Evaluation of Anticipatory Care Interventions

Evidence map

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Evaluation of anticipatory care interventions: Evidence map

Anticipatory care (AC) helps people to live well and independently for longer through proactive care for those at high risk of unwarranted health outcomes. It focuses on groups of patients with complex needs who have similar characteristics and who will be offered proactive care interventions to improve or sustain their health and reduce their need for reactive health care (NHS England and NHS Improvement, 2019). This evidence map draws together key characteristics and findings of evaluation studies about interventions that are similar to those likely to be put in place as part of an anticipatory care approach.

Objectives

The objectives of this evidence map are:

1. To identify published evaluations that can inform the AC programme evaluation
2. To identify the evaluations stated scope in order to assess their applicability to different evaluation objectives, programmes and contexts
3. To identify and map which evaluation components are encompassed within each study
4. To identify learning from the publications that is relevant to the development of a framework for evaluation of the AC programme

Evidence map method

A scoping review approach was used, allowing the extent and nature of the literature on evaluation guidance to be identified and an overview of the available frameworks to be developed. In line with the stages of a scoping review (Arksey et al 2005, Levac et al 2010), the process involved identification of the research question, a systematic search, and mapping of the frameworks against different components of evaluation.

To identify any frameworks that could inform the AC programme evaluation scoping, a research question was developed and used as the basis of a broad search strategy focussed on both peer reviewed and grey literature. The research question defined the search around multi-faceted large-scale community-based health care programmes similar to the AC programme, preferably pertaining to the proactive care of older people with complex needs.

A search of EMBASE, Medline and Cochrane Library was carried out to identify peer reviewed literature. A search of grey literature on the websites of key organisations interested in evaluation of programmes similar to the AC programme was completed at the same time. This includes reports from organisations such as the World Health Organization (WHO), Public Health England (PHE), British Heart Foundation, Age UK, and other relevant independent sector organisations reporting outcomes from other integrated care initiatives. The full methodology and search strategy are detailed in appendices.

Search results and data extraction

A total of 761 published evaluations were identified and the titles and abstracts sifted for relevance. Overall eight evaluations reported in ten publications were identified as relevant to the AC programme because they were evaluating initiatives using new models of care in either a UK or European setting. Of the ten publications, six were peer reviewed journal articles and four were published reports.

To address objective 2, a data extraction template was used to collate information about each framework. To assess each framework's scope and applicability to the evaluation of anticipatory care initiatives, information was extracted about the country and time scale of completion, stated evaluation objective and type of programme evaluated. To address the 3rd and 4th objectives we used extracted information about study methodology, research questions, data collection methods, sources and validated tools, engagement of stakeholders and key learning points of the evaluation. Table 1 lists the key evaluation questions and methods used to collect information to address the questions for each study. A more detailed outline of each study is provided in the appendix.

Findings

Of the eight evaluations six were of initiatives in the UK, one from Germany and one evaluating initiatives in five European cities including Manchester. All but two evaluations used a mixed methods approach incorporating qualitative and quantitative data collection. One evaluation reported quantitative data only and another a combination of different qualitative methods. Evaluation approaches ranged across the spectrum of formative, summative, process, outcome and impact. The longest evaluation was six years and the shortest, one year.

Key learning from these evaluations include:

- Longer evaluations (>4 years) may provide a more realistic view of whether the programme has worked or not
- Oversight and performance monitoring focussing on a narrow set of metrics available to the evaluators might not reflect the aims of the programme and shouldn't limit the scope of the evaluation
- Changes in impact measures over short time periods should not be interpreted as the intervention being unsuccessful
- Support for culture change should accompany process support should be part of a formative evaluation approach. A lack of early attention to culture change risks the capability of the system being effectively embedded and sustainable in the future
- Learning from evaluations should be shared widely to build on the current evidence base
- Evaluation at the macro (national), meso (service) and micro (individual) level gives a richer understanding of the programme's effectiveness, rather than focussing on one level
- To be useful the evaluation requires engagement of important stakeholders, and hence needs to be locally owned and led, which requires training and support
- Evaluation of local organisations may require funding for backfill to cover time for staff to extract and provide data, time taken for completing surveys and undertaking semi-structured interviews and identifying patients to take part in surveys, focus groups or semi-structured interviews

Table 1: Summary of included evaluations

Evaluation, country and study	Length and type of evaluation	Aim of evaluation and research questions	Approach and data collection/metrics
Integrated care transformation programme Mid-Notts, UK (Clarke et al 2020)	6 years (impact)	**Aim**: To evaluate of the long-term impacts of the Mid-Nottinghamshire Better Together Integrated Care Transformation Programme (ICTP) over a 6-year period from its launch in April 2013 until March 2019 **Research question:** What is the impact of the ICTP on hospital use, including A&E visits, emergency and elective admissions, emergency readmissions, elective and emergency length of stay and outpatient appointments?	A quantitative approach to evaluation using the following: • Demographic and socioeconomic factors, access to health care, and Quality and Outcomes Framework data by GP practice and CCG • Monthly hospital activity for the population of patients registered at each GP practice • Rate of A&E visits • % A&E visits patient seen within 4 hrs • % A&E visits resulting in emergency admission • Rate of emergency admissions • Average LOS of emergency admission • % emergency admissions with LOS less than 1 day • % of elective admissions with a LOS less than 1 day • Rate of 30-day emergency readmission
MamBo Care model evaluation protocol Germany (Richter et al 2020)	3 years (process & outcome)	**Aim:** To evaluate the new care model according to its implementation process and effectiveness **Research questions**: 1.What was the experience of the MamBo care model across the whole timeline for those involved in implementing, coordinating, delivering and receiving programme interventions? 2.How ready were the workforce to change to a new way of working? 3.What was the outcome of the programme on staff and patient wellbeing?	A mixed methods approach using the following: **Quantitative:** • HSOPS_M Hospital Survey on Patient Safety Culture for Hospital Management • Dispositional Resistance to Change Scale • The workload in Nursing scale • WHO 5-items Well-being Scale • PACIC - Patient Assessment of Chronic Illness Care shortened form • EFK-HPC Questionnaire on Disease Processing • Patient questionnaire of Cologne • HL-COM -Health Literacy sensitive Communication • Medication Adherence Rating Scale

Evaluation, country and study	Length and type of evaluation	Aim of evaluation and research questions	Approach and data collection/metrics
		4.Was care managed effectively and efficiently? 5.Was the programme cost effective? 6.Did the programme change the use of services?	- PHQ-2-Patient Health Questionnaire 2 - EORTC-QLQ-C30 (subscales) - Regional Health Network data - process data **Qualitative** - Annual focus groups - Semi-structured interviews – once following implementation
Vanguard new care models UK (Checkland et al 2019)	3 years (formative, process & outcome)	**Aim**: To examine on a macro level in depth the operation of the national support programme; how it has worked, the enabling and inhibiting factors and any wider lessons for future policy implementation **Research questions:** 1a. To what extent are the new care models being successfully implemented? 1b. Are there commonalities in factors that may enable or inhibit local programme implementation? 2.How do Vanguards interact with other policy initiatives such as Integration Care Pioneers and Sustainability and Transformation Plans? 3.How are Vanguards responding to support from NHS England within their local operations, and how has this influenced Vanguard activity? 4.What does a comparative outcomes analysis tell us about costs and cost-effectiveness?	A qualitative mixed methods approach to questions 1a and 1b comprising: - Document review and collation of relevant current data in order to develop a database to hold information about each of the vanguards characteristics and activities - Semi-structured interviews with NHSE employers, advisors, arms-length bodies - Survey of Vanguard leads

