Anticipatory Care

Approaches to evaluation

February 2021

Introduction

Delivery of anticipatory care (AC) will be coordinated through PCNs via primary and community health services working in fully integrated multidisciplinary teams alongside social care, mental health, housing sector, voluntary sector, community partners and in collaboration with urgent and acute care services. PCNs will identify a cohort of people from GP practice registers who have conditions relating to two or more of the NICE multimorbidity clusters[1]. Each PCN will prioritise a subset of this sample by referring to the list of health inequalities factors from the Public Health England (PHE) report on COVID disparities[2], for example focussing on those who are homeless or who have dementia. This group will be prioritised locally for the AC programme.

The programme will involve two parts:

a) System preparedness - workforce development and building relationships with partners to develop integration of services

b) Intervention - for people identified by the PCN, the PCN will ensure that they receive a proactive needs assessment by a care coordinator which will result in one of four outcomes:

- Those requiring no further investigation – people will be considered again when data are run quarterly
- Those where case management would be helpful with a referral to a social prescriber link worker who can signpost them to services
- Those where a formal targeted assessment for a specific issue is needed for example for falls or incontinence
- Those who have complex needs that require a multidisciplinary team to carry out a holistic needs assessment resulting in a personalised care and support plan (PCSP)

In order to evaluate the AC programme it is important to understand:

- The aims of the programme
- The programme components
- The support PCNs receive to set up the programme
- The proposed metrics collected for monitoring purposes

There are four aims of the AC programme and most key evaluation questions will be linked to one of these 4 aims:

1. Improving population health outcomes
2. Improving patients' experience (including the experience of unpaid carers)
3. Improving staff experience of care delivery
4. Improving use of resources.

[1] https://www.nice.org.uk/standards-and-indicators/qofindicators/the-practice-can-produce-a-register-of-people-with-multimorbidity-who-would-benefit-from-a-tailored-approach-to-care

[2]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/908434/Disparities_in_the_risk_and_outcomes_of_COVID_August_2020_update.pdf

There are five key components and three enablers whose development will determine the success of AC in PCNs and evaluation sub questions will mostly be linked to these areas of the programme.

Components:

- Population cohort identification
- Proactive needs assessment
- Personalised care and support planning
- Multidisciplinary team (MDT) working
- Care coordination

Enablers:

- Data sharing across services
- Digital tools
- System working

How PCNs set up the AC programme in the first year, the support for this set up and their readiness to deliver the programme will also be the focus of some of the evaluation questions. Some PCNs have been part of previous integrated care systems, and other PCNs will be receiving support in 2021 via the PHM and CLEAR programmes. It will be important to understand the different levels of support PCNs have accessed from PHM, CLEAR or being part of other integrated care systems and take into account evaluation of these programmes where they have taken place (details of these programmes are set out in the appendices).

Evaluation of anticipatory care interventions needs to be able to assess whether the four wide ranging aims of the AC programme (improved population health outcomes, patients' experience, staff experience and use of resources), have been acheived. In addition, in order to be successful, the AC programme calls for a high level of integration between services which for many will result in a change in culture and working practices, requiring evaluation of system readiness and implementation processes. This will require a, mixed methods, evaluation which will need to be long enough to realistically reflect whether the aims of the programme have been achieved. A wide range of key questions and proposed metrics and tools for the AC evaluation were identified through literature review, document review and stakeholder interviews and are set out in the tables below. The following key points emerged and need to be considered in evaluating AC:

- It will be important to assess culture and readiness of PCNs, combined with learning from effective early adopters and ensure best practice is shared to support implementation and the ongoing sustainability of integration across all PCNs
- In order to compare outcomes of groups of PCNs supported by the Population Health Management (PHM) and Clinically Led Workforce and Activity Redesign (CLEAR) programmes and those supported by neither, evaluation methods need to be aligned.
- The evaluation will need to include methods and metrics collected at national, service and patient level
- Some national level quantitative data is available focussed on resource utilisation in secondary care. In addition, some metrics will be gathered by all PCNs as part of the

PCN AC Directed Enhanced Service (DES) and by NHSEI as a General Practice Extraction Service (GPES) extract (once it goes live). This national level data will provide trends and impact over the period of the evaluation related to resource use and the number and demographics of those participating in the AC programme. Healthcare resource use is likely to increase before it decreases, as unmet need is identified in the first years of the programme

