

Delaware's Fertility Rate and COVID-19

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INTRODUCTION

The COVID-19 pandemic has impacted the lives of millions of Americans. More than 10% of the United States population has contracted COVID since March of 2020 and the pandemic has caused over 600,000 deaths¹, more than 2.2 million hospitalizations¹, and record high unemployment.² The ramifications of the pandemic will continue to impact the U.S. and Delaware for years into the future, and one such effect is the potential acceleration of the country's declining fertility rate.

Historically, there has been a decline in the number of births following economic recessions and high mortality health

events.³ This has remained true in the wake of the COVID-19 pandemic, as the national fertility rate reached a record low in 2020.

Preliminary birth rate data shows a 4% decline in the number of births between 2019 and 2020; since 2014, the average yearly decline has been 2%.⁴ In Delaware and across the U.S., there was a 6% decline in births in the second half of the year (June through December) from 2019 to 2020.⁵ Nationally, there were close to 40,000 "missing births" in the last

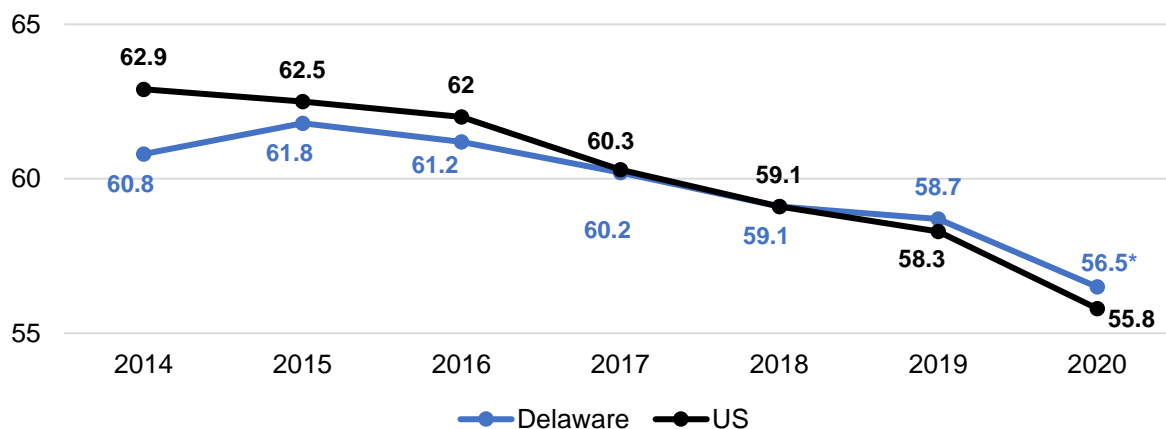
Fertility Rate

Live births per 1,000 women ages 15-44

Birth Rate

Live births per 1,000 total population

Figure 1: Fertility Rate, U.S. and Delaware, 2014-2019



*2020 fertility rate for Delaware is based off population estimates from the Delaware Population Consortium. Estimates may be subject to change.

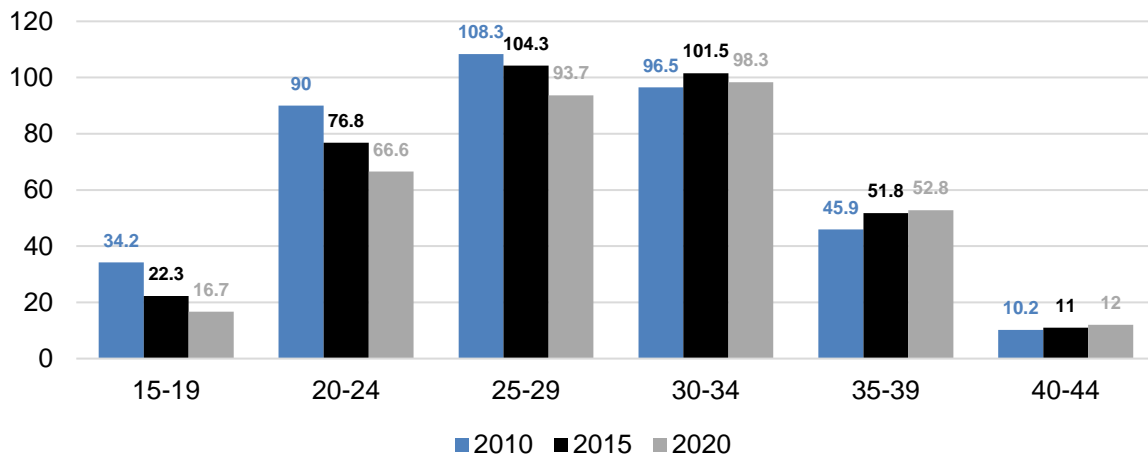
Source: Center for Community Research and Service, 2021. Data from the Centers for Disease Control and Prevention, Vital Statistics, and the Delaware Population Consortium.