Evaluation, country and study	Length and type of evaluation	Aim of evaluation and research questions	Approach and data collection/metrics
		5.What do the findings tell us about this approach to programme implementation? This interim report only addresses the first 2 questions	
Urban Health Centres Europe approach 5 European cities (Franse et al 2019)	2 years (process)	**Aim:** To evaluate specific process components of the Urban Health Centres Europe approach (coordinated preventive care approach aimed at healthy ageing by decreasing falls, polypharmacy, loneliness and frailty) among older persons in community settings of five European cities **Research questions:** 1. What population was reached by the UHCE approach? 2. What dose of the intervention was actually delivered and received and by which participants? 3. What was the satisfaction and experience of main stakeholders involved in the UHCE approach?	A mixed methods approach using the following: **Quantitative:** • Project register of patients • Number of patients completed assessment at baseline and follow up • Patients completing baseline but not follow up assessment • Log-book completed by health care coordinators • Number of people assessed for falls, polypharmacy indication, loneliness indication, or frailty/medical indication • Number of people enrolled: on any pathway, or falls, polypharmacy, loneliness and /or frailty medical care pathways **Qualitative** • Survey of patients (participating and not participating)
3D multi morbidity trial UK (Mann et al 2019, Mann et al 2016)	15 months (process)	**Aim**: The overall aim of the process evaluation is to better understand how and why the intervention in the 3D (dimensions of health, drugs and depression) multimorbidity randomised controlled trial was effective or ineffective, and to identify contextually relevant strategies for successful implementation as well as practical difficulties in adoption, delivery	A mixed methods approach using the following: **Quantitative:** • All practices: Completion of practice profile at baseline and at the end of the trial to characterise practice organisations and usual care for LTCs. Includes list size, number of nurses and GPs, chronic disease review response of practice to local commissioning initiatives

Evaluation, country and study	Length and type of evaluation	Aim of evaluation and research questions	Approach and data collection/metrics
		and maintenance to inform wider implementation **Research questions:** 1. To establish practice and local health area context in all intervention and usual care practices at the beginning and end of the trial period to identify differences in usual care and how this might have affected adoption, delivery and maintenance, and to identify changes in the care of patients and multimorbidity occurring in interventions and usual care practices during the trial period which might affect outcomes – Assessed in all practices 2. To explore how and why organisational aspects of 3D intervention were implemented or not 3.To explore how health professionals in case study practices delivered the interventions to patients, whether all components were included, how and why it varied and to what extent they changed their practice to make it more patient centred 4.To explore how patients responded to the 3D intervention and to what extent they experienced care as patient centred	• Quality and outcomes framework data to capture variation in care provision and outcomes for the included diseases • The continuity of care measure used to assess continuity of care • EMIS data about number of recruited patients, when the practice begins 3D reviews • Number of pharmacy reviews complete • Proportion of 3D patient screened for depression • Proportion of 3D patients who receive printed agenda to take to part 2 of review • Proportion of 3D patients receiving health plan • Sample of electronic records reviewed to assess pharmacy recommendations and if they were acted on • Number of reviews delivered • Proportion of participating patients given 3D review each 6 months • Proportion of 3D patient appts with nurse or GP • Proportion of pharmacy reviews complete • Proportion people screened for depression • Proportion of 3D patients receiving agenda completed with their problems to take to part 2 • Proportion 3D patients receiving printed copy of health plan • Number of practice champion meetings attended **Qualitative methods:** • Semi-structured interviews with GP, lead nurse, research associate • Assess delivery of training by attending sessions, informal interview with research associate to

Evaluation, country and study	Length and type of evaluation	Aim of evaluation and research questions	Approach and data collection/metrics
		5. To explore how and why practices maintained (or did not maintain) reach and delivery of the intervention	determine barriers and enablers to putting training in place • Informal interviews with lead administrator and lead nurse at the beginning and end of the intervention period • Semi-structured interviews with lead administrator • Observation and informal conversations with reception staff to determine how appointments are arranged • Video/audio record consultations (up to 20) • De-brief following consultation observation • Semi-structured interviews and focus groups with patients
Integrated care programme commissioning London, UK (Smith et al 2019)	1 year (process)	**Aim:** Evaluation of the role of commissioning of whole systems integrated care **Research questions:** 1.How was the WSIC programme designed? 2.What was the involvement of local stakeholders in the design process? 3. How were the early adopter schemes implemented? 4.How far was the WSIC on track to meet its objectives?	A mixed methods co-design approach using the following qualitative methods: • Semi-structured interviews • Surveys • Workshops • Literature review • Document review
House of Care UK (ICF 2018, NHS Scotland Greater Glasgow and Clyde, 2016)	3 years (formative & summative)	**Aim**: To evaluate the development, optimisation and implementation of a workable model of person-centred chronic disease management (CDM) for patients with multimorbidity, operating within a local 'total place' approach to prevention and care	A mixed methods evaluation approach using the following: **Quantitative metrics:** • Eligible number of patients. • Number of eligible patients invited to attend information gathering appointment

Evaluation, country and study	Length and type of evaluation	Aim of evaluation and research questions	Approach and data collection/metrics
		Research questions: 1.What are the outcomes of the consultation for the patient in terms of self-management and relationship with practitioner? 2.To what extent do patients find the intervention acceptable and have patients identified a change in the quality of the consultation? 3.Does the House of Care approach improve the reach and participation of those from socio-economically deprived communities? 4.To what extent do GP practices find the intervention acceptable? 5.What has been the impact of training on Health Care Professional practice in delivering CDM?	• Number of eligible patients attending information gathering appointment • Number of eligible patients attending care planning appointment • Patient demographics including: age, Scottish Index of Multiple Deprivation (SIMD), gender, ethnicity • Comparison with practice 2014/15 CHD & Diabetes LES achievement data • Practices completed the Year of Care Quality Marker Self-Assessment and Action Planning Tool following completion of day 1 of the 1½ day Care Planning training and 12 months post training **Qualitative methods:** • Experience of patients with LTC using LTC6 questionnaire • Patients recently received planning consultation: semi-structured interviews
Dallas – digital health programme UK (Lennon et al 2017)	3 years (formative, process)	**Aim:** Examine barriers and facilitators to implementation of digital health at scale through the evaluation **Research question:** What are the implementation issues from different angles and with different stakeholders with a focus on what this data tells us about the readiness of different elements of the ecosystem in the United Kingdom to deliver digital health at scale?	Longitudinal qualitative survey focussed on gathering information from representatives of health, industry, voluntary sector, government, academia and patients and carers undertaking: • Stakeholder interviews at baseline, mid-point and endpoint • Stakeholder focus groups

