RESEARCH PRIORITY FOR PATIENT SAFETY IN THE KLANG VALLEY [A RESEARCH PROPOSAL]

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OUTLINE

- Patient safety
- Research background
- Research objectives
- Methods
- Data Analysis
- Concluding remarks
The following slides contain pictures that some people may find disturbing
**CASE 1**

- **The patient:** premature baby
- **The incident:** The patient’s left hand was injected inappropriately
- **The consequence:** The left hand’s cells atrophied and the hand subsequently dismembered
- **The explanation:** The junior doctor performed the injection based on a telephone consultation with the specialist

Bernama.com, 27 Ogos, 2007
CASE 2

- **The patient**: newborn baby
- **The incident**: handling of baby during delivery
- **The consequences**: serious facial and eye injury, baby can’t feed normally
- **The explanation**: ?

The Star, 17 September
CASE 3

- **The patient**: a girl who suffered electric shocks
- **The incident**: The ambulance went out of control and crashed
- **The consequences**: The patient’s mother who accompanied her died
- **The explanation**: accident?

New Straits Times, 1 September 2011
CASE 4

- **The patient:** a woman in labour who was being transferred to a different hospital
- **The incident:** the ambulance driver avoided a dog and crashed the ambulance into a tree
- **The consequence:** the patient and her unborn child died
- **The explanation:** dog?

July 4, 2011, Monday Borneo Post
LEGAL & FINANCIAL CONSEQUENCES

- Zainab Sam vs Segamat Hospital & Muar Hospital
  - Patient’s baby suffered brain damage during transfer to Muar Hospital
  - The Muar High Court awarded the plaintiff a total of RM870,000 (Hamdan Raja Abdullah, 2011)

- Megat Noor Ishak Megat Ibrahim vs eye surgeon and the attending anaesthetist.
  - The patient suffered damage to his retina
  - Eleven years after the incident, the High Court awarded Megat RM1.2 million for cost and interest (New Straits Times, 25 May 2011)
PATIENT SAFETY

Definition: ‘the avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the process of healthcare’

‘To Err is Human’ (1999): as many as 98,000 people die each year in the USA hospital because of preventable medical errors

almost 100% increase in the number of articles published by MEDLINE
STAGES OF PATIENT SAFETY RESEARCH

- Identification of the risks and hazards
- Design, implementation, and evaluation of patient safety practices
- Maintaining vigilance to ensure that a safe environment continues and patient safety cultures remain in place
<table>
<thead>
<tr>
<th>Level of Analysis</th>
<th>Topic</th>
<th>Sample research question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational/Managerial</td>
<td>Organizational Safety Culture</td>
<td>What culture traits differentiate hospitals with low and high rate of adverse events?</td>
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<tr>
<td>Organisational/Managerial</td>
<td>Managers’ Leadership</td>
<td>What can lead nurses do to improve safe behaviour among nurses in wards?</td>
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<td>Communication</td>
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<td>How can the communication system support the spread of safety messages?</td>
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<td>Team</td>
<td>Team (structures and processes)</td>
<td>How can team members in different locations perform tele-operation safely?</td>
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<td>Team Leadership (supervisors)</td>
<td>Does power distance reduce the likelihood of nurses questioning surgeon’s action in the operation theatre?</td>
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<td>Situation Awareness</td>
<td>Which sensory channel should a medical device use to support an anaesthetist’s situation awareness?</td>
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<td>Decision Making</td>
<td>How do junior doctors make clinical decisions in face of uncertainties?</td>
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<td>Stress</td>
<td>How do clinicians cope with emergency department’s overcrowding without putting patients at risk?</td>
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<td>Fatigue</td>
<td>What is the effect of working overtime on the rate of adverse events?</td>
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<tr>
<td>Work Environment</td>
<td>Building design</td>
<td>What is the best ward layout to reduce falls among elderly patients?</td>
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PATIENT SAFETY RESEARCH

