Clinical Care Improvement Training Program (CCITP)

Transforming an improvement culture
QATAR: THE GROWING NATION

Dr. Noof Al Siddiqi
Consultant, Dermatology
Communications Lead, CCITP
<table>
<thead>
<tr>
<th>Human Development</th>
<th>• Development of all people to sustain a prosperous society</th>
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<tbody>
<tr>
<td>Social Development</td>
<td>• Just &amp; caring society based on high moral values</td>
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<tr>
<td>Economic Development</td>
<td>• Development of competitive &amp; diversified economy</td>
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<tr>
<td>Environmental Development</td>
<td>• Harmony between economic growth, social development and environmental protection</td>
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To ensure that people of Qatar have an effective and integrated healthcare system
Quality focus in QNHS

There will also be an established *culture of excellence* with a strong focus on *quality* and continuous improvement.

This will be achieved by:

- Ensuring that *measurable performance* agreements are in place for all providers (i.e., *performance standards* founded on mandated reporting within a proportionate regulatory framework which rewards achievement).
- Developing systems so *healthcare providers are given feedback* on current performance against *quality*.
- Standards to help *direct quality improvement initiatives* and sector wide best practice information gathering.
Who is HMC?

Hospitals
Clinical staff
Patients
Hamad Medical Corporation (HMC)

- Serving a community of 2,350,000
  - 8 hospitals
  - 2100 beds
- Established by Emiri decree in 1979 and reports to the Supreme Council of Health.
- Provides state-of-the-art diagnosis and treatment of diseases that previously could only be managed in overseas medical institutions.
HMC Facilities

Hamad General Hospital
- Beds: 551
- Location: Doha
- Services: General

Rumailah Hospital
- Beds: 509
- Location: Doha
- Services: Geriatric, PMR, Psychiatry, Communicable disease, Specialized surgeries

Women’s Hospital
- Beds: 354
- Location: Doha
- Services: Gyn/ Obs and Neonate
HMC Facilities

Al Khor Hospital
- Beds: 113
- Location: Al-Khor
- Services: General

Heart Hospital
- Beds: 118
- Location: Doha
- Services: Cardiology

Al Wakra Hospital
- Beds: 186
- Location: Al-Wakra
- Services: General
HMC Facilities

National Center for Cancer Care and Research
- Beds: 92
- Location: Doha
- Services: Cancer, Blood diseases

The Cuban Hospital
- Beds: 79
- Location: Dukhan
- Services: General

Specialized Care Center (Enaya)
- Beds: 76
- Location: Doha
- Services: Long term
HMC Facilities

Total Clinical Staff (14,223) (2013)

Benefits

• Wide diversity of clinical providers
• Increased knowledge base
• Expanded experiences

Challenges

• Cultural differences
• Language barriers
• Entitlements
What is HMC?

Mission

Vision

Goals
HMC Vision

“We aim to deliver the safest, most effective and most compassionate care to each and every one of our patients”

HE Dr. Hanan Al-Kuwari, Minister of Public Health, HMC

Best Care, Always
Leadership commitment, HMC
Challenges in HMC?
2010

Dr. Reham Hassan Negm Eldin
Hamad Healthcare Improvement Program Manager, HHQI
CCITP Manager
Quality Improvement at HMC

2010

“Someone else’s” job
Centrally-driven, little involvement of clinicians
Issues are reported, nothing seems to change
Accreditation focused, often lacks “clinical relevance”

FUTURE

Everyone’s job
Driven by local clinicians, supported centrally
Reporting leads to meaningful change
Clinically relevant and patient-centered, supports accreditation

Leadership decisions
Empowerment
Time & compensation
Skills training
Project coaching
Start a movement

2010

Start a movement
The need back in 2010

63% of physician believe that when something goes wrong, patients are most likely to register a complaint against them.

83% of physicians believe they should be involved in, and often lead, quality improvement efforts.

