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## Increasing Prenatal Participation in Home Visiting Programs in Rural Vermont

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# **Increasing Prenatal Participation in Home Visiting Programs in Rural Vermont**

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Agency: Caledonia Home Health & Hospice, Northern  
Counties Health Care (NCHC)

# Acknowledgements

- I would like to declare that there are no relationships or conditions that present a conflict of interest in relation to the content of this presentation.
- No outside funding was used in this project.

# Introduction — Problem

## Global Problem

### 1) Depression

- Greater risk for postpartum depression if depression is identified in the prenatal period (Sampson, Duron, Mauldin, Kao, & Davidson, 2017)

### 2) Increasing Disparities in Mortality in US Children

- SIDS, unintentional injuries and homicide (Olds, Kitzman, Knudtson, Anson, Smith, & Cole, 2014)

# Introduction-Problem

## Local Problem

- Opioid use in Pregnancy
  - CDC reports from 1999-2014 VT has one of the highest national averages of annual increases (Haight SC, 2018)
- Wisconsin Population Health Institute Study Results: Orleans County Vermont
  - Ranks 13<sup>th</sup> in health outcomes and socioeconomic risk factors
  - Ranks 14<sup>th</sup> in quality of life (Foundation, 2018)



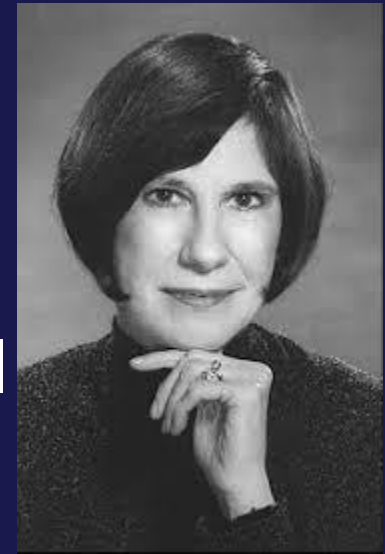
# Available Knowledge

- What do we know about Home Visiting?
  - 1) Favorable effects on child development, breastfeeding, birth outcomes and a reduction in child maltreatment (Avellar & Supplee, 2013)
  - 2) Early home visiting intervention can modify pregnancy risk factors to a certain extent (Goyal, Folger, Hall, Teeters, Van Ginkel, & Ammerman, 2016)
  - 3) Early exposure prenatally increases engagement with home visiting postpartum (Goyal, Folger, Hall, Teeters, Van Ginkel, & Ammerman, 2016)

# What is yet to be known?

- How do we engage more women prenatally in home visiting programs?
- What are the barriers?

# Rationale



- Conceptual Framework:  
Systems Based Theory Approach-Clinical  
Microsystems Concept  
(Nelson, Batalden, & Godfrey, 2007)
- Assumptions used to guide intervention:  
Rosemarie Rizzo Parse, PhD, RN
  - “The Nurse, in living true presence with others, does so with face-to-face discussions, silent immersion, and lingering presence.” (Bunkers, 2012, p. 13)
- Northeastern Vermont Regional Hospital (NVRH) OBGYN Office: 40% acceptance rates



# Purpose & Aims

- Overarching Purpose: Increase referral acceptance rates for the home visiting nurse program from 27% to 40% for Medicaid eligible pregnant mothers.
- Specific Aims: Establish a schedule for one of the home visiting nurses to be present in the NC OBGYN office one day a week for three hours to meet with all pregnant Medicaid eligible mothers.

