DNP Project Scholarly Paper:

Adolescent Maternity Care Program

NSG 8207c: DNP Clinical Project III

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Teen pregnancy can have a significant impact on individuals, families, and communities. It can result in adverse clinical and socioeconomic outcomes for the adolescent parents, the newborn, the families involved, and the community. Long-term impacts on individuals, families and communities can be mitigated by decreasing repeat pregnancy rates, providing specialized prenatal education, and by integrating community resources into patient care. This paper will outline the identified problem and proposed solutions related to teen pregnancy, and will assess the identified implementation site for this project with tools such as an organizational needs assessment, gap analysis and SWOT analysis. Next, supporting literature and guiding theories will provide the framework for the project and SMART goals will be outlined for the foundational elements of the project. Tools to guide the work will be reviewed, such as a GANTT chart, communication matrix, and budget. Finally, the project implementation plan, results, and conclusions will be outlined in detail at the end of the paper.

Problem Statement

The problem is that there are gaps in the healthcare system for pregnant adolescents and their families; the current prenatal care model is not tailored to meet the unique needs of this population. Evidence shows that the rate of repeat teen pregnancy can be decreased through specialized maternity services for pregnant teens, yet such programs are rarely integrated into clinical care. There are also specific educational needs that pregnant adolescents have that are unique to this population, but education is often tailored to the adult prenatal patient. Additionally, evidence shows that integration with community resources can improve outcomes for pregnant adolescents, however a lack of awareness of such specialized programs exists within

the current healthcare structure. As a result, these three foundational components of care are often lacking for pregnant teens.

Despite the evidence that suggests the importance of a unique approach to care, many organizations approach adolescent maternity care in the exact same way that adult maternity care is provided. The Adolescent Maternity Care Program that was developed and implemented for this project will address three foundational pillars, to include age-appropriate educational needs throughout pregnancy, an emphasis on future pregnancy prevention through postpartum use of long acting reversible contraception (LARC), and the integration of community resources into the patient's care.

Background to the Problem

Teen pregnancy rates have been decreasing over time in the United States (Martin et al., 2021). However, the rates in the United States are higher than 50 other developed countries (MN Dept of Health, 2015). Furthermore, repeat pregnancy rates remain high for teen mothers with many having a second child by age 19 (MN Dept of Health, 2019). Healthcare organizations specializing in prenatal care have historically tailored care to the adult patient. Prenatal education is built upon an assumption that the adult patient has a basic knowledge of human anatomy, women's health, pregnancy prevention, and obstetrics. Adolescents may lack that basic knowledge, and may have additional educational considerations. In addition, education regarding LARC use is typically offered if the adult patient asks, rather than an intentionally initiated educational conversation for the adolescent patient. Finally, community resources that are available to adults (such as housing or drug/alcohol treatment facilities) may not be the same for the pregnant adolescent patient and must be tailored to this unique population. In summary,

the historical structure of obstetrical care has been built upon a foundation for adult patients, which can leave gaps for the pregnant adolescent.

Problem Scope

The adolescent pregnancy rate in Minnesota was at an all time low in 2019, yet the rate of repeat teen pregnancy in Northern MN remains high (MN Dept of Health, 2019). The consequences of teen pregnancy extend beyond the patient and can impact the newborn, families and communities. Nearly half of teen women who become pregnant drop out of high school. This creates future socioeconomic strain on the individual and the community due to the associated challenges with obtaining and maintaining employment (Barnet et al., 2004). Efforts to eliminate repeat teen pregnancy can help reduce the economic cost and improve the overall life chances of the youth. Young people who are more likely to get pregnant are also more likely to have poor life experiences after delivery. They are less likely to be educated, have gainful employment, and have access to health care in their future (Barnet et al., 2004).

Additionally, adolescent pregnancies are more complicated than they were 20 or more years ago. Today, we have higher rates of pregnancies complicated by substance use, mental health disorders, obesity, asthma, pre-gestational and gestational diabetes (Staniczenko, A. et al., 2022). Also, the rate of poor outcomes for both mother and baby have increased, leaving an even higher need for intervention.

Problem Consequences

Adolescent men and women who begin parenting are half as likely to graduate from high school, which makes them less likely to join the workforce and more likely to result in future socioeconomic burden (Barnet, et al., 2004). A teen pregnancy impacts the individuals, their families and communities and puts a financial burden on society (Romera, et al., 2016). Teen

mothers are also more likely to suffer poor medical outcomes as well with higher rates of preeclampsia, eclampsia, and infection (WHO, 2015). The babies born from adolescent parents are also at higher risk to have poor outcomes and are more likely to be born prematurely and have low birth weights (WHO, 2020). These babies are also more likely to experience lower academic success, more likely to be incarcerated as an adolescent, and more likely to become pregnant as a teenager (CDC, 2021). With a tailored prenatal program designed to meet the unique needs of the adolescent parents, poor outcomes and future societal burden can be minimized with proper education and early connection with resources.

Knowledge Gaps

The research gaps include a lack of identification of best practices for the clinical care of pregnant adolescents, a lack of agreed upon education methods, and a lack of identified ways to improve the communication between the adolescent and the provider. There are also gaps in structured programs or approaches to care for this unique population. The needs of this population are well established, yet there is a lack of understanding regarding how to implement an individualized approach to care. Despite these knowledge gaps, creating a meaningful impact on this unique population is within reach. This can be accomplished with concentrated efforts on education throughout pregnancy, in particular education regarding contraception and community resources.

Proposed Solutions

The goal of this project was to develop and establish an Adolescent Maternity Care Program which was built upon three foundational pillars, each of which was designed to meet the unique developmental and educational needs of the pregnant adolescent. The first pillar was increased education regarding LARC initiation to promote increased postpartum initiation of

LARC, and ultimately decrease the chance of repeat teen pregnancy. The second pillar included development of age-appropriate prenatal education in a way that acknowledged the adolescent's cultural, social, and developmental needs. The final pillar emphasized community connection to improve adolescent use of local support and resources. The intent of the final pillar was to bridge the silos of care within our community and create integration of care with public health resources.

PICO

A PICO statement was developed to develop a framework for the literature review process. The PICO outlines the population, intervention, comparison and outcome for this project. The PICO is as follows: To address the gap in healthcare structures for pregnant adolescents, this project will implement best practice interventions for pregnant adolescents, as compared to the current method of caring for this population in the same way that pregnant adult women are cared for, with an intended outcome being an integrated Adolescent Maternity Care Program with three core foundational pillars. With that PICO in mind, a literature review was completed.

Literature Review, Matrix Table Development, and Literature Synthesis

In conjunction with the implementation site's Library Service, a search was conducted for articles newer than ten years including key phrases such as "adolescent pregnancy" and "established adolescent maternity care programs." The search engines used were the Cumulative Index to Nursing and Allied Health (CINAHL), pubmed, Cochrane Library as well as Google Scholar. The search was narrowed with a focus on continuity of care, style of education for adolescents, and use of technology to enhance care. Searches were limited to within 10 years, with a focus on 5 years or newer when able.

The literature matrix included in this document outlines key articles that provide the foundation for this project (Appendix D). The matrix outlines the purpose of each article, methodology used, results from each study, and notable limitations. While this is not a complete list of articles used to form this project, these articles hold key components that shaped the foundation of this project.

Nearly 40 articles were reviewed to determine the most impactful way to provide care to pregnant adolescents. The strength of the evidence varied from strong systematic reviews, to weak expert opinions. Since this topic has limited research within the last 10 years, value was found in all articles. The literature supports the need for this project, documenting poor health and socioeconomic outcomes for pregnant teens (Lucas et al., 2019; MacLean, 2020; Mann et al., 2020; SmithBattle et al., 2017). The need for care that is tailored to this population was evident, to include individualized education (MacLean, 2020; Mann et al., 2020, SmithBattle et al., 2017), consideration for cultural and developmental needs (Lucas et al., 2019; Mann et al., 2020; SmithBattle et al., 2017), and a focus on psychosocial interventions (Lucas et al., 2019; SmithBattle et al., 2017). Nearly all relevant articles outlined the need for interventions to reduce repeat pregnancy (Lucas et al., 2019; MacLean, 2020; Mann et al., 2020; SmithBattle et al., 2017).

Project Setting, Sponsor, Stakeholder and Participants

The project location is within an obstetrics and gynecology (OBGYN) department located within a large, rural health care facility. The clinic serves approximately 140 patients per day with about 1500-1600 births per year at the adjoining hospital. The clinic employs OB-GYNs, Certified Nurse Midwives, Nurse Practitioners, Registered Nurses for triage and education, a Gynecologic Oncologist, a Maternal Fetal Medicine specialist, and full support staff

with schedulers and clinical assistants. The clinic has an adjoining lab on-site as well as an ultrasound department. The delivering hospital is a few blocks away and connected by a skywalk system and is a level 1 trauma center with NICU services. The focus population is pregnant teens 19 years of age and younger who are receiving prenatal care in the OBGYN department. The sponsors are the Senior Operations Manager and Physician Section Chair of the OBGYN department.

Our primary stakeholders include the OBGYN, midwifery, and family practice teams, along with RN educators whose roles will shift as we introduce new education for practice. One goal is to establish a relationship with the site's Population Health team who has not had a large role within the OBGYN department to date, so they would be directly impacted by the new program. The internal stakeholders include the patients and their families who are most impacted by the change in practice. Other internal stakeholders include organizational leadership and the project mentors.

The external stakeholders include local schools attended by the pregnant adolescents and their partners. In addition, local transitional housing, organizations like the Young Women's Christian Association (YWCA), chemical dependency programs, and support groups will all be key stakeholders in this program. Currently, the OBGYN department has a steadfast relationship with the public health departments of the surrounding communities of Douglas, St. Louis and Carlton counties.