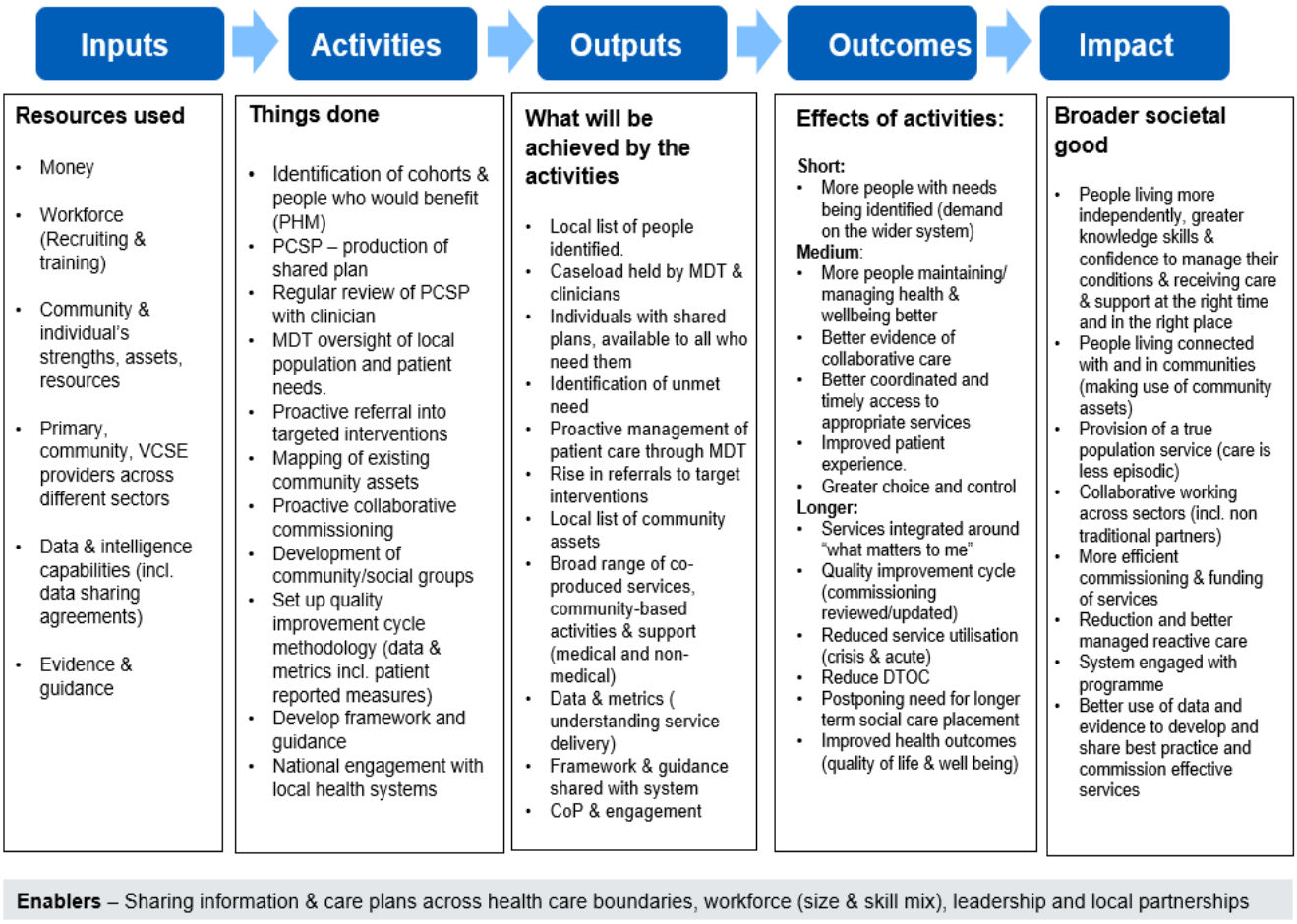
- It will be important to gather local data from PCNs to measure system readiness, implementation and integration. Ideally resource use at PCN level should be measured in terms of both the healthcare service utilisation and a broader view encompassing social care, housing, benefits, and other community assets
- Tracking the patient journey and gathering other patient level information (eg Patient Activation Methods and Patient Reported Outcome Measures (PROMs)) will be important
- A baseline from which to compare changes that may be due to the AC programme will be important. There are likely to be important confounding factors, due to other ongoing initiatives, that will make it difficult to attribute outcomes solely to the AC programme
- As all PCNs are likely to be implementing the AC programme, it will also be difficult to choose appropriate comparator PCNs. There are a number of potential comparator groups or counterfactuals that can be used to help, but each has its limitations and there is not likely to be an ideal counterfactual or statistical analysis that can be used.

Anticipatory Care Programme logic model

The NHSEI Ageing Well team has drafted a logic model for the AC programme identifying the inputs, activities, outputs, outcomes and impacts that might be the focus of an evaluation (see Figure 1).

The activities are based on the five components, the outputs achieved by carrying out these activities, whilst outcomes and impact reflect what success will look like on achieving the four aims of the AC programme.

Figure 1: Overarching logic model for the Anticipatory Care Programme



Use of counterfactuals for the evaluation

In order to understand if an intervention has been successful, evaluations typically use a comparator group in order to highlight any differences between the populations receiving and not receiving the intervention. This helps to be able to attribute changes in outcomes to the intervention or not. However in realist, pragmatic evaluations there are often confounding factors present which make attributing specific changes in outcomes solely to the intervention very difficult. Table 5 below shows a range of methods for determining counterfactuals with their advantages and disadvantages.

These methods typically consist of measuring trends in outcomes/metrics of PCNs/patients of the target population at baseline at the beginning through to the end of the evaluation. Trends can be compared with similar groups of patients/PCNs with a different target population. For example, trends in outcomes/metrics of patients/PCNs with a target population with COPD and frailty could be compared with trends in respiratory outcomes/metrics with similar PCNs /patients where the target group included people with frailty and mental health problems.

Some evaluations employ a quasi-experimental approach and allocate half the target population to receiving the intervention whilst the other half receive usual care. This is not possible for the AC programme as all PCNs will be contracted to provide AC for the whole of their target population and the PCN DES requires a change in the way PCNs integrate services so the 'usual' care won't exist as an option.

Table 1: Methods for identifying a comparator/counterfactual group

Method	Advantages	Disadvantages
Compare metrics in PCN target population at baseline and at one or multiple timepoints during the evaluation.	• It will be relatively straightforward to identify and capture characteristics of the target population in a PCN. This is the easiest type of comparison to make (but potentially also the most flawed)	• Individual patients or PCNs with high resource use one year may have lower resource use the following year without any intervention, due to 'regression to the mean' (rather than the AC intervention). However, the impact of regression to the mean could be reduced with multiple timepoints over several years (eg 3-5 years) both before and after implementation of the AC programme, if data are available • Other factors/changes that are not related to the PCN DES or AC may account for the changes in outcomes (confounding factors).
Patients receiving AC are each matched with another patient with similar characteristics not receiving AC (eg from a PCN with a different target population) and metrics, and preferably trends, compared for the two groups using multiple (where possible) time points before and after implementation of the AC programme.	• A comparison of outcomes in two groups of adequately matched patients should provide a more reliable evaluation than comparing metrics for a single group before and after an intervention	• Finding matched patients for the comparison, that are not receiving AC, will be difficult given that AC is to be rolled out nationally and to all those in need in at least one cohort in each PCN • Detailed data required for matching patients may not be available or reliable for both groups of patients (eg ethnicity, socioeconomic status) • System changes due to implementation of the PCN DES may affect both groups of patients, making the effect of the AC DES less obvious (because the comparator group may also have benefited to some extent)
PCNs offering AC for a target population are matched to similar PCNs that are not implementing AC for that particular target population. Metrics and	• Matching of PCNs is likely to be more feasible than matching individual patients • Some metrics will have been available at PCN level for several years prior to implementation of the	• It may be difficult to identify and agree the criteria, and their weighting, for matching PCNs, and detailed data for both groups of PCNs may not be available or reliable for all the different potentially confounding variables. For example, there is likely to be variation in the maturity, readiness and how the PCN DES is implemented

