

PATIENT SAFETY INITIATIVES AND QUALITY IMPROVEMENT ACTIVITIES IN UMMC

University Malaya Medical Centre (UMMC) has been certified for MS ISO 9001:2008 under the scope of 'Provision of Healthcare Services includes Ancillary and Support Services' since 3rd May 2002. Following that, the Working Committee of Quality Management System has set priorities to enhance the function of Quality Management System (QMS) in UMMC. In 2009, Quality Management and Safety Working Committee of UMMC have decided to incorporate quality and patient safety in a plan, which is known as The Quality Improvement and Patient Safety Plan in August 2009. The stipulated plan is to support and promote mission, vision and core values of University Malaya Medical Centre (UMMC) through the development of quality and safety culture among staff, patients and visitors in order to improve the functions of the organisation towards patient focused/centeredness such as provision of care, service treatment, medication management, research and ethics, prevention and control of infection.

The Plan has been implemented through continuous integration and coordination of the patient safety activities by medical staff, clinical and support clinical departments at UMMC. UMMC's staff have to be responsible and committed to their roles in performing activities to ensure the safety of the patients and employees. The Quality Improvement and Patient Safety Plan will hopefully be able to further improves on the UMMC's Quality Management System (QMS), clinical practices, hospital facilities and environmental safety through the monitoring of Quality Objectives, Clinical Indicator and National Patient Safety Goals measurement by all Departments, as well as outsourced service.

In February 2012, The UMMC Board of Management has approved the establishment of Quality Department with the main objective to further strengthen and enhance Quality and Patient Safety in UMMC. The Quality Department comprises of 2 main divisions which are Quality Management Division and Risk Management Division. The department is strongly supported by the Quality Management and Safety Steering Committee and two (2) other working committees namely Quality Management and Safety Working Committee and Risk Management Working Committee which will continuously collaborate towards managing quality, safety and risk of the organisation.

The focus of the UMMC Quality Improvement and Patient Safety Plan, in line with UMMC's Vision and Mission, is to be a world renowned medical centre providing the highest quality healthcare, medical training and research according to the International Standards.

1.0 ACTIVITIES RELATED TO PATIENT SAFETY GOALS/PROGRAM

1.1 Circulars, Standards and Policies

Policies

1. Assessment of Patients

- Assessment of Patients Policy
- Patient Admission Policy and procedures
- Patient Transfer Policy and Procedures
- Discharge Policy
- Referral Policy

2. Care of Patients Policies

- Care of Disabled Individuals
- Care of Elderly
- Care of Dialysis
- Care of Children
- Care of Patient in restraint
- Care of Patient receiving chemotherapy and radiotherapy

3. Facility Management and Safety

- Policy On Occupational Safety and Health and Environment
- Fire and Emergency Evacuation Procedures Plan
- Strategic Preparedness of Disaster within the UMMC complex

4. International Patient Safety Goals

- Patient Identification Policy
- Verbal Communication
- SBAR Communication
- Surgical/Invasive Procedure "Time-Out" Verification
- Anesthesia and Sedation Policy and Procedure
- Fall Policy
- Handling, Use And Administration Of Blood Policy And Procedure

5. Medication Management and Use

- Medication Management And Use Policy

6. Patient and Family Rights

- Consent Policy
- Do Not Resuscitate Advance Directive Policy

- End of Life Policy
7. Quality Improvement and Patient Safety
- Incident Management Process Policy And Procedures
8. Prevention and control of Infection
- Prevention and Control of infection Policy and Procedures

