Mobile Healthcare embraces the **vision** of the HMC family

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

- H.E. Dr Hanan Mohamed Al Kuwari’s concept
- Increasing healthcare demand
- Rising population
- Various models of providing care in home
  - Community Nursing
  - Community Paramedics
  - SOS Medecins France..1000GPs, 4Million Calls 2.5 Million Home Visits
  - Out of Hours Services - GPs
Population growth
Fast growing demand

We have increased our workforce and activity in response to very rapid population growth, but we are constrained by the supply of hospital beds.
A recent report found that 30% of our patients could be cared for in lower acuity settings if they had been available.
HMC Ambulance & Mobile Healthcare Service

AMI Deliance Service
- Emergency Ambulance Service
- Non-Emergency Ambulance Service

Mobile Healthcare Service
- Mobile Doctor Service
- Mobile Interdisciplinary Healthcare Service

Healthcare Coordination Service
- Emergency AS Communications Centre @ National Command Center
- Non-Emergency AS Communications Centre @ NAMHS HQ
- Mobile Healthcare Communications Centre @ NAMHS HQ
- Referral Management and Call Centre @ NAMHS HQ

Life threatening & serious illness or injury
- Acute

Urgent illness or injury
- High acuity care requirement e.g. Home ventilated

Chronic care requirement e.g. Cardiac failure

Care for vulnerable requirement e.g. Elderly care

Low acuity care e.g. Dependent patients
- Chronic
Mobile Healthcare Service

**STAFF**

- Total of 200 staff including
- Ambulance Paramedics
- Nurses
- Civilian Control Room Staff
- Doctors
  - 51 Consultants in Family Medicine with range of 15 – 20 years experience
- Operations Managers
- Admin

**FUNCTIONS**

- 24/7 Control Room
- 15 Liveried Vehicles
- 40 bedded Medi-Hostel
- Early Supported Discharge Program
- Emergency Admission Avoidance
With more efficient working practices we can meet our vision for high quality care in the face of growing demand.

Bridging the gap

Less pressure = Less harm = Higher quality care

Number of Inpatient Admissions

- Existing capacity
- Same-day admin+surgery
- Medi-hostel
- Mobile Doctor Service and Acute Home Healthcare
- Acute Medical Unit
- 7 Day discharge
- Bed management
- Demand

Indicative projections
Improving clinical quality and efficiency

Clinical leaders across HMC were tasked to identify improvements in practice that can make HMC more efficient and provide higher quality care, for example:

1. Seven day discharge
2. HMC-wide, real-time bed management system
3. Acute Medical Unit Model
4. Same day admission for overnight surgery and day case surgery
5. Acute home healthcare service
6. Mobile doctor service
7. Medi-hostel
Performance dashboard

Mobile Healthcare Service Corporate Dashboard April 15 - March 16

Monthly Cumulative of Daily Caseload (Mobile Doctors only) Month of Period

- **Caseload** Total number of patients under the care of Mobile Doctor Service (MDS) on each day - caseload does not include patient who are under the care of other services (e.g. Home Healthcare or Muither residents) who MDS may visit on request.

Patient Visits

- **ESD Visits** Number of patient visits (consultations) completed during each 24 hour period (6am-8am) to patients on the MDS Caseload. This number does not include visits requested by other providers (e.g. home healthcare or Muither).
- **Other Visits** Number of patient visits (consultations) completed during each 24 hour period (6am-8am) to patients under the care of other MHC healthcare providers. This currently includes Home Healthcare Service patients and Muither Compound residents. MDS complete visits to these patients on the request of the provider.

Telephone Advice

- **ESD Tel Advice** Number of telephone advice calls (Clinical Advice calls completed by an MDS Consultant) completed during each 24 hour period (6am-8am) for patients (and/or their relatives or carer) on the MDS caseload. This number does not include telephone advice calls to other providers (e.g. home healthcare or Muither).
- **Other Tel Advice** Number of telephone advice calls (Clinical Advice calls completed by an MDS Consultant) completed during each 24 hour period (6am-8am) for Home Healthcare or Muither Compound patients (usually with their care provider). This number does not include telephone advice calls for patients on the MDS caseload.
- **Total Daily Tel Visits** Sum total of ESD telephone advice calls & other telephone advice calls completed in a 24 hour period (6am-8pm).

