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A Realist Evaluation of the Refocused School Nurse Programme within Early Adopter Sites in Scotland

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A Realist Evaluation of the Refocused School Nurse Programme within Early Adopter Sites in Scotland

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Executive summary

The school nurse (SN) role is a significant part of the school health service, which is a universally accessible service provided to children and young people, aged 5-19 years and their families. However, the SN roles, models and skill mix have varied greatly across Scotland. These have encompassed roles and interventions focused in schools, as well as those with a wider public health and community function. The publication of CEL 13 (2013)[1] aimed to redefine the SN role to focus on delivering consistent and more efficient services across Scotland in order to deliver safe, effective and person-centred care based on the principles of Getting It Right for Every Child (GIRFEC) national practice model. The SN role has been designed to have greater emphasis on home visiting and addressing wider policy and public health priorities. Based on available evidence, policy direction and priorities, the role focuses on nine priority areas:

- Mental health and well-being
- Substance misuse
- Child protection
- Domestic abuse
- Looked After Children
- Homeless children and families
- Children known to or at risk of involvement in the Youth Justice System
- Young Carers
- Transition points

Since September 2015, two early adopter NHS boards, Dumfries and Galloway (D&G) and Tayside (Perth and Kinross (P&K), have been testing this role, including the role of the wider school health team and associated redesign requirements.

The aim of the evaluation was to assess how the refocused school nursing role worked in both D&G and P&K, in order to provide learning and guidance to support SN training and any further roll out and evaluation of the service.

A realist framework informed this evaluation, combining both qualitative and quantitative data analysis. Realist evaluation uses a theory-driven approach to evaluate healthcare or social programmes. Interviews were held with staff from the SN teams and managers, both on an individual basis and in groups. The information gathered was analysed in accordance with realist evaluation methodology. Secondary data from the first 6 months of the pilot was also collected and analysed in order to capture patterns of referral both in and out of the school nursing service and the pathways being used for children.

[1] Chief Executive Letter 13 available at http://www.sehd.scot.nhs.uk/mels/CEL2013_13.pdf

The evaluation identified the following key findings:

What worked well?

1. The nine priority areas have undoubtedly made the school nurse role more focused and standardised. It has added value to the service by providing clear priority areas and pathways to school nurses.

2. The referral system formalises practice and ensures that school nurses receive mainly relevant referrals.

3. The role is now clearer to the nurses themselves and to all relevant agencies, including education.

4. Other agencies are increasingly aware of the contribution school nurses make to children's assessment and support process.

5. The priority areas have extended working relationships with agencies (e.g. youth justice) that school nurses did not previously engage with.

6. Extensive and mandatory training appears helpful for delivering the pathways.

What did not work so well and may require further consideration?

1. The nine selected priority areas generated divided opinions amongst both managers and nurses, especially in terms of what qualifies to be included or excluded. However it was recognised that children and young people could move between priority areas and could also be on several pathways at once.

2. The mental health and wellbeing pathway was the most frequently used pathway. Whereas nurses referred complex mental health cases to CAMHS, they felt less equipped to deal with low to moderate cases. As there are no nationally agreed guidelines on the assessment and treatment of mental health issues in young people, it is difficult to know what kind of training would be most appropriate for School Nurses.

3. Some members of the wider school health team felt alienated and excluded from the refocussing of the SN role. Whilst the development of the priority areas and pathways gave increased clarity and structure to the School Nurse role the role of the wider School Health team still needs further clarification.

4. Accessing the service through pupil support teachers was considered as a barrier in some cases.

5. Although school nurses perceived that they are now in a position to build stronger trusting relationships with the limited number of children who access their services, it was generally recognised that they are now less accessible to the wider school population.

6. Targeted skill-based training would be required to equip nurses on some specific pathways e.g. mental health and wellbeing.

Recommendations for school nurse training and further implementation

Priority areas and Pathways

1. There needs to be a greater clarity around the pathways. It may be beneficial to amend some, e.g. the substance misuse pathway could be widened to include all risk taking behaviour.

2. Health Boards should be encouraged to adopt the nine priority areas but develop their own pathways as referral mechanisms and resources differ locally.

3. Additional training on the mental health and wellbeing pathway is required. It might be useful to involve CAMHS in any such training.

Training

4. Nurses would benefit from training approaches that seek to build practical skills within the parameters of the priority areas. This would ensure that aside from identifying risks, nurses would also be equipped with skills to deliver interventions or support where necessary.

5. When training school nurses, the rationale for the selected nine priority areas may need to be clarified and the reasons for omitting some of the obvious ones from the framework, for instance sexual health (if it is to be omitted) need to be clearly articulated. This would promote consistency across the workforce regarding the rationale for the selected priority areas.

6. Whilst it is encouraging to see staff taking up opportunities for full time training backfilling their posts is necessary. This will be particularly pertinent over the next 5 years or so whilst most staff are receiving training.

Referral

7. The current referral procedure through the pupil support teachers may exclude some groups of children who may find it uncomfortable to approach such teachers with their issues. Exploration of other means of accessing school nurses (e.g. text message service) without going through pupil support teachers would be useful.

8. Clarification is needed around whether the School Nurses use referrals or Requests for Assistance and the role of the Health Plan Indicator (HPI).

Wider School Health Team

1. The role of the Band fives should be consistent and clear career development/progression opportunities could be incorporated within the role.

2. Clearly articulating the specific role within the priority areas of members of the wider school health team would be useful.

3. A dedicated immunisation team is required if school nurses are to focus on the priority areas.

Recording and Record Keeping

1. Data needs to be consistently gathered using an agreed format. This data should be analysed nationally and fed back to school nurse teams for management purposes as well as being used to show the patterns of usage across Scotland.

2. The evaluation of the pilot was unable to measure any kind of impact. It is recommended that if the refocused school nurse role is rolled out nationally that some sort of outcome/impact study is undertaken.

1. Background

The school health service is a universally accessible service provided to children and young people, aged 5-19 years and their families. Historically the school nursing role has played a significant part within this service. Models, roles and skill mix have varied greatly across Scotland and have encompassed; direct interventions with pupils in schools, a teaching and education focused role and a wider public health and community function. The publication of CEL 13 (2013)[2] aimed to redefine this role to focus on delivering consistent and more efficient services to meet current needs of the 5-19 Scottish population. The work to re-focus the School Nurse (SN) role has been undertaken by a national Steering Group commissioned by CNO/SEND. Since September 2015, two health boards, Dumfries and Galloway (D&G) and Tayside (within Perth and Kinross (P&K)) have been piloting the refocused role, including the role of the wider school health team, and associated re-design requirements. These early adopter sites are seeking to provide learning and guidance to support the impending national role out of the service.

The overarching aim of the refocus is to ensure that the SN role and service going forward delivers safe, effective and person-centred care based on the principles of Getting It Right for Every Child (GIRFEC) national practice model.

It is proposed the future SN role will comprise two main elements:

1. Responsibility/leadership for children and families with additional healthcare needs:

Following pre-school review of children with an additional Health Plan Indicator (HPI) at four years of age and handover from the Health Visitor, the SN will re-assess those families and children requiring on-going support. Following re-assessment, SNs will agree those children and families requiring additional support, intervention or home visit in discussion with the Named Person.

2. Focused and targeted interventions with vulnerable population groups:

It is proposed that the wider school health service remains a universally accessible service but the SN role will be more focused and targeted. School Nurses will be required to adopt the Getting It Right for Every Child National Practice Model to assess the health and well-being needs of children and young people in conjunction with the Named Person (education) role and other partners providing the health assessment component to the Child's Plan. The future role will have greater emphasis on home visiting and addressing wider policy and public health priorities, interagency working and partnerships with education and justice. In response to the

[2] Chief Executive Letter 13 available at http://www.sehd.scot.nhs.uk/mels/CEL2013_13.pdf

available evidence base, policy direction and priorities, it was proposed that the role will be focused on nine priority areas:

- Mental health and well-being
- Substance misuse
- Child protection
- Domestic abuse
- Looked After Children
- Homeless children and families
- Children known to or at risk of involvement in the Youth Justice System
- Young Carers
- Transition points

As part of the review, it is proposed that some previous duties of school nurses may be more appropriately addressed through existing health improvement services and through the delivery of the health and well-being component of the Curriculum for Excellence.

Role of the wider school health team

The composition of the wider school health teams consisting of staff nurses, support workers, health improvement lead, education and social work link workers are likely to differ in individual Boards. However, it is proposed that they provide the universal service for all school aged children and families. This will consist of four main elements:

- Immunisation
- Screening such as height, weight, BMI. At present this takes place at P1 and sometimes P7. Following introduction of the Health Visitor review at 4 years of age the P1 screening will be reviewed. In the early adopter sites P1 assessment will be done by the wider school health team.
- Additional work commissioned by the SN
- Weekly Health Zones

Aims of the Evaluation

The aim of the evaluation was to assess how the refocused school nursing role worked in both D&G and P&K, in order to provide learning and guidance to support SN training and any further roll out and evaluation of the service.

