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A service evaluation of the North East Essex Diabetes Service (NEEDS)

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ABSTRACT

Improving outcomes and the integration of diabetes care for adults is a National Health Service ambition. In north east Essex, United Kingdom, an innovative interprofessional community-based diabetes service (North East Essex Diabetes Service (NEEDS)) was developed to provide a single point of access and continuity of care across an integrated, interprofessional care pathway. The aim was to evaluate how NEEDS was embedded into Primary Care, and gain insight into how it works from the perspective of staff delivering the service and from those receiving care. A mixed methods approach was used. Retrospective data from GP surgeries involved in NEEDS were analyzed. Online surveys ($n = 21$) and focus groups (workforce $n = 23$; service users $n = 6$) were conducted. A clear pathway of diabetes care across an integrated, interprofessional care system was demonstrated. Standard care processes and patient outcomes were higher than those recorded for other GP surgeries across England. Service users reported that they received support with more control over their care. The workforce reported a reduction in bureaucracy, blurring of professional boundaries, and thus autonomy to develop the service. The "*virtual ward*" provided a true interprofessional team approach. Patients and the workforce reported feeling empowered, demonstrating a holistic high-quality approach to patient care.

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KEYWORDS
Diabetes pathway; holistic approach; integration; multidisciplinary; teamwork; virtual ward

Introduction

The burden of diabetes, both in terms of prevalence and number of adults affected, has rapidly increased over the past decade. It is one of the most common chronic diseases in the UK, with the number of people living with diabetes rising (National Institute for Health and Care Excellence, 2020). More than 4.9 million people in the UK have diabetes, about 8% have type 1 diabetes and 90% have type 2 diabetes (Diabetes UK, 2019). Type 1 diabetes results from inadequate insulin secretion/production or excessive glucagon, whereas type 2 diabetes results from insulin resistance (Krause & Vito, 2023). Diabetes is a leading cause of premature mortality, with over 22,000 additional deaths each year, and it has been shown to double an individual's risk of cardiovascular disease (NHS England, 2023). In north east Essex alone over 18,400 people are living with diabetes, accounting for 7.3% of the total population, with a further 5,700 people estimated to be undiagnosed.

The National Institute of Health and Care Excellence (NICE), in the United Kingdom (UK), recommends that diabetes patients should receive eight care processes and three treatment standards (NICE, 2022). The eight care processes include measuring HbA1c (a blood test for glucose control), blood pressure, cholesterol level, kidney function, urine albumin, foot surveillance, BMI, and smoking status (NHS England, 2024). The treatment standards refer to the three NICE recommended treatment targets of HbA1c, cholesterol, and blood pressure. Meeting these treatment targets reduces the risk of diabetic and cardiovascular complications. These targets are assessed via the National Diabetes Audit (NDA), which allows local services to benchmark their performance, and the Quality and Outcomes Framework (QOF), which is a measure used by GP practices that rewards GP practices on how well they are performing in quality-of-care indicators (NHS England, 2022b).

Background

Currently, the NHS, which is the public care system provider in the UK, is facing numerous challenges such as long delays for patients attending emergency departments and reduced access to acute beds (Jones et al., 2022). Given that diabetes can result in serious and potentially fatal complications which could impact on the burdens on the NHS, innovative diabetes services are needed to overcome these challenges or to reduce the burden on the NHS (Jones et al., 2022). The percentage of individuals living with diabetes in north east Essex is 7.3% of the population which is higher than the national average of 6.2% (Joule, 2017). However, despite the higher national average of individuals requiring support for diabetes, in 2010, north east Essex was rated in the lowest quarter of Primary Care Trusts for those receiving all eight diabetes care processes. Furthermore, adults with a diagnosis of diabetes must often navigate a system which consists of many providers delivering separate care over a range of diabetes services. Consequently, care is often fragmented and results in variations in patients' experience and outcomes.

Recently, evidence suggests that interprofessional and integrated care models are needed for effective diabetes care

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(Nurchis et al., 2022). Interprofessional care involves health professionals, from different health professions working collaboratively to improve patient care (Nurchis et al., 2022; Reeves et al., 2017). Interprofessional care is especially needed with diabetes as it is a complex disease that requires care from a variety of health professionals (e.g. dieticians, podiatrists) (Gucciardi et al., 2016). Research has shown previous successes of interprofessional care models on diabetes patient satisfaction, wellbeing, diabetes care outcomes, and self-care management within an international population (La Rosa et al., 2020; Nurchis et al., 2022).

