

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

**A Quality Improvement Project
Linda L. Johnson, MSN, WHNP-BC**

Faculty Advisor
Jennifer Hensley, EdD, CNM, WHNP, LCCE

Introduction

- (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 [etonogestrel] 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 ...



PICO Question

- * 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

Cook, McCabe, Emiliozzi, Pointer, (2009); Cook, Emiliozzi, El-Hajj, McCabe, (2010).

QIP AIMS

Main Aim

- * Decrease premature implant removals from 17.98% to 14% by March 31, 2015 (Espey & Ogburn, 2011)

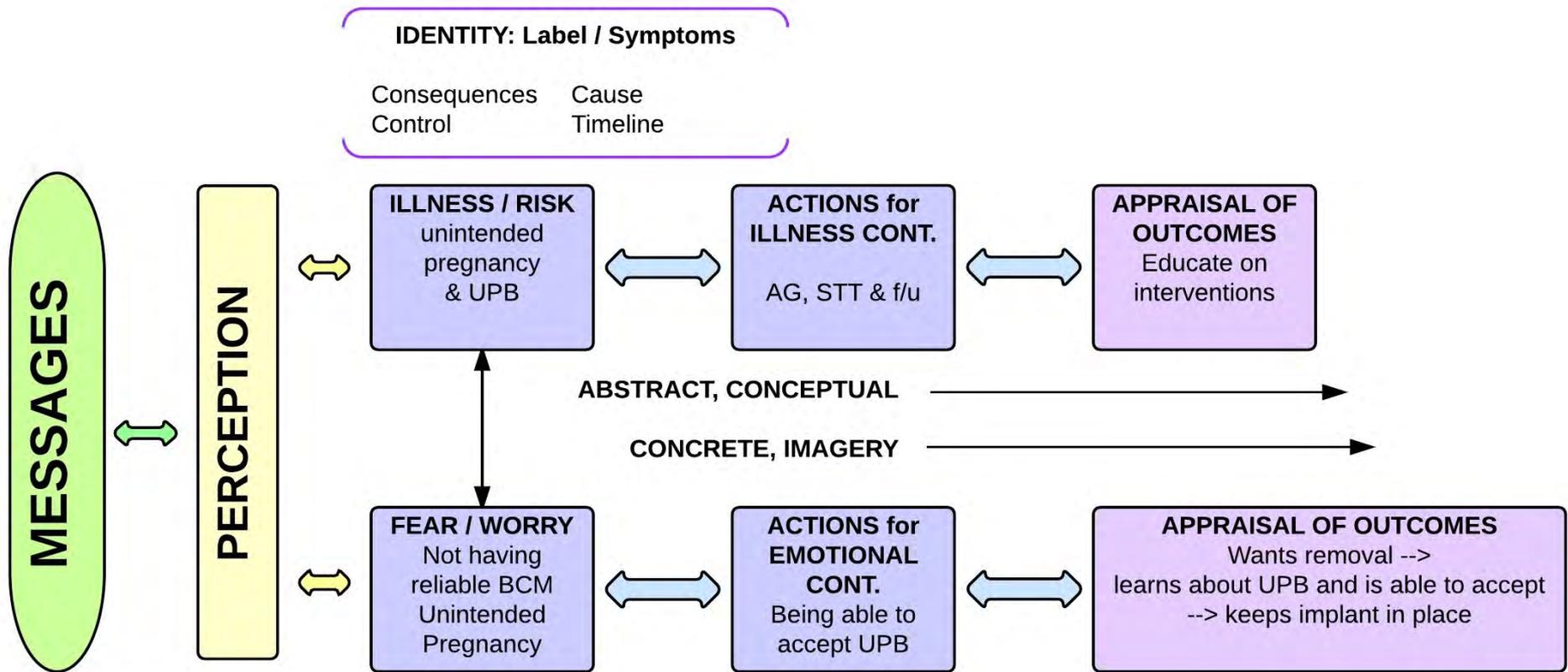
Sub Aim

- * 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



(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?