Appendix 1: Literature review PICO

Literature Search Terms

Population	Adults aged 18 years or over living in the community (at home, supported accommodation, care home, temporary accommodation, homeless) with ‘complex’ health needs/case complexity with or without social care needs (not strictly defined) [e.g. frailty (a long-term vulnerability to decompensation after a stressor event; high risk of unwarranted health outcomes), multimorbidity]
Intervention	Similar scale and context to the anticipatory care programme: multi-faceted large-scale primary and/or community-based health care programme for people with complex needs to help people live independently for longer
Comparator	Usual care i.e. no multi-faceted large-scale community-based programme or no comparator
Outcomes	Evaluation framework details including detail regarding at least one of the following: • Evaluation approach • Study design • Aspects of process evaluated • Types of outcomes evaluated • Learning points regarding evaluation approach/design
Inclusion criteria	
Study designs	Inclusion criteria • Sources describing a framework or guidance to support or facilitate evaluation of programmes of a similar scale and context to the anticipatory care programme e.g. process &/or outcome evaluation • Empirical and/or methodological studies reporting the development and/or validation of an evaluation framework • Conceptual or discussion papers describing a framework or guidance on evaluation of programmes similar to the anticipatory care programme
Date and language	Papers published in English in the last ten years UK and international
Exclusion criteria	
Study designs	Exclusion criteria • Sources describing a specific measurement tool • Frameworks designed to support evaluation of individual interventions (as opposed to complex programmes involving multiple possible interventions) • Frameworks designed to support evaluation of programmes targeting specific health behaviours (e.g. smoking, alcohol, substance abuse) that fall under the remit of general public health prevention • Sources describing frameworks or guidelines intended to support evaluation of technology-based programmes • Theoretical or conceptual models of conditions or interventions Web-based sources were included if they provided systematic guidance on how to conduct an evaluation but excluded if they are part of an organisation’s general website without guidance. Sources were screened by title and abstract against inclusion/exclusion criteria. Full papers were assessed where publications met the inclusion criteria based on the abstract, or where there was any uncertainty. One person reviewed the document and carried out data extraction. The outcomes of each of these activities were quality assured by a second member of the team and disagreements resolved through discussion.

Appendix 2: Anticipatory care evaluation search strategy

Database: Medline (Ovid MEDLINE® Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE® Daily and Ovid MEDLINE®) 1946 to present
Search Strategy:
1 Community Health Services/ (31873)
2 "Delivery of Health Care"/ (92662)
3 "Health Services Needs and Demand"/ (53429)
4 National Health Programs/ (32263)
5 Health Promotion/ (74780)
6 Preventative Medicine/ (11791)
7 Patient-Centered Care/ (19930)
8 ((anticipat* or proactive or pro-active or coordinated or co-ordinated or preventive or preventative) adj8 (care or (case adj5 manag*))).ti,ab. (21151)
9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 (312979)
10 ("at scale" or large scale or region* or district* or city or cities or national* or area*).ti,ab. (3597332)
11 (multifacet* or multi-facet* or multicomponent* or multi-component* or multifactor* or multi-factor* or multi-intervention* or multidomain* or multi-domain* or multielement* or multi-element* or multi-sector* or multisector* or multisite* or multi-site* or cross-site* or multilevel* or multi-level* or multi-center* or multicenter* or multicentre* or multi-centre* or multiplex or tier*).ti,ab. (370184)
12 (multi* adj4 (facet* or component* or sector* or site* or level* or center* or centre* or location*)).ti,ab. (135063)
13 10 or 11 or 12 (3959390)
14 9 and 13 (75237)
15 (evaluat* or logic model*).ti. (561841)
16 Evaluation Study/ (254900)
17 *Program Evaluation/mt (3476)
18 15 or 16 or 17 (771487)
19 14 and 18 (4425)
20 Frail Elderly/ or Frailty/ (13614)
21 *Aging/ (147293)
22 Multimorbidity/ (1082)
23 multiple chronic conditions/ (485)
24 Polypharmacy/ (5126)
25 (frail adj3 (adult* or people or elderl* or person* or women or men or male* or female* or population*)).ab. /freq=2 (1807)
26 Homeless Persons/ (7956)
27 exp *Aged/ (26091)
28 Homebound Persons/ (631)
29 frail*.ab. /freq=2 (9806)
30 (complex* adj2 (care or patient* or need* or healthcare or health care or case*)).ab. /freq=2 (3415)
31 (multicomorbid* or multi-comorbid*).ti,ab. (35)
32 ((medication or medicine*) adj9 (problem* or concern* or difficult* or issue*)).ab. /freq=2 (3178)
33 (mental health adj9 (concern* or issue* or problem* or difficult* or deterior* or poor)).ab. /freq=2 (8566)
34 (homeless* or homebound* or multimorbid** or multi-morbid* or polypharmacy or poly-pharmacy).ab. /freq=2 (10320)
35 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 (214301)
36 19 and 35 (79)
37 exp United Kingdom/ (368304)
38 (United Kingdom or Great Britain or England or wales or scotland or northern ireland or ireland or eire or channel islands).ti,ab. (137780)
39 37 or 38 (439479)
40 19 and 39 (495)
41 36 or 40 (558)

Appendix 3: Outline of included studies

Clarke et al (2020)

Citation	Clarke G, Pariza P, Wolters A. The long term impacts of new care models on hospital use: an evaluation of the integrated care transformation programme in mid-Nottinghamshire. 2020 The Health Foundation
Country, length of evaluation, size (N)	Mid-Notts UK, 2013 to 2019 (N=41 GP practices)
Aim of study	To evaluate of the long-term impacts of the Mid-Nottinghamshire Better Together Integrated Care Transformation Programme (ICTP) over a 6-year period from its launch in April 2013 until March 2019.
Objectives	To examine the long term impact on hospital use of an integrated care transformation programme.
Methodology	The ICTP programme contained several interventions, which changed over time. These included local integrated care teams; a 24/7 care navigation service (‘Call for Care’); a home support service (‘Intensive Home Support’) that aimed to bridge the gap between acute and community services; an acute home visiting service to which GPs could refer patients; a proactive home care service providing integrated care in a care home setting; the introduction of an ambulatory and emergency care unit; and a programme to streamline elective referrals. A comparison between the hospital use of the Mid Nottinghamshire population with a synthetic control area, constructed from similar GP practices elsewhere in England was carried out. This report is restricted to considering the impacts of the ICTP on hospital use, including A&E visits, emergency and elective admissions, emergency readmissions, elective and emergency length of stay and outpatient appointments. It could not examine whether there had been any improvements in the quality of clinical care, patient outcomes or quality of life. To ensure rigour and transparency, the analysis was conducted according to a statistical analysis protocol which was subjected to independent academic peer review and finalised before the analysis began.
Reference data	Data relating to the characteristics of CCGs and GP practices, including demographic and socio-economic factors, access to health care, and Quality and Outcomes Framework (QOF) measures, were collected from publicly available sources. These were structured so that they provided a monthly data series of reference data for all CCGs and GP practices in England between April 2011 and March 2019. These data were used for risk adjustment and for comparing between CCGs and GP practices.
Activity data	Hospital activity data were obtained from the Secondary Uses Service (SUS), the national, person-level database that is closely related to the widely used Hospital Episode Statistics (HES). These data were collected between April 2011 and March 2019 for all patients aged over 18 years and registered at Mid-Nottinghamshire and donor pool GP practices. Data were then aggregated

