The effectiveness of the Older prisoner Health and Social Care Assessment and Plan (OHSCAP): a randomised controlled trial

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Scientific summary

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Scientific summary

Background

Older prisoners

There has been a recent, considerable increase in the number of older prisoners across developed countries. In England and Wales, people aged ≥ 50 years currently account for 15% of the prison population, with 12,577 people in this age group in prisons.

The rise in the number of older prisoners is a consequence of a number of factors, including an ageing population, an increase in the number of older people committing crimes, changes to sentencing practices and enhanced forensic evidence resulting in greater numbers being convicted for crimes committed in previous decades.

Health and social care

There is no national strategy for the care of older prisoners. However, prisoners should have access to the same quality and range of health services that they would receive in the community.

Older prisoners have multifaceted health problems, yet there has been little research regarding the extent to which their physical and mental health needs are met. Older prisoners often have complex social care needs. Few studies have examined these needs, but evidence suggests that older prisoners experience a lack of appropriate support in this area.

Current practice

The present, standardised prison reception health assessment tool is designed to identify immediate health concerns, with a recommended second, more in-depth, assessment conducted later. However, there are low completion rates for the second, non-mandatory health screen, and it does not investigate social care need. There is no standardised older prisoner health and social care assessment in England and Wales; however, some establishments have developed their own.

Intervention

The Older prisoner Health and Social Care Assessment and Plan (OHSCAP) was developed and implemented as part of a previous study funded by the National Institute for Health Research (NIHR). An action learning group (including prisoners, NHS staff and prison staff) at one prison in England developed the OHSCAP.

The OHSCAP is a structured approach for better identifying and managing the health and social care needs of older prisoners. The previous study showed that the OHSCAP was acceptable to prisoners and staff, could be integrated into current prison/health-care processes and assisted with effective multiagency working.

The OHSCAP is paper based and collected information is uploaded onto existing prison, health and offender management systems. The assessment includes a series of open questions to facilitate discussion and is divided into three key parts, namely social, well-being and discharge planning. After the assessment, care plan and review sections allow facilitators to log in and update their responses to identified needs.

The assessment is conducted 1–2 weeks after an older prisoner enters prison. The care plan should be completed in conjunction with the older prisoner, and a copy of the OHSCAP should be offered to all participants.

Treatment as usual (TAU) included the standard non-age-specific health assessment carried out at prison entry.

Objectives

Research questions

1. Does the use of the OHSCAP compared with TAU improve:

    i. proportion of met health and social care needs
    ii. health-related quality of life (HRQoL)
    iii. depressive symptoms
    iv. functional health and well-being and activities of daily living (ADL)
    v. quality of health and social care planning
    vi. cost-effectiveness?

2. What are the facilitators of, and barriers to, the implementation and operation of the OHSCAP?

Objectives

1. To train prison staff to deliver the OHSCAP.
2. To implement the OHSCAP in a number of prisons in England.
3. To evaluate the efficacy of the OHSCAP in improving:

    i. the meeting of older male prisoners' health and social care needs (primary outcome)
    ii. HRQoL
    iii. depressive symptoms
    iv. functional health and well-being and ADL.

4. To assess the quality of care plans produced through the OHSCAP.
5. To explore the experiences of older prisoners receiving the OHSCAP, and of staff involved in conducting the OHSCAP.
6. To evaluate the cost-effectiveness of the OHSCAP compared with TAU.

Method

Sample

Four-hundred and ninety-seven participants were recruited from within 10 prisons housing adult males in England and informed consent was obtained. Inclusion criteria for the study were that participants were:

1. aged $\geq$ 50 years
2. newly arrived into a participating prison with a known release date (convicted) or likely release date (unconvicted) of at least 3 months after their prison entry date.

Participants were excluded if they:

1. did not have the capacity to provide informed consent
2. were considered by prison or health-care staff not safe to interview alone as a result of their current risk assessment
3. had previously been included in the study.

Procedure

Design

The study was designed to evaluate the OHSCAP. It consisted of a parallel two-group randomised controlled trial (RCT) with 1 : 1 individual participant allocation to either the OHSCAP intervention plus TAU (intervention group) or TAU alone (control group). The main trial was conducted alongside (1) an audit of the fidelity, and quality, of implementation of the OHSCAP; (2) economic evaluation examining the cost-effectiveness of providing the OHSCAP; and (3) a nested qualitative study to explore the views, and experiences, of participants and professionals involved in the study.

Randomised controlled trial

Older prisoner leads were recruited at each of the participating prisons and trained to deliver the intervention (OHSCAP).