Method	Advantages	Disadvantages
trends are compared, where possible for multiple timepoints both before and after implementation of the AC programme.	AC programme, allowing trends both before, during and after implementation of AC for those metrics to be compared with matched PCNs that selected a different population cohort for AC • The NHS RightCare programme methodology for matching PCTs could be adapted for use	between PCNs, which will affect the outcomes, and this would need to be taken into account in choosing the comparator group of PCNs • Many PCNs may choose similar/overlapping target populations and where a PCN chooses a different cohort, it may be because there is less need in the other cohort locally • System changes due to implementation of the PCN DES may affect both groups of patients, making the effect of AC less obvious • Not all metrics will be available for multiple time points both before and after implementation of AC • For some cohorts, the cohort of interest will not be identifiable in both groups of PCNs using available metrics

Evaluation Questions

A wide range of evaluation key questions and sub questions relating to the overarching aims of the AC programme proposed methods were identified through literature review, document review and stakeholder interviews and are set out in the table below. These questions are examples and methods that align with the logic model, but are not exhaustive. Different PCNs may want to include/exclude particular questions or tailor questions to ensure their evaluation approach remains relevant to the particular AC interventions implemented.

Table 2: Examples of key evaluation questions, purpose, timeframe and potential methods for AC programme evaluation

Overarching aims	Key evaluation questions	Example sub-questions	Purpose	Timeframe	Potential methods
Implementation					
Implementation (process)	What governance processes have been established to implement the PCN DES and the AC component of this?	What level/seniority of organisational ownership has been established to lead and implement the programme in each partner organisation?	Formative - to share learning from systems that have made progress earlier in order to improve implementation in other areas	Year 1	Qualitative eg survey, interviews, PCN plans
Implementation (process)	What systems / culture / relationships have been	What baseline level of integration and system	Formative - to share learning from systems that have made	Year 1 baseline Year 2	Qualitative eg interviews, focus groups, survey; possibly using case studies

Overarching aims	Key evaluation questions	Example sub-questions	Purpose	Timeframe	Potential methods
	developed in order to implement the programme?	readiness was already present in the PCN? How have the systems / culture / relationships been further developed so that the programme can work effectively? How is this different in areas supported by PHM, CLEAR or neither?	progress earlier in order to improve implementation in other areas Summative - to understand how the AC programme impacted systems and cultures	Year 5	Quantitative eg proportion of PCNs with data sharing agreement, agreed plan, other measure of system readiness
Implementation (process)	What are the barriers and enablers for successful implementation?	How do these differ for the PCNs that did and did not have support from PHM and CLEAR? How do these differ for PCNs that selected different patient cohorts? To what extent have the PCNs implemented learning on barriers and enablers that arose from the PHM and CLEAR pilots' evaluations? Are there any particular components of the AC approach that have been more difficult to implement than others?	Formative - to share learning from systems that have made progress earlier in order to improve implementation in other areas. - to identify ways to improve dissemination of learning from the pilots. Summative - to understand how the AC programme overcame barriers and used the enablers	Year 1 baseline Year 2 Year 5	Qualitative eg interviews, focus groups, surveys;
Implementation (process)	Are the services (eg wider rehab services) in place that are required for the programme to work effectively?	Which services need further development for which patient cohorts?	Formative - to share learning in order to enable the AC programme to achieve its aims. Summative - to understand how the AC programme improved availability of wider services	Year 1-2 baseline Year 2-3 Year 5	Qualitative eg interviews, survey

Overarching aims	Key evaluation questions	Example sub-questions	Purpose	Timeframe	Potential methods
Implementation (process)	Is the population cohort being accurately identified?	Which population cohort is the focus in each PCN and how is it defined? What is the expected number in the cohort? How are they identified? What proportion of that cohort has been identified?	Formative and summative - to evaluate how effective the programme is in identifying patients with AC need - to share learning on which cohort to focus on and how to accurately identify a high proportion of that population.	Years 2-5	Qualitative eg document review of PCN plans for AC submitted to CCGs, interviews, Quantitative eg using nationally available data
Implementation (process)	Have PCNs implemented each component of the AC pathway?	For what number of patients has each component been carried out (eg needs assessment, medication review, MDT, PCSP)? What factors have affected successful implementation and what insights have been learned?	Formative - to evaluate the extent to which the programme is being implemented in different areas - to share learning from areas where implementation has been more advanced (eg which patient cohort was the focus) and improve implementation for slower adopters Summative - to report to funders on implementation and to plan for next phase	Years 2-5	Qualitative eg survey, interviews Quantitative eg using metrics collected as part of PCN DES
Implementation (process)	Does the increased funding in primary care for the AC programme match the increased workload in primary care resulting from the AC programme?	How does the match of outcomes to increased workload for primary care vary by patient cohort?	Summative - to inform future PCN DES	Years 2-5	Qualitative eg survey Quantitative eg survey
Improving people's experience of care					
Improving people's experience of care (outcome)	Have patient and carer experience improved?	Has overall experience improved?	Formative - to share learning on improvements in patient	Year 1-2 baseline Year 3	Qualitative eg interviews, survey, focus groups

