Improving Adherence to Continued Use of Contraceptive Subdermal Implants in Women with Unpredictable Bleeding Patterns

A Quality Improvement Project
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• (US) Healthy People 2020 Goals:
  • Decrease unintended pregnancy rate by 5% over 10 years
  • Use Long Acting Reversible Contraceptive Methods (LARC); advocated by IOM, ACOG & CDC
• Subdermal, progestin-only [etonoogestrel] implant; 99.95% effective for 3 years; “Nexplanon®”
  • LARC method
    • 3 years
  • progestin-only
    • not associated with adverse drug reaction of estrogen
    • side effect: unpredictable bleeding that can be personally distressing
      • → women request early implant removal (< 3 years)
      • → risk of unintended pregnancy without reliable contraception
    • (ACOG, 2013; NICE, 2013)
So many methods …
**Question**: Does implementation of standardized protocols help adherence to the subdermal, progestin-only, implant for women who experience distressing unpredictable bleeding?

- **P**: Women using the subdermal implant as a contraceptive method who experience distressing unpredictable bleeding patterns
- **I**: Standardized protocols for education, treatment, & follow-up for unpredictable bleeding
- **C**: No standardized protocols for education, treatment & follow-up for unpredictable bleeding
- **O**: Decrease in number of women having implant removals due to unpredictable bleeding patterns
Background
The root cause analysis led to important questions...

◆ Anticipatory Counseling ➔
  Pre-Implant Checklist provided anticipatory guidance
  Madden et al., (2013); Peipert et al., (2011) Zhen-Wu et al. (1996)

◆ Therapeutic Treatments ➔
  COC’s, estradiol, NSAIDs
  Bussang & Taneepanichskul (2009); Madden et al., (2012); and Peipert (2011); Weisberg et al. (2009).

◆ Follow Up ➔
  90 day phone, text, clinic visit
Main Aim

* Decrease premature implant removals from 17.98% to 14% by March 31, 2015

(Espey & Ogburn, 2011)

Sub Aim

* Decrease premature implant removals due to unpredictable bleeding from 46.88% to 33% by March 31, 2015.

(NICE, 2013)

Process Aims

• 90% of women requesting Implants will receive standardized anticipatory guidance
• 80% of women with unpredictable bleeding who request treatment receive a standardized therapeutic treatment
• 80% of women will receive follow-up post-insertion of Implant
The Common Sense Model

IDENTITY: Label / Symptoms
- Consequences
- Cause
- Control
- Timeline

MESSAGES
PERCEPTION

ILLNESS / RISK
- unintended pregnancy & UPB

FEAR / WORRY
- Not having reliable BCM
- Unintended Pregnancy

ABSTRACT, CONCEPTUAL

CONCRETE, IMAGERY

APPLICATIONS for ILLNESS CONT.
- AG, STT & f/u

APPLICATIONS for EMOTIONAL CONT.
- Being able to accept UPB

APPLICATIONS OF OUTCOMES
- Educate on interventions

APPLICATIONS OF OUTCOMES
- Wants removal --> learns about UPB and is able to accept --> keeps implant in place

(Leventhal, et al., 1992)
Methods

* Pre-and-post QIP comparison of data
* Autonomy and confidentiality maintained
* Sample:
  * Inclusion - patients of BVWHC, currently using or receiving an Implant
  * Exclusion - patients requesting removals because they desired a pregnancy or reinsertion of Implant due to expiration
Instruments –
Primary and Secondary Data

- Primary data-
  - Development of pre-implant checklist
  - Consistent use of checklist
  - Accuracy
  - Were follow-up phone calls & text completed?

- Secondary Data (EMR)-
  - Selection of visits by ICD-9:
    - removals (V25.43)
    - UPB (626.6)
    - f/u after insertions (V25.5) FPAR reports
  - Accuracy - codes entered correctly?
  - Reports run correctly?
Parameters

- Clinic where Implant inserted (BVWHC or another clinic)
- Reason for removals; tracked by EMR review
- Same day removal and reinsertion (due to expiration)
- Date of insertion
- Date of removal
- Type bleeding assessed
- Therapeutic treatment (s) for unpredictable bleeding
- Whether or not providers followed standardized therapeutic treatments
- Whether or not follow-up was initiated by provider or patient
Improving Adherence in Women Who Use Subdermal Implants

For Contraception

Met with ED and MD and present project at CC

Start date: G-Feb-13

- GYN meeting
  - Present idea

- Bridge approval

- GYN meeting
  - Present PDSA 1 & 2

- GYN meeting
  - Reinforce and teach PDSA 1, 2

End date: Feb 28, 2015

Final Data by March 31, 2015.

Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov-Dec-Jan
Feb
Mar
Apr
May
Jun

- Present project at GYN meeting

- F/U calls & text

- First team meeting

- Started EMR

- Started to make appointment instead of 30 day f/u calls if tx

- PPT to staff

- Final Task

- Final Report(s)

Task 2 - Present idea to staff and CC and Clinical Care meeting

Present idea and gain approval from ED and MD

Smartsheet (2015)
Interventions

• Anticipatory Guidance using standardized checklist (AG) PDSA 1: 4/1/2014
  • October, 2014 checklist became part of EMR before Implant insertions

• Standardized Therapeutic Treatments (STTs) PDSA 2: 5/22/14; started use of STTs 6/16
  • Developed by providers per literature review (ACOG, 2013; NICE, 2013)
  • 3 standardized therapeutic interventions (COC, estradiol, NSAIDs)
  • Discussions about STTs held during clinical care meetings

• Follow-Up (F/U) PDSA 3: 6/2014 - 7/31/14
  • June 2014, calls and text messages
  • July 2014, teen patients texted for follow up
  • More adults texted over next few months

(Madden et al., 2011; Cook et al., 2009)
Anticipatory guidance completed:
___ Potential side effects, such as changes in bleeding patterns, reviewed.
___ Patient is willing to accept unpredictable bleeding patterns.
___ Interventions available for unpredictable bleeding if needed discussed.
___ Patient to receive routine 90 day follow up reminder:

Method:    ___Text    ___720-496-3937
Total Number of Subdermal Implant Removals

Percentage of Removals

Pre-intervention Sept- Feb 2014

Post-intervention Sept-Feb 2015 on data

September 1, 2013 to March 31, 2015
Total Number of Patients with Unpredictable Bleeding Patterns

Pre data
9/13 to 2/14

Post data
9/14 to 2/15

Percentage of Removals

September 1, 2013 to March 31, 2015
Outcomes

Main Aim

* Decrease removals from 17.98% to 14%
  * Results revealed a decrease to 14.42%
  * Pre-data = 32 removals
  * Post-data = 30 removals
  * (OR 1.3, z=.94, p=.40, 95%CI [.75, 2.24])

Sub Aim

* Decrease removals due to unpredictable bleeding from 46.88% to 33%
  * Results revealed a decrease to 36.6%
  * Pre-data = 15 removals due to UPB
  * Post-data = 11 due to UPB
  * (OR 0.769, z=95, p=.40, 95%CI [.443, 1.32])

(Lowry, 2015)
Anticipatory Guidance - 149 chart reviews indicated 134 or 89.93% of women who had insertions received anticipatory guidance. (Goal: 90%).

Standardized Therapeutic Treatments – 66 chart reviews indicated 25 out of 25 women or 100% were treated for UPB who had an Implant. (Goal 80%).

90-Day Follow-up Attempts – 133 chart reviews of monthly insertions and calls or text messages to 128 women was 96%. (Goal: 80%).
Appendix D – Number of Subdermal Implant Insertions and Checklists used

Starting October 6, the Standardized Checklist for pre-insertion information and counseling (PIC) was interfaced into the electronic medical record (EMR). All women who received insertions had either checklists placed in their paper charts, or checklists completed on the EMR template. Blue = checklists, Red = insertions
Twenty five women treated for UPB 9/1/14 to 2/28/15. Providers consistently used STTs.
Follow-up calls/texts became routine at 90 days after implant insertion to see how women were doing and if they needed to talk about any side effects or be seen in the Clinic. Text messages became more popular. The above graph represents the month implant insertions occurred.
Discussion

- Primary Success –
- Impact of standardizing contraceptive counseling and anticipatory guidance (Madden, 2013; Peipert et al. 2013).

“You told me if [unpredictable bleeding] was going to happen so it wasn’t a big deal” (personal communication, 2/2/15)

Standardized therapeutic treatments for patients who experienced UPB offered (ACOG, 2013; NICE, 2013)

Follow-up (phone, visit, text) provided support and reassurance if needed (Cook, et al., 2009; Cook, et al., 2010)
Limitations

* Data included patients whose Implants had been inserted at other clinics but came to BVWHC for removals; these patients did receive AG before removals
* Short pre-and-post intervention time data comparison → small sample size
* Short time period of QIP → to short time period to assess adherence with standardized protocols
* Age-specific information for AG not taken into account (teens v. women in their 40’s)
* Follow-up did not include emailing through a patient portal (more likely to appeal to “older” patients than teens)
Implications For Practice

• **Plans to Sustain**
• Continue to provide standardization for providers when caring for women with implants
• Continue to provide AG and document in EMR
• Continue to provide STT and to evaluate new interventions
• Increase communication and follow up by use of a patient portal
Conclusion

• Family planning promotes healthy families (CDPHE, 2015)
• Improves quality of care by helping women choose and adhere to effective contraceptive methods
• Decrease in unintended pregnancies (Peipert et al., 2011).
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Questions

* NP: “Are you having any bleeding?:
* Patient: “No I am driving”!

( personal communication, 2014)


