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. 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.

**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.
- Two Delphi studies were used to gain consensus as to the content and use of a pharmaceutical care complexity tool.

**Results**

**Delphi One**

- 300 tool components extracted from interviews, documents and a systematic review
- 109 final tool components included Clinical condition related (n=44), Medicines related (n=6)
- 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
- 92 items reached the limit of agreement for importance after 2 rounds. Final list of the tool components (n=32)
- 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).

**Delphi Two**

- Data from interviews with 36 clinical pharmacy managers analysed. A further 28 statements on practicalities and clinical appropriateness were developed
- 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)
- 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 1:** Flow diagram of the development of components of a pharmaceutical care complexity screening tool

**Final results from Delphi One & Delphi Two led to development of two tools:**
- One tool (ACTPC-I) screens patients on acute admission to identify high risk/ highly complex patients.
- A second tool (ACTPC-II) classifies patients into different complexity levels (red, amber, green) requiring different level of pharmaceutical care during hospital stay.

**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**


**Acknowledgements**

- This study is part of a PhD program at the University of Manchester funded by the Ministry of Higher Education (Kingdom of Saudi Arabia).
- This poster presents independent research funded by the National Institute for Health Research (NIHR) under its Research for Patient Benefit (RfPB) Programme (Grant Reference Number PB-PG-1215-20031). The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health and Social Care.

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