	across patients registered at each GP practice to provide monthly series of activity data for each GP practice. These data were used to define impact metrics capturing monthly hospital use for the population of patients registered at each GP practice in England. These data were also used to define variables for risk adjustment and for comparing between CCGs and GP practices: these include historic trends in hospital use and the characteristics (eg age, gender and comorbidities) of patients seeking care each month.
Impact metrics	SUS data provided information about: • Rate of A&E visits • % A&E visits patient seen within 4 hrs • % A&E visits resulting in emergency admission • Rate of emergency admissions • Average LOS of emergency admission • % emergency admissions with LOS less than 1 day • % of elective admissions with a LOS less than 1 day • Rate of 30-day emergency readmission
Learning points from evaluating the study	In the first 2 years rates of A& E attendances were higher in Mid-Notts than the synthetic control areas by 3.9% in 2013/14, and 5.4% in 2014/15.The trends then reversed and by year 6 (2018/19) the rate was 4.3% lower than the synthetic control areas equivalent to 14.2 fewer attendances per 10,000 people per month. Over time mid Notts showed fewer hospital admissions with 6.4% fewer emergency admissions compared to the synthetic control group and a significant drop in hospital admissions for urgent care sensitive conditions (2-3 admissions per 10,000 people per month). From the third year (2015/16) onwards the length of overnight emergency hospital stays was shorter in Mid-Notts than the synthetic control group and the number of 30-day emergency admissions was also lower. Higher rates of elective admission in Mid-Notts compared to the synthetic control group were noted in years 4 and 5(2016/17 to 2017/18) and higher outpatient appointments during the first 4 years (2013/14 to 2017/18)
Learning points of the evaluation	The evaluation spanning 6 years of the ICTP may provide promising evidence that integrated care programmes have the potential to reduce hospital use over the longer term, even if there are increases in the short term. Previous evaluations of integrated care have only examined impacts on hospital use over shorter periods and have found increased activity. This shows that it may take time for new ways of working to become embedded and unmet needs for care may be discovered during initial periods: results here suggest that it took between two and six years before the ICTP was associated with positive impacts on hospital use. Still longer may be required to determine if increased elective activity ultimately leads to better outcomes for patients, and a better understanding of the areas where elective activity increased might be informative. In general, these results emphasise the

	importance of being realistic about how long it will take to see results and that early assessment of impacts risks erroneous conclusions that may lead policymakers to question or abandon potentially effective initiatives. It is however difficult to be sure if the changes in secondary care utilisation is entirely due to the intervention of interest with long, realist evaluations.

Richter et al (2020)

Citation	Richter, S, Demirer I, Choi, KE, Hartrampf, J, Pfaff, H, Karbach U. People with multimorbidity in outpatient care: patient-focused and needs-oriented healthcare management (MamBo) - protocol for a multiperspective evaluation study. BMC health services research, 2020. 20(1): p. 296
Country, length of evaluation, size(N)	Germany, July 2017 to June 2020 (N=2460 patients completing baseline assessment, N = 1500 completing follow up, N=40 participating physicians, N=160 participating practice staff)
Aim of Study	To evaluate the new care model according to its implementation process and effectiveness.
Context	A new form of coordinated, managed and cross-sectoral care for multimorbid patients - the “MamBo” care model - has been developed. Along with the implementation of MamBo, a process and outcome evaluation will be carried out.
Methodology	The MamBo-care model was evaluated in multi-perspective terms. Thus, a process and outcome evaluation with several data sources was conducted: (1) Annual focus groups and individual interviews with those involved in the process. (2) Various primary data, including surveys of patients, physicians and practice staff at the time of enrolment and 1 year later to enable pre-post comparison. (3) Claim data from the health insurance of the MamBo population in comparison to a comparative population, formed by the propensity score matching method. (4) Process data of the care management. The analysis of qualitative data was carried out by content analysis according to Mayring. For the analysis of the quantitative data, multivariate analyses were planned.

Process	**Stakeholder group**	**Data collection**
Factors influencing implementation and adoption of innovation	Participating physicians	• Focus groups - annual
Complexity of the role and delegation process	Monitoring and coordination assistants	• Focus groups - annual
Demand management	Relevant managers	• Semi-structured interviews – once after implementation
Care management	Relevant managers	• Semi-structured interviews – once after implementation
Management consultancy	Relevant managers	• Semi-structured interviews – once after implementation
Outcome measure - perceptions	**Stakeholder group**	**Data tool**
Patient safety	Staff	• HSOPS_M Hospital Survey on Patient Safety Culture for Hospital Management - overall perceptions of safety
Openness to innovation	Staff	• Dispositional Resistance to Change Scale - routine seeking
Psychophysical burden of workload	Staff	• The workload in Nursing scale captures - psychophysical overload
Wellbeing	Patients	• WHO 5-items Well-being Scale

Patients' perceptions of the quality of care they have received for their chronic conditions	Patients	• PACIC - Patient Assessment of Chronic Illness Care shortened form
Current coping efforts	Patients	• EFK-HPC Questionnaire on Disease Processing - Acting, problem-oriented Coping
Burden of disease	Patients	• Patient questionnaire of Cologne (subscale)
Health literacy sensitive communication	Patients	• HL-COM -Health Literacy sensitive Communication
Medication compliance	Patients	• Medication Adherence Rating Scale (MARS)
Social support	Patients	• BS6 - Brief Social Support Scale (BS6)
Depression	Patients	• PHQ-2-Patient Health Questionnaire 2
Quality of life regarding physical function and global health	Patients	• EORTC-QLQ-C30 (subscales)
Costs of use of health services	MamBo patients and patients in standard care	• Statutory health insurance data
Use of health services	MamBo patients and patients in standard care	• Regional Health Network data - process data
Learning points from evaluating the study	• Results not reported yet	
Learning points of the evaluation approach	• There was an increased risk of bias due to the quasi-experimental evaluation design in which participating physicians enrol patients and only selected patients receive the intervention. • There were difficulties recruiting people during the evaluation and only views from people willing to engage in the evaluation were included. This also meant patient enrolment didn't meet the sample size to ensure adequate power for statistical analysis.	