The objectives were:

- to assess the implementation of the refocused school nursing role in the early adopter sites and identify the key facilitators and barriers to implementation.
- to explore whether the assumed mechanisms of action for the new school nurse role and wider team appear to be operating as planned, thus indicating likely future effectiveness on outcomes.
- to assess the degree to which both implementation and potential effectiveness of the school nursing role may be dependent on unique local contexts, and make recommendations for tailoring it to help inform school nursing training in future.

Structure of the report

Section one gives the background, aims and objectives of the refocused SN programme. Section two describes the realist evaluation framework used by this evaluation, and outlines the methods of data collection and analysis, Section three briefly describes the progress and structure of the implementation of the refocused role in each area and some of the background characteristics of the clients. The next three sections reflect the phases of realist evaluation. Specifically, section four uses the insights from managers who were involved in designing and implementing the refocused role to identify the initial programme theories (defined below). These theories were then tested with nurses in section five and refined in section six to provide further understanding of how the programme works.

Where quantitative data was available this was utilised in testing the programme theory. Occasionally, we have made links to the findings of the consultation with children and young people within the early adopter sites to add aditional insights. The consultation with children and young people was commissioned by the Scottish Government and conducted by Children in Scotland (Woodhouse et al., 2016).

Finally, section seven summarises the key conclusions of the evaluation and provides recommendations for any further implementation and evaluation of the school nurse programme across Scotland.

Terminology and definitions used in the report

A programme theory explains how an intervention (a project, a programme, a policy, a strategy) is understood to contribute to producing outcomes.

For the purpose of this report, we have used ‘managers’ to refer to those who have a supervisory or managerial role and were involved in designing and implementing the refocused SN role. We also used ‘nurses’ to refer to all other practitioners, including school nurses, support workers or any member of the wider school health team. However, where necessary, we distinguished between them. In addition, we use children at various points in the report to refer to those who use the service but in essence they refer to both children and young people.

2. Methods

Evaluation design

The evaluation used three different methods to obtain and analyse data. Firstly a realist framework was used for interviews with staff who had been involved in the early adopter sites. Secondly qualitative interviews were held with managers about the process of the evaluation and analysed thematically and thirdly quantitative data was collected and analysed to provide additional data about use of the refocused service.

A realist framework informed this evaluation, combining both qualitative and quantitative data analysis. Realist evaluation uses a theory-driven approach to evaluate healthcare programmes and public health interventions such as the new school nurse refocused programme. This approach evaluates a programme by exploring the complex interactions observed between the context (specific settings where the programme is implemented), mechanisms (participant's decisions and actions), and outcomes (intended and unintended effects) involved in the programme (Byng, 2011; Greenhalgh et al., 2009; Pawson and Tilley, 1997). The emphasis of realist evaluation is to explain how a programme works, whilst identifying features that can be used to improve a programme. In line with realist evaluation, this evaluation proceeded in three key phases:

- Developing the programme theory (data mainly from focus groups and interviews with nurse managers, informed by the logic model designed for the national refocusing of school nursing programme)
- Testing the programme theory (data mainly from interviews with school nurses and support workers and quantitative data)
- Refining the programme theory (using phase 1 and 2 findings to explain how the programme works in practice)

Data from the first 6 months of the programme was collected and analysed in order to report on patterns of referral both in and out of the school nursing service and the pathways being used for children. A template was developed that the early adopter sites could use to record the details of each child referred into the service. This included demographic data, data on the pathway and limited data on outcomes.

Setting

The school nurse programme was implemented in both Perth and Kinross, and Dumfries and Galloway which have the following demographic characteristics:

Table 1: Demographic Factors for two Early Adopter Sites

	Total Population	Area	Population of main town	Primary Schools	Secondary Schools
Dumfries and Galloway	149,670	6426 km^2	38,900	99	16
Perth and Kinross	149,930	5286 km^2	44,820	69	11

In terms of the proportion of their populations that are in the most deprived 20% (SIMD quintile 1), Dumfries and Galloway is ranked 19th and Perth and Kinross 24th out of the 32 local councils. In other words both areas have lower populations of SIMD 1 (most deprived) and higher of SIMD 5 (least deprived) than many other areas and this should be borne in mind when interpreting the findings.

Sampling, recruitment and data collection

School nurses, support workers and nurse managers who had been involved in implementation and/or delivery of the school nurse programme were recruited from the two early adopter sites. The research team contacted a senior member of staff from each early adopter site and a meeting was held to discuss the evaluation procedures and to provide recruitment materials, which were then distributed to the wider school nurse teams. Potential participants were provided with information sheets and consent forms.

A total of 27 school nurses and wider health team members were interviewed from Perth and Kinross and Dumfries and Galloway (16 and 11 respectively), with an additional six managers taking part in focus groups and interviews. Within Perth and Kinross, all eligible school nurses and wider health team, including a Looked After Children's nurse, healthcare assistants, and the Young People's Health Team participated. However, in Dumfries and Galloway, six school nurses and wider health team members (one Band 6, one Band 5 and four Band 4/3) did not participate in the evaluation. Details of number of participants in this evaluation are provided in Table 2.

Table 2: Participants' characteristics

Role/Band	Dumfries and Galloway (n=14)	Perth and Kinross (n=19)
Manager	3	3
Band 6	8 (4 with Specialist Practitioner Qualification); 1 with Public Health Nursing qualification (PHN))	11 (1 with SPQ)
Band 5	2	0
Band 4	1	0
Band 3	0	5

Two focus groups and three individual interviews (two participants also took part in the focus groups) with managers from both early adopter sites were conducted. The topic guide was designed to reflect some of the items in the logic model being used for the national refocusing of the school nurse programme. Briefly, it examined their assumptions of how they expected the programme to work, whilst exploring perceived challenges and benefits of implementation. The topic guide is available in appendix 1.

Qualitative in-depth interviews were undertaken with school nurses and support staff. Interviews explored some of the initial findings from the managers' data and consisted of questions relating to their experiences of delivering the programme, with a particular focus on challenges and perceived benefits. The interviews were informed by an interview topic guide which can be viewed in appendix 2. All focus groups and interviews were audio recorded and lasted approximately 30-60 minutes.

In addition to the above data and to offer further context to the evaluation, quantitative data was collected to provide an overview of the characteristics of the children who were seen by the school nurses in the first half of 2016. In order to do this, a form was designed which school nurses were requested to complete for each new referral. The form underwent several amendments during the course of the early adoption and so each area did not submit exactly the same data. The forms asked for information on age, sex and SIMD of child referred, reason for referral, pathway child was placed on and some information around outcomes, although this was limited. The form has since been standardized so that it can be used in both areas and, more widely if necessary.

Data analysis

Audio recordings of the interviews and focus groups were transcribed verbatim before being independently coded by two researchers (LD and SM). After coding had been agreed upon, a thematic analysis was undertaken and findings reported in a narrative fashion based on context, mechanism and outcome (CMO) configurations of realist evaluation. Analysis was conducted using the software package QSR NVivo 10. All data were anonymised to preserve participants' confidentiality.

The quantitative data was submitted in Excel but then converted to SPSS and analysed using standard statistical techniques.

Ethical approval

Ethical approval for the present evaluation was granted by the University of Edinburgh Centre for Population Health Sciences Ethics review group and complied with research governance procedures in both NHS Tayside and NHS Dumfries and Galloway.

3. Findings

Overview of referrals from November 2015 to end of May 2016

This section provides an overview of the characteristics of the children who were referred to school nurses from November 2015 up to the end of May 2016. The two early adopter areas had received different numbers of referrals. Dumfries and Galloway had recorded 299 children and young people who had been seen by the School Nurse service. Perth and Kinross had recorded 107 for the same period. However, the team in Perth and Kinross had had to continue with their immunisation work in schools as well as adopting the new role and there were some weeks where it was not possible for any of the staff to fulfill their new role.

Gender

In both areas more girls were referred into the School Nurse services than boys, although a slightly higher percentage of girls were seen in D&G than P&K.

Table 3: Numbers and percent of children seen by School Nurse by gender

	Perth and Kinross (n=107)	Dumfries and Galloway (n=299)
Female	53.3%	63.7%
Male	46.7%	36.3%
	100%	100%

Age/Year Group

Overall, a higher proportion of secondary school children were referred into the School Nurse service in D&G than in P&K who had a higher proportion of primary school children referred in.

