CLINICAL GOVERNANCE REPORT

INTRODUCTION

Medi-Clinic's commitment to quality care remains, as it has for the last 26 years, a key focus area in all activities throughout the Group. It has invested a significant amount of time and resources in measuring clinical data with the aim of improving clinical quality, and has established a proud reputation for delivering quality care.

The purpose of this report is to present an overview of clinical activities within the Group as well as its approach to quality care, to report on important quality indicators and to highlight notable trends in this field.

CLINICAL GOVERNANCE

Overview

Achieving internationally comparable quality care throughout the organisation is an ambitious goal. It requires a talented workforce, superior technological and electronic support systems, a set of clear quality objectives that are rigorously pursued, and a multidisciplinary team approach. MCSA, MCCH and MCME are following a unified approach to ensure and improve clinical quality in all its dimensions. Certain important principles are adhered to, namely self-governance at hospital level, being non-punitive, focusing on measurable improvement targets and involving the entire clinical team.

Components

Clinical governance has clear objectives and responsibilities for each of the following components:

1. Professional qualifications and standards
2. Professional performance
3. Facility accreditation and certification
4. Clinical risk management
   - Infection prevention and control
   - Hospital event management
   - Drug adverse events management
5. Clinical performance management
   - Clinical indicators
   - Clinical outcomes
6. Functional programmes
   - Emergency services
   - Critical care
7. Clinical standards
8. Health technology assessment
9. Patient satisfaction
10. Education and training
11. Clinical information systems

MCSA has been using and refining this framework for a number of years and has benefited from this structural approach.

MCCH has for some time had a uniform quality system and clearly defined quality policy that has covered all of the above components, which allowed for a seamless adoption of the same structural framework as MCSA and MCME. MCCH also participates in a number of quality activities in the Swiss public health system.

MCME has adopted the same structural approach towards quality improvement, and has spent much time and resources on implementing focused programmes on each of the components.

Co-ordination

MCSA, MCME and MCCH each has a central, multidisciplinary clinical committee that coordinates and oversees these initiatives. Each hospital has a clinical committee that is responsible for quality care and patient safety in its respective hospital. A critical success factor is the commitment and participation of nursing staff and doctors.

Information

Clinical governance at MCSA is supported by a clinical information department with unique data manipulation and statistical abilities. The department generates strategic, clinical and management information in order to support decision making, which is an important enabler in the management of quality care.

Although there is no clinical information department at MCCH, business intelligence software is used to access meaningful clinical information. Planning is under way to strengthen its data manipulation and statistical abilities even further. MCCH also participates in national and international data-collecting initiatives to measure and improve quality.

MCME also does not have a clinical information department. However, planning is under way for the clinical information department at MCSA to render a service to the MCME hospitals, and a number of data-collecting initiatives are under way.

MEDI-CLINIC SOUTHERN AFRICA

CLINICAL PROFILE

In the year under review MCSA experienced a steady growth in hospital admissions as well as emergency centre and out-patient cases, as can be seen in Table 1. However, the average length of stay and theatre time per surgical case remained virtually unchanged.

Table 1: Summary statistics (financial year)

	% Increase in 2009	% Increase in 2008
Emergency Centre and Out-Patient Cases	**2.6%**	4.3%
Hospital Admissions		
Day case admissions	**1.1%**	2.9%
In-patient admissions	**3.1%**	4.9%
Length of Stay (calendar days)		
All admissions	**1.0%**	0.0%
In-patient admissions	**0.4%**	0.0%
Average Theatre Time per Surgical Admission	**0.4%**	0.4%
Medical/Surgical Mix	**0.1%**	1.3%

Comorbidities

Comorbidities are chronic underlying medical conditions that might be present on admission to a hospital, but do not constitute the reason for admission. It is important to measure comorbidities, since they have the potential to impact on the level of care and/or length of stay of a patient during hospitalisation.

The proportion of patients who were admitted to hospital with one or more comorbidity for the period under review was 17.1% compared to 15.5% for the previous year.

Hypertension, diabetes mellitus and hypercholesterolemia were the most common underlying conditions.

