PRV / PUB

Chronic Disease

Audit Report Version 1.2

Chronic disease management in Irish General Practice (2019 vs 2024): A retrospective audit of public and private patient records

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Declaration: This clinician-led audit of anonymised patient data received ethical approval from Irish College of GPs Research Ethics Committee (reference number ICGP_REC_2025_2862) and was completed with financial support for participating practices from the HSE.

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Key Messages:

Structured CDM reviews improve care quality

- Public patients enrolled in the HSE's CDM programme showed substantial gains in clinical monitoring and outcomes (BP, LDL, HbA1c), despite being prescribed more medicines and having more chronic conditions than private patients.

Private patients remain under-monitored

- While private patients showed some improvements, persistent data gaps and lack of structured templates limited monitoring and outcome gains, raising concerns about equity in chronic disease care.

Structured care may reduce unplanned utilisation

- The public cohort had smaller increases in ED use, fewer inpatient stays, and reductions in unscheduled GP and out-of-hours visits, suggesting structured CDM may reduce reliance on urgent or reactive care.

EMRs enable quality improvement

- Near-universal monitoring and measurable outcome improvements among public patients demonstrate the value of structured EMR templates and consistent coding in supporting GP-led audit and care planning.

Ireland's two-tier system drives divergence

- As CDM continues to expand, inequities in care visibility, structure, and outcomes between public and private patients are likely to widen unless structured supports are extended across both cohorts.

1. Background

Chronic diseases such as diabetes, cardiovascular disease, asthma and chronic obstructive pulmonary disease (COPD) pose a major burden on Ireland's health service, accounting for a substantial proportion of morbidity, mortality, and healthcare resource use [1,2]. In 2020 the Health Service Executive (HSE) launched the Structured Chronic Disease Management (CDM) programme as part of wider Enhanced Community Care (ECC) initiatives. These initiatives build on the core principles of Sláintecare, aiming to shift more care into our communities [3] as rising healthcare demands of our growing and ageing population risk overwhelming existing capacity [4]. Strengthening upstream primary care has the potential to improve patient health, reduce avoidable hospitalisations and total system costs [5,6].

The CDM programme provides public patients with structured, guideline-based chronic disease care within general practice [7], and early evidence suggests that CDM is yielding positive impacts for qualifying patients [8,9]. However, private patients, who pay out of pocket for GP services, are currently ineligible for the programme. The CDM programme has scaled rapidly, with over 648,000 structured treatment programme reviews completed in 2024 [10]. While early indicators suggest that the programme may reduce reliance on hospitals [9], no comprehensive audit has yet assessed the impact of the CDM programme on chronic disease management for public and private patients attending general practice. Understanding the real-world impact of CDM on patient outcomes and healthcare utilisation is critical to informing policy decisions about the programme's future direction. This study aims to address that evidence gap through a multi-site retrospective audit comparing public and private patient care in 2019 (pre-CDM) and 2024 (post-CDM).

The audit focuses on patients aged 18-69yrs with a CDM-relevant chronic disease. Of note, CDM is available to all public patients aged 18yrs and over with one or more qualifying conditions and all patients aged 70yrs and over are eligible for free public GP care (and thus CDM enrolment, if clinically appropriate). A range of clinical indicators and patterns of healthcare utilisation across public and private patient cohorts are described, thus providing the first such comparative dataset at national level across all six HSE regions.

2. Methods

2.1 Setting and recruitment

A purposive sample of clinics distributed nationally were invited to participate in this project. GPs were contacted via email using Irish College of GPs networks and the clinical leads group.

GPs were asked to return data on 25 adult patients aged between 18-69yrs from their practice: 15 public patients (GMS or DVC) and 10 private patients. Eligible patients needed to have one or more existing coded diagnoses shown in **Table 1**, and public patients needed to be enrolled in the CDM programme to be included in the data return.

***Table 1**- Relevant ICD-10 / ICPC-2*

	ICD-10 code	ICPC-2 code
T2DM	e11	t90
COPD	j44	r95
Asthma	j45	r96
IHD	i25	k76
A Fib	i48	k78
Heart Failure	i50	k77
Stroke	i63	k90
TIA	G45	k89

An instructions document was circulated to participating GPs, demonstrating how to use standard reporting tools to generate the relevant patient lists. These lists are automatically produced by GP EMR systems in alphabetical order, which provides a more unbiased sequence than date order (which would preferentially select patients enrolled earliest, potentially several years ago). GPs were instructed to work through the alphabetical lists sequentially, thereby minimising selection bias. The Data items shown below were then entered by the participating GPs in a pre-populated Excel file. Patient age range 18-69yrs was chosen to ensure adequate representation from private patients as there is automatic entitlement for public GP care when patients reach 70yrs of age and to ensure public and private groups would be age-matched.

2.2 Data items

For each patient, the following data were extracted, for both 2019 (pre-CDM) and 2024:

- Patient factors: age, gender, eligibility (GMS/DVC/Private), coded conditions, number of regular medicines
- Chronic disease care metrics, including:
    - Blood Pressure, ECG use
    - BMI
    - Blood tests (LDL-cholesterol, HbA1c values)
    - Foot check
- Healthcare utilisation, including:
    - GP utilisation, including dates of first 3 CDM reviews (if relevant)
    - GP out-of-hours (OOH) visits
    - Emergency Department (ED) attendances
    - Inpatient admissions
    - Private consultant visits (CDM conditions)

This was a pragmatic, clinician-led audit to identify potential disparities in visitation, monitoring and clinical metrics between patient groups.

No statistical adjustment was made for the fact that patients were five years older in 2024.

2.3 Sample size

A power calculation was conducted to ensure the study was adequately powered to detect clinically meaningful differences between timepoints. Specifically, the calculation aimed to detect a reduction in public patients' use of general practice services for unscheduled chronic disease-related care, as well as changes in blood pressure control rates over time. This yielded a minimum required sample size of 375 patients.

3. Results

3.1 Geography & data returns

Seventeen GPs distributed nationally participated in this audit, each reviewing the records of 25 adult patients aged between 18-69yrs from their practice. **Figure 1** shows a geographic breakdown of returns.