# Methods — Context

- North Country Ob/gyn (NC OBGYN) Office home visiting statistics January 2018-June 2018
  - 15 referrals to home visiting nurse program
  - 4 acceptances (27%)
  - 111 deliveries
  - 79 of the deliveries were Medicaid eligible mothers
- Expansion of the Home Visiting Nurse Program
- Development of the WISHH Program January 2017

# Intervention(s)

- Create a schedule for the home visiting nurses at the NC OBGYN Office
- Presentation at the NC OBGYN office staff meeting regarding the home visiting nurse program
- Creation of an excel spreadsheet to track information
- Project Director will be present at the NC OBGYN office to help facilitate the process
- Monthly meetings-Project Director, Office Manager, Maternal Child Health Manger

# Specifics of the team involved

- Lyndsay Sykes RN, Case Manager OBGYN Office(Project Director)
- Melissa Gallup, Practice Manager at the North Country Hospital OBGYN Office
- Magdalene Miller RN, Maternal Child Health Manager, Caledonia Home Health & Hospice
- Home Visiting Nursing Staff, Caledonia Home Health & Hospice
- Anne Flynn RN, Director Maternal Child Health, North Country Hospital
- OBGYN office staff including medical assistants, LPN's, RN's, secretaries, schedulers

# Study of the Intervention(s)

- Approach chosen to assess impact of the intervention
  - Sept 2018 to Feb 2019 data collection period (Excel spreadsheet)
- Approach used to establish whether outcomes were due to intervention
  - The decision to permanently have a home visiting nurse present at the NC OBGYN office will be based on an increase of the acceptance to home visiting services from 27% ideally to a goal of 40%

