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ENHANCING PROVIDER KNOWLEDGE ON THE BENEFITS OF LARC USE IN
TEENS

A Scholarly Project Submitted to the Graduate School in Partial Fulfillment of the
Requirements for the Degree of Doctor of Nursing Practice

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ENHANCING PROVIDER KNOWLEDGE ON THE BENEFITS OF LARC USE IN TEENS

An Abstract of the Scholarly Project by
Lyndsay S Camper BSN, RN

The present study investigated the effects of introducing an educational intervention to enhance the knowledge of family and obstetric providers in the rural area on the benefits of Long-Acting Reversible Contraceptive (LARCs) use in teens. Teen pregnancy is associated with many different health risks including eclampsia, endometritis, and systemic infections. These mothers are also at risk of poverty, lower education levels, reduced employment, and dependence on government assistance programs. Apart from their lack of knowledge on the different types of contraceptives available, many teens do not take their oral contraceptives appropriately. LARCs can include IUDs or implants that prevent unwanted pregnancy up to 20 times better than pills, patches, or vaginal rings. However, it has been found that the majority (97%) of female teenagers aged 15-19 who had sexual intercourse used condoms followed by 65% of them using the withdrawal method and 53% using a pill form of birth control and only 20% of these females had ever used LARCs. This quasi-experimental research project was posted to a social media website for providers who are currently providing care to teens in a family or obstetric practice. This post contained an educational intervention followed by a posttest that generated data through the Qualtrics website. The data collected was then evaluated to assess whether there was an increase in the providers knowledge of the most recent research on the benefits of LARC use in teens after education on this topic was provided.

TABLE OF CONTENTS

CHAPTER I	1
INTRODUCTION	1
Teen Pregnancy and Birth in the U.S.....	2
Long-Acting Reversible Contraceptives.....	2
Types of Long-Acting Reversible Contraceptives.....	3
Teen Use of Contraception by Type.....	3
Obstacles to Teen Use of Long-Acting Reversible Contraceptives.....	3
Clinical Problem.....	5
Significance.....	7
Specific Aims/Purpose.....	7
Theoretical Framework.....	8
Research Questions.....	9
Conceptual Definitions.....	9
Logic Model.....	10
Summary.....	11
CHAPTER II.....	13
REVIEW OF LITERATURE.....	13
Literature Synthesis.....	13
Long-Acting Reversible Contraceptives Use in Adolescents.....	14
Factors That Influence Contraceptive Choice among Adolescents.....	14
Factors that Influence Providers Contraceptive Choice for Teens.....	15
Cost of Long-Acting Reversible Contraceptives.....	16
Clinical Challenges and Disadvantages.....	17
Governing Organization.....	19
Safety and Risks.....	20
Summary.....	21
CHAPTER III.....	22
METHODOLOGY.....	22
Project Design.....	22
Procedure.....	23
Resources.....	24
Setting and Participants.....	25
Recruitment.....	25
Inclusion/Exclusion Criteria.....	25
Protection of Human Subjects.....	26
Instrument.....	26
Content Validity.....	27
Summary.....	27

CHAPTER IV.....	28
EVALUATION OF RESULTS.....	28
Demographic Data.....	29
Project Questions and Study Design.....	30
Summary.....	32
CHAPTER V.....	34
DISCUSSION.....	34
Relationship of Outcomes to Research.....	34
Observations.....	35
Evaluation of the Theoretical Framework.....	36
Evaluation of the Logic Model.....	37
Limitations.....	37
Implications for Future Research.....	38
Implications for Practice, Health Policy and Education.....	39
Conclusion.....	40
REFERENCES.....	42
APPENDIX.....	50
APPENDIX A.....	51
Posttest.....	51
APPENDIX B.....	53
Educational PowerPoint Slides.....	53
APPENDIX C.....	54
ACOG Contraception Guideline.....	54
APPENDIX D.....	55
Nationwide Children’s Contraception Guideline.....	55

LIST OF TABLES

1 Comparison of LARC options.....	18
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LIST OF FIGURES

1 Logic Model.....	11
2 Demographic Data of Participants.....	30

Chapter I

Introduction

Teen pregnancy is associated with a higher risk of eclampsia, endometritis, and systemic infections. The babies born to teen mothers are at risk for low birth weight, preterm birth, and severe neonatal conditions (World Health Organization, 2022). It is also associated with poverty, lower education levels, reduced employment, and dependence on government assistance programs. The babies born to these teen moms are also at risk for lower educational performance, lower scores on standardized tests, and twice as likely to repeat a grade as their peers (National Conference of State Legislators, 2014). While teen contraceptive use (except condoms) has increased since 2015, women aged 15 to 19 are still less likely than women aged 20 to 29 to use long-acting reversible contraceptives (LARC) (Centers for Disease Control and Prevention, 2019-b). Barriers to use of LARC among adolescents include parents lack of familiarity with or understanding of these methods, potential of high cost with initiation, lack of access, low parental acceptance, and health care provider misconceptions about the safety of LARCs (American College of Obstetrics and Gynecology, n.d.-b).

Teen Pregnancy and Birth in the U.S.

Conception is a topic that is thought to be discussed thoroughly with most women at some point during their adolescence. Their parents, a friend, or their family healthcare provider is assumed to provide all the necessary information, along with their current choices of contraceptives on the market. Apart from their lack of knowledge on the different types of contraceptives available, many teens do not take their oral contraceptives appropriately. According to Brown and Guthrie (2010), many teens who take contraceptive pills routinely forget to take them or take them irregularly and believe they can “catch up” by taking several pills at a time. Another common myth is that intrauterine devices (IUDs) are only for women who have had children or who are done conceiving (Nationwide Children’s Hospital, n.d.-a). Due to these common misunderstandings, the use of Long-Acting Reversible Contraceptives (LARCs) in teens is not common despite their many proven health benefits.

Teen pregnancy has a large social and economic effect, with both short and long-term impacts on the teens, their parents, and the newborns. These teen pregnancies also contribute to higher high school dropout rates, an increased number of health problems, increased chance of being incarcerated, and an increased chance of filing unemployment as a young adult (Centers for Disease Control and Prevention, n.d.-b).

Long-Acting Reversible Contraceptives

Long-acting reversible contraceptives (LARCs) are described as “the most effective methods of birth control”, according to planned parenthood (Planned Parenthood, n.d.-b). These LARCs can be IUDs or implants that prevent unwanted pregnancy up to 20 times better than pills, patches, or vaginal rings (Planned Parenthood, n.d.-b). These devices can be reversed or removed at any time to allow a woman to

become pregnant but are a great option for any woman who desires a long-term pregnancy prevention or for women who cannot remember to sufficiently take contraceptive pills.

Types of Long-Acting Reversible Contraceptives

The two types of LARCs that are the most effective in preventing pregnancy and that are available in the United States include, intrauterine devices (IUD) and a single-rod contraceptive implant. There are currently five different IUDs available on the market today: the copper-containing IUD or Paragard and four different levonorgestrel-releasing intrauterine devices (American College of Obstetrics and Gynecologists, 2017-b). The hormonal IUDs include Mirena, Kyleena, Liletta, and Skyla. Single-rod contraceptives include Implanon and Nexplanon (Planned Parenthood, n.d.-a).

Teen Use of Contraception by Type

In a study by the Centers of Disease Control and Prevention on *Sexual Activity and Contraceptive Use Among Teenagers Aged 15–19 in the United States*, it was found that the majority (97%) of female teenagers aged 15-19 who had sexual intercourse used condoms followed by 65% of them using the withdrawal method and 53% using a pill form of birth control. The study goes on to state only 20% of these females had ever used LARCs (Centers for Disease Control and Prevention, 2020-c).

Obstacles to Teen Use of Long-Acting Reversible Contraceptives

There are many obstacles to teens using LARCs, in a recent mini review by Pritt et. al. it was found that the four main reasons for teens not choosing LARCs included the 1) cost and clinical operations, 2) adolescent awareness and attitudes, 3) health care

provider knowledge, attitudes and counseling, and 3) confidentiality, consent, and parental attitudes (Pritt et al., 2016, P.18).

This article stated that some adolescents did not choose LARCs for their contraceptive needs because their insurance may only cover their previous existing plan, or their private insurance did not cover contraception or LARC use because of religious stipulations. Another issue related to cost included the fear of providers from lawsuits over IUD complications. Additional barriers included that providers often may require a second visit for reimbursement purposes with the insertion of these devices and many women do not return for the second visit (Pritt et al., 2016, p. 18).