15% of physicians felt they had the proper training to lead a quality improvement effort.
Quality & Patient Safety

Capacity and Capability

IHI open school
Middle East Forum
Best care always collaborative
CCITP
Clinical microsystems coaching training
IHI HMC fellowship
QU MPH-HSI Masters
Vision

1. Start a Movement: train and mentor clinicians to lead improvement efforts that directly impact patient care.

2. Provide a Toolkit: teach basics of clinical quality and process improvement and apply to real life problem.
The Issues

1. Limited knowledge and experience in the area of quality improvement...

2. No lasting and sustained improvement projects in place...

3. HOWEVER, a strong desire for both...
Our Plan
Committed Leadership
Frontline Leadership Engagement

Sponsor Engagement

Initially
Sponsored limited their involvement to:
• Nominating members
• Acknowledging the work
• General oversight

Evolution
Sponsors are actively involved in:
• Identifying improvement priorities
• Aligning nominations with initiatives
• Presenting sustainability plan
• Actively monitoring project work
Frontline Leadership Engagement

Sponsor Engagement

Minimal (Laissez Faire) → Active / Engaging

Challenges:
- Management not fully engaged
- Seen as an “add-on” to existing work
- Freeing staff to attend training & work on projects
- Overwhelmed by current demands

However:
Once sponsors start seeing the value, it becomes easy to get them more invested
Expert Partners

Evolve & Grow

Expert Partners

Committed Leadership
QUESTIONS?
Building an Effective Program

Dr. Sajith Pillai
Quality Analyst, Medicine
Coaches Lead, CCITP
Where are you in your PI Journey?

Continuous Improvement
- Under budget
- Setting the standard
- Talent magnet

Increasing Effectiveness
- Within budget
- Standard work in place
- Engaged staff

Gaining Control
- Moving to a budget
- Establishing standards
- Identifying staff champions

Out of Control
- Over Budget
- Inconsistent outcomes
- Frustrated staff / high turnover rates
Developing the Foundation

**Initial projects:** Scoped to facilitate successful completion

- Limited timeline (90 days)
- Attainable goals
- Define a small / contained area in which the work will occur
- Keep your team small
- Provide formal training and support

**Focus** on the immediate problems:

- Process flow improvements
- Turnaround time improvements
- Standardizing internal communication
Developing the Foundation

1. **Defining the Project**
   - Identifying the problem
   - Establishing a proper AIM
   - Set the goal

2. **Data Collection**
   - Types of data (quantitative / qualitative)
   - Measurement systems
   - Observation techniques

3. **Data Analysis**
   - Charts / graphs
   - Flow maps / Value stream maps
   - Statistical analysis
Developing the Foundation

1. Project Management
2. Conflict Resolution
3. Communication
4. Presentation
5. Stakeholders Management
6. Change Management
CCITP Curriculum

Session 1

- Introduction to Process Improvement
- Project Charter Development
- Principles of Process Flow (the DOT Game)
- Voice of the Customer
- Principles of Data Gathering & Measurement Systems
- Understanding Waste in Healthcare
- Principles of Process Flow Mapping
CCITP Curriculum

Session 2

- Understanding Cause and Effect
- Chart selection
- Process Analysis I – Resident’s Discharge Case Study
- Advanced process Flow Mapping
- Process Analysis II – Urology Case Study
CCITP Curriculum

Session 3

- Managing Variation
- Change Methodology
- Sustaining Change
- Communication Workshop
Prep Sessions

- Conducted before each classroom module
- All presenters rehearse & get feedback
- Opportunity to simplify & modify (content & delivery)
- Train coaches for table facilitation
### Training Modules

#### The classroom

| **Content Design** |  • Presentations + worksheets  
 |  • Home-grown case study as a constant thread |
|-------------------|---------------------------------|
| **Content Flow**  |  • Based on flow of the work    |
| **Assignments**   |  • Building blocks of actual project work  
 |  • Feed into final deliverables |
| **Adult learning**|  • Concepts: “Explain & apply”  
 |  • Practical activities  
 |  • Engage multiple senses (thru use of videos etc) |
| **Key essentials**|  • Notice, manage & leverage group energy  
 |  • Use feedback forms to evaluate  
 |  • Use effective table facilitation |
Internal Growth

