PATIENT SAFETY
AWARENESS COURSE FOR JUNIOR HEALTH CARE PROFESSIONAL

Concise Module of Patient Safety Awareness Course for House Officers in Ministry of Health Malaysia

Patient Safety Unit
Medical Care Quality Section
Medical Development Division
Ministry of Health Malaysia
2016
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Patient Safety Awareness Course For
Junior Health Care Professional

First Edition 2016

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Patient Safety Unit
Medical Care Quality Section
Medical Development Division
Ministry of Health &
Patient Safety Council of Malaysia

Desiderius Erasmus, the 16th Century Dutch humanist and theologian once said, “Prevention is better than cure”. These pearls of wisdom still ring true to this day and are the oft-used mantra in patient safety, which is an integral dimension of health care quality. Worldwide action to further enhance patient safety has been spearheaded by the World Health Organisation and today, we in Malaysia can rightfully feel very proud and privileged to be one of the members of this global effort to enhance patient safety. The main message for patient safety is that there are no quick fixes or solutions and we need to develop a smorgasbord of possibilities in our “systems approach” to patient safety. There are two broad approaches to patient safety which should be utilized in tandem, the first of which is to improve basic clinical care processes through technology and standardization, which can help overcome human fallibility, vulnerability to fatigue and environmental influences.

The second approach is, “People create safety”. Making healthcare safer also depends on understanding technical work and how people overcome hazards such as the ability of doctors and nurses to look ahead e.g. anticipation of hazards, bridging of gaps or discontinuities in the processes of care, managing conflicts etc. Thus, medical staff should be trained in safety skills such as anticipation and mindfulness of hazards, and flexibility as well as adaptability, including recovery from error.

In addition, training in teamwork and leadership is highly beneficial. The Greek philosopher, Aristotle once said, “Excellence is an art won by training and habituation. We have virtue or excellence because we have acted rightly. We are what we repeatedly do.

Excellence, then, is not an act but a habit.” Thus, this 1st Manual on Patient Safety Awareness Course for Junior Health Care Professionals has materialised as the result of concerted efforts by the Ministry of Health Malaysia to develop a safety culture amongst our young doctors, who are the future leaders of the healthcare system. This manual was inspired by the WHO Patient Safety Curriculum Guide: Multi-Professional Edition 2011 and covers the 7 crucial topics on Patient Safety.

Finally, I would like to acknowledge the commendable efforts of the Patient Safety Unit of the Medical Care Quality Section in the Medical Development Division as well as all Technical Coordinators and Technical Committee members in developing this training module. Let us face the Patient Safety challenge head on and win this war together. “If you know the enemy and know yourself, you need not fear the result of a hundred battles...”, and so said Sun Tzu.

DATUK DR NOOR HISHAM ABDULLAH
Director General of Health, Ministry of Health, Malaysia
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Advisor

**Datuk Dr. Noor Hisham bin Abdullah**
Director General of Health Malaysia

**Datuk Dr. Jeyaindran Tan Sri Sinnadurai**
Deputy Director General of Health (Medical), MoH

**Dato' Dr. Azman bin Abu Bakar**
Director of Medical Development Division, Medical Development Division, MoH

**Dr. Wan Mazlan bin Mohamed Woojdy**
Deputy Director, Medical Care Quality Section, Medical Development Division, MoH

**Dr. PAA Mohamed Nazir bin Abdul Rahman**
Deputy Director II, Medical Care Quality Section, Medical Development Division, MoH

Technical Coordinator

**CHAIRPERSON**

**Dr. Nor ‘Aishah bt Abu Bakar**
Senior Public Health Physician, Head of Patient Safety Unit, Medical Care Quality Section, Medical Development Division, MoH

**MEMBERS**

**Dr. Mohd Suffian bin Mohd Dzakwan**
Senior Principal Assistant Director, Medical Care Quality Section, Medical Development Division, MoH

**Dr. Khairulina Haireen bt Khalid**
Principal Assistant Director, Medical Care Quality Section, Medical Development Division, MoH

**Dr. Ahmad Muzammil bin Abu Bakar**
Principal Assistant Director, Medical Care Quality Section, Medical Development Division, MoH

**Mrs. Sharmila bt Mat Zain**
Nursing Sister, Medical Care Quality Section, Medical Development Division, MoH
**Technical Coordinator**

**ADMINISTRATIVE ASSISTANT**

Mrs. Shazleen bt Zakariya  
Administrative Assistant, Medical Care Quality Section, Medical Development Division, MoH

**Technical Committee Members**

**CHAIRPERSON**

Dr. Nor ‘Aishah bt Abu Bakar  
Senior Public Health Physician, Head of Patient Safety Unit, Medical Care Quality Section, Medical Development Division, MoH

**MEMBERS**

Dato’ Dr. Abd. Jamil Abdullah  
Head of Surgical Services & Senior Consultant Surgeon, Hospital Sultanah Nur Zahirah

Dato’ Dr. Hj. Zamyn Zuki Tan Sri Dato’ Mohd Zuki  
Senior Consultant & Head of Department of Orthopedics & Spinal Surgery, Hospital Sg. Buloh

Dr. Suraya Amir Husin  
Head of Infection Control Unit, Medical Care Quality Section, Medical Development Division, MoH

Dr. Ruzaimi Md. Yusoff  
Consultant & Head of Department of Orthopaedics, Hospital Kajang

Dr. Shaari Mohamad Yatim  
Specialist & Head of Department of Rehabilitation, Hospital Serdang

Dr. Suhaimi Jaaffar  
Anaesthesiologist, Hospital Putrajaya

Dr. Ismaliza Ismail  
Infectious Disease Physician, Hospital Sg. Buloh

Dr. Gnanamalar John  
Assistant Director (Medical), Hospital Kuala Lumpur
Dr. Syamhanin Adnan  
Senior Clinical Pharmacist, Pharmacy Department, Hospital Kuala Lumpur

Dr. Fadzlinda Shaharuddin  
Senior Principal Assistant Director, Medico-Legal Section, Medical Practise Division, MoH

Dr. Mohd Suffian bin Mohd Dzakwan  
Senior Principal Assistant Director, Medical Care Quality Section, Medical Development Division, MoH

Dr. Khairulina Haileen bt Khalid  
Principal Assistant Director, Medical Care Quality Section, Medical Development Division, MoH

Dr. Ahmad Muzammil bin Abu Bakar  
Principal Assistant Director, Medical Care Quality Section, Medical Development Division, MoH

Dr. Affaf Azizan  
Principal Assistant Director, Medical Care Quality Section, Medical Development Division, MoH

Dr. Muhammed Faruqi Uzair bin Mohamed Sidek  
Principal Assistant Director, Medico-Legal Section, Medical Practise Division, MoH

Dr. Syazrah Aida bt Abd. Salam  
Medical Officer, Hospital Putrajaya

Dr. Aida bt Amir  
Medical Officer, Hospital Selayang

Mrs. Ong Su Hua  
Principal Assistant Director, Pharmaceutical Services Division, MoH

Mrs. Nazariah bt Haron  
Head of Pharmacy Department, Hospital Putrajaya

Mrs. Wan Rugayah bt Wan Salleh  
Nursing Matron, Hospital Kuala Lumpur

Mrs. Suhaily bt Othman  
Nursing Matron, Hospital Serdang
Mrs. Sharmila bt Mat Zain  
Nursing Sister, Medical Care Quality Section, Medical Development Division, MoH

Mrs. Marsita bt Hamzah  
Nursing Sister, Hospital Melaka

Mrs. Maznah bt Abd. Wahab  
Nursing Sister, Hospital Putrajaya

Mrs. Wan Rahayu bt Wan Hasan  
Nursing Sister, National Cancer Institute

Mr. Arun A/L Adi  
Medical Assistant, Hospital Kuala Lumpur
INTRODUCTION
INTRODUCTION TO THE COURSE

Patient Safety Unit
Medical Care Quality Section
Ministry of Health Malaysia
@ Secretariat, Patient Safety Council Malaysia

In Collaboration with:
Patient Safety Module Technical Committee

Introduction

• This course is intended to give an overview about important areas related to patient safety.
• It comprises of seven topics;
• 1. What is Patient Safety-the basic concept
• 2. Safe surgery
• 3. Effective communication to improve patient safety
• 4. Infection prevention and control
• 5. Antimicrobial resistance
• 6. Medication safety
• 7. Incident reporting and learning from error
• Patient safety is very important in clinical care because patient come to us to get better and rightly expect that they will not be harmed by the treatment we give to them.
• It is hoped that this course will give sufficient knowledge for junior healthcare professionals to practice safely.
Key Messages

• Patient safety is an absence of preventable harm during process of care

• Safe surgery checklist can prevent wrong surgery and unintended retained foreign body

• Ineffective communication among staff or between staff and patient may lead to incident/error

• Hand hygiene compliance is effective in preventing healthcare associated infection

Key Messages

• Inappropriate use of antibiotic can lead to antimicrobial resistance

• Patient safety incident need to be reported. We need to learn from error and prevent similar incident from happening

• Safe medicine administration involves
  √ Right Medicine
  √ Right Route
  √ Right Time
  √ Right Patient
  √ Right Dose

• Always remember that in medication safety, “simple mistake can be lethal”
Always remember that as a Houseman YOU have a big role to ensure your patient is safe.

Be a SAFE Doctor

Do no harm!!!

Acknowledgement

Advisor:
Datuk Dr Jeyaindran Tan Sri Sinnadurai
Dato’ Dr. Azman B. Abu Bakar
Dr Wan Mazlan B Mohamed Woorjdy
Datuk Dr Rohaizat B Hj Yon
Dr PAA Mohamed Nazir B Abdul Rahman

Technical Coordinator:
Dr. Nor’Aishah bt Abu Bakar
Dr. Mohd Suffian bin Mohd Dzakwan
Dr. Khairulina Haireen bt Khalid
Dr. Ahmad Muzammil bin Abu Bakar
Pn. Sharmila Mat Zain

Any enquires please contact:
Patient Safety Unit
Medical Care Quality Section
Medical Development Division
Ministry of Health
Tel: 03-88831180
Fax: 03-88831176

Website:
http://patientsafety.moh.gov.my/v2

*Thank you to those who have contributed in the development of this module.
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WHAT IS PATIENT SAFETY? THE BASIC CONCEPT
What Is Patient Safety?
The Basic Concept

Patient Safety Unit
Medical Care Quality Section
Ministry of Health Malaysia
@ Secretariat, Patient Safety Council Malaysia

In Collaboration with:
Patient Safety Module Technical Committee

Learning Objectives

• Understand the principal of Patient Safety

• Understand the burden of unsafe practice.

• Aware of common mistakes made by Junior Officers and the prevention.

• Understand the role of health practitioners in improving patient safety
Message From The Director General of Health Malaysia

“Patients and their families give great emphasis to the issue of “safety” when they seek healthcare. They come to us to get better and rightly expect that they will not be harmed by the treatment we give to them.”

(YBhg. Datuk Dr Noor Hisham Abdullah. Director General of Health Malaysia 1st National Patient Safety Campaign, Putrajaya 24th June 2013)

Wrong surgery performed - 5 CASES
Unintended retained foreign body - 32 CASES
Transfusion error (actual) – 64 CASES
Transfusion error (near miss) - 977 CASES
Medication error (actual) – 3,526 CASES
Medication error (near miss) - 248,307 CASES
Adult patient fall - 3,329 CASES
Paediatrics patient fall - 550 CASES

Source: Patient Safety Unit, Ministry of Health Malaysia 2016

Lessons Learnt From Our Real Incidents - Why Incident Occurred? The Human Factors

Lack of understanding on patient safety
Lack of “supervision”
Unclear “communication”
Failure to use check list/tools effectively
Failure to act despite “Red Flags”
Over work, fatigue, lapse of memory
Failure to learn from previous incident/error
Why Incident Happen
-Concept of “Unsafe Act” & “Unsafe Condition”?