month and a half of 2020, which were expected to have been conceived in the initial months of the COVID-19 pandemic.³

It is important to note that, nationally and locally, the fertility rate was already declining prior to the pandemic, as seen in Figure 1. In Delaware, the fertility rate fell from 60.8 in 2014 to 56.5 in 2020.⁴ This context is critical to keep in mind as we interpret future analyses of women in the pandemic and post-pandemic.

While the nationwide fertility rate has declined overall, there is large variation among age groups, as shown in Figure 2. Teenagers ages 15-19 had the greatest decline in fertility rate between 2010 and 2020, from 34.2 to 16.7. Conversely, women over 35 had an increase in fertility rate over this decade, with the largest increase among women ages 35-39. The fertility rate for this age group grew from 45.9 in 2010 to 52.8 in 2020.^{4,6}

Figure 2: U.S. Fertility Rate by Age Group, 2010-2020



Source: Center for Community Research and Service, 2021. Data from the Centers for Disease Control and Prevention, Vital Statistics.

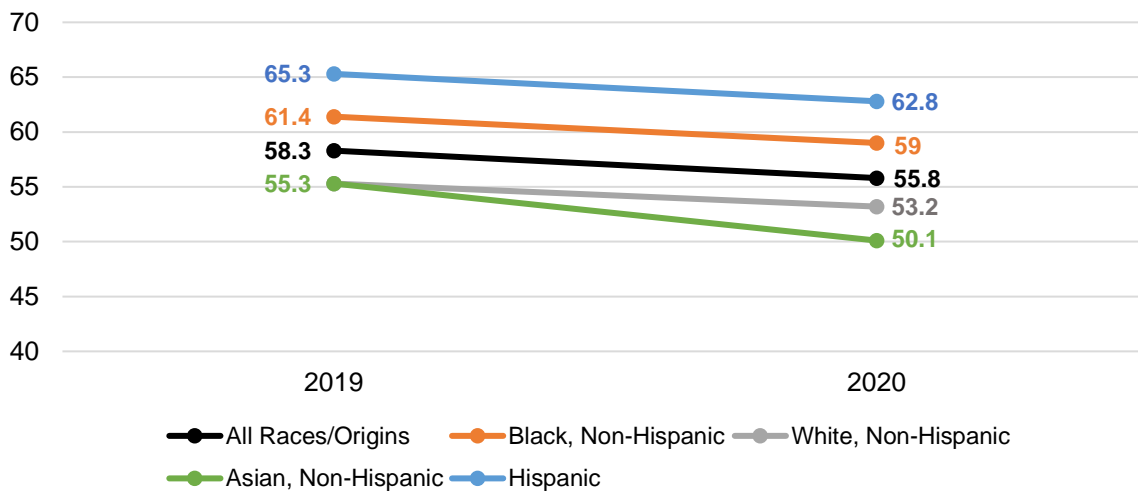
Differences in fertility rate decline can also be seen racially and ethnically. Data from the National Vital Statistics System shows that Hispanic, non-Hispanic Black, and non-Hispanic White women, all experienced a decline in fertility rate of approximately 4% between 2019 and 2020, similar to the national average. Non-Hispanic Asian women had a decline over twice that of the other age groups, at 9%. Figure 3 shows the distribution.⁴

The COVID-19 pandemic may be a contributing factor to this decrease in fertility rate. In one survey, 34% of women wanted

delayed or fewer pregnancies due to COVID-19. Preferences differed among racial and ethnic groups: 48% of Hispanic women reported wanting to delay childbearing or have fewer children due to the pandemic, compared to 44% of Black women and 28% of White women.⁷

Controlling for the fact that the national birth rate has been falling over time, experts estimate that the COVID-19 pandemic brought about an excess 8.6% decline in births across all age groups and ethnicities.³

Figure 3: General Fertility Rate, U.S., 2019-2020



Source: Center for Community Research and Service, 2021. Data from the Centers for Disease Control and Prevention, Vital Statistics.

