

Preconception Care Needs among Female Patients of Childbearing Age from an Urban, Community Pharmacy

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Introduction: Preconception Care

<u>Definition</u>: A set of interventions a man or woman receives that work towards identifying and modifying biomedical, behavioral, and social risks to their health or pregnancy outcomes through prevention and management.¹

Preconception care should not only target women who want to become pregnant, but the ~62 million women in US that are capable of becoming pregnant.2

~1/2 of all pregnancies in the US are <u>unplanned</u>²

Most birth defects occur within the first 3 months of pregnancy⁴

Almost all women have at least 1 risk factor that could adversely effect pregnancy⁵

Table 2

	pregnancy circuit pregnancy
pregnancy outcome	able 1 can put a patient at an increased risk of negative es and fetal birth defects. 4,6,7,8
Table 1 Parameter	Adverse Outcome(s)
	Classification
Obesity	个BP, preeclampsia, preterm birth, gestational diabetes, macrosomia, birth injury and C-section, neural tube defects (NTDs)
Underweight	Low birth weight, preterm birth
Type I or II	Diabetes Mellitus
Poor glycemic control (A1c >7%)	 <u>Early in Pregnancy:</u> Spontaneous abortion, congenital abnormalities (cardiac structural defects, NTDs, sacral agenesis) <u>Later in Pregnancy:</u> Fetal macrosomia, preterm birth, stillborn, and neonatal death
Depr	ession Status
Uncontrolled/Undertreated depression	Low birth weight, preterm delivery, and postpartum depression
То	bacco Use
Current tobacco use	Spontaneous abortion, preterm birth, low birth weight, placental previa, placental abruption, and stillborn
Vi	tamin Use
Inadequate daily folic acid consumption	NTDs: Encephalopathy, spina bifida
Vacci	nation Status
	Mara likely to sausa savora illness in

More likely to cause severe illness in Influenza pregnant/postpartum females, premature labor Can spread to baby during child birth causing life-**Hepatitis B** long, chronic liver disease for child MMR Miscarriage or serious birth defects

Pertussis can be life-threatening in a newborn

Medications that May Cause Harm to Developing Fetus

Increased risk of spontaneous abortion, Medications that may cause harm utilization miscarriage, fetal death, and/or serious birth defects

Preconception care is part of the **Healthy People 2020** initiative as well as described within the **CDC's Winnable Battles**. 9,10

With 90% of Americans living within a 5 mile radius of a pharmacy, pharmacists are poised in an excellent position to be able to provide preconception care services for their patients. 11

Targeted medication reviews (TMRs) focused on preconception care have been widely implemented into the pharmacy workflow within community pharmacies in Ohio. TMRs focused on:12

Folic acid supplementation

Tdap

- Hepatitis B/MMR vaccination
- Category D/X medication use

Objective

Determine the **different needs** for preconception care services within an urban, community pharmacy setting.

Methods

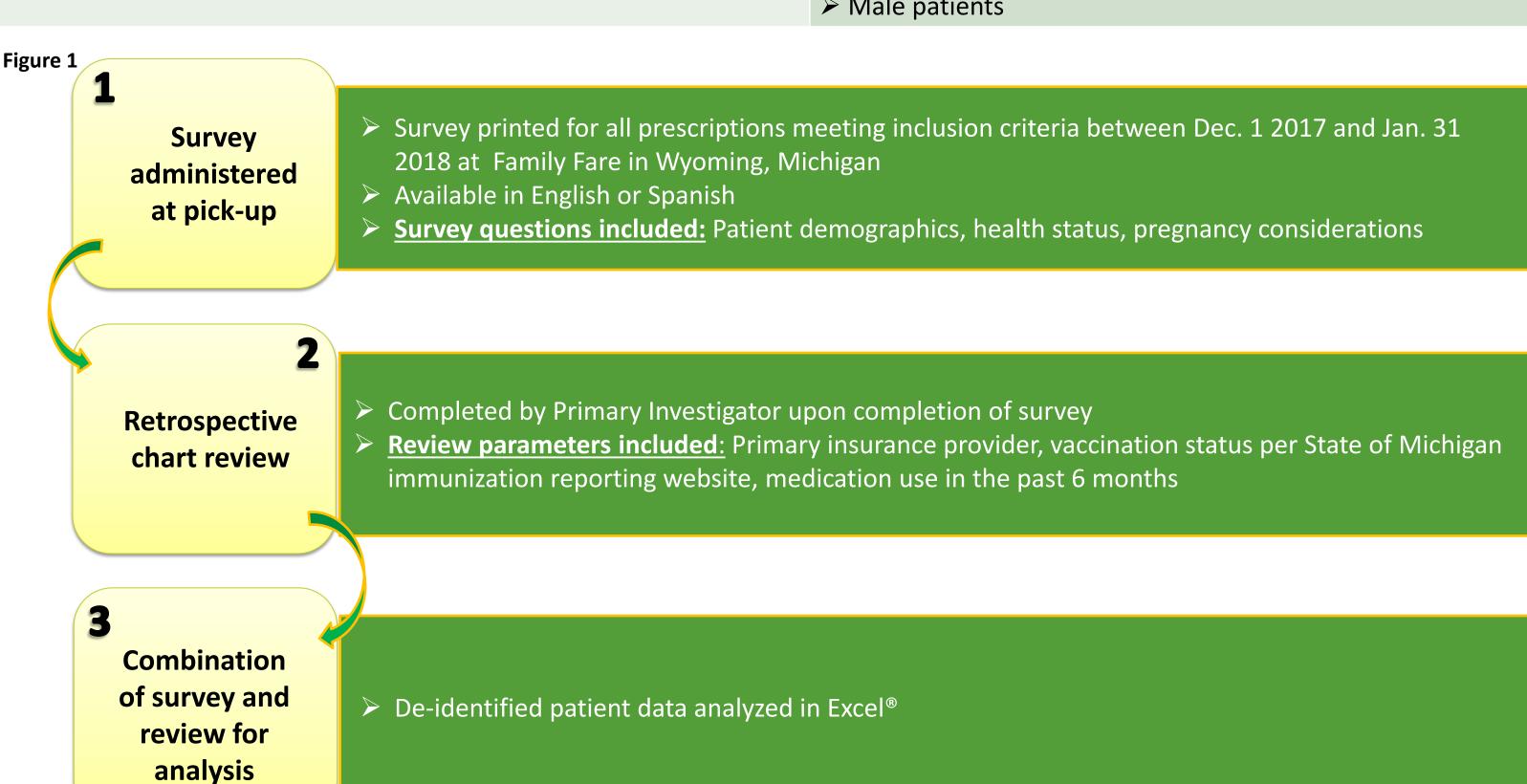
Needs assessment utilizing modified evidence-based core indicators developed by the National Preconception Health and Health Care Initiative (PCHHC) Clinical Workgroup and the Center for Disease Control (CDC). 4,13