Overarching aims	Key evaluation questions	Example sub-questions	Purpose	Timeframe	Potential methods
		Do patients and carers feel more informed, empowered, involved, listened to and in control as equal partners in their care? Has care been experienced as more joined up and patient centred? Have experience and waiting times improved for any individual services eg falls, incontinence, social care, etc? How does this outcome vary by factors such as the chosen local AC patient cohort, any other factors? Have patient and carer wellbeing improved?	and carer experience, particularly in terms of joined up working Summative - to evaluate the effectiveness of the programme in achieving this aim	Year 5	Quantitative eg waiting time metrics
Improving staff experience of delivering care					
Improving staff experience of delivering care (outcome)	Has experience of staff in delivering care improved?	Has working become more integrated? Have staff reduced duplication of work? Has satisfaction with work increased? Has experience improved (or worsened) for any particular service? What factors are associated with greater improvements?	Formative - to share learning on improvements in staff experience, particularly in terms of joined up working Summative - to evaluate the effectiveness of the programme in achieving this aim	Year 1-2 baseline Year 3 Year 5	Qualitative eg interviews, survey Quantitative eg measures of wellbeing, job satisfaction, productive use of time, integrated working
Improving population health outcomes					

Overarching aims	Key evaluation questions	Example sub-questions	Purpose	Timeframe	Potential methods
Improving population health outcomes (outcome)	Does tracking patients through the whole pathway demonstrate a change in population health? eg a movement between levels of frailty, levels of wellbeing, quality of life, etc or a reduction in use of unnecessary or potentially harmful medication?	Was there a measurable movement between levels of frailty, levels of wellbeing, quality of life, etc or a reduction in use of unnecessary or potentially harmful medication, reduction in polypharmacy? Over what timeframe did change occur? Was this different for different patient cohorts? What factors are associated with greater improvements?	Summative - to report to funding bodies and to inform next phase	Year 1-2 baseline Year 3 Year 5	Quantitative – changes at individual and/or population/cohort levels eg using national secondary care data, data from General Practice Extraction Service (GPES), tools that identify levels of health/wellbeing/frailty and changes between levels
Providing high-value care / improving resource use					
Providing high-value care / improving resource use (outcome)	What is the effect of the AC programme on healthcare utilisation?	What is the effect of the programme on unplanned admissions, readmission within 30 days and 90 days, length of hospital stay, rate of discharge to home / usual place of residence, rates of transfer to longterm care, and similar measures? What is the effect of the programme on use of community healthcare services, mental health services, primary care? Over what timeframe did any change occur? Is it different for different patient cohorts?	Summative - to report to funding bodies and inform next phase	Year 1 baseline Year 3 Year 5 Note that use of healthcare services may be expected (from vanguard reports) to increase in initial years before falling.	Quantitative eg using national datasets, metrics collected as part of PCN DES, data from GPES or individual patient records

Overarching aims	Key evaluation questions	Example sub-questions	Purpose	Timeframe	Potential methods
		What factors are associated with greater improvements? If there was any increase in use of acute healthcare services, to what extent was this due to lack of availability of more appropriate community services?			
Providing high-value care / improving resource use (outcome)	Has the AC programme resulted in a shift from emergency inpatient care to outpatient/out-of-hospital elective care?	Over what timeframe did any shift occur? Is it different for different patient cohorts? What factors are associated with greater improvements?	Summative - to report to funding bodies and to inform next phase	Year 1 baseline Year 3 Year 5 Note that use of healthcare services may be expected (from vanguard reports) to increase in initial years before falling.	Quantitative eg using national datasets, metrics collected as part of PCN DES, individual patient records
Providing high-value care / improving resource use (outcome)	What is the effect of the AC programme on wider (non-healthcare) resource use such as social care, benefits, housing, employment, voluntary sector, criminal justice sector?	Over what timeframe did any change occur? Is it different for different patient cohorts? What factors have influenced the changes? If there was any increase in use of healthcare services, to what extent was this due to lack of	Summative - to report to funding bodies and to inform next phase	Year 1 baseline Year 3 Year 5	Qualitative eg using surveys, interviews Quantitative for areas where data are available (likely to be limited), preferably data that can be linked to the local population cohort of focus for AC

Overarching aims	Key evaluation questions	Example sub-questions	Purpose	Timeframe	Potential methods
		availability of more appropriate non-healthcare services?			
Providing high-value care / improving resource use (outcome)	Economic analysis: How have healthcare costs changed as a result of the AC programme?	How has this varied by the type of AC patient cohort? How does this compare with the cost of implementing the programme? What other factors have been most important in terms of this economic analysis?	Summative – to report to funding bodies and to inform next phase Formative – to evaluate which cohorts to focus AC programme on in future	Year 3 Year 5	Quantitative – scope and type of economic analysis to be agreed locally
Providing high-value care / improving resource use (outcome)	Economic analysis: How have wider overall costs changed as a result of the AC programme, taking into account changes in costs related to healthcare, social care, benefits, housing etc.?	How has this varied by the type of AC patient cohort? How does this compare with the cost of implementing the programme? What other factors have been most important in terms of this economic analysis?	Summative – to report to funding bodies and to inform next phase Formative – to evaluate which cohorts to focus AC programme on in future	Year 3 Year 5	Quantitative – scope and type of economic analysis to be agreed locally
Providing high-value care / improving resource use (outcome)	Economic analysis: What have been the economic costs and savings of the AC programme (healthcare and also wider), in relation to health and wellbeing benefits for patients and carers and in relation to population health outcomes?	How has this varied by the type of AC patient cohort? What other factors have been most important in terms of the economic analysis?	Summative – to report to funding bodies and to inform next phase Formative – to evaluate which cohorts to focus AC programme on in future	Year 3 Year 5	Quantitative – scope and type of economic analysis to be agreed locally

Metrics and tools to evaluate AC interventions

Identifying tools or data for each measure of the evaluation may involve using particular licenced or validated tools, developing new tools such as surveys or questionnaires, or implementing data sharing agreements between organisations. The list in table 3 below includes a range of approaches but is not exhaustive and other useful tools, methods and measures may be more suitable than the ones suggested.

