



2021 MINNESOTA ADOLESCENT SEXUAL HEALTH REPORT

This report details the sexual health of Minnesota’s youth. Teen pregnancy and birth rates remain virtually unchanged from 2018. From 1990 to 2019, the teen pregnancy rate among 15 to 19 year olds decreased by over 76%. The teen birth rate decreased by over 72% in that same period. Young people should be commended for making safe and informed choices about their sexual health. Despite the improvements, many challenges remain. Sexually transmitted infections continue at high rates with gonorrhea rates at an all-time high. Disparities by geography and race/ethnicity persist. It remains to be seen how the ongoing COVID-19 pandemic has affected adolescent sexual health; this report examines how adolescent healthcare providers and sexual health educators in Minnesota modified their approaches during the pandemic. In response to the data outlined in this report, the following are recommendations from the University of Minnesota Healthy Youth Development – Prevention Research Center (PRC).

RECOMMENDATIONS

- Adolescent sexual health comprises much more than the absence of pregnancy, early childbearing, or infection. To fully support young people’s health, we need to address their physical, social, emotional, and cognitive development, and give them skills and supports to navigate their teen years.
- Sexual health disparities persist among youth who are LGBTQ, gender diverse, adolescent parents, from rural areas, homeless/runaway, in foster care, in juvenile justice settings, and/or from populations of color. The systems that serve these youth have a unique opportunity to address their sexual and reproductive health care needs, and everyone has a role to play to ensure these youth have a successful transition to adulthood.
- Fostering young people’s health, including their sexual health, requires addressing social determinants of health including education, employment, income, housing, community safety and vitality, discrimination, family and social supports, and access to quality health care services.
- Families need to be supported in their role as sexuality educators. Honest, accurate and developmentally appropriate information from parents, grandparents, and other adult caregivers is the first step toward raising children who make safe and healthy decisions about sex, sexuality, and relationships.
- While STI trends were impacted this year by COVID-19 lockdowns, adolescents continue to bear a disproportionate burden of STIs. Current resources for STI prevention and treatment are inadequate to address this critical public health issue. Increased federal and state funding is needed to build public health education campaigns and make testing and treatment more accessible.
- Clinicians and educators must stress the importance of barrier methods, including with youth who use IUDs and implants. Widespread adoption of innovations in STI screening — such as universal testing in schools, street outreach, and home-based screening — together with expanded access to treatment, including expedited partner therapy, are needed to address rising rates of STIs.
- Clinical service providers and health educators utilized innovative virtual strategies to meet the sexual health needs of adolescents during the COVID-19 pandemic. As we build forward post-pandemic, clinicians and educators are encouraged to continue to employ a mix of virtual and in-person strategies that support young people’s sexual health.



PREGNANCY & BIRTH

Every day in 2019, approximately 7 adolescents became pregnant and 5 gave birth in Minnesota.¹

Trends in Pregnancy and Birth

Overall, the pregnancy rate among adolescents aged 15-19 remained essentially unchanged, increasing by 0.7% from 2018 to 2019. The birth rate decreased by 1%. Pregnancy and birth rates decreased slightly among American Indian, Asian/Pacific Islander and White adolescents; rates increased slightly among Black and Hispanic adolescents. While the pregnancy rate rose slightly, the birth rate is at a historic low. From 2018 to 2019, the number of pregnancies among adolescents younger than 15 increased by 9%, while the number of births decreased by 40%. These changes are magnified because there are so few adolescents in this age group who become pregnant and/or give birth. Still, this represents a 77% decrease in pregnancies and an 87% decrease in births to adolescents younger than 15 since 1990 (Figures 1 and 2).

FIGURE 1. MINNESOTA ADOLESCENT PREGNANCY STATISTICS, 1990-2019

NUMBER OF PREGNANCIES	1990	2000	2010	2016	2017	2018	2019	CHANGE SINCE 1990	CHANGE SINCE 2018
Under 15	159	150	89	41	25	33	36	-77.4%	9.1%
15-17 years	2803	2411	1479	755	700	586	612	-78.2%	4.4%
18-19 years	5833	5164	3872	2249	2177	1910	1932	-66.9%	1.2%
15-19 years	8636	7575	5351	3004	2877	2496	2544	-70.5%	1.9%
PREGNANCY RATES PER 1,000	1990	2000	2010	2016	2017	2018	2019	CHANGE SINCE 1990	CHANGE SINCE 2018
15-17 years	33.8	21.9	13.8	7.2	6.6	5.6	5.7	-83.1%	1.8%
18-19 years	92.2	70.9	53.9	32.5	31.3	27.4	27.7	-70.0%	1.1%
15-19 years	59	41.4	29.9	17.2	16.4	14.3	14.4	-75.6%	0.7%