In addition, traditionally in the UK, diabetes was managed within the secondary care sector, however, evidence has shown that this model did not provide sufficient support or appropriate disease management (Diabetes UK, 2023). The five-year forward view published in 2014 (NHS England NHS Five Year Forward View, 2014) suggested that there needed to be a greater focus on the delivery of care from a Primary care setting. Research conducted in Canada has shown the positive effects on diabetes care of specialized diabetes teams being integrated into a primary care setting (Gucciardi et al., 2016).

Prior to the development of the North East Essex Diabetes Service (NEEDS) in 2014, a pioneering model of care for adults with diabetes in the UK was needed. The idea of developing and delivering such as model was embraced by commissioners and the local GP Federation in Essex to address issues with fragmented care, long distances to travel, varied patient experiences, and falling short of meeting care standards (https://suffolkfed.org.uk/). As can be seen in Figure 1, NEEDS provides a vertical integration of services providing a single point of access to an integrated care pathway through a Diabetes Specialist Team, Podiatry, and Combined Specialist Clinics to provide continuity of care and improve outcomes for adults with diabetes. Specifically, they developed an out of hospital specialist service' which supports Primary Care to deliver an enhanced service.

They achieved this by using four "cornerstones" which were:

(1) Prime contracting and vertical integration.
(2) Specialists working in the community.
(3) Building primary care capacity and skills.
(4) Patient involvement and education.

The NEEDS service was implemented in 2014, and the providers received several positive reports of its benefits, but it was never formally evaluated. As such, we conducted a service evaluation to ascertain how it was embedded into a Primary care setting and obtain a greater understanding of how it was working from both staff and patients' perspectives. A service

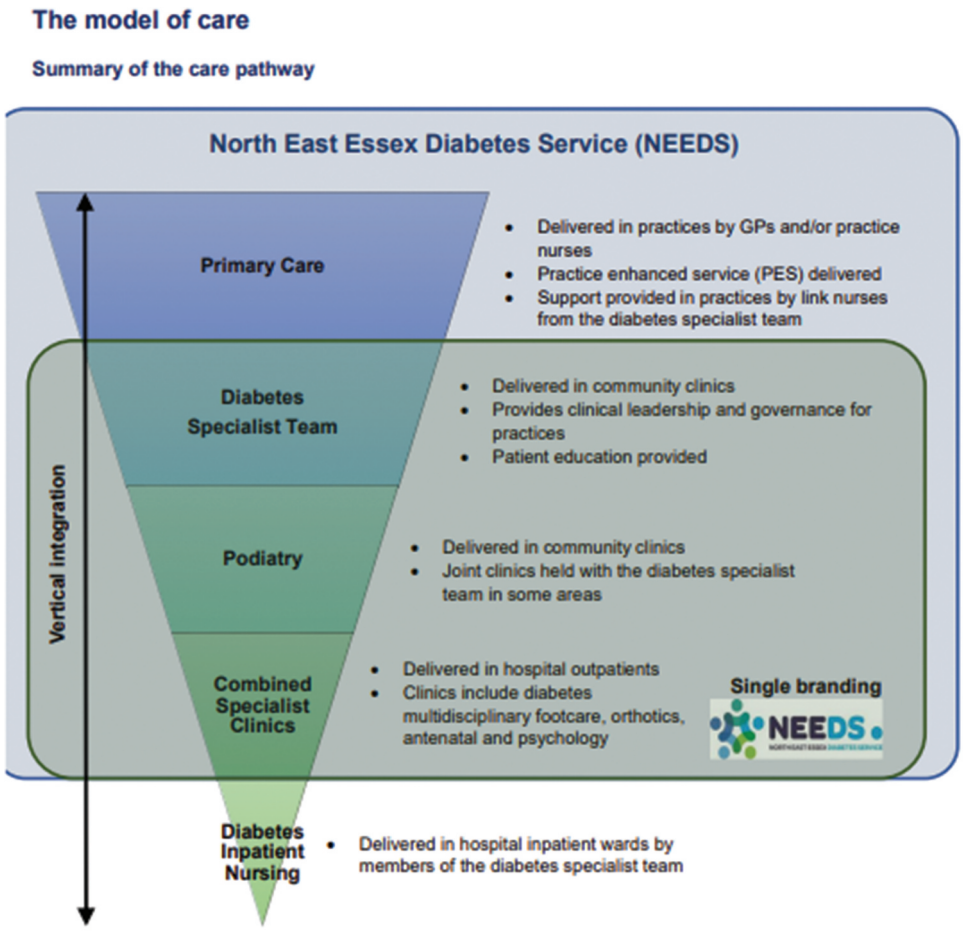

Figure 1. The structure of the NEEDS service (diabetes UK 2015 case study report).

