Queen's Nursing Institute Scotland

Queen's Nurse Development Programme Primary Prevention of Cardiovascular Disease Programme

Final Evaluation Report

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Executive summary

Scotland faces significant health disparities, with a notable gap in life expectancy and healthy life expectancy between the most and least deprived areas. Risk factors such as smoking, poor diet, and physical inactivity contribute significantly to cardiovascular health issues. Nurses, midwives, and health visitors play a critical role in mitigating these risks by engaging communities in health-promoting activities.

In 2023 The Queen's Nursing Institute Scotland (QNIS) launched a transformative project to address cardiovascular disease (CVD) prevention within communities in Scotland. Funded by the Burdett Trust for Nursing, this programme focused on empowering nurses with co-production skills to foster health improvements to reduce CVD risks, particularly targeting health inequalities exacerbated by socioeconomic factors. This report presents and evaluation of that programme.

The programme aimed to support four nurses on a journey to co-produce health initiatives focused on CVD prevention. The primary objectives were to enable nurses to co-create health-enhancing initiatives with community members, foster partnerships between professionals, voluntary groups, and community members, achieve measurable health improvements within twelve months, develop four evidence-based neighbourhood initiatives addressing CVD risk factors, and empower the nurses to drive community health changes sustainably.

Four candidates were selected to join the programme. They were supported through workshops and coaching to develop deep self-awareness and co-production skills. The emphasis on co-production aimed to improve nursing leadership and ensure community voices guided health initiatives. Each nurse received £2500 to fund their co-created projects, which were required to have clear, measurable impacts within twelve months. These initiatives were designed to be sustainable and owned by the community, ensuring long-term health benefits.

The evaluation was structured around formative and summative assessments. Formative evaluation included the development of logic models for each nurse's initiative, depicting resources, activities, mechanisms, and expected outcomes supported with a reflection on the progress of the work described in the model around 6 months after it was originally produced. Summative evaluation focused on qualitative data through interviews and group discussions, exploring the programme's implementation and impact.

In the formative evaluation, the logic models produced by each of the nurses focused on various aspects of community health intervention that were specific to priorities in their own areas. One nurse centred her efforts on early childhood nutrition, creating weaning packs and conducting healthy food preparation sessions for parents. Initial anticipated outcomes included improved parental awareness and engagement in health-promoting activities. Another nurse addressed physical health in mental health service users through community engagement and bespoke health activities. One of the nurses implemented community screenings for atrial fibrillation and hypertension using Kardiamobile kits, identifying at-risk individuals and leading to early interventions and

increased community health awareness, whilst the fourth targeted heart health in prisoners, developing wellbeing packs and heart health resources. Despite the varied focus areas, the logic models shared several communalities, in particular an emphasis on workforce transformation, a focus on inequalities, and co-production with community members for the primary prevention of CVD. This shared structure ensured that the interventions were aligned with the programme's overall goals while allowing for tailored approaches to address specific health challenges within different communities. When later reflecting on the progress of their work depicted in the logic models, the nurses noted positive changes as a result of their programmes, with the identification of some significant achievements. In particular they saw successful community engagement and increased awareness and participation in health-promoting activities among their target populations, although it was challenging to demonstrate wider impact of their work in the relatively short timescale available for programme delivery.

The process evaluation revealed several key themes. Empowerment and confidence building emerged as significant outcomes, with coaching sessions greatly boosting nurses' confidence and leadership skills, enabling them to effectively lead community health initiatives. Personal and professional development were fostered through reflective practice and continuous learning, with significant growth reported among the nurses. Co-production and collaborative working were crucial, leading to more relevant and sustainable health initiatives through inclusive decision-making processes and community engagement. Addressing health inequalities was central to the programme's impact, targeting vulnerable populations and addressing the broader social determinants of health. However, challenges such as time management, resource limitations, and resistance to change were encountered. Overall, the programme aimed for long-term changes in practice, building resilient systems and scaling successful innovations across different settings, although it was challenging to evidence impact in the timescales available.

In summary, the QNIS CVD prevention programme successfully empowered nurses to lead community health initiatives that aimed to address significant health inequalities in Scotland. An emphasis was placed on co-production, personal development, and sustainable practices to support the development and delivery of interventions that were effective and relevant. The programme demonstrated the potential for nurses to drive health improvements in their communities. The legacy of this initiative could be to provide a model to inspire and guide ongoing efforts in CVD prevention and health promotion across Scotland.

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1.0 Overview and background to the programme

1.1 Background

Scotland has the worst health inequalities in western and central Europe; the gap in life expectancy between the most and least deprived areas in the country is roughly 13 years for males and 10 years for females, whilst the gap in healthy life expectancy (the number of years lived in good health) is greater; roughly 23 years for males and 24 years for females[1]

The fundamental causes of health inequalities are an unequal distribution of income, power, and wealth. The aim of this project was to make a small difference by enabling nurses to develop the skills of co-production to enable communities to take steps that promote health. Scotland has a high prevalence of the risk factors associated with coronary heart disease, such as smoking, poor diet and physical inactivity[2]. The Scottish Government Heart Disease Action Plan, published in 2021, clearly sets out the urgency of addressing cardiovascular health in Scotland[3]. Many people live with cardiovascular risk factors such as high blood pressure, diabetes or high cholesterol which place them at increased risk of heart disease or stroke. Like the rest of the UK, Scotland's obesity rates are worrying; in 2018, 65% of adults over 16 were overweight, while 28% of these adults were obese. For the same period, 13% of children aged between 2 and 15 were at risk of being overweight, while 16% were at risk of being obese. Only 22% of adults met the recommended five-a-day target for the consumption of fruit and vegetables whilst, particularly worryingly, only 15% of children met the target.

Nurses, midwives, and health visitors are viewed as an unseen resource in addressing these risk factors. They are felt to be ideally placed to identify individuals and families at highest risk of cardiovascular disease. This is because they have the skills to build the therapeutic alliances required to empower ordinary people to make positive choices about their health and create a body of peer support within communities. The Queen's Nursing Institute Scotland (QNIS) therefore obtained funding for this project because of the belief that nurses have a central role to play in significantly reducing and reversing the progression of cardiovascular disease (CVD) through evidence-based research, education, policy, peer support and advocacy. This opportunity sought to give nurses the skills and capabilities to best support individuals, families, and communities to adopt healthier lifestyles that are designed to reduce the physical and psychosocial challenges and impact associated with CVD.

1.2 The programme

The programme under evaluation (hereafter referred to as "the programme") arose out of a funding application made by the QNIS to the Burdett Trust for Nursing's grants

[1] What are health inequalities? - Health inequalities - Public Health Scotland

[2] Scottish heart disease statistics - Year ending 31 March 2023 - Scottish heart disease statistics - Publications - Public Health Scotland

[3] Heart disease: action plan - gov.scot (www.gov.scot)

programme focussing on the primary prevention of cardiovascular disease. The primary objectives of the programme were:

- To support four nurses to undertake a transformational journey which enabled them to co-produce a health enhancing initiative focused on the primary prevention of cardiovascular disease with ordinary people in the communities they serve.
- To do this in partnership with others in their community to co-produce a way forward which is owned by ordinary people and enabled by relevant professionals and voluntary groups.
- To work with citizens to make a measurable difference to health within 12 months.
- To have four powerful examples of nurse-enabled change where people in areas of deprivation can make changes to their lifestyles which address one or more risk factors for CVD.
- To see four small scale evidenced based neighbourhood initiatives making a measurable difference to health focused on the prevention of CVD.

Based on written application and interview, four candidates were selected to join the Queen's Nurse Development Programme intake beginning in March 2023. The programme aimed to support these four practitioners as they undertook their development journey to explore their own CVD prevention idea with a partnership of others in their community. The nurses were also supported through coaching to develop a deep self-awareness and understanding of the skills required for co-production. In addition, each of the nurses were allocated an expert clinical mentor who agreed to mentor them on a voluntary basis (each was an expert nurse involved in heart health) to help guide their project.

There was a strong emphasis on co-production throughout the design of the programme. It was seen as innovative, offering new ways to strengthen and improve nursing leadership through genuine dialogue with others including multiagency collaboration. More widely, the Queen's Nurse Development Programme gives nurses an opportunity to consider how the voices less often heard are included and listened to, and in doing so to learn from those whose experience of working with communities has led to significant changes that enable health.

The four candidates pursued issues designed to prevent CVD during their nine-month development programme. Through the programme of workshops and coaching they were supported to engage with their communities to co-create initiatives which address the prevention of CVD by drawing on research evidence and listening to the voices of lived experience. The projects they led on were strongly co-designed and were required to have clear deliverables within twelve months so this initial phase could be evaluated.

Each candidate has been offered £2,500 to enable their co-created project. These funds were awarded by the advisory group after submission of a clearly co-produced project plan, with measurable impacts, which used evidence to address a key risk factor for CVD.

It was anticipated that the work will continue after the programme ended and these local groups would be given support to develop their initiative further and wider.

Within the timeframe of the project, QNIS expected to see four small scale, evidence-based neighbourhood initiatives making a measurable difference to health focused on the prevention of CVD. Local people would have been engaged in generative conversations around health and wellbeing, and the four nurses would have developed their skills in co-production to each be taking forward an initiative focused on prevention of CVD with their community that draws upon interprofessional colleagues and partners from other agencies. As the candidates would also have developed the skills in listening and creating partnerships, plans and actions would be co-created by those involved. In this way it was expected that the changes would be owned and sustained within the community.

Longer term, QNIS hope to see four initiatives which are making an impact on lifestyle and behavioural changes relating to prevention of CVD e.g. on tobacco use, diet, obesity or physical inactivity. It is expected that these initiatives will be making a measurable difference to people's health and that, because of the community buy in, they will be sustainable. They may have been catalysed by skilled nurses, but they will be people powered.

QNIS also expected to see nurses who have experienced the facilitation of co-production with local people, creating ripples across Scotland and beyond, sharing their skills and experience with others, thus inspiring others to make a difference within their communities.

The key legacy of this project was hoped to be four communities who better understand their health challenges and are implementing changes to make it easier to live healthy lives. The four nurses would have greater understanding of the issues that affect the health of people in challenged communities, and how services and opportunities can be better tailored to their needs.

2.0 Programme evaluation specification & development of evaluation approach

2.1 Evaluation specification

This evaluation was developed based on an evaluation specification that was drawn up by QNIS staff and presented to the evaluation partner Prof. Andy Jones (AJ) in September 2023. The specification provided an outline of the programme. It also stated that the evaluator was expected to work to engage the four nurses and their co-production partners as collaborative co-inquirers in a creative critical inquiry to capture the learning from these four initiatives to address CVD. There was an expectation that the evaluation work would take account of all relevant ethical issues. The specification stated that QNIS

were also keen to capture the voices of lived experience and were planning to work with a film maker to share the journeys of the people involved.

The specification set out a timetable which included the milestones of a draft final report being presented in June 2024 with the final version prepared during July 2024.