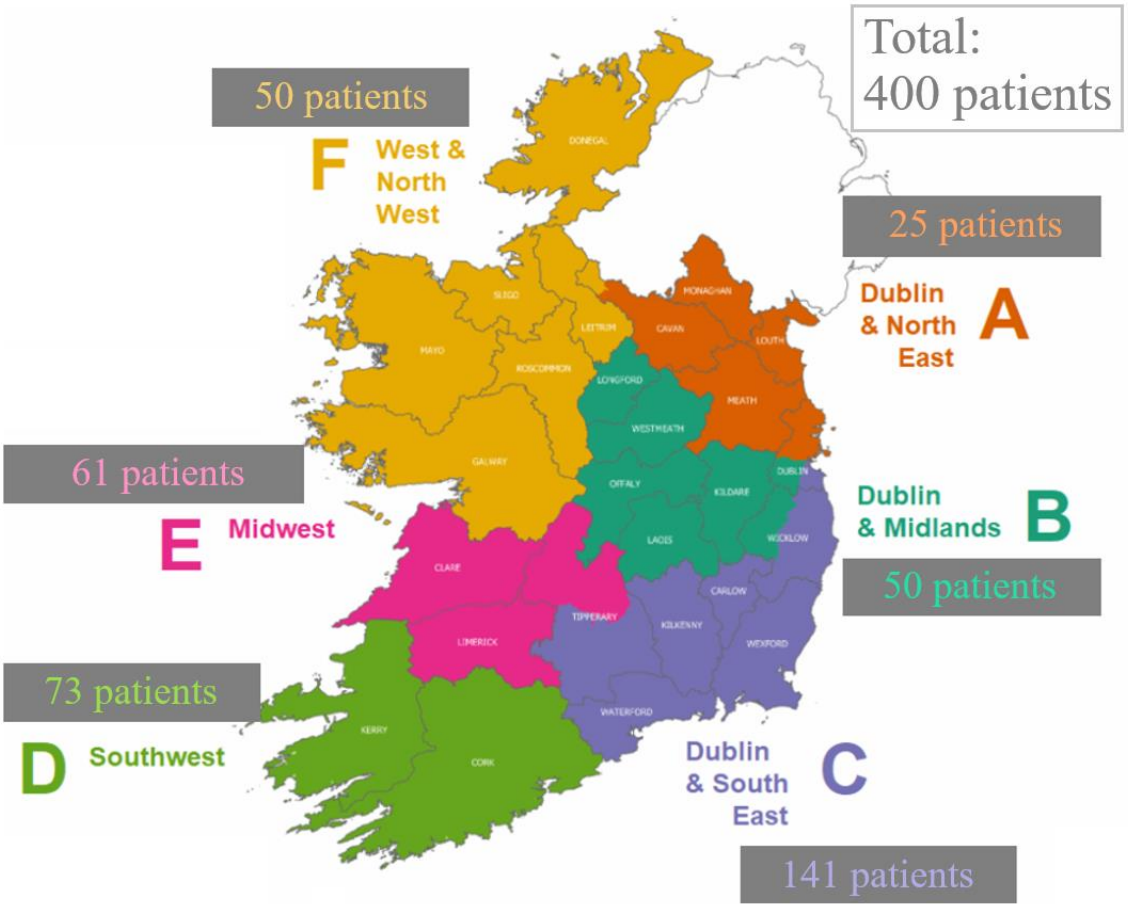

***Figure 1**- Returns from GPs by HSE Health Region*

Data from a total of 400 patient records were returned by participating GPs during the period from June to July 2025. These data describe the chronic disease-related metrics and healthcare setting visitation data for 230 public and 170 private patients in 2019 and 2024. Collecting EMR data at least five months after the end of 2024 was important to allow for delays in correspondence, such as hospital letters detailing emergency department visits or inpatient stays, reaching GP clinics.

3.2 Patient characteristics (eligibility status, age, gender, regular medications)

Of the 400 patients included in the audit, 230 were public patients, the majority of whom held GMS cards (n = 214). Only a small subset were eligible for public GP services under the Doctor Visit Card (DVC) scheme (n = 16). While DVCs are common among those aged 70yrs plus (due to universal entitlement for this age group regardless of financial means), they are much less frequently granted to younger adults. Instead, public patients under 70yrs are more likely to hold a GMS card due to chronic illness and/or socioeconomic disadvantage. This pattern is evident in national data: among patients aged 16–69 years, the ratio of GMS to DVC holders is approximately 5.5 to 1 [10]. The remaining 170 patients comprised the private cohort.

Given the age-related associations with chronic disease, understandably approximately three-quarters of patients in both cohorts were over the age of 50yrs, with a median age of 58 yrs in the public cohort and 57 yrs in the private cohort (see **Figure 2**).

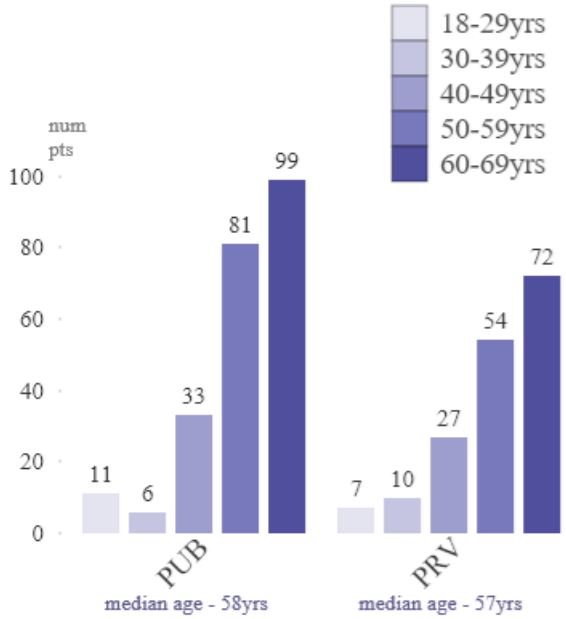

***Figure 2**- Age Spread in Public & Private Cohorts*

As demonstrated in **Figure 3,** female patients were underrepresented in the private cohort (60 of 170), while the public group had a near-even gender split (111 female, 119 male).

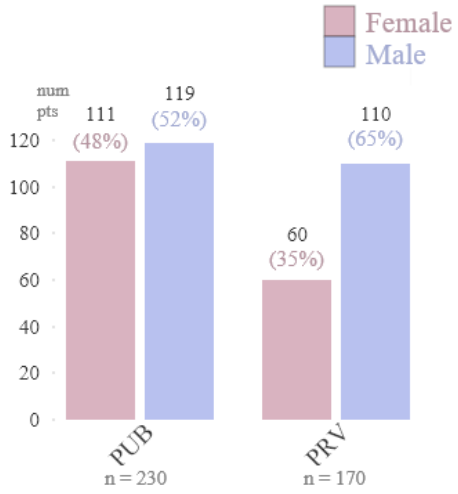

***Figure 3**- Gender split in Public & Private Cohorts*

The median number of (current) regular medications was eight for public patients and five for private patients, indicating a higher treatment burden among the public cohort (see **Figure 4**). This difference remained consistent across genders, with both male and female public patients having a median of eight medications, and both male and female private patients having a median of five regular medications currently prescribed by their GP.

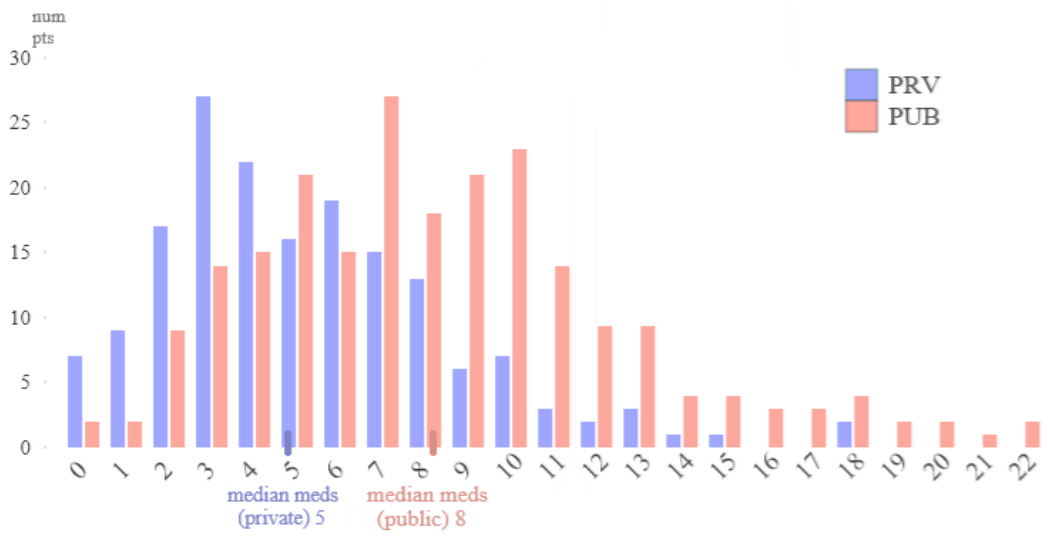

***Figure 4**- Number of regular medicines in Public & Private Cohorts*

3.3 Patient characteristics (chronic disease groupings)

This audit assessed the number of chronic disease groupings per patient, based on the three areas targeted by the HSE's Structured Chronic Disease Management (CDM) programme:

- Diabetes Mellitus
- Cardiovascular System (CVS) disease: includes IHD, heart failure, atrial fibrillation, stroke,TIA
- Chronic Respiratory Disease: asthma or COPD

Each grouping was counted once per patient, regardless of how many diagnoses fell within a category (e.g. both IHD and heart failure counted as one CVD grouping). The maximum condition count was thus capped at three. While this may understate the true burden for some patients, it allowed for consistent comparison by eligibility and gender.

Overall Distribution

Across the 400 patients:

- 78% (n = 310) had one condition grouping
- 21% (n = 82) had two
- 2% (n = 8) had all three

These distributions are broadly in line with national CDM reporting, where 65-91% of patients aged 18-74yrs have a single qualifying condition (multimorbidity rates increase with age) [11]. Mean condition count for Public patients (n = 230) was 1.30, while Private patients (n = 170) had on average 1.17 condition groupings. This modest difference is consistent with population trends showing greater multimorbidity in socioeconomically disadvantaged groups.

Gender Differences in Multimorbidity

When stratified, public male patients had 1.39 condition groupings, compared to the private male average of 1.19. For females, public patients had 1.21 condition groupings, compared to 1.13 of Private females.

These figures suggest male patients were more likely to be recorded with multiple chronic conditions. However, across both genders, public patients consistently had higher mean condition counts.

3.4 Clinical measurements – Monitoring Differences

As shown in **Figure 5**, between 2019 and 2024, public patients showed marked increases in the recording of clinical indicators, consistent with implementation of structured CDM reviews. Recording rates for core metrics like BP and BMI approached near-universal levels by 2024, and significant gains were also seen in more specialised indicators (e.g. foot checks, LDL, ECG).

While private patients also had more clinical measurements per patient recorded in 2024 than in 2019, absolute rates for items such as foot checks, ECG and ABPM remained low. On the other hand, blood pressure readings and bloods monitoring were frequently recorded for private patients, which potentially signifies which elements of care private patients prioritise when attending their GP.

Of note, designated recording fields for items like foot check within the GP EMR are not readily available in current EMR versions, as private patient files do not have access to the CDM module within the GP EMR. In addition, routine private consultations are shaped by the patient's agenda, and not a structured proforma like CDM.

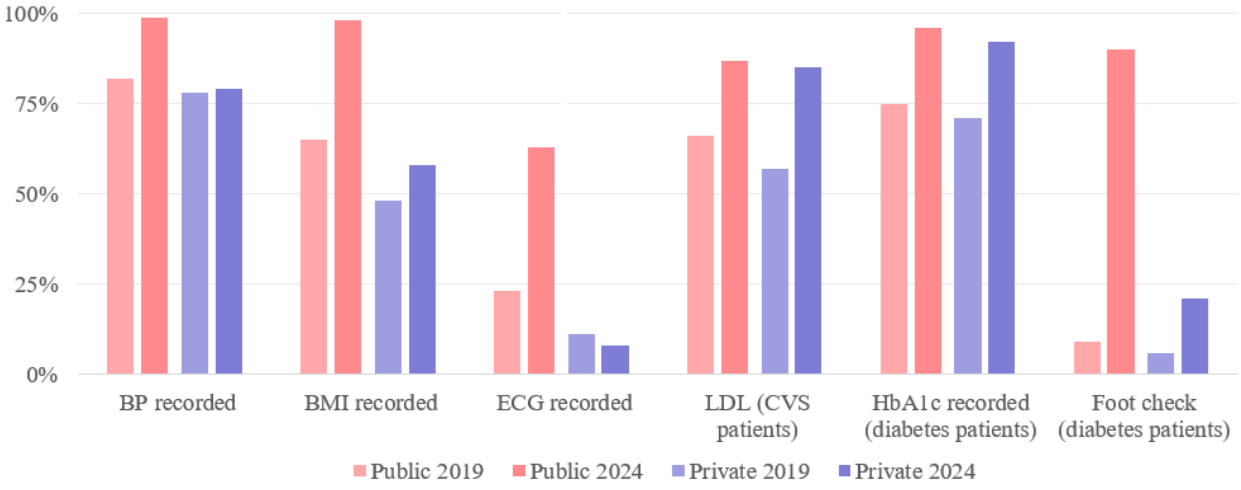

***Figure 5**- Changes in Monitoring over Audit Period*

Trends Overview:

- For Public (PUB) Patients there were improvements across the board, with particularly striking improvements in structured, condition-specific checks (e.g. BMI, foot exam):
    - BP recorded: 82% → 99%
    - BMI: 65% → 98%
    - ECG: 23% → 63%
    - LDL for patients for CVS disease: 66% → 87% (Overall LDL: 55% → 78%)
    - Foot check for patients with diabetes: 9% → 90%

For Private (PRV) Patients slight or modest increases were observed:

- BP recorded: 78% → 79%
- BMI: 48% → 58%
- ECG: 11% → 8%
- LDL for patients for CVS disease: 57% → 85% (Overall LDL: 45% → 65%)
- Foot check for patients with diabetes: 6% → 21%

Structured monitoring under CDM has led to large improvements in data recording for public patients, while private patients have had only partial or inconsistent increases in monitoring, likely due to consultation dynamics and absence of systemic incentives or frameworks.

3.5 Clinical measurements section - Results

Across the quantitative clinical metrics examined, namely systolic and diastolic blood pressure, BMI, LDL cholesterol (for patients with cardiovascular disease and/or diabetes) and HbA1c (for patients with diabetes)- public patients enrolled in the CDM programme showed greater improvements than private patients over the five-year period. Public patients had higher values for average glycaemic control initially and they had similar or better average values for diastolic and systolic BP and LDL as a starting point.

As outlined in Section 3.4, it is important to note that there are significant data gaps when interpreting the following subsections- particularly for the private patient cohort. Nonetheless, as shown in **Figure 5**, recording was consistently strong for public patients and values were available for at least half of private patients across all metrics examined in 2024, providing a meaningful sample (i.e. > 85 of the 170 private patients) from which to draw indicative insights.

