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Factors that influence the commissioning and implementation of integrated care for adults at risk of cardiovascular disease and mild-to-moderate mental health concerns in the UK: a systematic review protocol

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Abstract

Background Cardiovascular disease (CVD) risk factors and mild-to-moderate mental health concerns (anxiety, depression) often co-occur and can worsen individual health outcomes, increase healthcare burden, and related costs relative to non-co/multi-morbidity. Existing evidence from both staff and service users suggests that integrating care for this population can be beneficial but challenging. Therefore, it is important that the key influences on integrated care are mapped to behavioural science frameworks so that intervention strategies in the system are actionable. This review aims to synthesise findings on which individual, organisational, social, and system-level factors influence integrated care for people experiencing co-occurring CVD risk factors and mild-to-moderate mental health concerns from the perspective of a range of health and social care professionals.

Methods This systematic review will search MEDLINE, Embase, Emcare, PsycInfo, CINAHL, and grey literature in PsyArXiv and HMIC. Included studies will be qualitative primary research published in the English language reporting on the factors that influence the commissioning and implementation of integrated care for adults at risk of CVD and experiencing mild-to-moderate mental health concerns. This will be from the perspective of healthcare professionals, managers, commissioners, and policymakers. A thematic synthesis will identify relevant actions, actors, context, targets, and timeframes using the AACTT framework, and influences on actors' behaviour will be mapped to the Consolidated Framework for Implementation Research (CFIR) and the Theoretical Domains Framework (TDF).

Discussion Data from this review will provide insight for a larger NHIR-funded programme of work that aims to optimise Integrated Care Services (OptICS) that will develop a whole-systems map to identify appropriate targets and intervention strategies to optimise integrated care. This review will offer a novel contribution to knowledge by synthesising qualitative evidence from a range of stakeholders on the influences on commissioning and implementation of integrated care for adults with physical and mental health comorbidities, mapped to complementary implementation frameworks.

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Introduction

People who regularly access health services often live with several physical and mental health challenges, and co- or multi-morbidity levels are increasing [1]. Living with multiple conditions is associated with lower quality of life [2], premature mortality [3], and increased healthcare utilisation and cost [4]. Research shows there is a significant relationship between obesity and depression levels in the general population [5], and anxiety occurs more frequently in people living with obesity compared with those living with what is considered a 'healthy' weight [6]. Meta-analytic evidence also demonstrates that depression increases the risk of mortality among individuals living with diabetes [7] and is a risk factor for adverse outcomes in service users living with acute coronary syndrome [8]. Cardiovascular disease (CVD) risk can include health behaviours such as inactivity, smoking, alcohol misuse, and conditions including obesity, diabetes, hypertension/high blood pressure, and high cholesterol, and often co-occurs with mild-to-moderate mental health concerns such as anxiety and depression. The evidence from both staff and service users is that benefits can be gained from integrating care for this population with a 'user-centred system' [9], whereby through a single point of access, service users are treated as a 'whole person', where they would only need to 'tell their story once'.

The considerable evidence base on the independent and combined negative effects that non-communicable disease (NCD, i.e. medical conditions that cannot be transmitted) and mental health concerns can have on individual and population health led to calls for a shared framework to better drive research, dissemination, implementation, and policy in this area [10]. In recognition of the evidence, the Centers for Disease Control and Prevention (CDC; [11]) published an action plan in 2011 to integrate mental illness prevention with chronic disease prevention, and the World Health Organisation [12] produced an action plan in 2013 to reduce the burden of NCDs and preventable mortality, which incorporated mental health. Of note, the last two considerations of the CDC plan focus on the key implementation challenges of policy integration and adopting systems to promote integration across multiple infrastructures [11].

More recently, both in the United Kingdom (UK) and internationally, there has been a move towards providing integrated care (also referred to as co-ordinated care or comprehensive care), which involves offering a range of connected health and care services including health promotion, disease prevention/management, and rehabilitation [13]. In England, from July 2022, 42 Integrated Care Systems (ICS) were set up as area-specific partnerships with the aim of bringing organisations across health, social care, volunteer, and other sectors together to pool budgets and deliver integrated care services, to achieve better outcomes for local people [14]. A recent review of models of integrated care [15] highlighted six common themes across approaches for the chronic conditions addressed (e.g. diabetes mellitus, cardiovascular disease, mental health), types of services provided (e.g. health education and counselling, linkage to care, treatment and management of conditions), and healthcare professionals involved (e.g. primary care nurses, general physicians, pharmacists). The potential benefits of integrated care include better experiences for service users, carers, and health professionals, lower hospital and emergency admission rates, and improved health status and quality of life [16]. Components that help enable integrated care can span professional and cultural (e.g. common purpose and vision, strong leadership, joint working), organisational (e.g. clear roles and responsibilities, ability to share data across organisations), and policy (e.g. consistent regulatory policies, political will) domains [17].