Table 4: Percent of children seen by School Nurse by Year Group

	Perth and Kinross (%)	Dumfries and Galloway (%)
Nursery	2	0
P1	14	6
P2	14	4
P3	12	2

P4	6	7
P5	4	2
P6	4	3
P7	4	4
S1	4	9
S2	10	16
S3	8	14
S4	12	18
S5	3	12
S6	1	3
Total	100	100

SIMD

P&K appear to have had a lower proportion of children from SIMD quintiles 1 and 2 referred into the School Nurse service than D&G. However it should be noted that there were a high number of children in D&G where the postcode had not been fully reported and so it was not possible to ascertain in which quintile they resided. In addition, both D&G and P&K have a higher proportion of children living in quintiles 4 and 5 than the national average so a higher number of referrals from these groups would be expected for these areas. As shown in Tables 5 and 6, a higher proportion of the children from the more deprived SIMD quintiles were referred to the SN.

Table 5: Percent of Children referred to School Nurse by SIMD – Perth and Kinross

	Perth and Kinross			
	No. children referred to SN	% of total referrals to SN	Population of SIMD aged 5-19 in P&K	% of SIMD population 5-19 referred to SN
SIMD 1 (most deprived)	11	11%	1355	0.8%
SIMD 2	23	23%	2550	0.9%
SIMD 3	19	19%	5060	0.4%
SIMD 4	35	35%	10357	0.3%
SIMD 5 (least deprived)	13	12%	4833	0.3%
Total	101	100%	24,155	0.4%
No postcode given	6	6%		

Note: The populations used to derive the proportions are weighted according to ISD weighting schedule.

Table 6: Percent of Children referred to School Nurse by SIMD – Dumfries and Galloway

	Dumfries and Galloway			
	No. children referred to SN	% of total referrals to SN	Population of SIMD aged 5-19 in D&G	% of SIMD population 5-19 referred to SN
SIMD 1 (most deprived)	56	26%	2243	2.5%
SIMD 2	45	21%	6135	0.7%
SIMD 3	73	34%	8884	0.9%

SIMD 4	34	16%	3919	0.9%
SIMD 5 (least deprived)	6	3%	2076	0.3%
Total	214	100%	23,257	0.9%
No postcode given	84	28%		

Note: The populations used to derive the proportions are weighted according to ISD weighting schedule.

Children's Status on and after referral to School Nurse

On the whole HPI status was not an accurate predictor of the need for referral. Both areas took referrals from children on Core and Additional HPIs although Perth and Kinross had fewer children referred on additional HPIs than Dumfries and Galloway. This is despite proportionately more children from primary school being seen by the P&K nurses.

Table 7: Percent of Children by HPI status on referral

	Perth and Kinross (%)	Dumfries and Galloway (%)
Additional	21	77
Core	69	16
Pending	4	
Unknown	7	7

A certain proportion of children also were referred in because they were subject to a Child's Plan, they were on the Child Protection register or they were Looked After (often in kinship care). However, the figures below also refer to children's status after intervention by the School Nurse, so they represent children who had a child's plan in place on referral plus those who were assigned a plan as a result of being referred to the school nurse.

Table 8: Percent children referred to School Nurse by status

	Perth and Kinross	Dumfries and Galloway
Child's Plan (after SN intervention)	24	29
Child Protection	1	6
LAC	3	15

Note: The three rows represent separate groups of children although any one child could be LAC, on the Child Protection Register and have a Child's Plan in place.

4. Developing the programme theory in realist evaluation

In line with realist evaluation, the findings of this part of the evaluation were used to inform the initial programme theories. This stage was to understand the contextual issues and mechanisms operating within the programme and how they were expected to unfold in practice. Nurse managers who were able to articulate policy viewpoints about how the school nurse programme was designed and implemented at the two sites were involved in this stage.

Participants

Six key participants in managerial/team leadership roles participated in this part of the evaluation. Three took part in a focus group, whilst two were involved in a joint interview and one in an individual interview. All interviews and focus groups lasted about an hour.

Components

The findings are presented within four broad components. At the end of each component is a box summarising the key points.

Programme implementation and the nine priority areas (pathways)

The early adoption of the School Nursing role began in September 2015, although both areas found that they could not really begin implementation until the November of that year. For both sites there was a minimal amount of national planning undertaken and so they had to develop their plans and strategy at the outset. This was made more difficult by the fact that, owing to the innovative nature of this role, no one was very familiar with what might be involved or what issues might arise. However, both areas found that leadership was key and needed managers who could write SBARs[3], plan carefully and support staff through a period of change.

Each early adopter area therefore developed their own plans with regards to implementation of the new pathways, new partnerships, organising staff training and integrating the refocused service with existing processes. For instance, in Perth and Kinross, all schools held Integrated Team Meetings, which School Nurses attended, but it was found that the number of children the school nurse actually had contact with could be small. It was decided therefore that the school nurses would only attend for specific children, thus decreasing the amount of time they needed to spend in these meetings.

Other measures were also put in place as part of implementing the pathways. Managers thought it was important that some previous duties of SN were

[3] SBAR: Situation; Background; Assessment; Recommendation.

discontinued in order to facilitate the delivery of the priority areas. For example, drop-in clinics were stopped in both early adopter sites.

"The stopping of the drop-in clinics added capacity for the school nurses to adopt the programme because we were stopping something that was really if you like wasting their time because they were making themselves available for the drop-in but the young people were not accessing the drop-in therefore we took the decision to stop the drop-in which gave them extra capacity to be able to do the pilot" (R5).

Also, the school nursing service discontinued immunisations (but not in Perth and Kinross), sexual health and other health promotion-related activities in schools. Essentially, managers suggested that some of the activities duplicated efforts. It was mentioned that teachers covered, for example, sexual health promotion within the curriculum for excellence.

"Our school nurses no longer provide STI talks or contraception talks. They don't get involved in puberty because there was duplication because that's actually within the curriculum for excellence" (R4).

In terms of implementing the programme, a key challenge that was mentioned by managers was that the programme was implemented with little or no extra financial investment. For example, within Perth and Kinross, it was highlighted that existing resources were being diverted to support immunisations.

"One biggest thing for me is that they've not had the investment to do the pilot…there's not new money, we know that, you know. So you're funding an immunisation team, probably with money from school nursing. Which is most likely to happen, which, you know, it doesn't give it the same credibility as, you know, the health visiting got a lot of money ploughed into it by the Scottish Government, due to the Children's Act" (R1).

One of the major differences between the two areas was that the Perth and Kinross team still undertook immunisation in schools and the expansion of this agenda had taken most (75%) of their time.

"Immunisation has been unprecedented. I think that the additional MenC programme, nationally, as well as the flu, which is huge, has obviously taken up the school nurse's time, and therefore, the inability to test the pilot" (R3).

Within Dumfries and Galloway a separate team for immunisation had already been formed out of the school nursing budget.

The pathways, based on the identified priority areas, were established prior to implementation. Managers agreed that these are areas of vulnerability and high-risk behaviours for children and young people. Therefore targeting these areas would eventually improve outcomes, especially for those who need the service the most.

"These nine priority areas are looking for the most vulnerable children and I think the priorities in themselves are helping us to safeguard children" (R5*).*

Whilst there has been broad support for the priority areas, mangers also felt that the pathways may need some adjustment.

"I think there could still be a couple of areas that are maybe missed within the priority areas. One of them I think is specifically around support to girls who are pregnant within education" (R6).

This manager further explained although it could fit in within mental health and wellbeing, she was concerned that this extends beyond that priority area, especially if the father of the baby is also within education.

It was also mentioned that the mental health and well-being pathway was not finished and, because CAMHS is perceived as becoming stricter in their referral criteria and only taking more severe cases, managers in both areas felt this pathway needs some further development. Other pathways were also the subject of considerable local variation. For instance, different areas have different homelessness policies and it is unlikely one size will fit all. Managers therefore suggested that whilst the priority areas should be established at a national level and suggestions made for possible pathways, these need to be adapted according to local conditions and should be done in conjunction with partners.

There was also discussion regarding whether sexual health should be a distinct priority area. Managers mentioned that sexual health was being looked at within health zones, but this was suspended temporarily in order to focus on the current priority areas.

There was some feeling that certain issues were not being adequately covered in the pathways, especially sexual health. It was suggested that the priority area devoted to substance abuse could be widened and encompass a variety of risk taking behaviour, not necessarily just to do with substance misuse. Currently, the nurses from the early adopter areas have continued to offer help to young people around sexual health but it has not been clear how to properly support and record this activity.

"It's about making a provision of what can our practitioners and school nurses do if they're sat across from a child and that would be they have got sexual health issue. We have got in Dumfries and Galloway what we've called clinic in a bag where the practitioners have some training around sexual health awareness and some provision for STI testing, pregnancy testing, but the main thrust of it is if they need more input than that then they will be signposted to our sexual health department who will also meet children within schools" (R4).

It may be that other health staff should offer sexual health but, if so, this should be properly implemented and supported.