Unsafe Act

Unsafe Condition

Illegible writing of symptoms

Look alike medications placed next to each other

ACCIDENT

Broken chair with sharp edges

Definition of Patient Safety

“Absence of preventable harm to a patient during process of health care” (WHO)
Examples of Patient Safety Incident

- Health care associated infection
- Wrong treatment /medication
- Incompatible blood transfused
- Wrong surgery
- Retained foreign body after surgery
- Patient fall in health care

Common Mistakes

1. **Not using 2-identifiers to verify patients’ identity**
   - Incomplete process of patient identification (e.g. only using patients’ first name to identify the patient)
   - Using bed number to identify patients

2. **Poor documentation**
   - Copy and paste
   - No date and time
   - No signature and stamp
   - Use of non-standard abbreviations

3. **Prescribing error**
   - Incorrect dose or frequency
   - Illegible handwriting
   - Use of trade name
   - No duration of prescription
   - No frequency of use
Documentation Issue
- Illegible Writing

“PROBLEMATIC” Prescription

Contoh preskripsi bermasalah

Tulisan tidak jelas

Menggunakan nama
“PROBLEMATIC” Prescription

Contoh preskripsi bermasalah

[Image of a problematic prescription]

Dose terlalu

Tiada durasi
Acceptable Prescription

4. Poor handling of specimens
   - Labeling the bottle prior to blood taking
   - Wrong container
   - Poor handling of sharps
   - “Gotong-royong haram” (Inappropriate team work)

5. Not understanding the consequences of their acts/learning from previous mistakes
   - GSH/ GXM specimen taking process
   - Short-cuts in work processes
   - Poor hand hygiene habits
   - Not referring to CPG

6. Ineffective communication
   - Not listening attentively during rounds
   - Learning from wrong traditions
What Do We Want To Achieve In Patient Safety?

- Do no harm to patients & prevent incident
- Deliver safe service & better quality of care
- Prevent / minimize medicolegal implication

13 Malaysian Patient Safety Goals

1. To Implement Clinical Governance
2. To Implement WHO’s 1st Global Patient Safety Challenge: “Clean Care Is Safer Care”
5. To Ensure The Safety of Transfusions of Blood And Blood Products
6. To Improve The Accuracy of Patient Identification
7. To Improve Medication Safety
8. To Improve Clinical Communication By Implementing A Critical Value Program
9. To Reduce Patient Fall
10. To Reduce The Incidence of Healthcare-Associated Pressure Ulcer
11. To Reduce Catheter-related Bloodstream Infection (CRBSI)
12. To Reduce Ventilator Associated Pneumonia (VAP)
13. To Implement The Patient Safety Incident Reporting And Learning System

MPSG aims to monitor the status of patient safety in Malaysia, both public and private sector.
What Can You Do To Achieve Malaysian Patient Safety Goals?

- Wash your hands – 5 moments in hand hygiene
- Use Safe Surgery Check List
- Identify correct patient - using 2 identifiers
- Follow Guideline/SOP
- Good Documentation
- Remember 5 Rs to ensure medication safety
- Report and learn from incident

HOW TO IMPROVE PATIENT SAFETY?

“First or above all... do no harm” (Hippocrates Oath)
Safety Equation

“SAFETY THINKING + SAFE PRACTICE = PATIENT SAFETY”

The Safety Thinking....

- Patient safety involves prevention.
- Think of safety at all times, safety is everyone’s business
- “Safe Practice Saves Lives”
- “Safety culture”, “Non blame culture”
- “System Approach”
- Learn from incident/error & share
- Emphasize & share right practice also
“SYSTEM APPROACH”
...Looking At All Possible Factors To Prevent Incident/Error

Management & Organization
Leadership, governance
Policy & standard
Resource, constrain
Safety culture & priorities

Work/Care Environment
Building, design
Physical environment
Equipment malfunction
Staffing
Education
Work load

Task / Technology
Protocols
Availability of information
Availability of equipment
LASA medication

Team Factor
Communication
Leadership & responsibility
Inadequate support by staff

Individual/Staff Factor
Competency
Fatigue, stress, lapse in concentration
Domestic Issues
Staff-patient relationship

Patient Factor
Co-morbidity
Difficulty in diagnosis
Physical factor
Personality

The Safe Practice....

• Learn, read, ask....HAVE SUFFICIENT KNOWLEDGE & SKILL

• Develop relationships with patients – KNOW YOUR PATIENT

• Practise evidence-based care... FOLLOW CPGs, PROTOCOLS, SOP

• Maintain continuity of care ... COMMUNICATE! COMMUNICATE COMMUNICATE... with patients, with team members

• DON’T TRY TO BE A HERO!!!...seek help if required
The Safe Practice….

• Understand the multiple factors involved in failures…
  HOW TO IMPROVE SYSTEM

• Avoid blaming when an error occurs….
  NO BLAMING GAME!!!

• Be aware of the importance of self-care….
  LOOK AFTER YOURSELF TOO!

• Act ethically every day……NO VIOLATION! NO ‘SHORT-CUTs”
  IF UNSURE…SEEK HELP!

DO’s and DON’Ts in Patient Safety

<table>
<thead>
<tr>
<th>DO’s</th>
<th>DON’Ts</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Wash your hands</td>
<td>• Learn from unauthorized sources</td>
</tr>
<tr>
<td>• Use 2-identifiers</td>
<td>(eg passed over notes)</td>
</tr>
<tr>
<td>• Use surgery checklist</td>
<td>• Use short cuts</td>
</tr>
<tr>
<td>• Follow Guideline</td>
<td>• “Copy &amp; Paste/ Re-Write” culture</td>
</tr>
<tr>
<td>• Document properly</td>
<td>• Use bed number to identify patient</td>
</tr>
<tr>
<td>• 5R in ensuring medication safety</td>
<td></td>
</tr>
<tr>
<td>• Learn from previous incidents</td>
<td></td>
</tr>
</tbody>
</table>
Key Take Home Message

“You or your loved ones might be the patient one day…only you can make our system safer.”

You can make the difference…

START NOW!!

PATIENT SAFETY

= “PLEASE DO NO HARM”
Acknowledgement

Dr. Nor ‘Aishah bt Abu Bakar
Dr. Mohd Suffian bin Mohd Dzakwan
Dr. Khairulina Haireen bt Khalid
Dr. Ahmad Muzammil bin Abu Bakar
Pn. Sharmila Mat Zain

Dr. (Mr.) Ruzaimi Md. Yusoff
Dr. Gnanamalar John
Dr. Syazrah Aida Abd Salam
KEY POINTS FOR POWER POINT PRESENTATION

Topic 1: What Is Patient Safety? The Basic Concept

Slide 2: Title of the topic

Slide 3: Learning objectives

Slide 4: Message from the Director General of Health Malaysia during his opening speech at 1st National Patient Safety Seminar 2013

Slide 5: Medical error and medical negligence have been highlighted in the media as one of the problem in healthcare.


Slide 7: Examples of human factors which lead to incident, based on real incidents that had happened in our healthcare facilities.

Slide 8: Patient safety incident or accident can happen when there is (1) An “Unsafe act” of the healthcare staff and/or (2) An “unsafe condition” (unsafe environment) in the healthcare. We need to improve both elements to prevent incident from happening.

Slide 9: Definition of Patient Safety by the World Health Organization

Slide 10: Examples of patient safety incidents

Slide 11: Examples of common mistakes made by junior healthcare staff

Slide 12: Common mistake: Illegible handwriting- can cause misunderstanding and lead to error

Slide 13: Common mistake: “Problematic” prescription

Slide 14: Common mistake: “Problematic” prescription

Slide 15: Common mistake: “Problematic” prescription

Slide 16: Example of good prescription written
Slide 17: Common mistake:
- Example - Gotong-royong haram (Inappropriate Team Work): At times few junior officers are involved in the process of blood taking of few patients to save time. One officer will fill in the request forms for all patients; one person will take blood of the patients and another officer will do the labelling only. This may lead to confusion, “mix up” of sample, wrong sampling, wrong labelling and error. The right practice is for one officer to complete the task of blood taking from A to Z for one individual patient. This has been practised because the junior officers may not understand the consequences of this inappropriate “short cut” which may jeopardize the safety of the patient. Hence patient safety education is very important.
- Ineffective communication is also another common problem which may lead to wrong treatment or wrong execution of management plan. For instance, not listening attentively during Ward Rounds with Senior officers or Consultant. Also “learn inappropriate practice” (such as the example mentioned earlier) from more senior officers.

Slide 18: Main aim in improving patient safety

Slide 19: Patient Safety Council of Malaysia has established 13 Malaysian Patient Safety Goals. This is implemented nationwide since June 2013 to outline priority areas in patient safety and monitor patient safety status in Malaysia. This need to be implemented in both public and private healthcare. Hospital with ICU has 13 goals, Hospital without ICU has 11 goals (all Goals but minus Goal 11 & Goal 12) and Clinic has 4 goals to achieve (Goal 1, 7, 9 and 13).

Slide 20: Junior officers can contribute in improving patient safety and implementing MPSG by:
1) Washing their hands at these 5 moments: Before touching patient, before conducting clean/aseptic procedure, after blood/body fluid exposure, after touching patient and after touching patient’s surrounding
2) Participate in the use of Safe Surgery Check List. (Please refer to the Safe Surgery Module for more information on this).
3) Identify correct patient by using TWO (2) IDENTIFIERS before conducting any procedure, giving medication, doing blood transfusion. Identifiers can be the “FULL NAME of the patient; RN (registration number); Identity Card Number; Passport Number; Date of Birth or Address. The healthcare staff need to use at least 2 identifiers to identify patient correctly. In the past, many incidents happened not because of complexity of the case of treatment but because of patients had not been identified correctly.
4) It is essential to follow Guidelines, CPGs, Protocols, Standard Operating Procedures in ensuring correct clinical management of patients and other aspect of safety.
5) Good documentation includes **accurate and complete information** on the patient’s history, clinical findings and management plan of patient. This is also important to ensure continuity of care and prevent misunderstanding/ miscommunication between various healthcare providers which may lead to wrong/ delayed treatment etc. Documentation is also essential for medico-legal purpose.

5) Error during administration of medication is one of the common problem in patient safety. Hence, an acronym “5 R” has been developed to remind healthcare staff about FIVE (5) important elements that need to be checked. These are **Right Patient, Right Dose, Right Medication, Right Route and Right Time**.

6) If incident happen, officer has the responsibility to report the incident. The investigation findings can be used to improve the current condition or practice and be shared with others to prevent similar incident.

**Slide 21**: Commitment to patient safety has long been incorporated in our Medical Oath...“First or above all... do no harm”. This is our promise to our patients, that we will not harm them.

**Slide 22**: In order to make it easier for the “new beginners” to understand and remember the simple concept of patient safety, this Patient Safety Equation was developed by Dr Nor’Aishah Abu Bakar, Senior Public Health Physician and the Head of Patient Safety Unit, Ministry of Health Malaysia. This was presented for the first time on the 21st April 2016 during Patient Safety Seminar for Medical Students in Ministry of Health Putrajaya.

