

## Enhanced community care for type 2 diabetes in Ireland: the patient's perspective on attending an integrated care centre

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### Abstract

#### *Background*

Chronic diseases, particularly type 2 diabetes mellitus (T2DM), present significant challenges to Ireland's healthcare system. Sláintecare's Enhanced Community Care (ECC) initiative involves the nationwide establishment of integrated care centres (also known as hubs) that facilitate specialist management of T2DM within the community. This study evaluated the experience of people living with Diabetes (PWD) attending the Dublin North West (DNW) hub as part of this novel paradigm of T2DM care.

#### *Methods*

Consecutive PWD attending the hub T2DM service completed a standardized questionnaire on various aspects of their T2DM care. The hub operates as a multidisciplinary service designed to provide comprehensive diabetes management. Staff members include diabetes specialist nurses, podiatrists, endocrinologists, and dietitians, ensuring a holistic approach to patient care. The service aims to integrate these specialties to address the diverse challenges associated with T2DM management.

#### *Results*

In total, 40 PWD completed the study, of which 35 (87.5%) were satisfied or very satisfied with the care they had received in the hub. Notably, 34 (85%) patients indicated a preference for community-based T2DM management with their general practitioner (GP) in the future (GP alone or their GP with hub support). With regards to opportunities for "making every contact count" (MECC); 17 (42.5%) of patients reported discussions had taken place about smoking cessation, 23 (57.5%) about weight loss, 33 (82.5%) about nutrition, 21 (52.5%) about alcohol use and 25 (62.5%) about mental health.

### *Discussion*

This is the first study to report on the T2DM patient's experience as part of ECC in Ireland. It is notable that patient preference was for continued follow up of their diabetes within the community as opposed to the hospital, and that additional opportunities for MECC interventions were identified within the community setting.

### **Introduction**

Type 2 Diabetes Mellitus (T2DM) poses a significant and growing global health challenge<sup>1</sup>. According to the International Diabetes Federation (IDF), about 1 in 10 adults aged 20–79 years, totalling 537 million people worldwide, are living with diabetes<sup>2</sup>. This trend is mirrored in Ireland, where longer lifespans and a rise in chronic diseases are increasing the demand for integrated, community-based healthcare solutions. There is limited information available regarding the population prevalence of diagnosed and undiagnosed type 2 diabetes and pre-diabetes in the Republic of Ireland in the absence of a diabetes register. In 2022, Ireland's population was 5,149,139<sup>3</sup>. With an estimated diabetes prevalence of 6%, approximately 308,000 people in Ireland are living with diabetes. The Irish Longitudinal Study on Ageing (TILDA) reveals that nearly 75% of adults aged 58 years and older suffer from multiple chronic conditions<sup>4</sup> highlighting the substantial burden on the healthcare system. This increasing burden significantly impacts individual health and the healthcare system, with chronic conditions accounting for 76% of annual deaths and contributing to 40% of hospital admissions and 75% of hospital bed days in Ireland<sup>5</sup>.

In response to these challenges, Ireland introduced Sláintecare, a 10-year plan designed to realign the healthcare system to better meet population needs through integrated, community-based services<sup>6</sup>. A key component of this reform is the Enhanced Community Care (ECC) programme, which encompasses several initiatives, including Chronic Disease Management (CDM) led by GPs and the establishment of specialist hubs. These hubs support GPs in managing chronic conditions such as T2DM, asthma, Chronic Obstructive Pulmonary Disease (COPD), and cardiovascular disease, while also relieving pressure on the hospital system<sup>7</sup>. Community-based multidisciplinary teams (MDTs) within these hubs provide a range of services including diagnostics, rehabilitation, and self-management support, with the goal of reducing hospitalizations and improving care coordination<sup>8</sup>.

Within this context, the Dublin North West (DNW) hub, "Cuan Aoibheann," launched in October 2022, was the first fully operational community hub in Ireland, with consultant-led cardiology, respiratory and diabetes services accepting referrals from a catchment area of

150,000 people within the Blanchardstown, Finglas, and Blakestown community health networks (CHNs).