2.2 Development of proposed evaluation approach

Based on the evaluation specification document, and discussions held between AJ and Emma Legge from the QNIS leadership team, a proposed evaluation approach was developed and submitted for consideration in September 2023. This consisted of three work packages:

2.2.1 Proposed formative evaluation

Formative evaluation is generally any evaluation that takes place before or early during the implementation of a programme. Whilst an aim of a formative evaluation can be to improve the design or delivery of a programme at an early stage, this does not need to be a motivation and the formative evaluation is usually a precursor to any follow-up evaluation, whenever undertaken during programme delivery. The formative evaluation aims to help make implicit elements of programme delivery (i.e., those which are implied but not described in detail) explicit (i.e., written down with their role in the programme clearly elucidated and understood).

Given the programme was currently running with nurses in post, it was recommended by AJ that the formative evaluation of it began as soon as possible. It was suggested by AJ that this work commenced with the development of logic models, with four separate logic models each describing the bespoke elements of the intervention(s) being delivered by each of the nurses. Logic models are central to formative evaluation as they depict the activities and action of a programme, showing the relations between what is delivered and what the results are. A logic model (also described as Theory of Change or Theory of Action) can be thought of as akin to a series of if/then statements that describe the sequence of events that are expected to create change (in this case lead to changes in health and health-related behaviours in target communities so that health inequalities associated with CVD are reduced) and help resolve the problem (in this case that nurses are an underutilised resources in tackling inequalities in health related behaviours associated with CVD risk).

The clear descriptions of the programme provided by the logic models were proposed to form the starting point for this evaluation as the models would provide information on the resources being used, the activities being run, the mechanisms via which it is anticipated any outcomes are achieved, and the outcomes that are hoped for.

To support the nurses in the development of their logic models it was proposed that four workshops were run via MS Teams (one with each nurse) to upskill them in the development of logic models and to provide some hands-on time to allow them to start developing their model in a supported environment. Each nurse would then be further supported as required to develop their model over the post-workshop period.

The finalised logic models would then be subjected to a rapid evaluability assessment. The purpose of evaluability assessment is to determine the extent to which an activity or project can be evaluated in a reliable and credible fashion. In doing so, the evaluability assessment allows the potential feasibility, scope, and approach of the evaluation to be assessed. In the case of the QNIS CVD Programme, it was anticipated that the evaluability assessment would focus on an assessment of which local outcomes can be captured, and by what means. There would also be a focus on the identification of elements of programme delivery by each nurse that may provide a distinct opportunity via the process evaluation to understand the pathways via which any desired outcomes are achieved.

2.2.2 Proposed summative evaluation

Given the nature of the programme and the limited resources available for evaluation it was proposed that the evaluation focussed on the capture of qualitative data, although any quantitative data identified in the logic model evaluability assessment that could be readily captured by the nurses would be utilised. The core focus of the summative evaluation effort was however to undertake a process evaluation with the aim of capturing information on the nurses themselves and their work with their communities. The process evaluation would enable an exploration of how and why any change may take place, with a particular focus on the unique components of activities delivered by each of the nurses.

Qualitative evaluation involves the collection of predominantly open-ended data, typically through semi-structured interviews and focus groups. The aim with the qualitative data collection was not to achieve a high level of reach (in other words, it does not need to include a large percentage of those involved in the programme or impacted by it) but rather to obtain detailed information from a smaller sample of stakeholders. The proposed sampling frame was therefore the nurses as well as members of QNIS staff involved in the programme.

Key issues explored through the qualitative evaluation were suggested to include:

- In what way does the delivery of the programme for each nurse match the specifications set out in the logic models?
- What are the unique elements of delivery associated with the work of each nurse and what mechanisms might they lead to benefit?
- What are the experiences of the nurses themselves and how has participation supported their own development?
- What is the impact of this novel method of delivery on issues surrounding equality, diversity, and inclusion?
- How has co-production been operationalised within programme delivery?
- What impact has the programme had on the wider health and social care systems?
- What structure does the programme need to take to enable future sustainability?

It was anticipated that data for the qualitative evaluation would be predominantly collected through group discussions and interviews (typically online for convenience and

cost saving). The method of data collection would depend on the type of participant, and practical issues. For example, whilst focus groups are a potentially efficient way of gathering data from many, some might be reticent to talk in front of others.

When analysing the qualitative (notes or transcriptions) it was proposed that a framework be drawn up of the themes emerging from the data. The data would be interpreted with a view to assessing the objectives and primary questions of the evaluation.

3.0 Evaluation methodology

The evaluation described in this document largely mirrors the methods described in the initial proposed evaluation approach. The work began in October 2023 and the final data was collected in March 2024. AJ worked with the nurses to support them in the collection of outcome data although no formal outcome analysis was undertaken.

3.1 The formative evaluation

Two workshops, with additional support in-between, were held with each of the nurses at the start of the evaluation. During the first workshop, relationship building activities were undertaken whereby the evaluation approach was discussed, and some training was provided on the development of logic models. Time was taken to begin the development of a logic model for each nurse in a supportive environment before the end of the workshop. Each nurse then worked on their own logic model, based on their proposed programme of work, supported by email or Teams communication with AJ.

At the second workshop, AJ reviewed the logic model and agreed any final refinements with the nurse. The logic model was then evaluability assessed whereby the key outcomes that the nurse hoped to achieve were identified and the potential for capturing those outcomes was discussed. Each logic model was then revisited later in the evaluation (approximately 6 months after the first logic model as produced) to reflect on the operation of the programme depicted in the original logic model and identify how closely the activities undertaken by the nurse equated to those they had planned to undertake at the time of initial logic model development. These revisits took place relatively shortly after the initial exercise and later conversations with the nurses showed, as would be expected, varying degrees of divergence between planned and actual activity delivery.

In order to facilitate the summary and comparison of the various logic models, a simple thematic analysis was undertaken. The models were iteratively read and re-read with initial notes being made on early impressions, recurring themes, and notable differences. A basic coding scheme was then developed using the column headings of each model (which were common across all models) to identify key activities, outcomes and outputs and these were then grouped into themes (e.g. particular community groups, behaviours targeted, or different engagement approaches). These themes were then used to develop a thematic map (in list rather than graphical format) around which insights were organised and presented.

3.2 The process evaluation

3.2.1 Data collection

The process evaluation consisted of qualitative data collected via interviews undertaken between October 2023 and March 2024. Sessions were run using MS Teams and were typically around 60 minutes in length.

All interviews were digitally recorded and verbatim transcribed. The interviews were each guided by a topic guide, although the conversation was allowed to be open and themes that emerged during each conversation were appropriately explored. Table 1 lists the topics that were covered in the topic guide produced for each group of stakeholders

Table 1: Topic guide themes used

Stakeholder group	Topics included in topic guide
QNIS Leadership Team Emma Legge Clare Cable	How did the programme come about and what was your roles? What is the anticipated impact that the programme will have on the wider health and social care system? What successes have there been so far? How has co-production worked? What have been the challenges (anticipated or otherwise) of getting up and running? What are the key learnings for the programme so far? What structure does the programme need to take to enable future sustainability and what needs to be put in place to ensure this? What will success look like at the end of the initial funding period?
QNIS Nurses Dana Crawford Helen Bremner Rhona Martin Rosie Crichton	How did you hear about the Burdett funded opportunity and what attracted you to it? *(Prompt) What do you want to get from the programme personally (self-development)?* *(Prompt) What sort of changes do you hope to make as a result of your work (outcomes and impact)?* *(Prompt) How have those expectations aligned with your experience so far?* How have you found the process of co-production? What has gone well? What less so?

	(Prompt) How well have you been able to consider issues of health inequalities as well as diversity and inclusion? Thinking overall, what have the successes been so far? Any particular challenges? Anything that's been unexpected? What are your key learnings so far, the 'take homes' for you? What are the main issues that you're currently considering for your work over the next year? In what ways, if any, do you do things differently as a result of the programme?

3.2.2 Thematic analysis

All interviews were recorded digitally and then transferred to the Otter.ai transcription package (www.otter.ai) for verbatim transcription. This service uses artificial intelligence to extract the transcript from the recording. Where errors in the transcription were apparent, the recording was listened to and manually corrected.

Thematic analysis of the transcripts was undertaken using an inductive approach. Inductive thematic analysis is a qualitative research method used to identify, analyse, and report patterns within data without trying to fit it into a pre-existing coding frame or any set of preconceptions. Whilst the interviews were there guided by the topic guide (i.e. the pre-determined set of issues to cover listed in Table 1) there were no preconceptions around the nature or content of response. This inductive approach therefore allowed the findings extracted from the transcripts to more naturally reflect the views of participants than would have been the case with a deductive approach where certain themes are searched for in the data. It also provides a detailed, nuanced understanding of the participants' perspectives.

After the transcription of recordings was completed, all transcripts were read through multiple times to become familiar with the content. Notes were made of any initial impressions and ideas that arose during this process. Following this, a formal coding protocol was used, with codes generated as the transcript was read through and labels assigned to sections of text related to each code. Due to the use of an inductive approach, codes were allowed to emerge organically from the data

After the process of initial coding was completed, the initial codes were reviewed and broader patterns of meaning, or proto themes, were identified. Codes were then collated into potential themes based on their relationship with each other. Themes were then refined by examining the sections of transcript associated with their component codes

to ensure they formed a coherent pattern (i.e. that there was internal consistency within them). Where necessary, themes were split, merged, or discarded.

The final stage of thematic coding was the completion of a detailed analysis of each theme to understand its essence and scope. A clear understanding of each theme was developed in order to define its meaning. In this report, findings are presented according to major themes, and any secondary sub-themes, across all individuals taking part in the evaluation rather than the use of a separate presentation of themes within each individual. This was chosen as the most natural way to present findings as many of the themes were cross-cutting. Quotes are largely reproduced verbatim but have been edited where necessary to address issues of clarity and remove filled pauses or discourse markers. Each theme is presented along with extensive illustrative quotes. In order to preserve confidentiality each quote is presented along with the stakeholder group with which it is associated, but no names or other identifiers are given.

4.0 Findings

4.1 Formative evaluation

In total four logic models were created, one for each nurse. In addition to the individual presentation of each initial logic model, comparison of the different models is also provided to consider the degree to which they reflect the aims of the programme whilst also incorporating the need to address issues that were identified as a local priority by each nurse. The evaluator, AJ, met with the nurses to reflect on progress of their work at a later point in the evaluation, and these reflections are also presented.

4.1.1 Initial logic models

This section describes the logic models that were drawn up with each of the nurses as a result of the initial series workshops held with them at the start of the evaluation. As such, the models provide an insight into the programme of work initially planned to be undertaken by each nurse. For ease of presentation, each logic model is reproduced in full in Appendix A of this report and is discussed below.