Lack of adolescent awareness was another barrier noted in this article. More than 70% of women aged 14-19 had not heard of an IUD. Misconceptions about LARCs were also a large problem. These misconceptions included the effect of future fertility, not understanding the risks of oral contraception and an overestimation of the possible risks of LARCs. The fear of pain, expulsions and the thought of having a foreign body in the uterus were also mentioned (Pritt et al., 2016, p.18).

Health care providers also play a huge role in counseling these adolescent patients about LARC use to help relieve some of these misconceptions. Adolescents from San Francisco specifically outlined recommendations for health care providers to help alleviate any negative feelings towards LARC use. These included providing comprehensive information, being very reassuring that teens are able to choose when they want the IUD to be removed, being completely informed about all of the potential side effects, the use of models to demonstrate insertion and placement of the IUDs and

providing web links so that they may look up any additional information (Pritt et al., 2016, p.18).

Parents often have a big impact on the choices that teens make when it comes to contraception choices. Another barrier that was brought up in this article included the fact that confidentiality and consent from parents were influencing the choice for these teens (Pritt et al., 2016, p.18).

Providers also felt that they have their own barriers to prescribing LARCs to teens. In a study of pediatrician's perceptions of the barriers they face with LARC placement and adolescents, Murphy et al (2016) found that some nurse practitioners, family practice doctors, and pediatricians felt that they needed to have more supervision for training when placing these devices but felt that they did not have access to this supervision. They also felt that they were not able to obtain these devices in their clinics because of financial issues. These providers also stated that they had not yet received the required privileges to provide LARCs to their patients (Murphy et al., 2016, p. 436-442.).

Clinical Problem

Adolescent contraception is a huge contributor to decreasing teen pregnancy rates (American College of Obstetricians and Gynecologists, 2019-a). Eighty-two percent of teenage pregnancies in the U.S. have been classified as unplanned or with the failed use of other contraceptive methods such as pills or condoms (Finer & Zolna, 2011). Teen pregnancy has been associated with childhood disadvantages and unstable economic families (Smith et al., 2018). Intergenerational pregnancies in teens and their mothers also have a strong association with unplanned adolescent pregnancy (Liu et. al., 2018).

Within the past 10 years, new contraceptives have hit the market, becoming available to adolescents with new guidelines for providers to follow with evidence-based research (Ott & Sucato, 2014). Intrauterine devices are some of the most popular forms of LARCs. These can include copper IUDs such as Paragard and hormonal IUDs like Mirena, Kyleena, Liletta, and Skyla (Planned Parenthood, n.d.-a). However, many providers still feel uncomfortable introducing LARCS as a first line choice for contraceptives in adolescents due to lack of training and education.

Another study found that a large number of adolescent patients said they were told about contraception during office visits and almost two-thirds of these counseled patients were informed about IUDs and implants. However, still more than 70% of these providers prescribed short-acting hormonal types of contraceptives to their adolescent patients and less than 5% of them suggested IUDs or implants. This would suggest a significant need for providers to receive training on the benefits of these devices on the adolescent population (Fridy, et. al., 2018, p.398).

Another problem that occurs is a lack of understanding for teens and their parents on LARCs and their benefits. For example, Kavenaugh et al. (2013) found that teens fear painful insertions and removals. The authors also found among both adolescents and their parents the misconception IUDs were only appropriate for people who no longer wanted children or who had already given birth. Such misconceptions can be corrected by giving the patients the most up-to-date contraceptive information.

According to the World Health Organization (WHO) as of 2019, 21 million adolescent girls of the ages 15-19 became pregnant and it was estimated that 12 million of these pregnancies resulted in live births in 2016. Among these 21 million adolescent

pregnancies, the WHO reported that approximately 50% of them were unintended. The article goes on to state that 55% of these unintended pregnancies in 15–19-year-old girls end in abortions, many of them are often unsafe in low- and middle-income countries. The article also states there is no current data available on childbirths of girls aged 10-14 (World Health Organization, 2022).

Significance

The American Academy of Pediatrics (2014) found that each method of contraception had differing percentages of failure when used in the typical way by women. This article found that women who used no method of contraception had an 85% chance of getting pregnant within the first year. Women who chose to use spermicides in the form of foams, creams, or gels had a 28% chance within the first year. Those women who used the fertility awareness-based methods or those who tracked their monthly ovulation to prevent pregnancy had a 24% chance. The withdrawal method left a 22% chance while female and male condoms left an 18-21% chance. The diaphragm left a 12% chance while the combined pill and progestin only pill left a 9% chance. The patch and the contraceptive ring created a 9% chance of pregnancy during that first year. The women who had IUDs placed had their chances of becoming drop dramatically with in the first year. The copper T had a 0.8% chance, while the Mirena or the Kyleena levonorgestrel had 0.2% chance. A single rod contraceptive implant left a 0.05% in the first year (Braverman et al., 2014).

Specific Aims/Purpose

The aim of the project will be to educate health care providers on the benefits of LARCs for the teen population. This project would provide education on the positive

impact of LARCs with the newest research to support its use in teens to health care clinicians in a midwestern rural area. This project will also offer information on locations that provide training on the techniques that are used when inserting a LARC in teens. The education that is provided to the health care clinicians will allow them to feel more comfortable educating their patients on the use of LARCs and provide them with the confidence to insert them.

Theoretical Framework

The theoretical framework that was chosen for this project is Pender's Health Promotion. This nursing theory states that its purpose is directed at increasing the patient's level of well-being. This theory can also operate in a multidimensional way to include each unique person as they live and interact in their environment. The theory goes on to state that it can focus on areas of the patient's individual characteristics and experiences, their behavior-specific cognitions, their affects, and the outcomes related to their behaviors. The major assumptions of this theory include:

1. Individuals seek to actively regulate their own behavior.
2. Individuals, in all their bio psychosocial complexity, interact with the environment, progressively transforming the environment as well as being transformed over time.
3. Health professionals, such as nurses, constitute a part of the interpersonal environment, which exerts influence on people through their life span.
4. Self-initiated reconfiguration of the person-environment interactive patterns is essential to changing behavior" (Pender's Health Promotion Model, 2020).

This theory relates to this project because of its focus on the patient's ability to transform their environment and themselves. In the model, health care professionals are part of the interpersonal environment that influences patients' health outcomes. The healthcare provider can help patients transform themselves and their environment by educating the patient and their parent on the many benefits of using LARCs for their primary pregnancy prevention. This theory could also apply to teens who come from a multigenerational environment of teen pregnancy. The education provided to them could be the change of environment and knowledge that breaks the cycle and improves future generations.

Research Questions

The research questions for this study are:

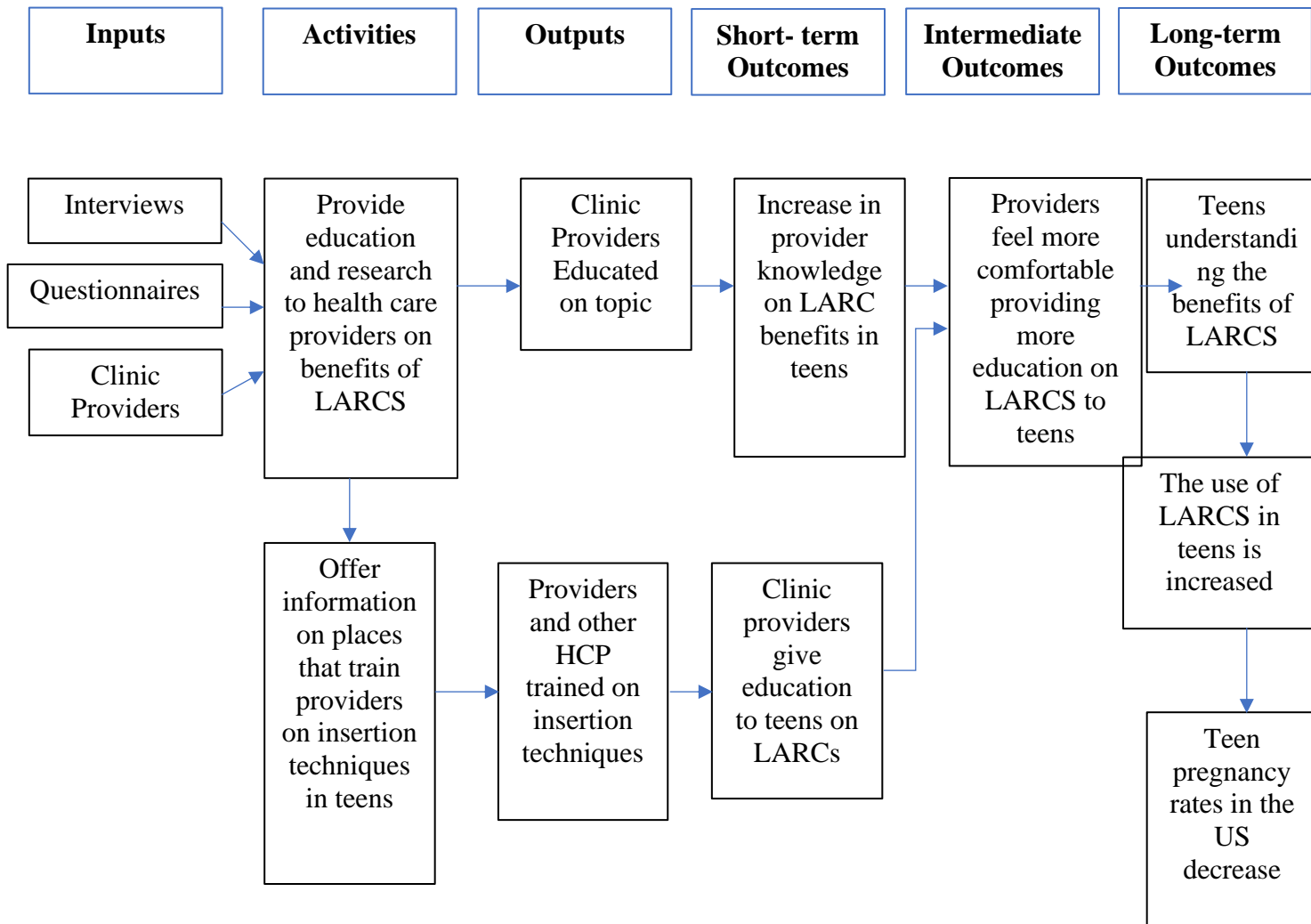
1. Will an educational intervention increase the knowledge of primary care providers on the benefits of LARCs in teens when identifying the most appropriate form of contraception in adolescents?
2. Will an educational intervention with proven research on LARCs help providers feel more comfortable providing this information to their adolescent patients?
3. Will an educational intervention allow the provider to feel more comfortable prescribing LARCs to their adolescent patients?

Conceptual Definitions

- Intergenerational teen pregnancies- the repeat of pregnancy in mothers in a family who had their first baby under the age of 20 (Whitehead, 2007)

- Intrauterine Devices (IUD)- a device inserted into and left in the uterus to prevent effective conception (Intrauterine Device, n.d.).
- Long-acting reversible contraceptive (LARC)- a reversible contraceptive that provides long lasting pregnancy prevention (Understanding LARC, 2020).
- Rural Population – a population or territory outside of cities and towns with 2,500 or more people (Ratcliffe, et al., 2016).

Logic Model



Summary

In conclusion, the problem of unintended pregnancy still significantly affects many girls. Current research has shown that teen reproductive care in the U.S. is not consistent with the evidence.

By conducting a project using a quantitative method consisting of a variety of multiple-choice questions and rating scales given to the health care provider and reviewing the results to create an educational handout will increase their knowledge and have a positive impact on the teen pregnancy rates in the U.S. The information given during this educational intervention, along with the access to insertion training, will allow the health care provider to feel more comfortable about informing their patients on the benefits that LARCs have on the teen population.

Chapter II

Review of Literature

Long-acting reversible contraceptives are both safe and effective for the use in teens but are still not used to their full potential in the United States. There are many disparities related to teen pregnancy on both the mother and the baby. By addressing these issues with the barriers that prevent teens from receiving LARCs and providing education to the providers on the benefits that LARCs have as their first line choice of contraception, teen pregnancy rates and these disparities could be decreased dramatically.

Literature Synthesis

A search of the scholarly literature on LARC use among adolescents, how to discuss LARC use with adolescents, and barriers experienced by providers recommending LARC use to adolescents was conducted using the Summon search system through Pittsburg State University's Axe Library. The search terms that were used to find these articles included, teen pregnancy, LARC use in teens, adolescent contraceptives, provider perceptions on LARC use in teens, and safety of LARCs. Eleven articles were used in the literature synthesis.

This chapter will discuss the long-acting reversible contraceptives use in adolescents, factors that influence contraceptive choice among adolescents, factors that

influence providers contraceptive choice for teens, cost of long-acting reversible contraceptives, clinical challenges and disadvantages, and their safety and risks.

Long-Acting Reversible Contraceptives Use in Adolescents

Research has shown that LARCs are the second most common method of contraception for women ages 25-34. This research has also shown that these sexually active adolescents are at an increased risk to not using condoms or pills appropriately. This article stated that 54% of unwanted pregnancies occur due to non-use of contraception and 41% to the inconsistent use of contraceptive methods (Strasser, et. al., 2016, p. 1). Still, despite the failure rates of pills and condoms, only 4.3% of teens are using LARCs as their contraception (Strasser, et. al., 2016). With LARC methods having less than a 1% chance of resulting in pregnancy, this leaves them as the best choice for this population (Braverman et al., 2014). However, there are still factors influencing them to not choose LARCs as their first line contraceptives.

Factors That Influence Contraceptive Choice among Adolescents

Little is known about how to counsel adolescents in a pediatric setting on the use of LARCs as first line contraceptives. One qualitative study looked at the influencing factors among adolescents choosing contraceptives and found that teens have five factors influencing their LARC choice. These five key factors include that these patients had strong preferences one way or the other about the device-specific characteristics. These patients had also been previously told information about LARCs from one of their friends or family members. These teens admitted to having gaps in their knowledge about LARC methods and stated that it affected their informed decision making. They also stated that personal circumstances led them to not choose a LARC method. Finally, these teens also

found that they had environmental constraints that may have influenced their choice in contraceptive methods (Hoopes, et. al., 2016).

In a descriptive study published in the Journal of pediatric and adolescent gynecology, researchers found that most of its adolescent participants had heard of LARC contraceptives but lacked accurate knowledge on these devices. These participants had misconceptions in the duration that these devices could stay in place, their ease of use, their effectiveness against unwanted pregnancy, menstrual concerns, potential side effects, seen as a foreign body, and their effect on the patient's future fertility (Coates et al., 2018, p. 608). These factors that influenced the decisions of adolescent females to choose other contraceptives may have been different if they were provided proper education and counseling.

Factors that Influence Providers Contraceptive Choice for Teens

Many healthcare providers in rural areas think their lack of training causes them to feel uncomfortable providing education and inserting IUDs for their adolescent patients. According to the Journal of Women's Health, physicians felt that they lack the training and education needed to place these devices and also felt they had low patient demand. The data from this article states that if these providers had additional training in their family medicine residency that this may help increase their abilities to provide these services in the rural areas (Lunde, et. al., 2014).

In a study on *Improving LARC Access for Urban Adolescents and Young Adults in the Pediatric Primary Care Setting*, it was found that providers felt that the 2-visit requirement for LARC placement hindered their ability to prescribe these LARCs to many of their patients. They also felt that they did not have competent teaching or

demonstrations on IUD insertions and did not feel comfortable placing these devices without additional hands-on training (Onyewuchi, et al., 2018).

By addressing these issues with providers, the ability for adolescents to receive the most effective type of contraception can be achieved more easily. These patients will be able to receive all the appropriate information on these devices and be able to have them inserted in office by the provider who feels comfortable not only educating them on this topic but also confident with the insertion techniques.

Cost of Long-Acting Reversible Contraceptives

The cost of LARCs for contraceptive use was another inhibiting factor for teens when choosing their preventative reproductive needs. A recent project from 2015 was conducted in St. Louis, Missouri, removing some barriers that prevented teens from accessing these devices including cost, education and access to these products. This project was titled the CHOICE project and provided contraceptive counseling and awareness of all reversible methods that were available, including LARCs, to women ages 14-45 at no cost for 2-3 years. During this study, LARC methods were found to be 20 times more effective than non- LARC methods. The study also reported a reduction in repeat abortions and substantial reductions in teen pregnancy, birth, and abortion rates compared to the national rates. The CHOICE project supports that LARC methods can result not only in fewer pregnancies and abortions in the teen population but can also be cost saving for the health care system (Birgisson et al., 2015). This project also stated that the implementation of this method required that all staff be trained about these devices. This included everyone in the office from the front desk workers, management, clinical staff, and the financing office to ensure that everyone is on board with providing

affordable LARCs for their patients. It also ensures that these women hear the most up to date information from a non-biased provider about these devices and contraception in general (Birgisson et al., 2015).