Table 3: Potential metrics and tools to evaluate AC interventions

Integrated care	Description and example tools	Example measures
Implementation		
System readiness	In order to describe whether systems are ready to integrate, an assessment of different elements of the system is important including; structure and governance; readiness to change; information and e-health; finance; problem solving; population approach; capacity building; innovation management; breadth of ambition; patient empowerment; understanding how to evaluate the change and standardising approaches; across organisations. • A tool that incorporates these elements is the Maturity Model for Integrated Care and self assessment - SCIROCCO https://www.scirocco-project.eu/maturitymodel/ https://www.scirocco-project.eu/scirocco-tool/) • Culture of Care Barometer https://www.england.nhs.uk/wp-content/uploads/2017/03/ccb-barometer-rep-guide.pdf	• Identification of strengths and weaknesses of system readiness and development of action plan to address areas that need improving • Submission and agreement of plan for AC that includes local partners • Agreement (eg: memorandum of understanding) between local integration partners about defining governance and accountability • Data sharing agreements in place between local integration partners
Population cohort	The population cohort targeted for the AC programme is based on the principles of Population Health Management and combines local knowledge of the population, data analytics and outreach to local communities and patients. It targets those at most risk of unwarranted health and care outcomes focusing on mitigating health inequalities and exploring where there are differences in access or outcomes between different groups.	• Submission of agreed target population with local partners (including community service providers) • % of registered patients offered AC • % of people who declined the offer of a Proactive Care Needs Assessment (PCNA) • % of people who accepted the offer of AC • % people who did not respond to the offer of a PCNA

Integrated care	Description and example tools	Example measures
		• % of people who received a PCNA • % AC recipients assessed as requiring no further support • % AC recipients who received a Targeted PCNA • % AC recipients who received a Comprehensive PCNA • % AC recipients for whom an MDT meeting is held
Personalised plan	A personalised care plan is a tool that records the outcome of the care planning discussion between an individual and their care practitioners, records how and when the services have interacted with the individual and delivered against the care and support included in the care plan. Personalised care plans are owned by individuals and contain all the information they need to manage their own care.	• % AC recipients receiving a Comprehensive PCNA who had a Personalised Care and Support agreed within the reporting period
Shared care plan	A shared care plan is a tool enabling a multidisciplinary care team (MDT) to access a common set of clinical information about a patient, containing information on problems, goals, timeframes and accountabilities for all involved.	• % of AC recipients with shared care plans across multidisciplinary teams of all patients receiving care from an MDT
Quality of care management	The system integrates the services around the needs of individuals. This includes targeted and proactive approach to care that involves case-finding, assessment, care planning and care coordination in multidisciplinary teams. • A theograph is an example of a tool to help understand what is happening to a patient. They are visual representations of the contacts that individual patients have with health and care services over a period of time. They can be used to identify patterns of behaviour and activity, which can in turn reveal where any changes could be made in a patient pathway or care package to improve patient outcomes (https://imperialcollegehealthpartners.com/gps-and-commissioners-are-increasingly-interested-in-using-theographs/)	• A system is in place to assess the quality of case management. • Waiting times for a holistic assessment based on CGA principles to occur following an index event (fall, delirium, loss of mobility, incontinence, recurrent UTIs) or recognition of frailty

Integrated care	Description and example tools	Example measures
Coordinated transitions across the continuum of care without undue delays	A delayed transfer of care occurs when a patient is ready to leave their current care provider but is still occupying a bed. Delays can occur when patients are being discharged home or to another supported care facility, such as a residential or nursing home, or are awaiting transfer to a community hospital or hospice.	• % delayed transfers of care with the indicator of integrated care being a reduction in this number over time
Aim 1: Improved population health outcomes		
Medication management in patients receiving multiple and/or long-term medication	Medication management is a structured review of a patient's medicines with the aim of optimising medicines use (including medication reconciliation), acting upon the review of prescribed medicines, and improving health outcomes. This might include asking the patient to complete the Medication Adherence Rating Scale mars-file.pdf (janssenmedicalcloud.co.uk)	• % of AC recipients receiving multiple and/or long-term medication who have had their medication reviewed by an expert (pharmacist, doctor or nurse) • % AC recipients prescribed opioids • % AC recipients prescribed hypnotics • % AC recipients prescribed antimicrobials • % of patients showing improvement on the medical adherence scale
Improved level of independence in patients with an identified impairment	A series of scales and tools have been developed to assess the level of impairment of individuals across Activities of Daily Living (ADL), self-care, and independence. • For example the Adult Social Care Outcomes Toolkit https://www.pssru.ac.uk/ascot/ • The ICHOM standard outcomes measures for older people https://www.ichom.org/portfolio/older-person/	• % of patients with impaired independence showing improvement on a relevant scale. • Place of residence 90 days after hospital discharge
Improvement of other health outcome(s) relevant to the integrated care	These can be any relevant measure for the targeted population cohort. • An example for a target population with COPD could be steroid inhaler medicines adherence • For those where frailty is the key challenge this measure could be an improved or static frailty score using the Rockwood Clinical Scale	• % of patients showing improvement for the selected health outcome, on a relevant scale within the reporting period