What it means is in order to ensure patient safety, the healthcare staff must have this TWO important elements - 1) Safety Thinking and 2) Implement Safe Practice **Patient Safety Equation**: “SAFETY THINKING + SAFE PRACTISE = PATIENT SAFETY”

**Slide 23**: These are examples of “safety thinking”.

- It is important to understand that it is possible to prevent harm from occurring. Incident or medical error can be avoided with improvement of the system.
- Safety culture is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation’s health and safety management” (Safety HSE Books, 1993)
- Elaboration of System Approach is in the next slide
Slide 24: In preventing an incident or medical error from happening, we need to look at ALL POSSIBLE FACTORS and not just focus or “blame” specific staff and take action to that one particular staff. Hence, more comprehensive approach is required to improve the system. Based on London Protocol, these factors can be divided into:
1) Management and organisation
2) Work/Care environment
3) Task/technology
4) Team factor
5) Individual/staff factor
6) Patient factor
7) External factor- political, economic, regulatory

(*In many instances, the facility has no direct control of these factors)

We should look at all of these contributory factors to prevent future incidents. This is called systemic approach. When conducting Root Cause Analysis, all these factors need to be explored. Review of Incident Reports & RCA submitted to Patient Safety Unit showed that some tend to identify “patient factor” and “specific staff” as the main contributing factors to the incident. Hence, it is important to highlight here that other factors need to be looked into in order to improve the system.

Slide 25: These are examples of “safe practise”

Slide 26: These are examples of “safe practise” (continued)

Slide 27: Do’s and Don’ts in patient safety for junior healthcare staff

Slide 28 & 29: Key take home messages- Each individual plays an important role in improving patient safety. Each and everyone of us can make the difference. We should take the FIRST STEP NOW!
SAFE SURGERY
SAFE SURGERY

Patient Safety Unit
Medical Care Quality Section
Ministry of Health Malaysia
@ Secretariat, Patient Safety Council Malaysia

In Collaboration with:
Patient Safety Module Technical Committee

Learning Objectives

• Understand the importance of practicing safe surgery

• Knows how wrong surgery can happen

• Understand Safe Surgery Checklist
Surgery

• Refers to all operations done under general/ regional anaesthesia or local anaesthesia.

• Usually performed in the operation theatre by a team of doctors and nurses.

Why Is It Important?

250 million people are operated each year

• Surgical complications 3-16% = 7 million disabling complications
• Death rates 0.4-0.8% = 1 million deaths each year

50% are preventable by use of CHECKLIST
TYPES OF SURGICAL ERRORS AND PREVENTION STRATEGIES

Operating on the WRONG PATIENT

“There’s been some sort of mistake. He came to clean the windows.”
Operating on WRONG SITE

UNSAFE Anaesthesia

CHECK GA MACHINE
Prepare for Difficult Airway

Identify Patients At Risk

Prepare ‘Difficult Airway’ Equipment

Prepare for Blood Loss

Set 2 IV lines if blood loss expected > 500mls

Cross match blood if excess blood loss expected
Check For Allergy
Prevent Adverse Drug Reaction

Minimise Infection Risk

Prophylactic antibiotics should be given before making the skin incision
**Contribution to Errors**

**Surgery Scheduling Process**
- Ensuring correct patient on list

**In The OT**
- Distraction
- Rushing for time
- Improper passing-over

**Pre-operative Processes**
- Not checking patient’s particulars
- Not marking operative site
- Not asking about allergy
- Not checking latest x-rays

**Not using the Checklist effectively** (e.g.: Ticking without checking)

**Organizational Culture**
- Poor example by seniors
- Staff afraid to speak up
- Lack of awareness on errors

---

**MALAYSIA’S STATISTICS**
## Surgical Volume/ Number of Surgeries In MoH Hospitals (2010–2014)

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Surgeries</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>913 256</td>
</tr>
<tr>
<td>2011</td>
<td>940 193</td>
</tr>
<tr>
<td>2012</td>
<td>1,038 792</td>
</tr>
<tr>
<td>2013</td>
<td>1,032 894</td>
</tr>
<tr>
<td>2014</td>
<td>1,052 116</td>
</tr>
</tbody>
</table>

Health Informatics Centre, MoH

## PERIOPERATIVE MORTALITY (July 2012 – June 2014)

- No. of anaesthetics performed/ operations: 1,104,258
- No. of reported death: 6,437
- Crude mortality rate: 0.58%

POMR Committee 2016
### Wrong Surgery Performed

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>1</td>
<td>Wrong Side Ankle Arthroscopy</td>
</tr>
<tr>
<td>2014</td>
<td>1</td>
<td>Removal of mass over axillary tail instead of the intended breast lump</td>
</tr>
</tbody>
</table>
| 2015 | 4     | - Wrong side Craniotomy  
- Unintended Oophorectomy instead of planned appendectomy  
- Wrong Site Breast Lumpectomy  
- Haemorrhoid Rubber banding instead of Excision biopsy of lump |

MPSG 2016

### Unintended Retained Foreign Body

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
<th>Hospitals Involving</th>
</tr>
</thead>
</table>
| 2013 | 13    | MoH: 8  
Private: 2  
ATM: 1 |
| 2014 | 17    | MoH: 7  
Private: 4 |
| 2015 | 15    | MoH: 10  
Private: 1 |

MPSG 2016
Retained abdominal pack/ gauze after laparotomy

Retained ‘bulldog clamp’ post Coronary Artery Bypass operation

Retained tampon after ERPOC

Retained end-catch bag post laparoscopic surgery causing left basal lung abscess

SAFE SURGERY CHECKLIST AND PERIOPERATIVE VISITS
Component of Surgical Checklist

1. Pre operative Checklist
2. Operating Team Checklist
3. Swab Count Form
4. Post Operative Checklist (Pre – discharge Checklist)

Safer Surgery through Better Communication

Page 1
PRE-OPERATIVE CHECK (by Staff Nurse)

In the ward:
before sending the case to OT

In the OT:
At the reception when receiving the patient
At the reception when accepting the patient, check:
- Correct patient
- Correct site
- Consent

Operative SITE MARKING

Page 3
SWAB COUNT FORM (for use by scrub nurse & circulating nurse)
**PRE-DISCHARGE CHECK**

Done at recovery bay by:

1. Recovery Room Nurse
2. Ward Nurse (during transfer of patient to the ward)

---

<table>
<thead>
<tr>
<th>Pre Discharge Check</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen</td>
</tr>
</tbody>
</table>

**Handing over of specimen from OR > Recovery > Ward staff**
OPERATING TEAM CHECKLIST

Check in OT

SIGN IN:
Anaesthetist checks patient

Write on the “white board”

TIME OUT:
• Before incision
• Introduce team member
• Anaesthetist, surgeon and scrub nurse do another check before starting

Sign In

Anaesthetist checks patient
## White Board Contents

<table>
<thead>
<tr>
<th>White Board Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient’s name</td>
</tr>
<tr>
<td>Diagnosis</td>
</tr>
<tr>
<td>Proposed operation</td>
</tr>
<tr>
<td>Site of operation</td>
</tr>
<tr>
<td>Team members’ name:</td>
</tr>
<tr>
<td>Surgeon/ Anaesthetist/</td>
</tr>
<tr>
<td>MO/ Scrub Nurse/</td>
</tr>
<tr>
<td>Circulating Nurse/</td>
</tr>
<tr>
<td>GA Nurse/ PPK/ Radiographer</td>
</tr>
<tr>
<td>Special instruction/</td>
</tr>
<tr>
<td>reminders: position/</td>
</tr>
<tr>
<td>antibiotics/ implants/</td>
</tr>
<tr>
<td>tourniquet time</td>
</tr>
</tbody>
</table>

## INTRA-OP COMMUNICATIONS

- **Check in**
  - Inform team before starting operation

- **Periodic Updates**
  - Anaesthetist and surgeon inform each other about patient’s condition during operation

- **Shout it out**
  - Inform clearly of critical events eg. “One pack IN” “One pack OUT”

- **Pre Closure Disclosure**
  - Inform team members of finishing the operation soon
Intra-Op Communication

‘Shout out’

One Pack In!

WE ARE FINISHING SOON,
Can call for next case

Pre Closure Disclosure

Inform team
that Final
SWAB count
is correct

‘Sign Out’

Specimen are labelled
correctly
Informing Relatives

- Informing of progress – when operation is prolonged
- Showing of specimen or photo

---

IMPROVING COMMUNICATION – Preoperative Visit

- Meeting patients and relatives
- Final check of patient and current condition including latest investigations
- Answering questions
IMPROVING COMMUNICATION – Postoperative Visit

• Post operative review of patient’s condition
• Meeting relatives
• Answering questions related to the surgery

THE ROLE OF JUNIOR HEALTH CARE PROFESSIONAL IN ENSURING SAFE SURGERY
1. Do Preoperative Visits

- Check if latest Ix OK
- Answer Q
- Check consent

“Personally, I wouldn’t have signed it.”

2. Mark site of surgery

Use permanent marker
Confirm with patient
3. Fill-Up WHITE BOARD
Before Surgery

Name of patient
Name of procedure
Names of staff

4. Antibiotics & X-Rays

Prepare prophylactic antibiotics (in selected cases)
Make sure latest x-rays available
5. Conduct/ Participate in “TIME OUT”

PARTICIPATE IN “TIME OUT”

Final check before incision.

6. Fill Up Request For Hpe

Fill-up HPE Request Form correctly

LABEL SPECIMENS CORRECTLY
7. Inform Relatives When Surgery Ends

• Informing progress if surgery prolonged or delayed

• Show specimen or photo of specimen

8. Carry Out Post Operative Visit

• Post operative review of patient’s condition
• Meeting relatives
• Answering questions related to the surgery
When Doing Surgery

- Identify patient correctly
- Know your patient
- Ensure correct procedure & side/site
- Observe and understand procedure before performing
- Perform procedure under supervision

- Know your limitation and get assistance if necessary
- If unexpected situation occurred/something went wrong CALL FOR HELP IMMEDIATELY
- You must inform your superior if you observe unsafe practice/unsafe situations

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YBhg. Dato’ Dr. Abd Jamil Abdullah
Dr. Suhaimi Jaafar
Pn. Marsita Hamzah
Slide 1 : Title of the topic

Slide 2 : Learning objectives

Slide 3 : Definition of surgery

Slide 4 : Safe surgery is important because millions of people undergo surgery. Surgical complications and death may occur. 50% of these can be prevented by using Safe Surgery Checklist and practise safe surgery.

Slide 5 : Title- Types of surgical errors and the prevention strategies

Slide 6 : Type of surgical error: operate on the wrong patient

Slide 7 : Type of surgical error: operate on the wrong site

Slide 8 : Type of surgical problem: Unsafe anaesthesia. In order to prevent unsafe anaesthesia, we need to practise safe anaesthesia. Checking the function of GA machine before giving anaesthesia is included as part of safe surgery checklist. It is also important to check the function of the pulse oximeter, status of patient’s allergy, risk of airway/aspiration and risk of high blood loss before giving anaesthesia.

Slide 9 : In order to prevent complication during surgery, it is necessary to prepare on the possibility of difficult airway. The anaesthetist need to identify patient who is at risk of difficult airway and prepare the measures to manage difficult airway such as preparation of the ‘difficult airway’ equipment

Slide 10 : If the surgery has the risk of blood loss more than 500mls, 2 large bore intravenous cannula need to be set and blood need to be cross-matched

Slide 11 : Check for patient’s drug allergy to prevent adverse drug reaction

Slide 12 : To minimise the risk of infection, prophylactic antibiotics should be given before making skin incision

Slide 13 : Contributory factors to unsafe surgery include:
1) Not using the checklist effectively - Example is “ticking the box” on the checklist without conducting actual “checking”
2) Surgery scheduling process not systematic - Surgery cancellation or rescheduling without close and systematic monitoring may lead to surgical error.
3) Inefficient or inadequate pre-operative process may lead to surgical error.
4) Unsafe or dysfunctional organizational culture may lead to surgical error.
Slide 14: Title- Malaysia's statistic related to surgery

Slide 15: The volume of surgeries conducted in Ministry of Health Malaysia hospitals from 2010-2014 increased every year.

