

# Commonwealth of Virginia Department of Medical Assistance Services

## 2020–21 Dental Utilization During Pregnancy Data Brief



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## 1. Overview and Methodology

The Commonwealth of Virginia Department of Medicaid Assistance Services (DMAS) contracted with Health Services Advisory Group, Inc. (HSAG), to assess dental utilization among pregnant women covered by Virginia Medicaid or the Family Access to Medical Insurance Security (FAMIS) MOMS program following the expansion of dental services to this population on March 1, 2015, through the Smiles for Children Program that is administered by DentaQuest.<sup>1-1</sup>

The assessment includes all women 21 years of age or older with deliveries from January 1, 2020, through December 31, 2020. A woman with a live or non-live birth during calendar year (CY) 2020 would have conceived the pregnancy after the initiation of dental service benefit, allowing the woman time to learn about and access covered dental services. Additionally, DMAS began enrolling individuals in the Medicaid Expansion program on January 1, 2019, and these women would be eligible to participate in the Smiles for Children Program.

HSAG identified women with a delivery during the measurement period using member demographic, enrollment and eligibility, and claims/encounter data files supplied by DMAS.<sup>1-2</sup> HSAG limited the assessment to deliveries among women 21 years of age and older at the potential start of the prenatal period (i.e., 280 days prior to the date of delivery).<sup>1-3</sup> Pregnant women younger than 21 years of age are eligible for dental services under a separate benefit. HSAG excluded 6,097 deliveries among women younger than 21 years of age at the start of the prenatal period from this assessment.

HSAG used dental encounter data to identifying which dental services, if any, were utilized during the woman's perinatal period (i.e., from 280 days prior to delivery to the end of the month following the 60th day after delivery).<sup>1-4</sup> Dental services were identified and grouped according to DentaQuest's covered services and categories. Please see Appendix A for further details.

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<sup>1-1</sup> The Smiles for Children program is administered by DentaQuest and covers most perinatal dental services for women ages 21 years and older. The latest DMAS program information is available at:

<http://www.dmas.virginia.gov/#/dentalpregnantwomen>. Refer to Appendix A in this data brief for the list of dental procedure codes applicable to the CY 2020 measurement period.

<sup>1-2</sup> DMAS supplied HSAG with claims/encounter data files paid through June 2020, allowing a four-month data run-out period for this assessment.

<sup>1-3</sup> HSAG identified deliveries using the *Deliveries Value Set* from the *Prenatal and Postpartum Care* measure in the Federal Fiscal Year (FFY) 2021 Centers for Medicare & Medicaid Services (CMS) Adult and Child Core Set of Health Care Quality Measures.

<sup>1-4</sup> The analysis only includes paid claims. All zero-paid claims were excluded.

## 2. Findings

Overall, HSAG identified 36,827 deliveries from January 1, 2020, through December 31, 2020. Fifty-six of these deliveries were excluded from the study population because the member included in the delivery claim was male, and 6,097 deliveries were excluded from the study population because the woman was less than 21 years of age at the start of the prenatal period (i.e., 280 days prior to the delivery). The final study population included 30,674 deliveries among 30,642 women.

Table 2-1 displays the number and percentage of deliveries where perinatal dental services were received, stratified by dental service category. Please note that a delivery is counted once for each applicable category, thus the same delivery may be included in more than one dental service category.

**Table 2-1—Distribution of Women with Perinatal Dental Utilization by Dental Service Category**

Dental Service Category	Count of Deliveries Where Perinatal Dental Services Were Received	Percent of Study Population (n=30,674)	Percent of Deliveries Where Perinatal Dental Services Were Received (n=4,948)
<b>Any Dental Service*</b>	<b>4,948</b>	<b>16.1%</b>	<b>100.0%</b>
Adjunctive Services	673	2.2%	13.6%
Crowns	659	2.1%	13.3%
Diagnostic Services	4,733	15.4%	95.7%
Endodontics	866	2.8%	17.5%
Periodontics	700	2.3%	14.1%
Preventive Services	2,212	7.2%	44.7%
Prosthodontics	94	0.3%	1.9%
Restorative Services, including Crowns	2,048	6.7%	41.4%
Surgery or Extractions	1,374	4.5%	27.8%