In this brief, we will explore the factors that may contribute to this national decline in births. Examining how indicators that contribute to birth rate such as unemployment, housing and food insecurity, and access to healthcare have changed throughout the pandemic can provide important insight into the nation’s population growth.

ECONOMY

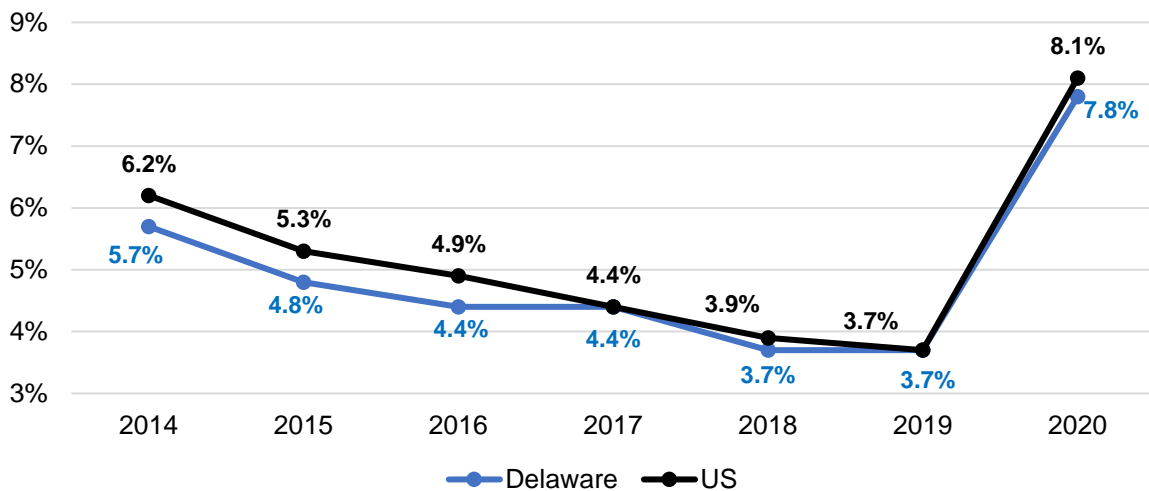
Over time, there has been a link between the health of the U.S. economy and the birth rate. Historically, the number of births decreases following times of economic decline such as the Great Depression and the Great Recession and stabilizes when the economy is in an upswing.^{8,9} Data from the Great Recession shows that in states where the recession was more severe, there was a greater reduction in births.³ Individuals and families facing the ramifications of a declining economy—including unemployment, housing instability, and food insecurity—may decide to delay childbearing or have fewer children altogether.

As the economy contracted during the COVID-19 pandemic, many adults found it challenging to provide for their families. In one nationwide study, 40% of women with children expressed concern about being able to take care of their children during the pandemic.⁷ In Delaware, 31% of adults reported difficulty covering their usual household expenses.¹⁰ Financial instability is one factor in declining births; women whose finances had worsened due to the pandemic reported that they were more likely to have fewer children or delay pregnancy.⁷

Unemployment

Unemployment is a key indicator of a society’s economic health, and as such can also be an indicator of a society’s fertility rate.¹¹ Analysis of unemployment and birth data following the Great Recession revealed that a 1% increase in unemployment was related to a 1.4% reduction in birth rate.³

Figure 4: Unemployment Rate, U.S. and Delaware, 2014-2020



Source: Center for Community Research and Service, 2021. Data from the Bureau of Labor Services.