evaluation is a research method, which seeks to understand what a service has achieved. It is important that service evaluations are conducted to examine the services effectiveness, efficiency, benefits, and added value and thus whether the service can be used as a model of care more widely within the NHS to benefit patients (NHS Foundation Trust Service Evaluation, n.d.).

Aim

To undertake a service evaluation to show how the interprofessional out-of-hospital specialist diabetes service was embedded into Primary Care, and gain insight into how it works from the perspective of staff delivering the service and from those receiving care.

Methods

Design

A mixed method explanatory sequential approach was used. Quantitative data from preexisting data sources were collected first, followed by quantitative data collected via questionnaires. This was complemented by interviews to explain and elaborate on the quantitative findings.

In particular, we conducted a process service evaluation as we were interested in assessing and evaluating how the NEEDS service was implemented. To conduct the service evaluation, we followed the guidance outlined by Moule et al (Moule et al., 2016).

Setting

NEEDS has 32 General Practioners (GP's) practices enrolled in providing diabetes care from an interprofessional team (including a GP lead, 3 Consultants, 9 Diabetes Specialist Nurses, 3 Diabetes Dietitians, a Diabetes Mental Health Nurse, a Diabetes Pharmacist, a Health Care Assistant, a Diabetes Specialist Midwife, a Diabetes Podiatrist, and 6 Diabetes Administrators).

The evaluation of NEEDS was undertaken in 2022 using a mixed method approach utilizing: 1) preexisting data collected by GP practices 2) online surveys and 3) focus groups.

Phase 1: analysis of preexisting data

Procedure

These data sets were provided by the Suffolk GP Federation (https://suffolkfed.org.uk) from the 32 different GP surgeries who submit data to the National Diabetes Audit (NDA) and Quality and Outcomes Framework (QOF), a voluntary annual reward and incentive programme used by GPs within the UK). The data is based on the rolling number over 12 months rather than the QOF Year data.

Participants

In September 2022, there were 32 GP surgeries with a total of 347, 813 patients. 21309 patients with diabetes consented to sharing their records to the NDA; analysis was conducted on 1,922 patients with Type 1 and 19,684 patients with Type 2 Diabetes. Due to methods of data collection, patients who have both Type 1 and Type 2 diabetes are double counted.

Data analysis

The period of evaluation used a 12-month data period up until September 2022. Data classification, sorting, and grouping allowed for descriptive analysis to be completed to draw inferences about the patterns of referral and use of the specific elements of the service. Data are presented as frequency distributions, mean and standard deviation values, percentages, and ranges as appropriate. The data are compared to other Clinical Commissioning Groups (CCGs). The NHS set up CCGs which organized the delivery of NHS services in each of the local areas in England. In 2022 when the data was analyzed there were 74 CCGs across England. After 2022 Integrated Care Systems (ICS) were established and CCGs were closed.

Phase 2: online survey

Procedure

An online questionnaire was sent (via QuestionPro, https://www.questionpro.com/) to all 27 health care professionals supporting NEEDS in the community, the primary care workforce, the specialist diabetes team, and the diabetes service board.

Sample

Twenty-one of the workforce team responded (total workforce of $n = 27$). Every member of the workforce was approached by service leads who disseminated the recruitment information. Interested participants contacted the research team and informed consent was obtained. 75% were female; 50% of participants were aged 35–44 years; 92% were white, and 8% were Asian; 45% of participants have worked for NEEDS for more than 3 years. 46% of participants work in Colchester, 21% in Tendring, 29% in Clacton, 4% reported other. 39% of participants have worked for NEEDS for 6–10 years, 28% have worked for NEEDS for less than 1 year, 22% 1–2 years, and 6% for 3–5 years.

Data analysis

The surveys were analyzed using descriptive statistics via SPSS Version 27 to draw inference about the use of the specific elements of the service. Data are presented as frequency distributions, mean and standard deviation values, percentages, and ranges as appropriate.