Slide 16: Perioperative mortality data from July 2012- June 2014 showed that there was 0.58% crude mortality rate from total of 1,104,258 surgeries conducted. (Source: Perioperative Mortality Review (POMR) Committee, MOH 2016)

Slide 17: Malaysian Patient Safety Goals statistics from 2013 to 2015 showed that wrong surgery still happened, although the target is zero. (Source: Patient Safety Unit, MOH 2016)

Slide 18: Malaysian Patient Safety Goals statistics from 2013 to 2015 showed that incident of retained foreign body still happened, although the target is zero. (Source: Patient Safety Unit, MOH 2016)

Slide 19: Examples of retained foreign body

Slide 20: Title- Safe Surgery Saves Lives Checklist and Peri-operative Visit

Slide 21: Operation theatre is a very complex environment because it involves many operating rooms, multiple level of staff and multiple disciplines. Furthermore the patients may look similar when they are wearing surgical attire and unconscious. Hence, a systematic and comprehensive “checking system” is essential to ensure adequate preparation of the surgery, correct and safe surgery is being conducted to the right patient. This is why, “Safe Surgery Checklist” was developed by WHO. Ministry of Health Malaysia has adopted this checklist and incorporate other related documents to produce 4-pages Safe Surgery Checklist in 2009.

There are 4 components of Ministry of Health Malaysia Safe Surgery Saves Lives (SSSL) Checklist.

Slide 22: Page 1 of the Checklist: Peri-Operative Checklist. Checking is done by the staff nurse 1) in the ward and 2) during patient reception in the OT

Slide 23: The nurse will check the identity of the patient, whether the patient is the correct patient and making sure the site of the surgery is correct. They will also check whether the operative site has been marked or not. They will also check the consent, whether it is signed by the patient and the form is complete.

Slide 24: Page 3: Swab Count Form, is filled up by the scrub nurse & circulating nurse prior to the completion of surgery. This form is important in ensuring the swabs and instruments used are not left behind within the cavity of the patient (i.e preventing unintended retained foreign body).

Slide 25: Page 4: Pre-Discharge Checklist, is filled up by the recovery room nurse and ward nurse. This checklist ensure that the patient is stable enough to be transferred to the ward following the operation

Slide 26: Pre-Discharge Checklist, will also ensure that the operated specimen is handled correctly (i.e correct labelling etc)
Slide 27: Page 2 of the checklist: this is where the house officer should be involved. The house officer needs to:
1. Identify the patient correctly at the operation room
2. Write on the ‘white board’- Patient’s name, diagnosis, proposed operation, site of operation, name of team members, special instructions etc
3. Involved in the ‘time out’ together with the Operating Surgeon and other team members.

Slide 28: The activities involved during ‘sign in’, normally conducted by anaesthetist together with the paramedics.

Slide 29: The content of the white board that should be written.

Slide 30: The MoH SSSL program has incorporated intraoperative communication as one of the main component in the checklist. It emphasizes the importance of communication between the team members during operation. It ensures that each of the team member knows what's going on & update of the operation. The surgeon should inform the anaesthetist of the progress of the surgery. Similarly, the anaesthetist should update the surgeon about the patient’s vital signs & condition while the surgery is being conducted.
Main component of intra-operative communication includes:
• Check in
• Periodic updates
• Shout it out
• Pre closure disclosure

Slide 31: Examples of “shout out” and “pre closure disclosure” communication

Slide 32: This is also called debriefing. The surgeon summarises the operative findings and procedure. He will verify what specimen will be sent and how it should be labelled. The anaesthetist will discuss any special post-operative instructions with the team. The scrub nurse will inform the team about the swab count. Proper swab count is very important to prevent incident of unintended retained foreign body. Any problem need to be reported to the surgeon immediately and openly.

Slide 33: Informing the relatives about the progress of surgery is very important especially when the surgery needs to be prolonged and also after the surgery is completed. Some may show the specimen of anatomical structure or related picture to the relatives. This usually enhances communication between the relatives and the healthcare staff.

Slide 34: It is best for the surgeon to review the patient (and explain to patient/relatives) about the surgery and answer any questions before the operation is conducted. The surgeon also need to make sure that everything is ready and the patient's condition is optimum to go through surgery. It is good for House officer to follow the Operating Surgeon and learn about the process as well as assisting the Surgeon when necessary.

Slide 35: Post-operative visit is done after the operation. The surgeon should make a post op visit to review his patient's condition after the surgery and answer any queries that the patient might have.
Slide 36: Title - The Role Of Junior Healthcare Professionals In Ensuring Safe Surgery

Slide 37: Role of a house officer: Conduct a pre-op visit. During the visit - verify the patient's identity, review the latest investigations and check the consent whether it has been completed.

Slide 38: Role of a house officer: Make sure that the site of operation is marked correctly. Confirm with the patient and ask if unsure.

Slide 39: Role of a house officer: In the OT - Fill up the white board

Slide 40: Role of a house officer: Prepare prophylaxis antibiotics (if indicated) and make sure latest x-rays, radiological imaging films are available in the OT

Slide 41: Role of a house officer: Participate in “time out”

Slide 42: Role of a house officer: Fill up the details of Histo-Pathological Examination Form correctly & label the specimen correctly

Slide 43: Role of a house officer: Inform the relatives when surgery ends especially if the surgery is prolonged or delayed. However, this should not be done by the H.O ALONE if there is a complication during the surgery (especially if it is a potential medicolegal cases).

Slide 44: Role of a house officer: Make a post op visit to review the patient's condition, his vital signs, pain score etc

Slide 45: Some take home messages to ensure safe surgery
EFFECTIVE COMMUNICATION TO IMPROVE PATIENT SAFETY
Effective Communication (EC) To Improve Patient Safety

Patient Safety Unit
Medical Care Quality Section
Ministry of Health Malaysia
@ Secretariat, Patient Safety Council Malaysia

In Collaboration with:
Patient Safety Module Technical Committee

Learning Objectives

• Understand the importance of EC.
• Learn the basic concept of EC & its barrier.
• Understand how EC can improve Patient Safety
Why Communication in Healthcare is Important?

Communication is a root cause of nearly 70% of the event reported to the JCHAO from 1995 - 2005

Failure to communicate safety concern and poor collaboration led to incidents such as medication error, diagnostic error and wrong surgeries (Joint Commission on Accreditation of Healthcare Organizations, JCHAO)

Level of Communication Involving Junior Health Care Professionals

- Medical Officers
- Specialists
- Consultants / HODs
- Nurses / Sisters / Matrons
- Medical Assistant
- Other Supporting Medical Staffs
- Patients & Families
Communication Failure…

“Hmm..is the dose 50mg or 500mg?…oh well…I’ll just give either one. Someone will correct me. I don’t want to look stupid in front of the M.O”

“That’s not En. Ramli’s X-ray but I’m too scared to tell the specialist because I will get scolded”

“I remembered the surgeon left a gauze in the patient’s abdomen but I guess he remembers it. Anyway, it’s not my problem”

Specialist : “ Start the patient on T. Carbimazole 20mg OD “
H.O : “Did he say Carbamazepine or Carbimazole?”

Basic Communication Concept

Effective Communication (EC) Loop

Message to send Encode Message medium Decode Message receiver

Communicate Sender Receiver Feedback
Ways of Communicating

Despite having various modalities of communication, we still have problem to communicate effectively.

WHY???

- Case notes
- Documents
- Photos
- Presentation
- Body language and dressing
- Social media (Whatsapp/FB)

Barrier to an EC

Personal factor
- Language
- Attitude
- Knowledge
- Fatigue / Stress

Environment factor
- Noisy
- Cultural issue
- Weather
- Disruption
Steps to EC in Clinical Setting

- Assert CONCERNS if needed
- Actively LISTEN to response
- CONCISELY describe the problem
- CLARIFY the problem & gather data / facts

Effective Communication

**Verbal**
- Clear
- Brief and concise
- Timely
- Respectful
- Assertive

**Non-Verbal**
- Eye contact
- Posture
- Dressing
- Facial expression
- Confident

ASK IF UNCLEAR
Situations Requires EC

Seek Consultation/ Referring case / Informing case

- Passing over cases
- Informing concerns / red flags
- Taking consents
- Breaking bad news
- Communicating error

Seek Consultation/Referring Case/Informing Case

Patient Safety Assertion Model

Get person’s attention
Reach decision
Express concern
Propose action
State problem
Seek Consultation/Referring Case/Informing Case

<table>
<thead>
<tr>
<th>I</th>
<th>S</th>
<th>B</th>
<th>A</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Your name &amp; role</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Situation</td>
<td>What is happening with the patient?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Background</td>
<td>What is the clinical background?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment</td>
<td>What do I think the problem is?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommendation</td>
<td>What action would I recommend?</td>
<td></td>
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</table>

Example of Inappropriate Communication Between Doctors

Doctor, I have a 29-year-old male in our ED. He has had abdominal pain for 3 days and was being treated by G.P previously. Since he wasn’t getting any better, his wife drove him here from Chini to Pekan with their two kids. He waited in the ED for an hour and a half before we saw him. He was then started on IV drip for half hour in the ED while waiting for blood investigation. The G.P treated him with T. Ranitidine for the past two days. I would like you to review this patient now as we think this is an appendicitis.
Communicating Patient Safety Incident for Junior Health Care Professional

- **Incident** need to be communicated through proper channel e.g. Incident Reporting System
- It should **not be kept silent**
- Your **immediate boss must know** soonest possible
- **Do not handle this matter on your own.**
- **Involve senior officer in charge** in managing this matter, especially when communicating with patient / family members in this difficult situation
- **Show empathy** to patient & family members
- **Document the communication** that take place
Take Home Messages

“Treat people the way you want to be treated. Talk to people the way you want to be talked to…”

Communication is vital in Patient Safety!

Acknowledgement

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YBhg. Dato’ Dr Zamyn Zuki Tan Sri Dato’ Mohd Zuki
Dr. Saari Mohamad Yatim
En. Arun A/L Adi
Pn. Maznah Abd Wahab
KEY POINTS FOR
POWER POINT PRESENTATION
Topic 3 : Effective Communication (EC)
To Improve Patient Safety

Slide 1 : (Title Slide) Effective Communication (EC) To Improve Patient Safety

Slide 2 : Learning Objectives:
1. Understand the importance of Effective Communication.
2. Learn the basic concept of Effective Communication & its barrier.
3. Understand how Effective Communication can improve Patient Safety.

Slide 3 : Slide to illustrate importance of communication in healthcare (Source: Joint Commission on Accreditation of Healthcare Organizations, JCHAO) Communication is very important. It is a root cause of nearly 70% of the event reported to the JCHAO from 1995 – 2005 Failure to communicate safety concern and poor collaboration led to incidents such as medication error, diagnostic error and wrong surgeries.

Slide 4 : Slide to illustrate various people involves in the communication with Junior Health Care Professionals.

Slide 5 : Examples of communication failure involving Junior Health Care Professional that might occur during patient care.

Slide 6 : i) Basic communication process
   ii) Effective communication involves sending the message, receiving and interpreting it and finally giving feedback - The Effective Communication Loop.

Slide 7 : Slide to illustrate many ways of communicating in healthcare With the advancement in technology, various new modalities of communication emerged. However, problem in effective communication remains a dilemma.

Slide 8 : Examples of Personal and Environmental Factors that act as barriers to an Effective Communication.