The following subsections take each of the following clinical metrics recorded from 2019 and 2024 GP EMR data in turn:

- Systolic blood pressure (all patients)
- Diastolic blood pressure (all patients)
- BMI (all patients)
- LDL cholesterol (CVS disease)
- HbA1c (Diabetes)

3.5.1 Systolic Blood Pressure

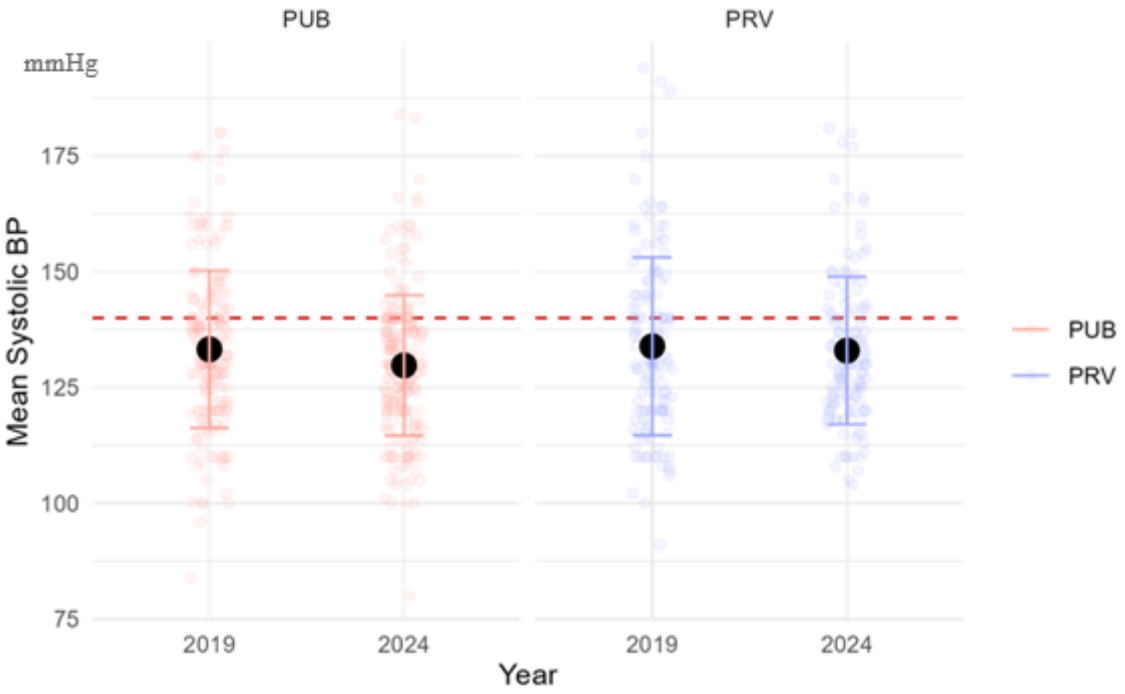

***Figure 6**- Mean Systolic BP over time and by eligibility*

In 2019, public and private patients had very similar mean systolic blood pressure values (133.3mmHg PUB vs 133.9mmHg PRV). The proportion of patients meeting the target of <140 mmHg was also comparable (69% PUB vs 64% PRV).

Examination of 2024 audit data shows that both groups showed improvement in mean systolic BP, with greater improvements seen for the public cohort, where mean systolic BP decreased to 129.8 mmHg, a 3.5mmHg drop. Private patients saw a comparatively smaller reduction of 0.9mmHg to 133.0 mmHg.

The proportion under the 140mmHg threshold rose to 76% (PUB) and 71% (PRV). Observed distributions suggest reduced variability in the public group, which is in keeping with more consistent BP control and fewer outliers.

3.5.2 Diastolic Blood Pressure

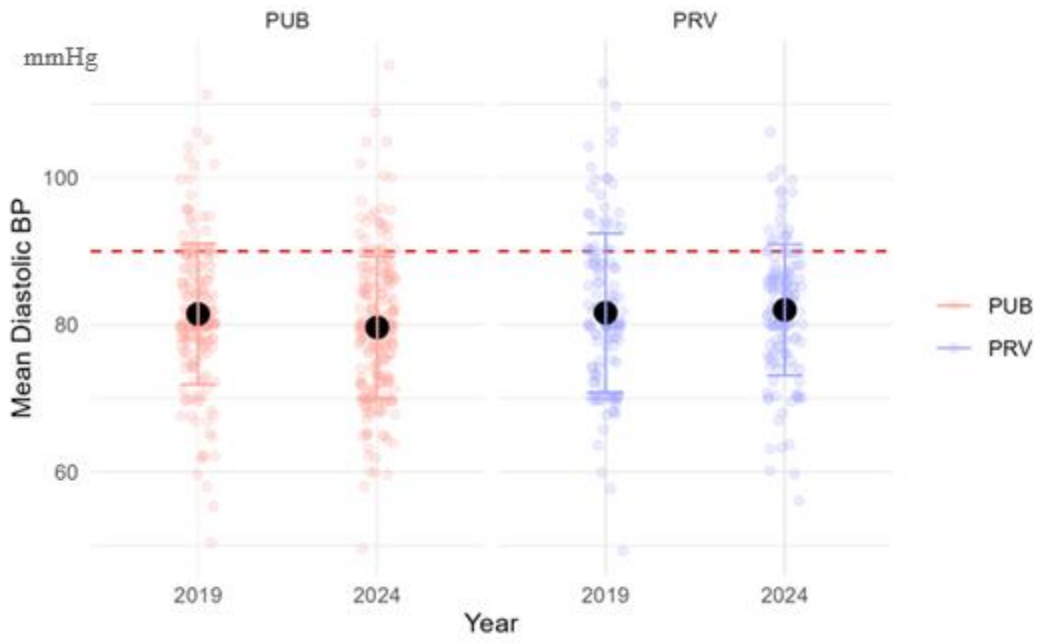

***Figure 7**- Mean Diastolic BP over time and by eligibility*

In 2019, public and private patients had very similar mean diastolic BP (~81.5 mmHg), and similar proportions below the 90mmHg target (80% PUB, 78% PRV). Between then and 2024, public patients showed a 1.8mmHg decrease in mean DBP from 81.5 → 79.7 mmHg, with the proportion below target rising to 85%. Private patients remained relatively stable in mean DBP (81.6 → 82.0 mmHg) but still showed a small increase in the percentage with diastolic BP under 90mmHg (78% → 81%).

Thus, public patients showed slightly greater improvement in average DBP and target attainment.