Integrated care	Description and example tools	Example measures
context you are assessing	measures https://41e5fc1d-e404-4830-8c0764690e79acce.filesusr.com/ugd/2a1cfa_e5e2c60f3d3d4449bbdd5e85aeb915f3.pdf	
Aim 2: Improved experience of patients and carers receiving care		
Level of met needs among patients	Patients report that their needs have been met satisfactorily by health and social care services. • An example measure is the Person Experience Questionnaire Person-experience-questionnaire-modified-LTC6.pdf (swscn.org.uk)	• % of patients reporting they had the support they needed to manage their conditions.
Quality of life and Patient Reported Outcome Measures (PROMs) and	WHO defines 'quality of life' as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns and this can be determined by patient reported outcomes measures (any report of the status of a patient's health condition that comes directly from the patient, without interpretation of the patient's response by a clinician or anyone else) • Example measures include: the Office of National Statistics Personal Wellbeing ONS4 tool (https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/personalwellbeingsurveyuserguide) • The Patient activation measure (PAM®) (https://www.england.nhs.uk/wp-content/uploads/2018/04/patient-activation-measure-quick-guide.pdf)	• % of patients who report positive outcome measures in the defined review period
Carers quality of life	WHO defines 'quality of life' as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. Information about carers quality of life would be collected via the PCN case studies. • An example measure is the Adult Carer Quality of Life questionnaire https://www.researchgate.net/profile/Saul_Becker/publication/237279984_Manual_for_the_Adult_Carer_Quality_of_Life_Questionnaire_AC-	• A system is in place to measure quality of life of carers and use the findings. IF YES % of carers reporting a positive QoL on a relevant scale

Integrated care	Description and example tools	Example measures
	QoL/links/0c96051bb1183e639a000000/Manual-for-the-Adult-Carer-Quality-of-Life-Questionnaire-AC-QoL.pdf	
Inclusion of carers	Caregivers are included in decisions regarding their relatives and friends receiving care.	• % of carers who report that they have been included or consulted in discussions about the person they care for and/or % of patients whose carer(s) report that they have been involved in the care discussions
Aim 3: Improved staff experience of delivering care		
Offer/take-up of multidisciplinary/integrated care training	Training programmes focused on multidisciplinary working practices, care planning and case management and tools to improve quality of care are important in developing workforce skills.	• Types of training offered specific to integrated care approach • % of staff in multidisciplinary team receiving multidisciplinary/integrated care training • Numbers of frontline staff trained in the recognition and management of frailty
Staff experience of the integrated care initiative being implemented	Staff feel confident and supported through the implementation of the transformation programme towards the integration of care, including their new roles, the new systems in place and coordination with other professional groups or organisations Information about staff experience would be collected via the PCN case studies. • An example survey is Pulse check staff surveys are one example of developing a bespoke survey for particular staff groups https://peoplepulse.com/resources/useful-articles/complete-guide-staff-pulse-surveys/ • Also the Culture of Care Barometer https://www.england.nhs.uk/wp-content/uploads/2017/03/ccb-barometer-rep-guide.pdf	• % of staff reporting a positive experience of the integration of care or components (e.g. case management, MDTs, shared care plans, ICT systems, etc.) • Staff engagement scores
Aim 4: Reduced health services resource use		
Health utilisation – primary care	Primary care resource utilisation by people throughout AC programme implementation and delivery. Data may need to be extracted from case study PCNs or may be available via a GPES extract nationally from NHS	Per AC recipient: • Number GP appointments

Integrated care	Description and example tools	Example measures
	Digital. It would be ideal to have some form of counterfactual to compare if there are any differences in utilisation.	• Number appointments in the reporting period with other GP practice staff eg practice nurse, counsellor, • Number of care co-ordinators in post and the number of patients that each supports
Health utilisation – secondary care	Secondary care resource utilisation by people throughout AC programme implementation and delivery. Data may need to be extracted from routine nationally collected data (eg HES/SUS) and linked to people receiving AC identified by the GPES extract from NHS Digital. It would be ideal to have some form of counterfactual to compare if there are any differences in utilisation	Per AC recipient: • Number of new hospital outpatient appointments / Follow-up hospital outpatient appointments • Number of Bed Days per Anticipatory Care recipient • Rates of delayed discharge from hospital • Rates of long stay admissions to hospital • Rates of discharge to home or usual place of residence • Rates of transfer to long term care • Rates of short stay (eg <1 day) emergency admissions • Rates of avoidable admission / avoidable A&E attendance / admission for the specific conditions of focus locally eg falls, or side effects of medication
Health utilisation – community care	Community care resource utilisation by people by people throughout AC programme implementation and delivery. Data may need to be extracted locally from the Community Services Dataset for case study PCNs and linked to people receiving AC identified by the GPES extract from NHS Digital. It would be ideal to have some form of counterfactual to compare if there are any differences in utilisation.	Per AC recipient: • Rates of specific service use eg falls service use (depending on local PCN AC cohort of focus) • Rates of community health service visits and costs (including nursing, physiotherapy, podiatry, dietetics, etc depending on PCN AC cohort of focus) • Rates of new/Follow-up community health service outpatient appointments/
Health utilisation - emergency care	Emergency care resource utilisation by people receiving AC at baseline and at timepoints throughout the evaluation. Data may need to be extracted locally from providers or from routine nationally collected data and linked to people receiving AC identified by the GPES extract from NHS Digital. It	Per AC recipient: • Rates of avoidable A&E attendance • Rate A&E Attendances • Emergency readmissions: at 30 and 90 day

Integrated care	Description and example tools	Example measures
	would be ideal to have some form of counterfactual to compare if there are any differences in utilisation.	• 999 calls • Ambulance visits • Ambulance conveyances to hospital • GP emergency visits • GP emergency calls • Standardised number of emergency admissions for Ambulatory Care Sensitive Conditions per registered patient
Wider social care and community resource use		
Social care, community and voluntary sector utilisation	With the introduction of AC wider social care and other community costs may change over time. Data to inform this part of the evaluation would have to be accessed locally using surveys of case study PCNs. It would be ideal to have some form of counterfactual to compare if there are any differences in utilisation.	Per 1000 AC population receiving a PCNA by PCN: • Local benefits statistics • Local employment statistics • Rates of use of local facilities eg gym, older people's lunch club, etc • Social care costs • Care packages • Carer costs • Voluntary sector and other support eg from palliative care organisations, Carers UK, specialist disease-specific support groups, etc • Rates of referral to a social prescribing service