FIGURE 2. MINNESOTA ADOLESCENT BIRTH STATISTICS, 1990-2019

NUMBER OF BIRTHS	1990	2000	2010	2016	2017	2018	2019	CHANGE SINCE 1990	CHANGE SINCE 2018
Under 15	94	87	47	15	12	20	12	-87.2%	-40.0%
15-17 years	1648	1710	1072	512	475	402	400	-75.7%	-0.5%
18-19 years	3688	3686	2951	1689	1638	1392	1390	-62.3%	-0.1%
15-19 years	5336	5396	4023	2201	2113	1794	1790	-66.5%	-0.2%
BIRTH RATES PER 1,000	1990	2000	2010	2016	2017	2018	2019	CHANGE SINCE 1990	CHANGE SINCE 2018
15-17 years	19.9	15.5	10	4.9	4.5	3.8	3.7	-81.4%	-2.6%
18-19 years	58.3	50.6	41.1	24.4	23.5	20.0	19.9	-65.9%	-0.5%
15-19 years	36.5	29.5	22.4	12.6	12.1	10.2	10.1	-72.3%	-1.0%

National Comparison

From 1990 to 2019, the birth rate among adolescents aged 15-19 in the United States dropped 73%, reaching a record low of 16.7 births per 1,000.² The decline in adolescent pregnancy over the past two decades is due to a combination of improved contraceptive use and delayed initiation of sexual activity.³ More recent declines have mainly been driven by increased use of highly effective contraceptive methods (IUDs and implants) and dual methods.^{4,5}

Despite reaching historic lows in 2019, the United States continues to have one of the highest adolescent pregnancy and birth rates among high-income nations.⁶

Subsequent Births

(Births to adolescents who have previously given birth):²

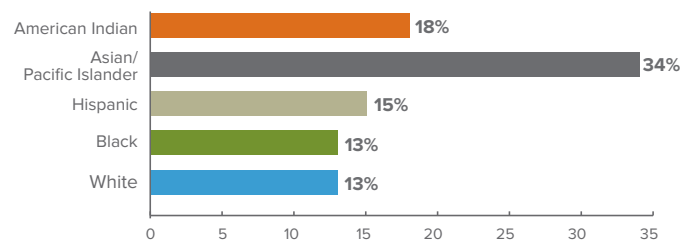
- Nationally, 16% of births to adolescents are subsequent births.
- In Minnesota, 15% of births to adolescents are subsequent births, which is a 7% increase from 2018.

Pregnancy prevention among adolescent parents is a complex issue. Adolescents who experience a subsequent birth are

more likely to be younger at first sex and first birth, have lower educational expectations and attainment, have intended their first birth, be living with a partner, and have not been employed or in school after their first birth.⁷

In Minnesota, BIPOC (Black, Indigenous and People of Color) adolescents have the highest percentage of subsequent births (Figure 3), with the rate for Asian/Pacific Islander youth nearly three times higher than the rates for Black and White youth.²

FIGURE 3. SUBSEQUENT ADOLESCENT BIRTHS BY RACE/ETHNICITY IN MINNESOTA, 2019



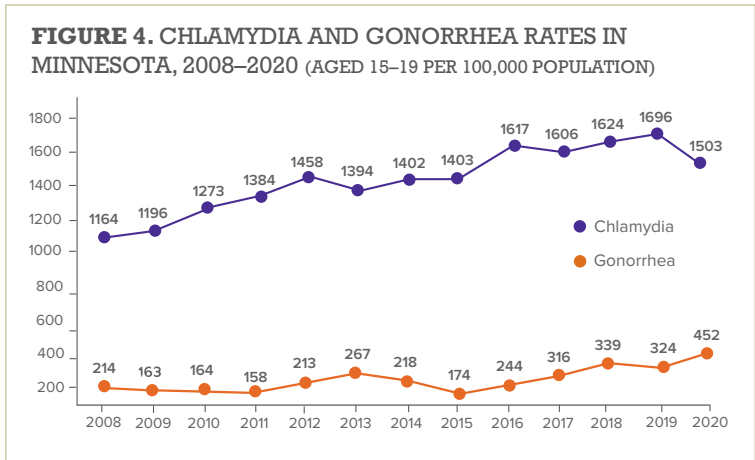
SEXUALLY TRANSMITTED INFECTIONS

Although they account for only 6.5% of the population in Minnesota, adolescents age 15-19 accounted for 25% of the chlamydia and 16% of the gonorrhea cases in Minnesota in 2020.^{9,11}