As seen in Figure 4, Delaware's unemployment rate has generally remained just below or equal to the national unemployment rate. Between 2019 and 2020, the unemployment rate more than doubled nationally and locally, increasing from 3.7% to 8.1% across the U.S. and from 3.7% to 7.8% in Delaware.¹²

Low income women were disproportionately impacted by rising unemployment throughout 2020. Low-wage positions had the greatest losses in number of jobs throughout the pandemic's first year¹⁰, and lower income women were more likely to want fewer or later pregnancies throughout the pandemic.⁷

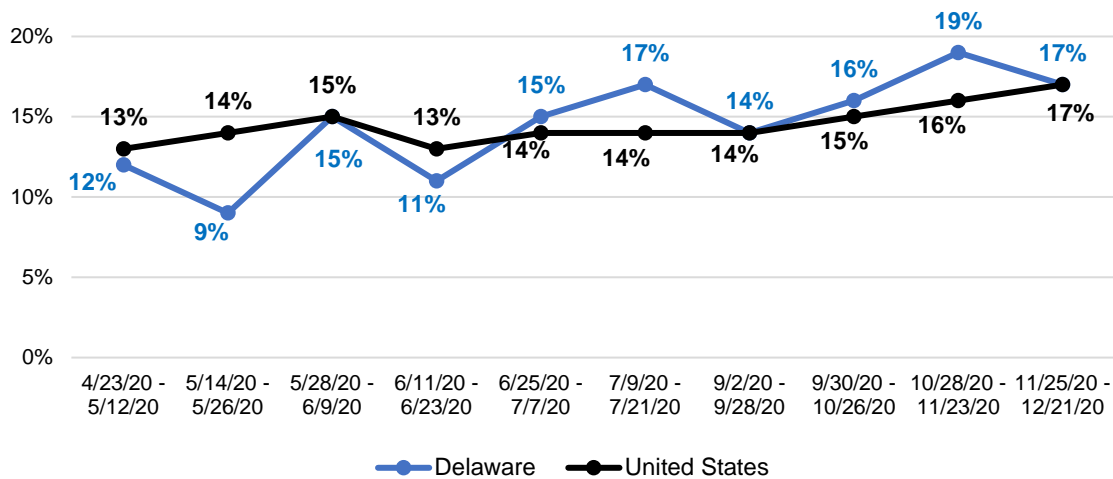
Housing Instability

The economic impact of the pandemic, in addition to rising housing prices, has led to many families experiencing housing instability.¹⁰ Stable housing is an important consideration in family planning for many individuals; in one study, couples with secure housing were more likely to plan to have a first child than those without secure housing.¹³

Although the CDC enacted a federal eviction moratorium for much of the pandemic, renters may eventually be responsible for billions of dollars in unpaid back rent.^{14,15} Nationwide, one in seven households is behind on rent; in Delaware, it is one in five.¹⁰ Almost a quarter of households in Delaware who are not caught up on their rent or mortgage report that they expect to be evicted or foreclosed upon within the next two months.¹⁶

A major component of achieving stable housing is the ability to afford a home. While many families have struggled to pay their rent or mortgage throughout the pandemic, housing prices have continued to climb to record highs.¹⁷ High housing costs may deter individuals and couples from expanding their families, as research shows that as housing prices increase, fertility rates among non-owners decrease.¹⁸

Figure 5: Households with Children That Sometimes or Often Did Not Have Enough Food to Eat in the Past Week in Delaware



Source: Center for Community Research and Service, 2021. Data from the Household Pulse Survey.

Food Insecurity

Food insecurity, which is the inability to obtain sufficient food due to lack of resources, is another byproduct of the economic decline experienced throughout the pandemic. Food banks across the country served 55% more individuals during the pandemic than in the previous year.¹⁹ Households with children are particularly vulnerable to experiencing food insecurity; in March 2021, 10% of adults living with children in Delaware reported that children were not eating enough because the family could not afford it.¹⁰

Figure 5 shows the percentage of households with children in Delaware reporting that they sometimes or often did not have enough to eat, which peaked in October and November of 2020 at 19%. Households with children led by a single mother or a woman alone are especially at risk of high rates of food insecurity. For mothers currently pregnant, food insecurity increases risk of gestational diabetes, iron deficiency, and having a low birth weight infant.²⁰

