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# CONTINUOUS SKILLED NURSING CARE BIENNIAL REPORT

PURSUANT TO  
MASSACHUSETTS GENERAL LAW (MGL) CHAPTER 12C §24

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Prepared for Massachusetts Center for Health information and Analysis  
by Berry Dunn McNeil & Parker, LLC

# Continuous Skilled Nursing Care Biennial Report 2020

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## Authorship and Acknowledgments

This report was prepared by Donna Friedsam, MPH; Larry Hart; Jennifer Elwood, FSA, MAAA, and Valerie Hamilton, RN, MHA, JD.

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## 1.0 Executive Summary

Massachusetts' fiscal year 2020 budget (Massachusetts Acts of 2019, Chapter 41, Section 11) amends Chapter 12C of the General Laws by adding Section 24. Section 24 requires the Center for Health Information and Analysis (CHIA), in conjunction with MassHealth, to provide a "biennial report on the provision of continuous skilled nursing [CSN] care as defined in 101 Code of Massachusetts Regulations (CMR) 361." This biennial report is required to address eight questions, including an assessment of the degree to which hours of care authorized for CSN are delivered, and an evaluation of rates paid for CSN and the related wage levels for nurses relative to the wage rates paid to all Commonwealth of Massachusetts (Commonwealth) nurses. CHIA retained BerryDunn to assist with conducting the study.

Registered nurses (RNs) and licensed practical nurses (LPNs) provide CSN care in patients' homes to pediatric and adult patients who have complex medical needs. Patients often have medical equipment and treatments that might require RNs and LPNs to have special training. MassHealth contracts directly with RNs and LPNs as independent nurses to provide CSN care, and MassHealth also pays Home Health Agencies (HHAs) that employ RNs and LPNs to provide CSN. Massachusetts' regulation determines pay rates for independent nurses and for HHAs, and HHAs then determine the wages paid to nurses they employ.

MassHealth provided BerryDunn with data regarding the enrollment and use of CSN services, including the total hours authorized and paid for each pediatric and adult patient. Paid visits, in this report, measure hours delivered. BerryDunn reviewed the trends in authorized and paid visits from calendar years (CYs) 2018 through 2020, and developed estimates for average number of hours authorized and paid by day, week, and month. This report also reviews the adequacy of CSN care staffing levels and nurse wages in the Commonwealth, using the data provided by MassHealth, publicly available data from the United States Bureau of Labor Statistics (BLS), and data from a survey BerryDunn conducted of HHAs that contract with MassHealth to deliver CSN care.

Findings related to service trends include the following:

- The total number of adult and pediatric patients with a prior authorization (PA) for CSN care has declined in each year of CYs 2018, 2019, and 2020, with 906 total patients in 2020. MassHealth authorized nearly 2.8 million hours of CSN service in 2020. Children account for over 60% of total authorized and delivered (paid) services.
- Of the nearly 2.8 million hours of CSN service authorized by MassHealth in 2020, 1.77 million (64%) were actual services delivered (paid).
- Compared to CYs 2018 and 2019, CY 2020 shows a substantial drop-off in the percentage of authorized hours delivered (paid) annually, with a total decline of 3.6 percentage points. Children showed the most substantial decline of 5 percentage points.
- The substantial decline in percentage of hours delivered (paid) occurred with the onset of the COVID-19 pandemic in March 2020. In the later part of 2020, this ratio of authorized-to-delivered services largely rebounded for adults, but it did not rebound to previous years' levels for the pediatric population.

Findings related to the nursing workforce and available nursing hours include the following:

- An estimated 1,351 RNs and 996 LPNs, totaling 2,347 nurses, serve HHA agencies. MassHealth contracted with 264 independent nurses in 2021.
- Nine of 10 HHAs that responded to the BerryDunn survey reported that they do not have adequate staffing to meet the hours for continuous skilled nursing services as requested by patients and authorized by MassHealth. These agencies reported that they were able to fill, on average, 64% of authorized hours, with responses ranging from 20% to 90%.
- In aggregate, approximately 4.5% of HHA nurses provide care to more than one patient at a time. This percentage is consistent with the 4.8% of independent nurses contracting directly with MassHealth who care for more than one patient at a time.

Many reasons might explain why authorized hours are not delivered. HHAs most frequently cited low reimbursement rates for CSN services challenging their ability to recruit and retain qualified nurses. HHAs identified, as a top impediment for filling authorized hours, the lack of MassHealth reimbursement for CSN services provided by a nurse who is working overtime; most HHAs report paying overtime to employed nurses under various circumstances, with the agency absorbing the additional cost of overtime pay. HHAs also reported that many agency nurses hold multiple jobs, and that this often creates scheduling conflicts. HHAs also report, as reasons why authorized CSN hours may not get delivered, COVID-related absences, and families choosing not to receive services from an available nurse.

HHAs compete with other healthcare provider sectors and with nearby states to attract and retain nursing staff. The degree to which CSN nurse wages are comparable to the nurse wages provided in other healthcare provider sectors may influence the supply of CSN nurses. However, this study's findings do not suggest a misalignment of HHA nurse wages with the larger nurse labor market. The wages paid by HHAs compare favorably to the hourly rates paid by MassHealth to independent nurses, and they also compare favorably to nurse wages in other non-hospital settings in Massachusetts. The average hourly wage earned by nurses in home health settings in Massachusetts exceeds the average hourly wages of nurses in home health settings in each of Massachusetts' neighboring states.

MassHealth payment rates for CSN services have increased several times since 2018. Most recently, in July 2021, MassHealth implemented a 10% time-limited and across-the-board payment enhancement for providers delivering Home- and Community-Based Services (HCBS); and for CSN providers, MassHealth issued an additional 20% rate increase. MassHealth has also proposed a permanent 20% rate increase for all CSN services and an allowance for agency overtime reimbursement, effective for dates of service on and after January 1, 2022. These payment changes begin to address the primary challenges noted by agencies in filling CSN authorized hours.