1.2 Others Standards/Procedures

- *Arahan Kerja Persediaan Pesakit Pra Prosedur / Pembedahan*
- *Arahan Kerja Pengurusan Pesakit Di Dewan Bedah*
- *Arahan Kerja Pengurusan Pesakit Di Dewan Bedah Kecil*
- *Arahan Kerja Penerimaan Pesakit Dan Persediaan Sebelum Pembedahan*
- *Arahan Kerja Persediaan Pesakit Dalam Pemberian Ubat Bius Am*
- *Arahan Kerja Pengurusan Perawatan Pesakit Di Wad Pemerhatian*
- *Garis Panduan Laporan Insiden / Kemalangan / Penyakit Di Bawah Akta Keselamatan Dan Kesihatan Pekerjaan (Akta 514)*
- *Guidelines on Blood Transfusion*
- *Garis panduan-Garis panduan Penyediaan Transfusi Darah dan Produk Darah*
- *Guidelines for Management of Pressure Ulcer*
- *Standard Operating Procedure for IV Medication*
- *Prosedur Kualiti Permohonan Penyelidikan bagi Kelulusan Jawatankuasa Etika Perubatan*
- *Quality Improvement And Patient Safety Plan*
- *Patients' Right and Responsibilities Statement*

1.3 Quality and Patient Safety Initiatives in UMMC

- a) **Implementing “Clean Care is Safer Care”**
- Hand Hygiene Campaign in UMMC on the importance of hand hygiene compliance: 5th May 2011



- b) Increase hand washing/hand disinfectant facility and monitoring the outcome of Alcohol Base Hand Rub implementation.
 - c) Bed side teaching on proper hand hygiene
 - d) Hand hygiene compliance enforcement and surveillance in order to get more than 75% compliance rate.
- Development of Hospital Infection Control Committee that involved in planning, monitoring, evaluating, updating, and educating activities related to prevention and control of infection including monitoring on patent of Antibiotic resistance micro-organism

b) Implementing “Safe Surgery Saves Lives” (SSSL)

- i. Implementing “Safe Surgery Saves Lives” by various strategies such as:
 - Improving communication and team building to ensure safer surgery.
 - Creation of a check list of “*site verification and time out*” procedure.
 - Developing standard operating procedure related to surgery (as partly mention at section 2.1.2)
 - Collection and analyzing data on Peri-operative Mortality and Peri-operative morbidity/incidents
- ii. Activities:
 - Monitor implementation of SSSL Initiative by doing audit compliance and discussion at Operating Theater Sub Committee meeting
 - Launch awareness program and continuous education for staff – doctors and nurses on SSSL

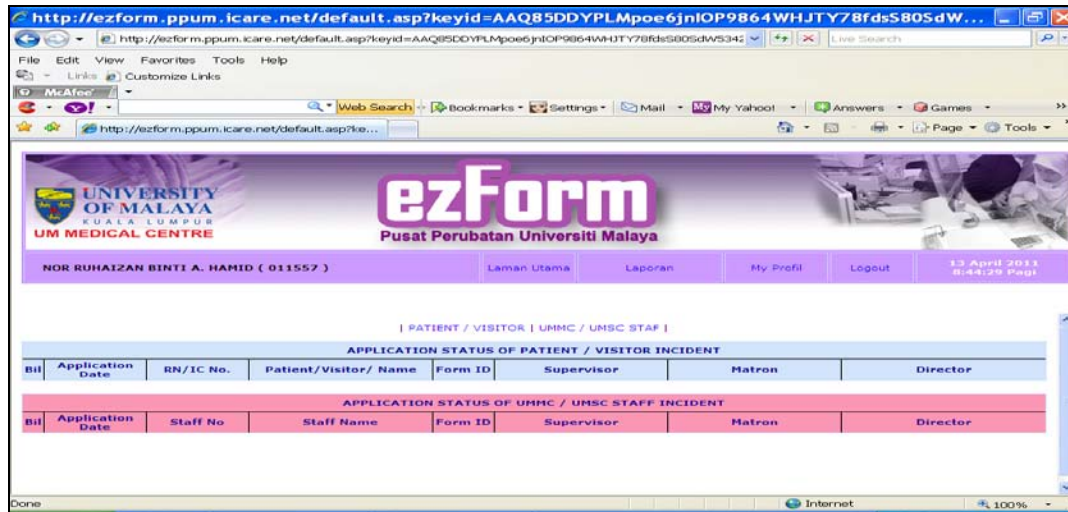
c) Tracking Antimicrobial Resistance

- Compliance to disease control policy
- Analysis on antibiotic resistance still in progress

