PERCEPTION OF HOSPITAL PHARMACISTS TOWARDS PHARMACOGENETIC TESTING

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INTRODUCTION

Pharmacogenetic (PGx) testing can be used as a tool in personalised medicine. PGx has potential to improve drug efficacy, patient safety and clinical outcomes and decrease healthcare costs. Advances in PGx may provide for the expansion of the role of hospital pharmacists in precision pharmacotherapy.

AIMS

To assess awareness, attitudes and confidence of hospital pharmacists regarding PGx testing.

METHOD

1. Development of self-administered questionnaire

   5 sections: Participant demographics, Awareness, Education and Training, Attitudes, PGx Testing in Practice

2. Psychometric evaluation of questionnaire

   Validation: Panel of 9 members (5 pharmacists, 4 physicians); Consensus reached after two rounds.
   Reliability testing: 9 participants, Test-retest method (Day 1, Day 14); Questionnaire deemed reliable and accepted.

3. Dissemination of questionnaire

   Questionnaire was disseminated to 70 hospital pharmacists practicing in 4 hospitals (3 public, 1 private) after ethics approval. Descriptive statistics were calculated.

RESULTS

- Forty-two pharmacists answered the questionnaire; 24 female, 18 male (18 practicing for more than 10 years).
- Forty-one pharmacists were aware of the term ‘PGx testing’. Awareness and attitudes of the pharmacists in relation to PGx testing are shown in Table 1 and 2.
- Seventeen pharmacists perceived the need to order a PGx test at least once monthly. The greatest challenges for PGx testing implementation were cost issues (n=41) and lack of healthcare professional awareness (n=39).
- Lack of confidence was expressed in recommending (n=31) a test, in interpreting test results (n=35) and discussing test results with patients (n=31). Thirty-eight pharmacists believe that they require education and training to increase competency and confidence in PGx testing. Seminars (n=29) and courses (n=24) were the preferred approaches for acquiring further education on PGx testing.

<table>
<thead>
<tr>
<th>Table 1: Awareness of PGx testing (N=42)</th>
<th>Table 2: Attitudes towards PGx testing (N=42)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacists were ‘moderately’ and ‘extremely’ aware of:</td>
<td>Pharmacists ‘strongly agreed’ and ‘agreed’ that PGx testing:</td>
</tr>
<tr>
<td>Advances of PGx testing</td>
<td>Number of pharmacists</td>
</tr>
<tr>
<td>--------------------------</td>
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<tr>
<td>27</td>
<td>Guides individualised therapy selection and dosing</td>
</tr>
<tr>
<td>11</td>
<td>Should be a government-funded service</td>
</tr>
<tr>
<td>13</td>
<td>Leads to reduced healthcare costs</td>
</tr>
<tr>
<td>12</td>
<td>Is applicable for use in their practice</td>
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<td>5</td>
<td>Should be routinely implemented in practice</td>
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CONCLUSION

PGx is considered to be a measure to achieve personalised medicine by pharmacists and is applicable for use in their practice, however lack of confidence and the need of further training is expressed; these findings have also been reflected by participants in this study. Increased training to improve competency in PGx testing and the designing of a standardised framework with regards to application of PGx testing in practice will have an effect on the role of the hospital pharmacist in precision medicine.

REFERENCES