3.5.3 BMI

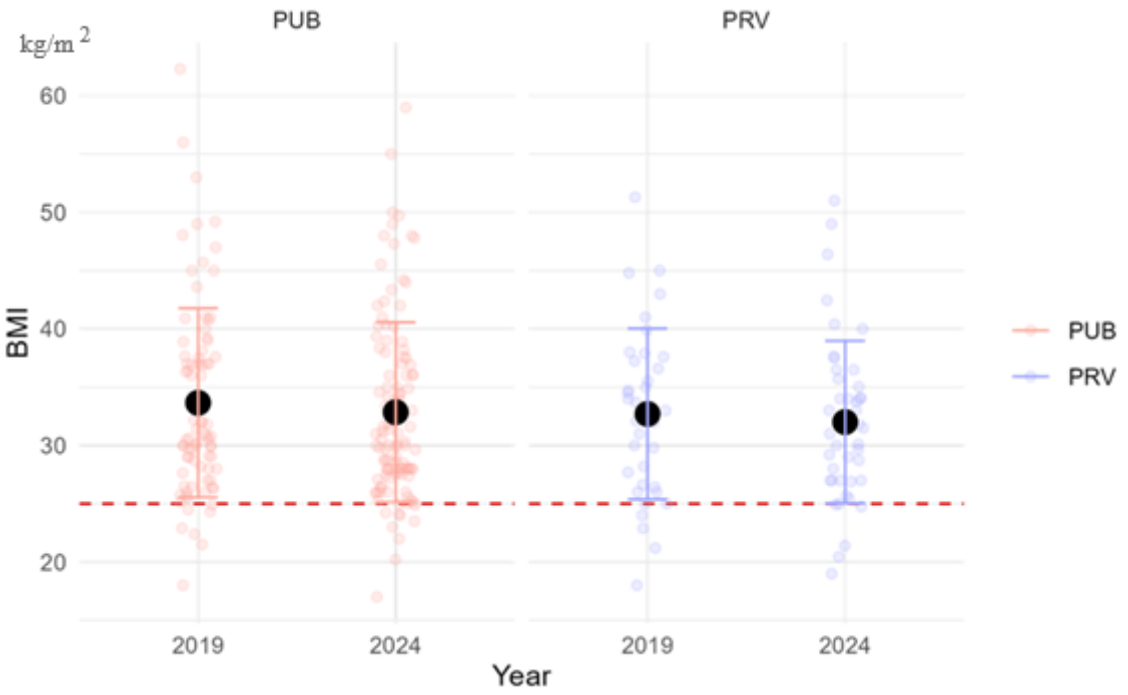

***Figure 8**- Mean BMI over time and by eligibility*

In 2019, average BMI among public and private patients with a recorded value was similar (33.7kg/m² PUB vs 32.7kg/m² PRV). The proportion of patients below the normal weight threshold (<25kg/m²) was low in both groups (8% PUB, 11% PRV). From 2019 to 2024, mean BMI decreased slightly in both groups (to 32.9 PUB and 32.0 PRV).

The proportion below the target threshold remained low and largely unchanged (8% PUB, 11% PRV in 2024). There was little change in BMI over time in either group. Public and private patients both maintained relatively high mean BMI levels and there were only a small minority were within the normal BMI range at either timepoint.

3.5.4 LDL Cholesterol

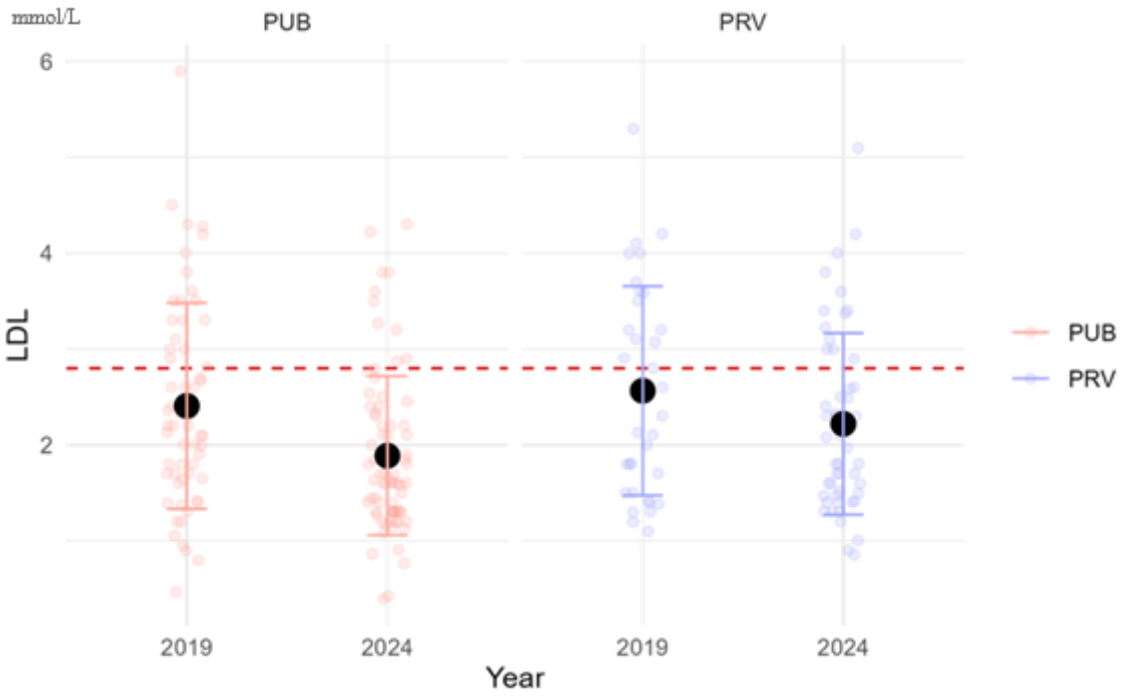

***Figure 9**- Mean LDL cholesterol over time and by eligibility*

In 2019, private patients with CVS disease had slightly higher mean LDL (2.56mmol/L) compared to public patients (2.41), and a lower proportion met the <2.8mmol/L target (56% vs 68%).

Public patients showed a notable reduction of 0.52mmol/L in mean LDL (2.41 → 1.89), with percentage meeting target rising from 68% to 86%. Private patients also improved, but to a lesser degree. Private patient mean LDL fell from 2.56 → 2.22, and % in target increased from 56% to 74%.

While sample sizes are modest, both groups improved over time, with public patients appearing to have benefitted more substantially, consistent with targeted CDM care. The mean shift and increased target attainment among public patients suggests more intensive lipid management under CDM.

3.5.5 HbA1c

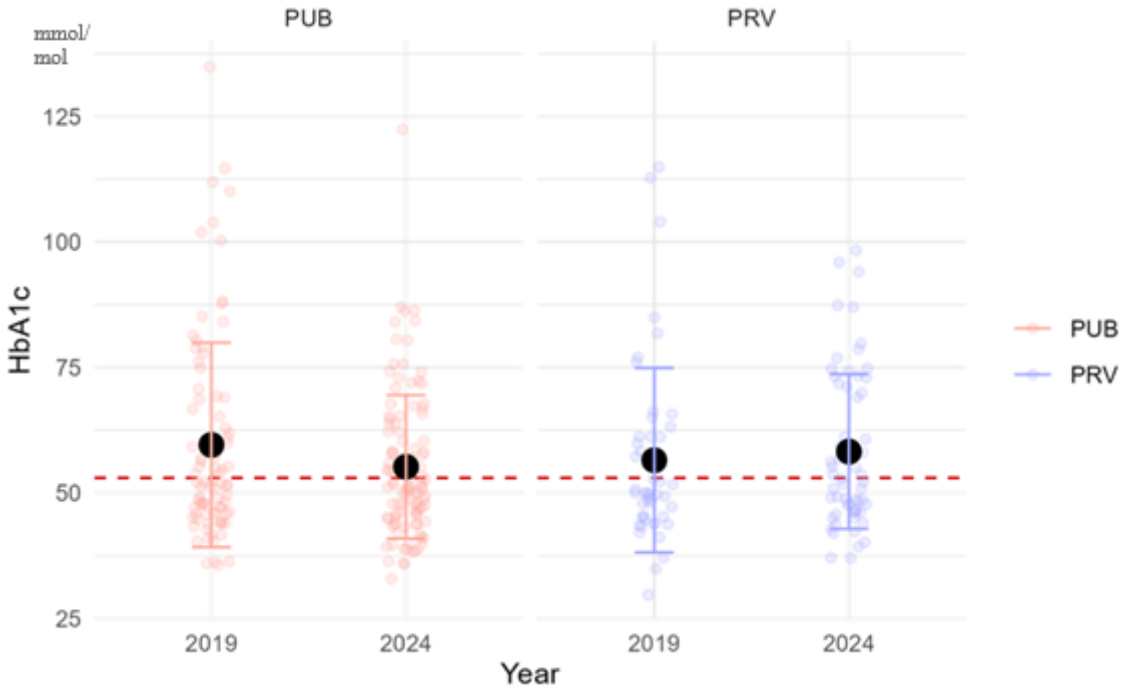

***Figure 10**- Mean HbA1c over time and by eligibility*

In 2019, private patients with diabetes mellitus had slightly better average HbA1c (56.5 mmol/mol vs 59.6 PUB), and a higher proportion meeting the target of <53 mmol/mol (60% PRV vs 52% PUB).