- Participant → Coach → Co-teach → Teach → Mentor/ Faculty
- Continually “on-board” new trainers, support & then let them flourish
- Coaches’ Training sessions:
  - Develop core coaching skills
  - Train on quality tools & techniques from a coaching perspective
  - “Soft skills training & professional development
Developing the Foundation

Coaches

➢ Provide technical experience to the Sponsor & Project Leader
➢ Help with scoping & setting goals
➢ Assist with overcoming barriers
➢ Be available for regular meetings with the Project Leader

The Coach does not:
➢ Lead the project
➢ Work \textit{IN} the project
Developing the Foundation

Characteristics of a good coach:

- Strong analytical skills
- Strong communication skills
- Flexible/Adaptable
- Time Management
- Excellent interpersonal skills

A coach’s greatest challenges will be with:

- Time management
- Interpersonal skills
### Developing the Foundation

#### Preparing the Coaches

1. Initially rely on **external** experts; they have:
   - The expertise & knowledge
   - The resources & materials
   - A clear view of the outcome

2. Identify **internal** experts from within your organization; they:
   - Have knowledge (and possibly expertise)
   - Understand the organization
   - Reshape the outcome to align with the organization

3. Transition to **Internally developed**
   - Move from instruction to coaching
   - Take ownership
   - Establish your own identity
Coaches Experience
Internal Structure

Semi-autonomous coaching structure

Creating a coaching support network

Initially
• Self reliant
• Self motivated
• Unstructured

Evolution
• 3-tiered coaching model
• Weekly coaches meetings
• Structured coaches’ evaluation
• Coaches training & development
• Leveraging technology (WhatsApp)
The CCITP Evolution

Internal Structure

Semi-autonomous coaching structure → Creating a support network

Fluid faculty structure → Task oriented faculty structure

Reactive capacity development → Proactive capability building

Initially
Faculty members were:
- An informal group
- Had other full-time responsibilities
- No clear roles

Evolution
Faculty members have clear delegation of functions:
- Overall program management
- Coaching, Content development
- Communication, Evaluation
The CCITP Evolution

Internal Structure

Semi-autonomous coaching structure → Creating a support network
Fluid faculty structure → Task oriented faculty structure
Reactive capacity development → Proactive capability building

Initially
Adhoc training for coaches & faculty as required
Faculty merely content presenters

Evolution
A structured development plan for engaged coaches & Facility
  • Certifications & courses
  • Schedule
  • Book club
Create a functional program team structure. (program manager, coordinator, admin team)

Set clear expectations from participants, coaches & sponsors.

Actively manage important stakeholders.

Address team issues when they arise; escalate appropriately when required.

Create a clear program plan:

- Agenda, checklist, course layout & materials
- Have a dedicated program coordinator
- Plan for effective in-class facilitation

Focus on crafting a consistent, authentic brand/ culture
Shaping our evolution

The key questions that guided our evolution:

1. How can we align CCITP with HMC’s quality vision/strategy?
2. What can we do on a continuing basis to stay agile, learn and evolve?
3. What are our customers really telling us?
Moving from Capacity Building to System Redesign

Dr. Khalid Awad
Sr. Consultant, Pediatric Neurology
Academic Lead, CCITP
The CCITP Evolution

Strategic Alignment

Initially
CCITP Model:
- PDSA
- DMAIC
- Rapid Cycle improvement

Evolution
Blend of:
- CCITP Model for improvement
- Clinical microsystems
- High reliability functions
Best Care Always: The Framework

10 Essential Functions of High-Reliability Patient Care Teams

- Leadership and Governance
- Team Structures and Dynamics
- Standard Protocols and Procedures
- Patient Safety and Quality Systems
- Education, Training and Supervision
- Workforce Management
- Care Planning, Coordination and Delivery
- Patient & Family Engagement
- Information Management
- Support Services and Equipment
The CCITP Evolution