Although obesity is not regarded as a chronic underlying medical condition unless it is quite severe, it impacts significantly on morbidity while in hospital. During the year under review almost 64% of all patients admitted were overweight or obese.

In this report "the Group" or "the Company" refers to Medi-Clinic Corporation Limited and its subsidiaries and "the group" or "the company" refers to one of the three operating platform groups, as the context may indicate. "MCSA" refers to the Medi-Clinic Southern Africa group, "MCCH" refers to the Medi-Clinic Switzerland group and "EHHL" or "MCME" refers to the Medi-Clinic Middle Eastern group.

CLINICAL INDICATORS

Clinical indicators are the "vital signs" of clinical care and give an idea of the performance and integrity of this very important core element of operating hospitals.

This section deals with four of the most prominent indicators that are frequently used around the world, namely Mortality, Extended Stay, Re-admission and Adverse Events/Near Misses. Analysing these indicators as well as the underlying reasons for their occurrence is vitally important in the management of quality care.

Mortality

Mortality is one of the most important indicators for determining quality care. It needs to be interpreted with caution because of the influence of patient risk factors upon admission as well as the types of surgery performed. MCSA uses a statistical methodology to adjust hospital mortality rates for these factors in order to make justifiable comparisons between hospitals and time periods.

The expected mortality is a statistical calculation that takes into consideration the age and gender (demographic) profiles of patients, the presence and types of comorbidities, the reasons for admission and the types of surgery performed. The actual mortality is what actually happened. The mortality index is the actual mortality in relation to the calculated expected mortality.

Table 2 reports an increase in expected mortality. Expected mortality increased because of the increase in the age of admitted patients, an increase in HIV-related conditions and an increase in patients admitted with comorbidities.

Table 2: Mortality as a percentage of hospital admissions (financial year)

	2009	2008	2007	2006
Actual	**1.09%**	1.13%	1.12%	1.09%
Expected	**1.15%**	1.15%	1.12%	1.05%
Index	**0.95**	0.98	1.00	1.04

Actual mortality increased to a lesser extent than expected, which led to a decrease in the actual versus expected index. This means that the effective management of mortality outcomes improved from 4% higher than expected to 5% lower than expected over the last four years.

Extended stay indicator

Table 3 indicates the extended stay rates for a number of prominent admission types commonly used in the literature. It is the percentage of cases per admission type for which the hospital stay exceeds a calculated extended stay point. The indicator is regarded as a proxy measure for quality of care in certain medical and elective surgical admissions.

Table 3: Extended stay cases as a percentage of hospital admissions (financial year)

Extended Stay	**2009**	2008	
Medical			
Acute myocardial infarct	**11.3%**	10.8%	Δ
Asthma	**10.8%**	9.7%	Δ
Cardiac failure	**10.3%**	10.1%	Δ
Neonatal disorders	**9.8%**	10.9%	∇
Pneumonia	**10.0%**	9.6%	Δ
Surgical			
Coronary bypass graft	**10.5%**	9.9%	Δ
Cardiac catheterisation	**10.1%**	9.8%	Δ
Cholecystectomy	**9.5%**	9.7%	∇
Hysterectomy (abd)	**9.9%**	9.6%	Δ
Hysterectomy (vaginal)	**9.0%**	9.8%	∇
Hip replacement	**9.0%**	10.0%	∇
Knee replacement	**9.3%**	9.7%	∇
Resection large bowel	**8.8%**	11.5%	∇
Spinal fusion	**9.5%**	10.4%	∇
Obstetrics			
Caesarean section	**9.3%**	10.1%	∇
Normal vertex delivery	**9.0%**	9.7%	∇

The extended stay point was calculated as the 90th percentile of hospital stays for each admission type. Note that the percentages provided in Table 3 are unadjusted, and may reflect patient demographics, comorbidity profiles and complications. There is ongoing research in this area and further improvements to the methodology may be expected in the future. The extended stays of almost all admission types in the medical category increased in 2009 compared to 2008.

In the surgical category coronary artery bypass grafts (CABG), cardiac catheterisations and abdominal hysterectomies experienced a slight increase in extended stays. Both obstetric groups showed a downward trend in 2009, with progressively fewer patients experiencing extended hospital stays.