Phase 3: focus groups

Procedure

Focus groups were used to collect qualitative data which focused on the experience of individuals of a particular situation (Ingham-Broomfield, 2015). Two focus groups were held with health care professionals and one with service users recruited through the service user's forum. We chose to split the participants into two focus groups rather than conducting one focus group to encourage greater participation during the focus groups to ensure that all voices were heard. The focus groups were completed by the research team and lasted for one hour. Prior to the focus groups, participants were given

Table 1. Professional focus group participant information.

Participant job title	n
Medical Consultants from a local NHS acute organization	3
GP Lead	1
Diabetes Specialist Nurses who work across primary & secondary care	9
Diabetes Dietitians	3
Diabetes Mental Health Nurse	1
Diabetes Pharmacist	1
Health Care Assistants	1
Diabetes Specialist Midwife	1
Diabetes Podiatrist contracted from a community organization	1
Diabetes Administrators	6

a participant information sheet and gave informed consent prior to participating in the focus groups. Focus groups were audio recorded and transcribed verbatim by the research team using the Richie and Lewis theoretical framework (Ritchie & Spencer, 2002).

Participants

Twenty-three participants attended the workforce focus groups. Participants were recruited for the focus groups using the same methods described in phase 2. As can be seen in Table 1, participants were predominantly Diabetes Specialist Nurses and Diabetes Administrators for the professional focus groups; six service users attended the patient focus group.

Data analysis

To reduce bias three members of the research team analyzed and annotated the transcripts data separately. Emergent concepts and ideas were identified using the framework developed by the National Centre for Social Research (Ritchie & Spencer, 2002). Prominent and unifying themes were identified across all three focus groups, any differences in coding were systematically examined and resolved by consensus.

Ethical consideration

The evaluation protocol, survey, and interview schedule were reviewed and given favorable opinion by the University of Suffolk Ethics Committee (RETH(S)21/057).

Results

Phase 1: results from pre-existing data

Eight care processes

Over 12 months (Table 2), NEEDS achieved higher than the national average for patients having had all 8 care processes completed, putting them first out of 74 CCGs, across England (Table 2). The lowest and highest individual GP practices within NEEDS achieved 42.4% and 83.9%, respectively.

Table 2. Percentage of patients receiving care standards (12 months until September 2022). Data from national diabetes audit (NDA).

	NEEDS average	National average
8 care processes	67%	38.4%
3 treatment standards	34%	25.7%
hemoglobin A1C (HbA1c)	64.2	43.0%
Cholesterol	79.6%	75.4%
Blood pressure (BP)	73.0%	66.5%
Type 1- and 2-foot monitoring	88%	67%

Three treatment standards

Over 12 months NEEDS was above the national average and 2nd out of 74 CCGs for the percentage of patients meeting all three treatment standards (Table 2). The lowest and highest individual GP practices within NEEDS achieved 24.1% and 55.5%, respectively. Individually, for each treatment standard, they were above National averages for meeting these (Table 2). The accepted treatment standards are: HbA1c ≤58 mmol/mol, cholesterol <5 mmol/L and blood pressure ≤ 140/80.

Type 1- and 2-foot monitoring

Over 12 months NEEDS achieved above the national average for the percentage of participants receiving foot monitoring. The lowest achieving practice was above the national average, and the highest achieving practice had 95% of patients receiving foot monitoring.

Phase 2: workforce survey results

Workforce survey results

Twenty-one participants who are part of the diabetes workforce took part in the survey. Job roles included specialists (43%), NEEDS leadership team (33%); GP practice or business manager (5%), and primary care delivering NEEDS (5%).

As can be seen in Table 3, the workforce reported that they perceived patients to be well supported and educated around diabetes. Specifically, the workforce strongly agreed that patients had high levels of support, access to specialist healthcare and education regarding diabetes, and a high level of appropriate care. Additionally, the workforce perceived that NEEDS helped patients to cope with their diabetes and have high levels of control and confidence. The workforce also strongly agreed that patients had a continued care plan and links with their GP practice. Lastly, the survey results revealed that the workforce perceived patient's overall quality of life to have improved since receiving care from NEEDS.

Phase 3: analysis of qualitative data from focus groups

Through analysis of the qualitative data, the following overall themes emerged:

(1) Service improvement
(2) Innovation and best practice
(3) Collaborative integrated working

We present quotes from the focus groups as relevant to each theme.

Table 3. Workforce survey results ($n = 21$). NB all responses are on a 5-point likert scale with 1 = strongly disagree, 5 = strongly agree.