*\*Because a woman may have had more than one dental service during the perinatal period, the count of deliveries for each dental service category does not sum to the overall number of deliveries among women with any dental service.*

As Table 2-1 shows, women received perinatal dental services in approximately 16.1 percent (n=4,949) of deliveries. Of the deliveries among women receiving perinatal dental services, 78.6 percent (n=3,890) were deliveries where services were received during the prenatal period and 42.8 percent (n=2,117) were deliveries where services were received during the postpartum period. Additionally, 21.4 percent (n=1,059) were deliveries where services were received during both the prenatal and postpartum periods.

The distribution of deliveries among women receiving perinatal dental services varied widely by Medicaid program (i.e., Medicaid for Pregnant Women, Medicaid Expansion, FAMIS MOMS, Low-Income Families with Children [LIFC], Other Medicaid<sup>2-1</sup>, or not enrolled), managed care program (i.e., Medallion 4.0, Commonwealth Coordinated Care [CCC] Plus, FAMIS, fee-for-service [FFS], or not enrolled), and delivery system (i.e., FFS, managed care, or not enrolled). Table 2-2 presents the number and percentage of deliveries where perinatal dental services were received, stratified by the Medicaid program, managed care program, and delivery system as of the woman’s date of delivery.

**Table 2-2—Distribution of Women with Perinatal Dental Utilization by Medicaid Program at Time of Delivery**

Medicaid Program, Managed Care Program, and Delivery System at Time of Delivery	Count of Deliveries	Percent of Study Population (n=30,674)	Count of Deliveries with Any Covered Dental Service	Percent of Deliveries with Perinatal Dental Services Received
<b>Any Program<sup>^</sup></b>	<b>30,674</b>	<b>100.0%</b>	<b>4,948</b>	<b>16.1%</b>
<b>Medicaid Program</b>				
Medicaid for Pregnant Women	20,477	66.8%	3,452	16.9%
Medicaid Expansion	3,996	13.0%	569	14.2%
FAMIS MOMS	1,841	6.0%	279	15.2%
LIFC	2,820	9.2%	412	14.6%
Other Medicaid	1,452	4.7%	232	16.0%
<b>Medicaid Managed Care Program</b>				
Medallion 4.0	22,081	72.0%	4,365	19.8%
CCC Plus	814	2.7%	164	20.1%
FAMIS	1,654	5.4%	266	16.1%

<sup>2-1</sup> The Other Medicaid program includes all other births not covered by Medicaid for Pregnant Women, Medicaid Expansion, FAMIS MOMS, and LIFC. HSAG recommends caution when comparing to prior years as the CY 2020 Other Medicaid program results excludes births to women in Plan First and the Department of Corrections (DOC) programs, which are now included in the Not Enrolled category.

Medicaid Program, Managed Care Program, and Delivery System at Time of Delivery	Count of Deliveries	Percent of Study Population (n=30,674)	Count of Deliveries with Any Covered Dental Service	Percent of Deliveries with Perinatal Dental Services Received
FFS	6,037	19.7%	149	2.5%
<b>Medicaid Delivery System</b>				
Managed Care	24,549	80.0%	4,795	19.5%
FFS	6,037	19.7%	149	2.5%

<sup>^</sup> Please note 88 members who were not enrolled on their date of delivery are included in the Any Program rate but are not included in any other stratification.

\*The Medicaid Expansion category includes deliveries among women with Aid Categories 100, 101, 102, 103, 106, and 108, regardless of other benefit package information.

\*\*Other Medicaid includes all other births not covered by Medicaid for Pregnant Women, Medicaid Expansion, FAMIS MOMS, and LIFC. The Other Medicaid category program results excludes births to women in Plan First and the DOC programs, which are now included in the Not Enrolled category.