Childcare

The cost of childcare has long been a consideration for current or future parents in planning family size. In one survey, 64% of respondents who had or expected to have fewer children than they considered ideal cited the cost of childcare as a factor.²¹

The COVID-19 pandemic has exacerbated financial and logistical concerns about childcare for many families. Due to school and daycare closures, many parents have taken on additional childcare responsibilities. Nationally, one in three parents between the ages of 18 and 64 reported having to stay home from work to care for children at some point during the pandemic.²² The declining economy and rising unemployment also led to many families no longer being able to afford outside care for their children. The National Association for the Education of Young Children reported that almost half of all childcare providers surveyed lost income because families were unable to pay.²³

Childcare During the Pandemic



83.7% of parents had children who stayed home due to school or childcare closures



33.3% of parents reported that someone in the family stayed home from work to care for children



16.5% of parents had difficulty arranging childcare due to the COVID-19 outbreak

Source: Center for Community Research and Service, 2021. Data from the Urban Institute, May 2020.

PUBLIC HEALTH

A public health crisis can diminish access to health services needed to become pregnant, biologically impact pregnancy outcomes, and generate anxiety surrounding pregnancy, all of which may impact a woman's ability or willingness to become pregnant.³ Experts predict that the public health toll of COVID-19, in conjunction with the economic downturn, will lead to hundreds of thousands fewer births in the wake of the pandemic.³

Access to Care

Throughout the COVID-19 pandemic, medical care has been unavailable or

delayed for many individuals. In May 2020, 37% of survey respondents in Delaware reported delaying medical care in the previous four weeks, and women were more likely to have delayed medical care than men.¹⁶ For some, unemployment also means a loss of employer-sponsored health insurance, which may severely disrupt women's access to sexual and reproductive care. One in three women reported that during the pandemic, they had to cancel or delay a visit to a provider for sexual or reproductive health care.⁷

For some women and families, the disruption of access to care can directly impact their ability to become pregnant. Nationwide, many fertility clinics closed and halted fertility procedures for a period of time during the pandemic. In March 2020, the American Society of Reproductive Medicine recommended clinics suspend initiation of new in-vitro fertilization (IVF), intrauterine insemination (IUI), and egg freezing cycles and consider halting embryo transfers.²⁴ These closures led to some individuals experiencing cancelled fertility procedures with no reschedule date, delaying possible pregnancies.²⁵

In recent years there has been a statewide push to increase access to effective reproductive care and contraception and limit the number of doctor's visits to obtain such care. The Delaware Contraceptive Access Now (DeICAN) initiative is a public-private partnership focused in reducing unintended pregnancy by increasing access to contraceptives, particularly same-day access.²⁶ Same day contraceptive access reduces the number of trips patients need to make to their healthcare provider, enabling women to more easily receive their contraceptive method of choice. In the wake of COVID, several bills were passed in 2021 expanding access to care outside of a doctor's office. Delaware's recent Senate Bill 105 allows pharmacists to both prescribe and administer certain contraceptives without a prescription from an additional health care provider²⁷ and

House Bill 160 expands Delawarean's access to telehealth and telemedicine services.²⁸ These bills enable eligible women to skip the doctor's office altogether for certain services and paired with programs such as DeICAN bring the state closer to a comprehensive approach to eliminating barriers to effective reproductive care.

Physical and Mental Health

In addition to access to care issues, knowledge of the potential physical and mental risks of contracting COVID-19 while pregnant may lead to delayed pregnancies. Research shows that women with severe COVID are more likely to experience pregnancy complications including preterm birth and requiring a C-section or complications requiring ICU admittance.^{29,30} In interviews, some women seeking to become pregnant have specified potential COVID related health concerns for themselves and future children as reasons for delaying pregnancy.^{31,32}

The mental toll of pregnancy during a public health crisis may also be a factor in a woman's choice to delay pregnancy or have fewer children. Studies show that the prevalence of depression symptoms was three times higher during the pandemic than before³³ and pregnant women are at an especially high risk for mental health issues.^{34,35} Pregnant individuals have cited the threat of contracting COVID, isolation due to social distancing measures, and economic concerns as reasons for heightened mental health issues throughout the pandemic.^{34,36} The COVID-19 pandemic and its threat to physical and mental health has caused many to reflect deeply on their life plans³⁷ such health concerns may cause some women to re-evaluate family planning decisions.