Checkland et al (2019)

Citation	Checkland, K., Coleman, A., Billings, J., Macinnes, J., Mikelyte, R., Laverty, L., & Allen, P. (2019). National evaluation of the Vanguard new care models programme: Interim report: understanding the national support programme. The University of Manchester
Country, length of evaluation, size (N)	England, 2015 -2018 (N=9 Primary care and acute care systems, N=14 Multispecialty providers, N= 6 Enhanced health in Care Home systems, N=8 urgent and emergency community care networks, N= 13 acute care collaboratives)
Aim of study	To examine on a macro level in depth the operation of the national support programme; how it has worked, the enabling and inhibiting factors and any wider lessons for future policy implementation.
Objectives	To examine the following research questions: 1: a) To what extent are the new care models being successfully implemented? b) Are there commonalities in factors that may enable or inhibit local programme implementation? 2: How do Vanguards interact with other policy initiatives such as Integration Care Pioneers and Sustainability and Transformation Plans? 3: How are Vanguards responding to support from NHS England within their local operations, and how has this influenced Vanguard activity? 4: What does a comparative outcomes analysis tell us about costs and cost-effectiveness? 5: What do the findings tell us about this approach to programme implementation? This interim report only addresses question 1a and 1b.
Methodology	The project is being conducted in phases (work packages (WP)), with an initial scoping phase undertaken to understand different types of Vanguard, the support programme in greater depth and the developing national context. The second phase (running alongside) involved synthesising the findings from local evaluations. The third phase will consist of primary data collection using case study methods to explore in depth the experiences (qualitative) of a sample of Vanguards and outcomes (quantitative) between areas with and without Vanguard sites. A final phase will synthesise the findings. This study focuses upon phase 1. These are the elements of the evaluation: • Individual Vanguard evaluations, including locally commissioned evaluations and a quarterly 'dashboard' setting out performance against a number of headline metrics compared with baseline and with non-Vanguard sites • Outcomes from the whole cohort of MCP and PACs Vanguards were compared with counterfactuals, using statistical techniques to establish whether or not any changes seen were statistically significant • Some individual interventions were subject to evaluation • Interventions common across a number of Vanguards were subject to thematic studies in order to understand how different contexts affected these • Independent national evaluation

Evaluation scoping Objective	Actions	Data collection method
1a: establishing Vanguard scope and activities and preparation for study	Development of a database to hold information about each of the vanguards' characteristics and activities which has provided a dynamic resource for the study	Document review and collation of relevant current data
1b: understanding the national context (macro level)	Between October 2017 and March 2018, 29 national level interviews were carried out with a variety of respondents at the national level, leads, consisting of current and past NHSE employees (n=19), advisors (n=7) and Arms Length Bodies (n=3.) In addition, in spring 2018 a survey of Vanguard leads was carried out in collaboration with the National Audit Office	Semi-structured interviews Survey
Learning points from evaluating the study	Some common features, mechanisms and ways of working which helped in achieving the programme's goals and supporting its operation included the development of relationships and alliances, incorporating learning and feedback, with local Account managers. They particularly valued: • Robust and multi-modal means of communication • Strong local and national leadership • Availability of expert knowledge and skills (within and outside the programme) • Flexibility within the programme, with the support team endeavouring to react to the needs of local sites • Good level of funding (across the programme elements) Also identified were a set of features, mechanisms and ways of working that were problematic. These included: • Over-optimistic expectations from the national programme • Oversight and performance monitoring, with a narrowing over the course of the programme to focus upon a narrow range of metrics which did not necessarily reflect the aims of some Vanguards • Difficulties associated with the continuation of existing national processes for regulation and oversight which may not be flexible enough to accommodate local innovations • The availability of high quality data and information, and issues with data sharing between organisations • Short timescales and a requirement for rapid progress, with guidance not always keeping pace with programme developments The following seem to have been important: • Active approaches to relationship building, with local account manager support and opportunities for face to face meetings • A permissive approach to change, encouraging local areas to develop approaches within a broad framework of support • Celebration of small successes to encourage ongoing engagement • Access to expertise and the opportunity to engage at national level with regulatory bodies to solve problems However, other issues were not always helpful such as: • Data availability and sharing issues	

	• The rapid pace of the programme overall
Learning points from evaluation approach	• Undertaking multiple local evaluations was an expensive and time-consuming approach, which requires further assessment • Pilots are designed to fulfil three purposes – implementation, demonstration and learning from evaluation. The evaluation approach was based on 'experimentation'. However if the pilots were seen as early adopters then subsequent implementation by later adopters would happen rapidly. If the pilots were for learning then a longer timescale with associated learning events would be appropriate. The tensions were acute in the programme which set out with no model of intervention but there was little time for learning as the full programme was rolled out.

Franse et al (2019)

Citation	Franse C, Zhang X, van Grieken Amy, Rietjens J, Alhambra-Borras T, Dura E, Garces-Ferrer J, van Staveren R et al A coordinated preventive care approach for healthy ageing in five European cities: A mixed methods study of process evaluation components. Journal of advanced nursing, 2019. 75(12): p. 3689-3701	
Country, length of evaluation, size (N)	Five European cities in the UK (Manchester), Greece, Croatia, Netherlands and Spain between May 2015 and June 2017 (N=2,825 invited, N=1,215 completed baseline, N=986 completed 12 months follow up)	
Aim of Study	The aim of this study was to evaluate specific process components of the Urban Health Centres Europe approach (coordinated preventive care approach aimed at healthy ageing by decreasing falls, polypharmacy, loneliness and frailty) among older persons in community settings of five European cities. The approach comprises preventative health assessment, shared decision making with the development of a care plan, and care pathways monitoring.	
Objectives	The objectives of the evaluation was to answer the following research questions: • What population was reached by the UHCE approach? • What dose of the intervention was actually delivered and received and by which participants? • What was the satisfaction and experience of main stakeholders involved in the UHCE approach?	
Methodology	A convergent mixed methods evaluation design (Creswell & Plano Clark, 2018) alongside the effect evaluation of the UHCE Approach was carried out in all cities between May 2015–June 2017. Quantitative and qualitative data were collected and analysed separately.	
	Stakeholder	**Data collection method**
Reach: What population was reached by UHCE approach?		
How many persons accepted to participate in the UHCE approach?	Participating patients	Project register Number of patients completed assessment at baseline and follow up
What were characteristics of persons who were lost to follow-up between baseline and follow-up?	Patients lost to follow up	Survey Patients completing baseline but not follow up assessment
Dose delivered and received: What dose of the intervention was actually delivered and received by which participants?		
To what extent were three stages of the UHCE approach (assessment, shared decision-making, care pathways) delivered to older persons?	Health care coordinators	• Log book completed by health care coordinators Number of people assessed for: • Falls risk • Polypharmacy indication • Loneliness indication • Frailty/medical indication

		- Number of people enrolled on any pathway, or specifically on falls, poly pharmacy, loneliness and /or frailty medical care pathways
What were characteristics of persons who did not enrol in care-pathways?	Non-participating patients	Survey
What were reasons for non-enrolment in care-pathways?	Non-participating patients	Log book completed by health care coordinators
Satisfaction and experience: What was the satisfaction and experience of main stakeholders involved in the UHCE approach?		
Were older persons satisfied with the UHCE approach?	Patients	Survey
What benefits, barriers and improvements did older persons, informal caregivers and professionals report?	Patients, carers and health care professionals	Focus groups
Learning points from evaluating the study	People in poor health seemed to be less likely to enrol in the programme. Interventions in the falls and loneliness care-pathways required persons to go to the training location and included active activities such as balance and strength training or social group activities. Persons who were limited in function were less likely to be able to participate in these activities. Strategies to reach older persons with limited functioning are required. Mistrust towards unfamiliar care providers and lack of confidence to engage in certain care activities are main barriers towards engagement in care among older persons. The development of a trusted relationship between health care professionals/coordinators with older clients and focus on psychosocial barrier may influence their care decision.	
Learning points of evaluation approach	The combined quantitative and qualitative approaches resulted in a deep understanding of the UCHE approach. Some evaluation measures were not defined well enough to be useful. For example cities reported almost 100% of cases involved shared decision making but it was unclear to what extent the older person was involved in the process.	

