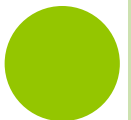# Research Priority for Patient Safety in the Klang Valley [A research proposal]

Harris Shah Abd Hamid
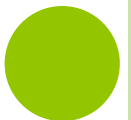
Department of Psychology, IIUM

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 women 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?
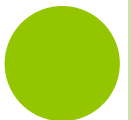
July 4, 2011, Monday Borneo Post

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)
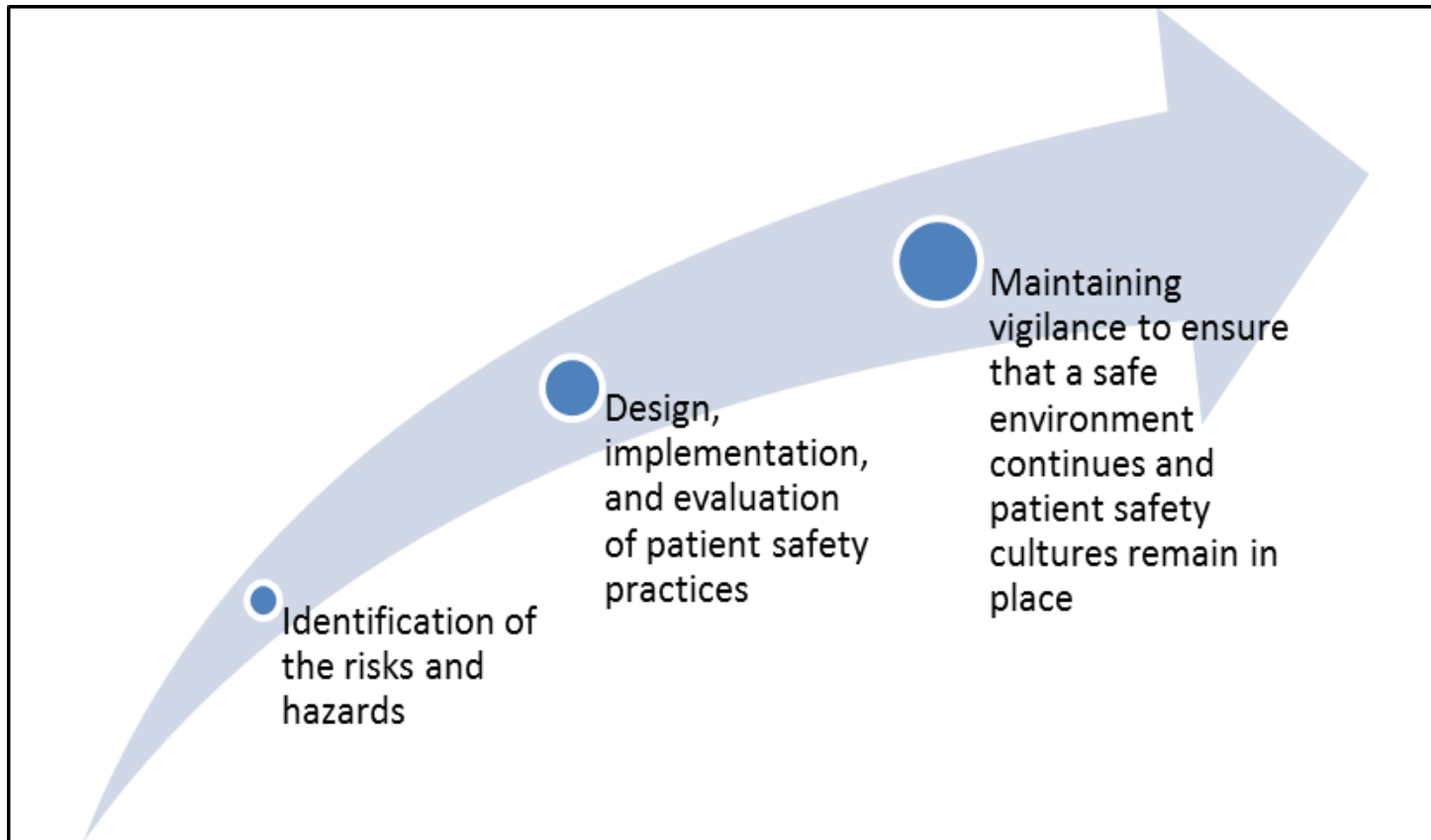
PATIENT SAFETY

- 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

PATIENT SAFETY RESEARCH ACCORDING TO LEVELS OF ANALYSIS

Level of Analysis	Topic	Sample research question
Organisational / Managerial	Organizational Safety Culture	What culture traits differentiate hospitals with low and high rate of adverse events?
	Managers' Leadership	What can lead nurses do to improve safe behaviour among nurses in wards?
	Communication	How can the communication system support the spread of safety messages?

Level of Analysis	Topic	Sample research question
Team	Team (structures and processes)	How can team members in different locations perform tele-operation safely?
	Team Leadership (supervisors)	Does power distance reduce the likelihood of nurses questioning surgeon's action in the operation theatre?