CONCLUSIONS

The reduction in births caused by the pandemic only adds to the decline in fertility rate over the last decade and a half. Since 2007, the fertility rate in the U.S. has been consistently below population replacement levels.⁴ Experts report that depopulation resulting from a reduced fertility rate may have both disadvantages and benefits. Depopulation can lead to an aging population, a smaller workforce and taxpayer base, and a shrinking economy.³⁸ However, research also finds that a fertility rate that is moderately lower than population replacement levels increases the standard of living per capita by placing less strain on resources.³⁹

Fertility rate is a lagging indicator, and the full extent of a decrease in births is often not known until months or years after an event. In the wake of the Great Recession, the related lag in the number of births continued for years after the Recession's official end, and current estimates show that the COVID-19 related birth decline will continue well into 2021.³ While this brief provides an overview of the reduction in fertility rate due to the COVID-19 pandemic, future additional research will be needed to understand the full extent of the ramifications of the pandemic on the population.

Options Moving Forward:

Delaware women could take advantage of Emergency Unemployment Insurance benefits during the COVID-19 pandemic; that said, work search requirements for the current available benefits recipients were reinstated on June 1, 2021.⁴⁰

Those eligible for Unemployment Benefits (paired with other income requirements and demonstrated risk for homelessness) can apply for COVID-19 housing assistance in Delaware.⁴¹

Delaware issued Pandemic Electronic Benefits Transfers benefits to households with children who lost access to school meals. For families enrolled in the Supplemental Nutrition Assistance Program, federal legislation offered a temporary increase in food benefit amounts by 15% starting January 1, 2021 and ending September 30, 2021.⁴²

To further support families, funding flowed from to childcare facilities during the pandemic to ensure care for children could continue to be offered. The state gave \$1 million in federal CARES Act funds to licensed childcare facilities that support remote learning for school-age students, along with additional funding for enhanced reimbursement and purchase of care based on enrollment (not attendance) through the end of the calendar year.⁴³

REFERENCES

¹Centers for Disease Control. (2021). *COVID Data Tracker*. https://covid.cdc.gov/covid-data-tracker/#trends_dailytrendscases

²Bureau of Labor Statistics. (2021). *The Employment Situation – June 2021*. Department of Labor. <https://www.bls.gov/news.release/pdf/empst.pdf>

³Kearney, M.S. & Levine, P. (2020). Half a million fewer children? The coming COVID baby bust. *Brookings*. <https://www.brookings.edu/research/half-a-million-fewer-children-the-coming-covid-baby-bust/>

⁴Hamilton, B.E., Martin, J.A., Ostermann, M.J.K. (2021). Births: provisional data for 2020. *National Center for Health Statistics: Vital Statistics Rapid Release*, 12. <https://www.cdc.gov/nchs/data/vsrr/vsrr012-508.pdf>

⁵Hamilton, B.E., Ostermann, M.J.K., & Martin, J.A. (2021). Declines in births by month: United States, 2020. *National Center for Health Statistics: Vital Statistics Rapid Release*, 14. <https://www.cdc.gov/nchs/data/vsrr/vsrr014-508.pdf>

⁶Martin, J.A., Hamilton, B.E., Osterman, M.J.K., & Driscoll, A.K. (2021). Births: Final data for 2019. *National Center for Health Statistics: Vital Statistics Rapid Release*, 7(2).

⁷Lindberg, L.D., VandeVusse, A., Mueller, J., & Kirstein, M. (2020). *Early impacts of the COVID-19 pandemic: Findings from the 2020 Guttmacher Survey of Reproductive Health Experiences*. Guttmacher Institute. <https://www.guttmacher.org/report/early-impacts-covid-19-pandemic-findings-2020-guttmacher-survey-reproductive-health>

⁸Haub, C. (2009). *The U.S. recession and the birth rate*. Population Reference Bureau. <https://www.prb.org/resources/the-u-s-recession-and-the-birth-rate/>

⁹Livingston, G., & Cohn, D. (2010). *U.S. birth rate decline linked to recession*. Pew Research Center. <https://www.pewresearch.org/social-trends/2010/04/06/us-birth-rate-decline-linked-to-recession/>