Appendix 1: The Population Health Management (PHM) Development Programme

The PHM Development Programme aims to build capacity and capability by working with all parts of the system to transform service delivery around key population groups. The programme comprises a 22-week externally supported action learning programme. There are 5 workstreams:

- A systems workstream involves five facilitated Action Learning Sets that bring together all system stakeholders to develop a common understanding and learn from international good practice. There is a focus on sharing learning across workstreams and collectively unlocking barriers to scale the PHM approach
- The place based integrated care pathway workstream involves three facilitated action learning sets with providers, Local Government and wider partners to develop a scalable plan to restore services inclusively and address inequalities by linking elective data with person level analysis
- A PCN workstream comprises five Action Learning Sets with primary and secondary care partners, social care and third sector teams to identify at risk groups to develop and deliver new holistic models of care. There is regular coaching throughout for key members of PCN MDTs
- The finance and contracting workstream comprises seven Action Learning Sets that bring together finance and contracting leaders from commissioners and providers. There is training in use of actuarial and predictive modelling to develop whole system demand models and drill down into a new blended payment model based around population cohorts
- The analytical workstream comprises seven Action Learning Sets that bring together system analysts for hands-on learning of PHM analytical techniques and facilitation to create a sense of shared purpose for system intelligence teams. Local analysts learn to directly support MDTs designing intelligence-based care models within the programme

Evaluation of PHM Development Programme

The PHM evaluation aims to generate insight for systems and NHSEI on the PHM development programme and how this has led to changes in systems.

Key evaluation aims:

- Exploring the impact, including identifying how learning from the programme has been applied to interventions and the impact these have had on patient outcomes, care models, approaches and processes. This will build the evidence base for proactive integrated models of care to achieve specific improvements to population health outcomes, with a key requirement to track utilisation and outcomes post intervention
- Understanding the ‘journey’: exploring the experience of those who have participated on the PHM development programme and understanding how the system has changed ways of working
- Identifying what works: distilling key learning and insights to support PHM programme developments, wider system transformation policy and support offers to systems, including the AC Specification

These aims translate into four overarching evaluation questions:

- What is the impact of the PHM approach on resource utilisation?

- Has the PHM approach improved patient and carers' experience of care?
- Has the PHM approach resulted in a more aligned skill mix in the workforce to meet the needs of the targeted patients with long term conditions (LTCs)?
- How has the PHM approach been experienced by staff delivering care and by staff coordinating the integration of care across practices?

To support evaluation, PCNs and the wider systems will be required to complete the following:

- PHM programme Terms of Reference prior to commencing the programme which details the context of the system and key aims
- Questionnaires which assess system understanding and capability of PHM during the programme
- Surveys which assess programme delivery to support continuous improvement
- Evaluation following completion of programme to understand the short-term impact of the programme
- Follow-up evaluation to understand the medium/long term impact of the programme (timing dependent on when systems participate)

PCNs and wider systems will be supported during the programme to do the following:

- Produce a logic model for each cohort intervention based on the theory of change approach
- Build the ability to track person level population health and system outcomes to demonstrate proof of concept and build ROI using key analytical techniques to support robust assessment of impact
- Produce case studies for interventions describing the cohort selection, intervention and proposed benefits, impact and longer-term view for the participants and the wider population
- Produce patient stories including a holistic view of the individuals describing their circumstances, expressed needs and wants
- Following the programme, the PHM Academy will provide ongoing support to help build and share evidence

It is expected that the PHM Development Programme evaluation will be carried out during or immediately after the five to six month programme by each PCN. The next wave of PCNs to participate in the programme will start in early 2021.

PHM evaluation		
Length of evaluation	For the 6 months of the PHM support for each of 150s PCNs	
Aim of Evaluation	• To identify how learning from the programme has been applied to interventions and the impact these have had on patient outcomes, care models, approaches and processes - including how proactive integrated models of care have achieved specific improvements to population health outcomes and tracking utilisation and outcomes post intervention. • Exploring the experience of those who have participated on the PHM development programme • Understanding how the system has changed ways of working	
Objectives of programme	• Accelerate changes to care delivery at neighbourhood and place through PCNs and their public health, local authority, community, mental health, acute sector and VCSE partners, to start to achieve demonstrably better outcomes and experience for selected population cohorts and secure the skills to spread the approach to other cohorts. • Advance the system's infrastructure and build sustainable capability across all tiers which supports a focus on proactive population health management and tackling unwarranted risk.	
Rationale for approach	• The analysis and discussion of linked individual patient level data enables a better understanding of population cohorts and how the whole system is supporting individuals Better understanding of population cohorts and whole system enables the design and delivery of improved, tailored and proactive support [interventions, care models, approaches and processes] for those cohorts and is acting on the wider determinants of health • The delivery of tailored and proactive support has a positive impact on population health and wellbeing outcomes • Participants in the system improve their understanding of PHM as an approach and this is supporting system development • Participants feel more capable to utilise PHM and are noticing improvements in how care is planned through multi-disciplinary work and using evidence-based approaches	
Evaluation question	**Stakeholder**	**Data to evidence change**
What are the benefits of the PHM approach (quantitative)	PCN	Case study PCNs to set targets and agree metrics to evaluate change in outputs following implementation (e.g. visits/calls to workforce, number of services used, increase in PAM score, % increase in intervention engagement, % of patients with care plan in X time)
What are PHM and benefits for patients and carers	Patients and carers	Case study PCNs to set targets and agree tools they will use to evaluate feedback from persons impacted by the intervention for this cohort
PHM approach and development of skillmix/MDT to meet casemix experience of integration Experience of staff delivering and coordinating PHM	Organisation change at PCN level	Case study PCNs to set targets and agree tools they will use to evaluate: changes to the PCN's internal workings, e.g. how the team composition altered due to the intervention or PHM-based working more generally?