Hospitals are focusing on these results on an ongoing basis.

Re-admission

The re-admission indicator is calculated by counting the number of patients re-admitted to hospital within 30 days after discharge. This includes scheduled (planned) as well as unscheduled (unplanned) re-admissions, but it is the latter that are important as they represent late complications following from the initial admissions. Only unplanned re-admissions for selected admission types were reported in the past, but the approach showed some shortcomings such as data impurities and a narrow focus.

Although still an incomplete science, re-admission is generally accepted as one of the proxy measures for quality of care if used as a trend indicator.

Table 4 reports the 30-day re-admission rate for all hospital admissions during the period under review. As mentioned, it includes both scheduled and unscheduled re-admissions. The overall re-admission rate remained constant over the last two years. Comparable external benchmarks are unfortunately not available, and an internal benchmark will be calculated for hospitals to compare themselves against.

Table 4: Re-admission rate as a percentage of hospital admissions (financial year)

Category	**2009**	2008
Re-admissions	**9.3%**	9.3%

Adverse events and near misses

For the purposes of this report an adverse event is defined as any event which causes harm to a patient while he or she is in the care of the hospital. A near miss is any event which could have caused harm, damage or loss, but which was prevented from happening by design or luck. Patient safety remains the priority of all Medi-Clinic hospitals, and all events are therefore reported and analysed.

The Hospital Event Management initiative is a standardised system for managing, reporting and investigating incidents. The system ensures that risks are identified and actions implemented in order to prevent the recurrence of such events. Data are captured into a central database, which enables centralised reporting of hospital performance in determining the effectiveness of action plans implemented. Accurate reporting of all events is therefore compulsory.

The system includes both adverse events and near misses.

Table 5 provides a breakdown of the most prominent adverse event indicators together with incidence rates and benchmarks. The benchmarks were derived from results of studies performed in the USA, UK, Canada, Australia and New Zealand.

Table 5: Adverse events/near misses as a percentage of hospital admissions (financial year)

Category	**2009**	2008	Benchmark
Medication	**1.1%**	1.1%	1.1 – 1.6%
Falls	**0.5%**	0.6%	0.6 – 0.9%
Infections	**1.5%**	1.8%	1.8 – 2.7%
Skin	**0.7%**	0.9%	0.9 – 1.4%
Other clinical	**2.1%**	1.5%	2.1 – 3.2%
All events	**7.3%**	6.8%	8.0 – 12.0%

Medication-related events

Medication events as a percentage of admissions remained unchanged during the year under review. Errors in medication management can occur at various points in the medication pathway, such as in the prescribing, dispensing, delivery, storage and administration of medication. The Hospital Event Management system gives hospitals the ability to report, analyse and manage all these events.

Falls

Falls decreased to 0.5% of admissions during the year under review. Falls and injuries sustained by patients while in hospital remain an enormous challenge. There are many reasons why patients fall, and hospitals rely on the events management system to record and analyse falls systematically in order to implement preventative measures.

During the period under review 63% of all reported falls occurred in patients' rooms. Approximately 33% of all reported falls resulted in injuries. Most falls occurred amongst stroke patients, knee replacement patients and patients older than 80 years of age.

Hospital-acquired infections

Hospital-acquired infections decreased by approximately 16% in the period under review when compared with 2008. MCSA operates a robust and comprehensive infection surveillance programme using the Centres for Disease Control and Prevention as a reference point. This is supported by a national electronic database of all hospital-acquired infections as part of the Hospital Event Management system. Clinical risk managers survey both bedside and laboratory data. Each hospital has an infection control committee that oversees infection prevention and control, and focuses on resistance patterns and the use of antibiotics.

Skin-related events

Skin-related events decreased to 0.7% of admissions during the period under review. These events can occur quite frequently in the treatment of seriously ill patients in the acute care setting, and can lead to substantial morbidity. Diligent prevention is therefore essential, as the treatment of skin lesions can be very challenging.

MCSA uses an assessment tool on admission to assess each patient's risk of developing a skin lesion. Seriously ill patients are frequently reassessed while in hospital. All skin lesions are reported and analysed on the Hospital Event Management system.