As ECC represents a novel paradigm of T2DM care in Ireland, to date there has been limited research exploring outcomes for people attending these new community-based specialist T2DM teams, in particular from the perspective of the patients themselves. The latter is of particular importance as person-centred care and patient-reported outcome measures are vital for the delivery of a high standard of chronic disease care. It was with this in mind that the present study was designed with the primary goal of characterising the experience of PWD's attending the community-based specialist team for this first time.

## Methods

This study aimed to gather patient perspectives on diabetes care within the community by recruiting participants aged 18 and older with a formal diagnosis of T2DM from the diabetes MDT clinic at the DNW hub. Individuals with Type 1 diabetes, gestational diabetes, severe cognitive or psychiatric conditions, or with limited proficiency in English were excluded. Recruitment took place after clinic visits, where eligible patients were approached by the primary researcher and invited to participate in the study.

This was a pilot study and a sample size of 40 consecutive PWD was chosen based on activity levels for new patients within the hub. Data were collected using a structured questionnaire. The questionnaire was developed based on the Chronic Care Model Elements Survey<sup>9</sup>, incorporating validated tools such as the Patient Assessment of Chronic Illness Care Survey<sup>10</sup> and the HSE Patient Experience Survey<sup>11</sup>. For transparency and to facilitate future research, the complete questionnaire is provided in a supplementary table (Appendix 1). The questionnaire also examined patient experiences with 'Making Every Contact Count' (MECC). MECC is a public health framework that integrates brief, evidence-based interventions into routine healthcare interactions to encourage healthier lifestyles, addressing key risk factors such as diet, physical activity, and smoking. It is particularly relevant in managing chronic conditions like T2DM. Frequency distributions, percentages, means, and medians were calculated for categorical and continuous variables. Cross-tabulations and chi-square tests explored relationships between key variables, such as ease of access and overall satisfaction.

The study protocol was approved by the University of Galway Ethics Committee. Informed consent was obtained from all participants, who were assured of the confidentiality of their responses and their right to withdraw from the study at any time without affecting their care.

## Results

In total, 40 PWD completed the study, with a slight majority being male (55%) and a mean age of 60.2 ( $\pm 10.1$ ) years. The study cohort displayed a multicultural composition, with 30% of participants coming from countries outside of Ireland, including China (10%), Nigeria (5%), and 15% from seven additional countries. The majority of respondents reported holding a Medical Card (50.0%), followed by those with a GP Visit Card (22.5%).

Self-reported satisfaction with the care PWD received for their T2DM was high, with 70% of respondents replying 'very satisfied' and 27.5% 'satisfied'. Regarding future care preferences, the majority (85%) of patients expressed a preference for the future care of their T2DM to be located within the community (Table 1).

*Table 1: Participant preferences for location of future diabetes care*

Future T2DM Care	Frequency	Percent
GP Only	6	15.0
GP with access to a community specialist hub	28	70.0
Diabetes Clinics in the Hospital	6	15.0
Total	40	100.0

Cleanliness of the hub was rated positively, with 82.5% of patients describing it as excellent. As community-based care involves patients travelling to new locations for their healthcare we also explored the patient perspective with regards to accessing the hub. In total, access to the DNW hub was generally reported as easy or very easy by 80% of patients.

Interestingly, a chi-square test indicated no significant association between ease of access to the hub and overall patient satisfaction, with a Pearson Chi-Square value of 6.672 and a p-value of 0.352. A further correlation analysis revealed no significant relationship between wait times in the hub on the day of appointment and overall satisfaction, as evidenced by a Pearson correlation coefficient of 0.190 and a p-value of 0.241.

In terms of opportunistic interventions around other aspects of healthcare as part of the MECC initiative, patients reported variable rates of discussions around the topics of mental health, smoking, weight management, physical activity, illicit drug use and alcohol consumption (Table 2). Patients answered 'not applicable' if they felt the topic was not relevant to them. Within this context the most frequently discussed topic was nutritional health (82.5%) and the least frequently discussed topic was illicit drug use (37.5%)

*Table 2: 'MECC' Topics Discussed as reported by participants*

Topics Discussed	Yes (%)	No (%)	Not Applicable (%)
Mental Health	62.5	20	17.5
Smoking	42.5	7.5	50
Drug Use	37.5	2.5	60
Losing Weight	57.5	7.5	35
Nutrition	82.5	2.5	15
Physical Activity	87.5	2.5	10
Alcohol	52.5	5	42.5

Finally, with regards to the involvement of patients in their own care 82.5% of respondents indicated that they had been involved in their T2DM care planning, 92.5% had been asked about their treatment goals and 55% of patients reported received a copy of their treatment plan.

