

Vitamin D Deficiency: A Treatable Inequality in Forensic Inpatients

Dr Joseph James, Dr Robert Stamatakis
Caswell Clinic,
Medium Secure Forensic Service
SBU Health Board, NHS Wales

A Quality Improvement Project in a UK Medium Secure Forensic Service

BACKGROUND

Secure forensic inpatients have high risk of vitamin D deficiency due to prolonged indoor confinement, reduced sunlight exposure and medication effects (SACN 2016).

Despite links with fatigue, low mood and infection risk, testing remains uncommon, representing a preventable health inequality (NHS Long Term Plan 2019).

AIMS

- Evaluate baseline vitamin D testing and supplementation rates.
- Implement a protocol to improve detection, prevention and treatment of deficiency

METHODOLOGY

- 29 inpatients offered testing in October 2025, 19 were sampled.
- 10 declined / were unavailable
- Deficiency <25 nmol/L, insufficiency 25–50 nmol/L (NICE CKS, 2025).
- Supplementation status recorded.

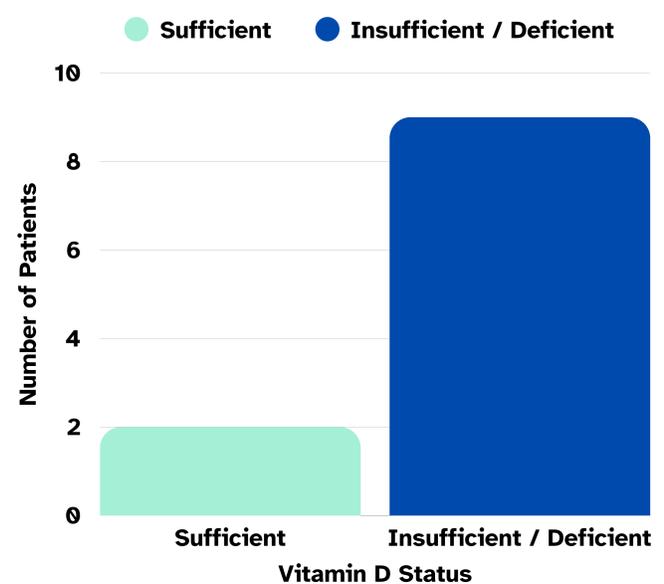
RESULTS

VITAMIN D STATUS AMONG TESTED INPATIENTS (N = 19)

Category	Number / %
Already on Vitamin D supplementation	8 / 42%
Not on supplementation	11 / 58%
Insufficient/Deficient (of unsupplemented)	9 / 82%
Sufficient (of unsupplemented)	2 / 18%

Figure. 1

Serum 25(OH)D levels in unsupplemented inpatients



DISCUSSION

- Vitamin D deficiency was highly prevalent (**82%**) among unsupplemented medium secure inpatients.
- Routine testing is rare despite low cost and clear links with fatigue, low mood and infection risk.
- A structured testing and supplementation protocol **aligns with SACN (2016) and NHS Long Term Plan (2019) priorities to reduce physical-health inequalities in severe mental illness.**
- Preventing deficiency may reduce fatigue, infection and delayed rehabilitation, improving recovery and shortening admissions.
- **The cost of one inpatient day (£500–£700) exceeds the combined annual cost of testing and supplementation for five patients, highlighting a strong economic case for routine screening.**
- This QIP is a collaboration between pharmacy, nursing and medical staff, and **will inform a new Caswell Clinic admission screening policy (2025)** with potential to scale across forensic services.

CONCLUSION

- Vitamin D deficiency remains a preventable inequality in forensic psychiatry.
- Routine testing and supplementation are simple, low-cost interventions aligned with NHS priorities on physical-health equality.
- National standards could ensure consistent, evidence-based practice across secure services.

ACKNOWLEDGEMENTS

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Scan for contact details and suggested protocol