ACCREDITATION

Accreditation involves a quality assurance process under which the structures and processes of a healthcare facility are examined by an independent accrediting agency to determine if applicable quality standards are met. Patients receiving treatment in an accredited facility can have the peace of mind that quality and safety standards are achieved and continuously monitored.

MCSA chose the Council for Health Services Accreditation of South Africa ("COHSASA"), one of only a few agencies around the world accredited by the International Society for Quality in Healthcare, to accredit its hospitals. The process in the South African health sector is entirely voluntary, and MCSA was the first private hospital group to enrol its hospitals in 1996.

In 2007 MCSA entered into a new arrangement with COHSASA, in which 35 of its facilities participate in a renewable three-year quality-improvement and accreditation programme. As hospitals typically receive accreditation status for three years at a time, this arrangement ensures that all participating hospitals maintain their status in the long term. The formal process is not suitable for small hospitals and in order for them to benefit from the accreditation process, they are working closely with selected large hospitals in order to comply with standards.

CLINICAL OUTCOMES

Vermont Oxford Network

Neonatal intensive care units deal with complex and very high-risk patients, and require experienced teams that follow a sophisticated and rigorous approach to patient care. This is an enormous challenge for which the Vermont Oxford Network ("VON") is an excellent support vehicle.

The VON is an initiative aimed at measuring and improving the quality of care in neonatal intensive care units. The project is based in Vermont, USA, with participating units all around the world. MCSA has been participating in the VON quality initiative since 2001. Currently 18 hospitals are participating in the initiative.

Although all babies admitted to the neonatal intensive care units are included in the programme, VON specifically focuses on the very low birth weight (<1 501g) infants because of the significant complexities involved in treating them. Table 6 deals with the general statistics of this subset of the neonatal intensive care population. This table, as well as Table 7, is derived from the official VON Annual Report for the 2007 calendar year. The VON Annual Reports only become available six months after year end, and the Report for 2008 was therefore not available in time to be included in this report.

Table 6:VON general statistics (calendar year)

Very Low Birth Weight Infants (<1 501g)	2007	2006	VON 2007
General			
Number of cases	264	164	54 068
Average birth weight in grams	1 107	1 141	1 043
Average gestational age in weeks	29	29	28
Average discharge weight in grams	2 208	2 209	2 178
Length of stay in days	50	53	54

During 2007 MCSA reported on 264 very low birth weight cases compared to 54 068 for the total network. Table 7 reports the quality outcomes for the participating MCSA hospitals.

Table 7:VON quality outcomes as a percentage of cases on the database (calendar year)

Very Low Birth Weight Infants (<1 501g)	2007	2006	VON 2007
Respiratory Support			
Respiratory distress syndrome	79%	82%	74%
Pneumothorax	2%	1%	5%
NCPAP	72%	76%	66%
Early CPAP	40%	33%	37%
Ventilation after early CPAP	41%	46%	44%
Ventilation	46%	52%	66%
Hifi Ventilation	23%	23%	23%
High-flow Nasal Cannula	37%	36%	45%
Nasal IMV or SIMV	10%	15%	13%
Chronic Lung Disease			
CLD 36 weeks	21%	20%	27%
CLD 36 weeks (gestational age < 33 weeks)	22%	21%	28%
Infections			
Early infections	3%	4%	2%
Nosocomial	26%	17%	21%
Other Outcomes			
Patent Ductus Arteriosus	23%	24%	39%
Necrotising Enterocolitis	7%	2%	7%
Periventricular-Intraventricular Haemorrhage	21%	18%	26%
Periventricular Leukomalacia	1%	1%	3%
Retinopathy of Prematurity	12%	24%	37%
Mortality	**16%**	**8%**	**17%**

For most of the respiratory support parameters, MCSA units were on par with, or outperformed, the VON averages. The occurrences of pneumothorax, as well as the use of ventilation and high-flow nasal cannulas were significantly lower than the VON averages. The nasal IMV/SIMV rate decreased from 2006 to 2007, becoming more in line with the VON average. However, the occurrence of respiratory distress syndrome was higher than the benchmark (p-value: 0.0745).

