

## **Executive Summary**

### **Introduction to the Problem**

Women scarcely receive adequate reproductive life planning education throughout their gynecologic care. This lack of attention has significant consequences and leaves women without necessary guidance on many topics including contraceptive choices and the importance of pre-conception health (Kleppel, Suplee, Stuebe, & Bingham, 2016). White, Teal, & Potter (2015) state that almost half of women in the United States rely on the use of less-effective birth control or none at all. Unfortunately, these statistics have resulted in around 80 million unintended pregnancies each year worldwide (Hanson, Nothwehr, Yang, & Romitti, 2014). Many of the unintended pregnancies happen to women who have had short-interval gestations, which is defined as a subsequent pregnancy arising within 12 months of the prior delivery (Bigelow & Bryant, 2015).

Lack of consistent use of reproductive life planning tools in a large, multi-site obstetrical and gynecological practice located in the Metro East is an issue that greatly impacts the population of patients served by this entity. The population cared for at this organization is largely based on government-funded healthcare, with 59 percent of the patients being covered by Medicaid alone. From January 2015 to November 2020, 2,346 pregnancies met the criteria for a short-interpregnancy interval. This figure averages to roughly 469 pregnancies annually that occur within 12 months of the previous gestation. Although it cannot be known if these pregnancies were undesired, it is assumed that some of these statistics were unplanned occurrences.

## **Literature Review**

### ***Unintended Pregnancy***

Missed or delayed care is a proponent of unintended pregnancy, which accounts for roughly one-half of all pregnancies in the United States (Mulligan, 2015). Contraceptive methods have varying degrees of effectiveness, which can affect the woman's vulnerability to unintended pregnancy (Sundstrom et al., 2017). A woman's perception of the effectiveness and safety of contraceptive options heavily influences which methods they use (Sundstrom et al., 2017). According to Morse & Moos (2018), many women underestimate their fecundability and do not utilize effective birth control methods as a result. The reach of unintended pregnancy is far beyond concerns for maternal and fetal morbidity. Edmonds & Ayres (2017) notes that the Institute of Medicine cites undesired pregnancy as a causative factor associated with child abuse and neglect.

### ***Short-Interval Pregnancy***

The World Health Organization (WHO) supports the timing of pregnancy to follow the ideal inter-pregnancy interval, which is defined as a subsequent pregnancy occurring 18 to 24 months following the prior gestation (Bigelow & Bryant, 2015). These authors go on to state that 51 percent of the pregnancies in the United States occur outside this window (Bigelow & Bryant, 2015). Another article reports that 70 percent of gestations, which meet the criteria for short-interval pregnancy, are undesired (White, Teal, & Potter, 2015). Women who experience short-interval pregnancy are more likely to be of lower socioeconomic status with decreased access to healthcare (Postava & Winter, 2015). Ahrens (et al., 2018) conducted a systemic review of data surrounding short-interval pregnancy and determined that many high-risk obstetrical complications occur from gestations close in proximity of time. An article by

McKinney (et al., 2017) discusses this impact further in the statement that short-interval pregnancy allows for little recovery from stresses inflicted upon the mother's body during the prior gestation. This increases the risk of pre-term birth, infants that are small for gestational age, and maternal health comorbidities (McKinney, House, Chen, Muglia, & DeFranco, 2017). In the same study, researchers documented findings of increased risk of infant morbidity and mortality; specifically, an astounding 34.3 percent infant death risk in cases of short-interval pregnancy (McKinney et al., 2017).

### ***Reproductive Life Planning***

Reproductive life planning is a protocol that initiates and guides the conversation with patients about their future family goals (Tyden et al., 2016). The idea of reproductive life planning evolved as a healthcare concept resulting from the women's rights movement and was first discussed by Robert Hatcher in 1980 (Edmonds & Ayres, 2017). It is endorsed by the American College of Obstetricians & Gynecologists (ACOG) and the CDC as a tool to decrease the rates of unintended pregnancy (Edmonds & Ayres, 2017). The objective is for reproductive life planning tools to be used as an additional vital sign (Madrigal, Stempinski-Metoyer, Mcmanus, Zimmerman, & Patel, 2019). Bellanca & Hunter (2013) also note the financial benefit of reproductive life planning services by cost-savings acquired in the reduction of unplanned pregnancy.

### ***Patient Education***

Addressing the issue of patient education regarding reproductive life planning is supported by the Center for Disease Control's (CDC) recommendation for health care providers' use of reproductive life planning tools to promote preconception health and avoid unintended pregnancy (Tydén, Verbiest, Achterberg, Larsson, & Stern, 2016). In a study by Jones and

colleagues (2020), nearly half of the respondents in their study identified a desire to be asked about and counseled on reproductive health needs at every visit. Bellanca & Hunter (2013) state that if contraceptive access is a preventative service, screening should take place at every visit. Implementation of patient education on reproductive life planning also supports pre-conception health promotion and decreases the risk of unaddressed health comorbidities (Hammarberg, Hassard, Silva, & Johnson, 2020). According to Cooper & Cameron (2018), discussions regarding reproductive goals should be continued during antenatal visits to avoid a potential missed opportunity to discuss family planning objectives. Tyden (et al., 2016) state that increasing patients' knowledge of reproductive health are vital; it is essential that healthcare providers are aware of patient intention and support their autonomy. Women state that they would follow through with making positive health changes if they had their provider's support (Hammarberg, Hassard, Silva, & Johnson, 2020).