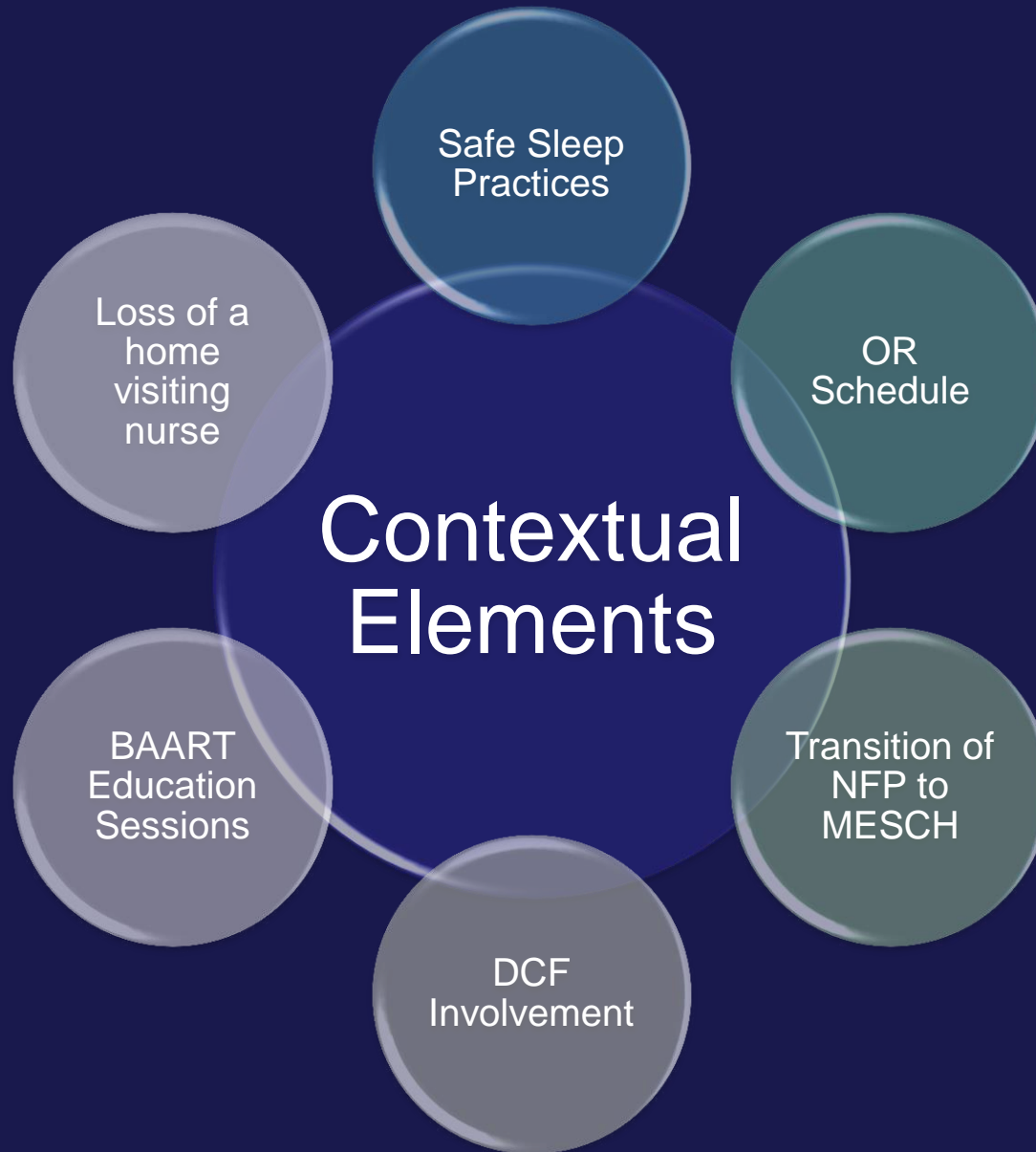
# Measures

## Process and outcome measures

- Overall acceptance rate increase from 27%-40%.
  - May be a increase in the number of referrals triggered
  - Document any variation in acceptance rates by nurse
  - Acceptance into the program is defined as three visits (two in addition to the initial office visit) within the prenatal period.

Data of acceptance rates of home visits will be compared with data obtained from Caledonia Home Health Database

# Measures



# Analysis

- Quantitative data of acceptance rates based on number of referrals for all Medicaid eligible pregnant women
- Acceptance into the home visiting program= a total of 3 visits (including the 1 office visit)
- Data will also include a de-indentifying number (e,g,:01, 02, 03) that will be assigned to each of the home visiting nurses
- The OBGYN Office scheduler will be the broker to de-identify the Medicaid eligible patients



# Ethical Considerations

- Institutional Review Board (IRB) approval as not-human subjects
- De-identified patient data
- Participation optional, including discontinuation of participation