Slide 9 : Steps toward Effective Communication in clinical setting:
1. Clarify the problem & gather data/facts
2. Concisely describe the problem
3. Actively Listen to response
4. Assert Concerns if needed

Slide 10 : Verbal & Non-Verbal components in Effective Communication
To communicate effectively, the message need to be:
1. Clear
2. Brief & concise (avoid unnecessary information)
3. Timely (at appropriate time & in the same time being prompt if it is urgent)
4. Respectful (avoid using aggressive or hurtful comments – be professional)
5. Assertive (avoid passive-aggressive comments)
   The person relaying the information / message need to show proper non-verbal cues
during communication.
Finally, remember to **ASK IF YOU ARE STILL UNCLEAR.**

**Slide 11**: Illustrate situations requiring Effective Communication. In this presentation, focus
will be given to effective communication in **seeking consultation / referring case / informing**
**other healthcare staff on a new case and passing over cases to another**

**Slide 12**: The **Patient Safety Assertion Model** is an example of a tool developed to improve
effective communication in **seeking consultation / referring case or informing**
cases. Frequently, Junior Health Care Professional forgets to propose an action after
stating the problem.

**Slide 13**: The **ISBAR TOOL**
It is a tool developed to help in **seeking consultation / referring case or informing**
cases. This tool is widely used by Health Care facilities worldwide.

- I - **Introduction**: Your name & role
- S - **Situation**: What is happening with the patient?
- B - **Background**: What is the clinical background?
- A - **Assessment**: What do I think the problem is?
- R - **Recommendation**: What action would I recommend?

(Show a video on this – **Slide 15**)

**Slide 14**: Example of Inappropriate Communication Between Doctors.
In this example we can see that the person relaying the information is not
communicating effectively and missed many important information regarding the
case.

**Slide 15**: Video to illustrate Effective Communication in:
1. Seeking consultation (House Officer to Specialist)
2. Passing Over Case (good & bad example)
3. Communication with other Health Care Provider (good & bad example)

**Slide 16**: In communicating Patient Safety Incident, the important points that need to be
remembered are:
- Incident need to be communicated through proper channel e.g. Incident Reporting System.
- **Incident should not be kept silent**
- **Your immediate boss must know about the incident soonest possible**
- **Do not handle this matter on your own.**
- Involve more senior officer in charge in managing this matter, especially when
  communicating with patient / family members
- Show empathy to patient & family members
- Document the communication that take place (this is important, so we can learn
  from previous incident and improve as well as medico-legal purpose).

**Slide 17**: Take home messages: Treat people the way you want to be treated. Talk to people the
way you want to be talked to...“Communication is vital in Patient Safety!”
INFECTION
PREVENTION & CONTROL
PART 1: INFECTION PREVENTION & CONTROL

- Healthcare Associated Infection (HCAI)
- Cause of Infection and Transmission Route
- Hand Hygiene
- Standard Precaution
- Transmission Based Precaution
- Needle Stick Injury
- HCAI Preventive Bundle
OBJECTIVES

Demonstrate the devastating effects of inadequate infection prevention & control in health-care settings

Apply required knowledge in preventing and/or minimizing infection

Perform appropriate behaviors required to prevent health care associated infections

Definition of Health Care Associated Infection (HCAI)

What it is HCAI?

Infection acquired in a hospital by a patient who was admitted for a reason other than that infection and/or

Infection occurring in a patient in a hospital or other facility in whom the infection was not (latently) present at admission.

This includes infections that are acquired in the hospital, but appear only after discharge, as well as occupational infections among health-care staff.
Impact of Healthcare Associated Infection

If you are admitted to a hospital, you have a 5% chance of contracting an HAI

1.7 million people per year get an infection during a hospital stay

98,987 people in the U.S. die annually from HAI

HAIs kill more people each year than Breast Cancer and Prostate Cancer combined.

HAIs kill more people each year than Breast Cancer and Prostate Cancer combined.

PNEUMONIA
Mechanical ventilation, Aspiration and Nasogastric tube
• Central nervous system depressants
• Antibiotics and anti-acids
• Prolonged health-care facilities stay
• Malnutrition
• Advanced age
• Surgery
• Immunodeficiency

37%

BLOOD STREAM INFECTIONS
Vascular catheter
Neonatal age
Critical care
Severe underlying disease
Neutropenia
Immunodeficiency
New invasive technologies
Lack of training and supervision

30%

SURGICAL SITE INFECTIONS
Inadequate antibiotic prophylaxis
Incorrect surgical skin preparation
Inappropriate wound care
• Surgical intervention duration
• Type of wound
• Poor surgical asepsis
• Diabetes
• Nutritional state
• Immunodeficiency
• Lack of training and supervision

17%

URINARY TRACT INFECTIONS
Urinary catheter
Urinary invasive procedures
Advanced age
Severe underlying disease
Urolithiasis
Pregnancy
Diabetes

7%

MOST FREQUENT SITES OF INFECTION AND THEIR RISK FACTORS
(Distribution based on MOH data)
CAUSES OF INFECTION AND TRANSMISSION ROUTE

- Direct contact transmission
- Indirect transmission
- Droplet transmission
- Airborne transmission
- Percutaneous exposure

5 WAYS TO PREVENT HCAI

- Environmental Cleanliness
  - Increased levels of cleaning during outbreaks
- Hand Hygiene
  - Hand washing
  - Hand rubbing
- Sterilization/disinfection of equipment, devices & instruments
- ‘Single use’ medical devices
- PPEs
  - Gloves
  - Goggle/FaceShield
  - Gown & Mask
THE “MY 5 MOMENTS FOR HAND HYGIENE” APPROACH

How to handrub?

1. Wet hands with soap and water.
2. Clean nails with soap and water.
3. Scrub hands, including fingers.
4. Rinse hands with water.
5. Dry hands with a single-use towel.
STANDARD PRECAUTIONS

• Set of infection control practices used to prevent transmission of diseases that can be acquired by contact with blood, body fluids, non-intact skin (including rashes), and mucous membranes.

• Meant to reduce risk of transmission of bloodborne and other pathogens from both recognized and unrecognized sources.
ELEMENT OF STANDARD PRECAUTIONS

1. Hand Hygiene
2. Wearing gloves
3. Mask, eye protection and face shield
4. Waste Management
5. Wearing gown or apron

6. Needles and other sharps
7. Patient care equipment
8. Management of spills
9. Respiratory Hygiene
10. Linen Management

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Patient Safety Awareness Course For Junior Health Care Professional | Ministry of Health Malaysia
TRANSMISSION-BASED PRECAUTIONS

- When treating patients who are known or suspected of being infected or colonized with infectious agents.

- Applied according to the clinical syndrome and the likely etiologic agents, and then modified based on test results.

- These precaution are to be implemented in conjunction with standard precaution

TYPE OF TRANSMISSION-BASED PRECAUTIONS

1. Herpes Zoster
2. Measles
3. Mycobacterium Tuberculosis
4. Varicella Pneumonia
TYPE OF TRANSMISSION-BASED PRECAUTIONS

2

• Diphtheria - Pharyngeal
• Epiglotitis - Haemophilus Influenza
• Meningitis (haemophilus influenza, meningococcal, fungal)
• Pneumonia
• Mumps
• Influenza
• MersCoV

3

• Herpes Simplex
• Herpes Zoster
• Methycillin-Resistance Staphylococcus Aureus (MRSA)
• Extended Spectrum Beta Lactamase (ESBL)
• Carbapenem Resistance Enterobacteriaceae (CRE)
• Streptococcal Disease – skin, wound, burns
• Typhoid (Salmonella Typhii)
• Varicella Zoster
Role of Junior Doctors

1. Practice standard precaution including Hand Hygiene
2. Be immunized against Hepatitis B
3. Take appropriate precaution when you are ill to avoid infecting patients' contaminating environment
4. Act as role model for good clinical practice and patient safety and encourage others to use appropriate precautions

5. Know What To Do After Needle Stick/Sharp/Splash Injury

- Wash the injury site under running water
- DO NOT SQUEEZE – causing hyperaemia and inflammation
- If splash injury from body fluids or blood to wash under running water (i.e. eyes, nostrils, eczematous skin)
HCAI PREVENTIVE CARE BUNDLE

Ventilator Associated Pneumonia Care Bundle

Catheter Associated UTI Care Bundle

Surgical Site Infection Care Bundle

Central Venous Catheter Care Bundle

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KEY POINTS FOR
POWER POINT PRESENTATION

Topic 4 : Infection Control & Prevention

Slide 1 : Title
Slide 2 : Content
Slide 3 : Learning objectives
Slide 4 : Definition of healthcare associated infection
Slide 5 : This slide illustrates the burden of the problem and the impact of healthcare associated infection (HCAI)- increase length of stay, increase cost of treatment, increase mortality.
Slide 6 : This slide illustrates the most frequent type of HCAI (Healthcare Associated Infection) which are pneumonia, blood stream infection, surgical site infections, urinary tract infections and their risk factors. Most of these are caused by lack of hand hygiene practise among healthcare staff
Slide 7 : There are 5 routes of infection transmissions in HCAI
Slide 8 : There are 5 ways to prevent HCAIs
Slide 9 : This slide illustrates “My 5 moments for Hand Hygiene” approach. There are 5 situations in which one needs to practise hand hygiene.
Slide 10 : The steps of handrub & its indication
Slide 11 : The steps of handwashing & its indication
Slide 12 : Definition of Standard precautions - A set of infection control practices used to prevent transmission of diseases that can be acquired by contact with blood, body fluids, non-intact skin (including rashes), and mucous membranes. It is designed to reduce the risk of transmission of microorganism from sources of infection in the hospital.
Slide 13 & 14 : This slide illustrates elements of standard precautions.
Slide 15 : Transmission-based precautions is applicable when treating patients who are known or suspected of being infected or colonized with infectious agent. It is based on a suspected or confirmed clinical syndrome, a specific diagnosis, or colonization or infection with epidemiologically important organisms and to be implemented in conjunction with standard precautions. It is divided into 3 categories: airborne, droplet & contact precaution
Slide 16: Airborne precaution & its pathogen (the pathogen that transmit through airborne)

Slide 17: Droplet precaution & its pathogen (the pathogen that transmit through droplet)

Slide 18: Contact precaution & its pathogen (the pathogen that transmit through close contact)

Slide 19: The role of Junior Healthcare Professionals in preventing HCAIs - Four main roles.

Slide 20: Action necessary following sharp injury & splash injury

Slide 21: In order to prevent common HCAI, sets of preventive measure, known as “bundle” can be implemented. Examples are: VAP care bundle; CAUTI care bundle, SSI care bundle and CVC Care bundle.
5

ANTIMICROBIAL RESISTANCE
PART 2: Antimicrobial Resistance (AMR)

☐ What is AMR?
☐ Why is it a global concern?
☐ How does it happen?
☐ What can we do to slow down the resistance?
☐ Antimicrobial Stewardship Programme
OBJECTIVES

Explain the concept of AMR, the burden of the problem and its consequences

Educate on the strategies to contain antimicrobial resistance

Explain the role of Junior Doctors in preventing AMR

What are Antimicrobials?

• Antibacterials (antibiotics)
• Antifungals
• Antivirals
• Antimalarials
What is Antimicrobial Resistance (AMR)?

• The ability of bacteria to resist the effects of an antimicrobial.

• It occurs when bacteria change in a way that reduce the effectiveness of antimicrobial.

Why is it a global concern?

‘Dangerously high’ antibiotic resistance levels worldwide:

GENEVA (Switzerland) – WHO Director General, Margaret Chan.

Overuse and misuse of antibiotics speed up the resistance.

Superbug haunts all hospitals & ICU’s all over the world.

The world is heading to post-antibiotic era where all common infections will once again kill.

(Results from multi-country survey on antibiotic use and antibiotic resistance)
HISTORY

- Penicillin discovered: 1929
- Penicillin resistance: early 1940’s

“The thoughtless person playing with penicillin treatment is morally responsible for the death of the man who succumbs to infection with the penicillin-resistant organism”

Alexander Fleming (1881 – 1955)

Contributing factors and consequences of AMR

The main contributing factors:
- Inappropriate antibiotics use by clinicians\(^7,\,8,\,9\)
- Poor infection control policies\(^10\)

AMR leads to increased:
- Mortality\(^4,\,5,\,6\)
- length of hospital stay (LOS)
- Cost\(^7\)

---

Projections of Death Attributable to Antimicrobial Resistance by 2050

Source: Review On AntiMicrobial Resistance 2014

Antimicrobial Resistance - How?