Mann et al (2019) and Mann et al (2016)

Citations	Mann C, Shaw A, Guthrie B, et al. Protocol for a process evaluation of a cluster randomised controlled trial to improve management of multimorbidity in general practice: the 3D study. BMJ Open 2016;6:e011260. doi:10.1136/bmjopen-2016-011260 Mann C. Shaw A, Guthrie B., Wye L, Man M, Chaplin, K, Salisbury C. Can implementation failure or intervention failure explain the result of the 3D multimorbidity trial in general practice: Mixed-methods process evaluation. BMJ Open, 2019. 9(11): p. 031438.	
Country, length of evaluation, size (N)	Thirty-three UK general practices in three areas starting in 2015 for 15 months (N=1546 people with multimorbidity(38 were interviewed) , N=11 general practitioners, N=14 nurses, N=7 administrators)	
Aim of study	The overall aim of the process evaluation is to better understand how and why the intervention in the 3D (dimensions of health, drugs and depression) multimorbidity randomised controlled trial was effective or ineffective, and to identify contextually relevant strategies for successful implementation as well as practical difficulties in adoption, delivery and maintenance to inform wider implementation.	
Objectives	See process evaluation objectives below.	
Methodology	The overall design is a mixed-methods process evaluation study using quantitative and some qualitative data from all practices, and observation, interview and focus group data from four purposively selected case study practices. Quantitative data was collected to provide implementation feedback to all intervention practices and contributed to evaluation of implementation fidelity, alongside case study data. Data was collected at the beginning and end of the trial to characterise each practice and how it provides care to patients with multimorbidity. Mixed methods was used to collect qualitative data from 4 case study practices, purposively sampled from among intervention practices. Qualitative data was analysed using techniques of constant comparison to develop codes integrated within a flexible framework of themes. Quantitative and qualitative data was integrated to describe case study sites and develop possible explanations for implementation variation.	
Process evaluation objective	Stakeholder	Data collection
To characterise usual care in all GP practices at the beginning and end of the trial period to identify variation in usual care and how this might have affected adoption and to identify changes in	All trial practices	• Completion of practice profile form for each practice at baseline and at the end of the trial. Data included list size, number of nurses and GPs, management of chronic disease review, and local healthcare commissioning initiatives to which the practice has responded interviews with the lead administrator and/or lead nurse will be conducted at the beginning and end of the intervention period in all practices to clarify practice organisational systems and whether and how they change in response to the intervention and to changing healthcare commissioning requirements • Quality and Outcomes Framework data from each practice will capture variation in care provision and outcomes for the included diseases

the care of patients with multimorbidity occurring in intervention and usual care practices during that time which might affect outcome		- The Continuity of Care measure will be used to assess to what extent patients in each practice receive longitudinal continuity of care
To explore how and why organisational aspects of the 3D intervention were implemented (or not)	4 case study practices sampled to achieve maximum diversity of role and experience	- Number of patients recruited - Date at which practice starts 3D reviews - Semi-structured interviews with lead administrator, researcher working with each practice and reception staff about experience of training, organisation of 3D intervention, barriers and enablers to implementation
To explore how health professionals in case study practices delivered the intervention to patients, whether all components were included, how and why it varied, and to what extent they changed their practice to make it more patient-centre	Health professionals in case study practice	- Proportion of pharmacy reviews completed - Proportion of 3D patients screened for depression - Proportion of 3D patients who receive a printed agenda to take to part 2 of the review - Proportion of 3D patients receiving a health plan and provided with a printed copy Non-participant observation and recording of consultations to assess fidelity of delivery of the 3D intervention to patients. With consent from both patient and clinician, the researcher video-recorded or observed and/or audio recorded up to 20 consultations conducted by GPs and by nurses with patients participating in the trial. Observation covered the extent to which all components of the reviews were included, how the consultation template was used and responses of patients and health professionals to the reviews. Observation of consultation style and techniques informed evaluation of patient centredness. De-briefing following consultation observation. A sample of 2 nurses and 2 GPs from each case study practice who have consented to having a consultation observed and/or audio recorded were if possible be de-briefed afterwards to gain more insight into their management of the consultation, where possible using extracts from the consultation to prompt recall. Semi-structured interviews with a sample of nurses and GPs to obtain views of the intervention, and explore experiences of delivering the intervention to patients. At least 1 nurse and 1 GP and up to 2 others from each case study practice were asked to consent to interviews during the course of intervention delivery to assess whether there were barriers or facilitators affecting delivery, whether

		roles and practice are significantly changed by the intervention, and the response of the health professionals to the intervention. A selection of electronic patient records were reviewed at the end of the trial to assess the content of pharmacist recommendations and whether they were acted on by the GP, and to assess how the agenda compiled by the nurse was reflected in the GP's subsequent consultation and health plan.
To explore how patients responded to the 3D intervention and to what extent they experienced care as patient-centred	Patients of case study practices	A sample of patients were asked to consent to a focus group to compare their experience of usual care with their experience of 3D care and to comment on organisation of care and degree of support in management of their LTC. Focus groups were used because this is likely to generate richer data through discussion of diverse experiences. Up to 4 patients from each case study practice were asked to consent to interviews after the intervention has been implemented to assess their response to the intervention and opinion of its impact. Individual interviews rather than focus groups were used for this because patients will be asked about their individual consultations and condition-specific care. Some of these patients will be those who have consented to having one of their 3D reviews recorded and/or observed and were invited to interview soon after one of their consultations has been recorded in order to discuss the consultation, using extracts from the recording to prompt recall and facilitate discussion of the consultation. Questions to be discussed depended on preliminary analysis, considering interaction, such as agreement or disagreement, and content, such as the patient's agenda. The questions aimed to elucidate the observed interaction between patient and clinician.
To explore how and why practices maintained (or did not maintain) reach and delivery of the intervention	Case study practices	• Number of reviews delivered month by month over the course of the intervention • Proportion of participating patients given a 3D review every 6 months • Proportion of 3D patients' appointments that are with designated nurse or GP • Proportion of pharmacy reviews completed • Proportion of 3D patients screened for depression • Proportion of 3D patients receiving an agenda completed to take to part 2 of the review • Proportion of 3D patients receiving a health plan and provided with a printed copy • Number of practice champion meetings attended • Semi-structured interview towards the end of the trial period with the 3D lead GP and lead administrator in each case study, what problems were encountered and what facilitated or hindered maintenance of the intervention

		• Semi-structured interview with at least 1 nurse and GP from each case study practice who have delivered the intervention (same sample as in 3G) to explore their perceptions of how well the intervention worked within the practice structures and how it affected their role and practice • Informal interview with research associate for each site at more than 1 time point to obtain their views about the implementation and maintenance of the intervention.