The MCSA units had lower rates of chronic lung disease than the VON benchmark during 2007. However, the nosocomial infection rate increased during 2007 and was higher than the VON average of 21% (p-value: 0.0305).

In a number of the other clinical outcomes, MCSA units performed better than the VON averages. MCSA had lower rates of patent ductus arteriosus, periventricular-intraventricular haemorrhages and retinopathy of prematurity. The necrotising enterolocolitis rate has increased since 2006, however, and is now on par with the VON benchmark.

For the very low birth weight infants, the MCSA mortality rate (16%) was slightly lower than the VON average, though not statistically significant.

Within the group of very low birth weight infants, chronic lung disease, periventricular leukomalacia and retinopathy of prematurity greatly determine survival and eventual quality of life. In all of these critical parameters and also with regard to mortality rate, MCSA performed better than average compared with the VON. These results can only be attributed to the professionalism, commitment and enthusiasm of the staff and doctors working in the units.

Adult Cardio-thoracic Database

The Adult Cardio-thoracic Database ("ACTD") is modelled on the database of the Society of Thoracic Surgeons, and has been piloted at Panorama Medi-Clinic since August 2005. The primary aim of the ACTD initiative is to measure and improve the clinical outcomes of cardio-thoracic surgery. As from January 2009 the database has also been rolled out in Dubai.

Table 8 reports some general volume statistics. It is important to note that some of the procedures reported in Table 8 were performed in combination but reported separately. A small number of previously unreported cases for 2008 have been included.

Table 8: Adult Cardio-thoracic Database volume statistics (financial year)

Indicator	**2009**	2008
Total number of cases	**472**	505
Procedures		
Coronary artery bypass graft	**401**	418
Valve surgery	**103**	124
Other cardiac procedure	**22**	25
Other non-cardiac procedure	**6**	18

Table 9 reports on general indicators, patient risk factors and clinical outcomes. Comparable international figures are not freely available, hence the year-on-year comparisons.

Table 9: General indicators, risk factors, outcomes as a percentage of cases on the database (financial year)

Indicator	**2009**	2008
Gender		
Female	**25%**	24%
Male	**75%**	76%
Age distribution		
< 40	**3%**	3%
41 – 60	**41%**	41%
> 60	**56%**	56%
Risk Factors		
Overweight/obese (BMI >25)	**81%**	77%
Hypertension	**77%**	73%
Dyslipidemia	**69%**	65%
Smoker	**47%**	50%
Family history of coronary artery disease	**42%**	52%
Diabetes	**23%**	25%
Renal failure	**7%**	8%
Other post-operative outcomes		
Infections	**2.5%**	2.2%
Re-operation	**4.9%**	2.6%
Renal failure	**1.1%**	2.2%
Prolonged ventilation	**5.5%**	6.9%
Mortality		
Expected mortality (EuroSCORE)	**6.6%**	6.3%
Actual mortality	**3.2%**	5.0%
Mortality index	**0.48**	0.79
Re-admit (30 days)	**8.1%**	12.3%

During the 2009 financial year about 85% of ACTD patients had coronary artery bypass procedures. This is slightly higher than the 2008 figure of 82.8%.

About three quarters of all cases in the ACTD database were male, with a small but steady increase in the proportion of female cases over the past three years.

Obesity and hypertension were the most predominant risk factors of the surgeries performed during the 2009 financial year. Approximately 81% of patients were overweight or obese, and 77% suffered from hypertension. Patients with dyslipidemia increased from 65% to 69%, while smokers decreased from 50% to 47%. Renal failure among patients in the ACTD database remained more or less 7% for the past three financial years.

The mortality index (actual/expected) fluctuated between 0.45 and 0.79 during the last three years. This is significantly lower than the benchmark index of 1.

From 2008 to 2009 the re-admission rate decreased by 52%, and only 8.1% of all patients in the ACTD database were re-admitted to hospital within 30 days of the original procedure in 2009.

In summary, the database is a very valuable tool in support of quality improvement and has been embraced by the team in the cardio-thoracic unit at Panorama Medi-Clinic.