Inappropriate usage of antibiotics:

• Given when they are not needed
• Wrong antibiotic is given to treat infection
• Broad spectrum antibiotic e.g. Carbapenem or Vancomycin is used to treat very susceptible bacteria
• Given at the wrong dose
• Continued when no longer necessary
**UPERBUG - MDRO**

Methicillin Resistance Staphylococcus Aureus (MRSA)
Escherichia coli ESBL
Klebsiella pneumonia ESBL
(ESBL: Extended Spectrum Beta Lactamase)
Carbapenem resistant Enterobacteriaceae (CRE)
Multidrug resistant (MDR)
Pseudomonas aeruginosa
MDR Acinetobacter baumannii
Colistin resistance organism

- Vancomycin
- Carbapenem
- Colistin (Polymixin E)
- NONE!

**Strategies to Contain Antimicrobial Resistance (AMR)**

- Rational drug use and regulation
- Infection prevention
- Research and development
- Surveillance
- Clean animal husbandry, agriculture, aquaculture
ANTIMICROBIAL STEWARDSHIP PROGRAMME

Promotes appropriate use of antimicrobials:

- Right type
- Right dose
- Right time
- Right duration
- Right route of administration

National Antibiotic Guideline – updated 2015
THE ROLE OF JUNIOR DOCTORS

1. Diagnosis
2. Cultures
3. Document indication of antibiotic initiation
4. After 48 Hours:
   • Trace cultures
   • What to do with the antibiotics

THE ROLE OF JUNIOR DOCTORS
- Diagnosis -

1. Good history taking
2. Physical examination
3. Allergic drug history

? INFECTION OR NOT INFECTION
THE ROLE OF JUNIOR DOCTORS
-Cultures-

1. Please do before initiation of antibiotics

2. Please do it URGENTLY if antibiotics need to be started ASAP in critically ill patients
THE ROLE OF JUNIOR DOCTORS
-Cultures-

3. Appropriate samples from possible infected sites:
   • Pneumonia – Sputum C&S / Tracheal aspirate C&S
   • Urinary tract infection – Urine FEME / C&S
   • Abscess – Pus C&S
   • Wound infection – Wound swab C&S
   • Blood stream infection – Blood C&S

4. Make sure samples are sent

   BLOOD C&S
   PLEASE DO IT UNDER ASEPTIC TECHNIQUE TO AVOID CONTAMINANT!

THE ROLE OF JUNIOR DOCTORS
-Documentation-

1. Indication to start antibiotic, i.e:
   • Community-acquired pneumonia
   • Hospital-acquired pneumonia
   • Urinary tract infection
   • Cellulitis

2. Antibiotic type & dose - Guideline
The Role of Junior Doctors
Antibiotic Review after 48 hours

1. Trace Culture
2. Review antibiotic use based on culture:
   • Stop
   • Change IV to oral
   • Change from broad-spectrum to narrow-spectrum
   • Continue the same antibiotic and review daily
The Role of Junior Doctors
Antibiotic prophylaxis before surgery

1. Antibiotics should be given
   One dose within 60 minutes before skin incision

2. Repeat dose if:
   • Prolonged procedure > 6 hours
   • Estimated blood loss > 1.5 L

3. A treatment course in case of dirty surgery / contaminated wounds
Take Home Message

Antibiotic : Handle With Care
Antibiotik: Perlu ke?

• Antimicrobial resistance is increasing worldwide
• Overuse and misuse of antibiotics increases antibiotic resistance
• Antimicrobial resistance is dangerous and costly
• Many common infections are caused by viruses and do not need antibiotics
• Preserve the miracle of antibiotics

ACKNOWLEDGEMENT

• DR SURAYA AMIR HUSIN
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• DR AFAF AZIZAN
• MATRON SUHAILY OTHMAN
Slide 1 : Title
Slide 2 : Content
Slide 3 : Learning objectives
Slide 4 : Types of antimicrobials- antibacterials, antifungal, antivirals and antimalarials
Slide 5 : Definition of Antimicrobial Resistance (AMR)
Slide 6 : Why AMR is a global concern: Overuse and misuse of antibiotics speed up AMR
Slide 7 : The history of antibiotics- Started when Sir Alexander Fleming discovered penicillin in 1929
Slide 8 : The contributing factors that lead to AMR and the consequences
Slide 9 : This slide illustrates the projections of death by 2050 attributable by antimicrobial resistance
Slide 10 : Inappropriate usage of antibiotics lead to AMR
Slide 11 : Types of current Superbug (MDRO) & its antidote. Currently there is no antibiotics/antidote for colistin resistance organism.
Slide 12 : This slide illustrates the strategies to contain AMR
Slide 13 : Antimicrobial Stewardship Program is one of the strategies developed by MoH to contain AMR in healthcare facilities particularly in the MoH hospitals. Through this program, it educates and promotes appropriate use of antimicrobials
Slide 14 : The MoH has developed guideline in 2015 to assist in ensuring proper use of antibiotic by healthcare staff. It can be downloaded using apps store
Slide 15 : The role of junior healthcare professionals- what you can do to prevent AMR
Slide 16 : The role of junior healthcare professionals in preventing AMR: DIAGNOSIS
  • Ascertain correct diagnosis by good history taking & comprehensive physical examination. Antibiotic is only necessary for bacterial infections.
  • It is important to know history of allergy before prescribing antibiotic
Slide 17: Most of the URTIs (upper respiratory tract infection) are caused by virus. Therefore no antibiotic is needed. Please think before prescribing an antibiotic. Always ask – is the antibiotic necessary?

Slide 18: The role of junior healthcare professionals - CULTURE:
- To perform culture before starting patient on antibiotic

Slide 19: Taking appropriate sample from possible infected sites is necessary and the samples must be sent to the lab for culture and sensitivity. This need to be done under aseptic techniques

Slide 20 & 21: The role of junior healthcare professionals - DOCUMENTATION
- Document properly in the case notes the indication to start an antibiotic & the type and dosage of the antibiotic - refer to the National Antibiotic Guideline for latest indication & recommended dosage

Slide 22: The role of junior healthcare professionals - REVIEW ANTIBIOTIC USE AFTER 48 HOURS. Treatment decision should be made based on the culture finding.

Slide 23: The role of junior healthcare professionals - GIVE ANTIBIOTIC PROPHYLAXIS ACCORDINGLY BEFORE SURGERY. Repeat dose if indicated or for further treatment in the case of contaminated wound.

Slide 24: This slide illustrates the pledge to join the fight against antimicrobial resistance that had been launched by MoH in 2016

Slide 25: Take home messages
MEDICATION SAFETY
MEDICATION SAFETY

Patient Safety Unit
Medical Care Quality Section
Ministry of Health Malaysia
@ Secretariat, Patient Safety Council Malaysia

In Collaboration with :
Patient Safety Module Technical Committee

Learning Objectives

• Understand crucial knowledge on medication safety

• Understand the correct practice in preventing medication error

• Aware of common medication error
Definition of Medication Error

“A medication error is any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of health professional, patient or consumer.”

(US National Co-ordinating Council for Medication Error Reporting and Prevention)

Why is Medication Safety is IMPORTANT?

- Medication use has become increasingly complex
- Medication error is a major cause of preventable patient harm
- As healthcare practitioner, you will have an important role in making medication use safe
The Statistics…

Almost one in five medication doses administered in hospitals is given in error
(Medication Errors Observed in 36 Healthcare Facilities, Archives of Internal Medicine, 2002;162:1897-1903)

At least 1 death occurs per day and 1.3 million people are injured each year due to medication errors
(US Food and Drug Administration, 2009)

Medication Safety

MPSG No 7: To ensure medication safety

Numbers of Medication Error (Actual)
Hospitals + Clinics

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>823</td>
<td>1,644</td>
<td>1,882</td>
</tr>
</tbody>
</table>

Target: Zero Actual Error

Numbers of Medication Error (Near Misses)
Hospitals + Clinics

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>20,395</td>
<td>103,348</td>
<td>144,959</td>
</tr>
</tbody>
</table>

Patient Safety Unit, MPSG 2015
Steps in Using Medication

Error can happen in any of the steps

**PRESCRIBING**
- Evaluate patient
- Establish need for medicine
- Select right medicine
- Determine interactions and allergies
- Prescribe medicine

**DISPENSING**
- Review prescription order
- Contact prescriber for discrepancies
- Prepare medicine
- Distribute medicine

**ADMINISTERING**
- Review prescription order
- Review warnings, interactions and allergies
- Ensure 5R
- Administer medicine

**MONITORING**
- Assess patient’s response to medicine
- Report and document results

**Type of Medication Error**

- **Prescribing Error** (Prescribe Wrongly)
- **Omission Error** (Failure to administer or prescribe)
- **Dispensing Error** (Dispense Wrongly)
- **Administration Error** (Wrong route, wrong technique, wrong time)
- **Deteriorated Drug Error** (Giving Expired Drug)
- **Monitoring Error** (Failure to monitor the patient after administering medication)
Contributing Factors

**Staff Factors** - incompetent, illegible writing, inadequate communication, distraction

**Products** - LASA medications, product packaging

**Task & Technology** - failure to adhere to work procedure, patient record inaccurate/unavailable, incorrect computer entry

**Work & Environment** - heavy workload, peak hour, emergency situation, no safety culture

**Patient Factors** - patients with specific conditions (eg pregnancy, renal dysfunction), patients taking multiple medications, patients cannot communicate well

---

How To Reduce The Risk Of Medication Error?

**-YOUR ROLE AS HEALTHCARE PRACTITIONER**

- Use generic names
- Tailor prescribing for individual patients
- Take complete medication histories
- Caution on High Alert Medication
- Be familiar with the medications you prescribe
- Use memory aids
- Remember 5R
- Communicate clearly
- Practice double checking
- Encourage patients to be actively involved
- Report and learn from errors
Example: Prescribing & Administration Error

Case
One patient died because a dose of 20 units of insulin was abbreviated as “20 U,” but the “U” was mistaken for a “zero.” As a result, a dose of 200 units of insulin was accidentally injected.

Root cause: Illegible prescription

4 U regular insulin

>> 4 or 44 units?

60 U regular insulin

>> 6 or 60 units
Can You Spot The Error(s)?

Rx

Amiodarone 200mg tds x 1/52
Iron 200mg bd x 1/52
Iron 200mg od x 3/12
Vitamin B complex 1/1 od x 1/12

Important!!

**Take note of allergy / contraindication / weight

Name : ABC
RN/IC: 123456
Date: 01/01/2016
Age: 22
Diagnosis: AF

Initial where correction was made
Signature
Stamp

Dr XYZ,
MMC No
Hospital QRS
**Good Prescribing Practice**

- ✔️ Use generic names for drug. Avoid trade names.
  - Daonil ✗ ➔ Glibenclamide

- ✔️ Avoid using abbreviations
  - MS ✗ ➔ MgSO₄

- ✔️ Write clear instructions
  - Gutt. CMC BD ✗ ➔ Gutt. CMC 2 drops RE BD

---

**Good Prescribing Practice**

- ✔️ Use leading zero before decimal point
  - .5 mg ✗ ➔ 0.5 mg

- ✔️ Avoid trailing zero after decimal point
  - 5.0 mg ✗ ➔ 5 mg

- ✔️ Avoid verbal orders

- ✔️ Identify patient drug allergies
Right Patient

MPSG No 5: To improve the accuracy of patient identification

Acceptable method of identification: Patient’s name, patient’s tag, registration number (RN), NRIC and date of birth

Examples of process/procedure requiring patient identification:
- Upon admission or transfer/transport to another hospital or other health care setting
- Administration of all medicines
- X-ray or imaging procedures
- Surgical intervention or procedures
- Blood transfusion
- Collecting of patient bodily fluid samples
- Confirmation of death
Example: Administration Error

Case

- Two babies were given neostigmine instead of vitamin K after delivery. Both had respiratory distress. Long term implication of hypoxia.