1.4 Patient Safety Incident Reporting

Incident Reporting System

Incident reporting system is an online reporting system used to report all incidents/accidents including sentinel, adverse event and near miss. The form can be access by staff at www.ezform.ppum.icare.net (UMMC web-portal).



www.ezform.ppum.icare.net

Type of Incidents monitored:

- Medication errors/adverse reactions
- Patient Fall
- Patient Abscond
- Retain of foreign object in the body post procedure
- Wrong Surgery/Wrong Patient
- Blood and Blood Product errors/adverse reaction
- Sharps Injury/Needle Prick Injury
- Equipment- related Incidents

Method of investigation and/or prevention:

- Root Cause Analysis (RCA) Team
- Risk Management Committee discussion and evaluation

1.5 List of Studies or Research on Patient Safety (2011 and 2012)

Year 2011

BIL.	NAMA PENYIASAT	TAJUK KAJIAN
1.	Dr. Nisreen Osman Ali Sulieman, Department of Trauma & Emergency	The role of limited goal directed abdominal ultrasound in the diagnosis and management of patients with non-traumatic acute abdominal pain in emergency department
2.	Dr. Sona Pradhan, Department of Trauma & Emergency	Audit on trauma team, Trauma and Emergency Department, UMMC, University Malaya
3.	Dr. Chia Peh Wui, Department of Anaesthesiology	Critical incidents in paediatrics anaesthesia: An audit over an 8-month period at University Malaya Medical Centre
4.	Dr. Ahmad Ridzuan Mohd Ali, Department of Trauma & Emergency	Evaluation of the effectiveness of the trauma team in Trauma & Emergency Department, University Malaya Medical Center
5.	En. Azrul Helmy bin Abd. Halim, Department of Biomedical Imaging	Comparison between the role of DSCT coronary angiography and QCA in determining the risk of coronary artery disease
6.	Dr. Monir O. Mhemed Abusharib, Department of Trauma & Emergency	Usefulness of shock index in predicting mortality in patient with sepsis presented in A&E
7.	Prof. Chan Yoo Kuen, Department of Anaesthesiology	Comparison of the incidence of ventilator associated pneumonia in patients intubated with the taper guard endotracheal tube versus a normal endotracheal tube
8.	Mr. Lim Chee Sem, MBBS student	Infant feeding practices in a single teaching hospital (UMMC)
9.	Dr. Shahrul Nizam bin Ahmad Zamzali, Department of Trauma & Emergency	The study on usage of StO₂ reading as a non invasive tool in monitoring patient status in dengue in emergency department

10.	Dr. Renukha a/p Sellappans, Department of Primary Care Medicine	Improving patient safety in primary care through the implementation of an Ambulatory Care Pharmacist Service (ACPS)
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Year 2012

BIL.	NAMA PENYIASAT	TAJUK KAJIAN
1.	Dr. Ngeow Yun Fong, Department of Medical Microbiology	Systems analysis of adiposity in obesity
2.	Dr. Tan Chun Khui, Department of Surgery	Does the pre-operative use of probiotic prevent ileus in patients with colorectal cancer after surgery? A randomized, double-blind, placebo-controlled trial
3.	Dr. Khairullina Khalid, Sports Medicine Unit	Effectiveness of injury prevention program: D2E among Malaysian varsity netballer
4.	Dr. Ahmad Ridzuan Mohd Ali, Department of Trauma & Emergency	Addressing the needs of osteoporosis prevention in community dwelling postmenopausal women in a tertiary hospital in Malaysian: An exploratory qualitative study
5.	Dr. Omran Abdelraheem Mohamed Fadol, Department of Trauma & Emergency	MEWS as safety net and objective assessment in the triage counter Department of Emergency University Malaya Medical Centre (UMMC)
6.	Dr. Siti Nurkamilla Ramdzan, Department of Primary Care Medicine	Knowledge and practice of caregivers on infant safety: A cross sectional study at health center in Shah Alam
7.	Dr. Chan Wah Kheong, Department of Medicine	Endo-luminal clipping versus surgery in the management of iatrogenic colonic perforation: A direct cost analysis
8.	Puan Khairunnisa Karis, Faculty of Pharmacy, Cyberjaya University College of Medical Sciences	Pharmacists opinion towards the factors which could affect dispensing error and the factors that are important to minimize it
9.	Dr. Liew Siew Khei, Department of Orthopaedic Surgery	Endoscopic plantar fascia release in recalcitrant plantar fasciitis: A prospective analysis storing patient status in dengue in emergency department