4.1.1.1 Logic model: Dana Crawford (NHS Lothian)

Model summary:

The work programme depicted in this logic model aims to improve health outcomes for vulnerable families by providing targeted support through trained nurses and health visitors. The work involves creating weaning packs for families at risk and conducting nurse-led sessions on healthy food preparation for parents of four-month-old children. It includes training for nurses, co-production activities, and buggy walks to encourage informal health discussions. The expected outcomes range from immediate improvements in parental awareness and physical activity to long-term reductions in cardiovascular disease (CVD) risks for both children and parents. The project seeks to embed these practices into routine NHS operations, ultimately enhancing community health and family well-being.

Model detail:

This logic model outlines a structured approach to improving health outcomes for vulnerable families, particularly those at risk of poverty or experiencing adversities such as drug and alcohol abuse, or domestic violence. The model starts with various inputs, including staff time from coordinators, nurses, and other staff, consumables and equipment for weaning packs, and expenses for travel, training, venue hire, and communications.

The activities described in the model involve working with nursery nurses and health visitors to identify the most vulnerable families and developing weaning packs tailored for these families. Additionally, parents of four-month-old children are invited to attend nurse-led sessions focused on healthy food preparation and eating habits. The nurses involved receive specialised training from the HENRY programme (an evidence-based, multi-layered approach to improving outcomes in nutrition, feeding and introducing a baby to solid food) and the NHS Lothian Infant Feeding Team on various aspects of infant feeding.

Mechanisms for change in the programme include the direct provision of weaning packs, which offer practical tools like cookbooks and healthy snack tubs to improve diet quality. The programme's universal invitation to parents aims for community-wide impact. Training nurses enhances their skills and reinforces the connection between diet and cardiovascular disease (CVD). Co-production activities with staff promote innovative programme delivery, and buggy walks provide informal settings for health discussions.

The outputs of the programme are identified as quantifiable measures such as the number of weaning packs produced, training sessions conducted, vulnerable families reached, parents invited and attending group sessions, advertisements for buggy walking groups, and feedback questionnaires collected.

In the shorter term (weeks), the outcomes include improved parental awareness of healthy starts for their children, increased physical activity and socialisation due to walking groups, and enhanced job satisfaction and skills among nurses. In the medium term (months), expected outcomes are healthier diets for children, normalised physical activity, improved family dietary quality, better mental health, and enhanced family functioning.

The longer-term outcomes (years) envision reduced lifelong risks of CVD for children as they transition to adulthood and for participating parents, a nursing workforce better equipped to support family health behaviours, and the integration of the programme into routine NHS practices. This comprehensive approach aims to foster significant health improvements across the community by targeting early childhood behaviours and parental support.

4.1.1.2 Logic model: Helen Bremner (NHS Tayside)

Model summary:

The programme of work depicted in this logic model aims to improve the physical health of adult community mental health service users by leveraging staff time, community support, and small budgets for consumables and communications. Activities include co-designing the project with diverse groups, understanding staff and service user behaviours and needs, collaborating with community organisations, and developing new health promotion pathways. This approach aims to capture service user preferences, transform staff capabilities, de-stigmatise mental health issues, and create a data-driven understanding of behaviour change. Outputs are measured through engagement and activity metrics, leading to short-term improvements in terms of better data use and understanding of CVD prevention needs, medium-term outcomes of reduced stigma and routine integration of health activities, and long-term outcomes of early CVD risk identification, reduced barriers to services, decreased CVD prevalence, and improved life expectancy for those with severe mental health issues.

Model detail:

The programme of work represented by this logic model aims to improve the physical health of adult community mental health service users through a structured approach involving various stakeholders and resources. The inputs include the time of nurses and administrative staff, venues for delivery, in-kind support from community organisations, support from service user and carer organisations, and small budgets for consumables and communications.

The activities depicted within the model revolve around assembling a diverse group of health service staff and service users to co-design the project. The work of this group helps the Community Mental Health Team (CMHT) staff understand the physical health needs of service users and their roles in addressing these needs. A questionnaire is developed and delivered to staff to understand their behaviours regarding supporting the physical health of service users. Service users are engaged through questionnaires, one-on-one sessions, and focus groups to understand the barriers to improving their physical health and what they believe will make a difference. Collaboration with community groups like "Angus Alive" helps develop bespoke activities for people with diagnosed mental health difficulties. New health promotion pathways are developed to take a more preventative approach for service users, such as supporting weight management in those on clozapine, and data is used to better understand staff behaviour regarding cardiovascular disease (CVD) prevention in service users.

The mechanisms for change depicted in the logic model include capturing the voices and preferences of service users, leading to a more effective and impactful programme of work. Understanding staff knowledge and behaviours supports workforce transformation, enabling them to better support service users' physical health needs. Working with community organisations helps de-stigmatise mental health issues and provide more effective support, whilst developing new pathways leads to holistic,

consistent, and equitable lifestyle support services. A data-driven approach provides a better understanding of behaviour change among staff.

The outputs listed in the model include the number of staff completing questionnaires, the number of service users engaged in consultations, the number of community organisations engaged, the number of referral partners engaged, the number of bespoke activities run by community organisations, the number of attendees at these activities, and the number of service users referred or signposted using newly developed pathways.

Short-term outcomes within weeks include more effective data usage to understand staff behaviour changes, better staff understanding of CVD prevention in service users, and improved understanding of service users' needs regarding CVD prevention. Community organisations are more likely to integrate activities for those with poor mental health, and staff show a better understanding of risk indicators. Relationships with potential support organisations are solidified.

Medium-term outcomes over months include reduced stigma associated with poor mental health among community CVD prevention services, routine integration of activities for those with poor mental health, and staff incorporating CVD prevention activities into their practice. Co-developed CVD prevention activities better fit service users' needs, and pathways providing long-term CVD prevention support are established.

Long-term outcomes depicted in the logic model that were hoped to be achieved over years include early identification of CVD risk factors among those with poor mental health, substantially reduced barriers to accessing services for CVD risk reduction, reduced prevalence of CVD among people with poor mental health, and an increase in the life expectancy of people with severe and enduring mental health problems to levels closer to that of the general population.

4.1.1.3 Logic model: Rhona Martin (Chest, Heart and Stroke Scotland)

Model summary:

The logic model for this programme of work, which involves identifying atrial fibrillation (AF) and hypertension in community settings, involves a multi-faceted approach to reduce health inequalities and improve cardiovascular health outcomes. By deploying Kardiamobile kits and training CHSS nurses and staff, the programme conducts screenings in high-footfall areas like charity shops in deprived communities and leisure centres. Collaborations with local organisations enhance accessibility and visibility, promoting health awareness and prevention. The model's activities lead to increased community engagement in health monitoring, upskilling of healthcare providers, and dissemination of lifestyle advice. In the long term, this initiative aims to lower the incidence of strokes and cardiovascular events, reduce healthcare costs, and embed preventive healthcare practices across Scotland.

Model detail:
The logic model for this programme of work around the primary identification of atrial fibrillation (AF) and hypertension within community settings employs a comprehensive approach aimed at reducing health inequalities and improving cardiovascular health outcomes. The model involves several inputs, including staff time from Chest Heart and Stroke Scotland (CHSS) nurses and other staff, Kardiamobile kits (a small electronic device that allows the measurement of heart rate and rhythm), health literature, travel expenses, and a budget for communication efforts.

The activities planned include identifying suitable venues such as charity shops in deprived areas and leisure centres with high footfall to host screening sessions. Collaboration with charity shops and Fife Leisure Trust will facilitate the placement of Kardiamobile units and conduct health screenings during exercise classes. Additionally, the CHSS Health Defence Team will run screening sessions in community hubs, and stroke nurses will visit patients at home for AF screening. Individuals diagnosed with hypertension during these screenings will receive lifestyle advice to mitigate their risk.

The mechanism for change depicted in the logic model focuses on tackling health inequalities by providing accessible screening in deprived communities and overcoming barriers to primary care access. This approach also aims to upskill stroke nurses and CHSS colleagues in primary prevention techniques, making the programme more visible and impactful within the community. By training individuals to monitor their own health metrics, the depicted programme aims to foster a broader culture of primary prevention.

Outputs from these activities listed in the logic model include the number of Kardiamobile kits purchased, the number of stroke nurses and Health Defence Team members trained, community members receiving health checks, and various screening sessions conducted. Additionally, the dissemination of lifestyle advice leaflets is measured.

In the shorter term, the programme expects increased community awareness and participation in screening for AF and hypertension, along with improved skills among stroke nurses for community screening. In the medium term, the model aims to embed primary prevention practices within Fife and the Health Defence Team, encouraging healthier lifestyle behaviours and identifying more cases of undiagnosed conditions. Ultimately, the long-term impact will be a reduction in stroke and cardiovascular events, decreased healthcare costs, and reduced health inequalities associated with cardiovascular disease across Scotland.

4.1.1.4 Logic model: Rosie Crighton (NHS Grampian)

Model summary:

The logic model for this programme of work that aims to improve the heart health of prisoners involves allocating staff time, health literature, travel expenses, and budget resources to develop heart health initiatives. Activities include creating wellbeing packs for nursing staff, engaging "We-care" teams, holding heart health discussions with prisoners, and co-developing a stop-motion film as a heart health

resource. These efforts address issues like illiteracy and unclear prison menu healthiness indicators. The anticipated outputs and outcomes range from immediate engagement and awareness improvements to long-term adoption of healthier lifestyles and overall heart health enhancement among nurses and prisoners, ultimately leading to better dietary quality within the prison.

Model detail

This logic model focuses on improving the heart health of prisoners, detailing inputs, activities, mechanisms for change, outputs, and various outcomes over time. The model begins with the inputs required, which include staff time, health literature, travel expenses, general consumables, and a budget for producing heart health resources for prisoners. These resources will be used to facilitate several activities aimed at promoting heart health within the prison population.

The planned activities involve producing wellbeing packs for nursing staff and collaborating with "We-care" teams to support the nursing staff. Additionally, discussions will be held with prisoners—two sessions with women and three with men—to talk about heart health and their support needs. The model also includes identifying partner organisations to co-develop a heart health resource, specifically an impactful stop-motion film containing essential information. Another activity addresses the problems with colour coding on prison menus to make the healthiness of food options clearer.

The mechanisms for change depicted in the model include the utility of engaging nurses, who have significant health needs and can serve as role models to healthcare staff. Co-developing resources with prisoners ensures the outputs meet the target group's needs, and there is evidence suggesting that co-development leads to more effective outcomes. A pictorial or voiced resource will help address illiteracy issues within the prison population, and clear healthiness indicators on menus will empower prisoners to make informed food choices.

The outputs of these activities will be measurable by the number of nurses and prisoners engaged, the number of prisoners and prison staff accessing the heart health resource, the number of prison menus produced without requiring colour production for healthiness indicators, and the number of prisoners utilising the healthiness ratings on menus.

In the shorter term (weeks), the expected outcomes are that nurses report a better understanding of how to support their heart health, and prisoners report higher awareness of what constitutes a healthy heart and how to achieve it. They will also have better awareness of healthy menu options.

