Multi-Morbidity Model of Care – Analysis to Evaluate Project Impact in South East London

Introduction

- ❑ The **Multi-Morbidity Model of Care (MMMoC) Programme** was rolled-out in participating South East London GPs to **address growing concerns** related to the **chronic kidney disease (CKD) population.**
- ❑ As a **new, patient-centred, integrated model** focused on **improving outcomes**, an **evaluation** was required to **assess impact** and **feasibility for system-wide adoption**.

Target Population

APL-renal tool assesses CKD risk of all EMIS records

Long-list At-risk patients for targeted optimisation	**Short-list** Complex cases requiring multi-specialty input	Does not meet long or short list criteria
BP, HbA1c management, medication review	Multidisciplinary team (MDT) review	

Methodology

Data Sources

Primary Care: Discovery dataset
Secondary Care: SUS Inpatients and Outpatients
Linked using **pseudonymised patient IDs** to create a single longitudinal dataset.

Patient Identification

Clinicians added project-specific **SNOMED codes** to **patient primary care records** at initial assessment.
QOF CKD Register used as **baseline population**.

Outcome Measures

Defined collaboratively with various SEL NHS teams.
Clinical Outcomes: CKD detections, blood pressure, HbA1c, medication prescribing.
Healthcare Utilisation: non-elective admissions, A&E attendances, outpatient attendances for cardiology, nephrology, diabetes (CND).

Project Comparisons

Patient-Level: Baseline CKD vs Long List vs Short List, compared across all outcome measures.
Population-Level: Participating practices vs non-participating practices compared across all outcome measures, plus CKD detections.

Aim

- ❑ To use **statistical methods** to determine if MMMoC **significantly improved clinical outcomes**, **optimised care** and **reduced hospital burden.**

Statistical Analysis

- ❑ Data for each outcome measure was extracted at two time points: **before** and **after onboarding**.
- ❑ **Difference** in measure values between time points were calculated.
- ❑ Indirect age-standardisation was applied to admissions and attendance rates to reflect age distribution differences between patient groups.
- ❑ Two Proportion Z-Tests were used to compare target and baseline populations and determine significant differences within 95% confidence intervals.
- ❑ Results validated by clinical colleagues against known trends.

Results

1. **CKD detections** in **participating sites increased 0.6% more** than in **non-participating sites**.
2. Proportion of **Long List** patients with **in control blood pressure (< 140/90) increased** by **2.4%**, compared to only **0.4% for baseline**.
3. **Non-elective hospital admissions dropped** from **20 to 7** per patient for Long List patients.
4. **CND outpatient attendances** dropped from **36 to 22** per **100 patients** for Short List patients.
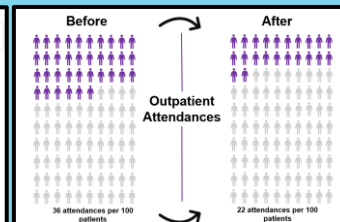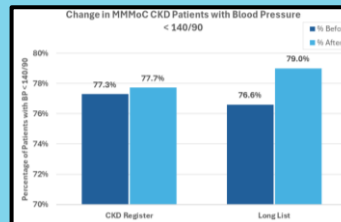
Conclusion

This analysis demonstrated the power of using **statistics** and **healthcare dataset linkage** to provide **real-world evidence** for the **impact of integrated health care models.**

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