Adolescents experience a disproportionately high rate of sexually transmitted infections. This is likely due to a combination of biological, behavioral, and cultural factors; barriers to accessing health services such as transportation, cost, and concerns about confidentiality; and peer and media influences.¹²

While gonorrhea rates increased, chlamydia rates declined. This decline likely reflects reductions in routine screening and early detection of chlamydia during the COVID-19 pandemic¹³ (Figure 4).

There were 9 new cases of HIV among 15-19 year olds in Minnesota in 2020. There are currently 50 adolescents (aged 15-19) living with HIV in Minnesota.⁹



GEOGRAPHIC DISPARITIES^{8,9}

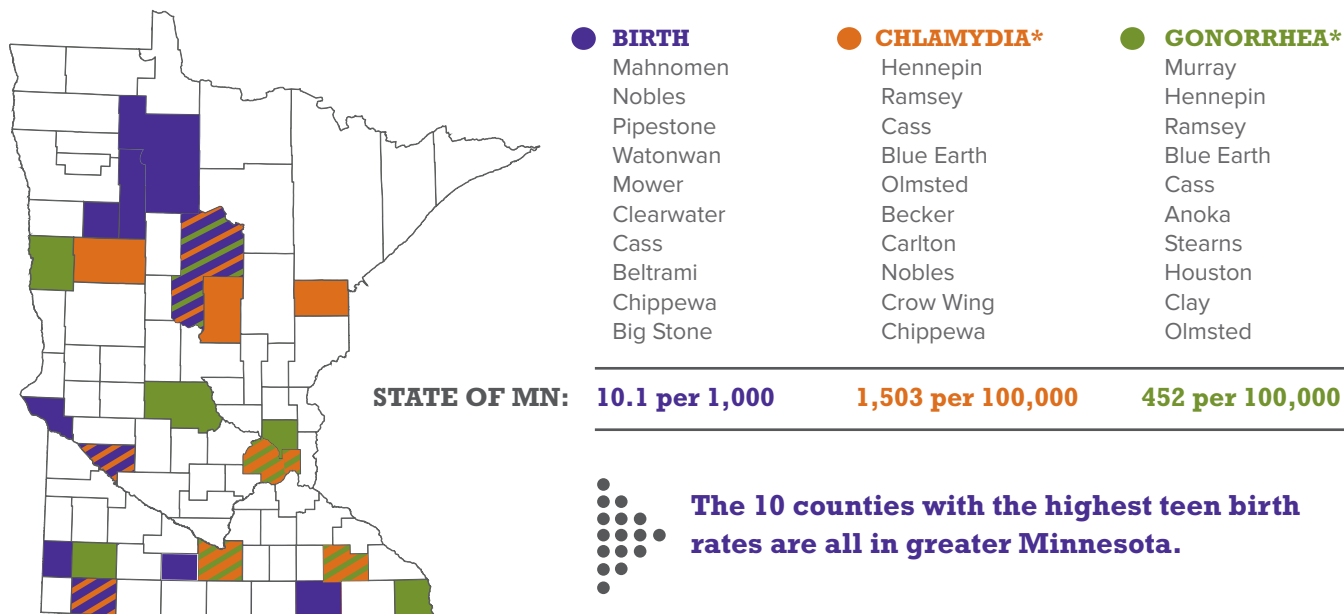
Pregnancy and birth disproportionately impact greater Minnesota while STIs tend to be more prevalent in urban areas.

Although the number of pregnancies and births are larger in the Twin Cities metro area, the rates of pregnancies and births are highest in greater Minnesota.

In rural areas, access to confidential, affordable, youth-friendly health care may be limited. There are large geographic disparities in sexual health clinic hours of availability and distance to service. For example, there are 29 sexual health clinics in Hennepin and Ramsey Counties with services available five days per week.¹⁰ In contrast, 47% of rural counties in Minnesota have no sexual health clinic location in the county itself.¹⁰

*Rural sexual health clinic access statistics are based on the Minnesota Department of Health directory of Family Planning Special Projects and Title X family planning services. Statistics may not include hospitals and clinics that also provide sexual health services.