Sample size

The sample size was calculated based on our previous work (a cross-sectional study assessing the unmet needs of 100 older prisoners at baseline), in which the mean number of unmet needs was 2.71 (standard deviation 2.65 unmet needs). The distribution of unmet needs ranged from 0 to 25 and was positively skewed, with the median number of unmet needs being 2. It was assumed that this distribution would be broadly similar at 3 months' follow-up in the TAU group. It was believed that, for this study to be practice-changing, at least a 30% reduction to a mean of 1.90 unmet needs would be required, so the study was powered accordingly, with 196 participants required in each trial arm at 3-months' follow-up.

Recruitment

An administrator within each of the prisons identified potential participants who fulfilled the inclusion criteria and informed them of the study. If the service user was interested in learning more, the administrator sought their permission to pass their details on to the research team. A researcher then met each potential participant to discuss the study further.

Informed consent was sought from all potential participants before they took part.

Randomisation

An individual-level randomised design was implemented. Randomisation was undertaken by the Manchester Academic Health Science Centre Clinical Trials Unit. Participants were randomised to receive either OHSCAP or TAU. The allocation method was minimisation with a random element using imbalance scores over the margins of two factors: institution and baseline number of unmet needs (0, 1, 2, 3, ≥ 4).

It was not possible to conduct a double-blinded study. Participants unavoidably became aware of which group they had been allocated to when they received the intervention. Furthermore, the researchers knew which group some of the participants belonged to because some of the intervention group took part in semistructured interviews.

Fidelity-of-implementation

Following the completion of data collection and all OHSCAP assessments in study sites, researchers contacted the OHSCAP lead at each site and requested anonymised photocopies of the OHSCAPs they had produced. Once collated, the anonymised copies were audited by a trained reviewer, who remained independent of the research team. A bespoke audit tool was developed specifically for this purpose. A total of 150 (68%) of OHSCAP assessments were audited.

Qualitative study

Semistructured interviews were held with staff delivering the OHSCAP, including prison officers ($n = 5$) and health-care staff ($n = 7$), to gain an understanding of the processes involved. It was necessary to ensure that an in-depth understanding of the social context and relationships affecting the successful

implementation of the OHSCAP was obtained. Additionally, semistructured interviews were held with 14 prisoner participants who had received the OHSCAP to gain an understanding of the facilitators and barriers involved in its delivery.

Cost-effectiveness evaluation

A within-trial cost–utility analysis of the OHSCAP compared with TAU was conducted as part of the trial. The primary outcome measure for the economic evaluation was HRQoL, as measured by the EuroQoL-5 Dimensions, five-level version (EQ-5D-5L). Participants' responses were converted to a single index utility value based on preference weights obtained from an English general population sample. These utility values facilitate the calculation of quality-adjusted life-years (QALYs) using the area under the curve method, which forms the outcome of the economic evaluation. Relevant resource use between baseline and follow-up was collected retrospectively using the Secure Facilities Service Use Schedule and a review of health-care files. Costs were calculated by multiplying resource use data by the relevant unit cost figures. All costs were valued in Great British pounds, according to the price year representing the mid-point of the trial (2014/15).

Outcome measures

The primary outcome measure was the mean number of unmet health and social care needs at 3 months, as measured by The Camberwell Assessment of Need – Short Forensic Version (CANFOR).

Secondary outcome measures were (1) functional health and well-being and ADL, as measured by The Bristol Activities of Daily Living Scale, (2) depressive symptoms, as measured by the Geriatric Depression Scale – Short form, (3) HRQoL, as measured by the EQ-5D-5L, and (4) the extent to which specific health and social care needs had been addressed according to responses using a bespoke OHSCAP tool.

The following tools were also used at baseline to describe the sample:

1. PriSnQuest – a brief mental health assessment that indicates whether or not a more in-depth assessment is required.
2. Burvill grid to obtain data on the physical health of participants.

Statistical analysis

All analyses were carried out using the intention-to-treat principle with data from all participants included in the analysis, including those who did not complete the OHSCAP assessments as intended. Analysis was conducted in the Statistical Product and Service Solutions, version 20 (SPSS Inc., Chicago, IL, USA).

The primary hypothesis for the change in the mean number of unmet needs, as measured by the CANFOR, was analysed using appropriate regression models, adjusted for baseline characteristics used in the minimisation process, for example site and number of unmet needs at baseline. Bootstrapping accounted for the skewness in the outcome of the data and 95% confidence intervals were calculated around all key effect size measures. Two-sided *p*-values were reported. In addition, a Poisson model was used to analyse the data as counts. Each relevant domain of the CANFOR was analysed separately using logistic regression, again with adjustment for baseline characteristics. Similar approaches were adopted for the secondary outcomes, with the linear regression models used for continuous outcomes and logistic regression for binary outcomes.

Qualitative data were analysed thematically, applying a framework method. The framework method produced a matrix of summarised data, which provided a structure to analyse and reduce the data.

Results

Ten prisons participated, and 497 male prisoners meeting the study criteria consented to take part. A total of 248 prisoners were randomised to the OHSCAP group and 249 to the TAU group. Equal numbers (202) in each trial arm successfully completed the 3-month follow-up.