- Vitamin K and neostigmine box/ampoules look very similar and were accidentally mixed in the same container.

- Root cause...look alike medication, similar box/ampoules and put next to each other in the cupboard.

Root Cause: Look Alike Medication

1. Put next to each other
2. Labeling on the sliding door
3. Similar ampoule design

Inj. Vitamin K 1mg/ml  Inj. Neostigmine  Inj. Vitamin K 10mg/ml
Look Alike??

Valsartan 160mg/
Hydrochlorothiazide 12.5mg

Valsartan 160mg/
Hydrochlorothiazide 25mg

How To Prevent Error With LASA Medications?

√ Checking & Double Checking

√ Tall Man Lettering

√ Store apart from each other (eg drug with different strength)

√ Extra Cautionary Labels
High Alert Medications (HAM)

High Alert Medications are medications which have a **high risk of causing significant patient harm** when these medications are used in error.

Institute for Safe Medication Practice (ISMP)

---

### Categories of High Alert Medications (HAM)

<table>
<thead>
<tr>
<th>No.</th>
<th>Class/CATEGORY Of Medications</th>
<th>No.</th>
<th>Class/CATEGORY Of Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adrenergic agonists, IV (eg. Adrenaline, noradrenaline)</td>
<td>11</td>
<td>Glycerol Trinitrate Injection</td>
</tr>
<tr>
<td>2</td>
<td>Adrenergic antagonists, IV (eg. Propanolol, labetalol)</td>
<td>12</td>
<td>Inotropic medications, IV (eg digoxin, dobutamine, dopamine)</td>
</tr>
<tr>
<td>3</td>
<td>Anaesthetic agents, general, inhaled &amp; IV (eg. propofol, ketamine, dexmedetomidine)</td>
<td>13</td>
<td>Insulin, subcutaneous and IV</td>
</tr>
<tr>
<td>4</td>
<td>Antiarrythmias IV (eg lignocaine (lidocaine), amiodarone)</td>
<td>14</td>
<td>Magnesium Sulphate Injections</td>
</tr>
<tr>
<td>5</td>
<td>Antifibrinolytics, hemostatic</td>
<td>15</td>
<td>Moderate sedation agents, IV</td>
</tr>
<tr>
<td>6</td>
<td>Antithrombotic agents (eg. warfarin, heparin, tenecteplase, streptokinase)</td>
<td>16</td>
<td>Neuromuscular blocking agents (eg pancuronium, atracurium, rocuronium, vecuronium)</td>
</tr>
<tr>
<td>7</td>
<td>Antivenom (eg Sea snake, cobra, pit viper antivenom)</td>
<td>17</td>
<td>Opiates and Narcotics</td>
</tr>
<tr>
<td>8</td>
<td>Chemotherapeutic agents, parenteral &amp; oral</td>
<td>18</td>
<td>Parenteral Nutrition preparations</td>
</tr>
<tr>
<td>9</td>
<td>Dextrose, Hypertonic, 20% or greater</td>
<td>19</td>
<td>Potassium salt Injections</td>
</tr>
<tr>
<td>10</td>
<td>Epidural and intrathecal medications</td>
<td>20</td>
<td>Sodium Chloride Solution (&gt;0.9%)</td>
</tr>
</tbody>
</table>
How to Prevent Error with HAMs?

√ Checking & Double Checking  
√ Use “HIGH ALERT MEDICATION” labels

Safe Administration of Medicines in the Wards  
Example: Meropenem Injection
Information Sources

*Please refer to your pharmacist for further information
IV Medication

Drawing Up Medication from an Ampule

1. Wash hand and gather equipment
2. Grasp the stem with an alcohol swab
3. Snap off the ampoule’s neck away from the hand and face
4. Uncap the needle and insert the needle into the ampule. Avoid touching the rim with the needle
Continue Drawing Up Medication from an Ampule

4. Invert the ampule, insert the needle into the solution and aspirate

5. Remove the needle cap and draw an amount of air into the syringe that is equal to the amount of medication that will be withdrawn from the vial

Drawing Up Medication from a Vial

1. Insert the needle keeping it above the solution

2. Invert the vial at eye level

3. Hold the needle upright and re-check the syringe’s contents for presence of air
“MEDICATION ERROR: SIMPLE MISTAKE CAN BE LETHAL”

Please check/verify with superior if in doubt before administering medication…
DO NOT ASSUME

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Dr. Ahmad Muzammil bin Abu Bakar
Pn. Sharmila Mat Zain

Pn. Nazariah Haron
Pn Ong Su Hua
Puan Wan Rugayah Wan Salleh
Slide 1: Title: MEDICATION SAFETY

Slide 2: Learning Objectives
1. Understand crucial knowledge on medication safety
2. Understand the correct practice in preventing medication error
3. Aware of common medication error

Slide 3: Definition of Medication Error

Slide 4: The importance of Medication Safety
1. Medication use has become increasingly complex – more medications have been developed by the industry, use of multiple medications by one patient, various available routes can lead to error, Look alike sound alike medication can lead to confusion
2. Medication error is a major cause of preventable patient harm compared to other incidents
3. As healthcare practitioner, we can ensure safe use of medication and prevent medication error from happening

Slide 5: Statistics related to Medication Error
• Almost one in five medication doses administered in hospitals is given in error
• At least 1 death occurs per day and 1.3 million people are injured each year due to medication errors

Slide 6: Statistics related to Medication Safety in Malaysia from Malaysia Patient Safety Goals (MPSG) Data
Numbers of Medication Error (Actual) Hospitals + Clinics.
Target is Zero despite number of prescriptions. This is because medication error is not tolerated at all.
Numbers of Medication Error (Near Misses) Hospitals + Clinics.
Increasing trend from 2013 to 2015 in both actual error and near miss
Probably true picture of increasing error and may be due to improvement in reporting as well

Slide 7: Steps in Using Medication
From diagnosis to “outcome” or improvement of patient’s health problem:
1. Prescribing
2. Dispensing
3. Administering
4. Monitoring

Error can happen in any of the steps
Slide 8 : Types of Medication Error
1. Prescribing Error (Prescribe Wrongly)
2. Omission Error (Failure to administer the medication or failure to prescribe)
3. Dispensing Error (Dispense wrong medication)
4. Administration Error (Wrong patient, wrong medication, wrong route, wrong dose is given to the patient or administration at wrong time.)
5. Deteriorated Drug Error (Give expired drug to patient)
6. Monitoring Error (Failure to monitor the patient after administering medication)

Slide 9 : Factors that contribute to Medication Error
- **Staff Factors** - incompetent (Knowledge, skill, attitude), illegible writing, inadequate communication, distraction
- **Products** – Look Alike Sound Alike (LASA) medications, product packaging
- **Task & Technology** – failure to adhere to work procedure, patient record inaccurate/unavailable, incorrect computer entry
- **Work & Environment** – staff with heavy workload, peak hour, emergency situation, no safety culture
- **Patient Factors** - patients with specific conditions (e.g. pregnancy, renal dysfunction), patients taking multiple medications, patients cannot communicate well (deaf patient, ventilated patient, mental retardation patient)

Slide 10 : Our role as healthcare practitioner to reduce medication error
- Use generic names
- Tailor prescribing for individual patients (e.g. Dose of paediatric patient depends on the weight)
- Take complete medication histories (Some patient have drug allergy)
- Extra caution if dealing with High Alert Medication
- Be familiar with the medications you prescribe – the dose, the route, some medications are combinations of few active ingredients, the generic and the trade names, the suitable route
- Use memory aids (e.g. certain mnemonic to remember)
- Remember “5R” before administering medication (Right Patient, Right Route, Dose, Medication/Drug, Time)
- Communicate clearly with patient (Avoid using medical jargon)
- Practice double checking – if possible with another staff
- Encourage patients to be actively involved - e.g. allergy status, patient knows the medications, the route etc.
- Report and learn from incident – unsafe practice, unsafe condition, the system error

Slide 11 : Example of Prescribing and Administration Error
A dose of 20 units of insulin was abbreviated as “20 U,” but the “U” was mistaken for as “zero.”

Slide 12 : Illegible prescription can lead to fatal error. Examples:
- 4 or 44 units?
- 6 or 60 units

Slide 13 : Interactive session
Can You Spot The Error(s)? * Answer is on next slide
Slide 14: Good Prescription
- Patient particular (R/N, IC, Age), date and diagnosis is complete
- Dosage Form (Tablet, Intramuscular, Sublingual.....)
- Generic Drug name
- The dose, frequency and duration of the medication is correct
- Add “Then” if two different doses of similar medication are prescribed
- The prescription has signature of the doctor who prescribe the medication with official stamp, MMC Number
- Initial signature is necessary next to any “correction”

Slide 15: Good Prescribing Practice
- Use generic names for drug. Avoid trade names
- Avoid using abbreviations
- Write clear instructions

Slide 16: Good Prescribing Practice continue
- Use leading zero before decimal point
- Avoid trailing zero after decimal point
- Avoid verbal orders
- Identify patient drug allergies

Slide 17: In order to ensure safe medicine administration to patient
Ensure 5R (minimal requirement)
1. Right Medicine
2. Right Patient
3. Right Dose
4. Right Route
5. Right Time

In nursing, 7R is used - 5R + Right documentation, Right for patient to refuse

Slide 18: In ensuring medication safety, we need to implement
MPSG No 5: To Improve The Accuracy of Patient Identification
Acceptable methods of patient identification include use of at least two(2) of the followings: The Patient’s FULL name, registration number (RN), NRIC or date of birth. Some of the previous medication error happened because of error in identifying the right patient. Especially when patients with similar names were located not far from each other.

Slide 19: Example of Administration Error due to LASA Medication
Vitamin K and neostigmine boxes with brown ampoules inside the boxes look very similar (except for the small print of the names were different). The boxes were put next to each other in a cupboard. Most likely different boxes were mixed up, both were opened and the ampoules with similar colours (except small print of the names) were both put in a similar container.

Before giving the Vitamin K injection to the baby (post LSCS) the nurse checked one ampoule in a special container and saw Vitamin K ampoule. She then put the ampoule in the container and prepared the baby for injection. She then took the ampoule without checking the name on the ampoule (assuming all ampoules in the container were Vitamin K, without realizing this time it was Neostigmine). She then injected Neostigmine to the baby unintentionally.
Similar incident happened to another baby and the anaesthetist realised something was wrong when both babies suddenly had respiratory distress even though the deliveries were uneventful without any complication.

This kind of incident is an example of how LASA Medication can lead to medication error. Hence improvement of the system including safe practice are essential.

**Slide 20**: Example of Look Alike Medication
- Inj. Vitamin K 1mg/ml
- Inj. Vitamin K 10mg/ml
- Inj. Neostigmine

**Cause of medication error**
1. Similar boxes were located next to each other
2. Labeling on the sliding door which moved when the door was opened
3. Similar ampoule design, size and brown colour

**Slide 21**: Examples of Look Alike Medication (Similar packaging)
- Valsartan 160mg/ Hydrochlorothiazide 12.5mg
- Valsartan 160mg/ Hydrochlorothiazide 25mg

**Slide 22**: How To Prevent Error With LASA (Look Alike Sound Alike) Medications
- Checking & Double Checking
- Tall Man Lettering (Refer examples in next slide)
- Store apart from each other (eg drug with different strength)
- Extra Cautionary Labels

**Slide 23**: Refer photo in the slide. Look Alike Sound Alike Medication
- The use of Tall Man Lettering
- The medications are store apart from each other (eg drug with different strength)

**Slide 24**: Refer photo in the slide. Look Alike Sound Alike Medication
Extra Cautionary Labels

**Slide 25**: Definition of High Alert Medications (HAM) - medications which have a high risk of causing significant patient harm when these medications are used in error.