Apache III

Apache III is a hospital mortality prediction methodology for patients in the adult intensive care setting and is a useful tool in evaluating quality of care in the complex environment of intensive care units. Patients are evaluated and scored on a number of clinical parameters within the first 24 hours after admission to intensive care. An expected mortality calculation is based on the clinical condition of each patient.

During the year under review the Apache III scoring system was implemented in the adult intensive care units of all MCSA hospitals. During the implementation phase a total of 16 513 cases were scored in 57 critical care units at 38 participating hospitals. Table 10 reports some important statistics, the most important being the mortality index, which is the relationship between the actual and predicted mortalities. The mortality index of 0.83 implies that the overall mortality of the scored cases was 17% better than expected.

Table 10: Apache III score (financial year)

Overall 2009	Total
Cases	**16 513**
Average age	**55.9**
Average physical score	**36.9**
Average length of stay (total hospital stay)	**8.0**
Average ICU days	**1.8**
Average high care days	**1.8**
Average days ventilated	**1.1**
Mortality index	**0.83**

The implementation of Apache III in all MCSA adult intensive care units is an important step towards a more measurable approach in quality care in this complex setting.

MEDI-CLINIC SWITZERLAND CLINICAL INDICATORS

Mortality

MCCH has been participating in the International Quality Indicators Project® ("IQIP") on a number of indicators since 2008. IQIP, an initiative that originated in the United States, assists healthcare organisations in identifying opportunities for improvement in patient care. It is important to note that IQIP data are gathered and aggregated for research purposes only. Weighted averages calculated on submitted data are in no way intended to be standards or to rank the quality of care provided by IQIP participants.

Table 11 reports the IQIP weighted average mortality figures for the 2008 calendar year. This compares favourably with other participating European hospitals.

Table 11: Mortality as a percentage of in-patient admissions (calendar year)

Quarter	1	2	3	4
MCCH	1.03%	0.91%	1.11%	0.81%
Europe	1.54%	1.37%	1.32%	1.37%

Re-admission

The IQIP weighted average figures for unscheduled re-admissions during the 2008 calendar year are reported in Table 12. Unscheduled re-admissions are not planned and are assumed to be a result of late complications. These figures are therefore not comparable with those of MCSA elsewhere in the report.

Table 12: Unscheduled re-admissions as a percentage of total in-patient admissions (calendar year)

Quarter	1	2	3	4
MCCH	0.70%	1.19%	1.17%	0.76%

Figures on participating European hospitals are not available and trends will therefore be reported in future.

Return to the operating theatre

The IQIP weighted average figures for unscheduled returns to the operating theatre for the 2008 calendar year are reported in Table 13. Unscheduled returns to the operating theatre are not planned and are assumed to be a result of complications. MCCH figures compare well with participating European hospitals.

Table 13: Unscheduled re-admissions to the operating theatre as a percentage of in-patient admissions (calendar year)

Quarter	1	2	3	4
MCCH	1.09%	1.29%	1.33%	1.08%
Europe	1.27%	1.42%	1.49%	1.39%

Adverse events and near misses

The Critical Incident Reporting System of MCCH is based on a uniform software platform for the registering of critical events and subsequent reporting of them to the national Critical Incident Reporting and Reacting System of the Swiss Foundation for Patient Safety.

Hospital-acquired infections

MCCH has been assisted by the Beratungszentrum Für Hygiene ("BZH") in Freiburg, Germany, in the control of infection, since 1998. Hospital-acquired infections have been recorded by some hospitals since 2000 by the standardised Hospital Infection Surveillance System ("HISS") of BZH, which is based on the criteria of the Centres for Disease Control and Prevention. Since 2008 all clinics have been recording hospital-acquired infections with the HISS. Figures will be published in the future.

Skin-related events

One of the IQIP indicators MCCH participates in is Pressure Ulcers in Acute Care. Its weighted average figures for the 2008 calendar year are reported in Table 14. This once again compares favourably with other participating European hospitals. The comparable figure for MCSA for the year under review is 0.2 per 1 000 bed days.

Table 14: Pressure ulcers in acute care per 1 000 bed days (calendar year)

Quarter	1	2	3	4
MCCH	0.4	0.3	0.4	0.2
Europe	1.8	1.5	1.7	1.4

Falls

MCCH also participates in the IQIP indicator for Documented Falls. Its weighted average figures for the calendar year are reported in Table 15. Once again, MCCH compares favourably with other participating European hospitals. The comparable figure for MCSA for the year under review is 2.0 per 1 000 bed days.

