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<td><strong>Author(s)</strong></td>
<td>Samaranayake, NR; Cheung, STD; Chui, WCM; Cheung, BMY</td>
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## Technology-related medication errors – incidence, nature and causes in a tertiary hospital

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### Aims of this study
Analysis of technology-related medication errors

- Incidence and types
- Nature and underlying causes

### Study process

- 1538 incidents were reported during the period of analysis (2006 – 2010)
- All incidents were reviewed by a pharmacist and technology-related incidents were identified as follows

### Pathway for incident analysis

- All incidents
- Technology related
- Not related to technology
- User related errors
- Device related errors

### Results

#### Incidence of technology-related errors

<table>
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<th>All incidents</th>
<th>Technology related</th>
<th>Not related to technology</th>
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<td>100%</td>
<td>17.3%</td>
<td>82.7%</td>
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</table>

#### Types of technology-related errors

- Most technology-related errors were prescribing errors followed by drug administration and dispensing errors

#### Technologies involved in technology-related errors

- Most technology-related errors were related to computerised medication order entry

#### Severity of technology-related errors

- 12% of technology-related errors reached the patient and 6.4% caused some form of harm to the patient

#### Most common underlying causes and their % contribution to the occurrence of technology-related errors

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<th>Incorrect computer entry (49.2%)</th>
<th>Similar drug name appearance (6%)</th>
<th>Failure to comply with policies and procedures (39.1%)</th>
<th>Device related problems (1.9%)</th>
<th>Lack of supervision (1.1%)</th>
</tr>
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</table>

### Conclusions

- Technologies have a potential to introduce new errors
- Most technology-related errors are related to user errors than technical defects
- Common underlying causes were incorrect computer entry and staff not complying to policies and procedures
- When using technological interventions, systems need to be improved in a way that errors cannot happen
- Staff training and continuous monitoring are also important to minimise technology-related errors