FIGURE 5. MINNESOTA COUNTIES WITH HIGHEST BIRTH, CHLAMYDIA AND GONORRHEA RATES AMONG YOUTH AGED 15-19



*Chlamydia and gonorrhea rates not calculated for counties with fewer than five cases. To view county-specific adolescent sexual health reports, please visit www.prc.umn.edu.

RACIAL/ETHNIC DISPARITIES^{2,8,9}

Compared to the birth rate for White adolescents:
(Figure 6)

7x The birth rate for American Indian adolescents is **almost 7 times higher**

3.5x The birth rate for Black adolescents is **3.5 times higher**

5x The birth rate for Hispanic adolescents is **almost 5 times higher**

↑ Birth rates for American Indian and Asian/Pacific Islander adolescents in Minnesota were **much higher** than national figures

From 2018 to 2019, birth rates decreased 5% among American Indian youth, 6% among White youth, and 23% among Asian/Pacific Islander youth. Birth rates increased by 4% for Black youth and by 7% for Hispanic youth.

FIGURE 6. ADOLESCENT BIRTH RATES BY RACE/ETHNICITY, MINNESOTA VS UNITED STATES, 2019
(AGED 15–19 PER 1,000 POPULATION)

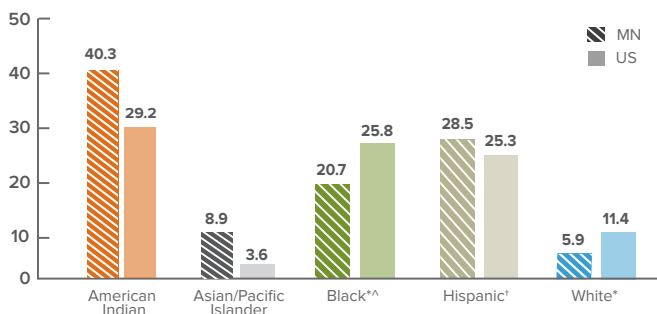
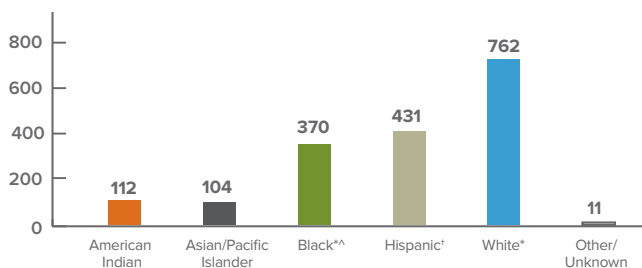


FIGURE 7. NUMBER OF BIRTHS TO YOUTH AGED 15–19 IN MINNESOTA BY RACE/ETHNICITY, 2019

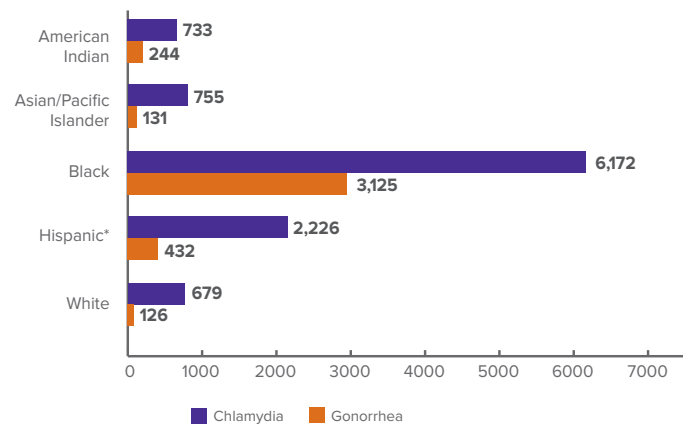


* Racial categories are disaggregated as non-Hispanic White and non-Hispanic black

^ The term "Black" is used rather than "African American" to be consistent with state and national racial categories and because data includes foreign-born and U.S. born populations

* This category represents Hispanic ethnicity, accounting for persons who identify as Hispanic of any race

FIGURE 8. MINNESOTA CHLAMYDIA AND GONORRHEA RATES BY RACE/ETHNICITY, 2020
(AGED 15–19 PER 100,000 POPULATION)



* Persons of Hispanic ethnicity may also be counted in other racial categories.