	Responses	
Perceptions of the workforce	Mean	Standard deviation
Patients' overall quality of life has changed since receiving care from NEEDS	4.94	0.25
Control patients have over their diabetes	4.94	0.25
How effective patients are at coping with their diabetes	4.75	0.45
How effective is NEEDS at helping patients take control of their diabetes	4.63	0.50
Patients feel they have access to specialist healthcare for their diabetes	4.75	0.45
Patients feel they experience a high level of support for their diabetes	4.53	0.64
Patients feel they have been given a high level of education about their diabetes	4.81	0.40
Patients feel they have the confidence to look after their diabetes care	4.44	0.63
Patients feel they experience a high level of appropriate care	4.75	0.45
Patients feel they have a link nurse at their GP practice that is aware of the care they receive	4.56	0.51
Patients feel they have a continued care plan	4.31	0.60
Patients feel they have access to their GP for continued care for their diabetes	4.19	0.91

Theme 1. Service improvement

The first theme relates to the impact that the changes had on the quality of the service provided. This first theme is comprised of four sub themes: enhanced quality indicators, safe discharge/virtual ward, improved access to the service, initial and continuing challenges to the service.

Enhanced quality indicators

Several participants noted how this new service provided a more holistic approach to care and improved patient outcomes, as indicated by the following quotes.

"I've got really good service, they really looked after me and everybody else. We have 10 to 50 tests every year and they chase it up if you don't go, they remind you you've got to go." Service user 2

"The processes of what we call like KPIs, key performance indicators, those processes have helped us to focus on what is important for diabetes care, and that has really transformed the way care is being delivered in primary care." Workforce 8

Participants also noted that NEEDS resulted in reduced admissions to the acute sector and access to new medications and technologies.

"It's admission avoidance and reducing hospital admissions, making sure that they have a safe discharge now." Workforce 10

"*For me having access to new pumps through the service was great it was not straightforward managing or interpreting how much insulin you need, then having to modify what you need, that's what they were really good at in my opinion. It's a lot of technology involved which they have a very good handle on.*" *Service user 1*

These results are in line with the survey results and analysis of preexisting data and suggest that patient outcomes and quality of life has improved after receiving care from NEEDS through ensuring patients are receiving holistic care and the 8 care processes.

Safe discharge/virtual ward

Others described how the virtual ward helped to support the district nursing teams whilst ensuring a safer discharge from acute hospital.

"I've just come from doing what we call our virtual ward where we review most of the people that we see anybody who needs dose changes, we review medications as we are just trying to optimise control and once, we get to a target range we discharge them from the virtual ward." Workforce 3

"*We will discharge patients if they have good care, their experience HBA1C is good, we'll discharge them back to practice. But those patients always know that they can ring in for advice, so they don't have to go back to their GP for a new referral.*" Workforce 3

Improved access to the service

Some described how the changes to the service provided improved access, whilst increasing capacity by reducing unnecessary activity relating to type 2 diabetes. This is supported by the survey results with the majority of participants reporting that patients have access to specialistic healthcare and that they can access the healthcare they require through their GP and within a community setting.

"For us I would say a bit revolutionary. Its instant. That person, without even knowing that they've had any contact with us because it's all just done behind the scenes through the practice." Workforce 5

"*Compared to the service I was with before, it felt as if there were just always too many things for the small number of staff that was there, because they had millions of calls from kind of primary care and so they are not constantly there firefighting.*" *Workforce 3*

Initial and continuing challenges to the service

Others described Initial challenges with setting up the service such as getting everyone on board including patients and professionals. Ongoing challenges described by others included difficulty with gaining access to IT systems which meant repeating some assessments such as podiatry foot assessment reviews.

"But it was really quite difficult, you know, it was the early years of getting everybody on board. But a hard challenge." Workforce 12

"Not all the surgeries use system1 and other systems don't speak to each other." Workforce 4

Theme 2. Innovation & best practice

The second theme relates to the innovation and the empowerment the staff felt which enabled them to bring about several changes to the existing pathway for patients and is described

under three sub-headings: empowered leadership, empowerment of patients, and autonomy.

Empowered leadership

Most of the healthcare professionals described how they were given the freedom from their immediate line managers and system leaders to try out new ways of working. Several stated that they felt empowered as leaders of NEEDS, as they were given the freedom by the GP federation and the commissioners to bring about change.

