Bar-Code Scanning
Reducing Medication Dispensing Errors

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Medication Without Harm

Third Global Patient Safety Challenge
MEDICATION ERRORS: WHERE DO THEY HAPPEN?

Reducing medication-related harm requires a clear understanding of where and when errors occur. This visual summary shows the latest estimates in England per year.

DAWN CONNELY & MARTIN COTTERELL

TYPES OF ERROR

<table>
<thead>
<tr>
<th>Stage of Medication Use</th>
<th>Error</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Care</td>
<td>Error 1</td>
<td>91.0m</td>
<td>38.3%</td>
</tr>
<tr>
<td>Secondary Care</td>
<td>Error 2</td>
<td>47.4m</td>
<td>20.0%</td>
</tr>
<tr>
<td>Care Homes</td>
<td>Error 3</td>
<td>99.0m</td>
<td>41.7%</td>
</tr>
<tr>
<td>Total Errors</td>
<td></td>
<td>237.4m</td>
<td></td>
</tr>
</tbody>
</table>

The World Health Organization wants to reduce severe avoidable medication-related harm globally by 50% by 2022.

POTENTIAL SOLUTIONS

- Implement electronic prescribing and medicines administration systems
- Develop computer-based systems for computerized physician order entry
- Develop computer-based systems for drug-dose monitoring
- Use patient-friendly packaging and labelling
- Improve shared care across mental health services
- Implement computerized prescriber decision support systems
- Increase reporting of medication errors
- Reduce inappropriate prescribing

NHS costs of definitely avoidable adverse drug reactions per year

712
£98.5m

Deaths owing to definitely avoidable adverse drug reactions per year

PRESCRIBING
50.7m / 21.3%

TRANSITIONING
3.3m / 1.4%

EXPANDING
37.8m / 15.9%

ADMINISTRATION
129.1m / 54.4%

MONITORING
16.5m / 7.0%

SEVERE 3.5m / 1.5%

Mild 27.8m / 12.9%

Mild 1.6m / 0.7%

Mild 0.7m / 0.3%

Mild 0.3m / 0.1%

Mild 0.1m / 0.05%

Mild 0.01m / 0.005%

Mild 0.001m / 0.0005%
Results

- **76%** Reduction in Prevented Error Rates (p<0.001)
- **7%** Faster than Manual Process (p=0.015)
- **97%** Users agree it reduces the likelihood of medication
- **67%** Want to use the bar-code enabled system
Technical Check Alert

WARNING
The dispensed product does not match the issued product

Override  Acknowledge