Gap Analysis

Several gaps exist related to the identified problem (see appendix A). First, the approach to prenatal education is standardized for every patient, meaning adult patients and adolescent patients receive the same education at the same intervals throughout their pregnancy. However,

adolescents may not have baseline education about their body, the changes they can anticipate throughout the pregnancy, parenting, or other important aspects of their care. These unique patients require a tailored approach to ensure their care is complete.

There are also gaps related to preventive prenatal care. These also exist because patient care is tailored to meet the needs of an adult. Because it is tailored to the adult patient, the current practice model also assumes a baseline knowledge of preventative contraception, and does not offer in-depth education or provider-initiated conversations regarding repeat pregnancy prevention. Additionally, preventative contraception education is offered near the end of pregnancy, during one prenatal visit. Adolescents may lack basic knowledge regarding contraception and need more time throughout the pregnancy to determine the best form of contraception.

Gaps also exist related to community connections. There are silos of care with lack of ability to connect patients to the appropriate site. One obvious gap is providers' lack of awareness of community resources for this population. Resources shift through time and providers may not be up to date with local services and resources to better serve their patients. Currently, there is limited communication between the project site and community resources. The result is that public health and community resources are left underutilized. Additionally, currently it is the provider's responsibility to initiate referral to community resources. However, other team members are equally capable of making those connections, and referrals should be offered at every opportunity.

Organizational Needs Assessment and SWOT Analysis

Organizational Needs

The site's values include quality, hospitality, respect, joy and justice. Their mission statement was "We are called to make a healthy difference in people's lives" (Essentia, 2021). Both their values and mission align readily with the Adolescent Maternity Care Program. The OBGYN team was highly committed to evidence-based practice and providing optimal care, so this program fit well with their goals and objectives.

SWOT Analysis

Strengths, weaknesses, opportunities and threats (SWOT) were analyzed extensively (see appendix B). The SWOT analysis revealed many strengths for this program. The largest asset was the highly engaged and innovative OBGYN team who were motivated to adopt practice changes that research supports. They had a strong focus on evidence-based practice and continued improvement. They held monthly journal clubs and peer review meetings to improve quality of care. There was also an established midwifery program and an outreach model of care to reach the most rural populations within the organization's footprint. In addition, the site had integrated Registered Nurse (RN) support for education and triage, which was critical to the success of all three triad pillars. Finally, the clinic had integrated care with maternal fetal medicine (MFM), neonatal ICU (NICU) and the Birthplace for inpatient care.

One of the most compelling weaknesses discovered within the organization was multiple competing internal priorities within the OBGYN department. The team had recently undergone significant changes intended to optimize the practice, they worked hard to establish and maintain COVID responses, and they experienced leadership and staff changes which altered the team dynamics. Another limitation was the lack of dedicated resources and funding. There was also a

potential for implementation challenges due to the wide geographic footprint for both OBGYN services and Family Practice with OB services within the organization. This was mitigated by scaling the scope of the project to only the OBGYN team. Other implementation challenges were related to the different leadership structures for the inpatient and outpatient components of the department. Lastly, the current providers were not always aware of community resources nor of best ways to connect patients.

Many opportunities were apparent related to this project. A body of evidence suggested that there was an opportunity to improve the care delivery model for pregnant adolescents. There were also opportunities to partner with community organizations and schools to aid in the care of the adolescent. Additionally, there were opportunities to expand technology to promote use of community referrals. With greater awareness of community resources, the providers could be better equipped to connect the patients to resources. Similarly, there were several threats identified in the SWOT analysis, including uncertain community partnerships, lack of community resources for pregnant adolescents, and time constraints within the project site and the community. Also, the population of interest may pose unique challenges which could be a threat to a successful program.

Theory Overview

Middle-Range Theory: The Motivation-Facilitation Theory of Prenatal Care Access

The Motivation-Facilitation Theory of Prenatal Care focuses on access to prenatal care. This theory categorizes two primary areas of focus. First, the maternal motivation or desire to initiate and sustain prenatal care, which is shaped by cultural and personal beliefs as well as acceptance of the pregnancy. And second, the ability of the clinic to create and sustain access to prenatal care which is easy and person-centered. This can be accomplished by focusing on

building a warm and welcoming environment, creating easy access by offering parking or bus vouchers, expanding clinic hours to meet patients' needs, providing culturally sensitive care, and more (Phillipi & Roman, 2013).

The motivation-facilitation theory focuses on practice-level interventions and the dynamic between the woman and the clinic. By removing barriers and facilitating access, women may be more motivated to establish and maintain prenatal care. This theory focuses on interactions and experiences. Positive interactions or experiences can promote motivation, and negative experiences can do the opposite. While social determinants of health may be difficult to impact, what clinical teams can impact is the experience that patients have while seeking care and the ease of access to that care (Phillippi & Roman, 2013). The foundations of the motivation-facilitation theory can be applied to the unique needs of the adolescent pregnant population. Integrating this theory into the project provided the framework to guide the interventions.

Change Theory: The IOWA Model

The IOWA Model of evidence-based practice can be used to implement changes in practice settings. The IOWA Model is a multi-step process that starts with identifying the opportunity. Next, the purpose of the change is identified and level of priority is determined. A team is then formed, followed by a review of the literature to determine if there is sufficient supporting evidence. The change is then implemented, often in the form of a pilot, outcomes are monitored, and results are disseminated (Zaccagnini & Pechacek, 2021). Utilizing the IOWA Model for the development and implementation of an Adolescent Maternity Care Program can ensure an evidence-based approach to change management. Following the steps outlined by the

IOWA Model can provide the framework needed for introducing a new approach to care for this population.

Project Goal

The project goal was to develop and implement an Adolescent Maternity Care Program which was built upon the three foundational pillars of repeat teen pregnancy prevention, age-appropriate prenatal education, and integrating community connections into care. The goal of the first pillar included initiating intentional education regarding LARC use during the prenatal period, with the goal of increasing the intent to use LARC at the postpartum visit. The goal of the second pillar was to meet the developmental needs of the adolescent through development of a specialized age and developmentally appropriate prenatal education bundle. This was to be completed by the provider during prenatal visits and during RN education visits. The goal of the third pillar is to connect the adolescent to community resources prior to 20 weeks gestation. Community connection can also enhance patients' use of available community resources and further their education from the public health department.

SMART Goals

There were three SMART goals associated with this project. First, the objective was to provide 75% of pregnant adolescents with age-appropriate education regarding long-acting reversible contraceptives (LARC) during prenatal care at the project site as measured by documentation within the patient's EMR. Second, the objective was to provide 75% of pregnant adolescent patients with an age-appropriate prenatal education bundle during their prenatal visit(s), to include RN education visits, at the project site by July 2022 as measured by the documentation within the patient's EMR. And finally, the objective was to connect pregnant adolescents to community resources before 20 weeks gestation as measured by documentation of

a community referral being offered to 75% of patients during their prenatal appointment by July, 2022.

GANTT Chart

The development of an Adolescent Maternity Program required several activities which are summarized in a GANTT chart (appendix E). The project was broken down into three semesters, beginning in September, 2021 and concluding in July, 2022. The GANTT chart outlines the various overlapping activities which will be completed during this project, from concept development to implementation and communication activities. The project concluded with dissemination of findings.

Work Breakdown Schedule

The project was further broken down through a work breakdown schedule (appendix F). The work breakdown schedule outlined four primary phases for development and implementation of the Adolescent Maternity Care Program. Phase one included researching the problem and potential solutions. A literature review was conducted, problem statement and PICO were developed, the theoretical framework for the project was chosen, and a needs assessment and project charter were completed. Phase two was broken down into two types of planning: focused school assignments and project component development. The focused school assignment planning phase consisted of the development of a GANTT chart and communication matrix, as well as the development of a project budget. During this phase the IRB approval process was initiated and a logic model was developed. In the project planning portion of phase two, an adolescent maternity education bundle was developed, electronic health record (EHR) tools were developed, and connections were formed with key stakeholders, to include community resources. In the final phase (phase three), implementation began. Implementation

consisted of education sessions for the RNs who deliver prenatal education and providers who deliver obstetrical care. This phase would have included education for case managers who support community connection, however they were not yet hired during the implementation stage. This component can be added after the case managers are hired. The project was then implemented and evaluated, with dissemination of findings occurring at the conclusion of this process.

Communication Matrix

Communication was a key component of project implementation. To ensure communication occurred throughout the project, a communication matrix was developed (appendix G). The communication matrix outlined key communications which took place to ensure project success. This included regular meetings with key stakeholders and project leaders. Changes were communicated to RNs through education sessions. In addition to the regularly scheduled meetings, the project leads met regularly to ensure open communication, ongoing alignment, and ongoing progression of the project.

Logic Model

A Logic Model can provide a visual overview of a project in an effort to display inputs, strategic activities, outputs and outcomes (Reavy, 2016). The Logic Model for this project began with specific resources, to include age-appropriate education materials and education bundles (appendix H). Activities to achieve project outcomes included training RNs and Case Managers, as well as establishing community connections and developing standardized documentation for patient education. The output included revised RN workflows, closed-loop community referrals, and customized patient education. The anticipated outcomes tied into the SMART goals outlined previously, with pregnant adolescent patients receiving age-appropriate education for prenatal

care and LARC use, as well as establishing community connections. The ultimate outcome is improving outcomes for this unique population.