10.	Dr. Raja Muhidayah Raja Baniamin, Department of Anaesthesiology	An audit on post-operative pain-controlled analgesia in paediatric patients: 6 months report
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1.6 Quality Improvement Project (QIT)

A. Competition at UMMC (between department / unit) (Year 2005 – 2011)

YEAR	DEPARTMENT/UNIT	PROJECT
2005	Purchasing	Lambakan Stok
	Transfusion Medicine	Donor Recruitment
	Medical Record	Pembekalan Fail Pesakit
	Critical Services & Operating Theater	Pengurangan Alat-alat Suplimentari pada Setiap Pembedahan – Kumpulan U7
	Dietetic	Indikasi Kualiti Bagi Perkhidmatan Dieteri Pesakit Luar di Klinik dieteri RUKA.
2007	Pharmacy	Pembekalan Ubat Jangkasa Panjang
	Transfusion Medicine	Quality Platelet Products for Haemato-Oncology Patients
	Purchasing	Ketiadaan Stok
	Cardiorespiratory Lab	Pembaziran Kertas
	Human Resource	Sistem Pengurusan Sijil Cuti Sakit Staf Pusat Perubatan Universiti Malaya.
	Nursing	Falls
	Medical Record	Pembekalan Fail Pesakit Luar
	Medical Record	Mengurangkan Peratusan Laporan Perubatan yang Tertunggak Tidak Melebihi 3 Bulan

YEAR	DEPARTMENT/UNIT	PROJECT
2008	Engineering	Pelarasan Suhu Air Panas Bagi Keselesaan Pengguna dan Penjimatan Tenaga Elektrik
	Human Resource	Kekerapan Pengeluaran Semula Salinan Penyata Gaji Yang dimohon Oleh Staf
2009	Finance	Mempercepatkan Proses Pembayaran Secara Efektif dan Berkesan
	RUKA Clinic, Ambulatory services	Meningkatkan Tahap Kepuasan Pelanggan Ketika Menunggu
	Training	Ke arah Mempertingkatkan Tahap Keselesaan Peserta Semasa Menghadiri Kursus.
	Nuclear Medicine, Biomedical Imaging Department	Keberkesanan Risalah Prosedur Sebagai Agen Maklumat Dalam Persediaan Pesakit Untuk Sesuatu Prosedur. (Fokus kepada Kajian Tulang "Bone Scan")
2010	Pharmacy	Improving The Process of Obtaining Cytotoxic Drugs by Cancer Patient
	Pharmacy	Increasing The Volume og Patients By 150%: Expansion of PharmCARE
	Dietetic & Clinical Oncology	Optimization of Dietetic Services In Clinical Oology Clinic, UMMC
	Nursing	Aplikasi Sistem Discaj <i>Fast-Track</i> di Wad 7U, PPUM.
	Dietetic	Pembaziran Hidangan Di Kalangan Pesakit Discaj di PPUM (<i>Food Wastage of Discharge Cases Among Hospitalized Patients In UMMC</i>)
2011	Nursing	Improvement In Intravenous Infusion Care Leads To Reducing The Incidence Of Intravenous Infiltration Among The Paediatric Patients
	Pharmacy	Reducing Packing Time And Error In The Outpatient Pharmacy
	Trauma & Emergency	Trauma Team: The Way Forward