Methods - continued

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

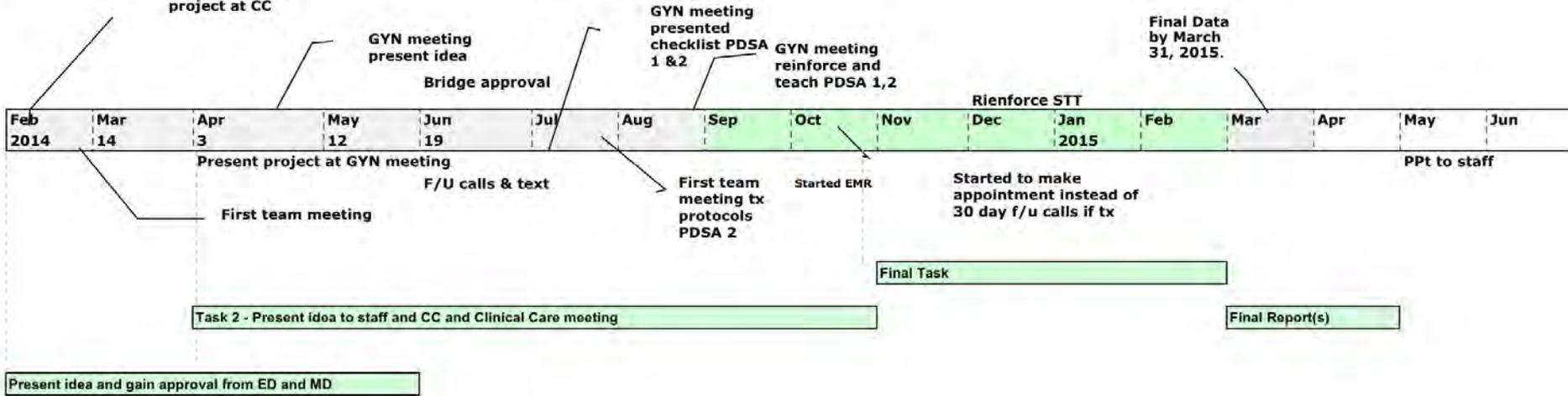
Improving Adherence in Women Who Use Subdermal Implants

For Contraception

Met with ED and MD and present project at CC

Start date **6-Feb-13**

End date Feb 28,2015



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

Subdermal Implant Counseling Checklist

Two key items - insertion template

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.

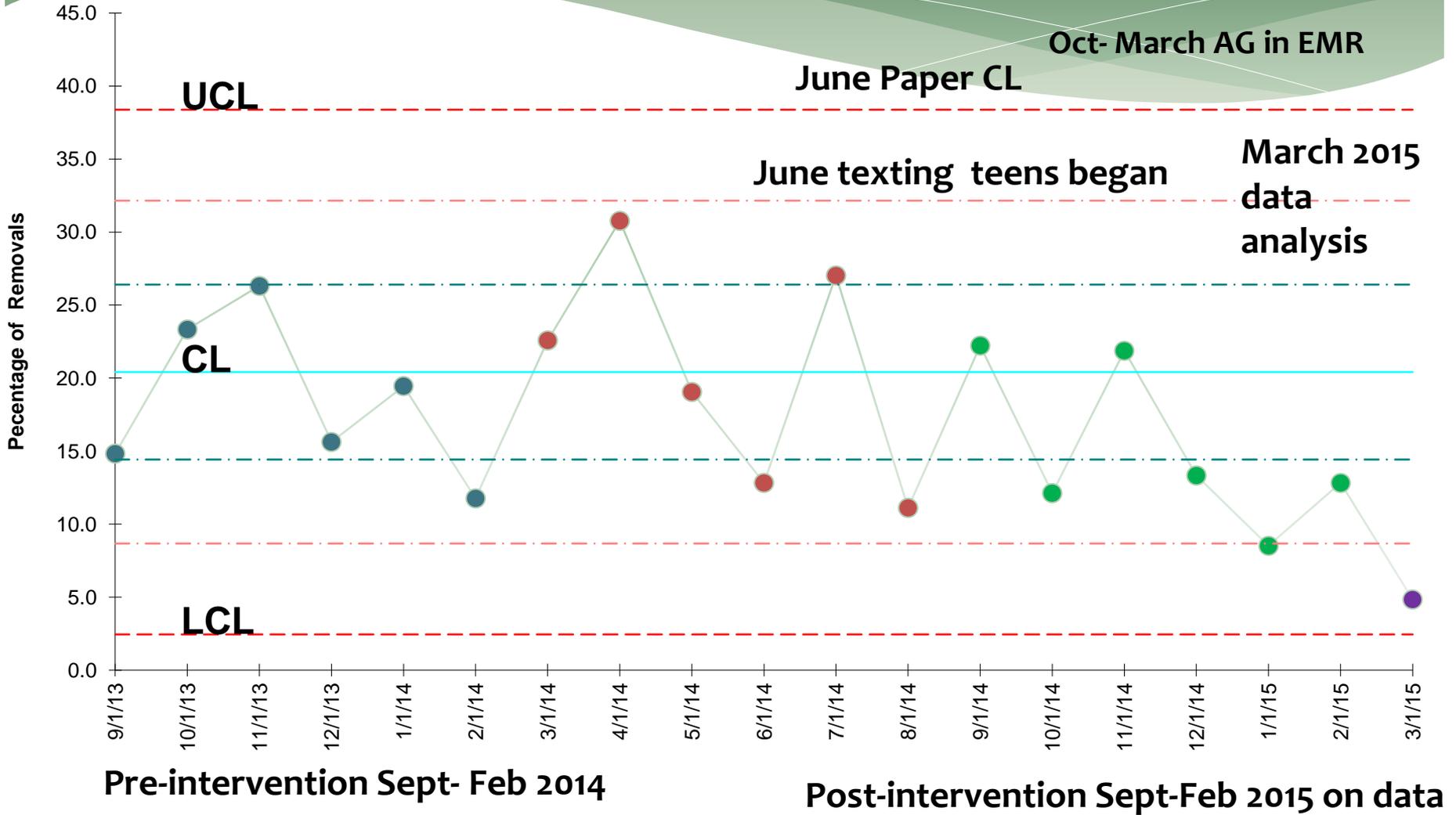
___ Patient to receive routine 90 day follow up reminder:

Method :

___ Text

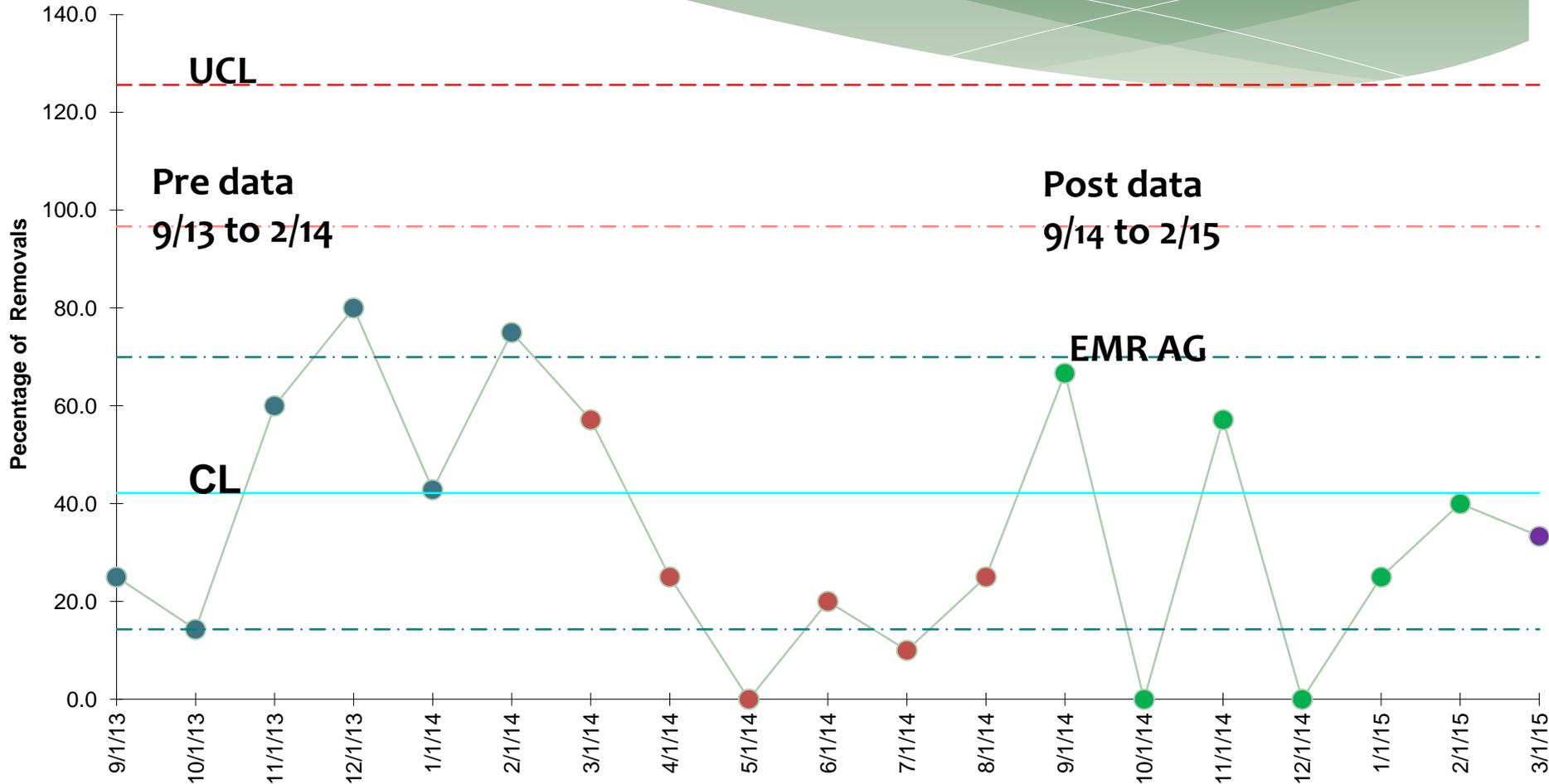
___ 720-496-3937

Total Number of Subdermal Implant Removals



September 1, 2013 to March 31, 2015

Total Number of Patients with Unpredictable Bleeding Patterns



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