Among the CY 2020 study population, a majority of deliveries were to women covered by the Medicaid managed care delivery system (80.0 percent) with 19.5 percent (n=4,795) of those deliveries to women who received perinatal dental services. Conversely, while 19.7 percent of deliveries were covered by FFS, only 2.5 percent (n=149) of those deliveries were to women who received perinatal dental services. Within the managed care delivery system, 72.0 percent of deliveries were covered by the Medallion 4.0 program with 19.8 percent (n=3,452) of these deliveries to women who had received perinatal dental services. Of note, the CCC Plus program had the highest percent of deliveries where the woman received perinatal dental services (20.1 percent, n=164). Women enrolled in the Medicaid for Pregnant Women program accounted for the largest proportion of deliveries by Medicaid program (66.8 percent), with 16.9 percent (n=3,452) of these deliveries to women who received perinatal dental services.

The length of time that a woman was continuously enrolled in Medicaid during their pregnancy may have also contributed to their ability to obtain perinatal dental services through the Smiles for Children program. Of the overall study population, 80.8 percent (n=24,793) of women were continuously enrolled in Medicaid for at least 90 days prior to and including the day of the delivery, and 93.1 percent (n=23,082) of these deliveries were among women enrolled in either Medallion 4.0 or FAMIS MOMS on their delivery date. Among the deliveries for continuously enrolled women, 19.5 percent (n=4,823) received one or more dental services during the perinatal period. In contrast, perinatal dental services were received in only 2.1 percent (n=125) of those deliveries to women who were not continuously enrolled for at least 90 days prior to and including the day of delivery.

Table 2-3, on the next page, presents the number of deliveries among continuously enrolled women, as well as the number and percentage of deliveries where women received any perinatal dental service and preventive dental services, stratified by region of residence.

**Table 2-3—Dental Utilization Among Continuously Enrolled Women by Managed Care Region of Residence**

Region of Residence	Count of Deliveries Among Continuously Enrolled Women	Deliveries Where Any Perinatal Dental Service Was Received		Deliveries Where Preventive Dental Services Were Received	
		Number	Percent	Number	Percent
<b>Total</b>	<b>24,758</b>	<b>4,823</b>	<b>19.5%</b>	<b>2,141</b>	<b>8.6%</b>
Central	6,378	1,306	20.5%	589	9.2%
Charlottesville/Western	3,059	513	16.8%	181	5.9%
Northern & Winchester	5,283	1367	25.9%	748	14.2%
Roanoke/Alleghany	2,468	345	14.0%	135	5.5%
Southwest	1,387	213	15.4%	102	7.4%
Tidewater	6,183	1079	17.5%	386	6.2%

Table 2-3 shows the highest rate of perinatal dental utilization occurred for deliveries among women residing in the Northern & Winchester region (25.9 percent, n=1,367), and the lowest rate of perinatal dental utilization occurred for deliveries among women residing in the Roanoke/Alleghany region (14.0 percent, n=345).

Table 2-4, on the next page, presents the number of deliveries among continuously enrolled women, as well as the number and percentage of deliveries where women received any perinatal dental service and preventive dental services, stratified by maternal age at delivery and maternal race.

**Table 2-4—Dental Utilization Among Continuously Enrolled Women by Maternal Age at Delivery and Maternal Race**

	Count of Deliveries Among Continuously Enrolled Women	Deliveries Where Any Perinatal Dental Service Was Received		Deliveries Where Preventive Dental Services Were Received	
		Number	Percent	Number	Percent
<b>Total</b>	<b>24,758</b>	<b>4,823</b>	<b>19.5%</b>	<b>2,141</b>	<b>8.6%</b>
<b>Age at Delivery</b>					
21–24 Years	5,715	895	15.7%	436	7.6%
25–29 Years	9,221	1,869	20.3%	817	8.9%
30–34 Years	6,281	1,312	20.9%	552	8.8%
35–39 Years	2,852	604	21.2%	277	9.7%
40 Years and Older	689	143	20.8%	59	8.6%
<b>Race</b>					
White, Non-Hispanic	12,438	2,412	19.4%	1,133	9.1%
Black, Non-Hispanic	9,569	1,783	18.6%	683	7.1%
Asian, Non-Hispanic	1,180	346	29.3%	187	15.8%
Hispanic, Any Race	952	189	19.9%	95	10.0%
Other/Unknown	619	93	15.0%	43	6.9%