**Slide 26**: Refer table in the slide.
Class/Category of High Alert Medications (HAM)
Maybe different between centers

**Slide 27**: Refer photo in the slide – Examples of HAM Labels
How to Prevent Error with HAMs?
- Checking & Double Checking
- Use “HIGH ALERT MEDICATION” labels

**Slide 28**: Refer photo in the slide
Safe Administration of Medicines in the Wards

**Slide 29**: Read the Information Sources:
1. Product Leaflet
2. MIMs Gateway, Micromedex Lexicomp
3. Please refer to pharmacist for further information/ any enquires
Slide 30 : Refer photo in the slide. Pamphlet of Meropenem Injection
Methods of Administration and reconstitution

Double check the name of the drug
All the drugs will have at least 2 names:
a) Generic Name
b) Trade name

Slide 31 : Refer photo in the slide

Slide 32 : Drawing up medication from ampoule - Refer photo in the slide
There is one dot color at the neck of the ampule.
Snap off the ampule neck away from the hands and face.

Slide 33 : Drawing up medication from ampoule (cont’d) - Refer photo in the slide

Slide 34 : Drawing up medication from vial - Refer photo in the slide

Slide 35 : Key Take Home Messages
“MEDICATION ERROR : SIMPLE MISTAKE CAN BE LETHAL”
“Please check/verify with superior if in doubt before prescribing or administering medication”
“If in doubt, DO NOT ASSUME. Please double check.”

Slide 36 : Acknowledgement
INCIDENT REPORTING & LEARNING FROM ERROR
INCIDENT REPORTING & LEARNING FROM ERROR

Patient Safety Unit
Medical Care Quality Section
Ministry of Health Malaysia
@ Secretariat, Patient Safety Council Malaysia

In Collaboration with:
Patient Safety Module Technical Committee

Learning Objectives

• Understand the basic concept of incident reporting and learning system.

• Understand the differences between error, violation and near miss

• Understand the role of Junior Health Care Professional in improving Patient Safety through incident reporting and learning system
1 in 10 patients is harmed while receiving hospital care
( Estimation in developed country ) - W.H.O

Malaysia Hospital admissions in 2013 ⇒ 3,323,024
Estimated adverse events (10%) ⇒ 332,302

Medical error is the third leading cause of death in the United States which accounts for 10% of all US death

Makary et al., BMJ, pg. 353; May 2016
Examples of Patient Safety Incidents

**MEDICATION ERROR**
- Poor Handwriting
- Incorrect Dose
- Unaware Of Patient Allergy

**TRANSFUSION ERROR**
- Incorrect Specimen Labeling
- Wrong Patient

**WRONG SURGERY/PROCEDURE**
- Wrong Patient/ Site/ Side
Examples of Patient Safety Incidents

**PATIENT FALL**
Not aware of fall risk

**RETAIRED FOREIGN BODY**
E.g. post partum (tampon/gauze)

**TO THE WRONG PERSON**
Wrong patient identification (switched patient tag)

**INJURY TO NEONATE**
Post delivery ERB Palsy

**SHOULDER DYSTOCIA**
Not aware of red flags and unassisted

Be aware!!
It could happen to any patient under your care!

Types of Patient Safety Incidents

- **ERROR**
  Non-intentional deviation from an accepted protocol or standard of care.
  
  "Tak sengaja"

- **VIOLATION**
  Intentional deviation from an accepted protocol or standard of care.
  
  Against the law

- **NEAR MISS**
  An error that has been prevented before it occurred
Types of Patient Safety Incidents

**ERROR**
ACCIDENTALLY wrote wrong unit on medication prescription
e.g.: 10mg instead of 10µg

**VIOLATION**
Take blood pre- and post-potassium correction but send the same sample
INTENTIONALLY (pre-sample) twice and resulting in over-correction

**NEAR MISS**
Wrong dose of medication being prescribed but
DETECTED BEFORE IT IS ADMINISTERED to the patient

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What Should You do If an Incident Occur?

**WHEN AN INCIDENT OCCUR…**

- **DON’T HIDE IT**
- **REPORT IT**
WHY SHOULD YOU REPORT IT?

DAMAGE CONTROL
PREVENT WORSENING
OF SITUATION

LEARNING
FROM MISTAKES

IMPROVE QUALITY
& SAFETY OF
HEALTHCARE
IMPROVE SYSTEM
DEFECT

HOW TO REPORT
AN INCIDENT?

PATIENT SAFETY UNIT
MEDICAL CARE QUALITY SECTION
MEDICAL DEVELOPMENT DIVISION
MINISTRY OF HEALTH MALAYSIA

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INSPIRED BY WHO PATIENT
SAFETY CURRICULUM GUIDE
(MULTIPROFESSIONAL EDITION)
Incident Reporting & Learning System

- Identify & Investigate
- Non Punitve
- Learn From Mistake
- Response & Action
- Sharing & Advise

Malaysian Patient Safety Goals No. 13

IR 1.1 FORM

Part 1
FILLED BY H.O WHO IS INVOLVED/WITNESS THE INCIDENT
Example of Reportable Incidents

RED (SEVERE / DEATH):
- Medication error with serious outcome
- Wrong transfusion
- Wrong Surgeries
- Patient fall with serious injury

YELLOW (MODERATE IMPACT):
- Injury of neonate during delivery,
  Incorrect swab count

GREEN (MILD):
- Failed instrumental delivery, delayed discharge from recovery room

*The list can be downloaded @ www.patientsafety.moh.gov.my

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Action to Take as a Junior Health Care Professional

PATIENT SAFETY INCIDENT OCCUR

1. IMMEDIATE CORRECTIVE MEASURE/DAMAGE CONTROL

2. INFORM SUPERIOR □ (e.g. MO, Specialist or other available experienced officer)
Action to Take as a Junior Health Care Professional

**PATIENT SAFETY INCIDENT OCCUR**

3. **FILL IN FORM I.R 1.1 (AS WITNESS/PERSON INVOLVED)**

As a Junior Health Care Professional, the incident will be investigated and action will be taken to prevent further occurrence of the incident.

Overview of Incident Reporting

- **INCIDENT OCCUR**
  - **IMMEDIATE ACTION/DAMAGE CONTROL**
  - **INFORM SUPERVISOR**
  - **FILL IN INCIDENT REPORTING FORM (PART 1)**
  - **INCIDENT INVESTIGATED BY INVESTIGATION TEAM** (e.g.: Root Cause Analysis)
  - **ACTION TAKEN & FURTHER OCCURRENCE OF INCIDENCE PREVENTED**
  - **MONITORING OF ACTION PLAN**
Examples of Improvement Achieved Through The Incident Reporting System

**1. PROBLEM**

WRONG SURGERY (DONE ON WRONG PATIENT/SITE/SIDE)

**IMPROVEMENT**

- SAFE SURGERY SAVES LIVES PROGRAM
- SSSL CHECKLIST

Examples of Improvement Achieved Through The Incident Reporting System

**2. PROBLEM**

BCG VACCINE MISTAKENLY INJECTED TWICE TO BABY IN NICU

**IMPROVEMENT**

- USAGE OF STICKER TO INDICATE BABIES THAT HAD RECEIVED THEIR VACCINATION

Usage of sticker to indicate babies that had received their vaccination.
Examples of Improvement Achieved Through The Incident Reporting System

3 PROBLEM

GERIATRIC PATIENT FALLING FROM NORMAL HOSPITAL BED

IMPROVEMENT

- USAGE OF ULTRALOW HOSPITAL BEDS FOR GERIATRIC PATIENT
- PATIENT FALL PRECAUTIONS

Usage of Ultras low hospital beds for Geriatric Patient

Take Home Message

√ We need to take action to improve and prevent similar incident from happening again

√ Incident reporting is not just about “paper work”, the aim is to improve our system and as a Junior Health Care Professional, you can play an important role in improving our system.
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KEY POINTS FOR POWER POINT PRESENTATION

Topic 7: Incident Reporting & Learning From Error

Slide 1 : (Title Slide) Incident Reporting & Learning From Error

Slide 2 : Learning Objectives:
1. Understand the basic concept of incident reporting and learning system.
2. Understand the differences between error, violation and near miss.
3. Understand the role of Junior Health Care Professional in improving Patient Safety through incident reporting and learning system.

Slide 3 & 4 : Global burden of Patient Safety Incidents

WHO data:
1 in 10 patients are harmed while receiving hospital care (Estimation in developed country). Using data from Malaysian 2013 hospital admission, it is estimated 332,302! (10%) patients suffered patient safety adverse event.

Makary et al., BMJ, pg. 353; May 2016:
Medical error is the THIRD LEADING CAUSE OF DEATH in the United States of America.

Slide 5 : This slide illustrate recent local newspaper articles on Patient Safety Adverse Events in Malaysia. This incidents are only the tip of the iceberg. There are many incidents left unreported.

Slide 6 & 7 : Examples of Patient Safety Incidents involving Junior Health Care Professional that might occur during patient care.

Slide 8 & 9 : Difference between types of Patient Safety Incidents (Error, Violation & Near Miss)
Error is a non-intentional deviation from an accepted protocol or standard of care. In other words, “Tak Sengaja”.
Violation is an intentional deviation from an accepted protocol or standard of care. It is against the law.

A Near-Miss is an error that has been prevented before it occurred.

Slide 10 : Tag line – DON’T HIDE IT, REPORT IT!

Slide 11 : Importance of Incident Report:
1. For Damage Control: Prevent worsening of situation.
2. To Learn from our mistakes.
3. To Improve Quality & Safety of our Healthcare (System Improvement).
**Slide 12**: Short Video on importance of learning from error.

Summary of the video:
“A guy carelessly kicked a soccer ball to a child face twice without learning from his mistake.”

Moral of the video: We need to learn from our mistake and prevent it from happening again.

**Slide 13**: (Section) How to report an incident? – In Ministry of Health Malaysia

**Slide 14**: By using the Incident Reporting & Learning System
(Picture: Ministry of Health Malaysia Incident Reporting & Learning System Manual)

The Incident Reporting & Learning System is a non-punitive system (no blaming) where reported Patient safety Incidents are investigated and proper response and action will be taken accordingly. Learning points from the incidents will be shared to prevent further reoccurrence.

Incident Reporting & Learning System is very important in Patient Safety and it is included as the 13th Malaysian Patient Safety Goal.

**Slide 15**: This slide show the example of the Incident Reporting form used in the Ministry of Health Malaysia

As Junior Health Care Professional you should fill up Part 1 if you are involved / witness an incident.

**Slide 16**: Examples of Reportable Patient Safety Incidents.

Note that in the Incident Reporting and Learning System used by the Ministry of Health Malaysia, colour coding were given to indicate the severity of the incidents (Green for Mild, Yellow for Moderate and Red for Severe). The list of Reportable Patient Safety Incidents is available in the Incident Reporting and Learning System Manual.

**Slide 17 & 18**: Flow chart to illustrate the actions to be taken by Junior Health Care Professional when a Patient Safety Incidents occur.

**Slide 19**: Overview of Incident Reporting & Learning System

**Slide 20 - 22**: Slides to illustrate improvement achieved through the Incident Reporting System.

**Slide 23**: Take home messages:
1. We need to take action to improve and prevent similar incident from happening again.
2. Incident reporting is not just about “paper work”, the aim is to improve our system and as a Junior Health Care Professional, you can play an important role in improving our system.