

ASSESSMENT OF HCG UTILIZATION IN PREGNANCY OF UNKNOWN LOCATION



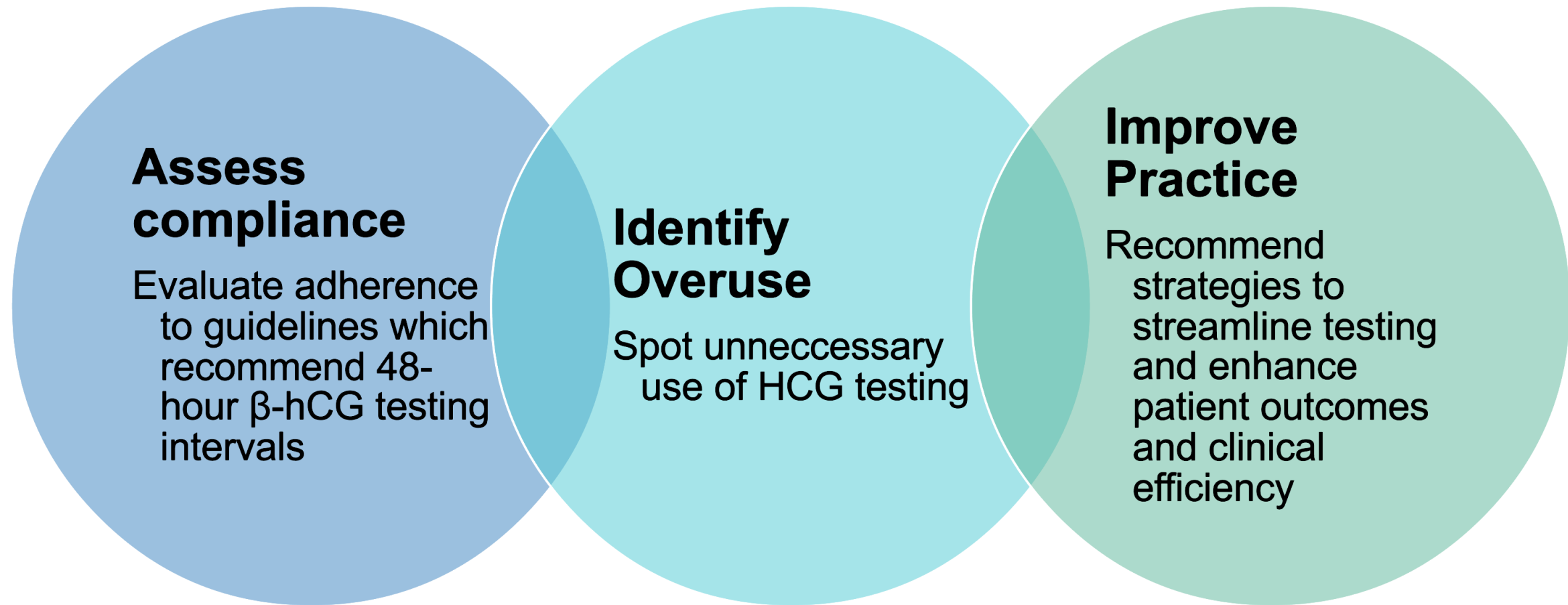
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Introduction

- Pregnancy of Unknown Location (PUL) is when a pregnancy test is positive, but no pregnancy is visible on Transvaginal ultrasound.
- Serial serum β -hCG measurements are critical for diagnosis and management, as 8–16% of PUL cases are ectopic pregnancies requiring close follow-up.
- This uncertainty requires a structured approach to rule out ectopic pregnancy, confirm viability, and ensure safe outcomes.

Aim of Audit

- To evaluate serum β -hCG use in managing PUL at Mater Dei hospital.



Method

- A retrospective analysis was conducted on fifty patients who presented to Gynaecology A&E with a positive pregnancy test and underwent serum β -hCG testing between October and December 2024.
- Cases were identified via patient records and electronic systems. Data was anonymized and analyzed for adherence to PUL management guidelines.

Results

- Total of 50 patients underwent serum β -hCG testing over a 3-month audit period. **9 patients had β -hCG measured despite an intrauterine gestational sac (IUGS) on ultrasound.**
- Among 37 confirmed PUL cases, most resulted in miscarriage, with β -hCG tests performed on average, despite meeting miscarriage criteria after two measurements
- Six cases were viable pregnancies; however, 10% of these still received β -hCG tests beyond guideline recommendations.
- For suboptimal β -hCG rises, follow-up testing often occurred in the emergency department instead of outpatient settings, potentially affecting care continuity

Summary of results

Total patients with β -hCG testing	50
β -hCG tested despite presence of IUGS on US	9
Confirmed PUL cases	37
Most common outcome in PUL	Miscarriage
Average β -hCG tests per miscarriage case	3-4 (above recommended)
Viable pregnancies	6
Viable cases with excessive β -hCG tests	10% (3-4 tests despite criteria being met after 2)
Follow up for suboptimal β -hCG rises	Mostly in ED not outpatients

Discussion

- According to NICE guideline NG126, initial management includes serial serum β -hCG measurements every 48 hours. A rise >63% suggests a likely intrauterine pregnancy; a fall >50% indicates a failing pregnancy. Suboptimal changes (<63% rise or <50% fall) require further review within 24 hours at an early pregnancy unit. TVUS is essential. If β -hCG exceeds 1,500 IU/L with no visible intrauterine pregnancy, a repeat scan in 7–14 days is advised.
- Persistent PUL with rising β -hCG should prompt ectopic pregnancy consideration and care escalation. Adhering to this algorithm improves diagnostic accuracy, reduces unnecessary testing, and supports early intervention in high-risk cases.

Conclusion

- This audit found overuse in hCG testing and guideline adherence discrepancies.
- Recommendations include standardizing testing, reducing unnecessary tests, and streamlining referral processes for better efficiency and patient outcomes.