Smith et al (2019)

<table>
<tr><td>Citation</td><td colspan="2">Smith, J, Gerald W, Holder H, Gaskins M. Evaluating the design and implementation of the whole systems integrated care programme in North West London: why commissioning proved (again) to be the weakest link. BMC health services research, 2019. 19(1): p. 228</td></tr>
<tr><td>Country, length of evaluation (N)</td><td colspan="2">North West London, UK. Programme initiated in 2012 and this evaluation carried out 2014 to 2015 (N= 8 Clinical Commissioning Groups in North West London)</td></tr>
<tr><td>Aim of study</td><td colspan="2">Evaluation of the role of commissioning of whole systems integrated care</td></tr>
<tr><td>Objectives</td><td colspan="2">Using a primarily qualitative evaluation to provide an independent, summative assessment of:
• how the WSIC programme was designed
• the involvement of local stakeholders in the design process
• the development and early implementation of early adopter (EA) schemes
• the extent to which the WSIC programme appeared to be on track towards its objectives</td></tr>
<tr><td>Methodology</td><td colspan="2">A mixed methods approach was used to evaluate a major integrated care initiative in North West London, focussed on the role of commissioning in attempts to secure large-scale change within and between health and social care services to support the delivery of integrated care for people living with complex long-term conditions.

This was achieved through analysis of data collected in semi-structured interviews, surveys, workshops and non-participant observations using a thematic framework derived both deductively from the literature on commissioning and integrated care, as well as inductively from coding and analysis of interview data. The study comprised two phases designed to meet the four research objectives, and to mirror the two phases of development: co-design and early implementation.</td></tr>
<tr><td>Process</td><td>Timing</td><td>Data collection</td></tr>
<tr><td>Assessment of co-design of the programme</td><td>Phase 1 – February to June 2014
Describing, understanding and assessing the context and processes of WSIC</td><td>Research co-design workshop (re overall objectives and approach)
30 × 1 hr interviews</td></tr>
<tr><td>Involvement of stakeholders in co-design</td><td>Phase 1 – February to June 2014
Describing, understanding and assessing the context and processes of WSIC</td><td>• Observation field notes of 60 hrs of meetings or workshops
• Analysis of programme documentation including WSIC toolkit
• Review of UK and international literature on integrated care and commissioning
• Feedback workshop with WSIC stakeholders re initial findings</td></tr>
<tr><td>Development and early implementation of early adopters</td><td>Phase 2 – July 2014 to April 2015
Tracking progress of 9 EA schemes and in-depth case studies of 4 EAs, plus ongoing programme-level monitoring of context</td><td>• Research co-design workshop with EA and WSIC stakeholders (re case study approach and selection)
• 16 × 1 hr interviews at pan-NWL level
• 27 × 1 hr interviews in case study EAs
• Field notes of 60 hrs of meeting observations both in</td></tr>
</table>

		• EA case studies and at pan-NWL level • Continued analysis of programme documentation • On-line survey of members of EA steering committees • On-line survey of all GP practices in NWL • Feedback workshop with EAs re survey and other data initial findings
Progress made towards WSIC objectives	Phase 2 – July 2014 to April 2015 Tracking progress of 9 EA schemes and in-depth case studies of 4 EAs, plus ongoing programme-level monitoring of context	• Synthesis by research team of all data • Comparison of conclusions with WSIC plans • Feedback workshop with WSIC core leadership team • to share draft report themes and framework • Feedback workshop with WSIC stakeholders to share final draft report
Learning points from evaluating the study	Successful engagement of front-line health and social care staff, their managers and union representatives in detailed planning for new ways of providing and staffing services: • Involvement of local politicians in WSIC planning and governance • Setting graduated and realistic outcome measures • Learning sufficiently from prior local experience of pilots that had demonstrated the time required to change service delivery patterns across multiple professions and the limited prospects of affecting emergency admission rates • Engaging the majority of clinicians employed in community and hospital settings in the implementation of EAs • involving the public, patients and carers in actual implementation of service change, as opposed to having intensive but narrow engagement in programme planning and governance Significant effort went into engaging some people at some levels in plans for change: • the project planning approach was extensive & included apparently rigorous 'checkpoints' and monitoring • WSIC built on prior integrated care and community budgeting initiatives locally, as well as participating in pilot schemes • the WSIC programme was located within a policy of primary care-led commissioning committed to strong general practice involvement; and there was a major commitment to recruiting • training and working with lay partners	
Learning points of evaluation approach	• Predesigning the process evaluation based on a published framework of a cluster RCT was useful	

NHS Scotland, Greater Glasgow and Clyde House (2016) and ICF (2018)

Citation	NHS Scotland, Greater Glasgow and Clyde. House of Care Early Adopter Programme Evaluation Framework, 2016, NHS Scotland Greater Glasgow and Clyde. ICF. House of Care Evaluation: Final Report, 2018. Birmingham
Country, length of evaluation, size (N)	UK, evaluation 2016/18 (N=2 English CCGs, 3 Scottish NHS organisations)
Aim of Study	To evaluate the development, optimisation and implementation of a workable model of person-centred CDM for patients with multimorbidity, operating within a local ‘total place’ approach to prevention and care. This includes patients diagnosed with type 2 Diabetes and/or Coronary Heart Disease (CHD) as an exemplar group.
Objectives	To examine: • What are the outcomes of the consultation for the patient in terms of self-management and relationship with practitioner? • To what extent do patients find the intervention acceptable and have patients identified a change in the quality of the consultation? • Does the House of Care approach improve the reach and participation of those from socio-economically deprived communities? • To what extent do GP practices find the intervention acceptable? • What has been the impact of training on Health Care Professional practice in delivering CDM?
Methodology	In addition to the outlined NHSGGC evaluation, ICF International have been commissioned by BHF to evaluate the HofC programme at a national level. The focus of the evaluation is both formative and summative. It will support the monitoring of projects and the sharing of lessons learned between sites; support individual sites to self-evaluate; and undertake a programme-level impact evaluation, including economic analysis. Four interim annual evaluation reports are available. NHSGGC / Scotland data will be available in addition to potential learning from other sites.