Improving adolescent sexual health outcomes starts where we live, learn, work and play

Pregnancy, birth and STI rates among Minnesota's adolescents continue to vary across racial and ethnic groups, socioeconomic status and geography. While many programs and services focus on changing individual behaviors that lead to pregnancy, increasing attention is being paid to the social determinants that contribute to poor health outcomes through systematic lack of access to resources, power and opportunity.¹⁴ Higher rates of adolescent pregnancy have been linked with concentrated poverty, residential segregation, unemployment, and lack of access to health care and education.^{15–18} Strategies to eliminate these persistent disparities must address the social determinants of health which disproportionately affect BIPOC young people.^{19,20}

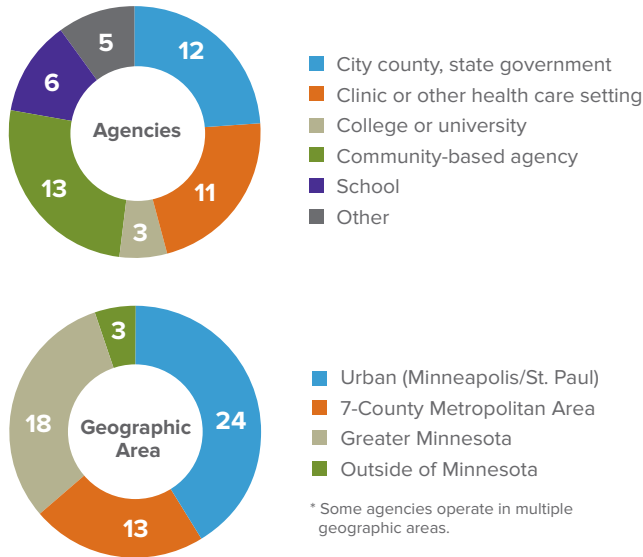
Sexually Transmitted Infections

STI rates are disproportionately high among BIPOC youth in Minnesota.⁹ The rates of chlamydia and gonorrhea are highest among Black and Hispanic youth. The gonorrhea rate is nearly 28 times higher and the chlamydia rate is 9 times higher among Black youth compared to White youth, who have the lowest STI rates of all racial/ethnic groups.

ADOLESCENT SEXUAL HEALTH AND COVID-19

Adolescent sexual health care and education programs in Minnesota were affected by the ongoing COVID-19 pandemic. The UMN Prevention Research Center implemented a survey regarding the pandemic's impacts on service delivery. Ninety four respondents from 50 unique agencies completed the survey. These agencies included a diverse array of settings that provide clinical services and education to Minnesota adolescents (Figure 9).

FIGURE 9. CHARACTERISTICS OF UNIQUE AGENCIES REPRESENTED IN SURVEY

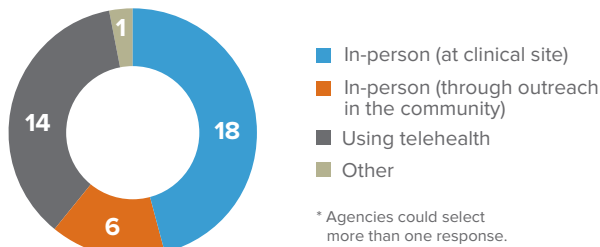


Over two-thirds (68%) of agencies reported somewhat less or much less engagement with adolescents due to the COVID-19 pandemic (Figure 10). This mirrors findings from other recent studies.^{21,22}

Sexual and Reproductive Health Care

Clinicians pivoted during the COVID-19 pandemic to provide sexual health care services in a variety of settings (Figure 10). Many providers began offering telehealth options that were not available pre-pandemic.

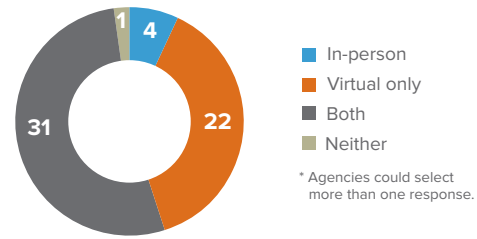
FIGURE 10. METHODS OF ADOLESCENT SEXUAL AND REPRODUCTIVE HEALTH CARE DURING COVID-19



Sexual Health Education

Sexual health education changed drastically during the COVID-19 pandemic. Almost all respondents provided education in a virtual format, a significant change from pre-pandemic (Figure 11).