MDS Escalation to 999

- **MDS Escalation to 999** Number of patients during a 24 hour period (6am-8pm) who have required a 999 ambulance response following an MDS consultation.
Mobile Healthcare

• Challenges
• Our team
• Planned work – Early Supportive Discharge
• Unplanned work – Emergency Admission Avoidance
• Our Improvement projects
• Our Future
Challenges
Why use Family Medicine Doctors?
Because it is the patient not his illness that defines our craft

- Communication skills
- Dealing with Multi-morbidities
- Holistic care – patients matter not diseases
- Respect choice always
- Deal with clinical risk as routine and discuss choices with patients in ways they understand
- Philosophical not nihilistic – life to years not years to life
- We respect who the expert is here – him
- We care – he knows it, and so does his family
- Natural team players
Our Paramedics and Nurses

Complementary skills

- Empathy/Kindness
- Advanced wound management
- Cannulation
- Resuscitation
- Knowledge of EMS service
- Communication (Languages and styles)
- Acute Medicine
24/7 Control Room

Dispatcher

Consultant Grade Doctor
Hamad General Hospital

- Early Supportive Discharge - all wards
- Daily ED presence
- Acute Medical Assessment Unit
- Short Stay Unit
Our first patient
Al Wakra Hospital

- Early Supportive Discharge
- Day Case Surgery
- Drain surveillance
- Burns dressings
- Post-natal pathways
Post Cardiac Stent
- Drug titration
- Medicines compliance
- Education
- Secondary prevention
- Complications

Heart Failure
- Symptoms review
- Medication adjustments
- Review of co-morbidities
- Other medical issues
- Confidence/Rehabilitation
Home Visiting

- Bespoke management plans
- IV Antibiotics
- Wound dressings
- Patient and family education
- Blood test follow up
- Long term conditions management
- Transition to Self care
- Transition to Primary care
Supporting palliative care patients in the community
Respite care in Medihostel
Women’s Hospital
Supported Discharge

- **Supported Discharge**

- **LCSs**
- **Haematoma evacuation**
- **Sutures out Deep wound noted**
- **Wound debridement & closure**
- **ID says stop tazocin**
- **Discharge home**

- **Hb 8.3**
- **Hb 10.2**
- **Hb 9.4**
- **Hb 7.8**

**Discharge home Day 25**

**Haematoma evacuation Day 5**

**Sutures out Deep wound noted Day 12**

**ID says stop tazocin Day 19**
Early Supported Discharge after Caesarean Section
A Quality Improvement project in the Women’s Hospital

Team: Women’s Hospital Postnatal Unit 2W: Head Nurse Jessy George.

Background

Early Supported Discharge (ESD) refers to a program which allows patients in acute care to receive some or all of their care outside the hospital. In the context of maternal health, ESD has been associated with decreased rates of postnatal depression while maintaining clinical outcomes (reference 1). Hamad Medical Corporation’s ESD program is run by the Mobile Healthcare Service (MHS), a branch of the Ambulance Service Group. Since the program started in late 2014, most of the patients who have participated in ESD were referred from medical and surgical inpatient units, however we think it is likely that postnatal women will also benefit from access ESD.

How can ESD benefit mothers and families?

Consider the case of patient “A” (name changed) who was referred to MHS after nearly 4 weeks in hospital. She suffered complications following lower segment Caesarean section (LSCS) delivery. During her hospital stay she required complex wound care, intravenous antibiotics, and ultimately required 3 operative procedures. Patient A certainly needed access to acute care, however, it is likely that some aspects of her care could have been provided outside the hospital in an ESD program.

One way to screen for those opportunities is to use a Patient Acuity Score (PAS). Patient acuity scores are designed to help Nurse leaders plan for staffing needs by estimating the degree of care needed for inpatients in their units (reference 2).