Budget

The first step in determining a project budget is to estimate anticipated costs and revenue associated with the project (Reavy, 2016). There was no anticipated revenue associated with this project. Therefore, the budget for this project consisted of various direct and indirect costs (appendix I). In each of the three phases, the cost of time for department leaders to meet with project leaders resulted in an indirect cost of approximately $500 per phase. This was the only cost associated with the research phase. There were no costs associated with project leaders because the time spent as students was not charged to the facility.

In the planning phase, the indirect costs included time spent with other project participants, such as time spent with the informatics team to discover and develop EHR functionality. The planning phase also had direct costs: those associated with the production of specialized education bundles. The total costs associated with the planning phase come to the sum of $1,205. During the implementation phase, the highest indirect cost of this project included the time spent educating team members. The cost of educating RNs is approximately $420 (12 RNs were educated for one hour each). The provider education was projected to be more costly, with an average cost of $150 per hour per provider. Considering the plan was to educate 35 providers for 20 minutes, the anticipated cost of this training was anticipated at $1,350. The cost of the implementation phase was anticipated to cost approximately $2,325. The total cost of project implementation was anticipated to cost approximately $4,030.

Methodology and Analysis

Pre-Implementation

The development of an Adolescent Maternity Care Program included a number of outcome, process, and balancing measures (appendix J). The first outcome measure that was analyzed quantitatively was the percent of pregnant adolescent patients who received education regarding LARC use. To determine if this outcome measure had been successfully met, project leads audited patient charts to quantitatively determine if LARC education was provided and documented using a standardized dot phrase. The process measures associated with this outcome include development of an education bundle and standardized dot phrases for documenting the education. In addition, a qualitative assessment was completed through observation during education sessions for the RN team. The sessions included how to provide the LARC education, as well as how to document.

The second outcome measure that was analyzed quantitatively was the percent of pregnant adolescent patients who receive age-appropriate prenatal education. The success of this outcome measure was determined through an audit of documentation. In addition to the process measures listed above, a qualitative assessment was completed through observation during education sessions for the RN team. The RNs received training regarding age-appropriate prenatal education.

The last outcome measure included the percentage of patients who were offered a referral to community resources during the prenatal RN education sessions. This was also quantitatively measured through a documentation review by the project leads. The process measure associated with this measure included the integration of an EHR tool which supported seamless community referrals.

IRB/Ethical Considerations

A letter of affiliation between the project site's OBGYN department and the College of St. Scholastica (CSS) was drafted and signed. The project was proposed to the Institutional Review Board (IRB) through The College of St. Scholastica. The IRB's intent was to review research protocols and guide research in a way that protects the well-being of any research participants. Approval through the IRB was a standard requirement prior to the onset of a research project involving living participants and reviewed throughout the research process. The IRB screened for possible physical, psychological and social risks and discomforts to the research participants.

The Adolescent Maternity Care Program was not a research program, it was a quality improvement program and therefore qualified for expedited IRB review. There were no designated project participants. The adolescent patients attending routine prenatal care received more education in a variety of formats throughout their pregnancy. The participants in the program were identified and selected based on age at onset of pregnancy.

Risks and discomforts to participants were minimal. All education and other forms of care provided could have been declined at patient's discretion. The benefits of the program included increased education to better prepare the adolescent for pregnancy and parenting. Another benefit was increased education regarding contraceptive management to decrease risk of subsequent teen pregnancy. One more benefit was connection to community resources both for a sense of belonging and improved education and care.

Participants' privacy and confidentiality were protected. Team leaders were made aware of qualifying patients within the patient's medical record, which is a secure platform. There were no other documents or files, printed or electronic, that contained any patient identifying

information. These efforts were in accordance with Health Insurance Portability and Accountability (HIPAA). The principal investigators and project faculty met after closure of the IRB process and prior to implementation at the project site.

Implementation

The initial phase of implementation included development of evidence-based education bundles and patient education material (Appendix L) with the three core program pillars forming the framework for each. Local research of all community organizations and resources that could support the care of pregnant adolescents was completed and developed into a new, adolescent specific folder within Resourceful™, an EMR-based referral platform. The folder was then shared with all providers and nurses to ensure they had quick access to the appropriate community resources. Standardized documentation was developed for both providers and registered nurses and shared within the EMR to ensure consistent integration of the tools into practice (Appendix M).

The second phase included educating all providers and nurses on the developmental needs of adolescents, the foundational pillars of the program, and the need to integrate these foundations into practice. The closed loop referral process was introduced and demonstrated to ensure providers and nurses could connect patients to community resources through the folder within Resourceful. All providers and nurses were educated on the evidence supporting adolescent use of LARC. The current prenatal patient education sessions which are conducted by the RNs were expanded to include additional developmentally appropriate education sessions for this unique population.

Training of providers was held virtually during an OBGYN Department Meeting on June 2, 2022. There were seven Advanced Practice Nurses and 11 physicians who needed training. Six

Advanced Practice Nurses and seven physicians attended for a completion rate of 64%. Nurses education training was held virtually on June 10 and Jun 15, 2022. There were ten Registered Nurses who provided prenatal education in the department who needed training. Four attended the first session and six attended the second session, for a 100% completion rate.

This stage also included identifying the patient participants who met program criteria of 1) age 19 and younger and 2) currently pregnant and 3) receiving prenatal care at project site of implementation. A benchmark report including females, aged 19 and younger and with a current pregnancy episode in the EHR identified 22 possible participants. Five were eliminated from the project because they had just delivered. Two more participants were eliminated because their prenatal care was elsewhere. 15 participants remained, three of which were experiencing their second pregnancy while still a teenager. The patient identification process was repeated with the same benchmark report at the end of the implementation period. One more participant was enrolled, totaling 23 possible participants and 16 that remained in the program.

During project implementation, assessment of the outcome measures occurred using qualitative and quantitative analysis. Standardized reporting structures were used to document outcomes (appendix K). Implementation began with achieving the process measures. Throughout the duration of implementation, a balancing measure monitored the RN workload. The outcomes associated with this project changed the RN workflow, and thus the workload. It was necessary to complete an analysis of time studies and direct observations to ensure new workflows are balanced and the project is sustainable.

Post-Implementation

Post implementation data analysis included chart audits by team leads. The percentage of adolescents receiving LARC education during prenatal visits was calculated. The numerator was

the number of charts that included documentation of LARC education and the denominator was the total number of pregnant adolescents who met program criteria.

The percentage of adolescents receiving the age-appropriate prenatal education bundle during prenatal visits was also analyzed. The numerator was the number of pregnant adolescents' charts who had documentation of age-appropriate prenatal education. The denominator was the total number of pregnant adolescents who met program criteria.

The percent of patients offered a referral to community resources was analyzed. The numerator was the number of pregnant adolescents' charts with documentation of community referral either by RN or provider. The denominator was the total number of pregnant adolescents who met program criteria.

Results from Data Collection

During the project window there were 23 patients who met criteria for project inclusion. Of those 23 patients, five patients had recently delivered and two patients were receiving their primary obstetrical care at another facility. Therefore, the total number of patients who met final inclusion criteria was 16. Additional details can be found in appendix K.

The first outcome evaluated was LARC education documentation received during prenatal visits. Of the total patients included in the project (n=16), seven patients were outside of the window for LARC education (it was too early in the pregnancy to discuss the topic, per program structure). Additionally, one patient was a 19 year-old married woman who sought additional pregnancies and thus was also excluded from this metric. The remaining eight patient charts were audited for compliance with LARC education during the second or third trimester visits. Five out of the eight patient charts were compliant for an overall rate of 62% compliance with LARC education.

The second goal that was measured was the receipt of age-appropriate prenatal education during prenatal visits. Of the 16 patients measured for this program, five were measured for this metric (ten patients were not seen by the RN during the narrow project window, and one patient delivered during the project window). Four out of the five remaining patients (80%) received age-appropriate prenatal education materials.

The final outcome evaluated in this project was the community referral offered during the prenatal visits. All 16 patients were included in this outcome measure. Thirteen out of the 16 patients received information regarding community referrals during one of their prenatal visits, for a total compliance of 81%.

Discussion of Data/Outcomes Interpretation

Two out of the three metrics measured met the goal of 75% compliance (age-appropriate education provided and connection to community resources). The goal of 75% compliance was not met for LARC education, which shows the greatest area for future continued improvement. One reason this may have occurred is because the inclusion criteria included patients who were 19 and under, and findings showed that some of these young patients were married with intentional pregnancies, as well as the desire to continue to grow their families. Therefore, LARC education was not appropriate for this population. Another reason this may not have met the target is due to team members having a pre-established cadence to discussion of LARC use with pregnant teens, many of whom only provide the education in the third trimester. The goal is to add education during the second trimester, so additional training may be necessary.

The greatest challenge with measuring outcomes of this project was the narrow timeframe for implementation. The overall number of patients who met criteria in two of the categories was low (LARC education and age-appropriate education). This was because many

patients were not scheduled for appointments during the project window. Additional data collection should be completed on the two outcomes that had a low total number of participants who met criteria for evaluation.

Finally, it is noteworthy that the Adolescent Maternity Care Program is designed to be implemented at onset of pregnancy. This means that the intent is to implement this evidence-based care at the very first obstetrics appointment, and then subsequently incorporate the fundamentals into the patient's care throughout their pregnancy. Because the project window for implementation was narrow, and because there was a desire to reach as many patients as possible, patients were incorporated into the program regardless of where they were in their pregnancy journey. The result was that most of the patients measured in this project were already in their second or third trimester, and all but one had already completed their first prenatal appointment. Now that the project is incorporated into the routine practice of the department, going forward the program should flow more easily and will always begin at onset of the teen pregnancy.

