Health Education England

Evidence Brief: Diabetes

Contents

Produced by the HEE Knowledge Management team Evidence Briefs offer a quick overview of the published reports, research, and evidence on a workforce-related topic.

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Key publications – the big picture

Five areas NHS integrated care boards can improve diabetes care for people NHS England (November 2022)
Preventing type 2 diabetes and supporting the delivery of high-quality care for people living with all forms of diabetes are the priorities of the NHS Diabetes Programme (NDP). The increase in prevalence, long-term risks of complications and budgetary impact of treatment make diabetes one of the most important non-communicable diseases to target. Our aim is to improve outcomes and equity across socioeconomic deprivation, ethnicity, age, and type of diabetes.

Best Practice in the Delivery of Diabetes Care in the Primary Care Network NHS Confederation (April 2021)
This document, shaped by a cross-section of healthcare professionals providing diabetes care, nicely articulates the opportunities and potential solutions that PCNs can provide, drawing on current best evidence to impact positively on peoples' lives. The focus on education for both staff and those living with diabetes, as well as the prioritisation of higher risk groups such as those with young-onset Type 1 and Type 2 Diabetes, is indeed welcome. The document describes solutions on delivery against these priorities, which we hope will be useful in supporting colleagues in primary care.

Diabetes: GIRFT Programme National Specialty Report GIRFT (November 2020)
The findings and evidence-based recommendations in this report are based on GIRFT deep-dive visits to 108 acute trusts. They are focused on helping people with diabetes and their clinicians to better manage the condition and reduce avoidable harms. In particular, the recommendations will help to improve services for people with type 1 diabetes, and improve inpatient care and foot care for everyone living with diabetes.

Building the right workforce for diabetes care: A toolkit for healthcare professionals London Strategic Clinical Networks (2019)
The skills required by healthcare professionals to support people with diabetes are many and varied, from supporting behaviour change to appropriate use of complex therapeutic interventions. All this must be achieved in a supportive care system. It is scarce wonder that there is huge variation in the quality of care provided. This guide is aimed at those working in primary care, where a multiplicity of skills and knowledge must be maintained, diabetes being only one area of care.

Tackling the crisis: Transforming diabetes care for a better future England Diabetes UK (2019)
Over recent years, welcome and significant advances have been made to improve diabetes care for all people living with diabetes, as well as advances in the prevention of Type 2. Investment through the transformation fund and the NHS Diabetes Prevention Programme, and support to extend the reach of diabetes education, are starting to show results. But, we need sustained commitment from government and the NHS, nationally and locally, to ensure that this progress continues and is stepped up where needed, in order to address the diabetes crisis and radically reduce the harm now and in the future.

Diabetes in the UK: 2019 Diabetic Medicine (February 2020)
*Abstract only**
Diabetes impairs the quality of life of people living with the condition and is a major public health concern. The aim of this paper is to create a state of the nation report of diabetes in the UK.

The future of diabetes Diabetes UK (2017)
We need a workforce with the capacity and confidence to care for people with diabetes. Every healthcare professional that people with diabetes come into contact with should have good understanding of diabetes – and be able to support the needs of those living with it. Consultations should be long enough for clinical teams to provide the quality of care they would like to.

The Future of Inpatient Diabetes Care All Party Parliamentary Group for Diabetes (2017)
Improving inpatient care starts with investing in the people who deliver the care. Specialist inpatient diabetes teams reduce errors and improve patient outcomes. Consequently, this reduces average length of stay and leads to fewer complications for patients. Studies show these teams save up to three times their cost, and an average of £400 per admission, with MDTs expected to save over four times their cost. The Department of Health estimates that investing in a specialist diabetes team and general staff education could improve patient outcomes and cut the excess of poor care by over £500 million.

HEE Star

More resources and tools can be found on the HEE Star; search for “Diabetes”

Statistics

You can find relevant statistics on the Health and Care Statistics Landscape; search for **“Diabetes”**

HEE National Data Programme

HEE staff can look at the National Data Warehouse (NDL) SharePoint site to find out more about datasets and Tableau products.

