Effect of PREG (Pregnancy Reasonably Excluded Guide) on Pregnancy Testing in Gynecologic and Urologic Surgery

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Description

Pre-procedural pregnancy assessment protects women and their fetuses from potential harm yet results in considerable time and expense to patients and the health care system as a large number of tests are performed for every positive result. Optimization of this system can detect unknown pregnancies and reduce unnecessary testing. The PREG (Pregnancy Reasonably Excluded Guide) utilizes both traditional methods of excluding pregnancy (e.g. sterilization, menopause) as well as some of the World Health Organization criteria for excluding pregnancy with the goal of testing only women potentially pregnant on the day of surgery.

PREG Checklist

A	☐ I am pregnant. ☐ I have had a bilateral tubal ligation (ie, "tubes tied", Essure® with confirmatory testing). ☐ I have had a hysterectomy or bilateral salpingo-oophorectomy (both ovaries removed), or both. ☐ I am menopausal and more than 45 years old. I have not had a period spontaneously for the past 12 months. ☐ I have a current IUD (eg, Mirena®, Skyla™, Paragard®, Liletta™) in place. ☐ I have a current contraceptive implant (eg, Nexplanon®, Implanon®) in place.
B	☐ I have not had sexual intercourse with a man since the start of my last normal menstrual period. ☐ My partner has had a vasectomy and he has had a negative post-surgery semen analysis. ☐ I started bleeding from a normal period within the last seven days. ☐ I reliably use hormonal contraception (eg, "the pill", Depo-Provera® shots, patch, ring).
C	☐ I think I may be pregnant or would like a pregnancy test. ☐ None of the above in sections A–C apply.

Aims

1. Improve preoperative pregnancy testing with universal implementation of the PREG in Gynecology and Urology surgical practices.
2. Identify a process for use in practices with less structured preoperative pregnancy assessment

Actions Taken

A multidisciplinary team using the DMAIC framework refined a process for consistent, patient-centered screening for pregnancy prior to surgery.
The PREG checklist was completed by eligible women the day of surgery and then verbally confirmed in private with the preoperative nurse. Pregnancy testing was obtained as indicated.

Multidisciplinary Team

Content expert
Management engineering and internal consulting
Anesthesia
Gynecology
Urology
Preoperative nursing
Inpatient nursing
Laboratory medicine
Information technology
Health unit coordinators
Administrative assistants
Supply chain

References

1. U.S. Selected Practice Recommendations for Contraceptive Use, 2013: Adapted from the World Health Organization Selected Practice Recommendations for Contraceptive Use, 2nd Edition. In: Reports MMWR Recomm Rep, ed.2013, June 21:1-46.
2. Wyatt M, Ainsworth A, DeJong S, Cope A, Long ME. Implementation of the Pregnancy Excluded Guide for Pregnancy Assesment. Obstet Gynecol 2018;132:1-8

Project Design

Women 18-50 years old who could independently read and understand the PREG checklist (Figure 1) were assessed for pregnancy on the day of their procedure with pregnancy testing as indicated.
The PREG checklist includes traditional exclusion criteria for pregnancy screening and also criteria supported by WHO and CDC for pregnancy exclusion prior to contraceptive initiation.

Women excluded from the PREG checklist and adolescents aged 14-17 would have day-of-procedure pregnancy testing.

Results of the PREG assessment and hCG test results were recorded in the preoperative documentation.

Surgical and anesthesia teams were directly notified of positive results or testing refusals.

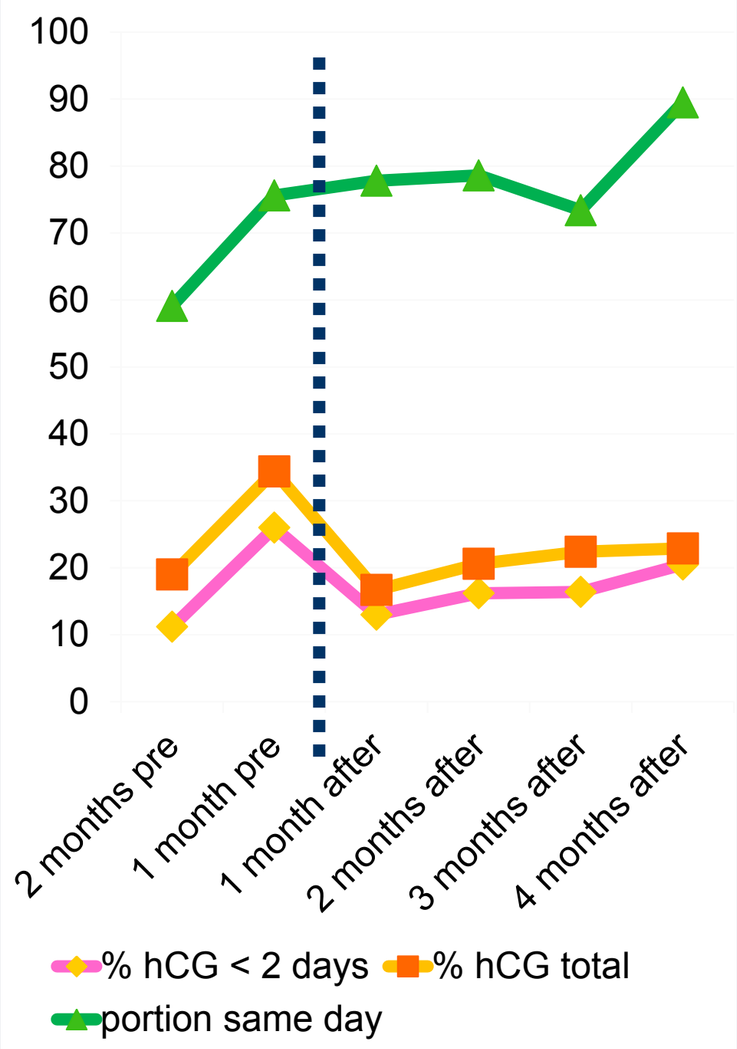
Changes Made

Implementation of a newer process for pregnancy screening (PREG) that is:
- Consistent
- Transparent
- Evidenced-based
- Does not require Ob/Gyn expertise
- Supports shared decision making
- Timely and patient focused
- Administered by nursing

Employment of pregnancy assessment in the preoperative area the day of the procedure (rather than a variable time before)

Utilization of STAT lab to run urine pregnancy tests for quality control, quick turn-around and entry into electronic medical record

Data



Summary of Results

Measures: Pre- and post-implementation pregnancy tests were 25.9% (69.1% same day) with improvements to 21% (80.7% same day) with a more transparent process that could extend to other services.

Countermeasures: No change in average operating room start time.

No positive test results. No reported missed pregnancies.

Lessons

Initial reservations by staff were replaced with enthusiastic support
Direct education of all staff was vital
Rapid response to snags in process maintained faith in process
Updating the institutional EMR to support the change was challenging