Potential Impact on Future Practice

Increased education and promotion of LARC can have an empowering impact on the adolescent population, so the ultimate goal of that foundational pillar is to see fewer teens who are experiencing a second pregnancy. The future impact of the other two pillars (age-appropriate education and community connections) are to improve the socioeconomic and health outcomes of the teen and baby.

Future progression of this project should include expansion to satellite clinics adjacent to our project site, paying particular attention to rural clinics in Northern MN where repeat teen pregnancy rates are highest. Additionally, increased age appropriate education has the potential

to impact every woman's pregnancy and parenting experience. The adolescent maternity program focused on women younger than age 20. However, many women aged 20-25 may also lack basic knowledge and body awareness, support from partners, or connection to their communities. This program could be expanded to include young women who need more education and support to improve outcomes for themselves and their children.

Plan for Dissemination of Findings

Findings of this project were summarized and shared in three ways. First, this paper was compiled to show a detailed summary of this project so that it may be replicated at other sites if there is a desire to do so. Second, a poster presentation was developed (appendix N). The poster summarized project goals, implementation plans, and outcomes. Finally, the project was summarized in a recorded three-minute thesis (3MT) which outlined the highlights of the program. The 3MT was recorded and shared.

Abstract

Background: Adolescent pregnancy is more complicated today with increased rates of repeat teen pregnancy and higher rates of complications and comorbidities. There are numerous negative outcomes for the health and socioeconomic well being of the adolescent and baby compared to women over aged 20. Currently, prenatal care in the United States is tailored to the adult population. Research supports the need for this population to have prenatal care tailored to their unique developmental needs. Research also supports the need for increased education with promotion of postpartum use of Long Acting Reversible Contraception (LARC) to prevent repeat teen pregnancy.

Objectives: An evidence based Adolescent Maternity Program was initiated in a large rural health care facility with three foundational pillars of care in mind including

1. preventative prenatal care for repeat teen pregnancy prevention
2. developmentally and age-appropriate education
3. increased connection to community resources.

The Motivation-Facilitation theory of prenatal care provided the framework for the program to create and sustain access for increased education, and inspired practice level changes. The program was then implemented using the IOWA Model multi-step process.

Methods: First, evidence-based education bundles and patient education materials were developed with the three core pillars forming the framework for each. Next, all providers and nurses within the department were educated on the foundational pillars. Tools were developed to help providers and nurses integrate the foundational pillars into their care, including standard documentation (dot phrases), scripting, age-appropriate patient educational pamphlets, and customization of a closed-loop referral program that previously existed within the electronic medical record. The current patient-centered prenatal education process was also expanded to include additional RN education sessions which focused on the developmental needs of the adolescent. Next, patients were identified who met program inclusion criteria of 1) age 19 and younger and 2) currently pregnant and 3) receiving prenatal care at project site of implementation. Providers and nurses then implemented the three foundational pillars into their care using the tools provided.

Evaluation: Outcomes were measured by chart audits for three categories: 1) percent of adolescents who received education regarding LARC during their pregnancy 2) percent of adolescents who received age-appropriate prenatal education and 3) percent of patients who were offered referral to community resources.

Outcomes & Conclusions: Two of the three foundational pillars were successfully implemented with 80% or higher compliance rate. One pillar (LARC education) did not achieve the 75% goal. Additional work may be needed to ensure this critical pillar is achieved going forward.

Conclusion

The literature supports the need for adolescent maternity care programs which are individualized, age-appropriate, culturally competent, and integrated with community resources. The consequences of teen pregnancy can impact individuals, families, and society, so the need to develop a program to support this population is significant. The aim of this project was to close the gap and improve care provided to this unique population through the implementation of an Adolescent Maternity Care Program which was built on three foundational pillars: preventative prenatal care to prevent repeat teen pregnancies, age and developmentally appropriate prenatal education, and connection to community resources as an integrated part of care. Through the implementation of these foundational pillars, the Adolescent Maternity Care Program can provide the future framework for teen pregnancy care into the future.

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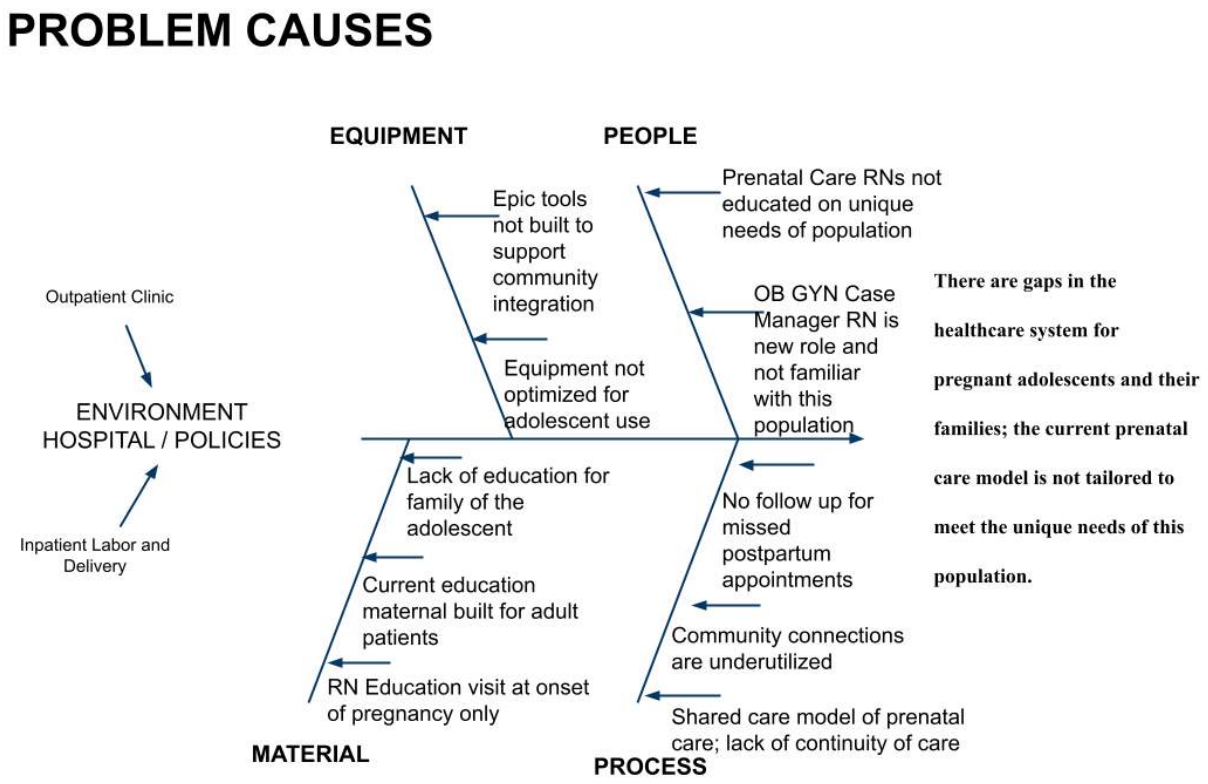
Appendix A: Gap Analysis



Appendix B: SWOT Analysis

STRENGTHS	WEAKNESSES
• Highly engaged and innovative OBGYN team • Strong focus on evidence-based practice and continuous improvement • Established Midwifery program • Expanding Family Practice with OB teams • Established outreach model • Integrated Registered Nursing support • Integrated team: NICU, MFM, Birthplace	• Multiple competing internal priorities • Limited dedicated resources and funding • Wide geographic footprint for OBGYN and Family Practice with OB services • Challenges r/t implementing a project with both inpatient and outpatient components (different leadership structures) • Providers unaware of community resources and how to connect patients
OPPORTUNITIES	**THREATS**
• Body of evidence suggests we have an opportunity to improve the care delivery model for pregnant adolescents • Opportunity to partner with community organizations and schools • Opportunity to expand technology to promote use of community referrals	• Uncertain community partnerships • Lack of community resources for pregnant adolescents • Time & resource constraints within organization and community • Population of interest may pose unique challenges

Appendix C: DNP Project Charter/Action Plan

Project Title: Adolescent Maternity Care Program

Project Members: Zada Dunaiski & Beth Young

Project Organization/Agency: CSS & Essentia

DNP Project Approval From Link: in process

Project Champions (2 required, include initial contact date): Meghann Redden & Michael Kassing

Project Start Date: June 1, 2022

Projected Date of Project Completion: August 30, 2022

Project Charter: Make a copy, edit & keep updated (This is your way of communicating what you are doing. It will keep you focused!) The purpose of this document is for students, faculty Chair's and stakeholders.

Contact Information

Team member Name	Location/Time Zone	Phone Number	Email/Tweet	Communicate Best Via	Project Lead Role
Beth Young Zada Dunaiski	Central Standard	(320)282-0699 (218)349-8349	eyoung@css.edu zdunaiski@css.edu	text/email	
Dr. Kassing	Centra Standard	(612)978-2929	michael.kassing@essentiahealth.org	text/email	Physician Section Chair
Megann Redden	Centra Standard	(218) 340-9588	megann.redden@essentiahealth.org	text/email	Senior Operations Manager

Ground Rules

1) The team will communicate via group text, email, google documents, and Zoom meetings (see chart above).
2) Assignments will be completed by individual or group-decided deadlines (see chart below).
3) If any issues arise with deadlines, it must be communicated with all team members. ("Communication is Key")

4) The designated Project Leader will be the sole person to submit the team assignment before/on submission due date.
5) The Project Leader for each project will rotate each semester to allow multiple students to experience the lead role responsibilities.
6) The Project Leader will initiate contact, delegate tasks, and assign team roles for their assigned project.
7) Team members will keep each other accountable and on task via weekly communication via text message in a respectful and considerate manner.
8) If any issues arise, team members will address this directly via email, zoom, tweet or text to allow for open communication between all members and to help each other out when needed. Further issues can be discussed as a team with the professor for additional guidance and feedback.
9) Team members will recognize each other's strengths and weaknesses (included in pre-project table below) and will understand and use these skills accordingly to work together to complete team projects.
10) Team members will recognize each other's strengths and weaknesses (included in the post-project table below) and will appreciate the evolution of individual growth.
11) Upon project completion each student will reflect on strengths and weaknesses that have evolved throughout the project work.
12) Feel free to explore materials and resources outside the ones provided in this course to develop your project and leadership skills.