FIGURE 11. METHODS OF ADOLESCENT SEX EDUCATION DURING THE COVID-19 PANDEMIC



Respondents were also asked to describe unique challenges and opportunities posed by the COVID-19 pandemic. Responses largely fell into three categories: accessibility; privacy; and engagement (Figure 12).

FIGURE 12. RESPONSES TO SHIFTS IN ADOLESCENT SEXUAL HEALTH CARE AND EDUCATION DUE TO COVID-19

	Upsides	Downsides
Accessibility	<ul style="list-style-type: none"> Online options better for adolescents with transportation/geographic barriers Privacy and reimbursement issues with telehealth improved for many agencies More flexible work hours for providers Agencies added drop-off or mail options for oral contraceptives and STI testing kits 	<ul style="list-style-type: none"> More instructor preparation needed than in-person sex ed Online options not available for adolescents with no internet, or adolescents with work or caregiving obligations due to pandemic Still need to come to clinical site for STI testing, bloodwork, or LARC insertion Unable to practice skills like putting on condoms
Privacy	<ul style="list-style-type: none"> Online platform allows for anonymous questions 	<ul style="list-style-type: none"> Adolescents and/or educators nervous about parents or other family overhearing
Engagement	<ul style="list-style-type: none"> More trust in providers during pandemic Some adolescents more engaged from the comfort of home Instructors utilized new technologies and online platforms to increase student engagement 	<ul style="list-style-type: none"> Lower engagement, "Zoom fatigue" Inability to read the room or gauge interest with adolescents' cameras off Instructor learning curve for new technologies/online platforms

Additionally, many Respondents emphasized the need to continue online and hybrid options for health care and sex education after the pandemic ends in order to improve health equity among adolescents in Minnesota.