In terms of referral of children onto the pathways, the managers added that as part of the programme a new referral system was introduced at both early adopter sites to facilitate referrals. Both areas found that referrals were slow to start and it took sometime before school staff and other professionals understood the mechanism for referral. For the first time there was a formal referral system and the early adopter areas developed referral forms that could be used by partners. By and large the schools have used these forms. For parents and self-referral, the school nurse completes the form on behalf of the referrer. Referrals were also received through various meetings, for example the child's plan meetings or child protection meetings. GPs have been slow to use the referral system. In P&K, discussion with GPs to use the SN Referral System (this is an electronic system which pre-populates much of the patient data) has taken place. However, overall there have been very few referrals from primary care.

Managers mentioned that the most common priority area through the referral system is the mental health and wellbeing.

"The majority of referrals we've received have been mental health and wellbeing" (R3).

There is confusion as to whether referrals are in fact referrals or are 'Requests for Assistance' under the 2014 Children's Act. This needs to be clarified at national level. There is also some confusion as to the role of the HPI status of the child. In one area all children with an Additional HPI were placed on the School Nurses' caseload. In another area the School Nurses' caseload comprised only those children referred in regardless of HPI status.

Box 1. Summary - Implementation strategies and the nine priority areas

- Several previous school nurses' duties were discontinued to create additional capacity for implementing the nine priority areas.
- Priority areas should adequately cover important areas of vulnerability and this would eventually improve outcomes for children.
- There was a notion that there were still gaps in the priority areas
- New referral system introduced to facilitate referrals to the priority areas

Role clarity and standardisation

Managers viewed role clarity and standardisation of service as important aspects of the programme. They believed that the school nurse role is now well defined, both for school nursing team and other relevant agencies.

"I think as well whereas there wasn't always that clear role for a school nurse, now we're very clear on what the role of the school nurse is. We can also say no and I think that's something that the nine priority areas have given us the ability to say right where is the distinct role for a school nurse within that child that's got the vulnerability because you've not got your scattergun approach where just everybody gets involved just in case" (R4).

One manager even suggested that role clarity can promote early identification and delivery of appropriate interventions. Because once other agencies are aware of their distinct role, they are likely to involve them in relevant cases, possibly in a timely fashion.

"I think that (distinct role) can lead to earlier intervention, which can lead to better outcomes for the young people" (R5).

There was recognition that early identification and intervention was not mainly due to the introduction of the refocused role, but other policies such as GIRFEC also contributed.

It was consistently clear across all managers that the implementation of the priority areas has made the school nursing service more standardised.

"It was almost a case of prior to it the one who shouts the loudest gets and they would have schools that are very very demanding for quite low level stuff and yet schools that were very very needy, with children with a lot of vulnerability, that didn't get that service so I think they're able to actually be more consistent" (R4).

The method of working proposed by the refocused role was very different from much of the work undertaken by school nurses prior to the early adoption and not all staff would necessarily wish to work in this manner. The result was that several staff resigned or were reassigned out of the School Nurse Team. It was particularly stressful for staff in P&K as they endeavoured to cover the immunisation schedule as well as working according to the refocused school nursing role.

The high level of anxiety such a change can engender meant that staff support was a major concern. Although sickness rates did not appear to change much, there were resignations and retirals which placed further pressure on the remaining staff. In P&K four of the original staff resigned or retired. In D&G, the three Band 5 staff who were hired with a view to them being trained and filling school nurse posts all left (2 to undertake Health Visitor training and one was on secondment and returned to her original post). Unfortunately the delay in starting the school nurse training meant that they took other opportunities. It was also difficult because many

of the newly hired staff were only on fixed term contracts and so could not afford to wait for the specialist school nurse training to be available.

"We've had, in our service anyway, two retirals, and two resignations. Because the school nurse model just wasn't something that some of our staff wanted to take on. So that's caused quite a significant challenge in capacity" (R3).

As staff left the teams, new staff were recruited who had an interest in this way of working. Because it was not possible to recruit Band 6 staff with the relevant qualifications (because the qualification had not yet been developed) Band 5 staff with a generic nursing qualification were employed with a view to them being offered training to upgrade their skills. Existing Band 5 staff were also encouraged to pursue further training. For some this was more problematic as they did not necessarily have a degree level qualification, which was required before starting an additional course or Specialist Practitioner Qualification (SPQ).

The challenge for the early adopter areas has therefore been how to upgrade existing staff so that they are academically prepared to undertake additional study or SPQ, how to backfill staff who are on training and how to provide in-service training for the transitional period. The delay in initiating the full-time training at the selected three Higher Education Institutes (University of West of Scotland, Robert Gordon University and Queen Margaret University) has meant that there have been issues with staff retention.

Managers suggested that although the current role of SN was clear, there were still misunderstandings of the role of the wider school health team, including Band fives.

"And there is a piece of work within the pilot that still needs to have further discussion around the wider school nurse, and workforce, what that looks like. So, again, that's a discussion that is part of the pilot, but it still needs to be had" (R3).

Within school nursing service, Band sixes have led sub teams with wider additional staff (the lower Bands) supporting this. However, as the school nurse role changed the role of the other staff (bands) has had to change also.

Box 2. Summary - Role clarity and standardisation

- School nurse role now consistent and well defined both for school nurses and other key agencies
- Uncertainties still surround the role of the wider school health team
- Role clarity would potentially promotes early identification and intervention

Engagement and accessibility

Due to the wide diversity of the priority areas, relationships had not necessarily been established with all the partners prior to implementing the programme. Both areas found that it was essential to engage with partners. For instance, they had to make new links with other parts of the health system and also police, youth justice, homeless services and young carers. In P&K a School Nurse Development Team was established that met monthly and had representatives from education, youth justice, social work and other partners. The aim of this group was to help implement the programme and develop local pathways. It now meets every two months. A similar group was established in D&G.

The engagement of other sectors means it was very important to show how the revised school nurse role differs from other roles and what they have to offer, and also when their intervention would not be appropriate.

Overall, the broad areas covered by the priority areas were therefore perceived to have facilitated engagement with other agencies.

"Networking has been really good, 'cause we've met people within the different priority areas, like youth justice, homelessness, who we never really had any contact with before" (R3).

In terms of accessibility, children are currently being encouraged to access the SN service through referral from their pupil support teachers, but there are also other ways that children can be referred into the service.

Managers acknowledged that access to school nurses by children has slightly reduced. For instance, the provision of health promotion talks and drop-in clinics that made school nurses more accessible to a wider school population had all been removed in the refocused role. However, managers believed that the introduction of the pathways has made school nurses accessible in other respects. For example, they suggested that home visits have increased.

" …we do more home visits, than we did before" (R3).

Within Perth and Kinross, it was suggested that absence of mobile IT devices has restricted school nurses from being based in schools as often as they would have preferred.

"Our IT system doesn't lend itself well to that. Because you're right, that's where they have to be (schools), they have to be visible" (R1).

In order to overcome the limited accessibility, Dumfries and Galloway plans to introduce novel approaches that children can use to directly access school nurses. For example, a text message service was a possibility.

"We have acknowledged that we might look at how we get them to contact us through the IT systems as well. Through texting or through emailing and

it's something that again was part of the service provision that we needed to look at" (R4).

Box 3. Summary – Engagement and accessibility

- Wide and diverse priority areas have improved engagement with other partner agencies
- Refocused role has left school nurses less accessible in schools than previously, which seems not ideal but home visits on the increase
- Dumfries and Galloway eager to overcome this by text message service where children can directly access school nurses, but this may require careful evaluation

Training and support

There had been little in the way of school nursing training since the 1990s, although some have been trained in a Specialist Public Health Qualification (SPQ). Whilst master's level modules are being developed nationally, it was recognized that there needed to be substantial training support for existing staff. NES offered a 2 day Masterclass with a session on each of the nine pathways. Whilst this course was appreciated it was not always possible to have the training on consecutive days. In addition, it was not possible to provide in-depth training on all the topics within the two day period.

Each area then tried to introduce its own training schedule using locally available resources. Both areas aimed for one day a month for training but this became increasingly difficult, particularly in P&K where the immunisation schedule made it virtually impossible to realize. It was also difficult on occasion to find suitable trainers, and even where training was provided, it was recognized that staff often needed to receive initial training, be given the chance to put what they had learned into practice, and then receive follow up training.

The provision of good and timely training was a huge issue for management in the course of the implementation and covered everything from trying to find venues, to trying to find trainers who could cover the various pathways, to recognition that refresher training would need to be provided on an on-going basis.

As such, it was clear from all managers that training was the most crucial aspect of delivering a successful programme.

"Well, I suppose one of the main things is the training for the school nurses. We had the masterclass days and we've also done some training locally so that we understood the nine priority areas and they had the tools to be able to deliver the nine priority areas" (R5).