Leadership

As you embark on your DNP project you will evolve into a "transformational leader", you should aim to inspire confidence, respect and trust into your project communications to assure an optimal project outcome. Role clarity is key with a group or team as it increases adaptation of team members through interdependence, integrity and relational growth all of which contribute to the achievement of identified common goals (Reavy, 2016). If you have determined that you will pursue an individual project, the team leader "will be you"! For a group effort of multiple students working on a single project, a team leader will need to be identified upon determining your project team. Determining the individual strengths and weaknesses of each team member will aid in identifying which team member may lead a specific project component.

Individual/Team Strengths/Weaknesses (pre-project): Soon after the formation of your team, enter your impression of your own strengths and weaknesses, then of your entire team's strengths and weaknesses collectively, if applicable. This can be related to individual skills, leadership qualities or any other unique contributions for carrying out a large project.

Project Member's Name	**Strengths**	**Weaknesses**

Entire Team		

Communication Table

Add Individual and Team-Decided Deadlines, as well as Project Member Expectations. Students will be required to update this DNP Project Action Plan prior to meeting with your Project Chair as this document will serve as an informational guide to the project process through it's evolution. (deadline dates and or revisions can vary/change as needed with proper group communication)

Project Development (Follow the DNP Project Checklist	**Planning** Identified Project Task	**Executing/Revisions** Identified Lead & Component Deadlines	**Monitoring & Controlling** Proposed Group Deadlines & Revisions Dates	**Closing** Submission/Due Date
8201	Needs assessment & Gap analysis. Complete literature review. Established SMART goals. Met with Dept Chair and Sr. Operations manager, project accepted.	Beth/Zada November 2021 Beth/Zada December 2021 Beth/Zada December 2021 Beth/Zada January 2022	Completed in 8201	
8206	GANTT chart Work Breakdown Structure Communication Matrix	Beth/Zada January 2022 Beth/Zada January 2022 Beth/Zada January 2022	Completed in 8206	
8207				
Individual /Team Experience Notes				

Project Communication Matrix

Team Members: Beth Young & Zada Dunaiski

Project Chair: Dr. Mike Kassing/Meghann Whiting

Project Title: Adolescent Maternity Care Program

ID #	Purpose/Objectives	Method Of Communication	Frequency	Recipients	Person Responsible	Notes
	Project Overview and Updates	Virtual meeting	Twice per semester	Dr. Mike Kassing and Meghann Redden, SR Ops Manager	Beth and Zada	
	RN Prenatal Education Updates	Virtual meeting	Once during project development, + once during implementation	OBGYN RNs	Beth and Zada	May add as needed
	RN Case Manager Updates	Virtual meeting	Once during project development + once during implementation	OBGYN Case Manager RNs	Beth and Zada	
	Project highlights and education session	Virtual Meetings	Once during implementation	OBGYN Providers	Beth and Zada	Will also send written communication as needed throughout roll-out.
	Communication with community resources	Virtual meetings	As needed	Community Resources	Beth and Zada	PHNs, public housing, alcohol and drug treatment facilities, schools,

Project Evaluation

Post Project, toward the end of 8207, reflect on your own strengths and weaknesses and then your entire team's strengths and weaknesses collectively. This can be related to individual skills, leadership qualities or any other unique contributions that you feel was beneficial for carrying out a large project.

Project Member's Name	**Strengths**	**Weaknesses**
Entire Team		

Write a comprehensive yet concise reflection (toward the end of 8207) by answering the following questions. *Each team member is to write a reflection.* See how to write a reflection.

1. How have strengths & weaknesses evolved from the beginning of your project to the end project?
2. What high and/or low points will help you move forward in any future leadership endeavors?

Name: Reflection:
Name: Reflection
Name: Reflection:

Part of a team/Group? Complete the DNP Group Project Peer Evaluation form (make copy visible to Chair only). Place a link to the form here, titled with your name.

Project Chair Recommendations

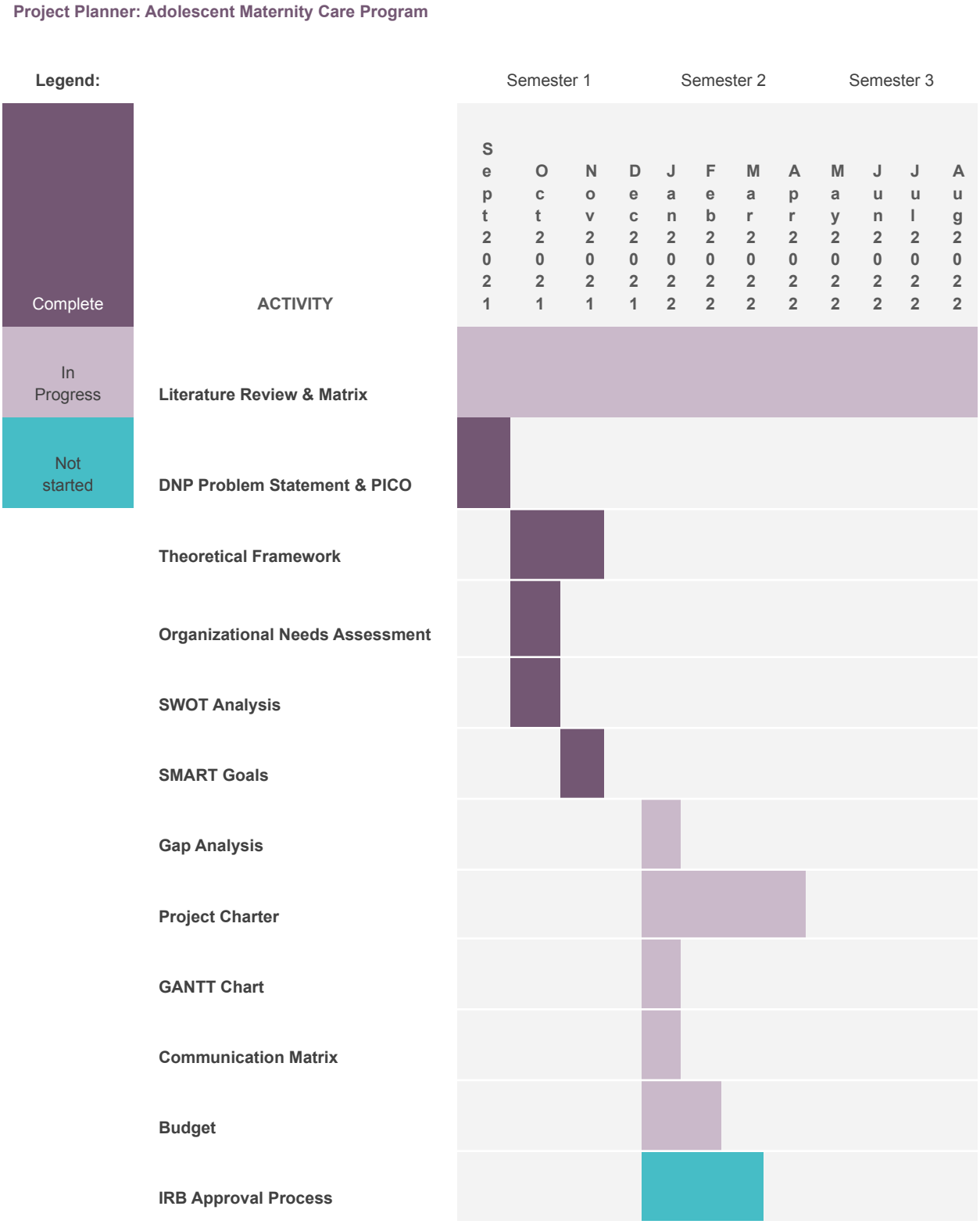
Date of Meeting	**Topic of Discussion**	**Action Recommended**	**Date to be actioned by**	**Action Completed X**
2/2022	**Discussed ability to reach SMART goals in the timeframe allocated for DNP program.**	**Change form of measurement from use of LARC to measure of education provided.**	**2/2022**	**x**