By 2024, public patients glycaemic control improved, with a reduction of 4.4mmol/mol seen in mean HbA1c (from 59.6 → 55.2) and a small improvement in percentage under target (52% → 53%). Private patients glycaemic control deteriorated slightly on both measures. Mean HbA1c increased (56.5 → 58.2), and percentage under target dropped from 60% → 48%.

Thus, public patients with diabetes enrolled in CDM showed a small but favourable shift in glycaemic control, while private patients showed modest decline in glycaemic control over the same period.

3.6 GP utilisation - daytime and out-of-hours (OOH)

GPs recorded the number of all daytime GP visits in 2019 and 2024, whether or not these visits were related to each patient's specific chronic disease(s) and if they were unscheduled or scheduled (i.e. planned CDM visits). **Figure 11** shows that average total GP visits for the public patient cohort in 2019 was 6.1 visits per patient per year, whereas private patients visited the GP 3.0 times. GP attendance by the public cohort increased by 6% between 2019 and 2024, while the corresponding figure for the private cohort was 25%.

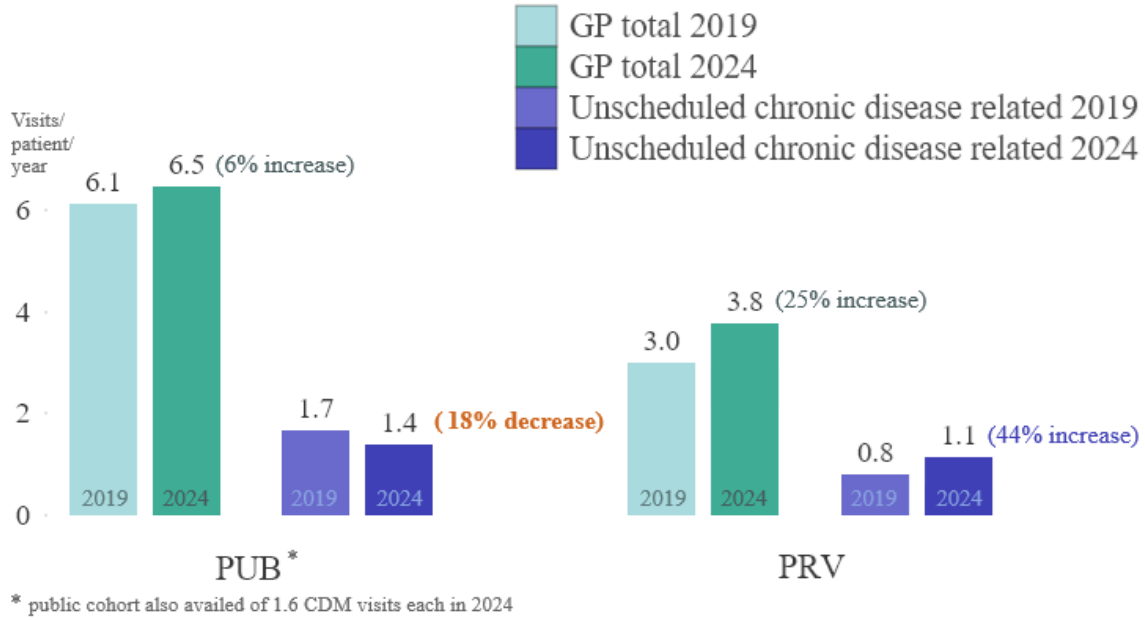

***Figure 11**- GP daytime service utilisation over time and by eligibility*

In 2019, there were on average 1.7 chronic disease-related unscheduled GP visits for the public cohort, which fell by 18% to 1.4 unscheduled visits in 2024. For the private cohort, unscheduled chronic disease-related attendances rose by 44% (from 0.8 visits in 2019 to 1.1 visits in 2024).

Of note, an average of 1.6 scheduled CDM visits are integrated within the 6.5 public cohort visits per patient in 2024. The structured and in-depth nature of these CDM visits likely helps offset what might otherwise be larger increases in overall and unscheduled care demands among public patients. This effect is underscored by the contrasting trends observed in the private cohort, where no such structured care programme exists.

Regarding OOH utilisation, as shown in **Figure 12**, public patients tended to attend more, with an average of 0.24 visits per patient in 2019. However, there was a 25% decrease in utilisation for public patients between 2019 and 2024, while the private cohort's utilisation increased by 22%.

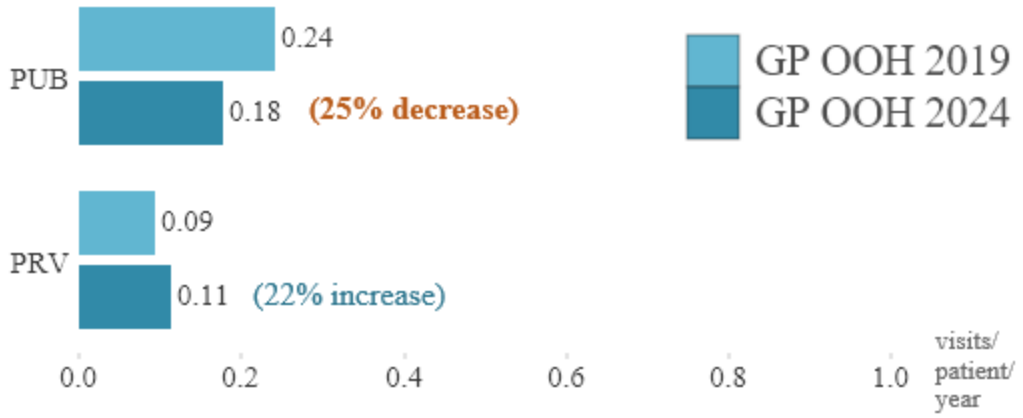

***Figure 12**- GP out-of-hours (OOH) service utilisation over time and by eligibility*

3.7 Public healthcare– emergency departments and inpatient stays

GPs provided data on emergency department (ED) visits and inpatient stays for both public and private patient cohorts in 2019 and 2024. Of note, use of private emergency departments or private hospitals for inpatient stays was outside the scope of this audit, which potentially underestimates overall healthcare utilisation.