Published Peer Reviewed Research

Impact of COVID-19

The impact of the COVID pandemic on primary care diabetes services in the UK: A cross-sectional national survey of views of health professionals delivering diabetes care January 2022, Primary Care Diabetes *(Athens log in required*)*
COVID-19 pandemic has had significant impact on the ability of healthcare professionals and their practices to deliver routine diabetes care. Failure to restore primary care provision urgently and safely to at least pre-pandemic levels in a sustainable manner may lead to emotionally drained and overworked workforce in primary care, place additional burden on the already overburdened healthcare system and worse outcomes for patients.

Inpatient diabetes care during the COVID-19 pandemic: A Diabetes UK rapid review of healthcare professionals' experiences using semi-structured interviews January 2021, Diabetic Medicine
This position statement makes recommendations to improve and sustain inpatient diabetes care during the current COVID-19 pandemic and for future waves. It describes the experiences of clinicians working during the first wave of the COVID-19 pandemic.

Time in range: a best practice guide for UK diabetes healthcare professionals in the context of the COVID-19 global pandemic November 2020, Diabetic Medicine *(Abstract only*)*
Recent changes in access to continuous glucose monitoring systems within UK health services have increased the number of people able to benefit from these technologies. The COVID-19 pandemic has created an opportunity for diabetes healthcare professionals to use continuous glucose monitoring technology to remotely deliver diabetes services to support people with diabetes. This opportunity can be maximized with improved application and interpretation of continuous glucose monitoring-generated data. Amongst the diverse measures of glycaemic control, time in range is considered to be of high value in routine clinical care because it is actionable and is visibly responsive to changes in diabetes management. Importantly, it is also been linked to the risk of developing complications associated with diabetes and can be understood by people with diabetes and healthcare professionals alike.

Ways of working

How do UK general practice staff understand and manage prediabetes? A focus group study 2022, BJGP Open *(Athens log in required*)*
The present study's findings suggest that it may be beneficial to shift health messages away from quantitative markers to exploring the patient's lived experience and what is possible within their social context. The findings also suggest that a longer-term approach was a key prevention strategy in assisting people with behaviour change. Disease prevention policies do not currently reflect the importance of patient-centred care, with the current model of annual reviews placing a greater emphasis on numerical targets than on therapeutic relationships.

Evaluation of a Community Health Worker Social Prescribing Program Among UK Patients With Type 2 Diabetes September 2021, JAMA Network Open *(Athens log in required*)*
In this cohort study with difference-in-differences analysis of 8086 patients in the UK National Health System, a holistic community health worker intervention was associated with improvements in hemoglobin A1c levels. The association increased over time and was greater for White patients vs non-White patients, those with fewer additional comorbidities, and those living in the most socioeconomically deprived areas.

The NHS Diabetes Prevention Programme: an observational study of service delivery and patient experience November 2020, BMC Health Services Research *(Athens log in required*)*
Addressing issues that we have identified as being linked to negative experiences with the NHS-DPP could increase uptake, reduce patient drop-out and increase the overall effectiveness of the programme. In particular, modifying structural aspects of the NHS-DPP (e.g. reliable session scheduling, reducing group sizes, enough session resources) and increasing interaction appear particularly promising for improving these outcomes.

Behavior Change in Diabetes Practitioners: An Intervention Using Motivation, Action Planning and Prompts November 2020, Patient Education and Counseling *(Athens log in required*)*
This study suggested specific deliberative planning may not be the most useful approach to behavior change in unpredictable health care delivery contexts. In the UK all health and social care professionals are encouraged to 'make every contact count' [41] as an opportunity to discuss ways of improving health and well-being with service users, and this type of training develops important and relevant skills for delivery. Training could focus on more flexible applications of learning, either development of skills that can be applied in different

contexts, or how to specifically tailor intervention techniques to context. The focus on prompting and cueing techniques is also adopted in the field of organisational ergonomics, for example in 'human factors' research [42]. It may be helpful to consider how this approach could be combined with psychological theories around behavior change to enhance interventions with health professionals in future research.