YEAR	DEPARTMENT/UNIT	PROJECT
	Pharmacy	Efforts In Optimising Pharmcare Services
	Laboratory Medicine Department, Pathology Department	To Improve Turn Around Time Of Laboratory Result

B. National Level Competition (Year 2007-2011)

YEAR	DEPARTMENT/UNIT	PROJECT
2007	TRANSFUSION MEDICINE	Improving Platelet Transfusion Care In Paediatric Patients Undergoing Haemotopoietic Stem Cell Transplantation
2009	PHARMACY	PharmCARE: A Quality Improvement In Supplying Long-Term Medications From the Outpatient Pharmacy in the University Malaya Medical Centre
	TRANSFUSION MEDICINE	Preventing Febrile Transfusion Reactions In Thalassemia Patients
	FINANCE	Mempertingkatkan Proses Pembayaran Secara Efektif dan Berkesan
2011	PHARMACY	Re-engineering the Process of Obtaining Special Formulary Drugs by Oncology Patients in University Malaya Medical Centre (UMMC)
		Optimization Of Pharmcare Service In A Tertiary Hospital

C. International Level Competition (The Asian Hospital Management Awards Year 2010 -2012)

YEAR	DEPARTMENT/UNIT	PROJECT
2010	TRANSFUSION MEDICINE	Preventing Fabry Reactions in Thalassemia Patients (Paeds Day Care)
	PHARMACY	Re-Engineering of Supply Process to Outpatients on Long Term Medications from the Outpatient Pharmacy in the University Malaya Medical Centre
2011	PHARMACY	Re-engineering the Process of Obtaining Special Formulary Drugs by Oncology Patients in University Malaya Medical Centre (UMMC)
2012	PHARMACY	Improving the Process of Technical Drug Evaluation
	NURSING	Improving the Process of Technical Drug Evaluation
	TRANSFUSION MEDICINE DEPARTMENT	Promoting a New Generation of Healthy Voluntary Blood Donors

D. List Of Qit Project (Active)

BIL.	JABATAN/UNIT	TAJUK PROJEK
1.	DIETETIC	Improving Diabetes Education service at Gestational Diabetes (GDM) Clinic-meeting the numbers with limited resources
2.	REHABILITATION MEDICINE	Pemasaalahan Fail Pesakit di Jabatan Perubatan Pemulihan
3.	SOCIAL WELFARE, PHARMACY AND DIETETIC	Improving Glycaemic Control Among Poorly Controlled Type 2 Diabetes Mellitus Patients Through Multidisciplinary Approach
4.	CARDIORESPIRATORY LABORATORY	Pelambakan Penerimaan Borang Echo

5.	TRANSFUSION MEDICINE	Promoting A New Generation of Healthy Unpaid Blood Donors
6.	PHARMACY	Reducing the return of cytotoxic drugs from wards/daycare
7.		Reducing Medication Error In Outpatient Pharmacy
8.	PATHOLOGY AND TRAUMA & EMERGENCY	Improving CBC Turnaround Time in Emergency Department
9.	INFORMATION TECHNOLOGY DEPARTMENT	Penambahbaikan QIT Windows Update Komputer
10.	REHABILITATION MEDICINE (OCCUPATIONAL THERAPY)	Pembaziran Penggunaan <i>Thermoplastic Splint</i> di Bahagian Pemulihan Cara Kerja

E. List Of 'Easy-Quality' Project (2011-2013)

DEPARTMENT/UNIT	PROJECT
PHARMACY	Memperkenalkan Kalender Pada Setiap Desktop Komputer Di Farmasi Pesakit Luar
	Memperkenalkan Softcopy Dokumen Tarikh Temujanji Ubat Pada Setiap Komputer Di Farmasi Pesakit Luar
	Memperkenalkan Sistem Penyediaan/Pembungkusan Ubat Yang Teratur Bagi Preskripsi Pesakit Dalam Wad
	Pharmcare Daily Checklist
	Memperkenalkan Senarai Semak Penilaian Teknikal (Ubat)
	Memperkenalkan Kit Ubat Sapu