Table 15: Documented falls per 1 000 bed days (calendar year)

Quarter	1	2	3	4
MCCH	1.5	2.2	2.3	1.8
Europe	3.3	3.3	3.7	3.2

ACCREDITATION AND CERTIFICATION

A total of seven MCCH hospitals have received ISO 9001 certification from the International Organisation for Standards ("ISO").

All the hospitals are now working towards obtaining ISO 9001:2008 certifications in cooperation with the Swiss Association for Quality and Management Systems by the end of 2009.

MCCH also participates in the European Foundation of Quality Management ("EFQM") Excellence Model, which is a quality management model that covers all areas of management. The aim of the model is to guide users towards excellent management practices and operating results. The EFQM organisation awards two certificates, namely a first-level Committed to Excellence certificate and a second-level Recognised for Excellence certificate. There are currently three hospitals holding Level-1 certificates and one hospital holding a Level-2 certificate.

MEDI-CLINIC MIDDLE EAST

EVENTS

The Hospital Event Management system of MCME is currently paper-based and statistical data are not readily available. An improved version of the electronic MCSA Hospital Event Management system is planned to be implemented in Dubai during 2009.

This system will also incorporate the current paper-based hospital infection surveillance system at MCME.

ACCREDITATION

It is a legal requirement for hospitals in the Dubai Health Care City to be accredited by the Joint Commission International. MCME is currently preparing to accredit both its hospitals in Dubai and the aim is to achieve accreditation status by November 2009.

OUTCOMES

The cardio-thoracic team at the Welcare Hospital in Dubai has been collecting cardiac surgery data as part of their own initiative for the last few years. These data are reported in Table 16.

Table 16: Adult Cardio-thoracic Database volume statistics (calendar year)

Indicator	2008	2007
Total number of cases	73	85
Procedures		
Coronary artery bypass graft	65	68
Valve surgery	8	14
Other cardiac procedure	0	3

Table 17 reports on general indicators, patient risk factors and clinical outcomes. Comparative international figures are not freely available.

Table 17: General indicators, risk factors, outcomes as a percentage of cases on the database (calendar year)

Indicator	2008	2007
Gender		
Female	16%	15%
Male	84%	85%
Age distribution (years)		
< = 40	8%	8%
41 - 60	60%	74%
> 60	32%	18%
Risk factors		
Hypertension	63%	55%
Dyslipidemia	73%	59%
Smoker	53%	52%
Diabetes	58%	49%
Other post-operative outcomes		
Renal/kidney complication	2.7%	0.0%
Ventilation >24 hours	2.7%	4.7%
Mortality		
Actual mortality	1.4%	0.0%

The majority of patients underwent coronary artery bypass grafts and more than 80% of patients were male. The Welcare Hospital cardiac patients were of a younger age compared to those at Panorama Medi-Clinic, and with a different risk profile. As accurate body mass index figures are not available, obesity as a risk factor cannot be reported on. The most dominant risk factor was dyslipidemia, followed by hypertension, diabetes and smoking. Diabetes occurred in 57% of patients compared to 23% at Panorama Medi-Clinic.

The unadjusted mortality was 1.3% at the Welcare Hospital. An expected mortality and therefore comparable index could unfortunately not be calculated because of the unavailability of data. The unadjusted figures are not comparable and cannot be commented on.

The re-admission rate could not be calculated because of data constraints.

THE WAY FORWARD

Quality and safety of patient care will always require continued focus and relentless attention to detail. Medi-Clinic is satisfied with the progress that has been made in this field.

During the year ahead Medi-Clinic will continue to integrate and benchmark the quality initiatives of the three platforms into a single clinical governance framework and implement a number of new quality improvement initiatives.

An important focus area will be to strengthen the information management and clinical performance measurement abilities of both MCCH and MCME. Another focus area will be to establish a corporation data warehouse that combines information from all three platforms according to a standard set of definitions that will enable Medi-Clinic to make cross-platform comparisons.