The content analysis of responses identifying barriers and facilitators of implementation provided clues useful in addressing these barriers, suggesting that institutional factors, characteristics of specific patients, and environmental cues to support change are important. These types of factors are often flagged in models of intervention implementation as important facilitators of successful delivery [43,44]. Workplace managers should be involved in 'making space' to implement new ways of working when training is offered. Although this is difficult in the context of current health service pressures, approaches which focus on developing team-based skills in psychosocial ways of working are likely to produce lasting and cost-effective benefits.

Provision of services in primary care for type 2 diabetes: a qualitative study with patients, GPs, and nurses in the East of England September 2020, BJGP *(Athens log in required*)*
The authors interviewed 24 patients and 15 GPs and nurses, identifying a changing landscape of diabetes provision owing to burgeoning pressures that were presented repeatedly. Patient responders wanted GP-delivered care with continuity. They saw GPs as experts best placed to support them in managing diabetes, but were increasingly receiving nurse-led care. Nurses reported providing most of the in-person care, while GPs remained accountable but increasingly distanced from face-to-face diabetes care provision. A reluctant acknowledgement surfaced among GPs, nurses, and their patients that only minimum care standards could be maintained, with aspirations for high-quality provision unlikely to be met.

Safe care for people with diabetes in hospital January 2020, Clinical Medicine Journal *(Athens log in required*)*
There have been some significant strides in improving the care for hospital inpatients with diabetes over the last few years. However, there remains a large amount to do and the data suggest that patient safety is still being compromised. To reduce these risks, the ongoing education of medical and nursing staff, and all other groups involved in the care of patients with diabetes in hospital remains paramount given the increasing prevalence of the condition and its ongoing impact. As part of this, the Care Quality Commission working with the JBDS-IP is looking at the management of inpatients with diabetes as a marker of quality of care across all aspects of inpatient management. However, ultimately the provision of safe and effective care of the person with diabetes in hospital will rely on the recognition by senior management that, by investing in diabetes inpatient services, there may be a lot to be gained. For non-specialists looking after people with diabetes, there are a number of resources available which, together with communication with the local diabetes teams, should help teams improve the provision of safe and effective care.

Does the Diabetes Specialist Nursing workforce impact the experiences and outcomes of people with diabetes? A hermeneutic review of the evidence August 2019, Human Resources for Health
Evidence suggests that Diabetes Specialist Nurses educate patients and other healthcare professionals as well as delivering direct care. The outcomes of these actions include a reduced patient length of stay in hospital, reduced inpatient harms and complications, and improved patient satisfaction. Additionally, they are cost-effective.

Recruitment, retention, and training of people with type 2 diabetes as diabetes prevention mentors (DPM) to support a healthcare professional-delivered diabetes prevention program: the Norfolk Diabetes Prevention Study (NDPS) May 2019, BMJ Open Diabetes Research and Care
Individuals with type 2 diabetes can be recruited, trained and retained as DPM in large numbers to support a group-based diabetes prevention program delivered by healthcare professionals. This volunteer model is low cost, and accesses the large type 2 diabetes population that shares a lifestyle experience with the target population. This is an attractive model for supporting diabetes prevention efforts.

Language matters. Addressing the use of language in the care of people with diabetes: position statement of the English Advisory Group 2018, Diabetic Medicine *(Athens log in required*)*
The use of language by healthcare professionals can have a profound impact on people living with diabetes. Our working group, which represents people with diabetes and key stakeholders, has developed a set of principles to guide healthcare professionals, with the goal of improving interactions with those living with diabetes.