Service users have had mixed experiences of integrated care, with some reporting a lack of person-centred care tailored to their needs [18], and that full integration of mental and physical health care services might not be desirable [19]. Alongside the involvement of service user voices, exploring the potential barriers and facilitators to optimisation of integrated care from the perspective of delivery staff, managers, and commissioners is crucial to capturing iterative learning about the latest approaches. From the perspective of leaders in ICSs across England, important influences on shared leadership included motivation to execute a leadership position, attitudes towards interdisciplinary working (including conflicting values and expertise), leadership skills and behaviours, and notable barriers such as bureaucracy and a lack of time and support [20]. These attitudinal and operational barriers are somewhat related to those highlighted by other healthcare professionals in the UK (e.g. [21]) and internationally (e.g. [22, 23]). For example, primary care clinicians working within integrated care in the US reported barriers related to responsibility around referrals where specialists have the ability to reject referrals and other system components that limit professional autonomy [24]. Although there are common challenges in delivering integrated care across countries and contexts, there may also be unique issues when care for physical and mental health is integrated.

Some of these challenges have been articulated in recent work. For example, clinicians who work within integrated care for mental and physical health conditions report significant communication and coordination challenges, despite benefits from broadening nurses' functions in mental health care and the integration of consulting psychiatrists [22]. An integrated overview of worldwide research in this area highlighted five strategic barriers to implementation related to coordination, human resources and skill, fit of policies, leadership and accountability, and finance [25]. With a growing body of research highlighting the challenges of integrating care for physical and mental health conditions, it is important that the key influences are mapped to behavioural science frameworks so that potential changes in the system are actionable. There are some emerging examples of this; for example, a review from Wakida and colleagues [26] mapped reported facilitators and barriers of the integration of mental health services into primary care to the COM-B model, assessing Capability, Opportunity and Motivation towards Behaviour [27]. The benefit of this mapping is that the COM-B sits within the Behaviour Change Wheel [27, 28], a methodological framework for behaviour change interventions, and so intervention strategies and practical solutions can be directly designed from the findings to optimise integrated care.

Using behavioural and implementation science approaches, this work will extend current knowledge to help improve the design and evaluation of integrated care and its associated system/s. These approaches detail a systematic method of appraising what influences integrated care effectiveness, by helping to analyse barriers and facilitators within deliverer, service user, and wider organisational, social, and political contexts [29]. This framework of analysis then helps select and tailor intervention and implementation strategies. Two frameworks that have been used regularly in healthcare are the Consolidated Framework for Implementation Research (CFIR; [30]) and the Theoretical Domains Framework (TDF; [31]). The strength of the CFIR lies in its detailed consideration of contextual factors, with the framework outlining five higher order domains: innovation (i.e. how adaptable and complex integrated care is); outer setting (e.g. hospital system); Inner setting (e.g. hospital); Individuals (e.g. characteristics of individuals); implementation process (e.g. strategies used to implement the innovation) ([30]). The strength of the TDF lies in its nuanced breakdown of individual and environmental influences, with 14 theoretical domains covering: Knowledge; Skills (cognitive/interpersonal and physical); Social/Professional Role and Identity; Beliefs about Capabilities; Optimism; Beliefs about Consequences; Reinforcement; Intentions; Goals; Memory, Attention and Decision Processes; Environmental Context and Resources; Social Influences; Emotions; Behavioural Regulation [31], which can be mapped to the COM-B [27, 32].