It was identified that more Band 6 nurses with a SPQ were required to adequately deliver the priority areas. In order to address this, managers acknowledged that those without the required qualification or Band 5 nurses would need to upskill to Band 6 and provision has already been made for them to acquire this at some designated Universities.

"You know, if you think, health visitors have to do an SPQ before they can ever become a Band 6. School nurses were a Band 6 without an SPQ. So there's discrepancies, straightaway. And I think, when the school nurses actually go to do the course, I think they will be so empowered, in terms of the knowledge that they haven't had, they can use it within their work" (R2).

However, due to limited spaces currently available, Band 6 school nurses have been given the priority to enroll on the programme. At present, the four Band 6s without SPQ in D&G are due to either start their SPQ training at University of West Scotland, or are upgrading their academic skills in preparation of starting their SPQ in the future. In P&K, four nurses will be starting their SPQ at Robert Gordon University. As the SPQ is full time this will have implications for staffing. Within P&K managers felt that taking staff away for further training could significantly deplete the current workforce.

"You know, if we take the staff out of, who are going to become students, and then see what we're left with, it's, again, disproportionate. I mean, you won't have many staff on the ground working" (R2).

Finally, because the role was new, several initiatives were introduce to support staff. Perth and Kinross used Value Based Reflective Practice sessions and Dumfries and Galloway introduced Preceptorship but this was discontinued as the programme developed. Dumfries and Galloway also used the safety huddle model for weekly meetings of teams and both areas provided one to one supervision.

Box 4. Summary – Training and support

- Training essential for preparing and equipping school nurses to deliver the priority areas, but SPQ increasingly necessary for the refocused role
- Strategic approach required in terms of training current staff, in order not to place unsustainable demand on the workforce

Overview of the initial programme theories

The four initial programme theories outlined below broadly captures the central tenet of each component. This would be tested and disentangled further in subsequent sections.

- The nine pathways (C) lead to streamlining of referrals (M), which improve children's outcome, especially for those who need the service the most (O).

- Standardisation of service and clarity of role (C) add credibility to the school nursing role (M), which result in enhanced professional status (O) and also promote interagency working (O).
- Regarding engagement and accessibility of the school nursing role (C), opportunities to be more accessible to the wider school population have reduced (M) but engagement with partner agencies and 'high risk' children has improved, which is important in terms of building trusting relationships (O).
- Training and support (C) facilitate the adoption of the programme and would provide opportunity for role development (M), which would empower nurses to deliver, identify and provide appropriate support within the priority areas (O).

Table 9 shows the initial programme theories, which are organised into context, mechanism and outcome configuration of realist evaluation.

Table 9 CMO theories for the components of the school nurse programme

Components	Contexts	Mechanisms	Outcomes
1. Programme implementation and the nine priority areas or pathways	The nine pathways	Streamlining referrals, so mainly children referred through the nine pathways were seen	Improving children's outcomes, especially for those who need the service the most
2. Role clarity and standardisation	Standardisation of service and clarity of the SN role both for nurses and other agencies	Credibility added to the SN role	Enhanced professional status and supported interagency working to improve outcomes for children
3. Engagement and accessibility	Engagement with other agencies and and accessibility to children	Engagement with other agencies and to 'high risk' children but opportunities to be more accessible to the wider school population limited, due to removal of health promotion activities	Improved engagement with other agencies and 'high risk' children which is important in terms of building trusting relationships
4. Training and support	Training and support opportunities made available to nurses	Facilitation of the adoption of the programme and provided opportunity for role development	School nurses empowered to deliver, identify and provide support within the priority areas

5. Testing out the programme theory

This section uses the nurses' data to examine how the initial programme theories outlined in section three unfolded in practice.

Component 1: Programme implementation and the nine priority areas (pathways)

The perception of the programme varied between Dumfries and Galloway and Perth and Kinross. This was mainly due to the continued immunisations, which took place throughout the programme in Perth and Kinross.

"You've got a team of school nurses here, who are hugely experienced, good at their job, and we all felt that we just weren't giving it enough time, and enough, you know, effort. Because we just couldn't, because, since October, we've basically been immunising, from October to June" (PK3, Band 6).

In Dumfries and Galloway, where more time was dedicated to the new way of working, nurses perceived the programme to be a step in the right direction in terms of giving the school nurse role a clear focus in the form of the nine priority areas.

"I think my practice has totally changed since we have done the pilot, you know, we are doing things completely different, we are focused, we are streamlined, I think we are a stronger workforce than what we were before because we are focused mainly on these nine pathways, instead of taking up a lot of things that perhaps before wasn't really our remit but we felt people are passing it on" (D1 Band 6).

Across both sites, the programme was perceived as a way of raising the profile of school nursing through the addition of clear pathways of work and a formal referral system.

"I think one of the most positive things that have come out of this is the referral system. I would love that to stay in place in the robust form it's in" (PK12, Band 6).

Specifically, a number of nurses stated that the referral system encourages teachers to think more carefully about sending a child to the school nurse, as they are now required to use the referral form to justify their reasons for doing so. The referral system also allows the school nurses to assess each individual case before accepting it, which then allows them to pass specific cases on to other agencies who are more appropriate for dealing with a specific issue.

"I think the referral process is really good, because it gives the education staff a clearer focus on the children that we should be working with, rather than just a wee word in the corridor as you pass, which is what happened previously. I think the referral process is really good for education and for us as well, because we can have a much more, almost like a streamlined caseload that,

you know, we're working with children that really need to be worked with" (PK4, Band 6).

There were few suggestions that the pathways were quite many and longwinded, making them a little bit cumbersome to use in practice. Interestingly, the band sixes with SPQ particularly highlighted this.

"To me it's too big, there are too many priority areas, you know, it needs to be more defined, maybe more structured. It's a bit wordy as well, there is quite lot in it, there's quite a lot in it, you know" (D5, Band 6).

Although there were some concerns about the size of the pathways, a number of the nurses commented on the lack of an explicit pathway for physical health.

"We've got mental and emotional health but we don't have, sort of, ill health, physical ill health, and there are some children that we might do a small piece of work with that isn't being captured" (PK4, Band 6).

Interestingly, findings from the consultation with children and young people within the early adopter sites suggested that children were also keen to get information and support on physical health issues (Woodhouse et al., 2016).

This meant they often found themselves placing referrals for conditions such as obesity and bed-wetting within other pathways - mostly mental health and wellbeing.

"I squeeze children that are quite overweight and obviously need that managed and you can say it will affect their self-esteem and their confidence so you can fit it under the mental health and wellbeing pathway but actually you're not recognising the problem" (PK7, Band 6).

An area, which divided opinion amongst nurses regardless of their band or practitioner qualification status, was the apparent omission of sexual health as an explicit priority area. Some nurses believed sexual health should be a stand-alone priority area, while others contested that it is sufficiently covered by other agencies and that there are ways of working sexual health referrals into the existing nine priority areas.

"Do you know, most of them I'm not seeing and I just think it's crazy that sexual health isn't one on its own" (D9, Band 6).

"I think…there's no sexual health pathway, but as far as I was led to believe the feeling was that there shouldn't be a specific pathway for sexual health because sexual health feeds in to every single one of them" (D2, Band 5).

Nurses at both sites stated that the pathway that presents in referrals most frequently was mental health and wellbeing. This was also confirmed by the consultation with children and young people (Woodhouse et al., 2016). School nurses felt that the mental health and well-being pathway was sometimes used as a

‘catch all’ for occasions when there did not seem to be an appropriate pathway. They also speculated that mental health is becoming a bigger issue in children and schools see this as a key part of the school nurse’s role.

This is congruent with the records, which showed that the majority of children were referred in to the service for mental health and well-being issues. As can be seen 68% of those from both P&K D&G were referred in to the service because of concerns around a child’s mental health and well-being. There was quite limited representation on the other pathways, except those children who were Looked After in D&G. It should be noted, however, that a high proportion of children in P&K had not been referred into the service on any particular pathway:

Dumfries and Galloway also reported on the pathways children were assigned to after meeting with the School Nurse, when School Nurses might change the pathway following more in-depth assessment. In this case some 50.5% of children were not given a pathway presumably because the referral had been declined or the children had received one episode of care before being discharged.

Table 10: Percent of Children on Pathways at Referral and after SN intervention

	Perth and Kinross	Dumfries and Galloway	
		Before SN intervention	After SN intervention
Mental Health and Well-Being	68	68	37
Substance Misuse	0	0.3	
Child Protection	0	4	3.3
Domestic Abuse	3	2	2
Looked After Children	0	12	8.4
Homelessness	5	1	0
Youth Justice	3	0	0.3
Young Carers	5	0.3	2.7
Transitions	0	4	2.7
Unknown/Discharged	32	9	50.5

Please note: children could be on more than one pathway, hence the percentages add up to more than 100%

Nurses recognised that mental health and wellbeing was an important pathway, however a number of nurses, including those with SPQ felt they are inadequately trained to deal with low to moderate mental health issues. While it was generally accepted that more mental health training is needed, nurses were also aware that they could refer more severe cases on to child and adolescent mental health services (CAMHS).