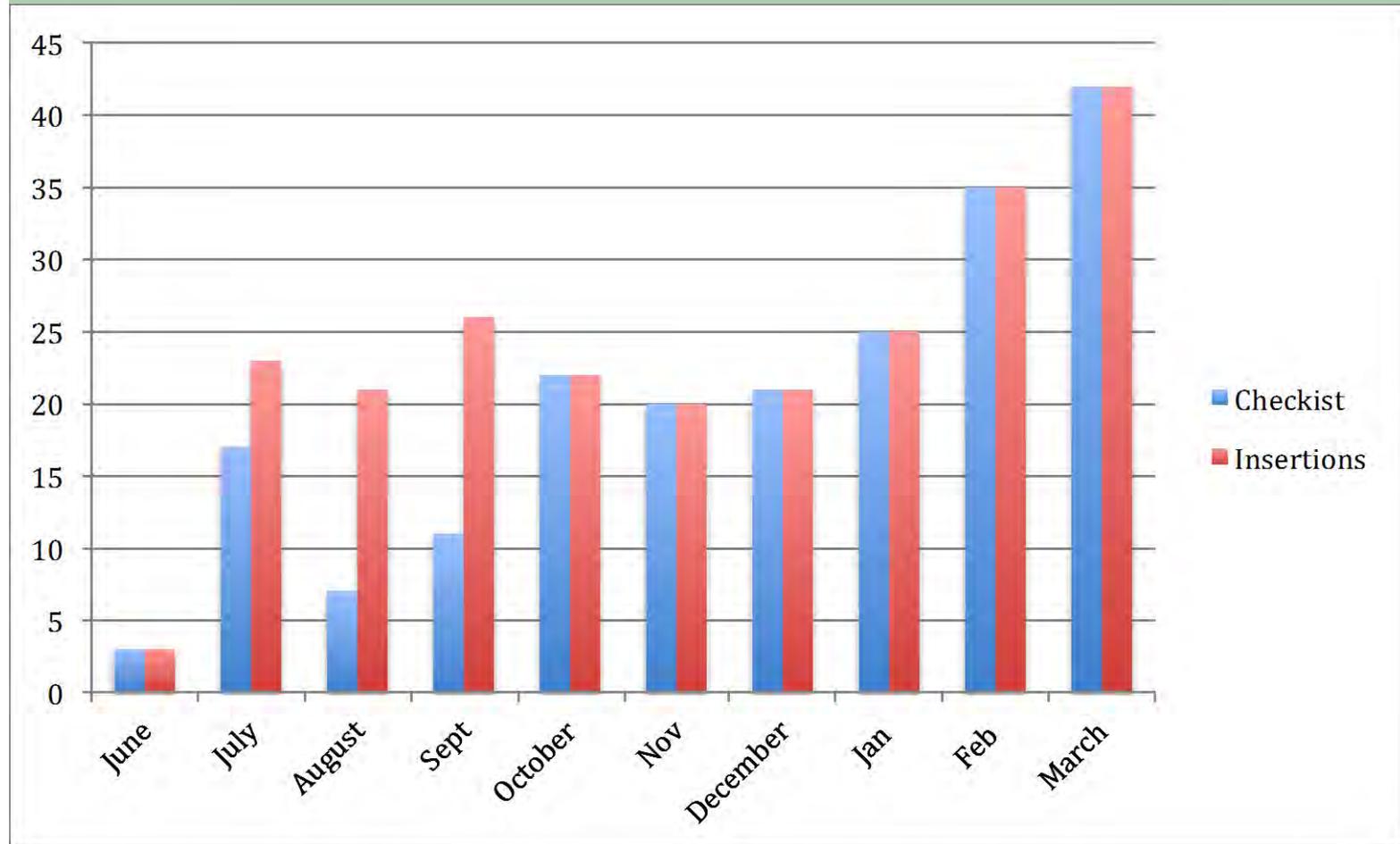
- * Decrease removals due to unpredictable bleeding from 46.88% to 33%
- * Results revealed a decrease to 36.6%
- * Pre-data = 15 removals due to UPB
- * Post-data = 11 due to UPB
- * (OR 0.769, $z=.95$, $p=.40$, 95%CI [.443, 1.32])

