

# Future health risks after pregnancy complications and communication between specialists and primary care providers: a cross-sectional study.

Roaa Elmahi<sup>1</sup>, Christy Pylypjuk<sup>2,3</sup>

1-Lithuanian University of Health Sciences. 2- Obstetrics, Gynecology and Reproductive Sciences (Section of Maternal Fetal Medicine, University of Manitoba, Canada. 3- Children's Hospital Research Institute of Manitoba.

## INTRODUCTION

**Gestational diabetes (GDM)** and **hypertensive disorders of pregnancy (HDP)** are the most common medical complications of pregnancy, affecting 5-7% and up to 10% respectively. Pregnant patients with GDM and HDP are considered "high-risk" because both conditions are associated with increased risk of birth complications, adverse outcomes in future pregnancies, as well as long-term health complications for mothers and their offspring. All patients with GDM in pregnancy require follow-up testing by oral glucose tolerance tests ~3 months postpartum. Patients with HDP require out-patient lab work of blood count, liver and renal function until return to baseline/pre-pregnancy levels. However, little is known about access to primary care providers (PCPs) for high-risk pregnant patients in Manitoba and there is a paucity of information regarding counseling/communication by specialists about future risks for these families.

## AIM

To determine high-risk patient access to PCPs and to evaluate the communication between specialists and PCPs about future health risks.

## METHODS

This was a cross-sectional study of pregnancies at HSC Women's Hospital (2019-2020). All pregnancies with GDM and/or HDP were identified using delivery record books, and birth events and early neonatal outcomes collected using standardized data collection sheets. Discharge summaries were then reviewed to evaluate the proportion of high-risk patients with access to a PCP, communication between specialists and the referring PCPs, and other recommendations for out-patient surveillance/testing/future health risks. Descriptive and inferential statistics were used to compare outcomes between groups. Subgroup analysis of outcomes prior to and during COVID was also performed.

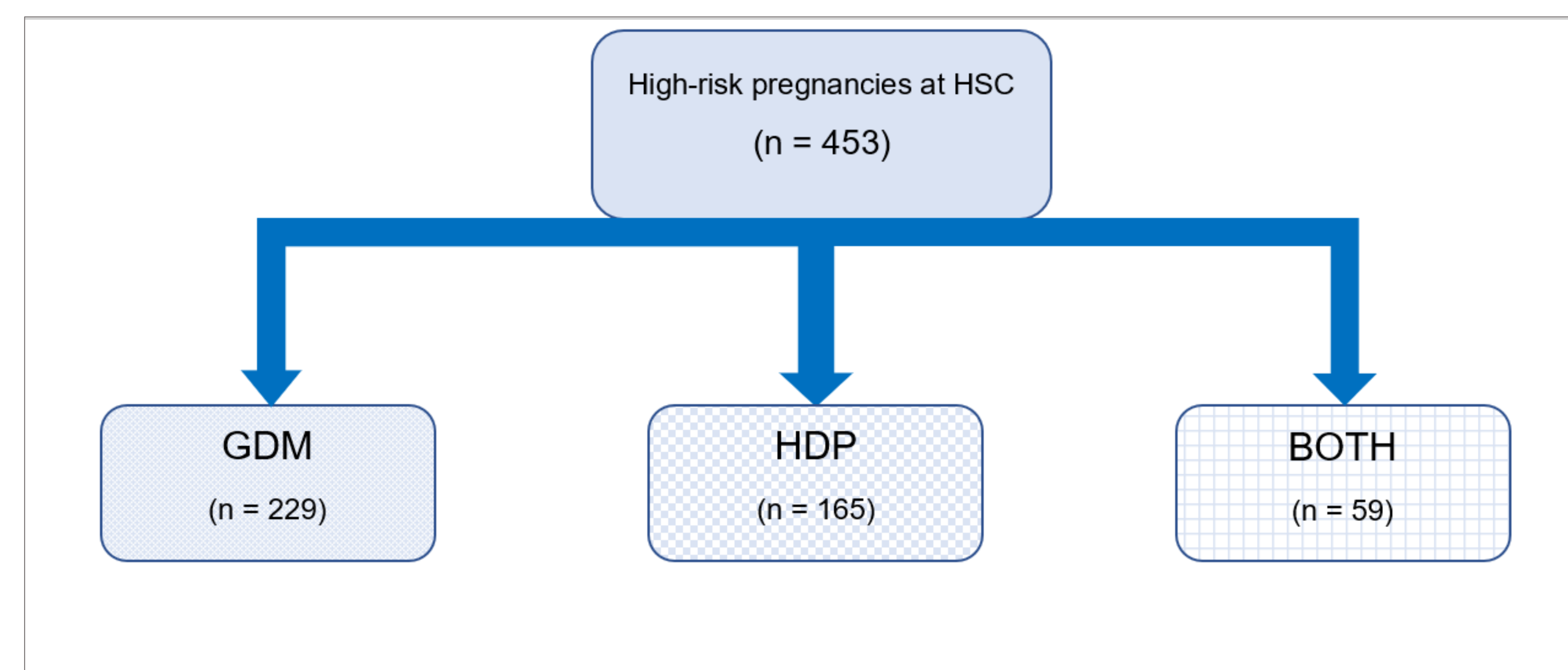


Figure 1. Study flow diagram.