	Menambahbaik Proses Pembekalan Ubat Glyceryl Trinitrate (GTN) ke Wad
	Menambah baik Proses Penyediaan Kotak Ubat Resusitasi
	Mewujudkan Google Doc <i>D&T subcommittee: New Drug Request Registry</i>
	<i>Introducing e-Rx cue cards on doctor's computer</i>
	<i>Improving PharmCARE BY-POST Booking Process</i>
TRAINING	Permohonan Kursus Individu Secara On-line (MyTraining)

1.7 Patient Safety Solutions:

a) Look-alike/sound-alike drugs (LASA)

Identify and annually review a list of look-alike/sound-alike drugs used in the UMMC, and take action to prevent errors involving the interchange of these drugs such as improvement in:

- Labeling and segregate
such as Tallman, different color code label
- Control of ward stock
- Separate box and shelf for ward-stock





Management of LASA Medication

b) Patient identification

- Improve the accuracy of patient identification by developing patient identification policy using two identifiers
- Patients wrist band as patient identification

Identification
Baby boy slip

Identification
Baby girl slip

Adult wristband

Baby wristband

ID wrist band photo



- Avoiding placing patient with same name in the same room
- Staff are not allowed to use bed number as patient's identifier
- Patient sticker to be stapled into the patient's folder/form to avoid miss-place of sticker into different patient's folder

- Educate new staff on correct patient identification during Orientation Program

a) Hands over communication



- Developing SBAR policy
- Integrate report writing during hands over process
- Introduce form for hand over in between shift using SBAR concept

b) Control of concentrated electrolyte solutions

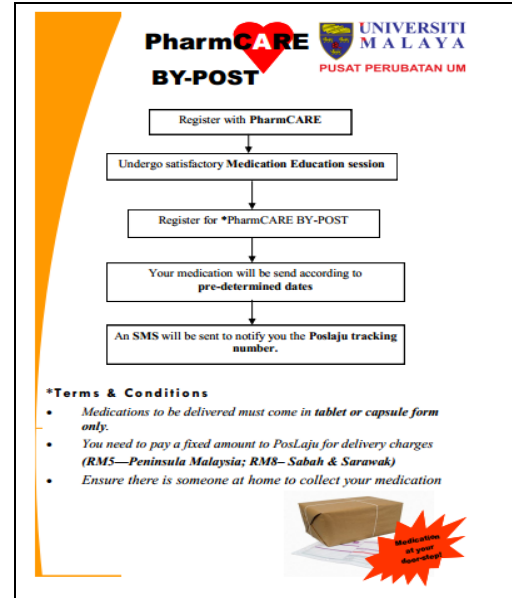
- Provide cabinet and special boxes
- Minimum ward stock
- Ready for use medicine by Pharmacy Department





c) Continuity of Medications

- Implementation of e-prescribing
- Patient speak up education
- Enhanced pharmacy services
 - Provide 24 hours pharmacy services at Trauma and Emergency
 - Pharmacy on call
 - By Post Pharmacy



- Drive-through Pharmacy: PharmCARE Drive-Thru Counter Service







Frequently Asked Question (FAQ)

Q: What documents must I bring to collect my medications?

A: 1. Prescription




2. Pharmacy Drive-Thru Card (green)



3. Doctor's appointment card (blue)





For more information, please visit our PharmCARE counter

PharmCARE Counter Working Hours
Mondays to Fridays: 7.30am to 4.45pm
Saturdays: 9.00am to 1.00pm
Sundays & Public Holidays: CLOSED

PharmCARE
Pharmacy Department
2nd Floor, Menara Utama
University Malaya Medical Centre




UNIVERSITI MALAYA
PUSAT PERUBATAN UM
PharmCARE DRIVE-THRU COUNTER SERVICE

• Eligibility:

- Patients who have undergone a satisfactory **MEDICATION EDUCATION** session
- Possesses own transport
- **Compliant** to PharmCARE appointment dates

** For **PAYING** patients, you need to pay full in advance*



PharmCARE Service: for prescription duration more than 1 month.

