



Implementation Toolkit

Low Carb Program

Self-care and education

Digital structured education and behaviour change platform for people with type 2 diabetes. It is available on the web, iOS, Android, Apple and Android watch and Alexa.

What is the NHS Innovation Accelerator (NIA)?

- An award-winning national accelerator supporting committed individuals ('Fellows') to scale high-impact, evidence-based innovations across the NHS and wider healthcare system
- An NHS England initiative delivered in partnership with England's 15 Academic Health Science Networks (AHSNs) and hosted at UCLPartners
- Launched in 2015 to support the delivery of the Five Year Forward View, the NIA is highlighted in the NHS Long Term Plan, published in January 2019

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lowcarbprogram.com/nhs

What is it?

The Low Carb Program is an award-winning, evidence-based, person-centred structured education and digital behaviour change platform for people with type 2 diabetes. It facilitates sustainable weight loss and blood glucose control through goal-focused education, resources and support. It enables individuals to achieve their health goals through reducing the amount of sugar (or carbohydrates) in the diet.

The Low Carb Program is clinically validated and delivers an extensive range of clinical and health economic outcomes including HbA1c (blood glucose), weight loss, and reduction in patient medication use. It is highly scalable for any locality. The platform is in use in 6 NHS CCG areas.

Members receive 3-year access to an interactive web and mobile application available on iOS, Android, Apple and Android watch and Alexa. The platform provides nutritional and lifestyle education and behaviour change mentoring, including tailored support and resources to sustain habits and engagement over the long-term, for people with type 2 diabetes, prediabetes and those that are obese or wishing to lose weight. This includes an initial intensive 12-week structured therapeutic nutrition and wellness education program, recipes, meal plans, tracking health data, lifestyle articles and a behaviour-change maintenance pathway to keep members engaged. The platform encourages patients to track their health data and can be connected to apps and wearables such as FitBit, Apple Health, Google Fit, Withings and Garmin.

Education is personalised according to the member's health and preferences. Members receive structured education on nutrition and lifestyle, covering sleep, stress, mental health, smoking cessation and blood glucose testing where necessary. The Low Carb Program is the only structured education platform that has a localised syllabus for the South Asian and Arabic communities, delivered in native, local-language.

Members are extensively supported throughout the programme. A team of Behaviour Change Mentors are also supported by Nutritionists and Psychologists. The Behaviour Change Mentors help to keep members motivated and accountable to achieve their health goals, resulting in sustainable weight loss, lower blood glucose and reduced medicine. Members are also further supported by the active community of over 425,000 members and a virtual buddy who has been through the programme.

The nutrition syllabus is based on the low carbohydrate (carb) diet guidelines of 130g per day in line with [NICE](#), [SIGN](#) and [Diabetes UK guidance](#) on low carb for weight loss. The app has received a positive review from The British Dietetic Association (BDA).

The Low Carb Program was developed by Diabetes Digital Media (DDM) with Dr David Unwin and 20,000 people with diabetes.

What's the problem?

- Type 2 diabetes is prevalent, costly, and a potentially progressive disease with serious health consequences including blindness, amputation, stroke, dementia, and premature death ([Stratton et al., 2000](#)).
- Globally, one in 11 people, or 422 million adults, have diabetes (majority type 2 diabetes) ([WHO, 2016](#)). One-third of UK adults are estimated to have pre-diabetes, another 4 million people have type 2 diabetes ([Mainous et al., 2014](#)).
- In community settings, type 2 diabetes is rarely reversed. A study that followed more than 100,000 patients with type 2 diabetes over 7 years found that less than 1% of patients experienced complete remission ([Karter et al., 2014](#)).
- Type 2 diabetes can be effectively treated with a carbohydrate-reduced diet and can potentially lead to remission ([Feinman et al., 2015](#)).
- In the UK, Type 2 diabetes is estimated to cost the NHS £8.8 billion each year in direct costs alone ([Hex et al., 2012](#)).
- Weight loss is key to successful management, but given the limited availability of weight management services, there is a pressing need for effective, low-cost interventions that can be delivered by GP teams.

What's the evidence?