In the medium term (months), it is anticipated that both nurses and prisoners will adopt lifestyle practices to improve their heart health, such as healthier diets, more exercise, and reduced smoking or vaping. The prison population in general is expected to select healthier menu options.

In the longer term (years), the goal depicted in the logic model is to see an overall improvement in the heart health of both nursing and prison populations, including both primary and secondary prevention. Additionally, the quality of diet consumed within the prison is expected to improve significantly.

4.1.2 A comparison of the initial logic models

The comparison of the various logic models shows that the programme appeared successful in developing a geographically disaggregated structure with a local focus that nevertheless showed commonalities associated with the overall programme aims.

4.1.2.1 Commonalities

The logic models from Dana, Helen, Rhona, and Rosie share several commonalities in their approach to health intervention, and these communalities align well with the objectives of the programme.

- **Inputs and activities:** All models emphasise the importance of staff time and training, indicating a shared recognition of the need for skilled and dedicated personnel. Dana, Helen, Rhona, and Rosie each outline specific training and engagement activities aimed at building capacity and ensuring the effective delivery of their respective programmes. For instance, Dana's model includes training nurses on healthy eating, while Helen's model focuses on co-design workshops with community mental health teams.
- **Mechanism for change:** In line with the ethos of the programme, each model incorporates the concept of co-production or community involvement to ensure that interventions are well-aligned with the needs of the target population. This is evident for example in Rosie's co-development of resources with prisoners and Helen's engagement with service users to understand barriers to physical health.
- **Outcomes:** The theme of cardiovascular health and the primary prevention of CVD runs through all the models. This runs from the prevention of risk development in early years in Dana's work to Rosie's work with adult prisoners. Short-term outcomes across all models generally focus on increased awareness of risks and knowledge of heart health among participants. Medium-term outcomes reflect behavioural changes, such as healthier lifestyles and improved practices. Long-term outcomes aim at reducing cardiovascular disease incidence and improving overall health, highlighting a shared goal of achieving lasting health improvements by reducing CVD risk.

4.1.2.2 Distinct Components

The ethos of local co-production is reflected in the distinct components of each of the models. These were:

- **Dana's model (NHS Lothian):** Dana's model is distinct in its focus on primary prevention via early childhood nutrition and parental education through weaning packs and group sessions. This model leverages the early developmental stage of children to instil lifelong healthy eating habits. It also incorporates community activities like buggy walks to foster informal health discussions.

- **Helen's model (NHS Tayside):** Helen's model integrates mental health and cardiovascular disease (CVD) prevention, addressing both physical and mental health needs through community and service user engagement. This model is noteworthy for its detailed approach to understanding staff behaviours and creating bespoke activities with community organisations.
- **Rhona's model (Chest Heart and Stroke Scotland):** Rhona's model emphasises cardiovascular screening and prevention within deprived communities, utilising Kardiamobile units in various community settings. The model is notable for its multi-faceted approach, involving charity shops, leisure centres, and home visits, which helps tackle health inequalities and promotes primary prevention.
- **Rosie's model (NHS Grampian):** Rosie's model is tailored to improving heart health among prisoners and nursing staff, both groups with very specific health needs. It includes unique activities like producing wellbeing packs and addressing menu colour-coding in prisons. The focus on both healthcare staff and prisoners as target groups provides a dual benefit of improving heart health awareness and practices within the prison system and the healthcare workforce.

4.1.2.3 Conclusions on model comparisons

While the programmes of work depicted in all four models aim to improve health outcomes through the primary prevention of CVD via community engagement and targeted interventions, they differ in their specific focus areas and methodologies. The communalities highlight the fact the nurses appear to have successfully embedded the key overall aims of the programme in their own work, whilst the distinctions underscore the adaptability of work the nurses planned to undertake to various health challenges in the populations they served. The programme therefore emphasises the use of tailored interventions to achieve impact on health outcomes.

4.1.3 Reflections on the progress of the work depicted in the initial logic models.

As outlined in the methodology, meetings were held with the nurses approximately 6 months after the original logic models were drawn up in order to reflect on the progress of the programme of work originally set out.

4.1.3.1 Reflections on progress: Dana Crawford (NHS Lothian)

The reflections on the progress of the programme highlight several key achievements and observations. The involvement of nursery nurses and health visitors was felt to have effectively identified the most vulnerable families, and the weaning packs were being successfully produced to reach those in greatest need. The development and distribution of these weaning packs was felt to have been particularly effective, with 100 weaning packs, along with 12 highchairs, having been funded to date. Furthermore, a sustainable source of funding for the future had been identified via the charity Kidz Eco, an organisation that already produces weaning packs. Evidence from conversations that Dana had with parents suggested that parents who had received weaning packs with were reporting improved awareness of the need for a healthy start to life in their children.

The nurse-led sessions on healthy food preparation and eating for parents, including a discussion of good practice for healthy weaning, had shown promise and were still up and running with parental attendance varying between 50% and 100% of those who signed up, leading to between 5-10 parents being present for each session. Attendees were mostly mothers, but fathers were sometimes present, as were grandmothers who were noted as being the adults that did the bulk of the cooking in the household. In addition to the group sessions, the nurses were going into the homes of the most vulnerable families to deliver the sessions, ensuring that this critical group were not overlooked. Feedback from the sessions was positive; it suggested that prior to attending them parents weren't linking children's diets to their heart health, and instead felt that this was only an "old age thing".

There was evidence that the training and engagement activities run for nurses has been impactful, with evidence from PDPs (Personal Development Plans), as well as anecdotal conversations Dana had taken part in suggesting that the nurses were experiencing improved job satisfaction and wellbeing because they felt their ideas were valued. The co-development approach adopted meant that each nurse had ownership of the programme. Dana felt that this strengthened the approach of collegiate working in the team, which was unseen at the start of the programme. At the time the reflection was made, 11 nurses had also received HENRY training with just 2, who were new to the team, still to be trained.

At the time that the discussion took place, the introduction of buggy walks had not taken place due to some health and safety matters that needed to be addressed, although it was hoped that they would start over the summer of 2024.

4.1.3.2 Reflections on progress: Helen Bremner (NHS Tayside)

The reflections on the progress made in the programme highlighted several key achievements and ongoing challenges. The project had successfully engaged a diverse group, including health service staff and service users, in co-designing the initiative. Indeed, Helen reflected how the membership of the group had widened including a psychologist and diabetes nurse joining. The group was operating using a core membership team and drew on others as required.

Work undertaken with the Community Mental Health Team staff showed there was a lack of understanding of physical health conditions within the team and a set of "aide-memoir" cards were developed as a result, along with staff training sessions being delivered. However, the work was not as far progressed as had been hoped and was organically developed rather than being an active focus. More generally in the work Helen undertook with her team, she did not feel there had been a wholescale change in team member's understanding and buy-in for the need to incorporate CVD prevention activities into their service-user facing work, but change had been seen in some "early adopter" staff members. It was hoped that this would spread out more widely over time, with an initially small group of individuals acting as advocates for change. Evidence for the early stages of cultural change in the team included some staff members putting an alert in patient records for when a health check review was due. This was felt to be

sending the message that this was important, and it showed that staff were taking responsibility around physical health issues.

Staff at Angus Alive had received some training on working with clients with poor mental health and the impacts of mental health medication on the ability of clients to be physically active, although there had been challenges in engagement with the organisation due to a change in leadership at Angus Alive. In collaboration with Angus Alive staff, the team had also instigated activities under the "Branching Out" brand at a local country park. This 12-week long programme of activities included undertaking nature conservation activities in outdoor environments. Helen reflected that further work was needed to widen this out to other population groups and organisations. Angus Alive were also running a 12-week programme for people with chronic health conditions, which Helen had engaged with. This comprised a gentle introduction to exercise and physical activity with a focus on heart health and improvement in chronic pain management. There were plans for doing taster sessions for mental health patients with a view to these being a stepping stone onto the programme, and a health walk, led by an occupational therapy assistant, was also being run as a potential additional stepping stone.

One of the original aims of Helen's work programme was to engage with service users to understand the barriers that they felt prevented them from improving their own physical health and reducing their CVD risk. This part of her work had taken longer than anticipated to get up and running but five focus groups had been planned to run by the end of May. The focus groups were to be run by service users with support from staff. They were using local community buildings which had also acted as a useful showcase of the community assets available. In addition, Helen and her team had developed questionnaires for service users who did not wish to attend a focus group, and several completed questionnaires had been received, with useful responses. Helen reflected that she would have liked to have started this part of her work earlier, but she felt it took time to properly listen to the needs of people and care had been taken to develop the questionnaires and topic guides.

Helen felt the work undertaken with service users of the clozapine clinic had been successful, and the pathway that had been developed earlier provided a potential model for adoption elsewhere. Staff from the clinic had attended "Moving Medicines" training to sow the seeds for behaviour change. A "healthy snacks" campaign was being run via the clinic where patients were given the snacks to try. This had been very well received and was seen was an opportunity to initiate soft conversations around physical health. A leaflet had also been produced covering the association between the use of mental health medicines and weight gain and, significantly, routine appointment times in the clinic had been increased to 30 minutes in length to allow time for a discussion on wider behaviour change and patient's support needs. Helen noted there had been a shift in emphasis from talking about "exercise" to "activity" and that patients attending the clinic appeared much more open to wider discussions than had previously been the case.

In terms of more general relationship building, Helen noted that links had been strengthened with "Angus Voice", a service user representative group. They had initially worked together on the diabetes screening programme, with a focus on looking how to improve access and uptake of the programme. At the time that the conversation took place, one of the nurses had also reached out to the cervical smear screening programme to investigate the options to improve access.

4.1.3.3 Reflections on progress: Rhona Martin (Chest, Heart and Stroke Scotland)

The discussion of Rhona's work revealed that many of the activities detailed in the initial local model had been implemented as originally planned. Central to the programme of work was the purchase of Kardiamobile units and at the time the reflective conversation was undertaken, 25 units had been purchased which provided some resilience by having spare units available if required. These were 6-lead devices that provided more useful data than the 2-lead devices that were originally planned to be purchased, and Chest, Heart and Stroke Scotland had contributed funding to help support the purchase of the higher quality devices. Output from the devices could be emailed directly to the patient's general practitioner or to the hospital ECG department depending on what further action was needed. The number of units purchased meant that one device was available for every stroke nurse working within the organisation in Scotland as well as devices being available for the Health Defence Team. NHS Tayside were keen to develop relationships to support this work as it was seen to provide a potential pathway whereby at-risk patients could bypass the need for an appointment with their GP before receiving an ECG.

Rhona reflected how the relationship with the company who produced the Kardiamobile devices had been strengthened by this work, which had led to new ways of working including the adaptation of the D365 patient database to better support the programme by adding records that detailed the number of people tested, how many were found to have evidence of arterial fibrillation, how many were identified as hypertensive, and how many were referred for further investigation. The relationship with Kardiamobile also provided access to the training materials produced by the company as well as the adoption of their Standard Operating Procedures.