The research from the CHOICE project allows us to understand that by providing our patients with up-to-date accurate information, as well as giving patients and their family the ability to finance these devices will help improve the number of teens who choose LARCs and potentially decrease the number of unintended pregnancies in the United States.

According to Planned Parenthood (n.d.), an IUD can cost anywhere between \$0 to \$1300. This number can fluctuate based on the patient's insurance. Many health insurance plans cover these devices as well as some government assistant programs. The affordable care act that was put into action by President Obama stated that most insurance plans must cover all methods of birth control, including IUDs (Planned Parenthood, n.d.-c). Birth control pills can cost anywhere from \$0-\$50 with majority of them being fully covered by most insurances (Planned Parenthood, n.d.-d).

Clinical Challenges and Disadvantages

With any implanted device there is always a chance that the patient may experience complications. Proper thorough education is the most important thing for this contraceptive method. Teens and their parents should understand that IUDs can be painful with insertion but application of lidocaine gels before the procedure may help with this discomfort. Difficulty with removal and expulsion are rare but can also occur in a small percentage of women who have the IUD. Vaginal and pelvic infections can also occur. During insertion, the patient may experience complications such as infection,

bruising, non-palpable implant, and have less than a 1% chance to become pregnant with the implant inserted (Committee on Gynecologic Practice et al., 2016).

Table 1.

Comparison of LARC Options

TABLE 1. Comparison of LARC options^{a,b}						
LARC Device	Prescribing Information	Typical Failure Rate,^c %	Duration	Advantages	Most Common Adverse Effects	Menstrual Bleeding Pattern
Paragard (Teva, North Wales, PA)	Copper IUD	0.8	10 years	Can be used as emergency contraception Nonhormonal	Heavy menstrual bleeding	Typically, no change
Mirena (Bayer, Whippany, NJ)	IUD (levonorgestrel 20 µg/day)	0.2	5 years	Treats heavy or painful menstrual periods Financial assistance through manufacturer	Bleeding pattern changes	Lighter, shorter, less frequent; greater likelihood for amenorrhea
Skyla (Bayer, Whippany, NJ)	IUD (levonorgestrel 14 µg/day)	0.2	3 years	Lower hormone doses Small device Financial assistance through manufacturer	Vulvo-vaginitis, abdominal pain, acne	Typically, no change; amenorrhea less likely
Kyleena (Bayer, Whippany, NJ)	IUD (levonorgestrel 17.5 µg/day)	0.2	5 years	Smaller device Financial assistance through manufacturer	Vulvo-vaginitis, ovarian cysts, abdominal pain, acne	Lighter, shorter bleeding, amenorrhea less likely
Liletta (Allergan, Irvine, CA)	IUD (levonorgestrel 19.5 µg/day)	0.2	3 years	Financial assistance through manufacturer Second device free (depending on insurance)	Vulvo-vaginitis, acne	Lighter, shorter bleeding
Nexplanon (Merck, Kenilworth, NJ)	Subdermal implant (etonogestrel, variable release)	0.05	3 years	Treats heavy, painful menstrual periods Most effective LARC option	Unscheduled bleeding	Lighter bleeding, but unscheduled bleeding possible

^aInformation obtained from prescribing information provided by manufacturer (Bayer, 2016; Bayer, 2017a; Bayer, 2017b; Bayer, 2017c; Merck, 2017; Allergan, Inc., 2017a; Teva Women's Health, 2014).

^bAdapted from Francis and Gold (2017).

^cInformation obtained from World Health Organization Department of Reproductive Health and Research & John Hopkins Bloomberg School of Public Health/Center for Communication Programs (2011).

Table 1 Comparison of LARC options

Note. From “The Latest in Teen Pregnancy Prevention: Long-Acting Reversible Contraception,” by K. McClellan, H. Temples, and L. Miller, 2018, *Journal of Pediatric Health Care*, 32(5), p.92 (<https://doi.org/10.1016/j.pedhc.2018.02.009>). Copyright 2018 by National Association of Pediatric Nurse Practitioners.

These complications, although uncommon, can be very serious and need to be fully understood by the patient and their parent before insertion of the contraceptive.

These complications should be included in the informed consent process and allow everyone involved to fully understand the risk and benefits of LARCs. The American College of Obstetricians and Gynecologists created several algorithms to help the healthcare provider inform the patient and their parent of all possible LARC complications. An example of this algorithm is listed in appendix A. This algorithm asks the reader if their patient would like to become pregnant within the next year and then prompts them down a series of counseling topics to insight a more thorough discussion on reproductive life planning.

A second algorithm can be found in appendix B, this algorithm allows the provider to help the teen work through their choices of contraceptives by using simple yes and no questions to reach the best option of contraception to meet their needs. This includes implants, IUDs, progestin only injectables, combination hormonal pills and progestin-only pills.

Governing Organization

The use of LARCs in teens and adolescents is endorsed by both the American Academy of Pediatrics (AAP) and the American College of Obstetrics and Gynecology (ACOG). According to ACOG, national data still shows that LARC use in teens is much lower than in the older age groups although their LARC satisfaction rates remained high as well as having an increase in the number of nulliparous women who use LARCs as their form of contraception. ACOG states that intrauterine devices and implants should routinely be offered as an effective and safe option of contraceptive for both adolescents and nulliparous women (American College of Obstetrics and Gynecologists, 2017-b).

The AAP states that it does recognize LARCs as a safe option of contraception for teens. It also states that it recommends that the providers seek and obtain the required insertion training for the placement of LARCs as well as the removal techniques. The AAP also states that it should keep in consideration that LARCs are a good option for reducing menses, especially in those who have cognitive or physical disabilities. It also emphasized that a dual therapy, like male condom use, may be needed to help protect against STIs and that placement of LARCs need not be delayed for screening for STIs (American Academy of Pediatrics, 2020).

Safety and Risks

In 2016, the CDC published updated criteria to the U.S. Medical Eligibility Criteria for Contraceptive Use. This publication would help a provider determine what patients would benefit best from different specific types of contraceptives, including LARCs, based on the medications they are currently taking and those women with chronic diseases. Updates to this report include adding women who suffer from cystic fibrosis, multiple sclerosis, and women who are taking psychotropic drugs or St. John Wort. Post-partum women, breastfeeding mothers, migraine sufferers, women who are receiving antiretrovirals, and women who have been diagnosed with the human immunodeficiency virus are also covered on this report (Curtis, et. Al., 2016). By utilizing this report, the providers and their patients can be certain that they are receiving the most effective and safest contraceptive for each of their unique bodies by factoring in their medications and their chronic illness or disorder.

The World Health Organization (WHO) stated support for the use of LARCs in women of all ages in their *Family Planning Handbook for Providers*. This article goes on

to state that “nearly all women can use implants safely and effectively including women who have or have not had children, are not married, and are of any age including adolescents and women over 40” (Advocates for Youth, 2018). The article also states that there is no minimum age for the IUD use (Advocates for Youth, 2018).

Summary

There are several gaps in the literature that are preventing the number of teens choosing LARCs as their first line contraception to rise. These gaps include a lack of proper training for physicians after residency to keep up their practice of inserting IUDs, especially on adolescent girls. Another is lack of knowledge and understanding of the benefits of LARCs from both teens and physicians. Many misconceptions have also been passed around in the population through social media and friends that prevent them from wanting to learn about LARCs.

The advantages and disadvantages of these devices should be fully covered by the provider with the patients. With the use of the created algorithms, the provider can ensure that they are clearly addressing the appropriate topics and questions that the patient may have. This will help alleviate the concerns of any misleading information the patient or their parent may have heard through their peers or social media. Utilizing the U.S. Medical Eligibility Criteria for Contraceptive Use will also help reduce the chance for a medication interaction or worsens the effects from their chronic illness.

Chapter III

Methodology

This chapter discusses the design of the research for this study. It also describes the sample, instruments used, and the statistical analysis. The method to conduct the research in this study is education. The overall goal of this project is to improve the knowledge of the health care providers when managing the reproductive health of teens and adolescents.

Project Design

The design of this study was a quasi-experimental and was used to evaluate whether an increase in the providers knowledge of the most recent research on the benefits of LARCS in teens occurred after education on this topic is provided. An online survey was administered to providers by a social media post on the 4 State APN Website on Facebook to determine their current knowledge in regard to the benefits of LARC use in teen pregnancy prevention and the comfort levels of these providers on educating their patients and inserting these devices. This survey provided an educational intervention followed by a post-test that generated quantitative results that were evaluated by the researcher.