In reviewing the differences in perinatal dental utilization based on age and race, Table 2-4 shows dental utilization rates were highest among deliveries to women 35–39 years of age (21.2 percent, n=604) and among deliveries to Asian, Non-Hispanic women (29.3 percent, n=346). Dental utilization rates were lowest among deliveries to women 21–24 years of age (15.7 percent, n=895) and among deliveries to women of Other/Unknown race (15.0 percent, n=93).

Table 2-5, on the next page, presents the number of deliveries among continuously enrolled women, as well as the number and percentage of deliveries where women received any perinatal dental service and preventive dental services, stratified by managed care region of residence and maternal race.



**Table 2-5—Dental Utilization Among Continuously Enrolled Women by Managed Care Region of Residence and Maternal Race**

	Count of Deliveries Among Continuously Enrolled Women	Deliveries Where Any Perinatal Dental Service Was Received		Deliveries Where Preventive Dental Services Were Received	
		Number	Percent	Number	Percent
<b>Central</b>					
White, Non-Hispanic	2,619	532	20.3%	267	10.2%
Black, Non-Hispanic	3,135	615	19.6%	241	7.7%
Asian, Non-Hispanic	198	74	37.4%	38	19.2%
Hispanic, Any Race	250	55	22.0%	27	10.8%
Other/Unknown	176	30	17.0%	16	9.1%
<b>Charlottesville/Western</b>					
White, Non-Hispanic	1,884	313	16.6%	107	5.7%
Black, Non-Hispanic	982	169	17.2%	59	6.0%
Asian, Non-Hispanic	52	S	S	S	S
Hispanic, Any Race	88	14	15.9%	S	S
Other/Unknown	53	S	S	S	S
<b>Northern &amp; Winchester</b>					
White, Non-Hispanic	2,822	742	26.3%	411	14.6%
Black, Non-Hispanic	1,298	308	23.7%	154	11.9%
Asian, Non-Hispanic	749	223	29.8%	125	16.7%
Hispanic, Any Race	244	62	25.4%	42	17.2%
Other/Unknown	170	32	18.8%	16	9.4%
<b>Roanoke/Alleghany</b>					
White, Non-Hispanic	1,810	267	14.8%	111	6.1%
Black, Non-Hispanic	520	60	11.5%	18	3.5%
Asian, Non-Hispanic	39	S	S	S	S
Hispanic, Any Race	49	S	S	S	S
Other/Unknown	50	S	S	S	S
<b>Southwest</b>					
White, Non-Hispanic	1,316	201	15.3%	96	7.3%
Black, Non-Hispanic	36	S	S	S	S
Asian, Non-Hispanic	S	S	S	S	S

	Count of Deliveries Among Continuously Enrolled Women	Deliveries Where Any Perinatal Dental Service Was Received			Deliveries Where Preventive Dental Services Were Received	
Hispanic, Any Race	S	S	S	S	S	
Other/Unknown	21	S	S	S	S	
<b>Tidewater</b>						
White, Non-Hispanic	1,987	357	18.0%	141	7.1%	
Black, Non-Hispanic	3,598	622	17.3%	206	5.7%	
Asian, Non-Hispanic	139	28	20.1%	S	S	
Hispanic, Any Race	310	51	16.5%	16	5.2%	
Other/Unknown	149	21	14.1%	S	S	

S indicates that the data were suppressed due to a small numerator or denominator (i.e., fewer than 11). In instances where only one stratification was suppressed, the value for the second smallest population was also suppressed, even if the value was 11 or more.