## Discussion

The findings from this study provide the first insights into community-based T2DM care in Ireland, as delivered by the specialist team within the integrated care centre and as part of ECC. The primary research question focused on understanding patient satisfaction and involvement in diabetes care at the DNW hub. The results reveal a high level of satisfaction, and while the sample size is limited and from a single centre only, these findings suggest that T2DM care in the hub appears to be well-received by patients. Of potentially greater importance however, is the finding that 85% of respondents, having experienced T2DM care in the community hub, expressed a preference for continued management of their T2DM within the community as opposed to the hospital. While these findings are novel for ECC and Ireland, it is notable that they do align with some of the broader literature on CDM. The 2015 report on CDM in Ireland, highlighted a general preference among stakeholders (which included patient advocacy groups but not individual patients) for integrating chronic disease management within primary care<sup>12</sup>. We submit that the alignment of our patient-reported findings with the 2015 report further supports the current direction of T2DM management as part of Sláintecare.

An additional key finding of the present study is that 82.5% of patients were asked for their ideas and 92.5% were asked about their goals during consultations. This is in keeping with the

principles of person-centred care and the involvement of the patient as the key stakeholder in their own healthcare<sup>13</sup>. Our findings contrast with previous research indicating that patient involvement in healthcare decisions in this manner is typically limited<sup>12</sup>, and our research does not indicate whether our findings were unique to our centre or indicative of a broader change in practice in this regard.

With regards to opportunistic healthcare interventions, this study also assessed the implementation of the 'Making Every Contact Count' (MECC) initiative from the perspective of the patient. While subjects reported that certain aspects of MECC had been discussed with relatively high frequency (particularly smoking and alcohol use), our results also indicated room for improvement in discussion around mental health and drug use. This suggests a need for a broader and more consistent application of MECC principles, particularly regarding mental health. Future research could also focus on integrating mental health discussions into routine diabetes care to enhance the overall effectiveness of MECC and support patient health and well-being.

Several methodological limitations should be acknowledged. Potential sampling bias may have resulted in an overrepresentation of more engaged or satisfied patients. Self-reported data introduces biases such as recall and social desirability bias, and the cross-sectional design limits the ability to infer causality. PWD who experienced difficulties accessing the hub, for example, may have been less likely to participate, leading to a potential underrepresentation. The study's setting within a single specialized ambulatory centre may limit the generalizability of the findings to other contexts. Non-response bias and ethical constraints also impacted the study, limiting the depth of insights into sensitive issues.

Although detailed demographics on diabetes indices, such as HbA1c levels, were not collected in this study, their inclusion in future research would add valuable insights into the complexity and clinical profiles of individuals attending the service.

To conclude, the present study demonstrates high levels of patient satisfaction with diabetes care at the DNW hub, along with a stated preference for T2DM in the community in the future. These findings therefore can be seen to be in support of ECC for T2DM as it is currently being implemented. Future research should explore the community-based patient experience over longer periods, with larger sample size and incorporate direct comparisons across multiple hubs. Robust evidence will help refine clinical practices and contribute to the development of more effective, patient-focused healthcare strategies at both national and local level as novel models of chronic disease care continue to be implemented across Ireland.

**Declarations of Conflicts of Interest:**

None declared.