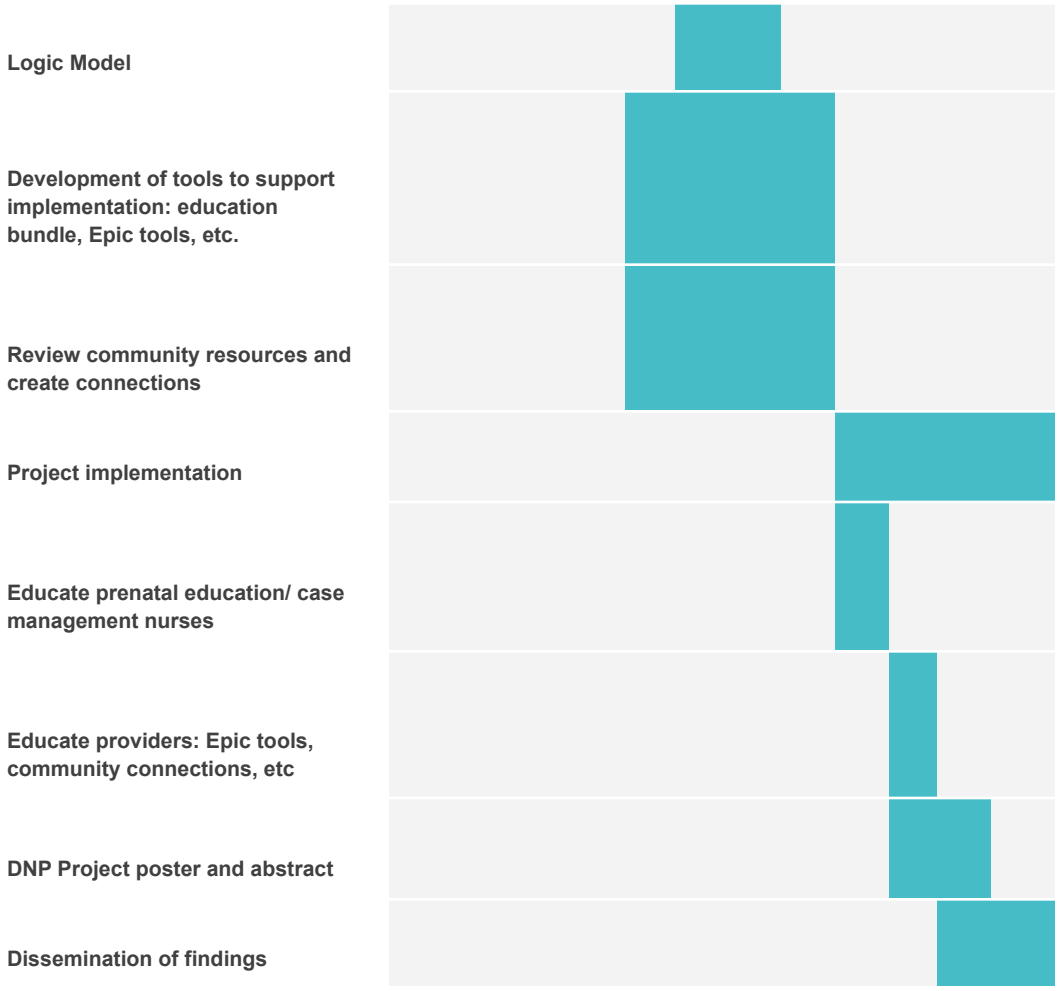
Appendix D: Literature Matrix Table

ARTICLE	AIM/ PURPOSE	DESIGN/ METHODOLOGY	ANALYSIS/ RESULTS	LIMITATIONS
Lucas, G., Olander, E., Ayers, S., & Salmon, D. (2019).	Examine young womens' perceptions of their mental health during and after pregnancy	Systematic review and meta-ethnographic synthesis of qualitative research of 19 peer reviewed papers which explored mental health and wellbeing of pregnant women under 20 years	-Violence and trauma may be correlated with young age of pregnancy -Stress and overwhelm are common themes associated with young pregnancy -Relationships are influential, and may change for teens who are pregnant- friendships may change and social isolation can result; Relationships that are negative may impact emotional wellbeing -Socioeconomic insecurity may result due to unstable foundations -Negative connotations and stigma exist -Resilience and empowerment can prevail	-Lack of geographic diversity in papers -All but one of the papers reflected a negative and stigmatized viewpoint of teen pregnancy, (not universal)
MacLean, L. (2020).	Review literature on health literacy among pregnant adolescents	Systematic review of 26 peer reviewed articles r/t health literacy & outcomes, literacy measurement, impact on adolescents' response to health/illness, and nursing interventions	-Lower health literacy r/t contraceptives can result in single/recurrent pregnancies -Unplanned adolescent pregnancies can lead to poor health outcomes -Adolescent pregnancy can impact education & create a cycle of poor socioeconomic outcomes. -There is a lack of research r/t adolescent health literacy and pregnancy - There is a lack of a comprehensive health literacy assessment tool for pregnant adolescents	-Lack of tools specific to this population make it difficult to rely on data collected -Small sample sizes of some articles reviewed
Mann, L., Bateson, D., Black, K. (2020).	Provide an overview of social/ medical complications of teen pregnancy & offer mitigation strategies	Expert opinion-panel of experts from Australia	-Outlines components of teenage-friendly healthcare -Reviews correlation between adolescent health behaviors and pregnancy, STIs, smoking, and drug/alcohol use -Outlines antenatal, perinatal and neonatal outcomes -Highlights postnatal care -Lists interventions/ practice recommendations for the practitioner	-Low level of evidence

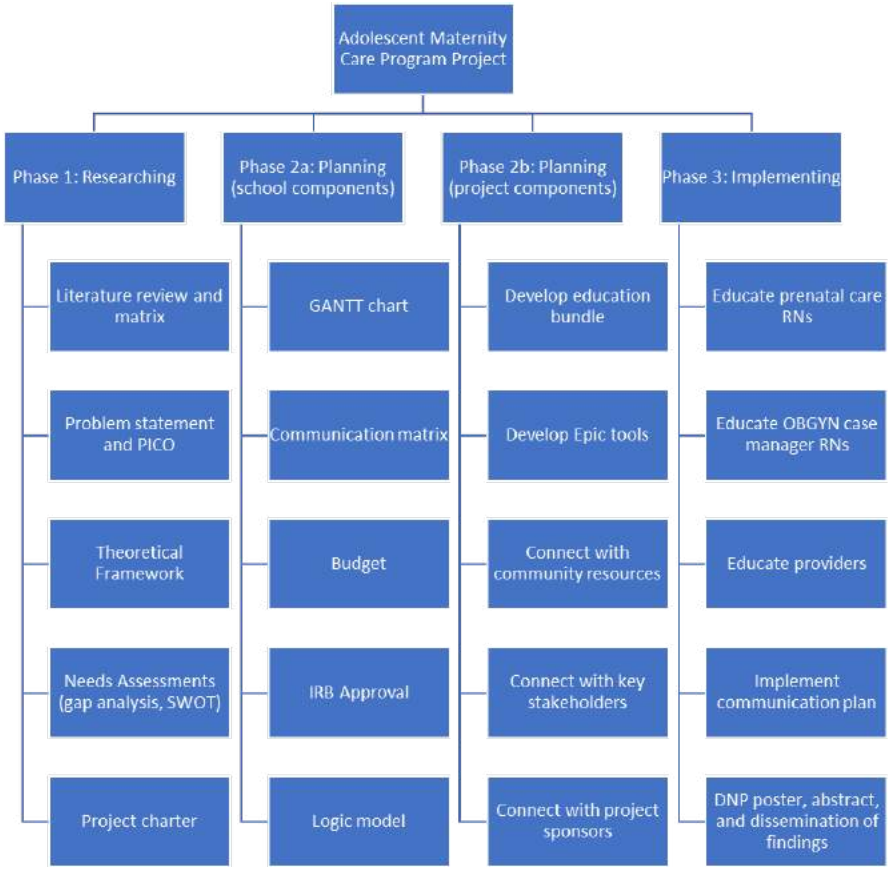
SmithBattle, L., Loman, D., Chantamit-O-Pas, C., & Schneider, J. (2017).	To review intervention studies focused on improving adolescent pregnancy outcomes	Umbrella review of meta-analysis for 9 reports focusing on 21 maternal outcomes	-Psychosocial interventions increased birth weight, but did not change preterm birth rates -Educational interventions nearly doubled graduation rate -Interventions to improve maternal use of contraception to reduce repeat pregnancy found mixed results -Interventions to reduce repeat pregnancy had inconsistent impact, though this varied depending upon age/other factors.	-Quality of 6 articles was high, but 3 were lower quality/less reliable -Study participant characteristics were not always clear

Appendix E: GANTT Chart




Logic Model
Development of tools to support implementation: education bundle, Epic tools, etc.
Review community resources and create connections
Project implementation
Educate prenatal education/ case management nurses
Educate providers: Epic tools, community connections, etc
DNP Project poster and abstract
Dissemination of findings

Appendix F: Work Breakdown Structure



Appendix G: Communication Matrix

Team Members: Beth Young & Zada Dunaiski

Project Chair: Dr. Mike Kassing/Meghann Whiting

Project Title: Adolescent Maternity Care Program

ID #	Purpose/ Objectives	Method Of Communication	Frequency	Recipients	Person Responsible	Notes
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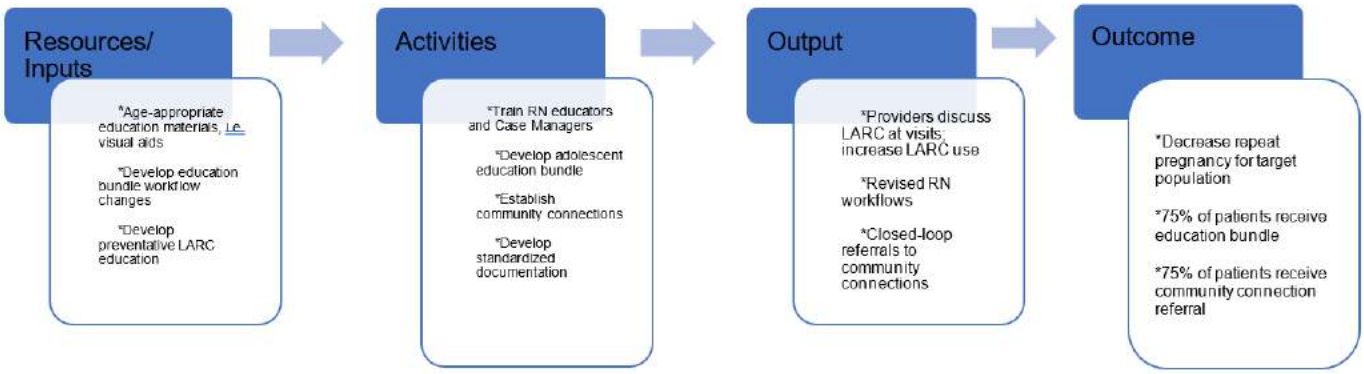
	RN Case Manager Updates	Virtual meeting	Once during project development + once during implementation	OBGYN Case Manager RNs	Beth and Zada	
	Project highlights and education session	Virtual Meetings	Once during implementation	OBGYN Providers	Beth and Zada	Will also send written communication as needed throughout

						roll-out.
	Communication with community resources	Virtual meetings	As needed	Community Resources	Beth and Zada	PHNs, public housing, alcohol and drug treatment facilities, schools,