Dartmouth Microsystem

Improvement Ramp
The CCITP Evolution

Curriculum Development

- Emphasis on quality tools & techniques
- Covering basic QI methodology
- Focus on covering the entire gamut

Blend of tools & soft skills
Designed to address elements of our framework
Focus on fewer & fundamental principles
Highlights of the Evolving Curriculum
The CCITP Evolution

Projects Selection

Challenges:
- Identifying improvement priorities
- Choosing the immediate sub-piece to work on
- Continuity and hand-off of projects
- Sustainability of current efforts
Alignment

CCITP moved from individually selected projects to general themes aligned with the strategic direction of the Corporation.

Still allowing individual project selection as agreed by the sponsors.

Participants are pre-empted for the role of Quality Improvement advisors.
Addressing Systems Needs

Reliable patient care systems systems/QEWS
Sepsis

High reliability patient care systems launched QEWS and brought the focus on the importance early identification and management of sepsis.

CCITP adapted and dedicated cycles 9 and 10 with a sepsis theme.
Timely Delivery of First Dose of Antibiotics to Febrile/Suspected Neutropenic Children on Chemotherapy in Children's Cancer Ward Hamad General Hospital HGH PICU Battle Against Infection Beyond Expectation

Improvement of Early Recognition Of Sepsis in Coronary Intensive Care Unit (CICU)

Optimizing Timely IV line removal in premature babies admitted to Women’s Hospital NICU

Improving septic miscarriage patients care and raise sepsis awareness in Women’s Hospital

Standardization of Aseptic Technique in Regional Anesthesia blocks

Improve the Hand Hygiene Practices in the Acute Medical Assessment Unit
CYCLE 9

Stop Sepsis

• It is SEPSIS! Let us save them

• Sepsis; let’s bundle the care!

• Improvement of Sepsis Awareness In Patients Attending West Bay H.C

• Golden hours of sepsis for long term patients in ENAYA Specialized Care Center (ESCC)

• Improving Sepsis Management in ED HGH Project 2015

• Increasing Sepsis Awareness amongst healthcare providers in the West Bay Health Center, PHCC.

RECOGNISE • RESUSCITATE • REFER
Implementing SIRS/Sepsis Checklist and Sepsis pathway in Acute Care Surgery Inpatients
Maintain intraparative normothermia

Improve referral system of patients with Root canal treated tooth (RCT) from Endodontic Department to Prosthodontic Department (Crown) in Hamad Dental Hospital

Improving children's vaccinations in the well-baby clinic

Improving blood cultures sensitivity

CYCLE 10

To provide chorioamnionitis patient care

requiring admission due to chest

Say Sepsis: Do Sepsis Six: Save lives

Detect Early, Intervene Early and Save Lives!

utilizing Sepsis Screening tools in pediatrics

SEPSIS: “Hit it early hit it right”

Increase The Vaccination Rate by Improving the Implementation of the Vaccination Program in Diabetic Patients at the West Bay Health Center, PHCC
Sustaining Change,
From Projects to Culture Change
CCITP by the Numbers

Project Sustainability:
Defined as maintaining the plan & performance of the initiative for **6 months or more** after the conclusion of the CCITP cycle (outcomes & measures might change or lag)

**Cycle 1-5**

**Project Sustainability Rate**
- Cycle 1 = 38%
- Cycle 2 = 36%
- Cycle 3 = 47%
- Cycle 4 = 47%
- Cycle 5 = 40%
- Average = 42%
CCITP by the Numbers

Project Sustainability:
By involving sponsors and targeting system redesigns rather than focusing just on projects we saw an overall sustainability increase from 47% to 82%.