Appendix 2: The Clinically Led workforcE and Activity Redesign Programme

The Clinically Led workforcE and Activity Redesign Programme is a nationally sponsored HEE programme that trains and enables clinicians to use a combination of big data analysis and modelling tools, alongside qualitative techniques, to deliver new models of care and workforce. The approach utilises the DELTA process of:

- Define (understand the key question)
- Establish (set activity and workforce baseline)
- Link (look for insights from multiple datasets)
- Transform (develop new models of care with the appropriate skill mix)
- Action (develop an implementation plan)

The CLEAR methodology will support PCNs to deliver the AC programme. A national pilot is underway where the CLEAR programme will be utilised in 14 different PCNs, two for each region, in two phases with seven PCNs in each phase. Each network will target a different patient cohort and share learning at each stage of the pilot so that each PCN can share thinking about innovative delivery mechanisms for different cohorts of patients. The cohorts could include:

- People with dementia
- Housebound people
- People with long term conditions (multi-morbidity)
- People with respiratory conditions (including those recovering from COVID-19 infection)

CLEAR is delivered by a CLEAR Fellow assigned to each PCN who will work with and train staff in the CLEAR methodology.

Evaluation of the CLEAR Programme

The evaluation aims to carry out a formative, mixed methods evaluation of the CLEAR programme to explore implementation and review current methodology. Qualitative process evaluation using semi-structured interviews, non-participant observation and document analysis will be carried out. This will document staff perceptions and experiences and impact of retention and knowledge of CLEAR Fellows. Evaluation will be carried out during and immediately after the Fellows have completed their work in the PCNs (3 months full time or 6 months part time). It is hoped there will be further follow up after this time.

An independent evaluator will carry out a rapid qualitative evaluation focused on the following key evaluation questions:

- What is the programme theory underpinning the programme?
- What are the barriers and facilitators encountered in implementation?
- What is the impact of wider contextual factors in shaping implementation?
- What is the impact of the programme on the CLEAR Fellows (retention, knowledge, experience)?
- How can the CLEAR methodology be improved?
- What are the lessons for implementing similar programmes across different contexts?

- Has CLEAR reduced inappropriate admissions through proactive case management, patient education and self-management plans?
- Has CLEAR reduced first and follow-up attendance in secondary care outpatients? through proactive case management, patient education and self-management plans?
- Has CLEAR improved the patient's experience and satisfaction by providing patient focused care closer to home?
- Has CLEAR strengthened partnerships between primary and specialist community care clinicians, whilst building on the existing expertise within primary care?
- How have staff been upskilled across primary care to use data to understand population health?
- Has CLEAR helped with workforce planning?
- How has the CLEAR approach empowered stakeholders in PCNs to work together across organisations and disciplines to solve local challenges?
- Has the CLEAR approach broadened the workforce types used to support the targeted population?

CLEAR Pilots will also set targets and agree metrics relevant to their patient cohorts which might include the following quantitative metrics in order to measure resource utilisation:

- Length of stay
- Admission rate
- Re-admission rate
- Specialist referral
- Medicines management
- WTE staffing planned/in place

It is planned that the final evaluation of the CLEAR programme will be submitted by December 2021.

Clinically Led workforcE and Activity Redesign Programme (CLEAR) evaluation	
Length of evaluation	Pilot in 7-14 PCNs; 3 to 6 months for each PCN with possible further follow up
Aim of Evaluation	To create a multidisciplinary clinical capability within the NHS that solves system-wide workforce challenges: improving the quality, efficacy and efficiency of patient care. The evaluation aims to carry out a formative, mixed methods evaluation of the CLEAR programme to explore implementation and review current methodology.
Objectives of study	• Reduction of inappropriate admissions through proactive case management, patient education and self-management plans. • Reduction of first and follow up attendance in secondary care outpatients through proactive case management, patient education and self-management plans. • Improving the patient's experience and satisfaction by providing patient focused care closer to home. • Strengthen partnerships between primary and specialist community care clinicians, whilst building on the existing expertise within primary care.
Evaluation approach	Each CLEAR pilot is trained in PHM methods and supported to develop a skill mix of workforce which meets the needs of the casemix of patients for a particular long-term condition. Local evaluation will involve: • An initial scoping study determined the evaluation questions, methods and dissemination plan • Qualitative process evaluation using semi-structured interviews, non-participant observation and document analysis will be carried out. This will document staff perceptions and experiences and impact of retention and knowledge of fellows • Metrics will be accessed locally and submitted to evaluators relevant to the patients of the target LTC. Case studies set targets with metrics. Examples of quantitative metrics: • Length of stay • Admission rate • Re-admission rate • Specialist referral • Medicines management • WTE staffing in planned/in place Examples of qualitative methods: • Semi-structured interview • Documentation review Dissemination and outputs • Standard evaluation framework • Recommendations on how to develop the CLEAR methodology (a guidance document) • A final report capturing wider lessons for the implementation of similar programmes in similar contexts • Dissemination of findings in an accessible context • Dissemination of evaluation findings in articles for academic journals and conference presentations Final evaluation will be submitted Nov/Dec 2021

Learning points	Challenges: • Variation in practices and services on offer across the STP with increased non-elective admission rate • Limited uptake of admission avoidance and facilitated discharge pathways • Community capacity challenged and limited scope for proactive case management Solutions: • Increased collaborative respiratory MDT in community can offer mixture of proactive case management and self management programme in combination with reactive support for acutely unwell cohorts • Upskilling of primary and community care teams in collaboration with secondary care team • Use of additional roles as evidenced by models of care across NHS • Use of gold standard practice as per NICE clinical guidelines Outcomes: • Reduction in admission & readmission rate, length of stay and length of exacerbation • Improved medicines management and patient self management • Improved patient and staff satisfaction