

CONTEXT

In the last 10 years, post-coital or emergency contraception (EC) has become a new strategy for preventing pregnancy. Unfortunately, the pills for EC are not highly effective and the copper IUD is often not a woman's preferred IUD. This study is to assess whether the Levonorgestrel (LNG/Mirena) IUD works as emergency contraception.

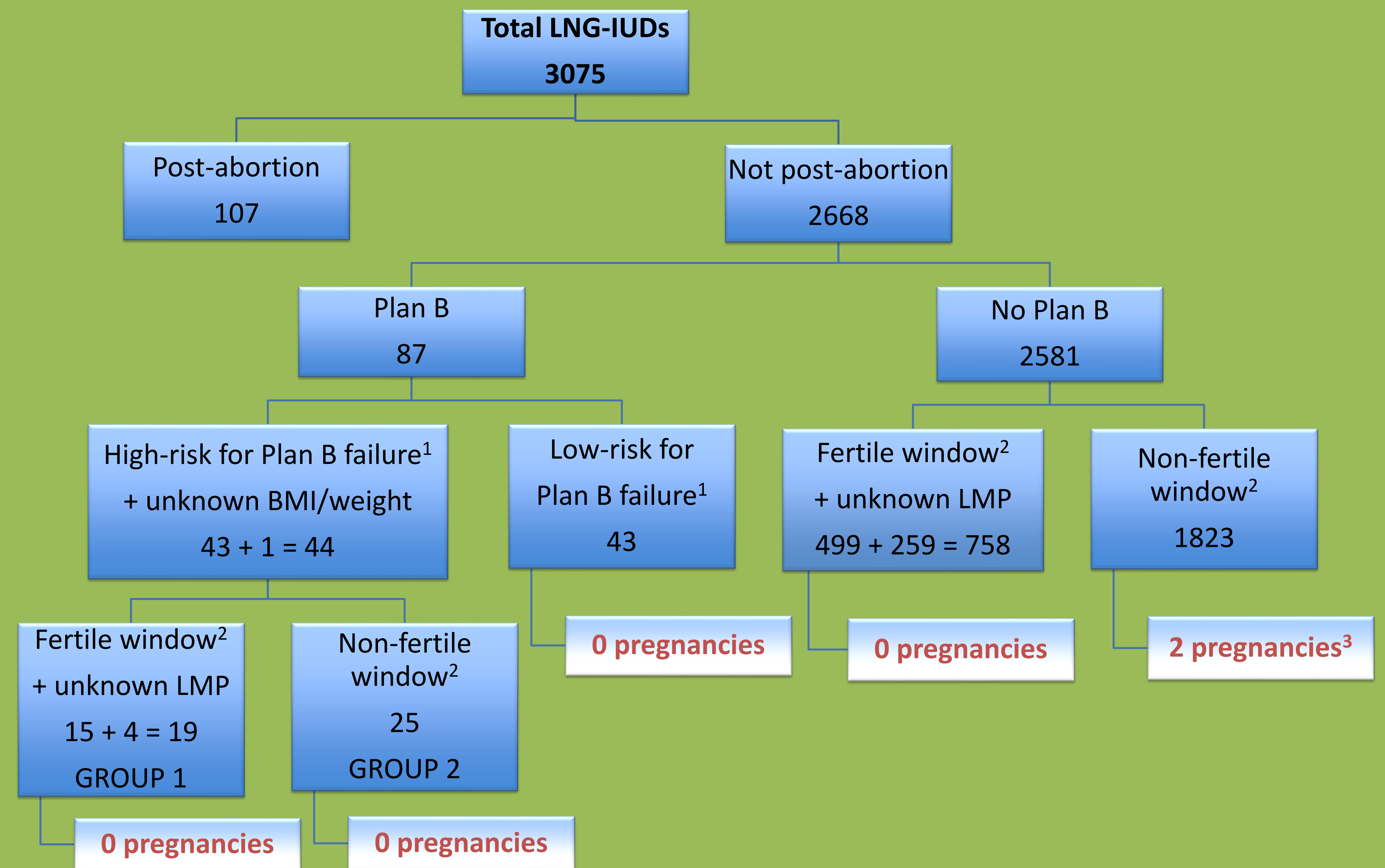
METHODS

Retrospective chart review was conducted on all LNG-IUDs inserted at a large FQHC over 5.5 years. Eligible patients were women whose IUD insertions were done between 10/1/08-2/16/14. Post-abortion insertions were excluded. Stratification was done by who received Plan B, and whether those who received Plan B were at high risk for failure if BMI $\geq 25\text{kg/m}^2$ and/or weight $\geq 155\text{lb}$. Patients were further grouped by last menstrual period, and whether they were in their fertile window (11-19 days of cycle) or not. Charts with positive pregnancy tests were reviewed to see if the pregnancy dating could be traced back to the 5 days before the LNG-IUD insertion.

RESULTS

Refer to the diagram of analysis. Of a total of 3075 LNG-IUDs inserted, 2668 were not inserted post-abortion. Of these 2668, 87 patients were given Plan B for self-reported history of unprotected intercourse in the five days prior to insertion of the LNG-IUD. Of these 87, 43 had a BMI $\geq 25\text{kg/m}^2$ or weight $\geq 155\text{lb}$, placing them at high risk for Plan B failure, plus 1 for an unknown BMI/weight. Of these 44, a total of 19 were in the fertile window (Group 1) and 25 were outside the fertile window (Group 2). No pregnancies occurred in either of these two groups. Two positive pregnancy tests were found in the 2668. They both occurred in the group that did not need Plan B and were in the non-fertile window. On close review, the two pregnancies were not LNG-IUD as EC failures. One became pregnant two months after the LNG-IUD insertion and the other pregnancy dated to show that she had likely become pregnant in the week prior to the IUD insertion rather than in the week of the IUD insertion (when we hypothesize that it may work as EC).

DIAGRAM OF ANALYSIS



¹High risk of Plan B failure refers to BMI $\geq 25\text{kg/m}^2$ or weight $\geq 155\text{lbs}$; also includes unknown BMI/weight $n=1$. Low risk refers to BMI $< 25\text{kg/m}^2$ or weight $< 155\text{ lbs}$.
²Fertile window refers to the window of 11-19 days surrounding ovulation which has the greatest chance of pregnancy with unprotected intercourse; also includes unknown LMP. Non-fertile days is the window < 11 days and > 19 days.
³The 2 pregnancies in this cohort occurred outside the window for using IUD as emergency contraception. See Results.

Conclusions

Of a small group of women at high-risk for Plan B failure and had LNG-IUD insertion in the timeframe for possible EC use, none became pregnant. The expected pregnancy rate is 7-9% during the fertile window. Thus, there may be mechanisms of action whereby the LNG-IUD works as emergency contraception. Further studies are needed. Study limitations include being a retrospective analysis with no control group comparison, and not having sufficient sample size for more robust analysis.