¹⁰Center on Budget and Policy Priorities. (2021). *Tracking the COVID-19 recession's effects on food, housing, and employment hardships*. <https://www.cbpp.org/research/poverty-and-inequality/tracking-the-covid-19-recessions-effects-on-food-housing-and>

¹¹Currie, J. & Schwandt, H. (2014). Short- and long-term effects of unemployment on fertility. *Proceedings of the National Academy of Sciences of the United States of America*, 111(41), 14734–14739. <https://doi.org/10.1073/pnas.1408975111>

- ¹²Bureau of Labor Statistics. (2021). *Local Area Unemployment Statistics*. [https://data.bls.gov/timeseries/LASST100000000000003](https://data.bls.gov/timeseries/LASST10000000000003)
- ¹³Vignoli, D., Rinesi, F., Mussino, E. (2012). A home to plan the first child? Fertility intentions and housing conditions in Italy. *Population, Space, and Place*, 19(1), 60-71.
- ¹⁴Center for Disease Control and Prevention. (2021). *Temporary halt in residential evictions to prevent the further spread of COVID-19*. <https://www.cdc.gov/coronavirus/2019-ncov/covid-eviction-declaration.html>
- ¹⁵Parrot J. & Zandi, M. (2021). *Averting an eviction crisis*. The Urban Institute. <https://www.urban.org/sites/default/files/publication/103532/averting-an-eviction-crisis.pdf>
- ¹⁶United States Census Bureau. (n.d.) *Household Pulse Survey*. https://www.census.gov/data-tools/demo/hhp/#/?measures=EVICTFOR&s_state=0010&periodSelector=28
- ¹⁷National Association of Realtors. (2021). *Housing market reaches record-high home price and gains in March*. <https://www.nar.realtor/newsroom/housing-market-reaches-record-high-home-price-and-gains-in-march>
- ¹⁸Dettling, L.J. & Kearney, M.S. (2014). House prices and birth rates: The impact of the real estate market on the decision to have a baby. *Journal of Public Economics*, 110, 82-100. <https://doi.org/10.1016/j.jpubeco.2013.09.009>
- ¹⁹Morello, P. (2021). *The food bank response to COVID, by the numbers*. Feeding America. <https://www.feedingamerica.org/hunger-blog/food-bank-response-covid-numbers>
- ²⁰Food Research and Action Center. (2017). The impact of poverty, food insecurity, and poor nutrition on health and well-being. <https://frac.org/wp-content/uploads/hunger-health-impact-poverty-food-insecurity-health-well-being.pdf>
- ²¹Miller, C.C. (2018). Americans are having fewer babies. They told us why. *The New York Times*. <https://www.nytimes.com/2018/07/05/upshot/americans-are-having-fewer-babies-they-told-us-why.html>
- ²²Karpman, M., Gonzalez, D., & Kenney, G.M. (2020). Parents are struggling to provide for their families during the pandemic. *The Urban Institute*. https://www.urban.org/sites/default/files/publication/102254/parents-are-struggling-to-provide-for-their-families-during-the-pandemic_2.pdf
- ²³National Association for the Education of Young Children. (2021). *Child care in crisis: Understanding the effects of the coronavirus pandemic*. https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/our-work/public-policy-advocacy/effects_of_coronavirus_on_child_care.final.pdf
- ²⁴American Society for Reproductive Medicine. (2020). *Patient management and clinical recommendations during the Coronavirus (COVID-19) pandemic*. <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforce.pdf>
- ²⁵Caron, C. (2020). Getting pregnant was a challenge. Then the Coronavirus happened. *The New York Times*. <https://www.nytimes.com/2020/03/22/parenting/fertility-coronavirus.html>
- ²⁶Choi, Y.S., Rendall, M.S., Boudreaux, M., & Roby, D.H. (2020). Summary of the Delaware Contraceptive Access Now (DelCAN) Initiative. <https://popcenter.umd.edu/delcaneval/summary-init>
- ²⁷S.B. 105, 151 General Assembly. (Delaware 2021). <https://legis.delaware.gov/BillDetail/58564>
- ²⁸H.B. 160, 151 General Assembly. (Delaware 2021). <https://legis.delaware.gov/BillDetail/58579>
- ²⁹Metz, T.D., Clifton, R.G., Highes, B.L., Sandoval, G., saade, G.R., Grobman, W.A., Manuck, T.A., Miodovnik, M., Sowles, A., Clark, K., Gyanfi-Bannerman, C., Mendez-Figueroa, H., Sehdev, H.M., Rouse, D.J., Tita, A.T.N., Bailit, J., Costantine, M.M., Simhan, H.N., Macones, G.A. (2021). Disease severity and perinatal outcomes of pregnant patients with Coronavirus disease 2019 (COVID-19). *Obstetrics & Gynecology*, 137(4), 571-580.
- ³⁰Ellington, S., Strid, P., Tong, V.T., Woodworth, K., Galang, R.R., Zambrano, L.D., Nahabedian, J., Anderson, K., Gilboa, S.M. (2020). Characteristics of women of reproductive age with laboratory-confirmed SARS-CoV-2 infection by pregnancy status — United States, January 22–June 7, 2020. *Morbidity and Mortality Weekly Report*. https://www.cdc.gov/mmwr/volumes/69/wr/mm6925a1.htm?s_cid=mm6925a1_w
- ³¹Pohle, A. (2020). How the Coronavirus has effected family planning. *The Wall Street Journal*. <https://www.wsj.com/articles/how-the-coronavirus-has-affected-family-planning-11593543743>
- ³²Smith, K. (2020). Many couples are putting pregnancy plans on hold because of the pandemic. *CBS News*. <https://www.cbsnews.com/news/covid-19-pandemic-pregnancy-delay/>