Advantages of using PharmCARE

1. Collect your medications in less than 30 minutes
2. We provide medication education to patients and carers.



3. You will be a candidate for our Drive-Thru collection service **



4. You will be a candidate for our Medication Delivery service direct to your home. **





For more information, please visit our PharmCARE counter

PharmCARE
 Pharmacy Unit
 2nd Floor, Menara Utama
 Discharge Centre
 University Malaya Medical Centre

Working Hours
 Mondays to Fridays: 7.30am to 4.45pm
 Saturdays: 9.00am to 1.00pm
 Sundays & Public Holidays: CLOSED



UNIVERSITI MALAYA
 PUSAT PERUBATAN UM
PharmCARE

- Are you here for a REPEAT MEDICATION SUPPLY?
- Is your PRESCRIPTION DURATION MORE THAN 2 MONTHS?
- Are you TIRED OF WAITING OVER HALF AN HOUR FOR YOUR MEDICATION?
- Do you have a MOBILE PHONE NUMBER?

Then PharmCARE IS your answer!

PharmCARE is a service where:

- You can book a medication collection date
- Your medications are ready for pickup on the appointed date
- An SMS reminder will be sent to you without charge (FOC).



** Terms & Conditions apply

- Audit of medications
- d) Avoiding catheter and tubing mis-connection
- Development of Guidelines on Tracheostomy care
- e) Single Use Injection Device
- Single use of needle practice
 - Disposal of needles into clinical waste sharps bin.
 - Sharp bins sealed for disposal when $\frac{3}{4}$ full.
 - Tracking and trending of needle stick injury incidences as performance indicators
 - Use of safe vacutainer system for blood taking



Vacutainer System

- f) Prevention of Hospital Associated Infection and Monitoring
- Surveillance of Healthcare Associated Infections (HCAIs)
 - Point prevalence survey
 - Prevention by Hand Hygiene education and compliance
 - Monitoring of effectiveness.



Hand hygiene education activity involving patient's family

Outbreak Management

- Care Bundles Procedure implementation in ICU
- Monitoring of Multi-resistant drug microorganism
- Antibiotic resistant index system monitoring-in progress
- Continuous education and enforcement by Infection control team & link nurse

Prevention and Reduction of Pressure Ulcer

1. Use of ripple mattress
2. 2 hourly body positioning
3. Frequent diapers change
4. Proper dressing treatment

Technology for Patient Safety

- Electronic Medication Prescribing System
- Flagging/warning system in the Lab for abnormal critical test result in order for early awareness of Lab staff, the staff will inform the ward doctor immediately
- Electronic Lab and Imaging result

Care Bundles Guidelines

Development of Procedures on:

- Ventilator Care Bundles
- Intravascular Catheter Bundles
- Severe Sepsis Care Bundles

Eliminating Central Line-associated bloodstream infections

- Central line insertion only performed by privileged staff
- Data collection is in progress

Ventilator Associated Pneumonia monitoring and prevention

- Implementation on Ventilator Care Bundle Procedure at Critical Care Area
- Data collection is in progress

Occupational Safety and Health & Environmental

a) Sharp Injury Campaigns



b) Demonstration of Safety Devices : Vacutainer System



Chemical Management in Healthcare Facilities

Improvement of Clinical Waste Management Work Process

- Create posters / signage to avoid misuse of clinical waste bins for domestic waste disposal.
- Implemented clinical waste management activities such as checking, binding of clinical waste bags and ensured
- waste bins closed are done by staff and not by contractor worker

Control/Prevention of Airborne Disease

- TB Campaign



Fire evacuation exercise/fire drill (March 2012)



Disaster Drill: “Lipan Bara” (March 2013)