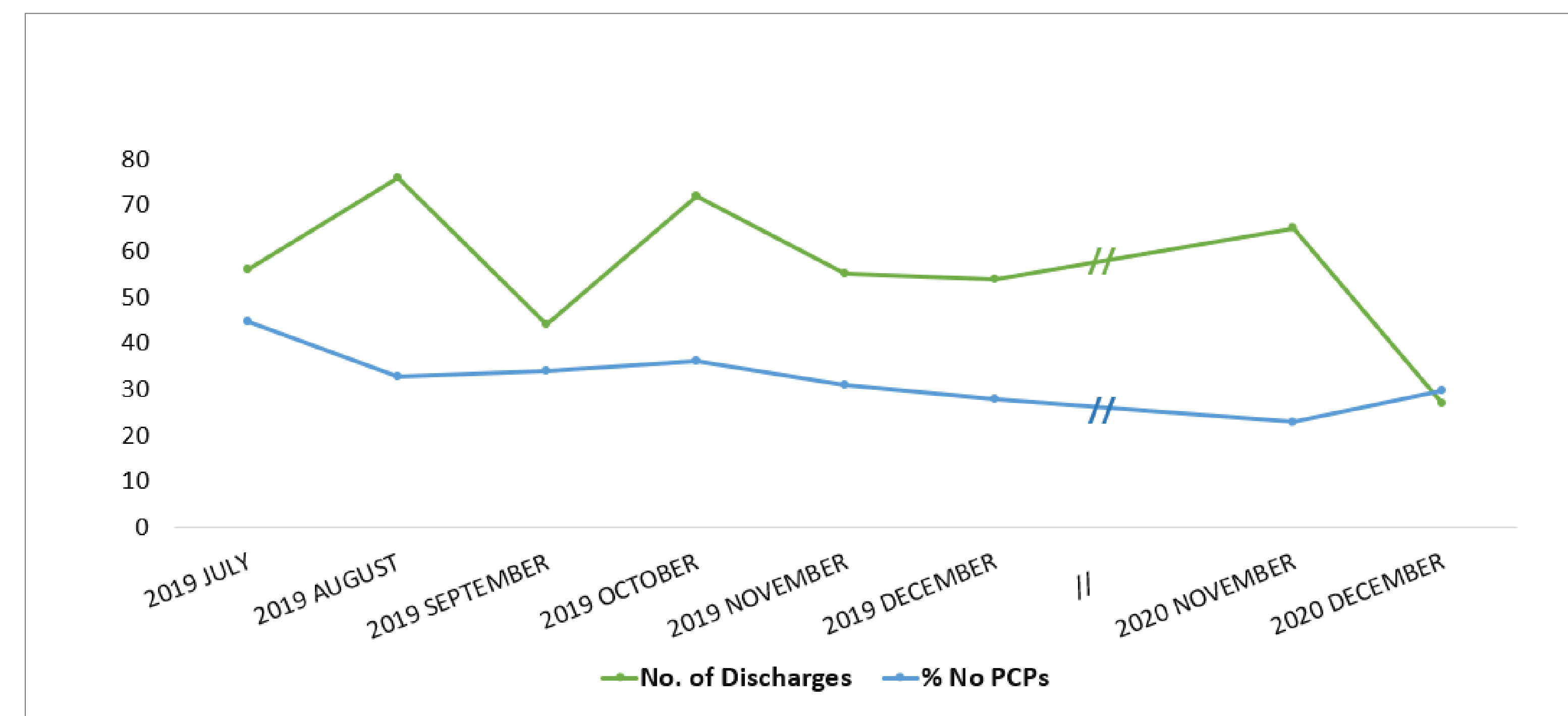


Figure 2. Cross-sectional trends in frequency of high-risk pregnancies (green) and relative proportion (%) of patients with PCPs (blue).