³³Ettman, C.K., Abdalla, S.M., Cohen, G.H. (2020). Prevalence of depression symptoms in US adults before and during the COVID-19 pandemic. *JAMA Network Open*.
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2770146>

³⁴Kinser, P.A., Jallo, N., Amstadter, A.B., Thacker, L.R., Jones, E., Moyer, S., Rider, A., Karjane, N., & Salisbury, A.L. (2021). Depression, anxiety, resilience, and coping: The experience of pregnant and new mothers during the first few months of the COVID-19 pandemic. *Journal of Women's Health*, 30(5), 654-664.

³⁵Lopez-Morales, H., del Valle, M.V., Canet-juric, L., Andres, M.A., Galli, J.I., Poó, F., Urquijo, S. (2021). Mental health of pregnant women during the COVID-19 pandemic: A longitudinal study. *Psychiatry Research*, 295.
<https://doi.org/10.1016/j.psychres.2020.113567>

³⁶Khoury, J.E., Atkinson, L., Bennett, T., Jack, S.M., Gonzalez, A. (2021). COVID-19 and mental health during pregnancy: The importance of cognitive appraisal and social support. *Journal of Affective Disorders*, 282, 1161-1169.
<https://doi.org/10.1016/j.jad.2021.01.027>

³⁷Ducharme, J. (2020). Why the COVID-19 pandemic has caused a widespread existential crisis. *TIME Magazine*. <https://time.com/5925218/covid-19-pandemic-life-decisions/>

³⁸Lutz, W. & Galley, N. (2020). Depopulation as a policy challenge in the context of global demographic trends. *United Nations Development Programme*.
<https://eeca.unfpa.org/sites/default/files/pub-pdf/depopulation20as20a20policy20challenge.pdf>

³⁹Lee, R. & Mason, A. (2014). Is low fertility really a problem? Population aging, dependency, and consumption. *Science*, 346(6206), 229-234.

⁴⁰Delaware Department of Labor. (2021). COVID-19 response center. <https://labor.delaware.gov/covid-19-response-center/>

⁴¹Delaware State Housing Authority. (2021). COVID-19 rental assistance. <https://decovidhousinghelp.com/>

⁴²Delaware Department of Health and Human Services. (2021). Important changes to benefit programs in response to COVID-19.
<https://www.dhss.delaware.gov/dhss/dss/COVID19.html>

⁴³Delaware Department of Health and Human Services. (2021). Current guidance for child care programs. <https://coronavirus.delaware.gov/child-care/current-guidance/>