Level of Analysis	Topic	Sample research question
Individual	Situation Awareness	Which sensory channel should a medical device use to support an anaesthetist's situation awareness?
	Decision Making	How do junior doctors make clinical decisions in face of uncertainties?
	Stress	How do clinicians cope with emergency department's overcrowding without putting patients at risk?
	Fatigue	What is the effect of working overtime on the rate of adverse events?

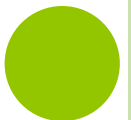| Level of Analysis	Topic	Sample research question
Work Environment	Building design	What is the best ward layout to reduce falls among elderly patients?

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
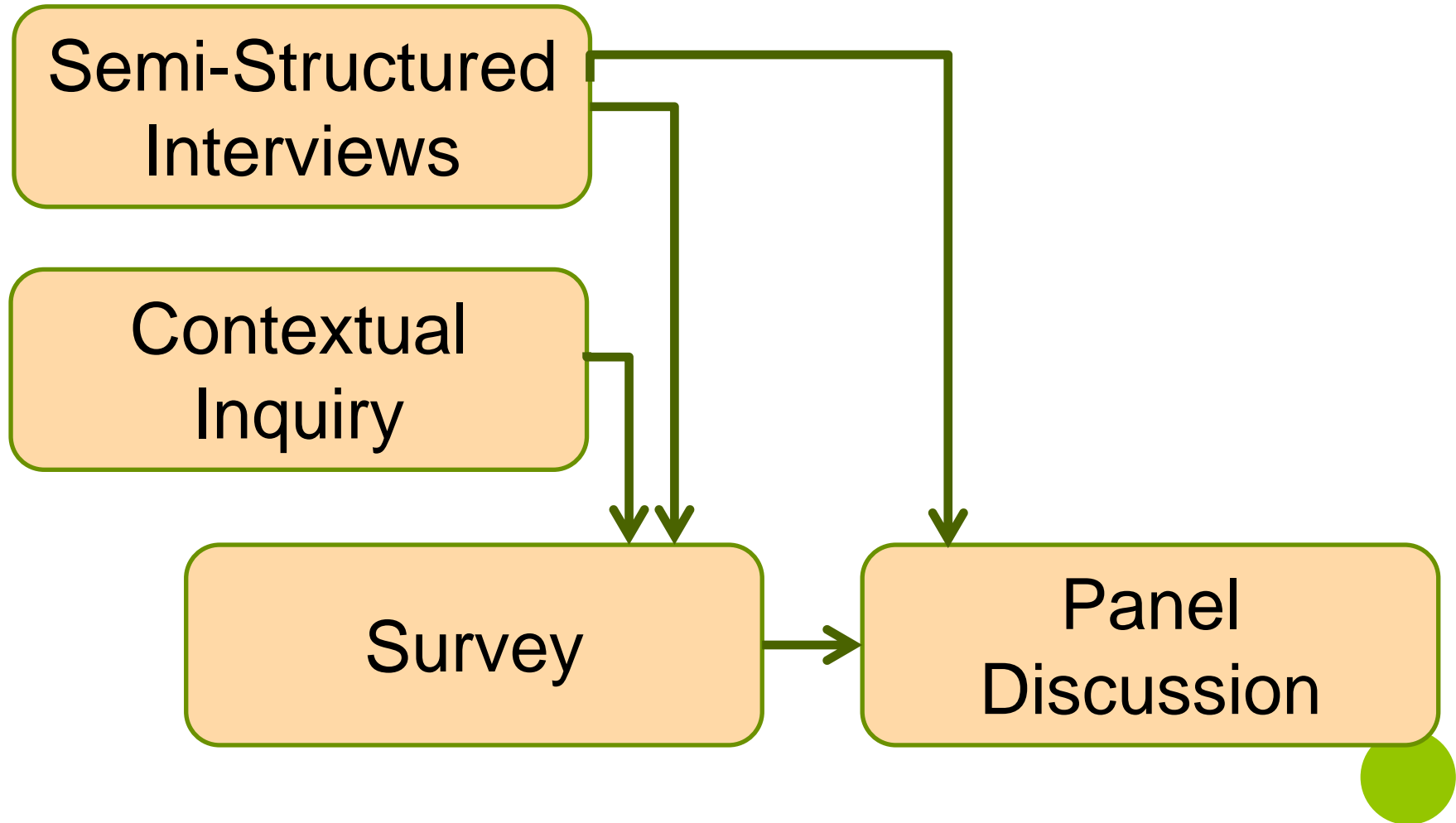
WHAT THE LITERATURE SAYS

- 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

- 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.
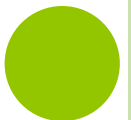 - Participants write individual and group responses

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.
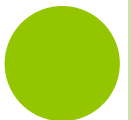
DATA ANALYSIS: CONTEXTUAL INQUIRY

- 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 topic 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
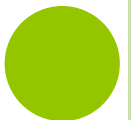
Patient Safety & Conference Theme

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