Overall, Table 2-5 shows that the rates of deliveries where any perinatal dental service was received were highest among Asian, Non-Hispanic women in every managed care region except for the Southwest managed care region.

## 3. Additional Considerations and Conclusions

### Additional Considerations

This study considered perinatal dental utilization data for all women 21 years of age or older with a delivery during CY 2020. Methodological or data-related factors may influence the identification of dental services utilized during the perinatal period (e.g., dental services may have been rendered prior to the perinatal period). Additionally, HSAG's dental utilization results were derived from dental encounter data provided by DMAS.

This study may be impacted by the Coronavirus Disease 2019 (COVID-19) pandemic. On March 16, 2020, the American Dental Association (ADA) recommended that dentists postpone elective procedures.<sup>3-1</sup> Additionally, the ADA released updated guidance on April 1, 2020, that dentists remain closed through the end of April 2020, with the exception of emergency care.<sup>3-2</sup> Given these recommendations, as well as COVID-19 "shelter in place" guidelines across the United States, declines in dental utilization may be attributed to the pandemic.

Starting July 1, 2021, the Smiles for Children program is expanding to provide an adult dental benefit to all members ages 21 and older enrolled in Medicaid or FAMIS, which may lead to an increase in dental utilization and rates as women enrolled in Medicaid may already be receiving dental care prior to conception.

### Conclusions

Enhanced oral health care among pregnant women is important for both mother and baby. Pregnancy may result in changes in oral health (e.g., pregnancy gingivitis, periodontic disease), and poor oral health is associated with cardiovascular disease and diabetes, and periodontic disease is associated with an increased risk for preterm birth.<sup>3-3</sup> Therefore, delaying necessary dental treatment could result in significant risk for mother and baby (e.g., an infection of a tooth could spread throughout the body).<sup>3-4</sup> The Smiles For Children program provides pregnant women with a critically important opportunity to receive dental services during the prenatal and postpartum periods, and the Virginia Department of

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<sup>3-1</sup> Fontana, J., & Murawski, T. COVID-19: Impact to Dental Utilization. 2020. Available at: [https://fdiworlddental.org/sites/default/files/2020-11/covid-19\\_impact\\_to\\_dental\\_utilization.pdf](https://fdiworlddental.org/sites/default/files/2020-11/covid-19_impact_to_dental_utilization.pdf). Accessed on: Aug 30, 2021.

<sup>3-2</sup> Ibid.

<sup>3-3</sup> The American College of Obstetricians and Gynecologists. Oral health care during pregnancy and through the lifespan. Committee Opinion No. 569. *Obstet Gynecol* 2013;122:417–22. Available at: <https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2013/08/oral-health-care-during-pregnancy-and-through-the-lifespan>. Accessed on: Aug 25, 2021.

<sup>3-4</sup> Oral Health Care During Pregnancy Expert Workgroup. Oral Health Care During Pregnancy: A National Consensus Statement. 2012. Available at: <https://www.mchoralhealth.org/PDFs/OralHealthPregnancyConsensus.pdf>. Accessed on: Aug 9, 2021.

Health offers guidance for providers offering dental services to pregnant women.<sup>3-5</sup> In CY 2020, relatively few eligible women (i.e., 16.1 percent) received dental services during or after pregnancy, and only 7.2 percent of eligible women received preventive dental services (e.g., a dental cleaning) during the perinatal period.

Health insurance coverage and other access to care considerations (e.g., provider availability) play a role in whether women access dental services for which they are eligible. This is demonstrated by the finding that 19.5 percent of deliveries to women covered by managed care on their date of delivery had perinatal dental utilization, compared to 2.5 percent of deliveries among women with FFS coverage. Overall, dental utilization was similar among the various Medicaid programs with between 14.2 percent and 16.9 percent of women receiving perinatal dental services during CY 2020. Additionally, perinatal dental services were received for only 2.9 percent of deliveries for women who were not continuously enrolled in Medicaid for 90 days prior to and including their date of delivery.