Appendix H: Logic Model



Appendix I: Project Budget

Phase 1: Researching	Department Leaders: Cost of Time	RN Training: Cost of Time	Provider Education: Cost of Time	Other inter-professional collaboration: Cost of Time	Production of Education Bundle Tools	Total ($)
Direct Costs (dollars)	0	0	0	0	0	0
Indirect Costs (dollars)	500	0	0	0	0	500
Total Research Costs						500

Phase 2: Planning	Department Leaders: Cost of Time	RN Training: Cost of Time	Provider Education: Cost of Time	Other inter-professional collaboration: Cost of Time	Production of Education Bundle Tools	
Direct Costs (dollars)	0	0	0	0	650	650
Indirect Costs (dollars)	500	0	0	55	0	555
Total Planning Costs						1205

Phase 3: Implementing	Department Leaders: Cost of Time	RN Training: Cost of Time	Provider Education: Cost of Time	Other inter-professional collaboration: Cost of Time	Production of Education Bundle Tools	
Direct Costs (dollars)	0	0	0	0	0	0
Indirect Costs (dollars)	500	420	1350	55	0	2325
Total Implementation Costs						2325

TOTAL PROJECT COSTS						$4030

Appendix J: Measures Worksheet

Outcome measure(s)		
75% of pregnant adolescent patients receive (LARC) education during prenatal visits	Numerator is the number of charts with dot phrase indicating education provided. Denominator is the total number of pregnant adolescent charts included in the study.	Data collected through chart review by project leads at midpoint and end of project.
75% of pregnant adolescent receive age-appropriate prenatal education bundle during their prenatal visit(s)	Numerator: number of adolescent pregnancy charts that have RN bundle dot phrase for education. Denominator is total number of pregnant adolescent charts included in study	Data collected through chart review by project leads at midpoint and end of project.
75% of patients are offered a referral to community resources during prenatal RN education sessions	Numerator is the number of pregnant adolescents charts with documentation of community referral. Denominator is the total number of pregnant adolescent charts included in study.	Data collected through chart review by project leads at midpoint and end of project.
Process measures		
Development of age-appropriate education bundle	Age-appropriate education bundle developed & approved for use	Education bundles developed by team leaders.
Development of standardized dot phrases to document process.	Dot phrase completed and shared (in Epic) with team.	Dot phrases developed and shared by team leaders,
100% RNs trained to provide LARC use education	All applicable RNs trained	Log of attendees at each education session & project leads will validate 100% attendance.
100% RNs trained to provide age-appropriate OB education	All applicable RNs trained	Log of attendees at each education session & project leads will validate 100% attendance.
Integration of Resourceful	Informatics session for educating team leaders and applicable RNs to use.	Log of attendees at each education session & project leads will validate attendance.

community connection feature within Epic		
Balancing Measures		
Increased RN time spent teaching	Compare education time prior to intervention and after intervention.	Project leads will complete time studies/observations prior to and at beginning of project.

Appendix K: Outcome Logs

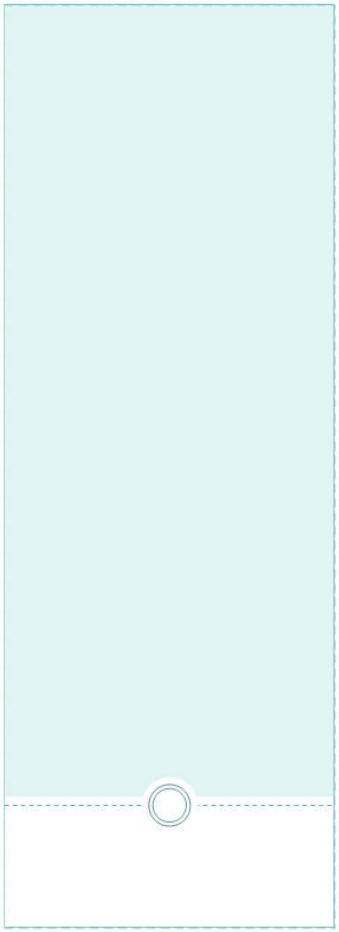
EMR Documentation Log Review:

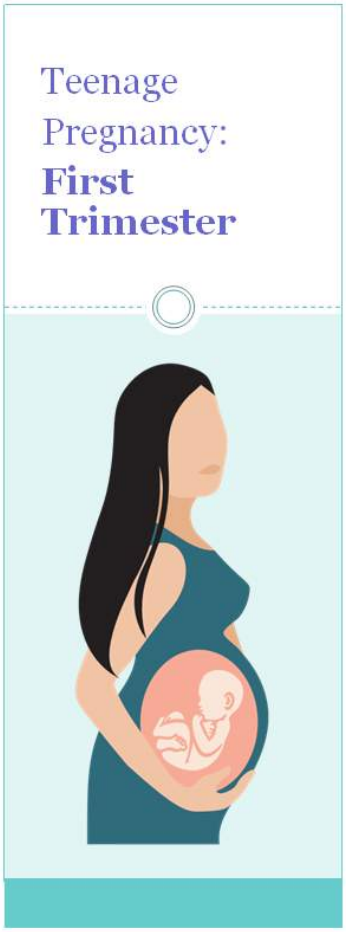
Patient Detail:	***Included/Excluded?*** ***Window for project: May 31-July 1***	***Goal #1: Was LARC education documented during prenatal visits?***	***Goal #2: Was age-appropriate prenatal education documented during prenatal visits?***	***Goal #3: Was the patient offered community referral (per documentation) during prenatal visits?***
Patient a	Excluded-Patient already delivered			
Patient b	Included	N/A Patient outside of window for LARC education (first trimester)	N/A NOB visit fell outside of timeframe (NOB education was before project implementation)	Yes
Patient c	Excluded- I Falls patient			
Patient d	Included	N/A Patient outside of window for LARC education (16 week visit)	N/A Outside of window (too soon for second trimester education, and first trimester RN visit was done outside of the window of this project)	Yes
Patient e	Excluded- Patient already delivered			
Patient f	Included	Yes	Yes	Yes
Patient g	Included	Yes	N/A Delivered baby mid-way through program, did not have RN education due to timeline	Yes
Patient h	Included	No	N/A Left message for patient- no return call	No
Patient i	Excluded- Lakewalk patient			
Patient j	Included	Yes	N/A Left messages to schedule	Yes
Patient k	Included	No	N/A Will see RN on July 6th	Yes
Patient l	Included	Yes	Yes	Yes
Patient m	Excluded- patient already delivered			
Patient n	Included	N/A	N/A	Yes

		Patient outside of window for LARC education	Left message to schedule	
Patient o	Included	Yes	Yes	Yes
Patient p	Included	No	N/A Left message/mychart message	Yes
Patient q	Excluded- Patient already delivered			
Patient r	Included	N/A Patient 19, married, plans to build family	N/A Delivered before RN ed could be provided	No
Patient s	Excluded- Patient already delivered			
Patient t	Included	N/A Outside of window for LARC	No	Yes
Patient u	Included	N/A Outside of window for LARC	Yes	Yes
Patient v	Included	N/A Outside of window for LARC	N/A Outside of window for RN education	No
Patient w	Included	N/A Outside of window for LARC	N/A Appointment scheduled	Yes
Number of patients included	16			
Total number of patients	23			
Exclusion reason: Patient already delivered	5			
Exclusion reason: Patients receiving care at a facility not measured in this project	2			
Total patients compliant patients out of total patients		5/8	4/5	13/16
Percent compliance for each goal		62% compliant	80% compliant	81% compliant

Appendix L: Age-Appropriate Patient Education Pamphlets

First Trimester tri-fold (front, back, and inner flap):





First Trimester tri-fold (inside left, middle and right):

Introduction to your Healthcare Team

Your healthcare team is made up of several team members to ensure you receive the best care and support throughout your pregnancy. By the end of your first visit, you should be aware of these team members who will be part of your care:

- Physician, Nurse Practitioner, and/or Certified Nurse Midwife
- Registered Nurse Educator
- Case Manager/Social Worker
- Public Health Nurse
- You, the Patient, are a critical team member! Remember, your voice matters.

MANAGING STRESS, OVERWHELM, AND STIGMA ASSOCIATED WITH TEEN PREGNANCY

You're probably experiencing a wide variety of emotions. A pregnancy during your teenage years presents many unique challenges.

This life changing event can impact your family, your friends, and your relationships at school and/or work. You may experience a shift in your relationships with those around you. Communicating your feelings to trusted friends and family is important.

Tell your provider what emotions you are experiencing, what scares you, and your feelings about the situation. Your care team can ensure that you have resources to help you work through family dynamics or personal emotions.

FAMILY SUPPORT

Teen pregnancy impacts the patient, family, and community. It can be difficult for family and friends to know how to offer you support throughout this journey. Oftentimes your family or friends may not know the right thing to say, and they don't always know what you need.

