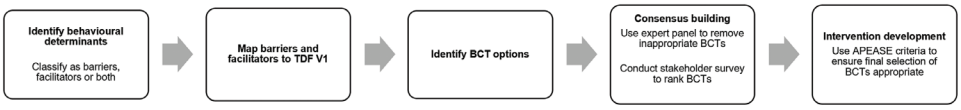


Figure 1: Study methods

*Results:* Forty-six behavioural determinants were identified within interviews and classified as barriers (n=19), facilitators (n=10), or both (n=17). These were deductively mapped onto 11 domains of the TDF. Following the mapping, 50 discrete BCTs were identified, which were reduced to 35 after subsequent consensus discussions between panel members to remove any deemed inappropriate. The survey resulted in 25 responses (62.5% response rate). Following visual inspection of the ranking, a natural cut-off was identified by panel consensus at 88% of the total score. This, and further assessment using the APEASE criteria, prioritised eight BCTs that were highly rated to be effective in promoting post-discharge medicines management when combined within a complex intervention. These were: practical social support, goal/ target specified, prompts, triggers or cues, social processes of encouragement, motivational interviewing, rehearsal, review goals, and comparative imagining of future outcomes.

*Conclusion:* This study has identified eight BCTs that could be valuable when combined within a complex intervention to support post-discharge medicines management for older people. Consensus allowed prioritisation of BCTs that were likely to be effective, acceptable to older people, practical and cost-effective to deliver within current healthcare organisations. Limitations included challenges of coding complex behavioural determinants to the TDF, defining the BCTs within the medicines management context and modest survey sample size. To overcome these limitations, input was sought from a health psychologist with expertise and consensus involved all relevant stakeholders.

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## THE DEVELOPMENT AND TESTING OF A NOVEL COGNITIVE BEHAVIOURAL THERAPY (CBT)-BASED INTERVENTION TO SUPPORT MEDICINES-RELATED CONSULTATIONS FOR HEALTHCARE PROFESSIONALS.

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*Introduction:* The cost to healthcare of wasted medicines has been estimated at around £300million per annum (1). In response to this figure and efforts to increase medicines management performance across pharmacy and patient outcomes, the practice of 'medicines optimisation' has developed into a key aspect of patient care. In particular, concerns exist around whether patients are deriving the optimum benefit from their medications and the extent to which adherence 'drops off' at varying intervals after prescription and collection.

In order to tackle medicines adherence and waste, a multi-disciplinary approach must be applied to ensure patients who are prescribed a new medicine take it as intended, experience no problems and receive as much information as they feel they need from healthcare professionals (HCP's). Adapting Cognitive Behavioural Therapy (CBT)-based techniques to medicines-related consultations has proven effective in supporting medicines adherence in previous studies (2). Collectively, findings demonstrate scope for improving the way HCP's communicate with patients around starting a new medication and monitoring ongoing use.

*Aim:* The study aim was to adapt an existing, Royal College of General Practitioners accredited '10-minute CBT' training package to be suitable for wider use by a range of healthcare professionals (HCP's) (i.e. Practice Nurses, Community Pharmacists, Hospital Pharmacists and General Practitioners).

*Methods:* The research design adopted a repeated-measures, pre/ post questionnaire study that gathered data on HCP knowledge around the use of CBT-based techniques in consultations at the start and end of the training intervention. Two training days were attended by HCP's that took place three weeks apart. The degree of satisfaction with the training intervention was assessed, along with a formulation exercise that was completed on a hypothetical patient case study pre- and post-training.

*Results:* Training of healthcare professionals took place at the Oxford Science Park and 105 NHS staff members participated. Feedback questionnaires were received by 96 HCP's and 46 HCP's provided additional follow-up questionnaires at 6-months, demonstrating favourable results regarding intervention content and delivery that were consistent with a prior feasibility study. Paired samples t-tests were performed on each formulation exercise rating scale domain and for total scores. There was a highly statistically significant increase in scores for all domains including total pre- and post-training scores as measured by the Formulation Rating Scale. Intra-class Correlation Coefficient for mean FRS ratings was 0.99 ($p$=.000) and there was no statistically significant change in any score when attendees repeated the skills assessment at 6 months, indicating once learning had been incorporated into practice, there was no recognisable training degradation over the 6-month period. See Table 1.