The focus of this study is based on the following research questions:

1. Will an educational intervention increase the knowledge of primary care providers on the benefits of LARCs in teens when identifying the most appropriate form of contraception in adolescents?
2. Will an educational intervention with proven research on LARCs help providers feel more comfortable providing this information?
3. Will an educational intervention allow the provider to feel more comfortable prescribing LARCs to their adolescent patients?

Procedure

IRB approval was sought from Pittsburg State University, approval number AS23-012 on December 13, 2022. After the approvals were received, the posttest was reviewed, and final edits made. The links from Qualtrics was created for the posttest and educational presentation. This was then sent out online via a social media post to the 4 State APN Website on Facebook. The social media post contained a thorough description of the instructions on how to complete the surveys. This post also contained an educational presentation followed by a posttest. After the surveys were completed from the providers, the data was received from the online surveys via the Qualtrics website. The safeguard and fidelity of this project was maintained through the Qualtrics website. This website allows the researcher to send out an anonymous link that is used to take the survey with no personal information being collected. This includes the participant's name and email address. Qualtrics is encrypted with Transport Layer Security for all of its transmitted data that keeps all of the information confidential and secure.

This survey included the demographic data, the current acceptance from providers of teens pursuing implanted contraceptives, their comfort level on their evaluation and placement of these devices, and their future management.

An educational intervention and a posttest were administered to the participants through a social media post on the 4 State APN Website on Facebook. This educational intervention included an educational read only PowerPoint on the benefits of LARC use in teens and included embedded links to IUD insertion training courses. The data recorded included the demographic location from which the data was collected on the website where the participants access the educational intervention. This data was then used to help determine the differences based on the characteristics of each group to evaluate which participants met the inclusion and exclusion criterion. An educational interaction on the topic of LARC use in teens and insertion techniques was then provided followed by a posttest. The posttest was more beneficial to obtain quick and accurate results from multiple areas where providers are caring for teens who are sexually active and are at risk for teen pregnancy. This study will help provide data that can be used to further improve the teen pregnancy rates and current practice guidelines for contraceptive care in adolescents.

Resources

The resources needed included assistance from instructors with final edits to the project and the surveys, and the Qualtrics website to conduct the research. This project did not require any financing.

Setting and Participants

This study included nurse practitioners who participated on the 4 state APN website on Facebook and who are actively providing care in a family practice or OBGYN office. The participants were given a read only PowerPoint educational intervention followed by a posttest. The ages of these providers were documented as well as their number of years in practice to assess the knowledge and comfort level of more experienced providers.

Recruitment

This study utilized participants from the area who are currently practicing at family practices or OBGYN offices that provide contraceptive care to teens. Qualtrics was set up to with an embed educational offering, link handouts, and a post-test. The URL was then be embedded onto the social media post on the 4 State APN Website on Facebook. This has the potential to result in many more participants and a better response rate for the post-test. The potential participants were sought out by this author using the 4-state Advanced Practice Nurse website via Facebook. The purpose of this study was also included in this post. Participants who wish not to participate simply do not have to respond to the post. Consent will be implied by all participants with posttest return.

Inclusion/Exclusion Criteria

The initial online survey was be accessible to a variety of providers on the 4 state APN via Facebook website who are currently providing reproductive care to teens and adolescents. Inclusion criteria for the posttest portion of this educational intervention included all providers who chose to click on the link and participate.

Any provider who completes the survey but are not actively participating in the care of teens or providing reproductive care to teens will not qualify for this study. No other exclusion criteria have been identified at this time.

Protection of Human Subjects

The initial survey, the educational intervention, and the posttests was sent out online after approval was received from the Pittsburg State University Institution Review Board (IRB). The population of subjects of this study only included providers. This project did not include any children, prisoners, or any specific race, religion, or ethnicity. No harassment or deception of the subjects took place with the techniques used to conduct the research. Confidentiality was be maintained by not requiring the names of the providers on their questionnaires or any other identifying factors. No risks were associated with this study.

The providers were able to participate in a voluntary nature with no compensation provided. The data was only obtained from the posttest; thus, confidentiality was maintained. These participants were also informed that they are allowed to leave the study at any time.

Instrument

An online survey was used for this study using the Qualtrics website. The information obtained included questions about the providers current practice, their knowledge on the benefits of LARCs, and their comfort level inserting these devices. The read only educational intervention was conducted using a short presentation on the benefits of LARC use in teens. A posttest was then utilized to gather the data from the participants using a descriptive study for the research questions. The providers

information included where they practice, their age, their years of practice, if they currently accept adolescent patients, and if they provide their contraceptive care. The posttest included a variety of multiple-choice questions.

Content Validity

To achieve content validity, the literature review was used to show need for the education of providers on the topic of using LARCS as the first line choice of contraception in teens. The literature review found that there is an abundance of misinformation passed around by word of mouth and lack of education given on the topic of LARCs to teens by the providers. It also found that providers lacked knowledge or skills in inserting these devices. The content validity was met by evaluating the survey content with other nurse practitioners who serve as committee members as well as a university instructor. These practitioners and instructor assisted the researcher in reviewing the posttest to ensure that it is relevant to current practice and is organized and easy to read. After the test was created, the committee members provided recommendations to modify the test to improve the content.

Summary

The continued, steady rate of teen pregnancy in the United States indicates a need for providers to understand the benefits that LARCs can have on the adolescent population. These providers also need to feel comfortable providing this information to teens and their parents. There is a need for an educational intervention on the benefits of LARCs with the current research on these devices in their use in teens to assist providers in decreasing teen pregnancy. This study included an educational intervention followed by a posttest to evaluate the knowledge they have gained.

Chapter IV

Evaluation of Results

The purpose of this study was to deliver the current practice guidelines and training links from ACOG and the Nation-Wide Children's hospital to primary care providers. The focus of this study was to enhance provider knowledge on the benefits of LARC use in teens. Educational resources were also included to allow them the ability to seek out additional training on insertion techniques.

The data collected in this study was used to evaluate primary care provider perceptions on their existing knowledge of LARC use in teens as well as their degree of comfort with prescribing and inserting LARCs for their teen patients. The providers current practice role, their age, gender, their current place of practice, their current patient population, and their length of time in practice were assessed. These providers were also asked if they routinely prescribe LARCs to teens, if they felt they needed further education to be more comfortable prescribing LARCs to teens, if the educational intervention increased their knowledge of the benefits of LARC use in teens, how much they knew about this topic before this training, if this educational intervention allowed them to feel more comfortable providing this information to their teen patients, and if they felt they needed further educational interventions to prescribe LARCs to teens. The

link to the slide show was delivered via a social media post and the providers knowledge level after the intervention was assessed using a post survey.

The initial social media post was placed on the 4 state APN Facebook website on February 2^{4th}, 2023 with a second post placed March 2nd, 2023. The data was collected from February 24th, 2023 to March 5th, 2023.

Demographic Data

The sample population consisted of fifteen nurse practitioners (n=15), including nine currently working in the family practice. The recruitment method for the study included a social media post with links to the educational intervention and posttest survey. The posttest data was collected using Qualtrics. Participants were all currently licensed providers working in a family practice or other clinic during the time of data collection.

A majority (40%) of the participants fell into the 41-50 age range, followed by four (26.67%) in the 31-40 age range, three in the 51 (20%) and older category, and finally two (13.33%) in the 20-30 age range at. Their current gender was also assessed with only one (6.67%) being male, one (6.67%) preferring not to say and thirteen (86.67%) identifying as females. Their length of time as a provider was primarily made up of providers who have been practicing for 6-10 years at six (40%) responses, three (20%) said 0-5 years practicing, three (20%) at 11-15 years, and three (20%) at 16 years or greater. These participants were then asked to describe their patient population setting. Eleven (73.33%) participants selected rural, two (13.33%) selected urban, and two (13.33%) selected suburban. These participants were also asked if they routinely

prescribed LARCs to teens, seven (46%) providers said never, three (20%) said rarely, four (26.67%) said occasionally, and one (6.67%) said often.

A graph representing the demographic data of participants is presented below (Figure 1).