"For those of us who are not mental health trained we noticed a real gap in our training there and we sort of passed that on to relevant people, but more and more the children that were coming to see us and that were asking for our help were falling into that pathway and that was an area where we all felt we lacked somewhat" (PK16, Band 6).

It appeared that across both sites school nurses rarely engaged with youth justice and homeless pathways. This may be because those early adopter sites experienced lower levels of child/young person homelessness and involvement in the youth justice system than is prevalent nationally. Some nurses also mentioned that youth justice was not something they considered to be within the remit of a school nurse and is more related to social work, and therefore should not probably be one of the pathways.

"I think, what we're trying to do, we're trying to turn school nurses into social workers. And a lot of the priority areas that we have, the majority of them are socially based. So, of course, you've got things like LAC, and child protection, of course that should be our priority area. But, you know, I'm not quite sure if we should be going down the lines of things like youth justice, and homelessness. And all these, there are other agencies that are equipped for that" (PK3, Band 6).

Homelessness appeared to be a difficult area to focus on according to the nurses, regardless of their SPQ status. Firstly, nurses stated that it is likely a context-specific pathway and would be more presentable in urban areas than in rural. Secondly, it was stated that the definition of homeless often caused unnecessary referrals as children would be referred when moving house or after their parents separated, as opposed to being truly homeless.

In terms of referrals that were declined by the School Nurse team there was some variation between the two areas. School Nurses in Perth and Kinross declined nearly 20% of the referrals to them, 65% were accepted and data is missing on the remaining 16%. In Dumfries and Galloway only 5% of referrals were declined. However, there were many cases where the School Nurse had only seen the child once suggesting that the School Nurse was in some cases declining the referrals after making their own assessment.

Table 11: Reasons for Declining Referral (numbers)

	Perth and Kinross (N)	Dumfries and Galloway (N)
Already being seen by another professional (health or other)	9	2
Parent refused	1	1
Referral did not fit criteria	1	2
School Nurse felt another service was more appropriate	6	
Child did not attend	2	
Inadequate information was given	1	
Child did not want support	1	

Box 5. Summary - Implementation strategies and the nine priority areas

Nine priority areas provide clear framework to school nurses, which ensures that only relevant cases are referred to school nurses

Perceptions that gaps exist in the pathways, with the omission of sexual health keenly debated

Mental health and wellbeing viewed as the most frequently used pathway, but there were indications this was also being used to accommodate areas not covered by the priority areas

Nurses struggling to deal with mental health and wellbeing pathway because of gap in training

Component 2: Role clarity and standardisation

It appeared that within both early adopter sites, interagency support and working has always been good between agencies they traditionally work with such as social work, sexual health and education. They emphasised that this has always been the case, and that this has not been made better or worse by the introduction of the programme.

"I think, to be honest, we've always had a good working relationship with education, social work" (PK16, Band 6).

Some nurses added that recent changes brought in as part of GIRFEC also contributed to the good practice observed between agencies.

However, other nurses indicated that the programme has made them more aware of the other agencies they had not previously engaged with, for example youth justice.

"You'd maybe become aware of others such as youth justice. You maybe would be thinking, that's something I could link in with them, so it's made you aware of different (agencies)" (D3, Band 6).

The introduction of a referral system was generally perceived to be a positive change, with school nurses in both sites stating that it formalised procedures, which in turn helped to clarify the role of the school nurse amongst other agencies.

"In the past people in a community, other professionals were never quite sure what we've done and it's always been a, you know, yes, we've been needed and appreciated but I think we've been appreciated more, especially now we have got the referral form, it can show that, you know, we've got proof that we are getting referred and why they are getting referred and I think our profile has been greatly raised with the pilot" (D1, Band 6).

Despite school nurses' perception that the refocused role has raised their profile amongst other professionals, findings from the consultation with children and young people suggest, however, that young people have limited knowledge of their school nurse and often mixed up their role with their social worker (Woodhouse et al., 2016).

The Band fives mentioned that the uncertainties surrounding the expectations of their role have been challenging for them. They felt there were inconsistencies across different areas regarding their role.

"And that's important because that's a new role, a Band 5, so if they decide that role will continue that's a really good role, a really meaningful role, but I have to be clear about what it is. Is it in primary? Is it in secondary? You have to be really clear on what everybody's role is" (D8, Band 5).

In terms of standardisation of practice, immunisation has been the most conspicuous and prevalent challenge in Perth and Kinross. Whilst they have stopped a number of previous duties, immunisations were very time consuming, and this has prevented lower bands from fully engaging with the programme.

"We've dropped a lot, we don't do health promotion and things like that anymore, but it's been taken up, the time that we gained by not doing that has been taken up with immunisations…I've not been given the opportunity to take on any of this (pilot)" (PK10, Band 3).

Interestingly, within Perth and Kinross nurses in the lower bands expressed concerns regarding their role within the priority areas once immunisations cease.

Box 6. Summary - Role clarity and standardisation

- Role clearly defined to all relevant agencies, with referral system further formalising duties of the role
- Uncertainties of the role of wider school health team challenging for them, with some mostly pre-occupied with immunisations

Component 3: Engagement and accessibility

Many of the nurses believed that although they are not widely accessible to the wider school population, the focus that the programme brought helped to strengthen trusting relationships with the limited children and families who access the service.

"I would say that it definitely strengthens relationships with children and families because we've got more focus on what we are doing" (D1, Band 6).

Other nurses explained that because they now work with a limited group of children and families over a period of time, which often involve home visits, they are therefore able to engage more with them and this helps to build trusting relationships. Children and young people also felt that it was important to build trusting relationships prior to discussing sensitive issues with school nurses (Woodhouse et al., 2016).

Nurses asserted that accessing the school nurse service through the pupil support teachers was probably a barrier for some children.

"Well, when they had the drop-in they didn't have to speak to anybody. They could have just dropped in confidentially. Now it's not a confidential service because you'd have to go to pupil support and what happens is they may go to pupil support and say I'd quite like to see the school nurse when she's in and pupil support may say, oh, what's wrong, can I help at all and in the right way but that's not...that means that you're taking something away from that service because it's not then as accessible as a confidential service" (D8, Band 5).

In this regard, all nurses particularly within Dumfries and Galloway were optimistic that text message service might help to overcome this challenge.

In terms of engagement with other agencies, it was clear that within Dumfries and Galloway the programme has significantly facilitated this. On the other hand, it appeared that immunisation has hindered this to a certain extent within Perth and Kinross.

"What I have struggled a little bit with is some of the meetings. There's certain areas, like we've all got areas that we've been told to support. Now, for me to know everything that's going on in that area, I need to attend certain strategic meetings, right. They have not been happening (because of immunisation)" (PK15, Band 6).

It was suggested by managers that the refocused SN role would increase home visits or referrals. However, as can be seen from the table below, the school was the main source of referral, particularly in P&K but Social Work, other health services and other agencies also referred. Most of the initial contact was made in school although the place of initial contact was often not recorded and so it is not possible to state definitively if, for instance, home visits were increasing (see table).

Table 12: Percent of Children referred to School Nurse Service by referrer

	Perth and Kinross	Dumfries and Galloway
Health Services incl GPs, HVs and A&E, CAMHS	7	6
School	92	68
Parent	1	3
Self referral	1	1
Other eg LAC, Child Plan Meeting, SACRO	0	4
Social Work	0	11
Missing	0	8

Table 13: Percent of children by Place of Assessment/Contact

	Perth and Kinross	Dumfries and Galloway
Telephone Call	12	0.3
Home	6	7
School	32	71
Unknown	50	21
Pending	1	

Box 7. Summary - Engagement and accessibility

Although accessibility has reduced, stronger trusting relationships are formed with those who use the service

Accessibility of school nurses through the pupil support teacher viewed as significant barrier

Using text message service or other ways to overcome this barrier presumably needed

Component 4: Training and support

It was consistently clear that all nurses in both early adopter sites, especially the higher bands, received extensive training on the priority areas, including those delivered by agencies like CAMHS. It appeared that training equipped nurses and facilitated early identification of risk.

"…and with the training we're able to maybe identify the kind of early indicators of risk within maybe if it's risk-taking behaviours or if it's potential issues at home, we're better" (D3, Band 6).

Some nurses believed that the mandatory nature of the training was helpful compared to previous optional training.

"We've had an increase in training, more than we've ever had. It's been mandatory, almost, everybody's had to do it, which was good, because a lot of it was optional before" (D6, Band 6).