	Stakeholders	**Data collection method**
Patient experience: To measure change over time in patient self-reported experience of health care and self-management support within participating HofC practices.	Patients with a long-term condition (LTC)	The LTC6 Questionnaire to gauge understanding and experience of the healthcare received over the last 12 months.
Patient experience: To gain insight into whether the House of Care approach to CDM care planning is acceptable to	Patients who have recently (in last 2 months) attended a	Semi-structured interviews

patients, and whether patients have identified a change in the quality of the consultation.	HofC care planning consultation	
Programme reach: To gain insight into whether the House of Care approach facilitates improved equitable uptake of CDM annual reviews, particularly in relation to socio-economic deprivation.	Quantitative	• Eligible number of patients. • Number of eligible patients invited to attend information gathering appointment. • Number of eligible patients attending information gathering appointment. • Number of eligible patients attending care planning appointment • Patient demographics including; age, SIMD, gender, ethnicity. • Comparison with practice 2014/15 CHD & Diabetes LES achievement data.
Practice implementation, adoption and acceptability: To explore practice implementation of HofC approach.	Practice level	The Year of Care Quality Marker Self-Assessment and Action Planning Tool developed by Year of Care Partnerships to support practice implementation of the HofC approach and continuous quality improvement. Completed: i. Following completion of day 1 of the 1½ day Care Planning training ii. 12 months post training.
Health Care Professional Acceptability and Adoption: To explore HCP acceptability of HofC approach, and their experiences of adopting this approach in practice as well as the impact of training on health care professional practice in delivering CDM.	Participating primary & secondary care staff	Facilitated group discussion using a discussion guide developed by Public Health collaboration with NHSGGC HofC steering group & evaluation sub-group.

Learning points from evaluating the study	• BHF has an important role to play in promoting person-centred care and new models of delivering care for CVD. BHF should continue with its work in promoting and driving forward person centred care as it has much to contribute in terms of advancing knowledge and practice using CVD conditions as an exemplar. • It is important that programmes are designed with clear aims from the outset. A number of stakeholders reflected that there was some uncertainty around the conditions to be included under the umbrella of CVD, the requirements of the evaluation and the expectations of BHF. BHF should bear this in mind when commissioning future programmes and evaluations. • Funding longer programmes may be of greater benefit for implementation and evidencing impact. Implementing CSP and promoting a more collaborative and person centred culture requires substantial change in both process and culture, which takes time. BHF should therefore consider designing and funding future programmes with this in mind. • Support for culture change should accompany process support. Throughout the evaluation, stakeholders highlighted the importance of change at both a practical level as well as a cultural level, sometimes reflecting that sufficient focus was not given to both. A lack of early attention to culture change risks later sustainability. Alongside its programme portfolio, BHF should support 'person-centred friendly' culture change and the strengthening of the voice of lived experience. • BHF and partners should continue to develop efforts around the more than medicine element of the approach. BHF, alongside the Health and Social Care Alliance Scotland and YoCP are well placed to continue supporting this work, developing the wider case for change and further understanding around the role of wider determinants of health and supported self-management. • Approaches to monitoring and evaluation could be further refined. The HoC programme has generated important learning around the ways in which monitoring and evaluation processes could be refined, including: balancing the requirements of BHF with efforts to ensure the evaluation is locally owned; focusing on measuring fewer indicators 'well'; setting realistic expectations; ensuring all requirements are fully understood; and improving the output reporting templates to provide more clarity to sites. • Learning from the programme should be shared widely. The programme and its evaluation has shown impact and generated a vast degree of learning around CSP and person-centred care and has built on previous learning from YoCP. BHF should therefore seek to disseminate findings as widely as possible; there is much to contribute to an as yet narrow evidence base around implementing CSP for patients with CVD and other LTCs.
Learning points of evaluation approach	None described

Lennon et al (2017)

Citation	Lennon M, Bouamrane M, Devlin A, O'Connor S, O'Donnell C, Chetty U, Agbakoba R, Bikker A, Grieve E, Finch T, Watson N, Wyke S, Mair F. Readiness for Delivering Digital Health at Scale: Lessons From a Longitudinal Qualitative Evaluation of a National Digital Health Innovation Program in the United Kingdom. Journal of medical Internet research, 2017. 19(2): p. e42	
Country, length of evaluation, size (N)	UK, June 2012 to October 2015 (N=125 key implementers)	
Aim of study	The aim of the study was to examine barriers and facilitators to implementation of digital health at scale through the evaluation of a £37m national digital health program: Delivering Assisted Living Lifestyles at Scale” (dallas) from 2012-2015. Four large multi-agency consortia (referred to as communities) called i-Focus,” Living It Up,” More Independent,” and Year Zero” were funded. The communities were funded specifically to design, deploy, and promote awareness and uptake of a range of innovative digital health and wellness services across the UK.	
Objectives	To examine implementation issues from different angles and with different stakeholders with a focus on what this data tells us about the readiness of different elements of the ecosystem in the UK to deliver digital health at scale.	
Methodology	Longitudinal qualitative and survey data were collected over 39 months to help identify and understand key barriers and facilitators experienced during the implementation journey.	
Process	**Stakeholders**	**Data collection**
Implementation of the e-toolkit	Health, industry, voluntary and academic representatives	Interviews at baseline, mid-point and endpoint
Championing the e-toolkit	Volunteer champions, voluntary sector, health and administrative and government representatives	Interviews
Experience of the ‘Living it up’ consortia	Representatives from, health, industry, voluntary sector, government academic, and users	Interviews
Project management of: **Evaluation alignment** **Dallas leads** **House of Memories** **Digital Health and Care Alliance**	Representatives from the health service, industry, academia, government, patients and carers	Interviews
Implementation of: **Voluntary champions** **House of memories** **e-Redbook** **‘No delays’** **‘Get active’**	Patients, carers, volunteer champions, government agency, industry, health care and administrative representatives	Focus groups

Learning points from evaluating the study	• Themes of readiness were sorted into Micro, Meso and Macro level facilitators and barriers. • Further commitment and investment in both national and local infrastructure will be required if digital health care is to become normalized. • Guidance relating to ownership and control of personal health data and data privacy regulations are required to mitigate current uncertainty in the digital health arena. • Brand trust and confidence is crucial. Accreditation and official endorsement of products and services is an important determinant of future successful deployment of digital health services as is peer recommendation for consumer wellness products. Clear systems to facilitate trust and confidence need to be put in place. • Technical and service interoperability needs to be prioritized and, if necessary, incentivized to ensure the scaling up of digital health care across systems and sectors. • Future digital health services need to be more accessible by those who are currently socially or economically excluded including those whose first language is not English, and those with sensory, physical, or cognitive impairments. • There is a need to invest in further awareness raising, upskilling of consumers and more affordable and accessible technologies if the true potential of digital health and wellbeing technologies are to be fully realized and the concept of professional and lay champions to promote technologies and services merit support. • More extensive and intensive public engagement and debate on the subject of the risks versus benefits of digital health needs to be undertaken to address concerns around security and safety of digital health and wellness products and services. • Greater emphasis needs to be placed on both upskilling and also ensuring the next generation of health professionals are more digitally” able. Digital health care needs to be a feature of undergraduate health professional training. • Guidance is required to shape and support a market that spans consumer wellness and statutory health services. Consideration must be given to future funding models, procurement, and the potential for hybrid data, including sharing, storage, and management models that permit digital health apps and services to be taken up and used via consumer markets and/or statutory channels. • There is a need to promote health care stability and a culture of long-term planning. Instability and constant change can be a deterrent to investment and hinders implementation in the digital health sphere.	
Learning points of evaluation approach	• It was difficult to engage with some individuals and organisations and so they weren’t pursued for their views although their input would have given a valuable perspective.	

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