There is a growing precedent for using the TDF and CFIR together, with a systematic review suggesting that their combined use may be additive, 'to more fully define the multi-level nature of behaviour change in healthcare organizations than either of these frameworks alone.' ([33], p12). Although there is overlap in some components, the TDF has a more comprehensive and nuanced range of influences for the individual, and the CFIR has the same advantage for the organisational level and surrounding context. For example, Kadu and Stolee [34] reviewed 22 studies examining the influences of implementation of the Chronic Care Model in primary care. The 'individual' level characteristics only focused on knowledge and beliefs, which represent just three of the potential 14 TDF domains. Coding of implementation influences with the CFIR alongside the TDF may have helped draw out more influences on the behaviours of key actors in the system that could be changed through future intervention. This combined approach has been recently used in reviews of barriers and facilitators to managing chronic conditions [35] and implementation of mental health interventions [36].

The current review will synthesise relevant studies exploring influences on the commissioning and implementation of integrated care for people living with CVD risk factors and mild-to-moderate mental health concerns using evidence generated from professionals involved in delivering, managing, coordinating, and commissioning such integrated care. This review will synthesise the findings from these studies using both the CFIR and TDF so that the breadth of potential individual, organisational, social, and system-level influences and contexts can be fully accounted for. Furthermore, key features of the studies will be identified with the Action, Actor, Context, Target, Time (AACTT; [37]) framework. Using these frameworks in combination will provide actionable recommendations for the optimisation of integrated care in the future. This will be a unique contribution to knowledge by being the first review to explore the influences reported from this range of health professionals, focused on this service user population, analysed through these key behavioural and implementation science frameworks. This work will offer systematically and theoretically developed recommendations based on evidence-informed behavioural science.

Research questions

- What are the influences on the commissioning and/or implementation (developing, delivering, coordinating, managing) of integrated care for adults living with cardiovascular disease risk factors and mild-to-moderate mental health concerns in the UK?
- How do identified influences map onto the CFIR [30] and TDF [31]?
- What are the key Actions, Actors, Contexts, Targets, and Time (AACTT: [37]) involved in the commissioning and/or implementation of integrated care for adults living with cardiovascular disease risk factors and mild-to-moderate mental health concerns in the UK?

Methods

Eligibility criteria

Included articles will meet the following PICOS criteria:

Population

Health and social care professionals, managers, commissioners, and policymakers working in integrated care with views on how best to implement integrated care for adults at risk of CVD and experiencing mild-to-moderate mental health concerns. These roles could involve referring, screening, case management, or any other provision of care, or commissioning, developing, coordinating, or managing integrated care services. For the purposes of this review, CVD risk factors will include the following: health behaviours (inactivity; smoking; alcohol misuse); and/or obesity (Body Mass Index > 30); type 2 diabetes; hypertension (high blood pressure); high cholesterol; history of heart disease; family history of heart disease. Mild-to-moderate mental health concerns will include anxiety, depression, and/or low mood/mental wellbeing. The judgement of whether a service is targeted at adults experiencing mild-to-moderate mental health concerns will be based on the classification provided by individual papers (e.g. the integrated care service specifically targets people who have been identified in this range).

Intervention

This review adopts an inclusive definition of integrated care by including any health and social care provision or service across primary care, secondary care, tertiary care, local authorities, third sector, and voluntary services in the UK that offer some sort of integration of care. The integrated care featured in studies needs to provide support for both the physical and mental health needs of service users. If, for example, the service only provides care for the physical elements of diabetes or obesity, but does not feature any mental health support, or vice versa, the study will be excluded.

Comparison

No control/comparator will be specified.

Outcomes

The primary outcome will be factors that influence the commissioning and/or implementation of integrated care for adults living with CVD risk factors and mild-to-moderate mental health concerns, from the perspective of health and social care professionals, intervention developers, managers, commissioners, and policymakers.

The secondary outcome will be identification of the following AACTT [37] domains: key actions (e.g. signposting to psychological support), actors (e.g. obesity specialist nurse), contexts (e.g. tier 2/tier 3 weight management setting), targets (e.g. obesity service users), or time (e.g. at the end of initial consultation) involved in developing, delivering, coordinating, managing, and/or commissioning integrated care.

Study type

Original research with qualitative study designs that report the influences on the development, delivery, management, coordination, and commissioning of integrated care for adults with the combination of CVD risk factors and mild-to-moderate mental health concerns. This could include: interview or focus groups studies; survey studies with open-ended questions; process evaluations; ethnographic methods; mixed methods studies where qualitative findings are reported separately and can be extracted. Quantitative study designs, editorials, opinion pieces, and systematic reviews will be excluded.

Information sources

The Ovid platform will be used to search the following databases: MEDLINE; Embase; Emcare; PsycInfo; CINAHL; and grey literature in PsyArXiv and HMIC, in English language only, with no date restrictions applied.