Study received IRB approval from: Ferris State University and Ohio Northern University

Exclusion Inclusion ➤ Women of childbearing age (18-45 years) > No women outside of the specified age range

> Picking up their own prescription from selected community pharmacy

> Picking up a prescription for someone else or inquiring about OTC products only Male patients



Results Demographics (n=110)

Table 3 Frequency (%) Characteristic Characteristic Frequency (%) Age Groups (n=99) Ethnicity (n=99) 26.26 37.37 Caucasian/ White 18-24 years Hispanic 25-34 years 43.43 48.48 30.30 African American/ Black 10.10 35-45 years 1.01 Asian **Primary Insurance Provider (n=99)** Native Hawaiian/ Other Pacific **Total Commercial** 44.44 1.01 Islander **Total Medicaid** 36.36

3.03

16.16

to complete survey Patients completed the survey Patients declined the 11 survey Patients completed

12.24

% Not Up to

Date

58.59

47.47

44.44

19.19

Trimethoprim

Use of Medications that May Cause Harm (n=99)

Total of **110 patients** asked

survey in English Patients completed survey in Spanish

Figure 7

Findings

American Indian/ Alaska Native

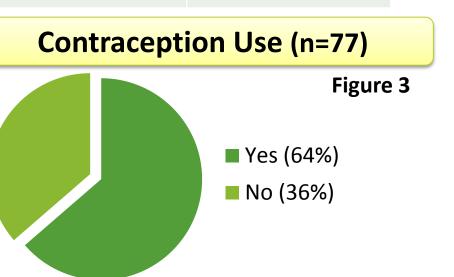
Sexually Active (n=99) Figure 2 ■ Yes (78%) ■ No (20%) Unreported (2%)

Total Medicare

No Insurance

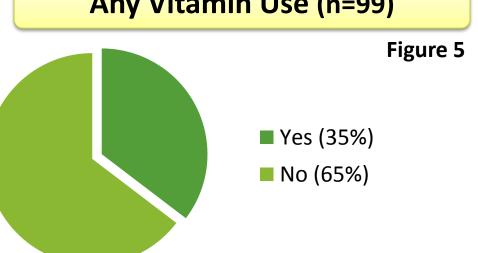
Table 4

Form of Birth Percentage of Patients (%) Control **None Reported** 45.45 20.20 10.10 Other Condom 7.07 Injection 4.04 3.03 **Combination** 2.02



BMI Classification (n=99) Figure 4 ■ Normal BMI (18%) ■ Abnormal BMI (71%) Unreported (11%)

Multiracial

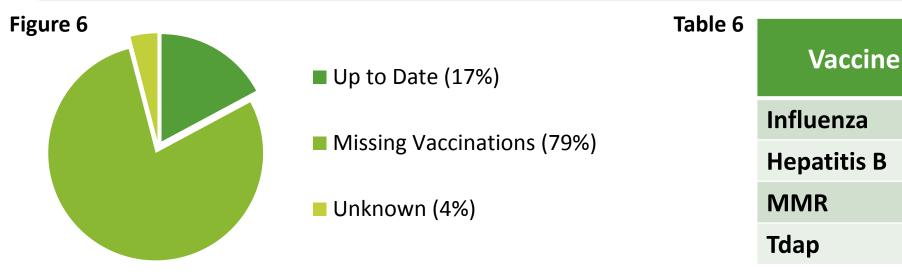


■ Yes (49%) ■ No (51%) **Top 4 Medications that May Cause Harm (n=49) Any Vitamin Use (n=99)** Table 5 % on Medication Therapy 46.94 24.49 14.29

0.00

2.02

Vaccination Status (n=99)



Discussion

Majority of patients have som degree of *capability* to become pregnan regardless of contraceptive use

setting.