## RESULTS

453 high-risk pregnancies were eligible for inclusion (Figure 1). Most patients were multiparous, delivered at term, and were urban residents. 35.5% were delivered by Cesarean section. One-third of high-risk patients (32.6%) **did not** have a PCP, including 39% of patients with GDM, 22.4% with HDP and 46% with both. **12.9% of high-risk patients** were recommended to have closer postpartum follow-up and only

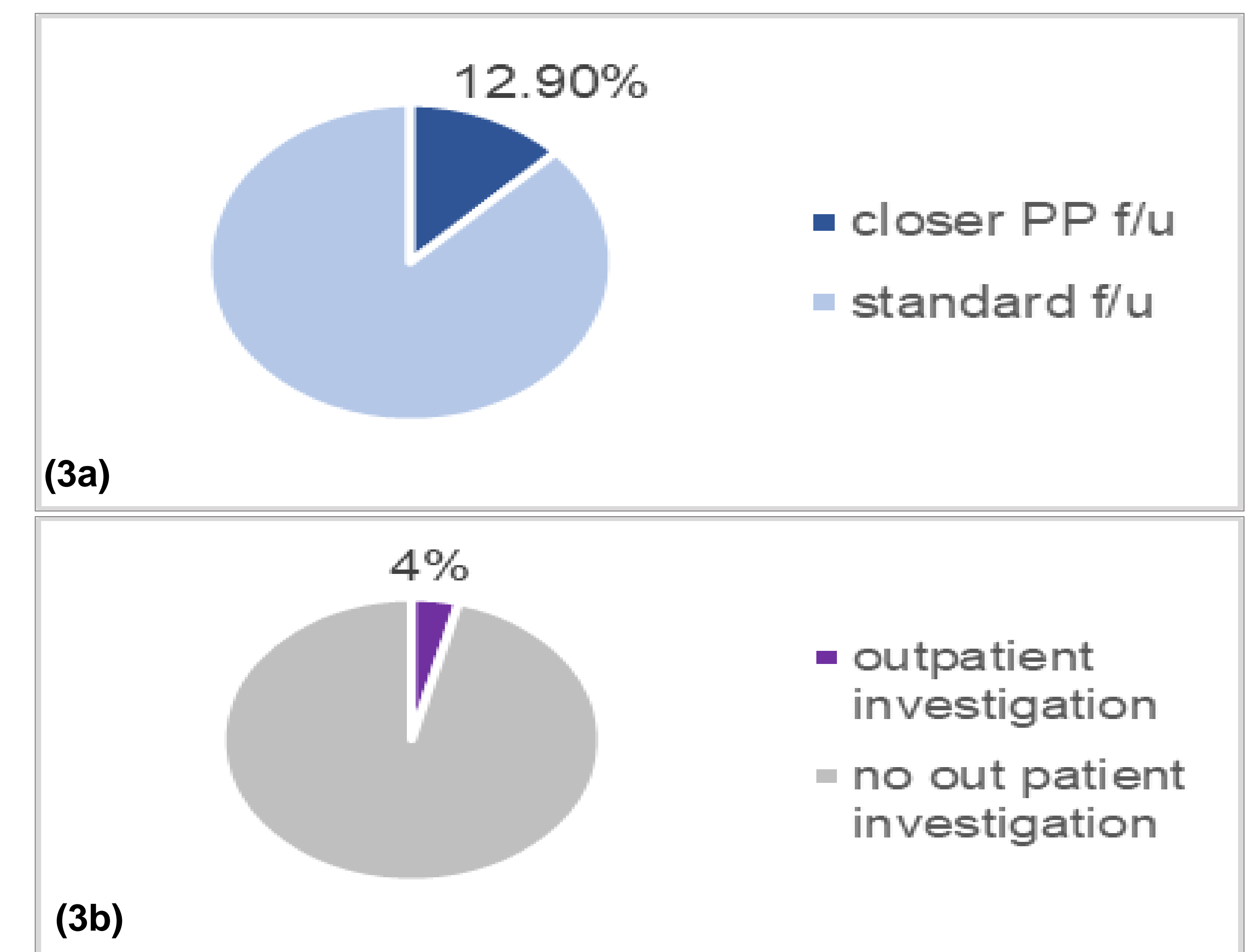


Figure 3. Post-partum (PP) care recommendations for out-patient follow-up (F/U) (Fig3a) and out-patient investigations (Fig3b).

4% were recommended to have outpatient investigations during the postpartum period (Figure 3). **No discharge summaries mentioned future pregnancy complications or risk of long-term health complications for mothers or offspring.**

## CONCLUSION

Almost **one-third of high-risk pregnant patients** with risk of long-term health complications following pregnancy **do not have a PCP**, and for others, communication about these future health risks is lacking. There is a particular gap in communication about future health risks for offspring after exposure to maternal medical complications of pregnancy. Targeted improvement in discharge communication would increase awareness of long-term health risks and enhance prevention strategies for mothers and their children.