(Lowry, 2015)

Outcomes

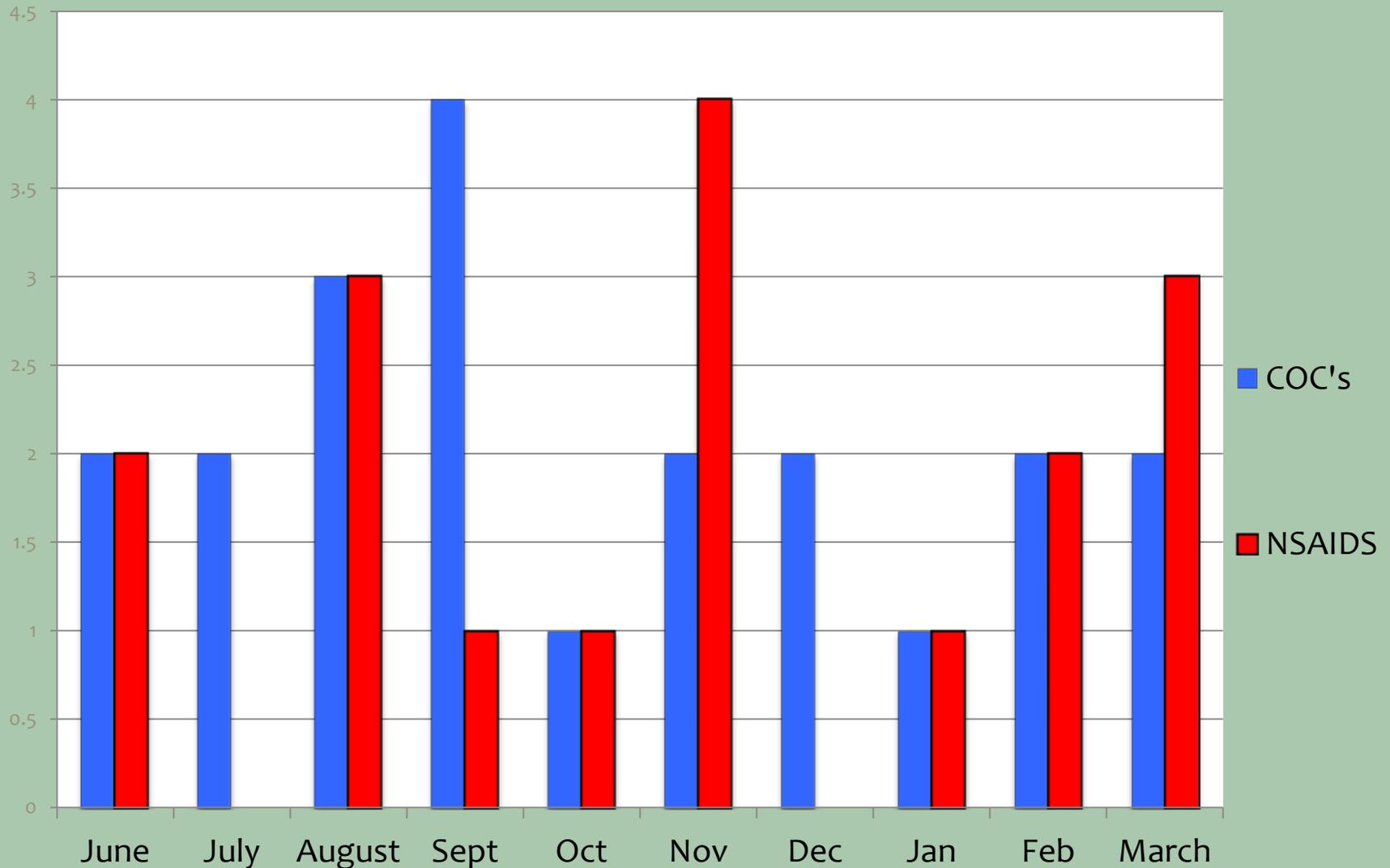
- * Anticipatory Guidance - **149** chart reviews indicated **134** or **89.93%** of women who had insertions received anticipatory guidance. (Goal: **90%**).
- * Standardized Therapeutic Treatments – **66** chart reviews indicated **25 out of 25** women or **100%** were treated for UPB who had an Implant. (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



