Assessing the Quality of Published Case Reports of Look-Alike and Sound-Alike Medication Errors

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BACKGROUND

15% to 25% of the reported medication errors in the United States are accounted for by look-alike and sound-alike drug name confusions. It is important that we learn from these errors to prevent similar incidents from happening again. Most of our knowledge about these drug name confusions is based on voluntary medication error report mechanisms such as the USP Medication Error Reporting (MER) Program and USP MedMARx™. Voluntary case reports on drug name confusions can also be found in published journals, newspapers, magazines, and other literature. Until now there has been no study assessing availability and quality of these published drug name confusion case reports.

OBJECTIVES

To evaluate the availability and the content of published case reports on drug name confusions.

METHODS

Search Strategy

Published case reports on drug name confusions were identified using computerized search of MEDLINE /PubMed, international Pharmaceutical Abstracts (IPA), and Google. Keywords or Medical Subject Headings (MeSH) such as look alike, sound alike, drug name confusion, medication errors, nomenclature, terminology, prescription drugs, handwriting and memory were used. The date of most recent search was July 2004.

Content Analysis

Drug Product Information

Drug names, generic/brand, strength, route of administration, dosage form, manufacturer, dosage schedule, color and shape.

RESULTS

1641 articles published from year 1964 to 2004 relevant to drug name confusions were retrieved. A subset of articles reporting actual errors (as opposed to near misses) was identified. 281 articles met the inclusion criteria. These articles discussed 611 cases with 892 occasions where the wrong drug was given due to drug name confusion.

501 unique drug names were involved in these medication errors. 307 unique drug pairs contributed to these 611 cases.

The most widely available information is the direction of the error, 78.1% (477 out of 611).

The least available information was the color (<1%), shape (<1%), manufacturer (13%) of the drug products, patient age (17%) and gender (25%).

Frequency Distribution of different features:

<table>
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<tr>
<th>Direction</th>
<th>Case</th>
<th>% of Specified Information</th>
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| Not Specified | 134 | 78.07%
| Specified | 477 | 21.93% |

CONCLUSIONS

Most of the case reports did not contain sufficient and important information regarding the drug name confusion medication error. Standard format for medication error reporting is recommended.

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