Search strategy

The search strategy was developed using a combination of relevant search terms taken from previous systematic reviews (e.g. [9, 38] and relevant MESH terms. The search terms are grouped around the key population and intervention variations from the PICOS inclusion criteria (see example in Supplementary Table S1). Boolean operators will be used to combine terms (e.g. “OR” within each category, and “AND” to combine categories). Various combinations will be piloted, and additional perspectives will be sought from the review team. A criterion paper will be identified and used to ensure that the search terms are suitable for the type of paper that meets the inclusion criteria.

Data management

Covidence software will be used to store, screen, and select studies.

Selection process

All selection processes will be undertaken by two reviewers, who will complete one full round of screening against the eligibility and inclusion criteria. Potentially eligible publications will be selected by their title and abstract independently by two reviewers, and categorised into 'included', 'unclear', and 'excluded'. Studies labelled as 'included' or 'unclear' will be screened as full texts independently by two reviewers. Any discrepancies between reviewers at the title and abstract or full text stage will be discussed and resolved with a third member of the review team.

Data collection process

A data extraction tool will be developed in Microsoft Excel. The tool will be piloted with the criterion paper and one other article prior to use and will then be modified as required after review from the research team. Data extraction will be undertaken by one reviewer, with a second reviewer extracting a sample of included articles (10%) for additional quality assurance.

Data items

The following variables will be captured in the data extraction form:

- Publication details: title; authors; year of publication; area of the UK.
- Methods: study design; method of data collection; participant information (e.g. age, ethnicity, sex) including stakeholder group (e.g. frontline delivery, managers, commissioners); setting.
- Outcomes: reported influences on integrated care service development, delivery, management, coordination, and/or commissioning; reported information on actions, actors, contexts, targets, or time (AACTT).

Outcomes and prioritisation

The primary outcome will be factors that influence integrated care for adults living with CVD risk factors and mild-to-moderate mental health concerns, from the perspective of healthcare professionals, intervention developers, managers, commissioners, and policymakers.

Secondary outcomes will be the identification of the key actions (behaviours), actors (people), contexts (settings), targets (service user group/s), and/or time (when/for how long) involved in developing, delivering, coordinating, managing, and/or commissioning integrated care.

Quality assessment of individual studies

The Critical Appraisal Skill Programme qualitative research checklist [39] will be used for quality assessment**.** Two reviewers will independently assess 20% of studies with the CASP, with any discrepancies discussed with a third review team member to reach consensus. The remaining studies will then be assessed by one reviewer. Studies will not be excluded based on quality, but we will take the quality of the studies into account where contradictory findings could be a result of poor-quality studies.

Data synthesis

Data synthesis, based on previous review approaches using the CFIR and TDF frameworks (e.g. [40, 41]), will be carried out in the following stages:

> *Step 1:* Factors that influence integrated care will be extracted from the eligible papers, including quotes, narrative summaries, and conclusions. These data will then be deductively coded to one or more relevant CFIR and/or TDF domains, and to the AACTT framework:

- CFIR high level domains: (1) innovation: how adaptable and complex the "thing" being implemented (i.e. integrated care) is and the extent of the evidence base; (2) outer setting: the setting in which the Inner Setting exists, e.g. hospital system; (3) inner setting: the setting in which the innovation is implemented, e.g. hospital; (4) individuals: the roles and characteristics of individuals; (5) Implementation process: the activities and strategies used to implement the innovation. Within each higher level CFIR domain there are several subdomains (e.g. the Inner Setting domain breaks down into the subdomains of Structural Characteristics, Relational Connections, Communications, Culture, Tension for Change. Compatibility, Relative Priority, Incentive Systems, Mission Alignment, Available Resources, and Access to Knowledge and Information). Some of these subdomains also contain further detailed categories (e.g. data coded to the Structural Characteristics sub-domain can be categorised as Physical Infrastructure, Information Technology Infrastructure, or Work Infrastructure). This framework allows a fine-grained analysis of potential influences.

- TDF domains: Knowledge; Skills (cognitive/interpersonal and physical); Social/Professional Role and Identity; Beliefs about Capabilities; Optimism; Beliefs about Consequences; Reinforcement; Intentions; Goals; Memory, Attention and Decision Processes; Environmental Context and Resources; Social Influences; Emotions; Behavioural Regulation.
- AACTT: any data highlighting key actions, actors, contexts, targets, or time.