At the time the reflection took place, the initiative to visit charity shops with the Kardiamobile devices to support opportunistic screening within the community had not commenced, although the required paperwork was being finalised. The Health Defence Team had a hub up and running in Dundee where they held health and wellbeing sessions. It was hoped that they would be incorporating a discussion of arterial fibrillation into these sessions by the summer of 2024.

At the time of the conversation, 18 stroke nurses had been trained to better identify patients with arterial fibrillation, and there was a move taking place whereby screening, which had previously been heavily concentrated in healthcare settings, was happening more frequently in community settings and the homes of patients. In addition, four members of the CHSS "Health Defence Team" had been trained on the use of Kardiamobile devices to further support the work of the nurses.

The original logic model incorporated a programme of work with Fife Leisure Trust to offer health screening at "Active Options" classes being run in leisure centres in Fife. Rhona reported that this work had not started. The leisure centre based classes were still being seen as a future option, but the plan was to use a Chest Heart and Stroke shop as a venue instead. This change was seen as making better use of the facilities that were at hand within the community, as the shops provided flexible venues for drop-in sessions and could easily be accessed by stroke nurses.

4.1.3.4 Reflections on progress: Rosie Crighton (NHS Grampian)

Although Rosie had been seriously unwell at the time she was undertaking this work, excellent progress had still been made although she expressed frustration at not being even more advanced in delivery of her programme. In total 32 wellbeing packs for nurses had been made up with only 6 still remaining at the time of the reflection. The items contained within the packs were linked to the five senses and included a photo frame, a red heart-shaped stress ball, a scented candle, skincare treatments (a foot rub, a hand rub and lip balm – all made of beeswax) a link to the sound of a skylark singing and a face mask. They also contained a bar of chocolate to tingle the tastebuds. Feedback from the nurses was that they appreciated the packs and loved the products. One of the nurses said that her daughter had asked her to use the foot rub on her own feet and she took time to do that – it gave them a connection that they would not have ordinarily had.

The "We-care" team had delivered sessions with staff as planned on mental health, wellbeing and self-care using the "Kindness" method. This approach emphasises the importance of treating oneself with compassion and understanding. Key components include self-compassion, mindfulness, emotional awareness, positive affirmations, and setting healthy boundaries.

Rosie had run consultation sessions with prisoners as planned. These had led to the development of a drink coaster for the cells of prisoners with information on heart health on it. One side of the coaster had information about a healthy heart, whilst the other side contained information on an unhealthy heart. As a result of the sessions, the prisoners had asked for a short cartoon film on heart health to be produced. They had decided to produce a stop motion animation and Rosie was in the process of making it herself. She found the process very labour-intensive but good progress was being made and it had been a valuable learning experience. The voiceover had been completed at the time the reflection took place and a flier to accompany the film was being printed. The plan was that the film will be broadcast on the prison TV channel Rosie was also working with the prison librarian to catalogue boxes of exercise cards, and she was looking at purchasing other wellness resources, such as a DVD, to add to the prison library.

The early work that Rosie had undertaken in the prison showed that there was a problem with the colour coding of prison menus whereby the menus were colour coded according to meal healthiness in the kitchen but were being printed in monochrome in the wings so that prisoners were not aware of the coding. As a result of her intervention, menus were now being printed in colour and placed in locations that prisoners could access them.

4.2 Process evaluation

This section presents the findings of the inductive analysis of the interviews organised according to the main and sub themes (with *italicised* titles) identified.

4.2.1 Main theme 1: Empowerment and confidence building

Empowerment and confidence building emerged as a central theme in the interviews, revealing how the Burdett funded programme significantly influenced the nurse's self-perception and leadership capabilities.

4.2.1.1 Transformative coaching and personal growth

The programme's coaching component played a pivotal role in fostering empowerment among the nurses. One of the nurses provided insights into how the coaching sessions transformed her confidence and leadership skills. Reflecting on her initial experiences, she said:

> *"When I started, I had just stepped into a management role and found myself very silent. The hierarchy within the NHS terrified me. I was scared to share my ideas or make concerns known in higher management meetings." (Queen's Nurse)*

The coaching sessions provided a safe space for her to explore and address her fears. She explained:

> *"The coaching has been wonderful. My coach helped me tap into the inner child and address some childhood trauma, which made me realise that my fear of speaking up was holding me back. This fear was rooted in not wanting to look stupid or be judged." (Queen's Nurse)*

The journeys of self-discovery and empowerment embarked upon by the nurses were marked by significant breakthroughs. For example:

> *"One of the coaching sessions involved setting goals for what I wanted my future to look like and why it was important to speak up in meetings. My coach made me do exercises that, at first, seemed silly, but they made sense afterward. They helped me recognise the importance of my voice and gave me the confidence to use it." (Queen's Nurse)*

The impact of these sessions extended beyond professional settings:

> *"I was able to bring up situations from my private life during coaching, like dealing with staff conflicts, and understand why I reacted the way I did. This helped me reflect better and understand my emotions, improving my interactions and leadership." (Queen's Nurse)*

4.2.1.2 Recognising vulnerability as strength

A critical aspect of empowerment was recognising vulnerability as a strength rather than a weakness. One of the nurses powerfully illustrated this when she described her initial discomfort with vulnerability:

"When I first did the residential, I couldn't understand why I felt so vulnerable. That word kept coming up for me, and I didn't want to appear vulnerable as a new manager." (Queen's Nurse)

However, the programme helped her reframe this perspective. She explained:

"My meta-question throughout the programme was about accepting my own vulnerability. I learned that showing vulnerability is actually a strength. It helps people see you as a human being, which builds stronger connections." (Queen's Nurse)

This nurse provided a compelling example of how embracing vulnerability improved her leadership:

"During a difficult meeting with staff, I shared a personal story about making a mistake due to being under pressure. Initially, I thought I would never tell them that, but it made a huge difference." (Queen's Nurse)

The positive reception from her team further reinforced the value of vulnerability. She reflected:

"After the meeting, team members came up to me and said it was really interesting to hear my story because they had been in similar situations. It helped them understand my decisions better." (Queen's Nurse)

4.2.1.3 Enhancing leadership skills

The programme not only boosted individual confidence but also enhanced participants' leadership skills. One nurse highlighted a specific instance where her newfound leadership confidence in the use of coloured cue cards made a difference:

"So, for development for example, say, okay what colour are you today? Okay so I'm bright yellow. Okay, what's making you bright yellow? Or it could be murky grey. Okay. What's making you murky grey? So, we'll talk about that and then we will say, okay, you've said what your pressures are. How can we fix this?" (Queen's Nurse)

One of the QNIS leadership team also emphasised the importance of self-improvement for effective leadership. She noted:

"Self-improvement is not about self-edification; it's about enabling them (the nurses) to make a difference. The purpose of looking at oneself is to become a more effective leader and advocate for the people we care for." (QNIS Leadership)

She explained how the coaching sessions supported this development:

"The monthly coaching sessions are vital. They help individuals hold onto what's going on for them and unpack their experiences, which is essential for developing leadership skills." (QNIS Leadership)

4.2.1.4 Personal empowerment through programme support

Participants also spoke about the broader support provided by the programme, which contributed to their personal empowerment. One nurse shared how the network of support from the programme helped her feel more confident:

> *"I think there has to be a bit about the network of support that comes from the Queen's Nursing Institute as well. We've got a WhatsApp team, and you know that you've got somebody on tap that's there for support if you ever need them. You know that they're there for you. It's just amazing." (Queen's Nurse)*

This nurse highlighted a specific instance where this network was particularly beneficial:

> *"During a particularly challenging time, I reached out to a fellow participant. Just talking through my concerns and getting their perspective made a big difference. It boosted my confidence and helped me approach the situation with a renewed sense of determination." (Queen's Nurse)*

This sense of community and shared experience reinforced the participants' confidence and ability to handle challenges more effectively.

4.2.1.5 Building self-awareness and reflection

The programme also fostered self-awareness and reflection, essential components of personal growth and effective leadership. One nurse described how the coaching sessions facilitated this process:

> *"The coaching helped me reflect on my reactions and understand why I behaved a certain way. It also helped me see why others might react differently." (Queen's Nurse)*

And one of the nurses reflected that:

> *"I think what happened was that it gave me validation that how I think and feel is probably not that far off the mark. So, I can have the confidence to actually think and feel like this." (Queen's nurse)*

A member of the leadership team echoed the importance of self-awareness, linking it to broader systemic change:

> *"Self-awareness is key to becoming an effective change maker. It's about understanding how I show up and intervene in the system. This reflective practice helps adapt and refine leadership approaches." (QNIS Leadership)*

This nurse's story of addressing staff resistance illustrated how self-awareness translated into effective leadership. She shared:

> *"I noticed one team wasn't using the kit bags and had a high number of toy appeal referrals. I brought it up in a meeting, sharing my own experience of poverty and why families might prioritise certain things over others.....This helped the team reconsider their assumptions and approach." (Queen's Nurse)*

4.2.1.6 Overcoming personal challenges

The programme also provided participants with the tools and confidence to overcome personal challenges. One of the nurses shared her experience of dealing with self-doubt and how the programme helped her:

> *"I often struggled with self-doubt and felt like I wasn't good enough. The programme helped me realise my worth and the value of my contributions. The coaching sessions were particularly helpful in addressing these feelings and building my confidence." (Queen's Nurse)*

She described a specific coaching session that was particularly impactful:

> *"My coach asked me to list my achievements and strengths. It felt uncomfortable at first, but it made me realise how much I had accomplished. This was a turning point for me, and it helped me embrace my abilities and feel more confident in my role." (Queen's Nurse)*

4.2.2 Main theme 2: Co-production and collaborative working

Co-production and collaborative working emerged as central themes in this programme. This theme captures the ethos of shared ownership and inclusive decision-making processes, emphasising the importance of integrating diverse perspectives, including those of service users and community members.