### ***One Key Question***

The most suitable reproductive life planning tool chosen for the doctoral project is One Key Question® (OKQ). OKQ is a singular question regarding pregnancy intention which is stated "Would you like to become pregnant in the next year?" OKQ is an evidence-based reproductive life planning intervention that focuses on what female patients desire (Hipp, Carlson, & McFarlane, 2017). OKQ was developed by the Oregon Foundation of Reproductive Health as an answer to providing an unbiased, positive approach to initiating the discussion of pregnancy intention (Allen et al., 2017). OKQ is endorsed by ACOG, Academy of Family Physicians (AFP), American Public Health Association (APHA), Physicians for Reproductive Health (PRH), and the National Association of Nurse Practitioners in Women's Health (NANPWH) (Baldwin, Singhai, & Allen, 2018). Based on the patient's response to the OKQ

question, this educational tool provides an algorithm that opens the dialogue regarding reproductive needs and intentions (Hipp, Carlson, & McFarlane, 2017). Counseling protocols are tailored to the patient's response of "yes", "no", "unsure", or "I am ok either way" (Allen et al., 2017). If a patient answers "yes" to the OKQ question, the provider should proceed with pre-conception counseling and prescribe a folic acid supplement. If the answer is "no", the provider should then discuss current contraceptive use, happiness with current contraception, and discuss all available contraceptive methods in the hierarchy of effectiveness ratings. If the answer is "unsure" or "I am ok either way", the provider should focus on both pre-conception and contraceptive counseling, then proceeding in the direction the patient prefers (Allen et al., 2017).

### **Project Methods**

The project aimed to implement an educational tool that could have an affirmative impact on patients at this clinic and advance the practice of providers who work for this organization. By creating a standardized approach to reproductive life planning education, all providers across the organization will be empowered to provide comprehensive education which would promote the patient's awareness of family planning options (Bigelow & Bryant, 2015). This in turn would have a great effect on unintended pregnancy rates within the practice.

The project investigator proposed evaluations of OKQ use weekly for one month, monthly for three months, and then quarterly to ensure all employees are utilizing the tool and working together towards the same goal. In addition, surveys were implemented in which the participating healthcare providers and staff evaluate the effectiveness of the OKQ tool in practice. A five-point Likert scale survey was administered at the end of one and three months of use to ensure allowance of time to attempt to collect all employees' assessment of the tool over the implementation period.

## **Evaluation**

A total of 14 providers and 12 medical assistants simultaneously began using the One Key Question® (OKQ) reproductive life planning tool in practice in March of 2021. The tool was embedded into the electronic medical record program used at this facility with the question initially being asked during the patient rooming process and then again during the provider visit. OKQ use was implemented at all gynecological patient visits except for women who had a history of hysterectomy or surgical sterilization. It was also included during obstetrical visits at 28 weeks and 36 weeks gestation to ensure reproductive life goals after delivery were addressed. Before this intervention, there was no standardized education regarding reproductive life planning goals with patients utilized at this facility.

## **Strengths**

During the intervention period, the OKQ tool was employed during 2,819 patient encounters from March to June of 2021. The usage was tracked with a mock current procedural terminology (CPT) code throughout the implementation. The change process was overwhelmingly accepted by the staff as evidenced by the high volume of OKQ use in practice during the implementation period.

A Likert-scale questionnaire was given to the participating staff members after 30 days and 90 days of application apart from one nurse practitioner, who was also the project investigator. The questionnaire was developed in the Qualtrics program, which was easily accessible via a weblink and quick response (QR) code, was distributed to the participating staff via email, instant messaging, and text messaging. A response rate of 52 percent was achieved.

The questionnaire results suggest the use of OKQ in practice to be positive and beneficial to patients. Over 75 percent of staff members agreed that the use of OKQ makes it easier to open

discussions with patients and improved patient communication surrounding reproductive life plans. All participating staff members agreed that OKQ is easy to use, and 80 percent agreed they would continue to use it in future practice.

### **Limitations**

During the implementation period, two physicians resigned from positions within the practice. This absence could have negatively impacted the questionnaire results as there were fewer participants surveyed at the 90-day assessment. Secondly, a few of the providers mentioned dissatisfaction with the follow-up responses recommended by the creators of OKQ. Based on the patient's response to the OKQ question, an algorithm is recommended that is supposed to open the dialogue regarding reproductive needs and intentions (Hipp et al., 2017). Counseling protocols are tailored to the patient's response of "yes", "no", "unsure", or "I am ok either way" (Allen et al., 2017). Some providers felt this was lacking in terms of the lesbian, gay, bisexual, transsexual, and questioning (LGBTQ?) population. This may impact the provider's preference to proceed with future use.

### **Impact on Practice**

There was little hesitation from the staff members regarding the practice change. By the end of the implementation period, the inclusion of this intervention was seamless. This was a relatively simple change in daily practice which will have a lasting impact on both the health of female patients and their families. The use of OKQ has continued at this practice, with plans to expand to other locations owned by the parent organization. The benefits of using OKQ in practice are not exclusive to obstetric and gynecological patients. It could easily be implemented in primary care settings.

## **Conclusion**

Reproductive life planning puts the patients' preferences at the forefront of their care and addresses preventative care needs (Morse & Moos, 2018). The use of OKQ as a reproductive life planning tool introduces the discussion of family planning goals in an unbiased and positive way that is readily accepted by patients (Curry et al, 2019). The reduction of unintended pregnancy reduces abortion rates, reduces maternal and infant mortality, and is a health care priority listed in Healthy People 2020 (Edmonds & Ayres, 2017). Long-term use of OKQ in practice enables providers to incorporate evidence-based practice concepts into the care of patients. Over time, implementation of OKQ has the potential to positively impact the incidence of unintended pregnancy at this practice.