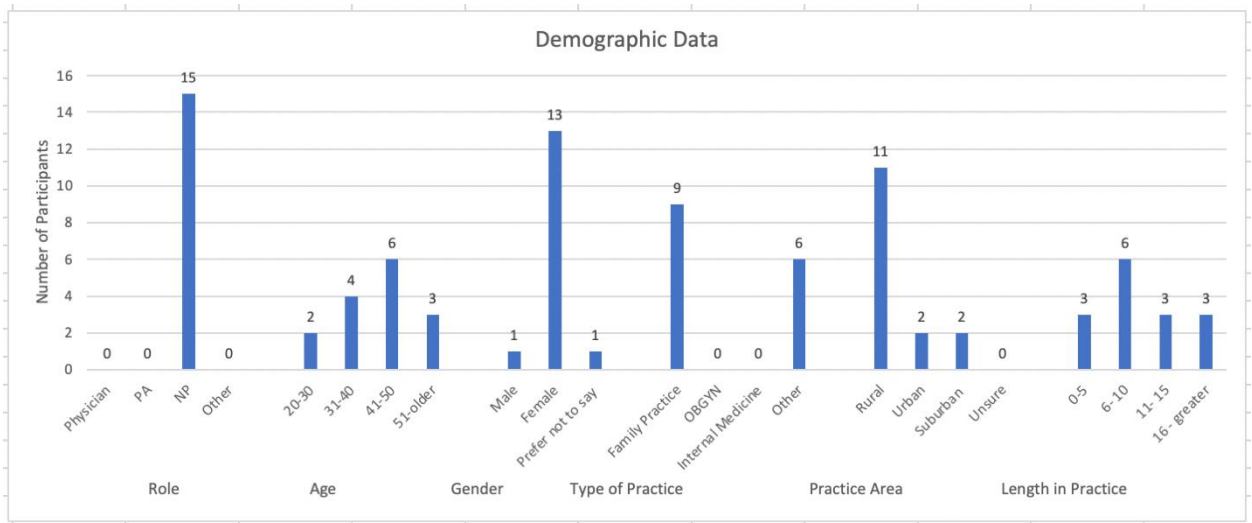


Figure 1 Demographic data of participants

Project Questions and Study Results

The posttest consisted of twelve questions, all multiple choice. Results of the posttest descriptive and non-inferential results were evaluated to answer the following research questions, *“Will an educational intervention increase the knowledge of primary care providers on the benefits of LARCs in teens when identifying the most appropriate form of contraception in adolescents?”*, *“Will an educational intervention with proven research on LARCs help providers feel more comfortable providing this information to their adolescent patients?”*, and *“Will an educational intervention allow the provider to feel more comfortable prescribing LARCs to their adolescent patients?”*.

Results of the posttest revealed seven (46.67%) of the participants felt they needed further education to make them feel more comfortable with prescribing LARCs to teens

this made up the majority. Six (40%) practitioners disagreed that they needed further education, and two (13.33%) strongly disagreed. When asked if the educational intervention increased their knowledge on the benefits of LARC use in teens one (6.67%) participant said they strongly disagreed, two (13.33%) said they disagreed, and twelve (80%) stated that they agreed. When asked how much they knew about the topics covered before this training, three (20%) participants stated they had little knowledge, nine (60%) stated they were somewhat knowledgeable, and three (20%) stated they were very knowledgeable. The participants were also asked if the educational intervention allowed them to feel more comfortable providing information on LARCs to their adolescent patients one (6.67%) stated that they disagreed, twelve (80%) stated they agreed, and two (13.33%) stated they strongly agreed. Finally, the participants were asked if they felt they needed further educational interventions to prescribe LARCs to teens one (6.67%) participant stated they strongly disagreed, eight (53.33%) stated they disagreed, and six (40%) stated they agreed.

The first project question that was assessed was “*Will an educational intervention increase the knowledge of primary care providers on the benefits of LARCs in teens when identifying the most appropriate form of contraception in adolescents?*” According to the results in this study, 80% of these providers felt that the education intervention increased their knowledge on the benefits of LARC use in teens. The second project question asked, “*Will an educational intervention with proven research on LARCs help providers feel more comfortable providing this information?*” 80% of these participants agreed that the educational intervention on the benefits of LARC use in teens made them feel more comfortable to provide information, while 13.33% strongly agreed, and 6.67% disagreed

that the intervention allowed them to feel more comfortable providing LARC information to teens. The last project questions asked, “*Will an educational intervention allow the provider to feel more comfortable prescribing LARCs to their adolescent patients?*” 46% of these providers felt that the education provided made them feel more comfortable prescribing LARCs to teens, 40% disagreed that it made them feel more comfortable, and 13.33% strongly disagreed.

Summary

After reviewing the posttest scores, it was found that the majority of the participants felt they needed further education to make them feel more comfortable with prescribing LARCs to teens at (46%). 80% of the participants felt that the educational intervention increased their knowledge on the benefits of LARC use in teens. When asked how much the participants knew about the topics covered before this training 80% agreed that they were somewhat knowledgeable. 80% of these participants also felt the educational intervention allowed them to feel more comfortable providing information on LARCs to their adolescent patients. Finally, 53.33% of the participants felt they needed further educational interventions to prescribe LARCs to teens. These results show that additional education and research needs to be done for providers to allow more teens to get the education they need as well as access to a provider who feels comfortable educating, prescribing, and inserting LARC devices.

This research allowed for the demographic collection of data to provide the researcher the ability to look at the differences between provider role, age, gender, and the area they are providing care as well as if they routinely prescribed LARCs to teens currently to further describe the results. The most common answer was that these

providers felt that this educational intervention increased their knowledge in the benefits of LARC use in teens and allowed them to feel more comfortable providing information on LARCs to their teen patients.

Chapter V

Discussion

Current clinic practices, and providers' knowledge of and comfort with prescribing and inserting LARCs in teens was assessed. Multiple choice questions were created based on the recommendations from ACOG and Nationwide Children's Hospital and clinical practice guidelines. These questions were answered after introducing an educational PowerPoint using ACOG and the Nation-Wide Children's hospital resources as well. After entering the link provided on the social media post, the participants were instructed to read through the PowerPoint presentation. The PowerPoint presentation also included links to educational training for LARC insertion. The participants were then instructed to take a posttest. The intention of the posttest was to assess if the educational intervention enhanced the providers knowledge on the benefits of LARC use in teens based on the recommendations from ACOG and the Nation-Wide Children's hospital.

Relationship of Outcomes to Research

The posttest evaluated the providers knowledge and their practices of LARC use in teens after receiving the educational intervention. The providers were also asked if they routinely prescribe LARCs to teens, if they felt they needed further education to be more comfortable to prescribe LARCs to teens, if the education intervention increased their knowledge on the benefits of LARC use in teens, how much they knew about this

topic before this training, if this educational intervention allowed them to feel more comfortable providing this information to their teen patients, and if they felt they needed further educational interventions to prescribe LARCs to teens.

The findings of this study are consistent with current research on providers' perceptions of prescribing LARCs to teens. Most of these providers did agree that the educational intervention increased their knowledge on the topic and allowed them to feel more comfortable providing this information to their teen patients; however, almost half of the respondents in this study did not agree that this educational intervention made them feel more comfortable prescribing these medications. Many of these providers might feel more comfortable prescribing and inserting LARCs after receiving hands-on training and education on insertion techniques. Links and websites offering trainings were made available in the education intervention PowerPoint, for those providers wanting further education.

Observations

Overall, the educational presentation was effective in increasing providers' knowledge of the topic. However, the need for hands-on training to develop the skill and confidence needed to feel comfortable prescribing and inserting these devices in teens and adolescents is likely to be a barrier to providers. Moreover, the topic of LARC use can have such a stigma around it in the minds of teens and their parents, that providers', are likely to want to be especially well prepared in the terms of their own knowledge and skill set before offering it to patients or telling patients that they are not good candidates for this type of device. Given the importance of hands-on training as a foundation for incorporating these devices into one's practice, it may be that the best outcome would be

to use the educational intervention to encourage providers to take the initiative to seek further training in prescribing and inserting LARCs.

Evaluation of the Theoretical Framework

The theoretical framework that was chosen for this project is Pender's Health Promotion. This theory is a multidimensional theory that can operate in several ways. One element is that it includes each unique person in the way they live and interact with their environment. This is very important for this project because providers must understand that not every teen or adolescent is going to be a good candidate for LARCs, and they need to feel comfortable enough with their knowledge about these devices to be able to accurately prescribe or refuse to prescribe these devices in each unique situation after gathering all of the patient's medical history and their goals for their reproductive health.