# Intervention Timeline

June and  
July 2018  
planning  
meetings

August 2018  
IRB approval  
obtained

September  
2018 Project  
Director  
Presentation

September  
17<sup>th</sup>, 2018  
start date

November  
2018  
schedule  
change

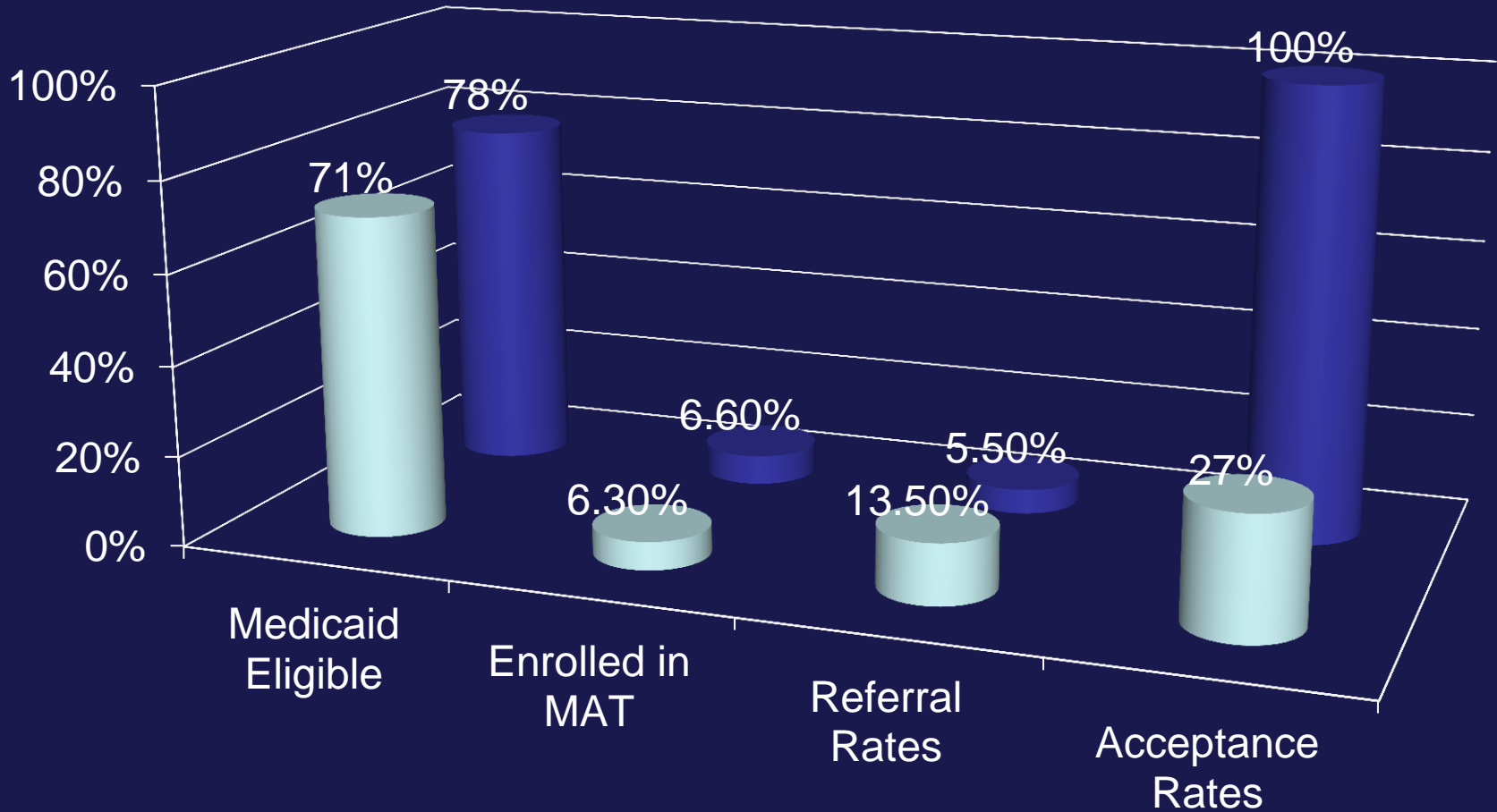
December  
2018 and  
January 2019  
monthly  
meetings

Final meeting in  
February 2019  
to review  
success/failures  
of the project

# Results

- Observed associations between intervention(s) & outcomes
  - Patients did not show unless they had a NC OBGYN office appointment
  - Visits were not alternated evenly between home visiting nurses
  - Highest risk patients declined to participate
  - Education from multiple agencies
  - Impact of dental care

