Introduction
For this project, I used the General Payment Data for the 2020 Reporting Year and filtered the dataset into payments only for the product category of women's health. This category contains both drugs and biological devices. Some payments had separate rows for other drugs/biological devices, but the data included in this analysis traces only the payments made for the main drug/biological device column.
(Author: CMS, Dataset name: General Payment Data - Detailed Dataset 2020 Reporting Year, Date Updated: 01/22/2022, Filtered by: product_category_or_therapeutic_area_1 contains "Women")
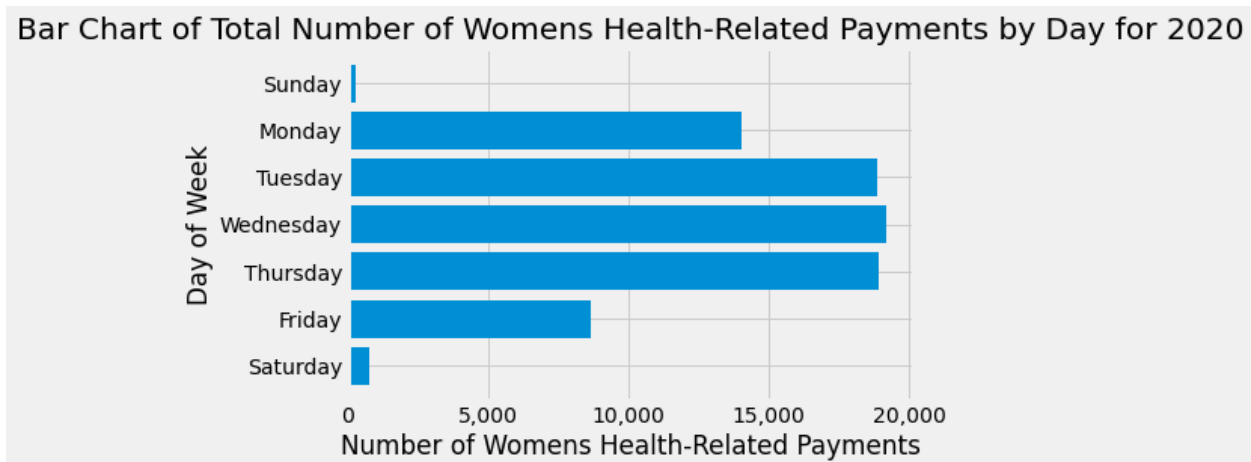
Part A. Where does the money come from?
Most of the payments and money within the Women's Health category come from five reporting entities. The top five companies making payments for the women's health section in 2020 were AbbVie Inc. with 39,215 payments, TherapeuticsMD, Inc. with 12,895 payments, Merck Sharp & Dohme Corporation with 7,168 payments, Bayer HealthCare Pharmaceuticals Inc. with 7,154 payments, and Pfizer Inc. with 6,129 payments. About 94.5% of this number of payments came from purchases of the "Food or Beverage" nature for a total of $1,420,551.54. The total number of payments for the 2020 cycle was 80,770 with all but one coming from reporting entities within the United States. The one payment not from the United States was from Jordan for a drug called Lysteda which is used for heavy menstrual bleeding and was the only reported payment related to that drug.
(Author: Jane Grigg, DipPharm, Article name: Lysteda, Date Updated: 06/21/2021)

Part B. Where does the money go?
There were 50 unique drugs in the dataframe being used for women's health with a total of 80,770 payments. The top five drugs in this women's health category were Orlissa, Lo Loestrin Fe, Oriahnn, Annovera, and Nexplanon; with three of those (Lo Loestrin Fe, Annovera, and Nexplanon) being used primarily as a birth control method. The states with the highest total payment amount (in USD) were California with $1,043,191.14, Florida with $548,306.27, Texas with $409,370.14, New York with $315,740.12, and finally Virginia with $243,133.92 (despite not even making the top ten states in number of payments). Most of the payments were made

between Tuesday and Thursdays, with a large drop off on the weekends.

Bar Chart of Total Number of Womens Health-Related Payments by Day for 2020

The CMS categories do not always include all of the drugs/devices that fall under that category. A drug called Makena that is used for preventing premature birth has recently been the subject of the study that found it does not work by the FDA and has since been recommended to be removed from the market. Since 2011, more than 300,000 women have taken this synthetic hormone and many have experienced complications, but the company has still refused to remove it and continues to promote it. Despite being a drug claiming to prevent premature birth within pregnancy, however, neither its primary and secondary category under the CMS database falls under "Women's Health," instead under "Reduction of Risk for Preterm Birth." With 501 payments totaling $90,178.81, it is the only drug in the 2020 database to occupy this product category.

(Author: Melody Peterson, Website name: Medical Press, Date Accessed: 02/21/2022)
(Author: AbbVie, Website name: Lo Loestrin Fe, Date Accessed: 02/21/2022)
(Author: Therapeutics, MD, Website Name: Annovera, Date Accessed: 02/21/2022)
(Author: Organon, Website Name: Nexplanon, Date Accessed: 02/21/2022)

Part D. Provide Context
The CMS Open Payments database requires the manufacturers of covered drugs to disclose the payment and transfers of value that are made to certain covered recipients such as healthcare providers and teaching hospitals. The section of data that I looked at had only drugs and devices that fell under the category of "Women's Health" (with the exception of the brief mention of Mykena) including products related to family planning and contraceptives and drugs to help with functions and pain related to the female anatomy. Three of the top five drugs/devices under this category for number of payments are used for birth control. Of the top ten states with the highest rate of teen births in 2019, nine of them fell into the Southern region of the United States. The other state was New Mexico in the West. Of the eighteen states with greater than 30% of women aged 13-44 in need live in 'contraceptive deserts' (lacking "reasonable access to a health care

center that provides a full range of birth control methods), the South and West regions each had seven states represented. The Northeast had none.

(Author: US News Staff, Article Name: The Highest Teen Birth Rates by State, Date: 08/10/2021)

(Author: Parker Waichman LLP Staff, Article Name: States with the Best and Worst Birth Control Access across America, Date Accessed: 02/21/2022)

Part E: How do things change?

I calculated the total amount (in USD) of the payments related to women's health drugs/devices per region of the United States. For my regions, I used the West, Midwest, Northeast, and South according to the Census regional map of the US. I found that the total dollar amount of payments for the West was $1,535,467.89, the Midwest was $1,101,028.65, the Northeast was $859,371.23, and the South was $2,543,444.62. Because some regions contain more states, more people, or both than others, I used 2020 Census data to calculate the per-capita breakdown. The two regions with the highest dollar amount per capita in 2020 were the South and the West. According to the data, reporting entities spend roughly 34.7% more in payments in the South than in the Northeast.

(Author: United States Census Bureau, Dataset Name: 2020 Population and Housing State Data, Date: 8/12/2021)

Amount ($) per Capita Spent in Womens Health Open Payments in 2020 by Region