Majority of patients had **1 or more** of the following risk factors for negative pregnancy outcomes:

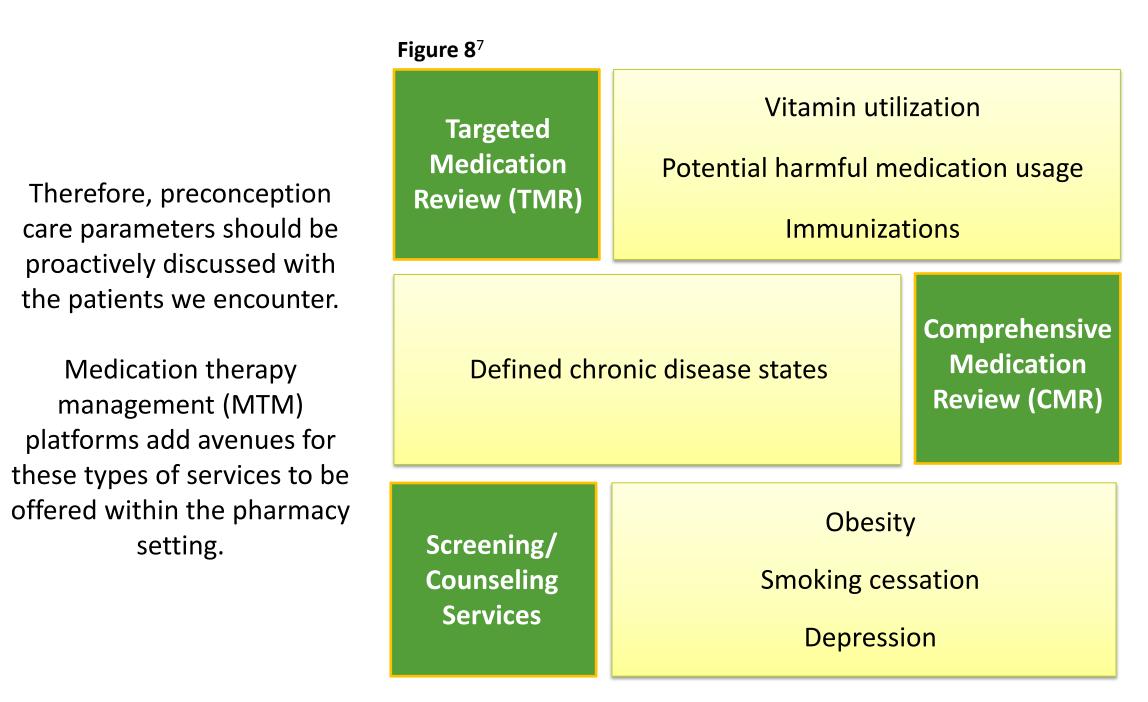
✓ Abnormal BMI ✓ Missing documentation of 1 or more recommended vaccinations ✓ No form of daily

multivitamin

~1/2 of the patients within study were taking 1 or more medications that may cause harm to a developing fetus

Despite this obvious need, 79% of patients surveyed indicated that they were NOT interested in receiving more information about preconception care.

However, this data suggests that many women may be in need of preconception support.



Many of the insurance providers within the study population (ie. Medicaid, Priority Health) offer coverage for these types of billable services.

Limitations

- > <u>Limited generalizability:</u> Single center, small sample size
- > <u>Underreporting:</u> Most data was self-reported, personal questions, staff participation, vaccine status limited to Michigan Care Improvement Registry (MCIR) reporting
- > Incomplete data: Limited medications that may cause harm to a developing fetus reviewed, no evaluation of over the counter (OTC)/ vitamin/ herbal supplement use

Conclusions

There are multiple preconception care needs, such as abnormal body weight, vaccination status, and vitamin and potentially harmful medication usage, for women of childbearing age within this community pharmacy setting.

All needs discovered may potentially be targeted within MTM services by pharmacists.

Future Considerations

- > Utilizing identified preconception care needs, develop strategies to address these needs through future MTM interventions.
- > Preconception care services could be built within the pharmacy workflow to address the needs observed.
 - Built into framework of already established MTM processes
 - Creation of services protocol for established needs
 - Documentation of services provided
- > Collaborative practice agreement (CPA) development for services (ie. Contraception or folic acid supplementation)
- > Evaluation of outcomes from pharmacist initiated services (ie. Medications switched or initiated, vaccinations attained, etc.) could be useful to ensure the utility of the interaction.

Disclosure Statement

No investigators had financial, personal, or professional conflicts of interest related to this research.

References

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