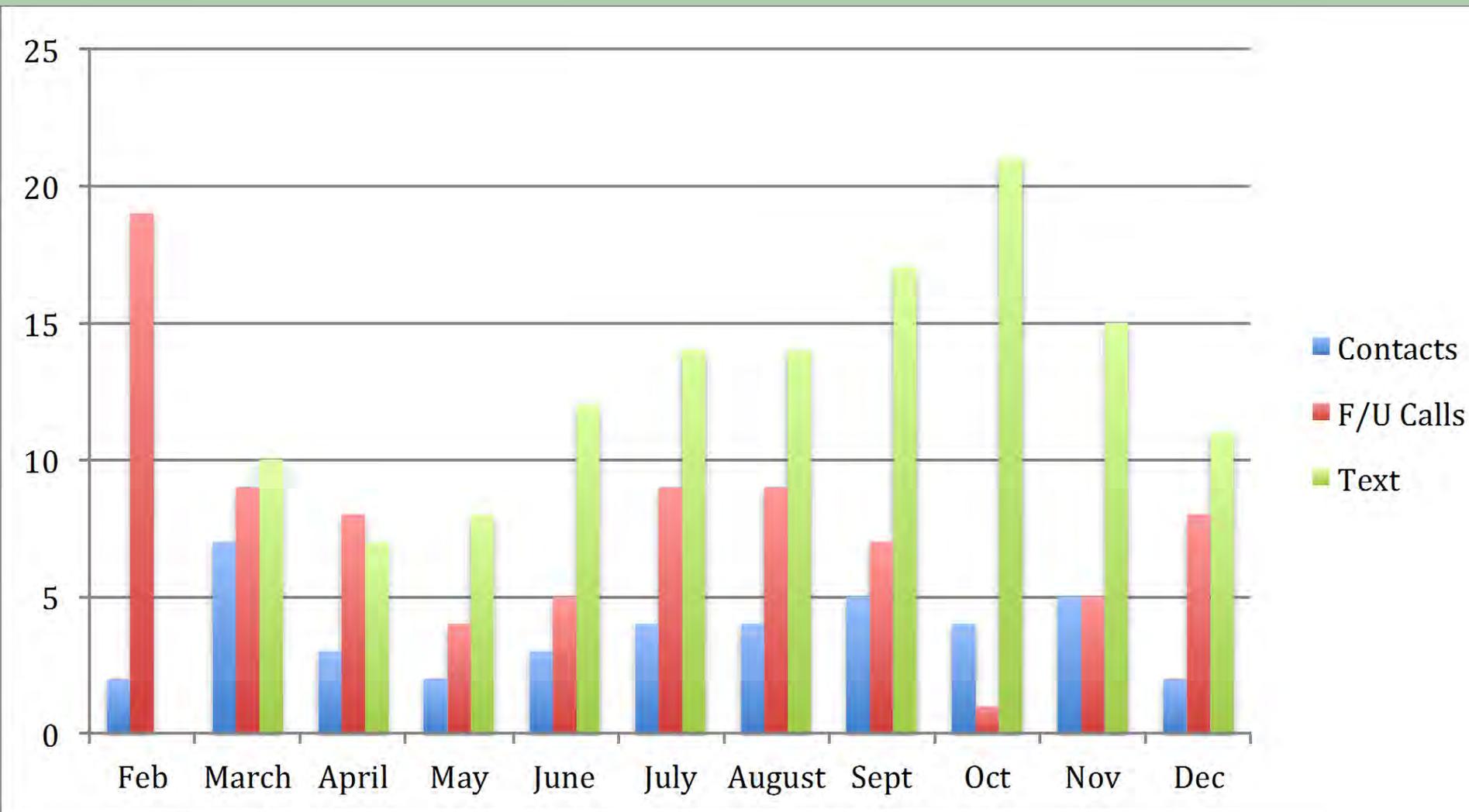
Starting October 6, the Standardized Checklist for pre-insertion information and counseling (PIC) was interfaced into the electronic medical record (EMR). All women who received insertions had either checklists placed in their paper charts, or checklists completed on the EMR template. Blue = checklists, Red = insertions