Lower PAS = Lower acute care needs = Potential for ESD.

Patient Acuity Score (PAS) example:

<table>
<thead>
<tr>
<th>Eating</th>
<th>Dressing</th>
<th>Bathing</th>
<th>Tolerating</th>
<th>Other care</th>
<th>perioperative</th>
</tr>
</thead>
<tbody>
<tr>
<td>No restriction</td>
<td>no restriction</td>
<td>no restriction</td>
<td>no restriction</td>
<td>Minor procedure</td>
<td>Any other</td>
</tr>
<tr>
<td>Limited diet</td>
<td>Limited ability</td>
<td>Minor wound care</td>
<td>Minor procedure</td>
<td>Pre-operative or post-op day 0</td>
<td></td>
</tr>
<tr>
<td>Swallowing difficulty</td>
<td>Needs assistance</td>
<td>Uncomplicated wound care</td>
<td>Vomiting</td>
<td>Post-op day 1</td>
<td></td>
</tr>
<tr>
<td>Full assist</td>
<td>Full assist</td>
<td>Neat dressing</td>
<td>Complex wound care</td>
<td>Admission requiring monitoring</td>
<td></td>
</tr>
<tr>
<td>Needs equipment or full assist</td>
<td>Full assist</td>
<td>Neat dressing</td>
<td>Intravenous antibiotics</td>
<td>perioperative</td>
<td></td>
</tr>
</tbody>
</table>

How to calculate the PAS:

1. Find the column which best describes the patient’s care needs during each activity.
2. The number at the top of the column is the acuity score for that activity.
3. Add up the scores for each activity to reveal the total acuity score.
4. A low PAS suggests an opportunity to transfer the patient’s care to ESD.

Proposed OI algorithm

Post LSCS?

- >48 hrs post op and not being discharged?
  - Patient Acuity Score = 2 or less?
  - Discuss ESD with inpatient teams and patient & family
  - Do I feel safe to transfer to ESD?
  - If agree, transfer to ESD
  - Document reason

Aims:

The primary aim of this project is to reduce the percentage of women from Postnatal Unit 2W who experience a prolong (>72 hours) low acuity hospital stay by 40% by the end of 2016. If this can be achieved, we believe it will improve quality at the WH by promoting patient-centered care, reducing nosocomial infection risk, and decreasing waiting times for inpatient beds.

Secondary aims are to understand the reasons why women post-LSCS delivery may experience prolonged low-acuity stays, and to see if patient acuity scores are a useful tool in our setting.

Project Steps (PDCA Cycle 1):

1. Review the 2W Postnatal Unit inpatient list twice weekly for 2-4 weeks to determine a baseline for how many post-LSCS patients are present, how many have stayed beyond 72 hours (preliminary estimate is 1-3 patients per week), and what the patients’ acuity scores are.
2. After a baseline has been established, implement the proposed OI algorithm daily to identify patients at risk for prolonged low acuity hospital stay (should take no more than 20 minutes). For patients with PAS ≥ 2 or less, use MHS admission sheet to assess eligibility for ESD and proceed as indicated.
3. Record number of patients screened, PASs, results of ESD eligibility assessments. Use run charts to track monthly data. If patient numbers are much higher or lower than expected after the first month, revi the protocol.
4. Analyze the data after 3 months to see what further quality improvement steps could be implemented in the next PDCA cycle.

Anticipated Outcomes:

- Acute care needs which could be addressed in ESD program: IV antibiotics, wound care, blood tests, blood pressure checks, glucose monitoring, etc.
- Initially, we expect that 15-20% of eligible patients will be transferred to ESD. We think the percentage will increase over the year as patients and staff become more familiar with ESD.
- We expect to encounter barriers to transfer such as infection control issues (e.g. MRSA, HHN1), patient/family refusal, operational capacity issues from MHS side, delays in obtaining specialist advice (e.g. unusual wound care or antibiotics needs).
- We will monitor for unintended consequences from transferring these patients out of the acute setting. Possible examples are increased patient turnover negatively impacting Unit nursing resources, increased emergency presentations among transferred patients.