The RCT did not identify any significant differences between the intervention and TAU groups in relation to the primary outcome. There were no tests of statistical significance for differences between randomised groups on any baseline variable, with the exception of 'hearing instructions' (one subsection of the bespoke OHSCAP research tool).

The audit of completed OHSCAP assessments and care plans highlighted several problems with completion of the document. Although the assessment sections were often completed well, there were particular problems with the care planning and review processes, and information sharing. The evidence obtained during the audit process overwhelmingly suggested that the OHSCAP was not implemented as intended. Four superordinate themes emerged from the qualitative data, namely the broken prison system, rigid prison processes, prisoner and staff relationships and the OHSCAP procedure itself. The OHSCAP was delivered within a prison system that was perceived by prisoners and staff to be in crisis. This acted as a fundamental barrier to its successful implementation. Rigid prison processes, including a lack of real partnerships between prison and health-care staff, impeded the OHSCAP process. Overall, prison officers were not considered to be ideal facilitators of the OHSCAP.

The within-trial cost-effectiveness analysis found no significant differences in either the costs or the QALYs between the TAU and OHSCAP arms of the trial.

Conclusions

The aim of the OHSCAP was to streamline current processes and create a more systematic approach to identifying and managing older prisoners' health and social care needs. There were no statistically significant differences in the total unmet health and social care needs between the group of older prisoners who received the OHSCAP and those who received TAU. However, the results of the audit illustrate that the OHSCAP was fundamentally not delivered as intended.

The qualitative interviews provided insight into why the OHSCAP was not delivered as intended. Most strikingly, the prison system was considered, currently, to be 'broken', predominantly as a result of a drastic reduction in prison officers. To potentially add value, the OHSCAP is reliant on previously established prison processes being fully operational, but this appears not to have been the case for the duration of this trial.

Implications for practice

1. Careful consideration should be given to who should facilitate initiatives for older prisoners, such as the OHSCAP, which involves multidisciplinary input. Prisoners did not deem it acceptable for prison officers to deliver the OHSCAP. This needs to be taken into consideration for any further exploratory work with this or similar tools. It would be beneficial if facilitators of these types of tools were employed within a designated role with protected time, preventing their routine redeployment to other wing duties. Facilitators should have knowledge, experience and interest in older prisoner issues. OHSCAP facilitators require skills in conducting assessments, case management and setting appropriate review periods. It is necessary to either ensure that there are predefined review time periods for the OHSCAP or to ensure that staff members feel confident, are skilled and have a manageable workload in order for them to be able to successfully determine when reviews should be conducted and to ensure that reviews are

completed on time. Further work is required to assist in meaningful partnership working and information sharing between prison and health-care staff. Initiatives that would assist with this process include joint training, designated 'information sharing and collaboration leads' within each relevant organisation and the development of clear policies to assist staff in understanding what can and cannot be appropriately shared and what social care is and why it is different from health care.

Implications for future research

1. In light of the problems with implementation of the OHSCAP, there remains a need to review the best ways of identifying and appropriately addressing older prisoners' health and social care needs.
2. The ways in which the Health and Social Care Act [www.legislation.gov.uk/ukpga/2012/7/contents/ enacted (accessed 18 October 2017)] and the recently announced prison reforms (Wahidin A, Aday R. The needs of older men and women in the criminal justice system: an international perspective. *Prison Serv J* 2005;**160**:13–23) have been, and will continue to be, implemented across the English and Welsh prison estate need to be identified, and gaps in services addressed. Furthermore, the implementation of the 2014 Care Act places new responsibilities on local authority Adult Social Care Departments. The way in which these responsibilities are discharged, particularly case finding, assessment and care co-ordination, needs further investigation.
3. A full training-needs assessment of the knowledge and skills of prison and health-care staff concerning older prisoner issues should be completed. This will provide a basis from which skills deficits can be clearly identified, and suitable training developed and implemented, with the aim of improving individual care and making prisons more informed environments with regard to older people.
4. Because prisons are unique and discrete environments, which differ significantly from both home and other institutional settings in which older people are cared for, focused ethnography should be conducted to generate an understanding of the way in which the prison environment, prison staff and younger/age-matched peers interact with and affect/influence the day-to-day lives of older prisoners, particularly with regard to the meeting of their social care needs.
5. Researchers conducting future RCTs in prison should carefully consider the balance between protecting the fidelity of initiatives being evaluated and ensuring that the research is conducted in a 'real-life' setting.
6. When public finances are severely limited, any money spent needs to be spent efficiently. A major contribution to this is the conduct of high-quality research that identifies '*what works*'. For services to evolve positively and efficiently, institutions need to remain committed to facilitating research as it is a valuable and valued contributor to high-quality, modern service provision. Active engagement of providers and decision-makers with research and the research community has the potential to improve services in both the short and the longer term.

Trial registration

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