4.2.2.1 Organic development of ideas

Co-production within the QNIS programme often emerged organically, highlighting the value of flexibility and openness to diverse inputs. One of the nurse's projects on early intervention is a prime example. Initially, she intended to set up cooking groups for community members, but discussions undertaken during the collaborative process led to a different outcome. She recounted:

> *"I thought I would get cooking groups up and running in the community. But once I got the funding and involved the team, we sat and thrashed out ideas. Other people had better ideas than me, and we went with their ideas instead." (Queen's Nurse)*

This collaborative approach resulted in the development of weaning packs, a more feasible and impactful initiative. She explained:

> *"The idea of weaning packs was much better. It was practical and addressed the needs of the community more effectively than my original idea" (Queen's Nurse)*

One of the nurses who worked with prisoners reflected:

> *"So, there were all these ideas around what (the resource) it could look like and some said that they wanted something that showed half of the picture to be a healthy heart and the other picture to be an unhealthy heart and that one side all the things directing at this unhealthy heart that made it unhealthy and then all the things on the healthy side that made it healthy. And you know I was blown away*

really by the level of involvement that they wanted to have and the ideas that they had." (Queen's Nurse)

4.2.2.2 Inclusive decision-making processes

The work of the nurses emphasised the importance of inclusive decision-making, ensuring that all voices were heard and valued. One nurse highlighted how this approach fostered a sense of ownership among team members. She said:

"It was invigorating to see the team's ideas come to life. It felt like a load had been lifted off my shoulders because it wasn't just my project. The whole team was involved, and it gave them a sense of ownership." (Queen's Nurse)

One of the nurses reflected how the Theory U change management framework helped with inclusivity:

"Co-production is at the heart of Theory U and the person-centred framework. It's about listening to marginalised voices, being curious about different perspectives, and creating solutions collaboratively." (Queen's Nurse)

A member of the leadership team also elaborated on the practical application of these principles, emphasising the need for health professionals to be open to different perspectives. She noted:

"Too often, as health professionals, we think we know the answers and how to fix things. The programme invites participants to hold up a mirror to their own blind spots and be curious about missing voices." (QNIS Leadership)

4.2.2.3 Enhancing service user involvement

Co-production also extended to involving service users in the development and implementation of projects. One nurse expressed her commitment to engaging families and service users, although she acknowledged that this aspect was still developing. She shared:

"Engaging service users is definitely something I'd like to take forward. We're planning to film some of the families and involve them in the project. I'm anxious to get on with that" (Queen's Nurse)

The programme's emphasis on service user involvement reflects a broader trend towards more inclusive and participatory healthcare practices. One of the leadership team highlighted this shift, stating:

"Listening to the voices of the marginalised and being curious about the perspectives that challenge our own is crucial" (QNIS Leadership)

As this nurse said it succinctly:

"There's only one person that knows best what's right for prisoners really and it's prisoners themselves." (Queen's Nurse)

4.2.2.4 Building sustainable collaborative practices

Sustainability was a key consideration in the co-production process, ensuring that collaborative practices would continue beyond the duration of the programme. One of the leadership team discussed the role of co-production in embedding changes within healthcare settings. She explained:

> *"Co-production helps sustain changes by embedding new practices within the system. When service users and team members feel a sense of ownership, they're more likely to maintain and support these changes." (QNIS Leadership)*

She also highlighted the role of coaching in supporting collaborative working, noting:

> *"The coaching sessions are vital for supporting individuals in their journey of collaboration. They help participants hold onto what's going on and unpack their experiences, which is essential for sustaining collaborative practices." (QNIS Leadership)*

4.2.2.5 Overcoming challenges in co-production

Despite the successes, participants also faced challenges in implementing co-production. Time constraints and varying degrees of engagement were common issues. One nurse admitted:

> *"There are things I haven't kept up with, like certain practices from the residentials. That's entirely on me, but it shows how challenging it can be to maintain new practices amidst external pressures." (Queen's Nurse)*

One of the leadership team acknowledged the variability in participants' success with co-production, emphasising the need for realistic expectations. She stated:

> *"People achieve co-production to a greater or lesser extent depending on their context and openness. Our role is to support them on this journey, recognising that it's a process and not everyone will reach the same point." (QNIS Leadership)*

4.2.3 Main theme 3: Addressing health inequalities

Addressing health inequalities was a central theme in the QNIS CVD programme, underscoring the commitment to reducing disparities in healthcare access and outcomes, particularly in the context of cardiovascular disease prevention.

4.2.3.1 Targeting vulnerable populations

The work strategically focussed on vulnerable populations to address health inequalities. For example, one nurse emphasised the importance of starting interventions early in the lives of members of the community to have a lasting impact. She explained:

> *"If you're looking at early intervention, then the age group that I work with (newborns) is the earliest you can probably get…these are our future adults." (Queen's Nurse)*

She reflected how her commitment to targeting vulnerable populations is rooted in her experience as a health visitor:

"People think of health visitors as focusing on child development and immunisations, but we are trained to see the bigger picture. We look at these children as our future adults, and early intervention can shape their long-term health outcomes." (Queen's Nurse)

Similarly, another of the nurses discussed how her project aimed to support vulnerable families based on local socioeconomic deprivation:

"Our project focused on providing resources and support to families in deprived areas. By addressing their immediate needs and providing long-term support, we aim to address inequalities" (Queen's Nurse)

4.2.3.2 Systemic effects

The programme aims to create a systemic impact by embedding practices that reduce health inequalities within the healthcare system. One of the leadership team articulated the importance of this approach with the Burdett CVD funding, stating:

"Cardiovascular disease statistics are poor in Scotland…it felt like an important opportunity to address a specific health inequality. By enabling nurses to develop with a focus on this area, we hope to create a ripple effect that extends beyond the immediate cohort." (QNIS Leadership)

She also emphasised the programme's broader goal of fostering systemic change through targeted interventions. She explained:

"The programme is designed to equip nurses with the skills and confidence to act as change makers within their communities. Their impact goes far beyond individual projects, influencing the wider healthcare system to address health inequalities." (QNIS Leadership)

4.2.3.3 Personal stories of experiences of inequalities

Personal stories from the nurses were used highlight the tangible impact of the programme on reducing health inequalities. One nurse shared a poignant example of her upbringing:

" I delved in a wee bit deeper, and I said I want to tell you about my own childhood and the poverty we were brought up in. And what I can tell you what I did have was a good Christmas every single year. And the reason is my parents went into debt January. " (Queen's Nurse)

Her story underscores the perceived importance of empathy and personal connection in addressing health inequalities. She reflected on the outcome of this discussion:

"After sharing my story, the team became more aware of the hidden struggles families face. They realised that looking at material possessions, like the clothes and shoes that children were wearing, alone doesn't capture the whole picture." (Queen's Nurse)

4.2.3.4 Fostering community engagement

Engaging the community was seen to be a crucial aspect of the programme's approach to reducing health inequalities. This engagement was seen to not only ensure the relevance and effectiveness of interventions but also to empower the community members by giving them a voice in the process. One of the nurses spoke about the importance of this participatory approach:

> *"By involving families, we make sure that the solutions we develop are grounded in their real experiences and needs. It also helps build trust and a sense of ownership." (Queen's Nurse)*

Another of the nurses highlighted the importance of community involvement in her project:

> *"Engaging the community from the outset was key. We have started to hold workshops and focus groups to gather input and feedback, ensuring that our interventions a good fit to their needs." (Queen's Nurse)*

4.2.3.5 Addressing broader social determinants of health

In addressing the issue of inequalities, the programmes of work undertaken by the nurses also aimed to addresses broader social determinants of health by recognising that health inequalities are rooted in complex, interrelated factors. One of the nurses discussed how her project considers issues such as food insecurity and poverty. She explained:

> *"In my world of health visiting, energy and food insecurity and food poverty are constant concerns. These issues are on everyone's agenda, and our interventions need to address these underlying determinants of health." (Queen's Nurse)*

The need for a holistic approach was demonstrated clearly in this quote:

> *"It's not enough to provide health services alone. We need to address the broader context in which families live, ensuring they have the resources and support they need to thrive." (Queen's Nurse)*

4.2.4 Main theme 4: Personal and professional development

Personal and professional development ran throughout the QNIS CVD programme, highlighting the transformative impact on participants' careers and personal growth.

4.2.4.1 Holistic coaching and self-reflection

The programme's coaching sessions were reported as being instrumental in facilitating both personal and professional development. One nurse provided an in-depth account of how the coaching sessions helped her reflect on and address deep-seated issues:

> *"Because I had opened myself up and explored some deep places (in a poem) that I just don't go very often. And not only that I'd articulated on paper, and I'd sent it to somebody else to look at. For myself, I got something from it. I wrote that that piece and that piece wouldn't have been written otherwise actually." (Queen's Nurse)*

Her coach encouraged her to set personal goals and think about her future aspirations. She explained how this process contributed to her professional development:

> *"So, about a month ago there was a course advertised a leadership course and culture change and person cantered care. And there was also an opportunity on that to do a further three days which I think is a bit like Train the Trainer....that's one reason why I've pushed myself to get back this week. So, I build up some stamina." (Queen's Nurse)*

The holistic approach of the coaching sessions allowed this nurse to bring in experiences from her personal life, enhancing her ability to manage work-related challenges. She shared:

> *"I could discuss personal situations, like dealing with staff conflicts, and understand why I reacted the way I did." (Queen's Nurse)*

And this nurse reflected how the learnings from her coaching spread to her non-work activities:

> *"I decided on the first of January that I would write a haiku a day for the whole year. Set myself that challenge. And that came out of the programme. That's not nursing as such, but I've got a few people, about half a dozen people, who dip in and out and follow it and some of them have said I'm trying to write haikus now." (Queen's Nurse)*

4.2.4.2 Navigating challenges and embracing vulnerability

The programme encouraged participants to embrace vulnerability as a strength. One nurse shared how she initially struggled with this concept but ultimately found it empowering:

> *" So, I'm a very private person. And I suppose we spoke about vulnerability, and they do quite a bit of that within the residential as well. So, before I knew I was within a team meetings and somebody brought up about somebody, one of our patients, who had died. And for some reason, I just opened up to the team.... and we got into a conversation about compassion and being fatigued. It got me thinking about other people putting up protective barriers, but then there was other people that were much more open and honest about how they were .... so yeah, so it's just share, I suppose, sharing that with a wider team." (Queen's Nurse)*

4.2.4.3 Balancing work and personal life

The nurses reported how the programme also helped them achieve a better balance between work and personal life. For example, one of the nurses emphasised the importance of self-care and setting boundaries, which she learned through the programme:

> *"I've always been really good at self-care. So, I suppose the program reinforced my need to continue with that and do new things for self-care..... and I've spread that right out to the team because I think some of them are not very good at self-care. " (Queen's Nurse)*

She felt this improved balance had a positive impact on her professional performance. She explained:

> *"By taking care of myself, I became more effective at work. I was better able to support my team and manage my responsibilities without feeling overwhelmed." (Queen's Nurse)*

4.2.4.4 Reflective practice and continuous learning

The programme instilled a culture of reflective practice and continuous learning among the nurses. The emphasis on continuous learning encouraged them to seek new opportunities for growth. One of the nurses shared how this mindset influenced her approach to challenges:

> *"I learned to view challenges as opportunities for growth. Instead of feeling overwhelmed, I started seeing them as chances to improve and learn. This shift in perspective was a significant change for me." (Queen's Nurse)*

This nurse reflected:

> *"I used to think I was a good listener. But now of course I now use much more... I use What do they hear? What do they see? What do they feel? What do I imagine? That sort of thing as well. And so, I'm using that when I'm speaking to people to support but also my team as well." (Queen's Nurse)*

4.2.5: Main theme 5: Impact and sustainability

The need to achieve impact and sustainability was raised regularly during the discussions, highlighting the desire to achieve long-term effects and enduring changes from the work of the nurses.