Although most nurses, regardless of their SPQ status, found the training useful, a few thought it was quite theoretical and did not equip them with sufficient tools or skills to actually deliver relevant interventions. Nurses were especially keen to be up-skilled in intervention techniques around child and adolescent mental health and

well-being and the various pathways. For instance, one school nurse with SPQ revealed below that whilst it is straightforward to assess risks and assign a pathway, they often lack the skills to provide appropriate support.

"You've got the skills on maybe assessing anxiety or assessing self-harm, but what can we use to try and do a bit of work with that person? We don't have the resources to actually implement the work there. We've got the knowledge of what maybe the risk factors and things are but we've got nothing to make any interventions with" (D3, Band 6).

Some nurses suggested that continued training especially on priority areas they sparsely engage with would be useful. In particular, youth justice and homeless pathways were mentioned. Similarly, others were of the view that further training and support was required within the mental health and wellbeing pathway, which appeared to be the most heavily used pathway in both early adopter sites. Nurses explained that whilst severe mental health cases are easy to refer on, they struggle to cope with low-level mental health issues, as explained by a Band 6 nurse with SPQ in this quote.

"I think it is when the young people or children's come to us, and it's a mental health issue they've got, I feel confident enough to know if I need to move it on quickly. Because I can recognise that, you know, if they are in a stage where I have to move it onto my mental health colleagues quickly I know that. But it's with the ones who are just a wee bit, you know, sort of a wee bit of anxiety, a wee bit of they are feeling a bit low mood. It's just to have more support on, you know, where we are taking them" (PK12, Band 6).

Further analysis showed that there was a need for further training on mental health and wellbeing. Interestingly, training needs appeared to differ disproportionately across the early adopter sites. More nurses in Perth and Kinross than Dumfries and Galloway felt there was a training gap. It was also mentioned that the mental health services in Perth and Kinross have a long waiting time and this seemed to have necessitated the perceived training need.

It was apparent that both early adopter sites had issues with how training would affect their existing staff capacity. There were concerns that the training opportunity offered to staff to acquire an SPQ put further pressure on the capacity of the existing workforce. One nurse explained:

"They're talking about training the ones we already have, because we don't have the public health nurse qualification, so…which fills us with alarm, because as well as losing our Band 5s, we'll be two Band 6s who are already in post will be going away to do training. So it's going to leave us down, sort of, three Band 5s and two Band 6s" (D4, Band 6).

It appears that there was no noticeable difference in terms of how SN with or without SPQ felt equipped to deliver the pathways. Any difference was possibly masked by the extensive, and often mandatory training given to all SN on each of the priority areas.

Box 8. Summary – training and support

- training seen as essential but did not necessarily equip school nurses with sufficient skills to support and deliver interventions
- training required in less and most frequently used pathways for different reasons
- additional training needed on the most frequently used pathways (e.g. mental health and wellbeing) in order to support the different spectrum of cases usually presented
- ongoing training needed for less frequently used pathways (youth justice and homeless) because nurses may lose confidence to use this pathways per time
- taking staff away to pursue SPQ likely to have detrimental effects on existing staff capacity

6. Refining the programme theory

This section brings together the findings from the two sets of participants (managers and nurses). Within realist evaluation this stage is about explaining how the programme worked or did not work, by clarifying where there were agreements and disagreements between the designers (managers) and the nurses involved in delivering the programme in practice. The section is organised into four key areas arising from the findings, but disentangled using context, mechanism and outcome configurations of realist evaluation to provide further illumination to the findings.

Component 1: Programme implementation and the nine priority areas (pathways)

Both school nurses and managers felt that the introduction of the nine priority areas was a positive change as it provides focus in the form of specific referral pathways. Undoubtedly, the mental health and wellbeing pathway was considered the most frequently used pathway. However, a number of nurses felt they were less equipped to deal appropriately with the many referrals on this pathway. The concerns voiced by the school nurses with regards to the content of the priority areas was not as strongly mirrored by the manager's responses. Specifically, a number of school nurses highlighted the lack of a number of pathways, including physical health. They stated that this should be reconsidered, as they felt that as school nurses, their primary role should be to treat and monitor health issues. In relation to this, some school nurses felt that some of the pathways such as youth justice and homeless were more related to social work than school nursing. In practice, many of them have not received referrals on these pathways.

An area of considerable contention amongst the school nurses was the absence of a sexual health pathway. The majority of nurses felt that sexual health was adequately covered by other agencies and that sexual health referrals can be placed within other priority areas if required. However some strongly felt that sexual health should be a stand-alone priority area. This disagreement was less apparent amongst managers, who apart from one, generally accepted that sexual health was the remit of other agencies and that it fits into existing pathways.

Table 14: Refined CMO for component 1: Programme implementation and the nine priority areas (pathways)

Context	Mechanism	Outcome
The nine pathways	Provision of defined referral pathways	Improved identification of needs and perceived improvement of outcomes for children
Referrals system	Referral system empowers school nurses to withstand pressures	Provided a system of working with the children who are most in need of

	from educational staff and other agencies who avoid the referral system	the service. Inappropriate referrals rejected or passed on
Highly-referred pathways	Mental health and wellbeing is the most highly-referred pathway	Some nurses perceived that they are less equipped to deal with some mental health referrals, but know they can refer more complex cases to CAMHS
Gaps in pathways	Perceived omission of physical and sexual health pathways	Cases often added to mental health and wellbeing pathway but perceptions that some high risk children excluded from benefitting from the service

Component 2: Role clarity and standardisation

School nurses and managers were in agreement that the school nurse role has been positively enhanced and formalised by the introduction of the refocused SN programme. Whilst both school nurses and managers could not definitively say the programme had improved outcomes for children and families, they did concur that such benefits would become apparent in the future due to the more focused nature of the school nurse role.

Both school nurses and managers were optimistic about the benefits of the referral system. School nurses further explained that this is making other agencies (such as education) take more consideration when referring a child.

Whilst there was agreement that links with certain agencies continued to be strong, there was an understanding that the priority areas have broadened relationships with additional agencies.

However, members of the wider school health team felt alienated and excluded from the programme. Whilst most were pre-occupied with immunisations others were unclear of their specific role within the pathways.

Table 15 Refined CMO for component 2: Role clarity and standardisation

Context	Mechanism	Outcome
Role clarity and standardised practice	No obvious change in relationships with certain agencies like social work, but increased awareness of additional agencies e.g. youth justice which they can refer to	SN profile raised and interagency working enhanced. Both important to early identification and improving outcomes for children.
Clarity of role through referral system	Operated through formalised referral system	Empowered midwives and validated role amongst other agencies
Perceived lack of clarity regarding the role of wider school health team	Lower bands felt alienated and excluded, with some still pre-occupied with immunisations	Confusion and uncertainties over role of lower bands within the pathways

Component 3: Engagement and accessibility

Both managers and nurses admitted that school nurses' accessibility in schools has reduced. However, further examination of the nurses' data illustrated that this was not entirely negative because the focus introduced by the pathways was vital in terms of strengthening trusting relationships with the limited number of families that access the service.

On the other hand, it appeared that children who may find it difficult to access the service through the pupil support teachers may not benefit from the service. In this regard, other ways of making the service accessible to this group of children should be explored. The concept of text message service seems interesting, although this may have its own limitations. Further evidence of how this would work should be explored, whilst looking into other novel ways of making the service more accessible to the wider school population.

Engagement of school nurses with other agencies has been enhanced due to the diverse pathways. Engaging more with other agencies ensures that other agencies are clearer of the school nurses role and the contribution they make to children and young people's assessment and support processes. It is likely that this can promote increase in early identification, referral or provision of appropriate interventions.

Table 16: Refined CMO for component 3: Engagement and accessibility

Context	Mechanism	Outcome
Engagement and accessibility to school children	Limited number of children seen and assessment by school nurses	Trusted relationships strengthened with the few children who use the service
Engagement and accessibility to other agencies	Validation of SN contribution to children's assessment and support to other agencies	Improved engagement with other agencies inherent to early identification of risk
Accessibility of school nurses through pupil support teachers	Perception that some children may be hesitant at accessing service through pupil support teachers	Perceived low engagement from less confident and more sensitive children

Component 4: Training and support

Nurse managers and nurses unequivocally established that extensive training, often involving multiagency partners, was provided as part of the refocused SN programme. The training facilitated assessment of risk and undoubtedly improved school nurses knowledge of children and young people's development, especially those linked to specific elements of the nine priority areas. The training also broadened nurses' knowledge of community assets and local services.

However, what was striking was how nurses perceived the training they received. It appeared that the training did not build nurses' skills and confidence to deliver all the priority areas in an efficient manner. It was apparent that nurses would require further skill-based training on both the more and least frequently used pathways for quite contrasting reasons. Regarding the least frequently used pathways such as youth justice and homeless, continued training would be required because the knowledge acquired was rarely practiced. Further training is also needed on the more frequently used pathways, for example mental health and wellbeing, because a more in-depth knowledge and advanced skills would be required to identify and support the spectrum of issues that are often presented through this pathway.

