Determining the necessary components of a pharmaceutical care complexity screening tool: an e-Delphi study

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Background

With increased pressure on clinical pharmacy services there is a demand for reliable screening tools to appropriately allocate pharmaceutical care to those patients with most urgent and or complex needs.[1] Several such tools have been developed; however, they are often locally developed with a lack of agreement on their components. To date, no broad agreement exists on the valid components of pharmaceutical care complexity screening tool in the adult hospital setting.

Aim

To systematically develop, using consensus methodology, a pharmaceutical care complexity screening tool for use by pharmacy ward services.

Methodology

❖ **A multistage development process:**

- An online survey was distributed to chief pharmacists of all UK acute hospital trusts to identify existing prioritisation and/or complexity tools and processes (Figure 1).
- Respondents from hospitals that reported using a tool were invited to participate in a semi-structured interview to discuss the development and application of their tool. They were also asked to share copies of relevant documentation.
- A systematic review was carried out to identify existing patient prioritisation tools in hospital settings worldwide.[2]
- Two Delphi studies were used to gain consensus as to the content and use of a pharmaceutical care complexity tool.

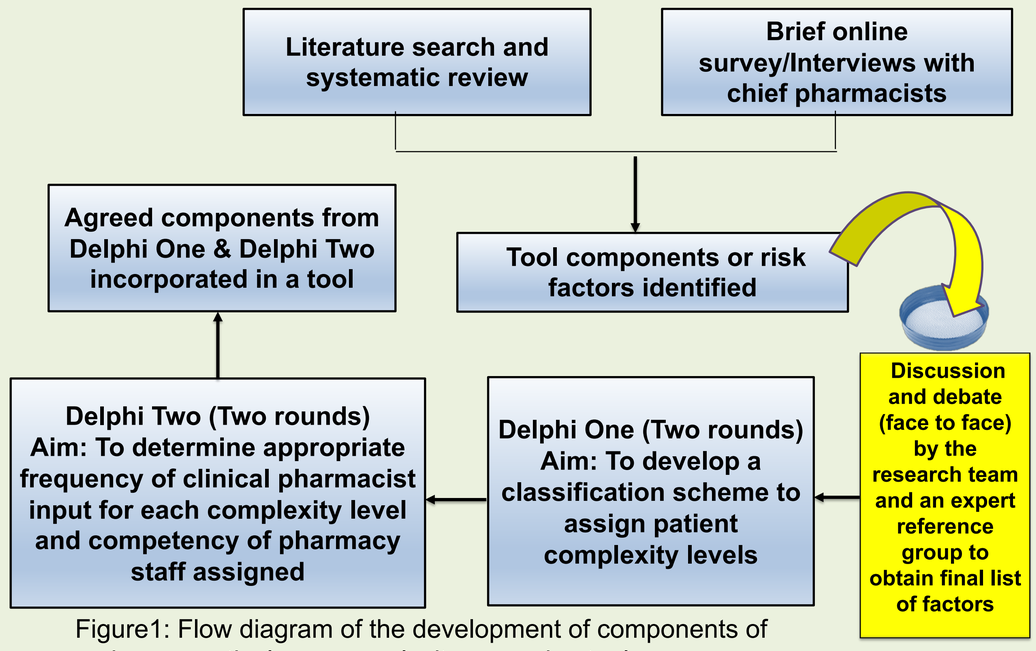

Figure1: Flow diagram of the development of components of a pharmaceutical care complexity screening tool

Results

Delphi One

300 tool components extracted from interviews, documents and a systematic review

Discussion and debate (face to face) by the research team and the expert reference group to obtain final list (109)

109 final tool components included
Clinical condition related (n=44)
Medicines related (n=65)

First Delphi round
49 international experts in medication safety invited
41 panel experts completed 1st round

Second Delphi round
33 panel experts completed 2nd round

Discussion (face to face and via email) by the research team and the expert reference group

92 items reached the limit of agreement for importance after 2 rounds.
Final list of the tool components (n=92)

Grouped into three types (demographic, clinical and medication components) and shortened to 33 items which were included in the first draft of the Adult Complexity Tool for Pharmaceutical Care (ACTPC).

Figure 2: Overview of Delphi One : gaining consensus on tool components

Final results from Delphi One & Delphi Two led to development of two tools:

- One tool (ACTPC-1) screens patients on acute admission to identify high risk/ highly complex patients.
- A second tool (ACTPC-2) classifies patients into different complexity levels (red, amber, green) requiring different level of pharmaceutical care during hospital stay.

Delphi Two

Data from interviews with 36 clinical pharmacy managers analysed. A further 28 statements on practicalities and clinical appropriateness were developed

Discussion by the research team to obtain final list (n=23)

First Delphi round
56 national experts (chief pharmacists and clinical service pharmacy managers) invited
43 panel experts completed 1st round

Second Delphi round
40 panel experts completed 2nd round

Final statements reached the limit of agreement in relation to practicality or clinical appropriateness of the ACTPC after 2 rounds (n=18)

Discussion (face to face and via email) by the research team and the expert reference group

Grouped into three types (highly, moderately and least complex) and shortened to 3 statements which were then included in the latest version of the ACTPC

Figure 3: Overview of Delphi Two: gaining consensus on practicality and clinical appropriateness

Conclusion(s)

- This study has developed a comprehensive pharmaceutical care complexity screening tool containing 33 agreed components based on robustly collected data with input from national and international experts.
- Future work will test the feasibility of the ACTPC in clinical practice across three hospitals in the UK prior to a large cluster randomised controlled trial.
- It is hoped that the ACTPC can improve patient safety and assist in workforce planning and resource utilisation by ensuring that the right pharmacists see the right patients at the right time.

References

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