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Calcium in CKD patients

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Background: Chronic kidney disease–mineral and bone disorder (CKD-MBD) significantly impacts morbidity and healthcare costs.

Purpose and Objectives: This audit assessed compliance with KDIGO/KDOQI guidelines for calcium management in CKD patients at Alexandria Main University Hospital.

Methods:

- Cycle 1 (Baseline): Retrospective review (n=24) identifying gaps in calcium control, patient education, and care plans.
- Cycle 2 (Post-Intervention): Prospective study (n=28) implementing structured education, dietary support, and medication adjustments.

Results: • Cycle 1: 62% hypocalcemia, 12.5% hypercalcemia, 0% patient education.

• Cycle 2: Normal calcium levels increased to 57% (p<0.05), patient education compliance reached 68%, and medication adjustments improved to 75%. Persistent hyperphosphatemia (40%) remained a challenge.

Conclusion: Targeted interventions improved calcium management; however, multidisciplinary strategies are needed to address phosphate control and long-term adherence.

Keywords: CKD-MBD, Clinical audit, Calcium management, KDIGO guidelines, Quality improvement.