- Much of the evidence on medical harm comes from developed country
- The involvement of the healthcare workers at the start of a research process will encourage applications of the research output in practice
RESEARCH OBJECTIVES

- to examine healthcare practitioners understanding of patient safety research
- to measure the perceived importance of patient safety research topics
- to identify research topics that are considered as high priority among healthcare practitioners in Malaysia
WHAT THE LITERATURE SAYS

- Various methods (e.g. literature review, oral and written testimony, Rand Delphi technique) can be used to develop research agenda.
- Involvement of healthcare practitioners and stakeholders: different degrees (high vs low) and nature of involvement (provide input, evaluate ideas)
METHODS

- Semi-Structured Interviews
- Contextual Inquiry
- Survey
- Panel Discussion
**SEMI-STRUCTURED INTERVIEWS**

- **Aims:**
  - to examine their understanding of patient safety,
  - to delineate the usage of research for patient safety in practice
  - to identify major threats to patient safety in their organisations.

- **Participants:**
  - healthcare practitioners in Klang Valley
  - convenience sampling
  - theoretical saturation point determines the number of participants

- **Materials:**
  - Interview schedule developed by analysing documents on patient safety research topic.
CONTEXTUAL INQUIRY

Aim:
- To identify existing research topics according to their priority

Materials
- published documents from organisations who set research agenda on patient safety.

Procedure
- Snowballing technique: to access information from as many organisations as possible.
- Develop two lists of patient safety research topics: with and without priority reported
- Consensus of experts: to provide a structure for the list.
Survey

Aim:
- To obtain priority ranking for research topics

Participants
- healthcare workers (professionals, managers, and support staff) in government and private hospitals in Klang Valley.
- Random sampling to select the hospitals.
- 500 questionnaire sets will be distributed

Procedure
- Recruit a representative from each hospital to distribute and collect the questionnaire.
- Option to reply by email.
Panel Discussion

- **Aims**
  - to verify the results from the survey
  - To raise practical issues related to doing research and using research output.

- **Participants**
  - between 15 to 21 representatives from hospitals and agencies related to patient safety

- **Procedure**
  - Stratified random assignment (based on occupational level) to assign the panellists into 3 groups.
  - The researcher facilitates the discussion.
  - Participants write individual and group responses
DATA ANALYSIS: SEMI-STRUCTURED INTERVIEW

- Emergent thematic analysis using NVivo 7
- To identify the components of patient safety as understood by the healthcare workers, the uptake of research findings, and patient safety problems.
- Transcribed interviews will be coded by two independent coders to obtain list of codes and themes.
- The coders will discuss their list and themes and reach consensus.
DATA ANALYSIS: CONTEXTUAL INQUIRY

- Qualitative comparison of different lists
- Overlapping and similar topics will be removed
- The list will be grouped under emerging themes through consultation with subject matter experts.
Data Analysis: Survey

- Correlation analysis: to identify the participants’ agreement on the relative importance of the research topics.
- Mean of ratings: to identify the relative importance of topics
- New topics suggested by the participants will be compiled into a list.
- Subject matter experts will then be consulted to classify items in all lists into meaningful groups.
DATA ANALYSIS: PANEL DISCUSSION

- The panellists’ notes will be collected and compiled.
- Based on their responses, ten top priority topics of research will be identified.
- A list of limitations and opportunities will also be produced based on the panellists’ notes.
WHAT’S NEXT

- Set a research agenda for a (proposed) research unit at IIUM
- Establish network with hospitals and healthcare workers for future research
PATIENT SAFETY & CONFERENCE THEME

Quality of Life

- For patients:
  - reduce the likelihood of being exposed to acquired harm
  - prevent further deterioration of the quality of life

- For health workers
  - contribute to a safe environment

Interdisciplinary approach

- research on patient safety in general tends to be interdisciplinary in nature.
- difficulty in data collection, e.g. observation
- opportunity for the researcher to get new knowledge and experience