# Results

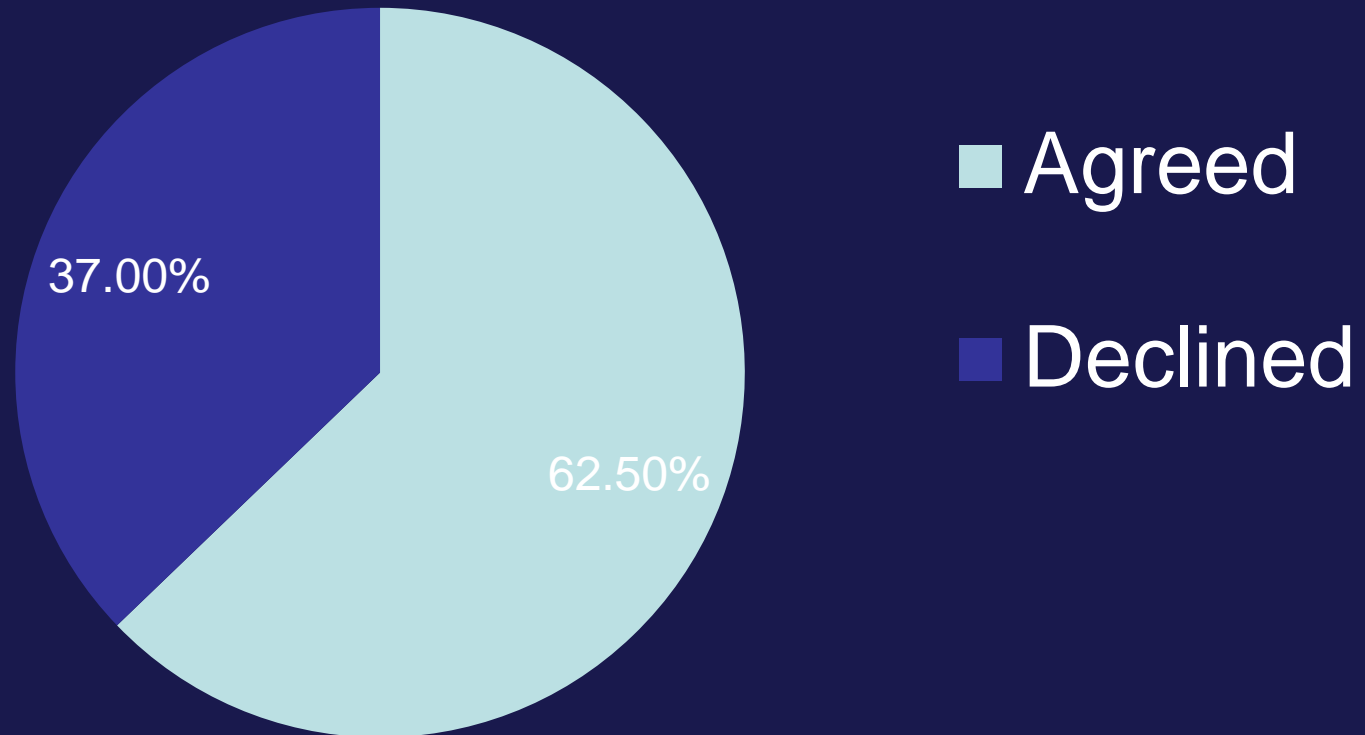


■ Jan 2018-June 2018: 111 Total Deliveries

■ Sept 2018-Feb 2019: 91 Total Deliveries

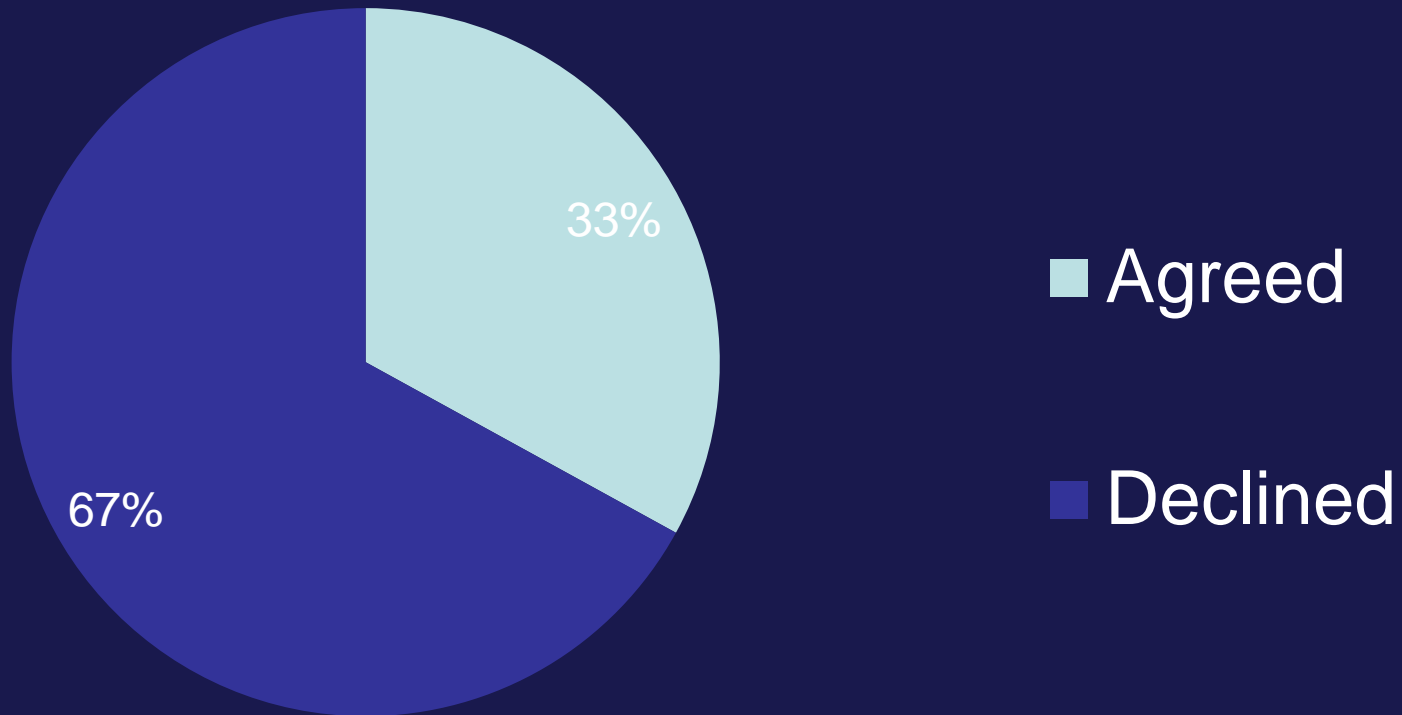
# Results

**Patients that agreed to initial meeting with home visiting nurse at the OB/GYN office**



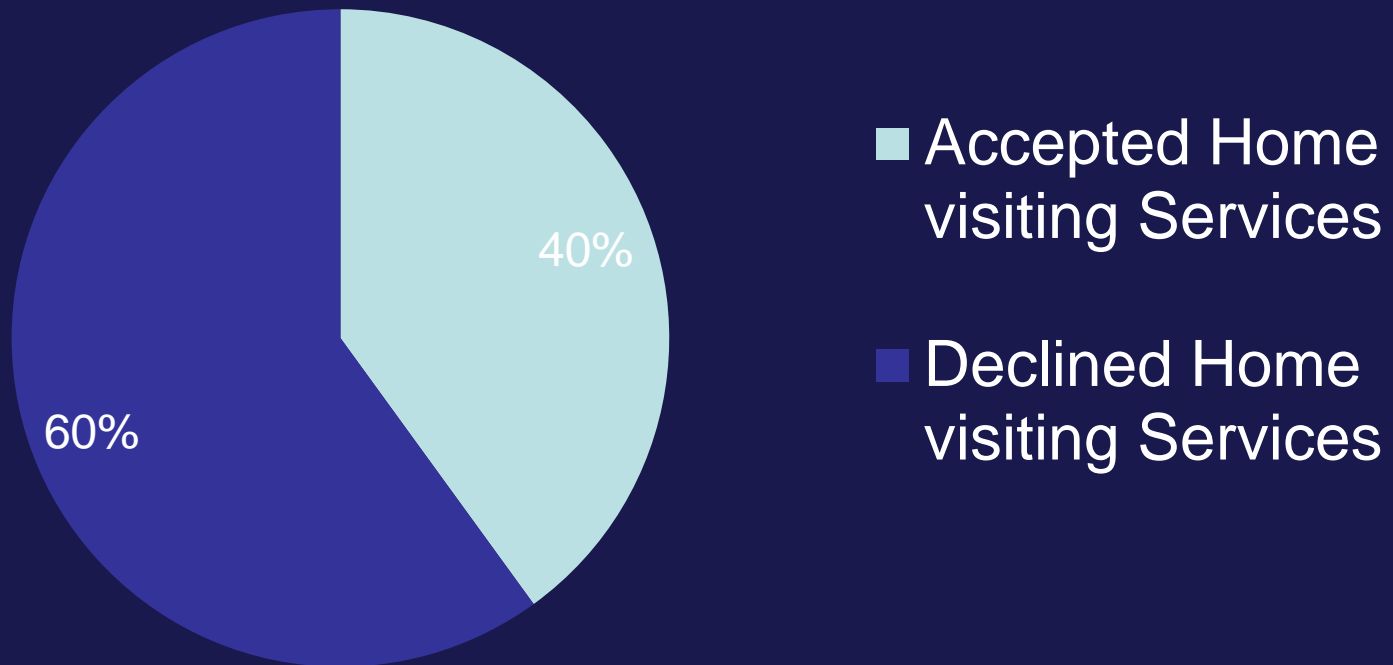
# Results

Patients that agreed to a referral from initial meeting with home visiting nurse



# Results

## Pregnant Mothers Enrolled in Medication Assisted Treatment (MAT)



# Results

**NC OBGYN office referral that lead to an acceptance of the Home Visiting Nurse Program**



- Accepted
- Declined



# Results

- Unexpected Benefits
  - Patients more likely to accept postpartum home visiting nurse
  - Increased care coordination between office staff and home visiting nurses
- Unexpected Outcomes
  - Assumptions of patient need for a home visiting nurse
  - Affects of schedule changes on project
  - Lack of coordination between schedulers and providers and home visiting nurses
  - Presentation of the home visiting nurse at the end of the visit

# Discussion

## Key Findings of the Project

The acceptance rates of referrals increased to 100% from 27% speaking to the importance of Nursing True Presence