As shown in **Figure 13**, overall ED utilisation and inpatient stay rates increased over the five-year period, with public patients again demonstrating higher baseline use. However, the relative increases over the audit period were considerably more pronounced among private patients.

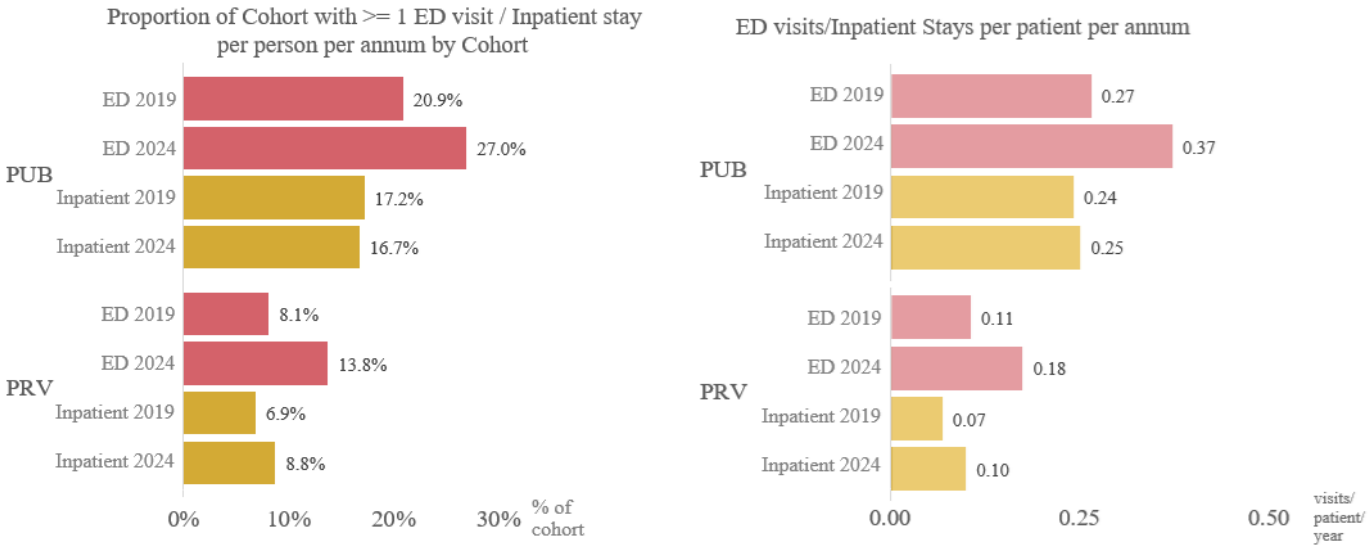

***Figure 13**- Public ED visits and Inpatient Stays over time and by eligibility*

As shown on the left-hand panel of **Figure 13**, 21% of public patients visited a public ED at least once in 2019, and this percentage rose to 27% in 2024. Corresponding figures for the private cohort were 8% in 2019 and 14% in 2024. Regarding inpatient stays, slightly fewer of the public cohort required admission in 2024 (17.2% versus 16.7%), while the percentage of private patients requiring at least one inpatient stay in a public hospital increased from 6.9 to 8.8%.

From the right-hand panel of **Figure 13**, in terms of visitation rates, public patients recorded an average of 0.27 ED visits per person in 2019, rising to 0.37 in 2024- a 37% increase. In contrast, private patients had 0.11 ED visits per person in 2019, increasing to 0.18 in 2024- a 64% rise. In terms of inpatient stays, public patients averaged 0.24 stays per person in 2019, with only a small observed increase to 0.25 in 2024 (4% increase). Meanwhile, private patients showed a larger relative increase- from 0.07 to 0.10 inpatient stays per person (43% increase).

3.8 Private consultant utilisation

GPs recorded where patients, both public and private, had documented evidence of attending a private consultant for chronic disease care in 2019 and 2024. **Figure 14** shows that although utilisation of private consultants was less commonplace for public patients, utilisation by all patients grew considerably in the five years between 2019 and 2024.

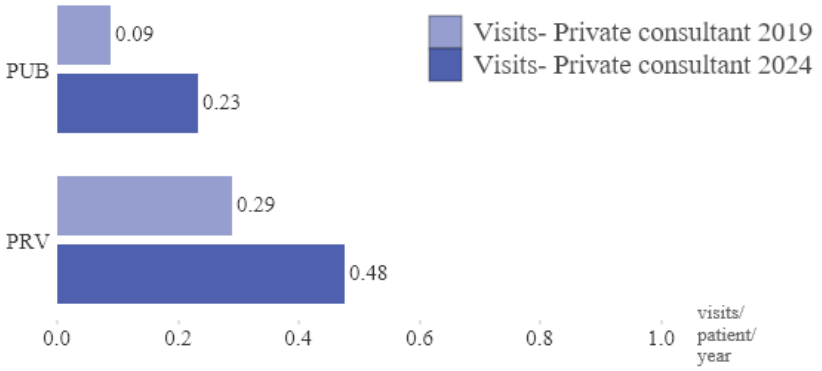

***Figure 14**- Private consultant attendance over time and by eligibility*

4. Discussion

This audit was designed to examine differences in chronic disease-related care, clinical outcomes, and healthcare utilisation between public and private patients in Irish general practice across two points in time (2019 and 2024). The data reflect significant developments in structured chronic disease management (CDM) in the public system and also shed light on emerging gaps in care for private patients, who do not currently benefit from the same programme infrastructure.

4.1 Improvements in Clinical Monitoring and Outcomes under CDM

A key finding of this audit is the strong association between enrolment in the public CDM programme and improvements in both the recording of clinical metrics and levels of control achieved. Public patients demonstrated near-universal levels of structured monitoring by 2024, with sharp increases in recorded BMI, BP, ECGs, LDL, and foot checks. In contrast, while private patients also showed some improvements, especially in blood pressure and lipid monitoring, progress was more limited, with continued low levels of recording for items like foot checks and ECGs.

These differences likely reflect the structured nature of CDM visits- underpinned by templates integrated into GP software systems and incentivised recording- compared with the more issue-focused nature of private consultations.

Improvements in clinical outcomes were more evident in the public cohort, despite that group being both more medically complex. Public patients were prescribed a median of eight regular medications (compared to five among private patients) and had higher multimorbidity across the audit period, particularly among males. Nevertheless, over the five-year period they demonstrated greater gains in key clinical measures: larger reductions in systolic blood pressure and LDL cholesterol, improvements in glycaemic

control, and more consistent attainment of clinical targets. That these gains were achieved in a more complex population, while also seeing lower relative increases in healthcare utilisation, reinforces the potential of CDM.

For example:

- Systolic BP fell by 3.5 mmHg for public patients, compared to 0.9 mmHg in private patients
- LDL cholesterol dropped more substantially among public patients with cardiovascular disease, with a 0.52mmol/L (22%) reduction. They also achieved higher target attainment rates by 2024 (86% vs 74%)
- HbA1c improved for public patients with diabetes (mean reduction of 4.4 mmol/mol), while control declined among private patients over the same period

The CDM programme appears to support not only better monitoring and treatment but also more effective disease control in a cohort with greater baseline burden of disease. This highlights the value of structured interventions in addressing both clinical outcomes and demand management in general practice. These shifts are clinically meaningful at a population level and are particularly notable given recent US and UK data showing declining diabetes control and slower recovery in care process delivery since the pandemic [12,13].