Overall perinatal dental utilization and receipt of preventive dental services varied by managed care region. Among women with continuous enrollment, utilization was highest in the Northern & Winchester region and lowest in the Roanoke/Alleghany region. Perinatal dental utilization was highest to deliveries among Asian, Non-Hispanic women (29.3 percent, n=346) and lowest among deliveries to women of Other/Unknown race (15.0 percent, n=93). These statewide patterns for race/ethnicity are similarly demonstrated within each managed care region. Women may have received services that are not covered by DMAS (e.g., other public health initiatives<sup>3-6</sup>); however, the regional distribution of perinatal dental utilization may be indicative of regional differences in women's access to dental providers.

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<sup>3-5</sup> Virginia Department of Health, Dental Health Program. Oral Health During Pregnancy: Practice Guidance for Virginia's Prenatal and Dental Providers. Available at: [https://www.vdh.virginia.gov/content/uploads/sites/30/2019/03/PracticeGuideforVirginiaPrenatalDentalProvider\\_sWEB.pdf](https://www.vdh.virginia.gov/content/uploads/sites/30/2019/03/PracticeGuideforVirginiaPrenatalDentalProvider_sWEB.pdf). Accessed on: Aug 9, 2021.

<sup>3-6</sup> Perinatal and Infant Oral Health Quality Improvement Expansion Program 2019 Final Progress Narrative. Richmond, VA: Virginia Department of Health. Available at: <https://www.mchoralhealth.org/PDFs/H47MC28478.pdf>. Accessed on Aug 9, 2021.

## Appendix A: Covered Dental Services Included in Analysis

Appendix A provides the list of the Current Dental Terminology (CDT) procedure codes for dental benefits covered by the Smiles for Children—Over 21 Pregnant Women population from the January 1, 2020, DentaQuest Smiles for Children Office Manual<sup>A-1</sup>, which aligns with the CY 2020 births addressed in this data brief.

- Adjunctive Services, including intravenous (IV) sedation and emergency services provided for the relief of dental pain
  - D9110, D9222, D9223, D9230, D9239, D9243, D9248, D9310, D9420, D9610, D9630, D9930, D9990, D9992, D9994, D9995, D9996, or D9999
- Crowns
  - D2740, D2750, D2751, D2752, D2753, D2790, D2791, D2792, D2794, D2920, or D2931
- Diagnostic Services
  - D0120, D0140, D0150, D0170, D0220, D0230, D0240, D0250, D0251, D0270, D0272, D0274, or D0330
- Endodontics
  - D3110, D3120, D3221, D3310, D3320, or D3330
- Periodontics
  - D4210, D4211, D4341, D4342, D4346, D4355, or D4910
- Preventive Services
  - D1110 or D1208
- Prosthodontics
  - D5110, D5120, D5213, D5214, D5410, D5411, D5421, D5422, or D6930
- Restorative Services, including Crowns
  - D2140, D2150, D2160, D2161, D2330, D2331, D2332, D2335, D2391, D2392, D2393, D2394, D2740, D2750, D2751, D2752, D2753, D2790, D2791, D2792, D2794, D2920, D2931, D2940, D2950, D2951, D2952, or D2954
- Surgery or Extractions
  - D7111, D7140, D7210, D7220, D7230, D7240, D7241, D7250, D7260, D7261, D7285, D7286, D7288, D7310, D7311, D7320, D7321, D7450, D7451, D7471, D7472, D7473, D7510, D7511, or D7880

<sup>A-1</sup> DentaQuest, LLC. Office reference manual Smiles for Children Commonwealth of Virginia Medicaid, FAMIS, FAMIS Plus, Dental Program. Available at: <https://dentaquest.com/getattachment/State-Plans/Regions/Virginia/Dentist-Page/va-smiles-for-children-orm.pdf/?lang=en-US>. Accessed on: Aug 9, 2021.