Cycle 6-8 Project Sustainability Rate
Cycle 7 = 92%
Cycle 8 = 71%
Average = 82%
Dr. Sajith Pillai, Mr. Mossad Eleiwa, Ms. Fatima Elshaer, Nursing staff in Stroke Unit & AMAU

Department of Medicine, HGH

Improving, Sustaining & Spreading Exit Flow of Discharged Patients on the Medical Floor

PROBLEM:
As of October 2014, only 49% of all patients on the medical floor exit the wards within 2 hours after decision to discharge is made by the care team (Exit Time). This adversely impacts inpatient bed capacity causing a reduction in the number of beds available for inpatient admissions and transfer, and increases overall inpatient length of stay.

AIM:
Increase the percentage of patients with Exit Interval of 2 hours or less (as per hospital standards) from 49% to 70% in 3S2 by June 2015. Subsequently, expand this initiative to other medical floors, starting with Acute Medical Assessment Unit (AMAU).

INTERVENTION:
Multiple PDSAs have been carried out since December 2014. Successful changes were sustained in Stroke Unit, and the initiative was spread to AMAU:
- Medical teams to begin daily rounds with patients who are planned to be discharged
- Begin discharge paperwork at least 24 hours prior to discharge

RESULTS:
- Complete discharge paperwork before 10am
- Single-piece flow of discharge process

CONCLUSIONS & LESSONS LEARNT:
- Rounding with “for-discharge” patients first can shorten their exit times.
- There is a lot of individual variation amongst medical teams with regards to clinical rounds (discharge vs teaching rounds).
- Daily discharge planning & multi-disciplinary communication may significantly help speed up discharge process.
- Spreading successful initiatives requires customizing change ideas to be appropriate for each unit.

CHALLENGES & NEXT STEPS:
- Constant changes to medical team structures due to rotation schedule hampers testing & stabilizing change ideas.
- Lack of a common system for discharge process.
- Admitting patients that are not appropriate for a particular ward (e.g., surgical cases in AMAU) may hinder timely discharge process.
- Upcoming Cerner implementation may pose a challenge that would require new ideas & PDSAs.
Reducing the No-Show Rate in Pediatric Neurology

**AIM:** To reduce the percentage of no show rate of new patients to one pediatric neurology clinic from 45% to 25% by 31st December 2013

**INTERVENTION:**
- Direct and weekly communication was made between the project team, clinic staff and patient referral management and the call center to ensure sharing of information.
- When call center contacts patients an offer of an alternative appointment is explicitly made.
- All patients removed from the list are notified to referral management to replace them; are no slots left empty.

**CONCLUSIONS:**
- Communication with stakeholders (call centre and referral management service) is key to any improvement program in the area of clinic no show.
- Customer contact strategy is the best way of ensuring attendance and reducing no show.
- Replacing cancelled patients improves clinic usage and indirectly reduce no show and reduce waiting time.

**NEXT STEPS:**
- Call center to continue to use the same message to all patients called.
- Regular review of the no shows by monthly communication between clinic and call center.
Percentage of no show to Pediatric Neurology clinics
HMC-Qatar

Weeks

percentage of no show

0%
10%
20%
30%
40%
50%
60%
70%
80%
90%

PDSA 2
Blended Learning

Putting at the heart of QI
The way to Future Learning!

E classrooms with discussion boards.

Posted questions and resources uploaded.

Dedicated faculty members to run the discussion.

Studying the impact of blended learning.
Research & Scholarship

What have we learned?
A Culture of Enquiring Minds

CCITP adopted humble enquiry as a way of interaction, coaching, evaluation and research.

Reflecting on our knowledge.

Encouraging faculty to build up on knowledge by obtaining formal research degrees.
Research activity

Publishing:
- CCITP experience: in press
- Several projects: BMJ quality reports
- Blended learning
- Qualitative/action research.