The systems theory approach, extending services from home to the practice and community setting by enhanced communication and coordination

## Strengths of the Project

**Increased awareness** of the home visiting nurse program

**Increased collaboration**

100% of the patients that agreed to a referral accepted the home visiting program

# Interpretation

- Association between intervention & outcomes
  - The importance of the design of the flow of patients meeting with the home visiting nurse may have affected the outcome
  - Continued Education from the Project Director at staff meetings
  - Importance of reasons why patient declined
- Consistencies with other publications
  - It is difficult to engage patients in a home visiting nurse program, especially the highest risk
  - Importance of a provider champion

# Differences between observed and anticipated outcomes

- The number of patients referred to home visiting program was lower than anticipated
  - Operating room schedule
  - Flow of patients meeting with the home visiting nurse
  - Provider support varied within the NC OBGYN office
  - Scheduling support

# Limitations

- Limits to generalizability
  - Project focused on a small population of patients living in rural Vermont
- Factors that might limit internal validity
  - DCF Involvement during pregnancy
  - Safe Sleep Grant Provided through the Vermont Dept of Health
  - Varying ways of presenting the home visiting program
- Efforts to minimize/adjust for limitations
  - Education regarding home visiting nurse program

# Conclusions

- Usefulness of work
  - Continued need to coordinate care in rural Vermont as patients face many barriers
  - Continued need to explore other options to support this population (neutral setting)
  - Implementation of the Clinical Nurse Leader (CNL) role in the NC OBGYN office
- Sustainability
  - NC OBGYN office workflow changes
    - Incentive offers
    - Provider buy-in

# Conclusions

- Potential for expansion to other contexts
  - Local Pediatrics Office
  - Women Infant Children (WIC) Office Dept of Health
  - Primary Care Office –VT Chronic Care Initiative
- Implications for practice
  - Support/coordination of services for pregnant mothers in a neutral environment
  - Pregnancy Education Sessions
  - Postpartum Coordination

# Suggested Next Steps

- Propose a change the flow of how patients meet with the home visiting nurse at NC OB/GYN office
- Further advertisement of home visiting nurse program (posters, video)
- Publishing summary of project (NCH monthly newsletter, VCHIP, NNEPQIN)



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