"Working in the NEEDS service is enlightening, revolutionary, no red tape, freedom to act, no constraints, working for a service I'm proud off and the outcome data is amazing." Workforce 3

Empowerment of patients

Service users talked about taking ownership and responsibility for their own care and described how the staff really supported them in this decision-making process. The workforce noted how the patients also felt empowered through being given better access to the NEEDS team and by learning how to self-manage their condition.

"I think it's great to equip you to take the responsibility for managing your own diabetes." Service user 2

Autonomy

Most of the participants in the workforce focus groups described how they were given much more autonomy working within the NEEDS service which improved the patient pathway.

"We are able to have much more free thinking a much more integrated service for patients/bloods etc. are done in one place, improved coordination, overall, the service is much better." Workforce 5

Theme 3. Collaborative integrated working

All participants described how integrated working across organizational boundaries, and individual professional roles was one of the keys to the success of the service. They used phrases such as "*care without walls.*" Many said that the team worked very well with both internal and external colleagues and suggested they were happy to work longer hours to support the service.

"Communication is so much better between all staff and organization." Workforce 4

"All the consultants and the impatient team are again approachable and easy to talk to and to ask questions. You know, they're there to help you and support you." Workforce 21

Discussion

This study reports on an evaluation of NEEDS, a service developed in north east Essex, UK, in 2014, designed to deliver community-based diabetes services which aimed to improve the pathways for diabetes care. The results of this service evaluation revelated that NEEDS improves the effectiveness and efficiency of diabetes care in north east Essex, UK. NEEDS provided many benefits and added value to diabetes care and management, as will be discussed in more detail below.

Firstly, NEEDS provide an integrated holistic service that brought together diabetes services from different levels of the care pathway and encouraged interprofessional working (Jones et al., 2022; NHS England, 2023). Traditionally diabetes is managed within the secondary care sector via many different providers. However, this does not provide sufficient support or appropriate disease management (NHS England, 2023). In line with the five years forward view published in 2014 (NICE, 2022), NEEDS was created to address this lack of integrated care. The evaluation strongly demonstrates that NEEDS provides an integrated approach. The importance of having access to specialized care in the community through their GP was highlighted by most participants as a strength and key to the success of the service. Similar interprofessional team-based care approaches have been developed internationally and have also found to have better outcomes for patients with diabetes in terms of improving the management of their care, improved patient wellbeing and satisfaction, and patient outcomes (Gucciardi et al., 2016; La Rosa et al., 2020; Nurchis et al., 2022; Reeves et al., 2017). Thus, suggesting that diabetes care could be improved by utilizing an integrated approach which encourages interprofessional working, such as demonstrated by NEEDS.

Secondly, the impact of the NEEDS service on reducing acute diabetes hospital admissions and a safe discharge from hospitals was noted by several participants in this study, both in the qualitative and quantitative data. Additionally, the results revealed that NEEDS achieved higher than the national average for patients having had all eight care processes completed, foot monitoring and the three treatment standards. The interviews revealed that this was largely as a result of NEEDS providing a holistic approach to care which improved patient outcomes. This is vital considering the current challenges of long delays in emergency departments and reduced access to acute beds which face the NHS (Jones et al., 2022; NICE, 2022). Thus, through innovative practices such as community-based diabetes services, it may be possible to help reduce the burden on the NHS.

Thirdly, the results of this evaluation revealed that the workforce and patients received technology, training, and education. According to the Getting it Right First time (GIRFT) report (The Kings Fund, 2022), effective diabetes care models need to utilize technology, training, and education to help patients regulate their diabetes and prevent hospital admissions. Many participants of this evaluation described how the use of technology enabled them to provide "care without walls." Using the virtual ward to deliver appropriate care allowed for the sharing of new knowledge relating to new devices as well as providing learning opportunities. Furthermore, patients commented on their enthusiasm for the Dose Adjustment for Normal Eating (DAFNE) course (Rayman & Kar, 2023), which resulted in them feeling confident in controlling their diabetes.

Additionally, the results of this evaluation clearly demonstrate that patient empowerment was achieved. Considering that diabetes is a self-managed illness, the empowerment of patients is essential to ensuring effective diabetes care (DAFNE

Study Group, 2002). Therefore, effective diabetes care models require patients and health care professionals to collaborate in the development of self-management plans (Lambrinou et al., 2019). This is essential to the sustainability of the service where patients described "*taking ownership and responsibility for their own care*" and suggested that the staff had really supported them in this decision-making process.