Using evidence-based guidelines to inform service provision: a structured mapping exercise within the National Health Service Diabetes Prevention Programme in England July 2018, BMC Research Notes *(Athens log in required*)*
This structured mapping exercise has utility for implementation science and real-world programmes in explaining differences in outcomes based on specific components of the interventions and how each programme is implemented in relation to the service specification. This method could also enable the identification of key areas that require improvement. The mapping exercise examined the progression of a national programme rollout, identifying how the service specification developed from a draft to a final document (e.g. incorporating greater detail on the inclusion of BCTs and addressing inequalities). This mapping exercise could be utilised in further rollout of the NHS DPP. This process could be used for the development of future service specifications and in the reporting of behaviour change programmes. Fidelity measures need to be established in order to judge whether implementation of a programme meets the required standards.

NHS Diabetes Prevention Programme in England: formative evaluation of the programme in early phase implementation
February 2018, BMJ Open *(Athens log in required*)*
When fully implemented the NHS DPP will provide an evidence-based lifestyle intervention for prevention of T2D in adults at high risk, with provider capacity to deliver the intervention on a national scale. Formative evaluation of first wave NHS DPP implementation found that the intervention specification reflected current evidence, while allowing balance between consistency and contextual variation in intervention delivery, with detailed session planning devolved to providers.

The role of nurse specialists in the delivery of integrated diabetes care: a cross-sectional survey of diabetes nurse specialist services August 2017, BMJ Open *(Athens log in required*)*
This study is the first to examine the provision of diabetes nurse specialist (DNS) services nationally in Ireland. A comprehensive questionnaire that was employed in a previous UK study and adapted for the Irish context was used for the study. Although the support of the Irish Diabetes Nurse Specialist Association and other sources was enlisted to generate the sampling frame, there is no definitive list of all DNS in Ireland. Only a small number of nurses work in both hospital and community roles; therefore, we did not distinguish between DNS who are solely

based in the community and those in new posts working between hospital and community.

Workforce supply

Burnout in diabetes and endocrinology specialist registrars across England, Scotland and Wales in the pre-COVID era 2022, Primary Care Diabetes *(Athens log in required*)*
The aim of this study was to assess the frequency of burnout syndrome among Diabetes Specialist Registrars across England, Scotland and Wales and to identify any self-reported factors which may be contributory to burnout.

A survey of staffing levels in paediatric diabetes services throughout the UK 2018, Diabetic Medicine *(Athens log in required*)*
Some 175 services (93%) caring for 29 711 children and young people aged ≤ 24 years with diabetes participated in the survey. Northern Ireland and Wales had the lowest ratio of total staff to patient population. Nursing caseloads per one whole-time equivalent (WTE) nurse ranged from 71 patients in England to 110 patients in Northern Ireland with only 52% of the UK services meeting the Royal College of Nursing recommended nurse-to-patient ratio of > 1 : 70. Scotland and Northern Ireland had the highest ratio of consultants and fully trained doctors per 1000 patients (3.5 WTE). Overall, 17% of consultants had a Certificate of Completion of Training in Endocrinology and Diabetes. Some 44% of dietitians were able to adjust insulin dose. Only 43% of services provided 24-h access to advice from the diabetes team and 82% of services had access to a psychologist. Staffing levels adjusted for volume were not directly related to glycaemic performance of services in England and Wales.

Education and training

Feasibility and acceptability of e-learning to upskill diabetes educators in supporting people experiencing diabetes distress: a pilot randomised controlled trial November 2022, BMC Medical Education
This pilot study found the diabetes distress e-learning to be acceptable to credentialled diabetes educators (CDEs). The study design had reasonable feasibility but requires modification to reduce participant attrition. The e-learning shows potential for improving CDEs' knowledge, confidence, and behaviours with regard to providing support for diabetes distress. Future larger-scale evaluation of the e-learning is warranted.

Current provision and HCP experiences of remote care delivery and diabetes technology training for people with type 1 diabetes in the UK during the COVID-19 pandemic 2022, Diabetic Medicine *(Athens log in required*)*
The COVID-19 pandemic has led to the rapid implementation of remote care delivery in type 1 diabetes. We studied current modes of care delivery, healthcare professional experiences and impact on insulin pump training in type 1 diabetes care in the United Kingdom (UK). One hundred and forty-three healthcare professionals (48% diabetes physicians, 52% diabetes educators and 88% working in adult services) from approximately 75 UK centres (52% university hospitals, 46% general and community hospitals), responded to the survey. Telephone consultations were the main modality of care delivery. There was a higher reported time taken for video consultations versus telephone.