**Table 1.** Change in Scores from pre- to post-training scores using the Formulation Rating Scale.

| Change in Scores from Pre- to Post- Training using the Formulation Rating Scale | Mean Score Difference | 95% confidence intervals | T score | P value |
|---|---|---|---|---|
| **Relevant Cognitions** | 0.85 | 0.72–0.97 | 13.497 | P<0.0001 |
| **Emotions** | 1.21 | 1.38-1.05 | 15.06 | P<0.0001 |
| **Relevant Behaviours** | 1.04 | 1.19-0.9 | 14.25 | P<0.0001 |
| **Physical Symptoms** | 1.29 | 1.46-1.12 | 15.26 | P<0.0001 |
| **Situational Factors** | 0.62 | 0.74-0.51 | 10.53 | P<0.0001 |
| **Total scores** | **5.02** | **5.60-4.44** | **17.19** | **P<0.0001** |

*Conclusion:* The training intervention was rated favourably by attendees and was reported by participants as providing a safe environment from which to increase knowledge of CBT-based techniques, practice implementation of formulation skills and access additional peer support to help integrate learning into medicines-related consultations. The study also demonstrates this group of HCP's were able to integrate CBT-based techniques into hypothetical medicines-related scenarios and that learning was retained over a six-month period following training intervention.

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## CARE OF OLDER PEOPLE

### MEDICATION USE AND DEPRESCRIBING IN OLDER PATIENTS IN THE LAST 14 DAYS OF LIFE

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*Introduction:* Older patients may continue to receive potential inappropriate medications (PIMs) at the end of life. Application of consensus-based tools to identify PIMs may result in the identification of candidate medications for deprescribing, with the aim of overcoming the harm of inappropriate medication and improving clinical outcomes. This study aims to describe medication use and deprescribing patterns, and to assess prescribing appropriateness for older people in the last 14 days of life in the hospice setting.

*Methods:* Longitudinal, retrospective cohort study of deceased patients (≥65 years) who died between 1 January 2018 and 31 December 2018 in three hospices in a region of the United Kingdom. We identified prescribed and deprescribed medications and assessed medication appropriateness using consensus-based criteria, namely STOPPFrail[1] and criteria developed by Morin et al.[2] Unexpected/sudden deaths were excluded. Statistical analysis was conducted using SPSS statistics 26.0.

*Preliminary results:* Data collection is currently ongoing. To date, data from 69 deceased patients have been collected (mean age 76.1 years). Of these decedents, 62.3% were female and the majority (just under 90%) had cancer reported as the cause of death. During the last 14 days of life, each patient was prescribed a mean of 17 ± 5 different medications. The mean number of medications decreased significantly between day 14 and the day of death from 13.2 ± 4.4 to 9.4 ± 3.7 ($P < 0.01$). Six hundred and thirty-nine medications were discontinued, with just under 70% stopped in the last seven days before death. 34.9% of those discontinued were prescribed for chronic conditions and 22% were proton pump inhibitors. In most decedents, swallowing difficulty was the reason for medication discontinuation. According to the STOPPFrail criteria [1], 42 (60.1%) of decedents received at least one PIM between day 14 and the day of death. There were 59 PIMs in total for these patients; of these 20.3% were hyoscine butylbromide and 16.9% were gliclazide. Using the criteria developed by Morin et al [2], 103 medications were assessed as being of questionable (81.6%) or inadequate (18.4%) clinical benefit. Of these, 64.1% were initiated during hospice admission. There was a statistically significant association between medications of questionable clinical benefit and medication number during the last 14 days of life ($P < 0.01$). Three of the PIMs were vitamins, considered inappropriate by both sets of criteria. Prescribing of PIMs reduced as patients neared death.

*Conclusion:* A substantial proportion of older patients with life-limiting diseases receive PIMs during their last days of life. No systematic discontinuation of inappropriate medications was observed thus guidelines and resources are needed to facilitate rationalisation and deprescribing of drug treatments for older patients in the last days of life. The small sample size makes the relationship between most variables insignificant; however, data extraction is still ongoing in hospices.

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