Another dimension of this theory is that it assumes that health care professionals constitute a part of the interpersonal environment and exert influence on people throughout their life span. This assumption also applies to this project because providers do have a huge impact on a patients' choices in the terms of their healthcare needs. If a provider chooses not to educate a patient on all of their possible choices for their reproductive care because they feel uncomfortable doing so, the patient may have negative outcomes throughout their lifespan because of the lack of appropriate care. Providers need to be able to provide all of the options for reproductive care to their patients and be able to help the patient work through what option is the best for their unique situation. This choice could potentially impact the rest of their life, for instance, if a teen patient is prescribed an oral contraceptive and became pregnant because they were

not educated properly on its use, they would then have to suffer the consequences of teen pregnancy for the remainder of their life. This would also affect the life of the baby born to that teen mother.

Based on the results of this project it seems likely that the best option would be an educational resource accompanied by a live, in-person training on the LARC insertion techniques to allow providers to feel 100% comfortable educating teen patients about these devices as well as; prescribing; and inserting them.

Evaluation of the Logic Model

The results of this study support the logic model that was proposed in Chapter One. The logic model described how the educational intervention would positively impact provider knowledge on the benefits of LARC use in teens and allow them to feel more comfortable providing this knowledge to their teen patients. The providers in this study stated that the majority of them had an increase in their knowledge and would apply it to their practice. This logic model continues with the providers being trained on the insertion techniques of LARCs in teens, this will take initiative on the part of the provider to get the additional training and cannot be assessed during this time. The long-term goals of this logic model include teens understanding the benefits of LARC use, the use of LARCs in teens being increased, and the U.S. teen pregnancy rates decreasing over time. I do feel that these goals could all be met if these providers take the time to educate themselves and apply the information and skills obtained to their patients.

Limitations

The method for sampling did not introduce bias or error in the results because the results were received anonymously via a social media post. There were no assumptive or

loaded questions in this survey. The survey avoided jargon and poor answer scale options. This survey also avoided confusing answer scale formatting by only allowing multiple choice answers. The instrument that was used to receive the data was a limitation of this study. The scale that was used did not include a neutral answer option which was also a limitation in this survey. The amount of time the participants spent on the educational intervention and each question was not documented, this is also considered a limitation. Due to time constraints the social media post was only placed twice on the APN website, limiting the number of responses to the post. As previously mentioned, time was also a factor for obtaining the data. The post was left open for two weeks and reposted to the social media site twice to allow for as many responses as possible. Resources were also a limitation of this study, the original plan to post to a large organization for a larger response rate but that plan had to be changed due to legalities of the organization that the researcher was not aware of during the planning stage of this project.

Implications for Future Research

The next steps for practice improvement and knowledge development on the topic of LARC use in teens would include the continuation of education for providers and their patients. As previously mentioned, this simple study showed that the majority of the providers agreed that their knowledge was enhanced by reading through the simple PowerPoint provided. If something this simple can impact these fifteen providers, it could have the potential to impact many others. If this educational intervention was presented with hands on training of LARC insertion techniques in teens, this researcher believes that this could generate a substantial number of positive outcomes on the providers

knowledge, skill set, and confidence in prescribing LARCs to teens. In turn, this could heavily impact the use of LARCs in teens and decrease teen pregnancy rates in the future.

This researcher would improve the design of this project for the next time by adding in some visual training videos to the educational intervention. These educational videos could show the provider insertion techniques of these devices on teens and allow them to feel more confident inserting them on their patients themselves. These videos could also be interactive and offer them the ability to practice virtually before prescribing them to their own patients. The links to in person training sessions could also be provided. Another way to improve this project would be to offer the educational intervention with an in-person hands on training of LARC insertion in teens. This would take a significant amount of planning and cost to complete but would greatly enhance the educational instrument in this study.

This project could be replicated with a larger sample to generate more data to review the benefits of this study. If this project were to be sent out to many more providers in a larger system, it may generate more responses and lead to larger data obtained to create more significant research to review.

Implications for Practice, Health Policy and Education

The clinical significance of the findings from this project shows that a simple educational intervention on the LARC use in teens allowed the majority of the providers in this survey to feel more confident in their ability to educate their teen patients on the benefits of LARC use as well as feeling more confident in prescribing these devices. This researcher suggests that changes for advanced practice nurses should include yearly mandatory training that is provided by their employer on reproductive care and insertion

techniques. If a provider is going to be prescribing contraceptives to their patients, they should feel confident about providing information on all of the patient's choices in contraceptives and confidently be able to insert these devices. If the provider attended yearly training on this topic, they would be able to provide this information and these services. This could be implemented through a health policy that mandated companies to provide this training to their staff that are providing reproductive care to their patients to allow them to have the tools and resources necessary to provide their patients with the best possible care. Providers also need to implement the ACOG and Nationwide prescribing guidelines in their practice to allow them to feel more comfortable when choosing the appropriate LARC for their adolescent patient.

Conclusion

The aim of this project was to educate health care providers on the benefits of LARCs for the teen population. This project provided education on the positive impact of LARCs with the newest research to support its use in teens to health care clinicians in a midwestern rural area. This project offered information on locations that provide training on the techniques that are used when inserting a LARC in teens. The education that was provided to the health care clinicians allowed them to feel more comfortable educating their patients on the use of LARCs. This projects outcome contributed to advanced practice nursing knowledge and practice by enhancing the providers knowledge on LARC use in teens and providing resources for continued training. It is imperative for primary care providers to feel comfortable with all of the options when discussing contraceptive choices with their teen patients. This education could greatly impact the teen's life and the life of their potential unborn child. Primary care providers must be

diligent in adhering to evidence-based practice recommendations when it comes to contraceptive care in teens.

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APPENDIX

Appendix A

Posttest

1. Current practice role
 - a. Physician
 - b. Physician Assistant
 - c. Nurse Practitioner
 - d. Other, _____

2. Current age
 - a. 20-30
 - b. 31-40
 - c. 41-50
 - d. 51 or older

3. What is your current gender?
 - a. Male
 - b. Female
 - c. Transgender
 - d. I use a different term, _____
 - e. Prefer not to answer

4. What best describes your current practice role?
 - a. Family practice, birth to geriatric
 - b. OBGYN
 - c. Internal medicine
 - d. other, _____

5. How would you describe your current patient population?
 - a. rural
 - b. urban
 - c. suburban
 - d. unsure

6. Length of time in practice?
 - a. 0-5 years
 - b. 6-10 years
 - c. 11-15 years
 - d. 16 years or greater

7. Do you routinely prescribe LARCS to teens/adolescent patients?
 - a. never
 - b. rarely
 - c. occasionally
 - d. often

e. always

8. I need further education to make me more comfortable with prescribing LARCs to teens/adolescents.

- a. strongly disagree
- b. disagree
- c. agree
- d. strongly agree

9. The educational intervention increased my knowledge about the benefits of LARC use in teens.

- a. strongly disagree
- b. disagree
- c. agree
- d. strongly agree

10. How much did you know about the topics covered before this training?

- a. no knowledge
- b. little knowledge
- c. somewhat knowledgeable
- d. very knowledgeable

11. The educational intervention allowed me to feel more comfortable providing information on LARCs to my adolescent patients.