4.2.5.1 Long-term changes in practice

The programme aimed to create lasting changes in healthcare practices by equipping the nurses with the skills and confidence to implement sustainable improvements. One member of the leadership team emphasised the importance of embedding these changes within the healthcare system:

> *"Co-production helps sustain changes by embedding new practices within the system. When service users and team members feel a sense of ownership, they're more likely to maintain and support these changes." (QNIS Leadership)*

One of the nurses also highlighted how the programme encouraged sustainable practices within her team. She said:

> *"The changes we implemented have become part of our routine. For instance, the feedback loops we introduced have continued to shape how we operate and engage with each other. These practices have really stuck." (Queen's Nurse)*

4.2.5.2 Building resilient systems

The programme of work undertaken by the nurses also focussed on building resilient systems that can adapt to changing circumstances and continue to deliver high-quality care. One of the leadership team discussed the importance of creating a culture of continuous improvement:

> *"The programme equips nurses with the skills and confidence to act as change makers within their communities. Their impact goes far beyond individual projects, influencing the wider healthcare system" (QNIS Leadership)*

It was emphasised that the programme's impact was not meant to be limited to immediate outcomes but includes the development of a culture that supports ongoing improvement and innovation. She noted:

> *"The aim is to foster a culture where continuous improvement is part of the DNA of healthcare practice. This ensures that the changes we make are not only sustained but also built upon over time." (QNIS Leadership)*

One of the nurses echoed this sentiment, highlighting the programme's role in fostering a resilient approach to healthcare:

> *"What you're talking about to a certain extent is system change. You're embedding this way of thinking throughout and it's more sort of patient-centred work where you're thinking more holistically." (Queen's Nurse)*

4.2.5.3 Scaling and spreading innovations

The programme also aims to scale and spread successful innovations across different settings. One of the nurse discussed the potential for broader systemic impact through the dissemination of best practices:

> *"How do we spread out to the wider people who use our service? And how do we how do we engage with our primary care colleagues for them to start thinking about the service that they're providing for this group of people and how can improve what they provide so that our patients feel more included in primary care?" (Queen's Nurse)*

One of the nurses also highlighted the importance of spreading successful practices:

> *"We've seen how the strategies we've developed can be applied in different contexts. By sharing our experiences and outcomes with other teams, we're able to extend the benefits of our work." (Queen's Nurse)*

4.2.5.4 Personal stories of sustained impact

Personal stories from nurses highlight the tangible, lasting impact of the programme on them personally. For example, one nurse shared how the skills and confidence she gained through the programme have continued to benefit her, describing how the programme's impact has extended beyond the initial project:

"I mean that's something that everybody said, that's been a real theme that's come out. It's interesting having talked to the others about themes of creativity, of having the confidence, having the ability to show vulnerability, those things have been really important." (Queen's Nurse)

4.2.6: Main theme 6: Challenges and barriers

Despite the many successes of the programme, the nurses reported various challenges and barriers in implementing and sustaining their initiatives. This theme explores the obstacles encountered and the strategies employed to overcome them.

4.2.6.1 Time management and external pressures

One of the most frequently mentioned challenges was managing time effectively amidst competing priorities and external pressures. For example:

"I came home (from the residential) there's some things I feel that went off the burn. And I know that's entirely on me. So that's up to me making time for me to do these practices." (Queen's Nurse)

This sentiment was echoed by another of the nurses, who described the difficulty of balancing programme responsibilities with her everyday workload:

"Absolutely because we did speak about my private life having to juggle everything as we all have to do, to juggle work with my private life. And I did have that I probably still have got a bit of inability to say 'no' I can't do it. I am getting better at that. I don't think I'm quite there yet, but something I'm aware of." (Queen's Nurse)

4.2.6.2 Engaging team members and sustaining motivation

Another significant challenge was engaging team members and sustaining their motivation over the long term. One nurse discussed the difficulty of maintaining enthusiasm and commitment among her gaining engagement and buy in, but the tools presented from the coaching helped overcome this barrier:

"One team in particular have been very challenging to manage. And one person in particular within the team has made it very evident that she just doesn't like me. That's fine that's her choice. It does cause anxiety when you have to go into these things, but using these tools within the team meetings in actual fact I couldn't believe the impact that it had." (Queen's Nurse)

Another nurse shared a similar experience, noting the challenge of maintaining engagement:

"I want to get the team back around the table again just to hopefully get some fire in their bellies again and keep this going. And then think about reflecting on it and how it's going." (Queen's Nurse)

4.2.6.3 Resource limitations

Limited resources, both in terms of funding and personnel, were also mentioned as barriers. One nurse highlighted the impact of resource constraints on her project:

> *“There was pressure that…I need to spend the money before it's no longer available!” (Queen’s Nurse)*

One nurse discussed how shortages of personnel affected her ability to execute the project effectively:

> *"We often struggled with not having enough hands to carry out the work. The enthusiasm was there, but without sufficient people, it was difficult to achieve everything" (Queen’s Nurse)*

4.2.6.4 Resistance to change

Resistance to change, both from within the team and from external stakeholders, was sometimes raised by the nurses as a challenge. One nurse discussed encountering resistance from some team members:

> *"So initially there was a lot of resistance. And I have to say there was a couple of times that I did come out of those meetings, and I spoke to my manager, and I felt quite demoralised." (Queen’s Nurse)*

Another nurse shared a similar experience, reflecting on the challenges of implementing change in a healthcare system under pressure:

> *"There is resistance (to take action) because on the one hand you can understand it's a system under strain and people are concerned, at the end of the day you don't want people with undiagnosed (condition) wandering around. You know it’s a little bit strange isn't it but you're actually reluctant to diagnose cases." (Queen’s Nurse)*

4.2.6.5 Overcoming challenges through collaboration and support

Despite these challenges, the nurses employed various strategies to overcome obstacles and achieve their goals. Collaboration and support from peers and mentors were critical in this process. This quote from one of the nurses highlights the importance of this:

> *"Because if I'm having a difficult day (my partner) cheers me up and vice versa, but also my team as well has started exercising a heck of a lot more. It’s still a work in progress but that's okay." (Queen’s Nurse)*

Another of the nurses emphasised the role of mentorship in overcoming challenges:

> *"It was out of the comfort zone. It was amazing. And you would go into one of those (coaching) sessions thinking you knew what you're going to speak about. And you ended up speaking about something entirely. Totally different, and difficult at times as it made you look at yourself and others and your challenges so differently." (Queen’s Nurse)*

5.0 Discussion and conclusions

5.1 Summary of key findings

The Queen's Nurse Development Burdett funded programme focussed on the primary prevention of cardiovascular disease in Scotland, addressing one of the country's most pressing health challenges. The programme was notable because of its innovative approach to community health, co-production, and leadership development among nurses.

A notable finding is the successful engagement and empowerment of nurses to lead community health initiatives and work in ways that people in their roles might commonly not be expected to do. The programme's strong emphasis on personal development and co-production has enabled nurses to work closely with community members, understanding their needs, and developing tailored interventions. This approach enhanced the nurses' leadership skills as well as fostering a sense of ownership and collaboration among community members.

There was a strong emphasis on health inequalities. By targeting vulnerable populations, such as families in deprived areas, children, individuals with mental health issues, and prisoners the programme has sought to address the root causes of health disparities in cardiovascular disease. Although this evaluation did not attempt to directly measure outcomes, the initiatives led by the nurses were reported as showing promising results in increasing awareness of risk factors amongst staff, patients, and community members and promoting healthier lifestyles.

The programme has several elements that have contributed to its success. The emphasis on co-production and collaboration was a cornerstone of the work, and by involving colleagues and community members in the development and implementation of the health initiatives developed by the nurses, their activities had generally good buy-in and remained relevant and effective to those to whom they were targeted. This participatory approach was also seen to have the added benefit of making the initiatives more sustainable.

Evidence from the coaching, mentoring, and personal development components of the programme suggested that they appeared to have been highly effective in empowering the four nurses. The nurses reported that the transformative coaching sessions helped them build confidence, embrace vulnerability, and develop leadership skills. This personal growth translated into them working more effectively with their teams as well as bringing benefits in their everyday lives.

Despite the very positive views expressed, the nurses reported several challenges. Time management and external pressures were obstacles, and there was some discussion amongst the nurses of the difficulty of balancing the demands of the programme with their everyday responsibilities. Engaging team members and sustaining motivation over the long term has also been a challenge, as were limited budgets which meant that prioritising initiatives within the available resources required careful planning.

5.2 Strengths and limitations of this evaluation

The approach used to produce this evaluation report has a number of strengths and weaknesses. One of the primary strengths of the approach was the fact that it combined formative and summative evaluations to provide a more holistic understanding of the programme. The formative evaluation, which included the development of logic models and evaluability assessments, ensured that the programme's theoretical underpinnings were soundly captured and that there were clear pathways from activities to outcomes. This approach also facilitated a detailed understanding of each nurse's intervention, informing the follow-on qualitative data collection.

The use of qualitative data collection methods provided in-depth insights into the experiences and perceptions of the nurses and other stakeholders involved in the programme. These discourses helped understand the nuances of the programme's implementation and the personal and professional development of the nurses, which would have otherwise risked not being captured.

One limitation was the reliance on qualitative data, which, while rich in detail, does not provide the generalisability of quantitative data. The scope of this evaluation did not include the statistical analysis of outcome data, so the reflections on the impact of the work the nurses undertook in their communities contained in this report are inevitably somewhat anecdotal. Additionally, the evaluation's timeframe may have constrained the nature of the findings. In particular the nurses were all in post at the time the evaluation commenced so their reflections on the impact of the earlier stages of the programme were not contemporary with the experiences that the nurses were reflecting on. Likewise, it has not been possible to capture the longer-term impact of the programme on the nurses, their teams, or the communities within which they were working.

5.3 Conclusions

The evaluation of the Queen's Nurse Development Programme cardiovascular workstream funded by the Burdett Trust for Nursing highlights the significant potential of nurse-led initiatives in primary prevention of cardiovascular disease within Scotland. The programme's emphasis on co-production and community engagement empowered the nurses to develop and implement health-enhancing initiatives tailored to the specific needs of their communities. The nurses successfully utilised their enhanced leadership and co-production skills to foster a sense of ownership among their teams as well as with community members, resulting in increased awareness and early evidence of positive behavioural changes related to CVD risk factors. The diverse approaches undertaken by the nurses, from early childhood nutrition education to targeted interventions for mental health service users and prisoners, underscore the programme's flexibility and effectiveness in addressing varied health challenges across different populations.

The findings of this evaluation suggest that programme demonstrated the value of empowering nurses as leaders in community health initiatives. By addressing health inequalities and promoting sustainable, community-driven interventions, it has laid a robust foundation for long-term improvements in cardiovascular health, and the successful integration of co-production principles and the development of tailored,

evidence-based interventions provide a model that can be replicated and expanded in other contexts. Continued support and funding will be important to sustaining these initiatives and ensuring that the early positive changes observed are maintained and further developed.