Communicating your needs, and listening to their needs, can help you determine how to move forward together.

COMMUNITY CONNECTIONS

Your healthcare team is not complete without connections to community resources. Here are some community resources you should ask about today:

- Public Health Nurse: Supports your maternity journey from the community perspective, to include visits during and after your pregnancy
- Emotional support and mental wellness resources
- Organizations that can help you get free or low cost food
- Transportation options to get you to and from your clinic appointments

Ask your healthcare team for information about Resourceful®, which is a tool that can connect you to these resources in your area.

Second Trimester tri-fold (front, back, and inner flap):

IMPORTANT THINGS TO DO IN THE SECOND TRIMESTER

- ☐ *Ensure you have made connections with community resources*
- ☐ *Register for prenatal and parenting classes (see handout for class options)*
- ☐ *Prepare for upcoming changes in the third trimester*
- ☐ *Ask your provider about resources to support mental wellness throughout your pregnancy journey*

Teenage Pregnancy: **Second Trimester**

Second Trimester tri-fold (inside left, middle and right):

Prenatal Education Classes

Prenatal education classes are designed to help you and your support team prepare for delivery. They also provide education on basic parenting and safety skills. Review the Prenatal Education class list to explore class options

- Childbirth Preparation
- Infant & Child Safety
- Breastfeeding
- Daddy Boot Camp
- Grandparents Class

Ask your healthcare team what classes they recommend for you.

PREPARING FOR THE THIRD TRIMESTER (28+ WEEKS)

Knowing what changes to expect in the third trimester can help you navigate this unique time. Take some time to discuss these changes with your nurse or provider, and ask any questions you might have:

- Physical body changes
- Increased pelvic pressure
- Braxton-Hicks contractions
- Vaginal discomfort or discharge
- Breast changes
- Edema

REPEAT PREGNANCY PREVENTION

Repeat teen pregnancy is avoidable, however it remains common among teens.

Many contraceptive options are available to prevent repeat pregnancy. Planning for these contraceptives starts now.

Ask your provider what contraceptive is best for you. This birth control can be initiated at your follow-up visit after delivery.

See effectiveness of birth control methods here:

COMMUNITY CONNECTIONS

Your healthcare team is not complete without connections to community resources. Here are some community resources you should ask about today:

- Public Health Nurse: Supports your maternity journey from the community perspective, to include visits during and after your pregnancy
- Emotional support and mental wellness resources
- Organizations that can help you get free or low cost food
- Transportation options to get you to and from your clinic appointments

Ask your healthcare team for information from Resourceful®, which is a tool that can connect you to these resources in your area.

Third Trimester tri-fold (front, back, and inner flap):

IMPORTANT THINGS TO DO IN THE THIRD TRIMESTER

- ☐ *Review postpartum changes so you know what to expect after delivery*
- ☐ *Ask your nurse for information about breastfeeding*
- ☐ *Review the packing list and checklist in the "My Maternity Journey" book*
- ☐ *Ask your provider about resources to support mental wellness throughout your pregnancy journey*
- ☐ *Ensure you have completed the prenatal education classes*

Teenage Pregnancy: **Third Trimester**

Third Trimester tri-fold (inside left, middle and right):

Postpartum Care Plan

You will follow up with your provider 2 weeks after you deliver (virtually), and again 6 weeks after you deliver (in-person).

Your newborn will also have a schedule of appointments after delivery to ensure they are gaining weight and remain healthy.

Monitoring for Postpartum Depression:

All women are at risk for postpartum depression, and this risk can be higher for teens. Your provider will ask you questions to screen for postpartum depression during your visits. Let your provider know if you have a history of depression or anxiety, or if you are experiencing a low or depressed mood.

Breastfeeding:

Appointments with lactation resources are available to help with any breastfeeding issues. If you wish to breastfeed, ask your provider for resources or information to guide you.

CHOOSING THE RIGHT BIRTH CONTROL

Repeat teen pregnancy is avoidable, however it remains common among teens.

Many birth control options are available to prevent repeat teen pregnancy. Ask your provider which method is right for you, and make a plan to initiate at your first in-person postpartum visit.

Birth control can be initiated at your 6 week postpartum visit. It is important to abstain from sexual activity until after your 6 week postpartum visit.

GET INFO ABOUT THE DIFFERENT BIRTH CONTROL METHODS HERE:

LEARN MORE ABOUT LONG ACTING REVERSIBLE CONTRACEPTIVES (LARC) HERE:

COMMUNITY CONNECTIONS

Your healthcare team is not complete without connections to community resources. Here are some community resources you should ask about today:

- Public Health Nurse: Supports your maternity journey from the community perspective, to include visits during and after your pregnancy
- Emotional support and mental wellness resources
- Organizations that can help you get free or low cost food
- Transportation options to get you to and from your clinic appointments

Ask your healthcare team for information from Resourceful®, which is a tool that can connect you to these resources in your area.

Appendix M: Standard Documentation (dot phrases)

.1OBteen1 (first trimester education-addition to existing education)

1. Introduced team: RN education, providers, prenatal educators, public health nurses (connection to community resources, parenting classes and developmental milestones).
2. Completed/***reviewed referral to public health.
3. Mailed NOB packet and 1st trimester adolescent brochure.
4. Scheduled 2nd trimester RN education session.

.1OBteen2 (second trimester)

1. Assessed community connection, she is established with public health./*** Referral placed.
2. Discussed prenatal education, including infant CPR, childbirth education, breastfeeding class, daddy boot camp class. Connection offered/made to prenatal education coordinator. Assessed for barriers to prenatal education, offered connection to director of prenatal ed.
3. Review risk of repeat pregnancy.
    1. Recommended delaying next pregnancy at least 18 months to allow full recovery and best outcomes for next pregnancy.
    2. Discussed forms of contraception, pill, patch, ring and depo are more likely to fail in women younger than 20.
    3. Reviewed IUDs and arm implants as most effective way to prevent repeat teen pregnancy.
    4. Dual protection of condoms with LARC are the best protection from pregnancy and STDs.
4. Mailed 2nd trimester adolescent brochure, Resourceful brochure and prenatal education information sheet.
5. Scheduled 3rd trimester RN education session.

.1OBteen3 (third trimester)

1. Reviewed chart to ensure public health connection has been made.
2. Postpartum plan of care discussed: 2 wk virtual POB appt, 6 wk in person POB appt. Infant has several well child checks in first few months.
3. Review risk of pregnancy in postpartum year.
    1. Recommended delaying next pregnancy at least 18 months to allow full recovery and ensure best outcome for next pregnancy.
    2. Discussed forms of contraception, pill, patch, ring and depo are more likely to fail in women younger than 20.
    3. Reviewed IUDs and arm implants as most effective way to prevent repeat teen pregnancy.

    4. Dual protection of condoms with LARC are the best protection from pregnancy and STDs.
4. Mailed 3rd trimester adolescent brochure, resourceful brochure and ACOG contraceptive handouts.

Appendix N: Poster Presentation

Adolescent Maternity Care Program

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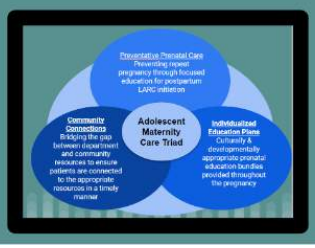
Background

- Current prenatal care is tailored to the adult population. This care often does not meet the developmental needs of a pregnant teen
- Teen pregnancy is associated with high rates of complications and comorbidities
- Teens who become pregnant are more likely to have poor health and socioeconomic outcomes compared to adults
- For teens who become pregnant, their likelihood of having repeat teen pregnancies is high
- Connection to community resources, such as Public Health Nurses, is an integral part of a pregnant teen's care

Objectives

An evidence based Adolescent Maternity Program was initiated in a large rural health care facility with three foundational pillars of care, including

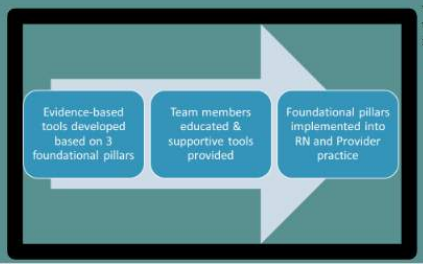
1. preventative prenatal care
2. developmentally appropriate education
3. increased connection to community resources.



Methods

1. Evidence-based education bundles and patient education materials were developed with the three core pillars forming the framework for each.
2. All providers and nurses within the department were educated on the foundational pillars.
3. Tools were developed to help providers and nurses integrate the foundational pillars into their care, including standard documentation, scripting, age-appropriate patient educational pamphlets, and customization of a closed-loop referral program that previously existed within the electronic medical record.
4. The foundational pillars were implemented into RN and Provider practice

Program inclusion criteria: 1) age 19 and younger and 2) currently pregnant and 3) receiving prenatal care at project site of implementation.



Evaluation & Outcomes

Charts were audited in three categories:
1) percent of adolescents who received education regarding long-acting reversible contraceptives (LARC) during their pregnancy
OUTCOME: 62% Compliance
2) percent of adolescents who received age appropriate prenatal education
OUTCOME: 80%
3) percent of patients who were offered referral to community resources.
OUTCOME: 81%

Conclusion

The goal of achieving 75% compliance was met for two out of three pillars. 80% of pregnant teen patients who received care during the project window received age-appropriate education, and 81% were offered a referral to community resources. Education regarding LARC use did not meet target, with only 62% of patients within the window receiving education on LARC use to prevent repeat teen pregnancy. Future phases of this project should include additional efforts around LARC use for pregnant teens.

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