References:


Choosing the patient’s room in the women’s hospital. Women’s hospital.
Bayt Al Diyafah

43 Bedded patient recovery unit – Completing treatments in recovery phase
Case Example
Building confidence in the service

Referred from ED: UTI
IV Antibiotics – Ertepenam started at home

Days 1 to 4
- Daily review
- Culture result

Days 5 to 10
- Antibiotics changed to oral
- Telephone and planned review

Family education, review of diabetes, medicines reconciliation

Admission prevented
Discharged
Patient visits 2015/16

- April 2015: 612 visits
- May 2015: 611 visits
- June 2015: 650 visits
- July 2015: 533 visits
- August 2015: 595 visits
- September 2015: 667 visits
- October 2015: 682 visits
- November 2015: 852 visits
- December 2015: 867 visits
- January 2016: 1,039 visits
- February 2016: 964 visits
- March 2016: 1,200 visits
MHS documentation: a “note”-worthy improvement project.


Background
Mobile Healthcare Service is a branch of Hamad Medical Corporation’s Ambulance Service Group which provides transitional care to patients through its Early Supported Discharge (ESD) program. Patients who qualify can receive short term acute care in their own homes instead of in the hospital. ESD has been associated with higher patient satisfaction and, in some cases, improved clinical outcomes in other countries. In Qatar, the challenge of implementing ESD has highlighted the need for high quality clinical documentation. There is an ongoing programme within the MHS to improve the quality of our clinical documentation.

Aim
To deliver safe, high quality medical care to patients in their homes.

To develop a medical record system which is specifically tailored to the needs of a transitional care service.

SPECIFIC TARGETS (TO ACHIEVE BY JUNE 2016):
• 100% documentation of drug, dose, route, frequency, and duration for patients receiving IV antibiotics (HMC policy CL 0030).
• 95% completion of Discharge Summary (HMC policy CL 0037) for discharged patients.
• 95% of patients actually seen by MHS have complete minimum admissions information available in the chart (HMC policies 6005, 7069): patient name, HC number, contact phone, allergy status, history, examination details, as well as patient location.

Methods
\[\text{Plan}\]
- Clinical and Operational strategy sessions.
- Clinician-conducted rolling chart audits, usually at 6 to 12 month intervals.

\[\text{Act}\]
- Action Plan.
- Periodic small group meetings focusing on different aspects of patient care provision.

\[\text{Do}\]
- Daily feedback from end-of-shift reports (EQRPs).
- Audits.
- QIs (if applicable).

\[\text{Study}\]
- Audit summary.
- Periodic small group meetings focusing on different aspects of patient care provision.

Results
We are making good progress towards our targets with consistent ongoing improvement being demonstrated across.

Once our targets are being consistently met the emphasis will shift toward maintenance of standards and preparing for future needs.

Future
Ongoing audits and educational packages for MHS clinicians.

Tablet-based electronic medical records?
Emergency admission avoidance
Emergency admission avoidance

Alpha Crew (999) deployment as usual

National Command Centre

Co-Deployment with MHS

Patent treated in the right place

Time saved

Ambulance
Medical support to Home Healthcare Services
Qatar University
• 165,000 Health Apps
• Downloaded 1.7 billion times
• $21.5 billion revenue by 2018

Economist p55 March 12 2016
What’s next?

• Shaping resources to improve Continuity
• Feedback
• IT and mobile electronic patient records
• Volume and complexity expansion
• Team Training (IHI, CITI, CPD, LEAN)
• Demonstrate ROI
What’s next? Cont’d

- Launch of Emergency Admission Avoidance
- Service expansion to longer transitional care
- New Pathways - New Hospitals
- Telemedicine - remote monitoring
- mHealth/Simulation QU partnerships
What patients really want (Detski 2011)

1. Restoration to health when ill
2. Timeliness
3. Kindness
4. Hope and certainty
5. Continuity, choice, and coordination

Thank You