6.0 Acknowledgements

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APPENDIX A: Initial logic models

Logic model: Dana Crawford (NHS Lothian)

Inputs	Activity	Mechanism for change	Output	Shorter term outcomes	Medium term outcomes	Longer-term outcomes (impact)
				(weeks)	(months)	(years)
Staff time: Co-ordinator, nurses, other staff. Consumables and equipment to make up weaning packs. Expenses: Travel expenses for staff. Costs of providing	Working with nursery nurses & health visitors to identify most vulnerable families (living in poverty or at risk of poverty, other adversities such as drug, alcohol, or domestic abuse). Development of weaning packs for parents of most vulnerable babies. Invite all parents with 4-month-old	CVD is linked to poor diet and the weaning packs provide straightforward tools (e.g., cookbooks, tubs for healthy snacks, potato mashers, links to other resources etc) to improve diet quality of young children. The most vulnerable families are least likely to attend	Number of weaning packs produced. Number of staff receiving training and delivering the programme. Number of vulnerable families receiving weaning packs. Number of parents invited to group sessions on food and diet. Number of group sessions on food and diet run.	Parents report an improved awareness of the need for a healthy start for their children. Parents report an improved awareness of how to achieve a healthy start for their children (e.g., diet, physical activity). Parents report being more	The diet of children contains a higher proportion of fresh and healthy first foods. Being physically active becomes a normalised part of childhood for the children of participating parents.	As children transition into adulthood the risk of them developing CVD is reduced, and this remains lifelong. The risk of developing CVD in parents is reduced because of the programme. The nursing workforce is better able to

training for staff. Costs of venue hire Budget for comms.	children to attend nurse-led session on healthy food preparations and eating. Nurses receive HENRY training to support delivery of sessions around healthy eating for families. Nurses are trained by NHS Lothian Infant Feeding Team on issues including breast feeding, formula feeding and weaning. Deliver nurse-led classes (8-10 parents each) including discussion around good practice for	group activities, so packs provide an appropriate way to reach them. By inviting all parents of 4-month-old babies to attend a class there is a potential to have a whole-community impact. The use of co-production with staff means that the programme delivery remains innovative and well aligned to the needs of families. Providing training for nurses will	Number of parents attending group sessions on food and diet. Number of advertisements and social media posts issued for buggy walking groups. Number of parents invited to attend buggy walking groups. Number of buggy walking group sessions run. Number of parents attending buggy walking groups. Number of feedback questionnaires received.	physically active and socialising more because of walking groups. Nurses report improved job satisfaction and wellbeing because of feeling their ideas are valued. Nurses report improved skills to undertake their roles because of the training they have received.	Parents report that the dietary quality of the family has improved. Parents report family members having better mental health because of participating in activities. Parents report that family functioning (e.g., time spent together etc) is improved because of the programme.	deliver community support to families around health behaviours because of the programme. The programme is embedded in routine practice throughout the NHS.

	healthy weaning. Run co-production activities with staff around programme design and delivery to support innovation in thinking. Run series of buggy walks for parents with children where conversations around health can take place.	lead to upskilling of the workforce in this way of working and will reinforce the links with CVD for the nurses. Walking groups provide an informal and non-confrontational environment in which to have talks around health behaviours. Focussing on families of young children provides a teachable moment with higher potential for behaviour change (e.g., the family adopts healthier eating				

		behaviours). Focussing on infants provides an opportunity to have life-long impacts and societal changes as behaviours adopted in early life are known to track to adulthood.				

Logic model: Helen Bremner (NHS Tayside)

Inputs	Activity	Mechanism for change	Output	Shorter term outcomes	Medium term outcomes	Longer-term outcomes (impact)
				(weeks)	(months)	(years)
Staff time (nurse time, admin time) Venues for delivery In-kind support from community organisations Support from service user and carer organisations Small budget for consumables Small budget for	Assemble diverse group (health service staff, service users, etc) to co-design the project. Use group to get CMHT (Community Mental Health Team) staff understanding of physical health of service users and their role in considering service user needs. Develop & deliver questionnaire for	Capturing the voices and preferences of service users and involving them in co-design will mean that programmes delivered will better meet their needs and be hence more effective. Understanding staff knowledge and behaviours will support transformation towards an upskilled workforce who	Number of staff completing questionnaire survey. Number of service users engaging in the consultation. Number of community organisations engaged with. Number of potential referral partners engaged with. Number of	Data is more effectively used to understand behaviour (and change of) amongst staff regarding follow-up of service users with particular CVD risks. Staff views, attitudes, and behaviours regarding CVD prevention in service users are better understood.	Stigma associated with poor mental health is reduced amongst organisations providing community CVD prevention services. Activities for those with poor mental health are routinely integrated into community CVD prevention.	Risk factors for CVD are identified at an early stage amongst those with poor mental health. Barriers in access to services to support CVD risk reduction are substantially reduced amongst those with poor mental health in the community.

communications	staff to understand their behaviours regarding supporting the physical health of service users. Engage service users in understanding the barriers improving their own physical health (questionnaire, 1:1 sessions, focus groups) and what they think will make a difference. Work with "Angus Alive" and other community groups to develop bespoke activities for people with diagnosed mental health difficulties (e.g., run training sessions on	are better able to embed support of the physical health need of service users into their daily work. Working with community organisations (Angus Alive etc) will de-stigmatise mental health issues in these services meaning they can more effectively support service users. Developing new pathways will provide a holistic, consistent, and equitable lifestyle support service that overcomes many	bespoke activities run by community organisations. Number of people attending bespoke activities run by community organisation. Number of service users referred/signposted using newly developed pathways.	The needs of service users with regards to CVD prevention are better understood. Community organisations providing CVD prevention services are more likely to integrate activities for those with poor mental health into their portfolios. Staff show better understanding of how to react to risk indicators that may arise from conversations / screening checks	Staff begin to incorporate CVD prevention activities into their everyday practice. Co-developed CVD prevention activities are delivered which better fit the needs of service users. A set of pathways exists that provides service users with long-term CVD prevention support.	The prevalence of CVD is reduced amongst people with poor mental health. The life expectancy of people with severe and enduring mental health problems becomes more like that of the general population.

	how medicines to manage mental health can impact physical activity). Develop new health promotion pathways to take a more preventative (primary and secondary prevention) approach for service users (e.g. support weight management in service users on clozapine). Use data to better understand behaviour from staff regarding CVD prevention in service users.	existing barriers to service users receive support for their physical health. A more data-driven approach will provide a better understanding of behaviour change amongst staff.		with service users. Relationships are solidified with organisations providing potential support for service users with elevated CVD risk factors.		

Rhona Martin (Chest, Heart and Stroke Scotland)

Inputs	Activity	Mechanism for change	Output	Shorter term outcomes	Medium term outcomes	Longer-term outcomes (impact)
				(weeks)	(months)	(years)
Staff time: CHSS Nurses, CHSS staff. Equipment: Kardiamobile kit (approx. 20 units). Health literature to hand out. Expenses: Travel expenses for staff.	Identify most appropriate venues (e.g., shops in deprived areas, leisure centres with high footfall) to host screening. Work with charity shops (Chest, Heart and Stroke Scotland – CHSS) to place Kardiamobile units in shops with nurses present to undertake health screening. Work with Fife		Number of Kardiamobile kits bought. Number of stroke nurses trained. Number of Health Defence Team members trained. Number of members of the community receiving a health check. Numbers of patients and carers in nurses' caseloads receiving screening. Numbers of sessions	More community members receive screening for AF & hypertension. More community members are aware of blood pressure measurement and the interpretation of readings. More community members check their pulse manually.	The model of primary prevention developed in this project is embedded within Fife. The Health Defence Team embed identifying AF and use of the technology within their remit. Members of the community	The incidence of stroke and other cardiovascular events is reduced in the community. The cost to health services of treating cardiovascular disease is reduced. The model of primary prevention developed for this project is embedded

Budget for comms.	Leisure Trust (Active Options Classes in Leisure Centres – exercise classes for patients which aren't stroke specific) to offer health screening at the classes. Work with the CHSS Health Defence Team (Primary Prevention) to use hubs (Maryhill, Glasgow and Dundee) to run screening for AF with Kardiamobile units with people from the community. Stroke nurses visit stroke patients in their homes to run screening for AF.		run in charity shops. Number of people screened at Active Option Classes. Number of people screened at the Hubs. Number of lifestyle advice leaflets given out.	Stroke nurses report being more skilled in undertaking community screening for AF and hypertension. More community members are aware of healthy lifestyle behaviours to reduce their risk of CVD. More community members are aware of CHSS and their staff in the community.	are more likely to adopt lifestyle behaviours to reduce their risk of CVD. More cases of undiagnosed AF and hypertension are identified and treated.	throughout Scotland. Health inequalities associated with CVD are reduced in Scotland.

	Individuals with hypertension identified by screening are given lifestyle advice to reduce risk. Work with CHSS Comms team to publicise the programme.					

Rosie Crighton (NHS Grampian)

Inputs	Activity	Mechanism for change	Output	Shorter term outcomes	Medium term outcomes	Longer-term outcomes (impact)
				(weeks)	(months)	(years)
Staff time Health literature to hand out. Travel expenses and general consumables. Budget for production of the heart health resource for prisoners.	Producing wellbeing packs for nursing staff. Get teams from "We-care" to come and work with nursing staff. Hold discussions with prisoners (2 sessions with women, 3 with men) to talk about heart health and needs for support. Identify partner organisations to develop a	Nurses are a group with significant health needs and can also act as a role-model to healthcare staff more generally. Co-development with prisoners ensures outputs are well aligned with needs of target group. There is good evidence that co-development leads to more	Number of nurses engaged with. Number of prisoners engaged with to discuss heart health. Number of prisoners (and other prison staff) accessing the heart health resource. Number of prison menus produced that do not require colour production to convey food healthiness. Number of prisoners making use of	Nurses report a better understanding of how to support their own heart health. Prisoners report better awareness of what a healthy heart is. Prisoners report higher awareness of how to achieve a healthy heart.	Nurses adopt lifestyle practices to improve their heart health. Prisoners adopt practices to improve their heart health (e.g. healthier diet, more exercise, reducing incidence of smoking/vaping). The prison population	The heart health of nursing populations in improved. The heart health of prison populations is improved (including primary and secondary prevention). The quality of diet consumed in the prison is

	resource around heart health. Co-develop a resource to support heart health amongst prisoners (impactful stop-motion film containing important information) Address problems with colour coding of prison menus.	effective outputs. Developing a pictorial / voiced resource will help address the problem of illiteracy in prison populations. Making healthiness of menus clear allows prisoners to make an informed choice when selecting food options.	healthiness rating of prison menus.	Prisoners have better awareness of which are the healthy options (and which not) on their menus.	selects healthier menu options in general.	improved.