Table 17 Refined CMO for component 4: Training and support

Context	Mechanism	Outcome
School nurses extensively trained	Equipped nurses and facilitated risk assessment	Improved early identification of risk BUT less confident with intervention delivery
Multi-agency training	Awareness of community assets and local services	Increased access and engagement with wider services and greater support for children
Training and support	Low engagement with certain pathways e.g. youth justice and homeless	Reduced skills and confidence to engage with these pathways
Training and support	High and consistent engagement with mental health and wellbeing pathway	More advanced skills required to analyse and appropriately support the spectrum of cases presented on this pathway

Status of cases at end of the early adoption period

As of May 2016 Perth and Kinross had closed/discharged 50 (47%) of its cases and Dumfries and Galloway 79 (26%). The difference may have been caused by D&G nurse sometimes keeping cases open but on reduced intervention. Many of the children had been referred on elsewhere, particularly in the case of P&K. This may indicate a need for further training in order to build confidence in their own skills in the workforce.

Table 18: Percent children with certain Outcomes of Intervention for Closed Cases

	P&K % Outcomes	D&G % Outcomes
Child Development Team	31	
Elsewhere in NHS	2	4
Patient Declined (or DNAs)	13	1
CAMHS	24	8
GP	7	
YPHT	4	
Central due to Immunisation	7	
Incontinence	2	1
Intervention Completed	11	68
Left school		8
Foster Care		3
Educational Psychology		1
Physiotherapy		1
Social Work		1
Other		3

By the end of the early adoption period around two thirds of cases were open in D&G and a third in P&K. However this does not take into account the complexity of cases in the respective areas, nor whether the term ‘open’ meant the same in both areas (in discussion it became apparent that some School Nurses were keeping cases open so that they could keep a watching brief over certain children but this did not necessarily entail a high level of intervention), nor the length of time a child had been seen by a School Nurse.

Table 19: Status of cases at end of programme

	P&K % (N=107)	D&G % (N=299)
Open/Active	30 (32)	68 (202)
Closed	47 (50)	26 (79)
Declined by School Nurse	21 (22)	2 (5)
Unknown/Other	2 (3)	4 (13)

7. Conclusions

What worked well?

1. The nine priority areas have undoubtedly made the school nurse role more focused and standardised. It has added value to the service by providing clear priority areas and pathways to school nurses.

2. The referral system formalises practice and ensures that school nurses receive mainly relevant referrals.

3. The role is now clearer to the nurses themselves and to all relevant agencies, including education.

4. Other agencies are increasingly aware of the contribution school nurses make to children's assessment and support process.

5. The priority areas have extended working relationships with agencies (e.g. youth justice) that school nurses did not previously engaged with.

6. Extensive and mandatory training appears helpful for delivering the pathways.

What did not work so well and may require further consideration?

1. The nine selected priority areas generated divided opinions amongst both managers and nurses, especially in terms of what qualifies to be included or excluded.

2. The mental health and wellbeing pathway was the most frequently used pathway. Whereas nurses referred complex mental health cases to CAMHS, they felt less equipped to deal with low to moderate cases. As there are currently no nationally agreed guidelines on the assessment and treatment of mental health issues in young people, it is difficult to know what kind of training would be most appropriate for school nurses.

3. Some members of the wider school health team felt alienated and excluded from the refocusing of the SN role. Whilst the development of the priority areas and the pathways gave increased clarity and structure to the SN role, the role of the wider school health team still needs further clarity.

4. Accessing the service through pupil support teachers was considered as a barrier in some cases.

5. Although school nurses perceived that they are now in a position to build stronger trusting relationships with the limited number of children who access their services, it was generally recognised that they are now less visible to the wider school population.

6. Targeted skill-based training would be required to equip nurses on some specific pathways e.g. mental health and wellbeing.

Recommendations for school nurse training and further implementation

1. There needs to be a greater clarity around the pathways. It may be beneficial to amend some e.g. the substance misuse pathway could be widened to include all risk taking behaviour.

2. Health Boards should be encouraged to adopt the nine priority areas but develop their own pathways as referral mechanisms and resources differ locally.

3. Additional training on the mental health and wellbeing pathway is required. It might be useful to involve CAMHS in any such training.

Training

1. Nurses would benefit from training approaches that seek to build practical skills within the parameters of the priority areas. This would ensure that aside from identifying risks, nurses would also be equipped with skills to deliver interventions or support where necessary.

2. When training school nurses, the rationale for the selected nine priority areas may need to be clarified and the reasons for omitting some of the obvious ones, for instance sexual health (if it is to be omitted) need to be clearly articulated. This would promote consistency across the workforce regarding the rationale for the selected priority areas.

3. Whilst it is encouraging to see staff taking up opportunities for full time training backfilling their posts is necessary. This will be particularly pertinent over the next 5 years or so whilst most staff are receiving training.

Referral

1. The current referral procedure through the pupil support teachers may exclude some groups of children who may find it uncomfortable to approach such teachers with their issues. Exploration of other means of accessing school nurses (e.g. text message service) without going through pupil support teachers would be useful.

2. Clarification is needed around whether the School Nurses use referrals or Requests for Assistance and the role of the HPI.

Wider School Health Team

1. The role of the Band fives should be consistent and clear career development/progression opportunities could be incorporated within the role.

2. Clearly articulating the specific role within the priority areas of members of the wider school health team would be useful.

3. A dedicated immunisation team is required if school nurses are to focus on the priority areas.

Recording and Record Keeping

1. Data needs to be consistently gathered using an agreed format. This data should be analysed nationally and fed back to school nurse teams for management purposes as well as being used to show the patterns of usage across Scotland.

2. The evaluation of the pilot was unable to measure any kind of impact. It is recommended that if the refocused school nurse role is rolled out nationally that some sort of outcome/impact study is undertaken.

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Appendix 1. Topic guide for focus group – Managers

- What are the key changes that have been introduced to the School Nursing Role?
- What do you think was the rationale for implementing the priority areas?
- What strategies or activities were put in place before the priority areas were introduced? (prompt to find out more about CPD and details about the training programme)
- Could you tell me how the priority areas were implemented?
- How is the refocused school nursing role incorporating individual or community assets and strength-based way of working?
- What specific plans/structures have been put in place to ensure that school nurses improve their knowledge and awareness of community assets and referral pathways?
- In what ways are you ensuring that school nurses are visible and accessible to school children, young people, their families and partner agencies?
- In what ways are school nurses contributing to multiagency support for keeping children safe?
- In what ways are you equipping school nurses to identify risks in children, young people and their families early and provide appropriate support?
- How was it envisaged that the changes would make things better for:

    School nurses and the wider school nursing team?

    Children and families?
- What do you think are the gaps in school nursing education and how can this be addressed?
- In your opinion, what are the key benefits of this refocused school nursing role?
- What were you expecting to achieve in the short, medium and long term?
- In your opinion, what have been the key challenges of implementing the priority areas?
- What might need to be in place to improve the school nursing role further?

Appendix 2. Topic guide – School nurses and wider team

- Could you tell me your job title and your grade please?
- How are you responding to the refocusing of the school nurse programme?
- What do you think are now the key expectations of the school nurse programme?
- Do you feel you require additional support in this new role? (prompt to find out if there are gaps in education)
- How do you feel you are equipped to identify risks in children, young people and their families early and provide appropriate support?
- What are your opinions about the selected nine priority areas of intervention?
- In your view, which of the priority areas are more difficult to focus on and why?
- What difference do you think the changes introduced to the school nurse programme is making for:

    Children and young people

    Their families

    Professional partnership/multiagency working

    You as a school nurse
- In what ways are you ensuring that school nurses are visible and accessible to school children, young people, their families and partner agencies?
- How do you feel you are contributing to multiagency support for keeping children safe?
- Has the changes enabled you to link to wider services such as social work and sexual health in ways that you had not previously done?
- Can you give me some examples of additional interventions or supports that you have been able to access for children, young people and families due to this new way of working?
- Regarding looked after children, do you think other partner agencies have understanding of the contribution that school nurses make to the assessment process and child's plan?
- Does the refocusing of the school nurse programme allow you to:

    Strengthen relationships with children, young people and their families?

    If so how?

- In your opinion, what have been the key challenges of delivering this refocused school nurse programme?
- I understand that you have now moved to strength-based and inequalities sensitive way of working using improvement methodology.
- How do you understand the term strengths based working?
- How has this influenced your practice?
- What is your experience of working with families in this way?

How to access background or source data

☒ cannot be made available by Scottish Government for further analysis as Scottish Government is not the data controller.

social research

The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

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