A coding manual with definitions for each of the CFIR, TDF, and AACTT components will be developed to ensure consistency and reliability in coding. There is also the potential for TDF domains to map onto elements of the CFIR, particularly in the 'Individuals' domain. A random subset of 20% of included studies will be independently coded by two reviewers. Coding and discrepancies will then be discussed and presented to the wider review team. Upon agreement on the finer details of the process, one reviewer will complete the remaining coding, with input from other team members when needed.

Step 2: the finalised CFIR, TDF, and AACTT coding will synthesise the most salient influences on the commissioning and/or implementation of integrated care. The synthesised findings will be presented to colleagues with experience in behavioural science and healthcare, as well as policy partners supporting this research. Feedback from this step will be incorporated into the final data synthesis.

Subgroup analysis

If there are sufficient studies that distinguish between stakeholder groups, subgroup analysis will focus on influences specific to either commissioning or implementation (i.e. delivery, management, coordination).

Confidence in cumulative evidence

An assessment of confidence in the cumulative evidence across the review will be conducted using the Confidence in the Evidence from Reviews of Qualitative research tool (GRADE-CERQual, [42]). This tool provides an overall judgment of confidence categorised as high, moderate, low, or very low based on four components (e.g. [43]): Methodological limitations (e.g. the design or conduct of included studies); Coherence (e.g. the fit between the data from the included studies and a review finding); Adequacy of the data (e.g. richness and quantity of data supporting a review finding); Relevance (e.g. included studies are applicable to the review question).

Dissemination plans

Dissemination will include both academic and wider stakeholder output and engagement. Academic-focused dissemination is intended to include a published protocol, conference presentations, a peer-reviewed publication, and a policy brief. Wider dissemination may include stakeholder 'lunch and learn' events, videos on research host websites, and distribution of resources and recommendations via wider network partners (e.g. Applied Research Collaborations).

Public and Patient Involvement and Engagement (PPIE)

The Policy Research Unit (PRU) in Behavioural and Social Sciences (PRU-BaSS) is supported by a PPIE Strategy Group, made up of patient and public representatives, who provide advice and support to all research projects based on their lived experience of project-related topics. This review forms part of a project that involves a dedicated PPIE expert member within the study team as an equal contributor and co-author. The project's PPIE representatives will provide input and advice throughout the review, based on their lived experience.

Discussion

This review will synthesise existing research on the perspectives of a range of stakeholders involved in integrated care for adults living with CVD risk factors and mild-to-moderate mental health concerns. It is particularly important to study the functioning of integrated care for people living with multimorbidity who would benefit most from streamlined services, the improvement of which could produce important advancements in the quality of care alongside cost savings to national health and social care services. These perspectives will be mapped onto complementary implementation research frameworks, which will produce a set of recommendations for optimising the delivery, management, coordination, and/or commissioning of integrated care services. This will provide guidance to a range of policymakers about the elements of integrated care that currently work well and highlight key areas for improvements. The findings from this review will be relevant for a range of stakeholders invested in making cost-efficient integrated care work as well as possible for service users now and in the future.

Abbreviations

UK	United Kingdom
CVD	Cardiovascular disease
CFIR	Consolidated Framework for Implementation Research
TDF	Theoretical Domains Framework
COM-B	Capability-opportunity-motivation-behaviour
PRU	Policy Research Unit
CASP	Critical Appraisal Skill Programme
NCD	Non-communicable diseases
WHO	World Health Organisation
CDC	Center for Disease Control and Prevention

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s13643-025-02970-5.

Supplementary Material 1: Table S1. Search Strategy.

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Authors' contributions
This review forms part of the study entitled Optimising Integrated Care Services: OptICS, a PRU-BaSS project led by AMC. AMC, EO, FS, FL, DO, AoD, IV, MPK, and SM conceived the study design and funding acquisition. NH led on the writing of the protocol, with input from VA, AM, FL, LMcG, EO, AoD, CK, and AMC. NH, AMC, AM, VA, and FL led on the conceptualisation of the review approach. All authors contributed to conceptualisation, writing, and approved the final manuscript.

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Data availability
Not applicable.

Declarations

Ethics approval and consent to participate
Not applicable.

Consent for publication
Not applicable.

Competing interests
The authors declare that they have no competing interests.

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