The top 10 research priorities in diabetes and pregnancy according to women, support networks and healthcare professionals May 2021, Diabetic Medicine *(Athens log in required*)*
Further research is needed to provide evidence-based healthcare for women, with or at risk of diabetes complications, who are planning pregnancy or are pregnant, to ensure the best outcomes for them and their children in the short and long term. The Covid-19 pandemic has highlighted the importance of inclusive research. Pregnant women, those planning pregnancy or breastfeeding are often actively excluded from clinical trials, perpetuating the population as a vulnerable group. The addition of co-morbidities, such as diabetes, complicates matters further. As well as improved health and well-being for generations of families, interventions which improve outcomes for pregnancy with diabetes provide significant opportunity in terms of cost savings.

Setting the top 10 research priorities to improve the health of people with Type 2 diabetes: a Diabetes UK–James Lind Alliance Priority Setting Partnership February 2018, Diabetic Medicine *(Athens log in required*)*
We describe the largest research prioritization process for Type 2 diabetes to date and the first to consult extensively with healthcare professionals, people living with the condition and their carers in partnership. The process provides an authoritative resource to the academic community to guide research that has the potential to make a meaningful difference to people living with Type 2 diabetes and healthcare professionals.

Competency Frameworks

End of life guidance for diabetes care November 2021, Diabetes UK
Topics to be included in training should encompass:

- Assessment of Nutritional and Hydration States
- Importance of the person-centred care approach to the caring process which includes all aspects of an individual's life as well as symptom management
- The importance of assessment of pain, assessing impact of co-existing co-morbidities including frailty, communication, shared decision - making regarding medication and safe prescribing. This would also apply to diabetes medication and associated adverse effects including hypoglycaemia.
- Sensitive communication skills including empathy, recognising emotional response to stress and distress, discussing uncertainty, treatment limitations and withholding or discontinuation of treatment and preferred place of death

Grow your DSNs: A quick guide to recruiting, developing and supporting diabetes specialist nurses 2019, Diabetes UK
Diabetes specialist nurses (DSNs) are key to meeting the health and care needs of the steadily rising number of people living with diabetes in the UK. DSNs reduce length of stay in hospital, support better self-management, improve patient satisfaction and are cost effective. In 2016, our DSN workforce survey reported significant present and future shortages in the workforce, growing difficulties in recruiting suitably skilled staff and a trend towards downgrading specialist posts. Without urgent action to develop a sustainable DSN workforce, these problems look set to get worse. Use these top tips collected from healthcare professionals across the UK to help you recruit, develop and retain DSNs in your team, whatever step in the process you're at.

Competency Frameworks in Diabetes October 2014, Diabetes UK
Quality, skills and attitudes of staff working in the healthcare system are central to multidisciplinary learning and working, and to the delivery of the quality of care patients expect. Patients want to know that the staff supporting them have the right knowledge and attitudes to work in partnership, particularly for conditions such as diabetes where 95% of all care is delivered by the person with diabetes themselves.

Specialist diabetes team: role and members October 2010, Diabetes UK
Specialists involved in the delivery of diabetes care must work in multidisciplinary teams for care to be truly effective. They should have received extensive training accredited at a national level. Specialist teams should comprise physicians, nurses, podiatrists, dietitians and clinical psychologists, who will also collaborate with many other specialists who might be incorporated into the team.

Specialist teams provide direct care for people with diabetes with complex needs that cannot be met within the skill competencies of the general practice team.

*Help accessing articles or papers

Where a report/ journal article or resource is freely available the link has been provided. If an NHS OpenAthens account is required this has been indicated. It has also been highlighted if only the abstract is available. If you do not have an OpenAthens account you can self-register here.

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