Standardized Therapeutic Treatments



Twenty five women treated for UPB 9/1/14 to 2/28/15. Providers consistently used STTs.

Appendix F Follow up calls/Text



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 → too 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).

Thank you acknowledgement:

Linda L. Johnson, RN, MSN, WHNP-BC: I would like to take this opportunity to thank Dr.'s Vicki Erickson, Mary Beth Makic, Kathy Shaw, and Jennifer Hensley for their guidance, and support. Each of you helped to strive for excellence. I would like to especially thank Dr. Jennifer Hensley for her continued support and helping me refine my writing skills, and believing in this project. I would also like to thank my mentor Dr. Ruth Weinberg, consultant Dr. Jan Shepherd, Heather Goodchild, Co Clinical Director, and my family. A special thank needs to be said for my husband Craig, who helped me recover through my surgery, and encouraged me to keep going through my healing process. I am forever grateful for all their support and encouragement throughout my nursing career and journey in the DNP program.

Questions

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



(personal communication, 2014)

References

- Buassang, D., Taneepanichskul, S., (2009). Efficacy of Celecoxib on controlling irregular uterine bleeding secondary to Jadelle use. *Journal of Medical Association of Thailand*, 92, (3), 301-307.
- Cook, P., McCabe, M., Emiliozzi, S., Pointer, L. (2009). Telephone nurse counseling improves HIV medication adherence: an effectiveness study. *Journal of the Association of Nurses in AIDS Care*, 20, (4), 316-325.
- Madden, T., Mullermans, J., Omvig, D., Secura, G., Peipert, J., (2012). Structure contraceptive counseling provided by the Contraceptive CHOICE Project. *Contraception*, 88, 243-249.
- Madden, T., Proehl, S., Allsworth, J., Secura, G., Peipert, J., (2011). Naproxen or estradiol for bleeding and spotting with the levonorgestrel intrauterine system: a randomized controlled trial. *American Journal of Obstetrics and Gynecology*, 206, (2), 129.e1-129.e8.
- Peipert, J., Zhao, Q., Alsworth, J., Petrosky, E., Madden, T., Eisenberg, D., Secura, G. (2011). Continuation and satisfaction of reversible contraception. *Obstetrics & Gynecology*, 117, (5), 1105-1113.
- Weisberg, E., Hickey, M., Palmer, D., O'Conner, V., Salamonsen, L., Findlay, J.,... Fraser, I., (2009). A randomized controlled trial of treatment options for troublesome uterine bleeding in Implanon users. *Human Reproduction*, 24, (8), 1852-1861.
- Zhen-Wu, L., Sang, C., Garceau, R., Sou, J., Qiao-Zhi, Y., Wei-Lun, W.,... Vander Muelen, T., (1996) Effect of pretreatment counseling on discontinuation rates in Chinese women given Depo-medroxyprogesterone acetate for contraception. *Contraception*, 53, 357-361.