In contrast to these internationally observed trends, our audit demonstrates that structured CDM reviews in Irish general practice are associated with improved monitoring and better clinical outcomes in a more complex public patient cohort. This is heartening given the challenges facing the Irish healthcare system faces with an expanding and ageing population with rising rates of multimorbidity [4-8].

4.2 Healthcare Utilisation and the Impact of Structured Care

In addition to improvements in clinical metrics, the data also suggest that structured CDM care may influence broader patterns of healthcare utilisation, particularly in reducing unplanned care and managing demand for acute services. While public patients consistently had higher baseline utilisation of GP and public hospital services (as may expected given their socioeconomic and morbidity profiles), the relative increases in service use between 2019 and 2024 were consistently smaller in the public cohort. This pattern may reflect the stabilising effect of regular, proactive care delivered through the CDM programme.

Key utilisation-related findings from the audit include:

- Modest reduction in unscheduled GP visits: Public patients with chronic disease recorded a decrease (-18%) in unscheduled GP attendances, even as the cohort aged five years over the audit period. This suggests that planned CDM reviews reduce reliance on reactive care.
- Decrease in out-of-hours (OOH) GP visits: The public cohort saw a 25% decline in OOH GP utilisation, compared to a 22% increase among private patients- despite higher baseline usage in the public group. This further supports the role of structured daytime care in managing urgent care needs more effectively.
- Smaller relative increases in emergency department use: ED visits rose by 37% in the public cohort versus 64% in the private group. While both increases reflect broader healthcare trends, the smaller rise in the public group suggests potential mitigation via structured chronic disease management.
- Stable inpatient stay rates for public patients: Public patients recorded only a 4% increase in inpatient stay rates over the five-year period (0.24 → 0.25 stays per person), whereas private patients experienced a 43% increase (0.07 → 0.10). Maintaining near-stable admission rates in a multimorbid cohort, which had aged by five years during the audit period, is notable and may point to improved chronic disease control in the community.

These audit findings are consistent with national reporting on the impact of the CDM programme, including reduction in inpatient stays for chronic disease since introduction of CDM [8].

These findings highlight the potential of structured, proactive care to moderate demand on acute services, even in high-need populations. Conversely, the larger relative increases observed among private patients, who lack access to structured CDM, may signal emerging gaps in chronic disease support and raise important equity considerations for future service planning.

4.3 Implications for Private Patients and Equity of Care

The private cohort consistently demonstrated lower baseline rates of multimorbidity and treatment burden, which aligns with expected epidemiological trends in higher income groups. However, their relative increases in healthcare utilisation (e.g. GP visits, ED attendance, inpatient stays) were often larger than for the public cohort. Increased GP utilisation of GP services by private patients has been noted in recent Healthy Ireland data [2], and may indicate emerging unmet need, especially in the context of ageing and chronic disease progression.

For example, the private cohort saw a 64% increase in ED visits and a 43% increase in inpatient stays between 2019 and 2024, compared to smaller relative rises among public patients. These increases occurred despite private patients having, on average, fewer recorded medications and lower initial disease burden. The absence of a structured care framework like CDM may leave private patients without the same level of proactive monitoring and early intervention.

4.4 Implications for Policy and Practice

The findings support the conclusion that structured CDM in general practice- when adequately resourced and embedded- is associated with improved monitoring and better clinical outcomes across key chronic disease indicators. There is also emerging evidence that such structured care may help reduce unscheduled attendances by proactive care rather than reactive responses.

However, the data also raise important questions about how best to support private patients, who currently fall outside the CDM framework. This gap risks deepening inequities in chronic disease care delivery as Ireland's population continues to age and grow. The feasibility and impact of extending structured care or parallel supports to private patients deserves further exploration.

Strengths

- National coverage across health regions: Data were collected from GPs in each of the six HSE health regions, supporting geographic representativeness.
- Large, representative real-world dataset: Includes the full eligible population aged 18–69 years with a coded chronic disease from routine general practice, offering statistical power and enhancing generalisability to everyday clinical settings.
- Within-patient comparison: Each patient serves as their own comparator, minimising confounding and allowing clearer attribution of changes over time to the care process rather than inter-individual variability.
- Standardised, consistent data capture: CDM templates enable uniform coding and regular measurement intervals among public patients, improving data quality, reliability, and comparability over time and avoiding additional data collection burden.

- Longitudinal outcome tracking: Ability to follow patients across a five-year period may offer insights into sustained trends and the durability of changes in care and clinical outcomes.

Limitations

- Impact of ageing and natural disease progression: Auditing the same patients five years apart means that some observed changes may reflect the natural course of ageing or evolving disease burden, independent of care processes. No corrections for increased utilisation rates with age were applied.
- Data completeness and representativeness: Public patients enrolled in structured CDM had more complete and consistently coded datasets. In contrast, private patient records frequently lacked key clinical metrics and structured assessments, potentially under-representing care delivered outside formal templates and biasing comparisons between cohorts. Nonetheless, values were available for over half of private patients across all metrics, allowing for indicative trend analysis.
- Differences in care models and patient populations: Direct comparisons between public and private patients in Ireland are challenging. Public patients are, on average, older, more socioeconomically disadvantaged, and more medically complex. They engage more regularly with the healthcare system, reflecting both greater need and the absence of financial barriers to access. Private patients typically access care episodically and outside structured frameworks, limiting opportunities for comparable monitoring and follow-up. These structural differences should be kept in mind when interpreting comparative findings.
- Simplified condition grouping: Collapsing multiple diagnoses into three broad domains (diabetes, cardiovascular, respiratory) improves clarity and comparability but may understate the true complexity of multimorbidity within and across patients.
- Interpreting missing data: The absence of structured data entries—particularly in private patient records—should not be assumed to reflect absence of care. Some interventions may be documented solely in free-text notes or delivered outside EMR-coded formats.

- Incomplete picture of private sector activity: The audit did not include care provided through private hospitals or private emergency departments, which may lead to an underestimation of overall healthcare utilisation, among private patients in particular.

5. Conclusions

This audit demonstrates the tangible impact of the HSE's CDM programme and highlights the value of EMR data in evaluating chronic disease care within Irish general practice. Among public patients, incentivised CDM implementation has driven substantial improvements in recording, and more importantly, results.

Crucially, the audit shows that structured care may be associated not only with improved clinical indicators (e.g. BP, LDL, HbA1c), but also with stabilised or reduced reliance on unplanned healthcare services, particularly for the public patients with higher comorbidity rates and medication usage. Compared with private patients, the public cohort experienced smaller increases in ED and inpatient utilisation, a reduction in out-of-hours GP use, and a reduction in unscheduled chronic disease-related GP consultations- despite being five years older by 2024.

Although structured EMR data will never capture the full scope of general practice care, it provides vital insights into the performance and impact of chronic disease care over time. This audit also highlights a growing disparity in visibility, monitoring, and potentially outcomes between public and private patients.

To deliver chronic disease care equitably, expanding structured supports and digital infrastructure beyond the publicly funded cohort should be considered. Looking ahead, the sustainability of effective chronic disease management in Irish general practice will depend on continued investment in GP-led care, supported by EMR systems designed not only for clinical care, but also for quality improvement, audit, and system learning.

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