Finally, Epstein (Beck et al., 2017) suggests cohesive interprofessional teamwork within healthcare improves communication, optimizes healthcare workers performance, patient satisfaction, and reduces hospital costs. The results of this evaluation demonstrate that NEEDS is achieving this through enhanced autonomy to make decisions and ability to make changes to the patient pathway and encouraged commitment and improved performance, to ensure the patients' pathway was successful and appropriate. The workforce suggested that this was because they worked collaboratively and highlighted the importance of integration across systems. This is in support of previous literature which suggests there is a synergetic relationship between teamwork and autonomy in healthcare professionals; specifically, in a study by Rafferty et al (Epstein, 2014) nurses with higher teamwork scores also exhibited higher levels of autonomy. In turn, autonomy was positively correlated with higher job satisfaction and perceptions of high quality of care (Epstein, 2014).

Strengths and limitations

For this study, we utilized a mixed method approach which used both existing and novel data, including perceptions from the workforce delivering NEEDS and the experience of service users, as well as routine datasets that are collected by all GP surgeries nationally. This enabled comparisons to be made with National data and demonstrated better outcomes for GP surgeries that are a part of NEEDS. A limitation of this data was that it was not possible to separate the data from individuals who have both Type 1 and Type 2 diabetes, which may potentially skew the results. Another limitation of the study is that the evaluation took place after NEEDS had been established for eight years; therefore, direct comparisons prior to the setup of NEEDS are not possible, and perceptions are given on the NEEDS programme as it currently operates (Rafferty et al., 2001). Whilst this evaluation was retrospective, it would have been useful to compare our data to data collected prior to the NEEDS model being established. However, this was not possible as we were asked to evaluate the service after it had already been up and running. We could potentially have used past data and made a comparison to current data, but the data collection methodology has changed over the years meaning this would not have been feasible. Alternative methodologies that would have been helpful in answering the research question further could be case studies and a cost analysis. This would enable further questions to be answered about cost benefits. Using case studies would also allow a deeper understanding of what it was like for patients using this service. Other methodologies were considered to conduct this evaluation such as the "Patients" as Teachers' action research approach, however, due to the time constraints in which the evaluation had to be completed, it was considered inappropriate. However, this could be an alternative methodology for future research.

Implications for practice

The results of this study indicated that 67% of patients in NEEDS receive delivery of eight care processes, compared to 38% nationally. NEEDS works using a collaborative integrated interprofessional approach, reducing bureaucracy and the blurring of boundaries and professional roles. This has empowered the workforce increasing levels of autonomy, commitment, performance, and work satisfaction. Patients are seen locally with improved access to specialist services when required, helping to increase patient outcomes. Further, patients feel empowered with augmented level of accountability and responsibility arising through education and improved access to services. This innovative approach provides learning to delivering community based long term condition care and may offer a helpful model to Primary Care Networks following the Fuller stocktake recommendations (NHS England, 2022a). NEEDS works in line with the recommendations of integrating primary care through streamlining access to care, providing proactive, personalized care via interprofessional teams, and helping people to stay well for longer by using a joined-up approach to prevention (NHS Foundation Trust Service Evaluation, n.d.).

Conclusion

The service evaluation suggests that the NEEDS programme provided a holistic, integrated care approach that led to improved patient outcomes across the care system. Compared to other GP surgeries in England (based on audit data), the NEEDS programme recorded a higher number of care standards and better patient outcomes. The key benefits of the NEEDS programme included: increased patient autonomy and access to specialist support services; an empowered workforce that felt supported by system leaders to make changes to the patient pathway; a multidisciplinary, interprofessional team approach utilizing a "virtual ward" model; provision of training and education for all staff involved. The holistic, integrated nature of the NEEDS programme, along with giving autonomy to patients and staff, enabling interprofessional collaboration through virtual wards, and providing ongoing training were cited as critical factors that allowed it to improve standard care processes delivery and achieve better patient outcomes compared to those recorded by other GP practices across England. NEEDS, as a model, could have implications for practice within diabetes but also in other long-term conditions. The results of this service evaluation have important implications for practice by providing a helpful model to Primary Care Networks which utilizes an integrated Primary

Care Network and the establishment of interprofessional teams.

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Disclosure statement

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Data availability statement

The data that support the findings of this study are available from the corresponding author on reasonable request.

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