REFERENCES

- 1 Minnesota Department of Health (MDH), Center for Health Statistics. Minnesota Health Statistics Annual Summary, 2019.
 - 2 Martin, J.A., Hamilton, B.E., Osterman, M. J. K., & Driscoll, A.K. (2021). Births: Final Data for 2019. *National Vital Statistics Reports*, 70(2), 1-51. Retrieved from <https://www.cdc.gov/nchs/data/nvsr/nvsr70/nvsr70-02-508.pdf>
 - 3 Boonstra HD. What is Behind the Declines in Teen Pregnancy Rates? Guttmacher Institute: Policy review. 2014;17(3)15-21.
 - 4 Wind R. Declines in Teen Pregnancy Risk Entirely Driven by Improved Contraceptive Use. Guttmacher Institute. <https://www.guttmacher.org/news-release/2016/declines-teen-pregnancy-risk-entirely-driven-improved-contraceptive-use>. Published August 30, 2016. Accessed April 25, 2021.
 - 5 Wind R. U.S. Rates of Pregnancy, Birth and abortion Among Adolescents and Young Adults Continues to Decline. Guttmacher Institute. <https://www.guttmacher.org/news-release/2017/us-rates-pregnancy-birth-and-abortion-among-adolescents-and-young-adults-continue>. Published September 7, 2017. Accessed April 25, 2021.
 - 6 World Development Indicators: Reproductive Indicators. Washington, D.C.: The World Bank Group; 2019. <https://data.worldbank.org/indicator/sp.ado.tfrt>. Accessed April 27, 2021.
 - 7 Association of Maternal & Child Health Programs. Life Course Indicator: Repeat Teen Birth (LC-53). http://www.amchp.org/programsandtopics/data-assessment/LifeCourseIndicatorDocuments/LC-53%20Repeat%20Teen%20Birth_Final_9-16-2014.pdf. Published September 2014. Accessed April 25, 2021.
 - 8 MDH, Center for Health Statistics. 2019 Birth Data.
 - 9 MDH, STD and HIV/AIDS Surveillance System. Surveillance Statistics 2020.
 - 10 MDH, Directory of Family Planning Services. <https://www.health.state.mn.us/people/womeninfants/familyplanning/directory.html>. Updated March 2, 2021. Accessed April 25, 2021.
 - 11 United States Census Bureau. State Population by Characteristics: 2010-2019. Minnesota – Annual Estimates of the Resident Population by Single Year of Age and Sex: April 1, 2010 to July 1, 2019. <https://www.census.gov/data/tables/time-series/demo/popest/2010s-state-detail.html>. Accessed May 31, 2021.
 - 12 Centers for Disease Control and Prevention (CDC). Sexually Transmitted Diseases, Adolescents and Young Adults. <https://www.cdc.gov/std/life-stages-populations/adolescents-youngadults.htm>. Updated April 8, 2021. Accessed May 31, 2021.
 - 13 Pinto CN, Niles JK, Kaufman HW, Marlowe EM, Alagia DP, Chi G, Van Der Pol B. Impact of the COVID-19 Pandemic on Chlamydia and Gonorrhea Screening in the U.S. *Am J Prev Med*. 2021 May 18;S0749-3797(21)00217-8. Retrieved from: doi: 10.1016/j.amepre.2021.03.009.
 - 14 CDC. Social Determinants and Eliminating Disparities in Teen Pregnancy. <https://www.cdc.gov/teenpregnancy/about/social-determinants-disparities-teen-pregnancy.htm>. Updated October 15, 2019. Accessed May 31, 2021.
 - 15 Maness, S. B., Buhi, E. R., Daley, E. M., Baldwin, J. A., & Kromrey, J. D. (2016). Social determinants of health and adolescent pregnancy: An analysis from the national longitudinal study of adolescent to adult health. *Journal of Adolescent Health*, 58(6), 636-643. Retrieved from <https://doi.org/10.1016/j.jadohealth.2016.02.006>.
 - 16 Maness, S. B., & Buhi, E. R. (2016). Associations between social determinants of health and pregnancy among young people: a systematic review of research published during the past 25 years. *Public Health Reports*, 131(1), 86-99. Retrieved from <https://doi.org/10.1177/003335491613100115>.
 - 17 Taylor, M. A. (2017). Review of the Social Determinants of Health-Income Inequality and Education Inequality: Why Place Matters in US Teenage Pregnancy Rates. *Health Syst Policy Res*, 4(2), 52. Retrieved from doi.org/10.21767/2254-9137.100071.
 - 18 Kumar, N. R., Raker, C. A., Ware, C. F., & Phipps, M. G. (2017). Characterizing social determinants of health for adolescent mothers during the prenatal and postpartum periods. *Women's Health Issues*, 27(5), 565-572. Retrieved from <https://doi.org/10.1016/j.whi.2017.03.009>.
 - 19 Fuller, T. R., White, C. P., Chu, J., Dean, D., Clemmons, N., Chaparro, C., ... & King, P. (2018). Social determinants and teen pregnancy prevention: exploring the role of nontraditional partnerships. *Health promotion practice*, 19(1), 23-30. Retrieved from <https://journals.sagepub.com/doi/abs/10.1177/1524839916680797>.
 - 20 Brindis, C. D., Decker, M. J., Gutmann-Gonzalez, A., & Berglas, N. F. (2020). Perspectives on Adolescent Pregnancy Prevention Strategies in the United States: Looking Back, Looking Forward. *Adolescent health, medicine and therapeutics*, 11, 135. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7567553/>.
 - 21 Thomson-Glover, R., Hamlett, H., Weston, D., & Ashby, J. (2020). Coronavirus (COVID-19) and young people's sexual health. *Sexually Transmitted Infections*, 96(7), 473-474. Retrieved from <http://dx.doi.org/10.1136/sextrans-2020-054699>.
 - 22 Nagendra, G., Carnevale, C., Neu, N., Cohall, A., & Zucker, J. (2020). The potential impact and availability of sexual health services during the COVID-19 pandemic. *Sexually transmitted diseases*, 47(7), 434. Retrieved from <http://dx.doi.org/10.1097/OLQ.0000000000001198>.
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For over 30 years, the Centers for Disease Control and Prevention have worked to eliminate health disparities and create healthy communities by funding Prevention Research Centers (PRCs) throughout the United States.

The Healthy Youth Development • Prevention Research Center, housed at the University of Minnesota,

Department of Pediatrics, is one in a network of 26 academic centers whose main objective - as a PRC - is to link science to practice through collaborations with public health agencies and community-based organizations.

The HYD•PRC collaborates with state and local organizations and communities to conduct research, provide training, and disseminate actionable knowledge and best practices that promote healthy development and health equity for all youth.

Many thanks to the respondents to our survey for the 2021 special feature!

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