- a. strongly disagree
- b. disagree
- c. agree
- d. strongly agree

12. I feel I need further educational interventions to prescribe LARCs to teens.

- a. strongly disagree
- b. disagree
- c. agree
- d. strongly agree

Appendix B

Educational PowerPoint Slides

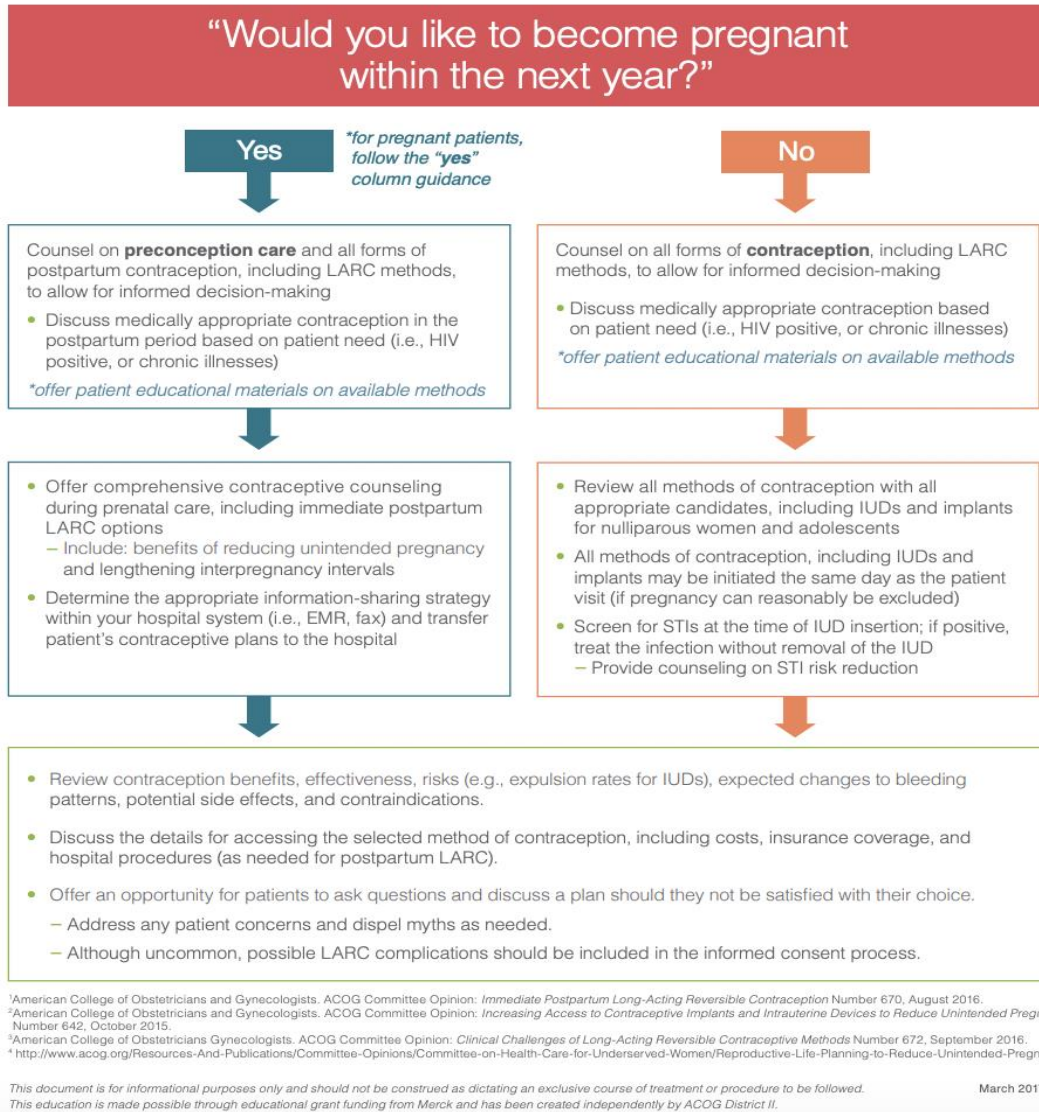
The image displays a grid of 14 educational PowerPoint slides, numbered 1 through 14. The slides are arranged in four rows and four columns. The first row contains slides 1, 2, 3, and 4. The second row contains slides 5, 6, 7, and 8. The third row contains slides 9, 10, 11, and 12. The fourth row contains slide 13, which is titled 'REFERENCES CONTINUED'. Each slide contains text, bullet points, and some include diagrams or tables. Slide 1 is titled 'LARC COUNSELING' and discusses enhancing provider knowledge. Slide 2 is titled 'CLINICAL PROBLEM' and lists various clinical scenarios. Slide 3 is titled 'CONTRACEPTIVE FAILURE RATES AND THEN USE BY TYPE' and provides data on failure rates for different contraceptive methods. Slide 4 is titled 'FACTORS THAT INFLUENCE PROVIDER CONTRACEPTIVE CHOICE FOR THE PATIENT' and lists factors like lack of training and patient education. Slide 5 is titled 'SAFETY AND RISKS' and discusses CDC published data on LARC safety. Slide 6 is titled 'EDUCATIONAL RESOURCES' and lists resources like the National Clinical Training Center. Slide 7 is titled 'Evidence Based Practice Guidelines - Contraception' and shows a flowchart. Slide 8 is titled 'ACOG Contraception Counseling & Referral Guide' and shows a flowchart. Slide 9 is titled 'COMPARISON OF LARCs' and contains a table comparing different LARC methods. Slide 10 is titled 'GOVERNING BODY' and discusses the role of the American Academy of Pediatrics and the American College of Obstetrics and Gynecology. Slide 11 is titled 'SUMMARY' and summarizes the key points of the presentation. Slide 12 is titled 'REFERENCES' and lists various sources. Slide 13 is titled 'REFERENCES CONTINUED' and lists additional references.

Appendix C

ACOG Contraceptive Guideline



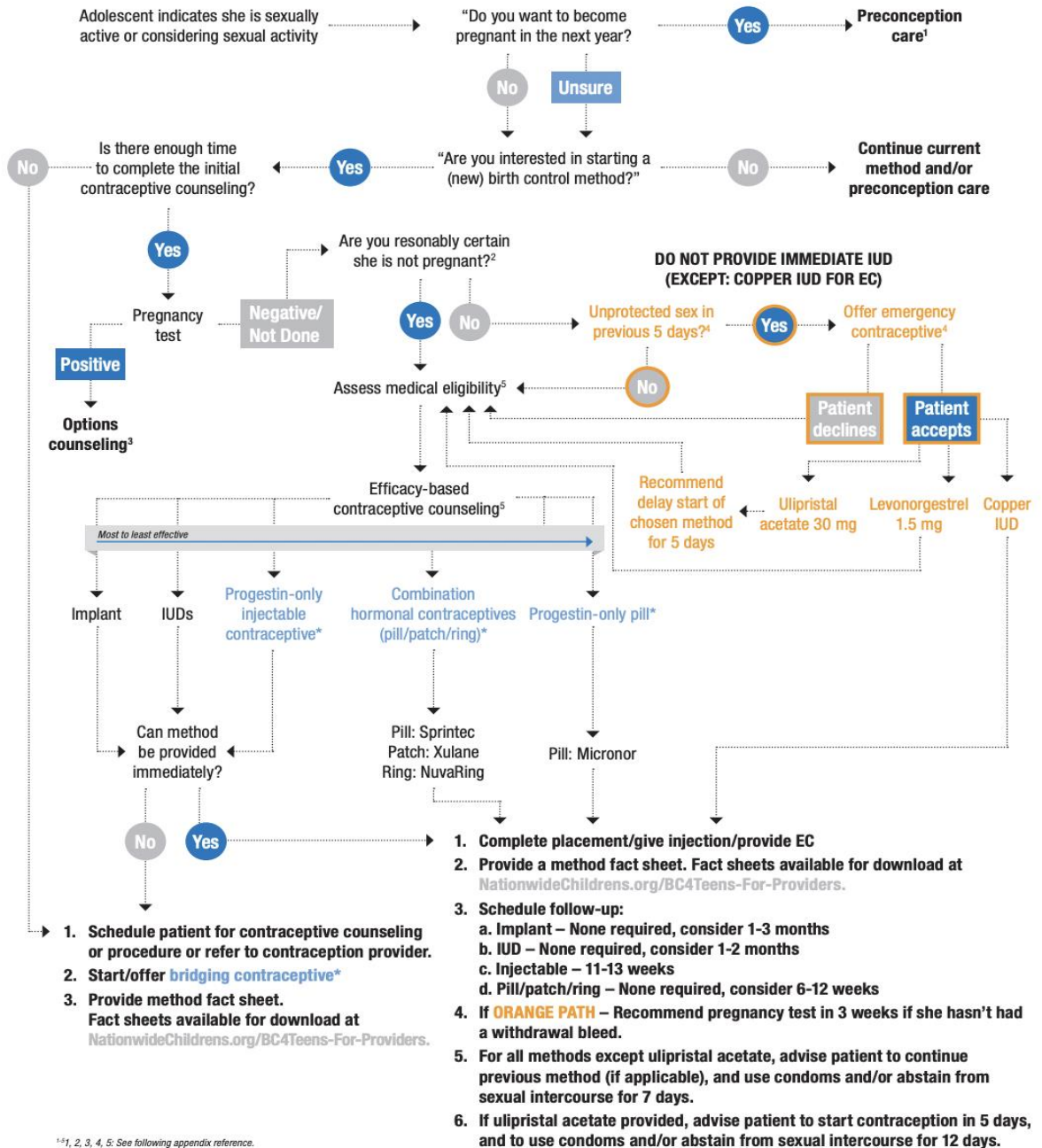
Contraceptive Counseling & Reproductive Life Planning:^{1,2,3,4} Suggestions for Getting Started



(American College of Obstetrics and Gynecology, n.d.-b).

Nationwide's Contraception Guideline

Evidence Based Practice Guideline – Contraception



(Nationwide Children’s Hospital, n.d.).