Towards cancer patient empowerment for optimal use of antithrombotic therapy at the end of life (SERENITY): A realist review of how deprescribing interventions can improve shared decision-making for cancer patients in the last year of life.

Authors: Gamze Keser[1], Sarah Greenley[2], Justin Jagosh[1], Miriam J Johnson[1] and Mark Pearson[1]

[1]Wolfson Palliative Care Research Centre, Hull York Medical School, University of Hull, [2]Hull York Medical School, University of Hull

Background:

- Advance care planning is an integral part of healthcare for patients with terminal and life-limiting illnesses in Europe (Agarwal and Epstein, 2018).
- One component of this process is the optimisation of pharmacotherapy.
- The continued use of ATT can contribute to increased disease burden for patients in palliative care; despite this, healthcare providers are hesitant to deprescribe ATT near the end of life (Huisman et al., 2021).
- Reluctance to deprescribe ATT stems from lack of evidence-based guidelines/tools in determining the appropriate timing and method, as well as patient expectations influencing clinician perceptions of its benefits (Paque et al., 2019).
- This realist review seeks to understand how goal-concordant deprescribing interventions can be designed to enhance shared decision-making in the last year of life. It is part of Workpackage 1 in the HORIZON European project, aiming to develop and test a shared decision support tool.

Aims: Identify key mechanisms that contribute to effective deprescribing interventions in clinical practice, ultimately improving care for end-of-life patients.

Methods:

- The review is registered on PROSPERO (CRD42022375000) and structured using Pawson's five iterative stages for realist review.
- After initial scoping searches to refine search terms and main themes, a Stage 1 search combining 3 concepts ((Shared-decision making/goal concordant care OR de-prescribing) AND palliative care) was conducted to retrieve any literature:
  - (a) describing and assessing formal/informal interventions to improve goal concordance and de-prescription efforts with adults (age >=18 years) towards the end-of-life; and
  - (b) describing barriers to goal concordance and de-prescription.
- We searched 9 databases and used focused searching of Google Scholar, expert solicitation and forward/backward citation to supplement searches. JJ and GK reviewed titles and abstracts independently against eligibility criteria with recourse to other study members if there was disagreement.
- Results of Stage 1 searches were screened in Rayyan using the Reverse Chronology Quota method to identify a pre-specified quota of studies meeting the criteria.
- Study team members reviewed the included papers and wrote reflections ("journaled") in relation to emerging contexts, mechanisms and outcomes pertinent to the research question.
- We also held two international stakeholder meetings (i. members of public/patients; ii. Professionals of various backgrounds) to ensure perspectives and insights of health care professionals and patients/carers informed identification of evidence.

Results:

- 17036 results were found, of which 215 were double screened until the pre-specified quota of studies (including targeted screening for systematic reviews (SR)) was met. 68 abstracts were selected for review synthesis, (45 in Goal-Concordance in Palliative, Long-Term and Geriatric Care (19 SR) and 24 in Palliative, Long-Term and Geriatric Deprescribing (10 SR).
- The realist synthesis findings so far have identified 3 domains of mechanisms influencing the decision making for deprescribing ATT at the end of life (Figure 1).
- The identified mechanisms, particularly the empowerment of patients and carers in shared decision-making at the end of life were further discussed during the stakeholder meetings.
- As well as identifying mechanisms around current challenges, the synthesis also identified possible and current efforts to promote deprescribing efforts. For clinicians this involved streamlining the identification of when it is appropriate to deprescribe, through methods such as Possibly Inappropriate Medications (PIM) lists, electronic medical record pop-up alerts and professional development training.

Organisational-level mechanisms	These describe the culture and logistics around promoting conversations on deprescribing, particularly legalistic paperwork, lack of training and lack of time.
Clinician-level mechanisms	These highlighted concerns around uncertainty of, and the adverse events possibly associated with decisions.
Patient and family-level mechanisms	There was a lack of readiness to make EOL decisions, limited health literacy skills, and little experience with shared decision making, resulting in a failure to recognize their ability to express their wishes.

Figure 1: The 3 domains of mechanisms influencing decision-making for deprescribing ATT at the end of life.

Conclusion: Our Stage 1 search found significant barriers to goal concordance and deprescribing at the organizational, clinician, and patient/family levels. Evidence-based guidelines and tools are urgently needed to help clinicians deprescribe appropriately. Empowering patients and their families in shared decision-making and streamlining deprescribing through PIM lists and professional development training are also important. This realist review will contribute to the development of effective deprescribing interventions, leading to better end-of-life care for patients on palliative treatment.

References:

Agarwal, R. and Epstein, A. S. (2018) 'Advance Care Planning and End-of-Life Decision Making for Patients with Cancer', *Semin Oncol Nurs,* 34(3), pp. 316-326.

Huisman, B. A. A., Geijteman, E. C. T., Arevalo, J. J., Dees, M. K., van Zuylen, L., Szadek, K. M., van der Heide, A. and Steegers, M. A. H. (2021) 'Use of antithrombotics at the end of life: an in-depth chart review study', *BMC Palliat Care,* 20(1), pp. 110.

Paque, K., Vander Stichele, R., Elseviers, M., Pardon, K., Dilles, T., Deliens, L. and Christiaens, T. (2019) 'Barriers and enablers to deprescribing in people with a life-limiting disease: A systematic review', *Palliat Med,* 33(1), pp. 37-48.

Funding acknowledgement: The SERENITY project is funded by Horizon Europe Research And Innovations (project number 101057292). This work was also funded by UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding guarantee [grant number 10039823 for Cardiff University and 10038000 for Hull York Medical School]