Presenting:
- IHI forum
- ISQUA
CCITP ACHIEVEMENTS

(2014 – PRESENT)

Dr. Reham Hassan Negm Eldin
Hamad Healthcare Improvement Program Manager, HHQI
CCITP Manager
Delivering Independently

HMC Delivering CCITP Independently

### Average per Cycle

<table>
<thead>
<tr>
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<th>Cycle (1-4)</th>
<th>Cycle (5-8)</th>
<th>% Δ</th>
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<tbody>
<tr>
<td><strong>HMC Faculty</strong></td>
<td>5</td>
<td>7</td>
<td>40% ↑</td>
</tr>
<tr>
<td><strong>HMC Coaches</strong></td>
<td>8</td>
<td>25</td>
<td>212 %↑</td>
</tr>
<tr>
<td><strong>Partners Faculty</strong></td>
<td>5</td>
<td>1</td>
<td>70% ↓</td>
</tr>
<tr>
<td><strong>Partners Coaches</strong></td>
<td>2</td>
<td>1</td>
<td>50% ↓</td>
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In 2012, CCITP was awarded the HMC “Stars of Excellence Managing Director Award”

This in special recognition by the HMC Managing Director for overall **Excellence**
CCITP by the Numbers

Number of participants per CCITP cycle

Summary:

Cycle 1 – Cycle 5 average class size = 35 students
Cycle 6 – Cycle 10 average class size = 47 students

Reason:

- Expanded program to include non physicians
- Increase demand

34 % ↑
CCITP by the Numbers

“Do you feel qualified to lead a quality improvement event?”

In all cases, significant increase in the level of improvement from 42% to 77%.

**HOWEVER,**

- Cycle 5 included senior level participants
- Cycles 7 & 8 included Multi Disciplinary Staff
CCITP by the Numbers

Project Sustainability:
By involving sponsors and targeting system redesigns rather than focusing just on projects we saw an overall sustainability increase from 47% to 52%.

**Cycle 6-8**
**Project Sustainability Rate**
- Cycle 6 = 56%
- Cycle 7 = 92%
- Cycle 8 = 71%
- Average = 82%

**CCITP Project sustainability %**
Cycle 1-8 Nov. 2011 – May 2015

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80
Focus Clinical setting of projects
cycle 1 - cycle 10 November 2011 - May 2016
Percentage of projects covering each improvement theme

cycle 1 - cycle 10 November 2011 - May 2016
Target Disease Groups

Percentage of projects covering every disease group
cycle 1 - cycle 10 November 2011 - May 2016
Project Highlights

- Eliminating Allergy documentation discrepancy in NCCCR
- Improving pneumococcal vaccination for patients above 65 to 75%
- Timely referral of cancer patients from acute to palliative care
- Establishing the demand for Palliative Care accredited program & unit and sustained.
- Dropping the waiting time of patients for CT Scan by 50%
- Increasing the percentage of neonates receiving first dose of antibiotics within one hour from 30% to 70%
- Improving postoperative pain assessment by CT ICU staff from 30% to 60%
- Reducing the No Show in pediatric neurology clinic from 45% to 25%
- Improving appointment utilization in DC pediatric surgery from 75% to 92%
- Optimizing the throughput time in intervention radiology & reducing the waste peri-procedure by 50%
CCITP by the Numbers

Coaching demand at HMC, based on clinical departments magnitudes and requirements are estimated to = 230 coaches.
CCITP by the Numbers

CCITP’s contribution to Hamad Medical Corp.

• 100% of ALL HMC hospitals are involved

• 95% of ALL Clinical Departments

145+ Projects

45 Coaches

12 Faculty

410+ Graduates

1500+ MDT members
Next Steps

The development of CCITP 2

• Designed to deepen QI skills
• Bridge between CCITP and the HMC Fellowships and Masters program
Success recipe

- Focus on developing people
- Commit to learning
- Build a culture
- Think global, act local
- Take risks
- Have fun!
Thank you

Dr. Khalid Awad
KMohamed9@hamad.qa

Dr. Noof Al Siddiqi
nalsiddiqi@hamad.qa

Dr. Reham Negm
rhassan@hamad.qa

Dr. Sajith Pillai
spillai@hamad.qa