- One-year outcomes published as part of a three-year study on a randomly selected cohort of 1,000 people who joined the Low Carb Program demonstrated:
 - 71% platform retention at one-year
 - 40% of people on medication eliminated at least one diabetes medication from their regime
 - 60% of people on insulin eliminate or reduced it from their regime ([Saslow et al., 2018](#))
- For people with type 2 diabetes who complete the Low Carb Program outcomes include:
 - average 7.4kg weight loss with almost half losing 5% of their body weight,
 - 13nmol/mol HbA1c (blood glucose) reduction
 - 39% place HbA1c under the type 2 diabetes threshold
 - 26% place type 2 diabetes in remission ([Saslow et al., 2018](#))

Cost savings

- A conservative cost-saving medication de-prescription analysis was conducted on the same cohort of users,

Please contact [Arjun](#) for more information on cost-effectiveness.

Further evidence in development

- A feasibility study is currently taking place with the University of Warwick Medical School. With GPs, nurses and healthcare assistants from eight practices signposting patients with type 2 diabetes, pre-diabetes or obesity to the Low Carb Program. Questionnaires and interviews at three and six months will explore the patient's experience. Key physiological variables will also be measured, and clinicians will be interviewed about their experience and feasibility of incorporating its delivery into practice

Regulatory requirements

- Low Carb Program has a CE mark, MHRA approved as a Class I Medical Device, GDPR compliant, QISMET approval for commissioning as structured education and has been approved into the [NHS Apps Library](#) (NHS Digital DAQ).
- The technical platform architecture and security is medical-grade, with compliance to all international data, accessibility and privacy standards.

How can I adopt Low Carb Program?

The Low Carb Program is available for purchase at a 3-year license cost of £90 per licence. Low Carb Program is on G Cloud.

CCGs with limited funding can also engage the Low Carb Program for their population on a gain-share basis/model. Through this, the majority of the cost of making the solution available to patients with type 2 diabetes and prediabetes is funded from the saving that the CCG makes in medication de-prescription and associated cost savings.

Implementation support

DDM, providers of the Low Carb Program, will provide implementation support to Clinical Commissioning Groups (CCGs) and Healthcare Professionals (HCPs) wishing to provide the Low Carb Program to their patients.

For example, for a representative CCG purchasing 3,000 licences for implementation across 25 practices, support would include:

- Collaborative approach to identify local needs and design a tailored implementation plan.
- Dedicated Account Manager – regular meetings and touchpoints to optimise a clear integration process for the care pathway and to ensure successful programme implementation.
- Collaborative modelling and stratification to enable the commissioner to effectively target which practices and patient cohorts to include for maximum impact.
- Comprehensive training plan to educate local HCPs at practice level on the science of the low carbohydrate diet, de-prescribing, patient onboarding and all aspects of the programme led by DDM's Medical Officers.
- Ongoing training through the Low Carb Program's HCP digital platform with access to case studies, HCP forum, clinical papers.
- Patient enrolment and engagement support plan e.g. SMS, email, notifications, social media, intranet, leaflets, posters, etc.
- KPI engagement dashboards to enable clear understanding of the engagement and progress of patients that are going through the programme.

Please contact [Arjun](#) to move forward with adoption.

Who else is using it?

Low Carb Program has 425,000 users in the UK and is currently being used by Southampton CCG and NHS Symphony Healthcare in Yeovil.

DDM is the preferred digital diabetes partner for reinsurance organisations Swiss Re and Gen Re. With these partnerships, the Low Carb Program is being delivered to over 16 million individuals by 2022. Currently, the Low Carb Program is localised in four markets. Research is taking place with University of Warwick on the feasibility of delivering the Low Carb Program within the West Midlands, and in Canada with University of British Columbia on the feasibility of the Low Carb Program as a prescribe-able platform for pharmacists.

Feedback from users



“I lost over 3 stone following the program and have been able to reduce my HbA1c below the diagnosis level for type 2 diabetes. I am in type 2 diabetes remission.”

Sue Virdee



“The Low Carb Program is superb. I have now lost 12kgs and my HbA1c is in normal range – I no longer have prediabetes.”

Andy T



“I tried several diets to reduce my weight but found no significant improvements in my blood sugar levels. I was determined to come off my medication and found Low Carb Program, which unlike other diets it promoted long term lifestyle changes. If I had only known about it years ago!”

Peter Thompson

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