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## Appendices:

### Appendix 1 - Questionnaire

Section	Question	Response Options
<b>Your Details</b>	What is your age?	_____ years old
	What is your gender?	<input type="checkbox"/> Female <input type="checkbox"/> Male <input type="checkbox"/> Other
	Do you have any of the following? (tick all that apply)	<input type="checkbox"/> Medical Card <input type="checkbox"/> GP Visit Card <input type="checkbox"/> Long Term Illness Card <input type="checkbox"/> None
	What is your country of origin?	<input type="checkbox"/> Ireland <input type="checkbox"/> Poland <input type="checkbox"/> United Kingdom <input type="checkbox"/> India <input type="checkbox"/> Romania <input type="checkbox"/> Other
	If Other, which country?	_____
	Who has helped you care for your diabetes before now? (tick all that apply)	<input type="checkbox"/> GP <input type="checkbox"/> Hospital Diabetes Service <input type="checkbox"/> Other (specify): _____
<b>Access to Service</b>	How would you describe the ease of getting to the hub?	<input type="checkbox"/> Very easy <input type="checkbox"/> Easy <input type="checkbox"/> Difficult <input type="checkbox"/> Very difficult
	Once you were at the hub, how easy was it to navigate the building during your visit?	<input type="checkbox"/> Very easy <input type="checkbox"/> Easy <input type="checkbox"/> Difficult <input type="checkbox"/> Very difficult
	On a scale from 1 to 5, how would you rate the overall cleanliness of the building and facilities?	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5



	<i>How long, in total, did you spend waiting to interact with healthcare professionals today?</i>	<input type="checkbox"/> Less than 15 mins <input type="checkbox"/> 15–30 mins <input type="checkbox"/> 31–45 mins <input type="checkbox"/> Over 45 mins
	<i>Did healthcare professionals wash or clean their hands before contact?</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No contact <input type="checkbox"/> Can't recall
	<i>Did healthcare professionals introduce themselves to you?</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Already known
	<i>Were you treated with kindness and respect during your visit?</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<i>Were you satisfied with the level of privacy provided during your appointment?</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<i>Was the advice and information provided by healthcare professionals easy to understand?</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
<b>Cuan Aoibheann Service</b>	<i>Which professionals did you see today?</i>	<input type="checkbox"/> Clinical Nurse Specialist <input type="checkbox"/> Dietitian <input type="checkbox"/> Podiatrist <input type="checkbox"/> Endocrinologist
	<i>Do you feel you know more about managing your diabetes after today's visit?</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	<i>How important is knowledge about your condition for managing your diabetes?</i>	<input type="checkbox"/> Not important <input type="checkbox"/> A little important <input type="checkbox"/> Important <input type="checkbox"/> Very important <input type="checkbox"/> Extremely important
	<i>After today's visit, do you feel your blood glucose levels are well-controlled?</i>	<input type="checkbox"/> Not controlled <input type="checkbox"/> Moderately controlled <input type="checkbox"/> Well controlled
	<i>How satisfied are you with the care you received today?</i>	<input type="checkbox"/> Not at all satisfied <input type="checkbox"/> Somewhat satisfied <input type="checkbox"/> Satisfied <input type="checkbox"/> Very satisfied
<b>Care Plan Evaluation</b>	<i>For each question, tick the appropriate box:</i>	<i>Yes / No / Not Applicable</i>
	<i>- I was asked for my ideas when making a treatment plan.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	<i>- I was given choices about treatment to think about.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	<i>- I was asked to talk about problems with my medicines or their effects.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	<i>- I was satisfied that my care was well-organized.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	<i>- I was asked to discuss my goals for managing my condition.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	<i>- I was given a copy of my treatment plan.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable

	- I was encouraged to attend a group/class to help me cope with diabetes.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	- My values, beliefs, and traditions were considered when treatments were recommended.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	- I was helped to plan ahead for difficult times in managing my condition.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	- I was asked how diabetes affects my life.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	- I was provided with a follow-up plan for my future care.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	Did you receive advice or information today about:	
	- Quitting smoking	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	- Losing weight	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	- Nutrition and healthy eating	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	- Physical activity	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	- Alcohol use	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	- Mental health and wellbeing	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
	- Drug use	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
<b>Final Question</b>	Where should your diabetes be managed in the future?	<input type="checkbox"/> GP only <input type="checkbox"/> GP with access to a community specialist hub <input type="checkbox"/> Diabetes Clinics in the hospital
	Additional Comments:	<hr/> <hr/> <hr/> <hr/>