MEDICAL ERRORS IN MOH PRIMARY CARE CLINICS

Issue
Medical errors* are occurring unnoticed in MOH primary care clinics and this may pose important implications on patient safety issues. More than 50% of medical records reviewed had a medical error and almost all (93.4%) of these errors were preventable. Immediate action needs to be taken to uphold our standards of care.

This is the baseline results of a study done on patient safety in 12 MOH primary care clinics in 4 states of Malaysia. An intervention package designed based on the baseline findings has been carried out and a post intervention survey is currently being conducted.

Key Messages
- A high percentage of medical errors,
  - 57.2% occur in primary healthcare visits
  - 93% of medical errors were deemed preventable
- The majority of medical errors are related to medication
- A lack of knowledge and skills of MOH staff has been shown to contribute to medical errors
- There is a need to improve the quality of healthcare services provided by MOH health clinics

* Medical errors = Diagnostic errors, investigation errors, medication errors and decision making errors

MOH/5/IPSK/05.08(BR)

RESEARCH HIGHLIGHT IPSK/07/2008/236

Letter of Intent for Improving Patient Safety: Primary Care

Who is this for?
- The Patient Safety Council and its secretariat
- Public Health Division, Ministry of Health
- Primary Care Practitioners

Purpose of this summary
To inform policy makers, stakeholders and primary care practitioners about the extent and types of medical errors occurring in MOH primary care health clinics and to highlight issues necessitating policy and practice interventions.

Medical errors in MOH primary care clinics

Additional information:

Other articles are available upon request
This summary was prepared by:
Conflict of interest
There is no conflict of interest.

Acknowledgement:
This document has been peer reviewed by Dr Leetisra Maranathan, Hospital Taiping and Dr. Nor M Mirzolina Che Omar, Kelana Jaya Hosp Clin.
This summary should be cited as:

Keywords:
primary care, clinics, medical errors, management errors, medication, decision making, intervention.

This is a collaborative project with

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Background
To date, no published data are available on medical errors that occurred in MOH primary care clinics in the country. Primary care is most often the first point of contact for patients seeking treatment from health care providers. The recent move by the MOH to shift care of chronic diseases such as diabetes and hypertension to primary care settings means that there will be more patients seeking treatment at primary care clinics compared to previously. The increasing workload coupled with shortened consultation time necessitates greater efforts on the primary healthcare providers to ensure the quality of care provided to patients is not compromised.

This study aims to determine the extent of medical errors that occurred in MOH primary care health clinics and to develop a feasible intervention to overcome this.

Medical errors as defined in the study:
• Medical errors were categorized as diagnostic or management errors.
• A diagnostic error is an error in the making of a diagnosis, usually from history and physical examination.
• A management error is an error that occurs in the management of a patient during investigation, treatment and making decision.

Key Considerations for Decision Makers
- Need to facilitate the use of Clinical Practice Guidelines at primary care
- Need to ensure non-evidence based medications/ treatments are not practiced
- Need to strengthen surveillance and audit activities

Key Considerations for Health Care Providers/ Practitioners
- Need to adhere to Clinical Practice Guidelines
- Need to constantly update knowledge and enhance clinical skills
- Need to avoid the use of non-evidence based treatment
- Need to ensure legibility in documentation and prescriptions
- Need to ensure that documentation of medical records are complete

<table>
<thead>
<tr>
<th>Type of error</th>
<th>Overall Error Rate</th>
<th>3 states in Peninsular Malaysia</th>
<th>1 state in East Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Error rate (%)</td>
<td>Inconclusive rate (%)</td>
<td>Error rate (%)</td>
</tr>
<tr>
<td></td>
<td>% Lower CI Upper CI</td>
<td>% Lower CI Upper CI</td>
<td>% Lower CI Upper CI</td>
</tr>
<tr>
<td>Diagnostic error</td>
<td>3.9 0.0 15.2</td>
<td>61.8 44.0 79.5</td>
<td>4.9 3.4 6.4</td>
</tr>
<tr>
<td>Management error</td>
<td>53.3 35.4 71.3</td>
<td>14.3 0.0 29.4</td>
<td>58.7 55.3 62.1</td>
</tr>
<tr>
<td>Investigation error</td>
<td>21.7 5.4 38.0</td>
<td>22.1 5.7 38.5</td>
<td>26.3 23.3 29.4</td>
</tr>
<tr>
<td>Medication error</td>
<td>41.3 23.5 59.2</td>
<td>27.6 10.6 44.6</td>
<td>45.3 41.9 48.8</td>
</tr>
<tr>
<td>Decision-making error</td>
<td>14.9 0.0 30.1</td>
<td>39.5 21.8 57.3</td>
<td>15.7 13.2 18.3</td>
</tr>
</tbody>
</table>

Table 1: Overall medical error rates for primary care setting*

*Results based on meta-analysis

This research highlights series is based on on-going research done by the institute and its collaborators on health system policy issues in Malaysia

Key findings
- Diagnostic error: 3.90% (inconclusive*= 61.80%)
- Management error: 53.30% (inconclusive* = 14.30%)
  - Investigation error: 21.70% (inconclusive = 22.10%)
  - Medication error: 41.30% (inconclusive = 27.60%)
  - Decision-making error: 14.90% (inconclusive = 39.50%)

(*"Inconclusive" was often due to incomplete or poor documentation)

Detailed findings
- 39.8% (CI 26.6-53.0%) of errors were likely to cause serious morbidity or mortality
- 93.4% (CI 83.6-100%) of errors had strong evidence for preventability
- 29.0% (CI 19.5-38.6%) of errors were due to some form of missing documentation whereby:
  - 54.7% (CI 43.8-65.6%) had no documentation of physical examination
  - 49.5% (CI 38.8-60.2%) had no documentation of history
  - 43.0% (CI 27.6-55.1%) had no documentation of problem or diagnosis
- 22.6% (CI 12.8-32.4%) of errors were due to illegibility
- Medical assistants saw 81% of total records assessed.

Types of medical errors found
- Medication errors were the commonest type of error found.
  - The most frequent medication error was inappropriate medication given such as prescription of drugs that were not indicated for a condition (e.g. antibiotics for viral fever, antibiotics for conjunctivitis), antacids prescribed with NSAIDs, prescribing of drugs contraindicated in children, prescribing non-evidence based drugs (e.g. vitamin C for URTI, prolase for leg swelling)
  - The second most frequent medication error was related to poor management, including poor disease control and CPGs not adhered to.
  - Other types of medication errors were:
    - Wrong dosage and frequency of drug prescribed (e.g. drug dose for child not calculated according to body weight)
    - Drug interaction or adverse drug event (e.g. 2 or more antihistamines prescribed)
- Severe medical errors1 include organ failure no action taken, drug dose not monitored and abnormal investigating result no action taken.