The changes in payment policy are intended to immediately infuse additional nursing hours into the CSN program and allow full use of the current workforce. However, nurses base their employment decisions on many factors and, even with these proposed policy changes, challenges remain in matching the specific and complex needs of each patient and family to available nurses providing CSN care. Gaps in CSN staffing persist amid the overall shortages in the nursing workforce—an existing shortage made more acute under the conditions of the COVID-19 public health emergency. This broader policy challenge will continue to affect CSN and healthcare service delivery broadly throughout Massachusetts.

## 2.0 Continuous Skilled Nursing (CSN) Care in Massachusetts

### 2.1 Introduction

Massachusetts' fiscal year 2020 budget (Massachusetts Acts of 2019, Chapter 41, Section 11) amends Chapter 12C of the General Laws by adding Section 24.<sup>1</sup> Section 24 requires CHIA, in conjunction with MassHealth, to provide a "biennial report on the provision of CSN care as defined in 101 CMR 361."<sup>2</sup> CHIA retained BerryDunn to assist with conducting the study.

Section 24 specifically requires CHIA to address eight questions related to the provision of CSN care in the Commonwealth for both the pediatric and adult population:

1. The number of pediatric and adult patients requiring CSN
2. The average and median number of CSN hours authorized by MassHealth per day, week, month, and year for pediatric and adult patients
3. The average and median number of authorized CSN hours actually delivered per day, week, month, and year for pediatric patients and adult patients
4. The total number of CSN hours authorized and actually delivered by MassHealth per month and year for pediatric patients and adult patients
5. The number of nurses providing CSN care to more than one patient at a time and, for the patients cared for by those nurses, the aggregate proportion of authorized CSN hours to delivered CSN hours
6. The number of nurses who contract with MassHealth to provide CSN care, the number of nurses who provide CSN care through an HHA that contracts with MassHealth, and whether the total number of nurses providing such care is sufficient to fill all authorized CSN hours
7. A description of the training, experience, and education levels of the nurses who contract with MassHealth to provide CSN care
8. An evaluation of the adequacy of the reimbursement rates for CSN care as established in 101 CMR 350.04(2)<sup>3</sup> paid to nurses who contract directly with MassHealth to provide CSN care, and a comparison of those rates against:
  - a. The portion of the reimbursement rate paid directly as wages to nurses providing CSN care through an HHA that contracts with MassHealth
  - b. The median wage rate paid to all nurses in the Commonwealth

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<sup>1</sup> The full text of the study requirements, as they are provided in the Acts of 2019, Chapter 41, Section 11—making appropriations for fiscal year 2020—can be found in Appendix A.

<sup>2</sup> 101 CMR 361 defines continuous skilled nursing care as "a nurse visit of more than two continuous hours of nursing services."

<sup>3</sup> 101 CMR 350.04 establishes rates for payment for home health services in the home. 101 CMR 361.04 sets forth the rates of payment for CSN Services in the Home. This report uses rates set forth in 101 CMR 361.04.

## 2.2 Background

CSN is defined as “a nurse visit of more than two continuous hours of nursing services.”<sup>4,5</sup> CSN care enables pediatric and adult patients with complex medical needs to receive nursing care at home, and it helps many avoid extended stays in an institutional healthcare setting. As a service administered by MassHealth, CSN is provided to MassHealth-enrolled individuals<sup>6</sup> who are determined by the MassHealth agency to be clinically eligible for CSN services based on criteria set forth in 130 CMR 414.408.<sup>7</sup> Each nurse providing CSN care must be licensed to provide nursing services in the Commonwealth.<sup>8</sup> Nurses provide CSN care either through a direct contract with MassHealth as an independent nurse or through service with an HHA.<sup>9</sup>

As a condition of payment for CSN services, a prior authorization (PA) must be obtained from the MassHealth agency or its designee before rendering services to a patient.<sup>10</sup> PAs typically authorize care for a year, although the authorized duration of services can vary.

MassHealth has designated the University of Massachusetts Medical School Commonwealth Medicine Community Case Management (CCM) Program to manage the evaluation and authorization of CSN care. The CCM Program partnership between MassHealth and Commonwealth Medicine began in 2003 to coordinate care for medically complex children and young adults through age 21.<sup>11</sup> The program expanded in 2013 to include adult patients; since then, patients can stay in the program into and through adulthood or join the program as an adult.

MassHealth, pursuant to 130 CMR 414.402, refers to children and adults with medical complexity who are enrolled in the CCM program as *complex-care members*.<sup>12</sup> However, MGL Chapter 12C §24, specifying the parameters of the

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<sup>4</sup> 101 CMR 361.02 definition of Continuous Skilled Nursing Care.

<sup>5</sup> MassHealth is promulgating a new provider regulation, as of January 1, 2022, at 130 CMR 438: Continuous Skilled Nursing Agency, which establishes CSN agency as a new provider type. This will allow the agency to enrollment criteria for agencies that specialize in providing CSN care, rather than basing it on existing standards for intermittent home health. <https://www.mass.gov/regulations/130-CMR-438000-continuous-skilled-nursing-agency>.

<sup>6</sup> Pursuant to 101 CMR 361.02, a Publicly Aided Individual is “a person who received healthcare and services for which a governmental unit is in whole or part liable under a statutory program.”

<sup>7</sup> A member is clinically eligible for MassHealth coverage of CSN services when all three of the following criteria are met: 1) there is a clearly identifiable, specific medical need for a nursing visit of more than two continuous hours; 2) the CSN services require the skills of a registered nurse or of a licensed practical nurse in accordance with 130 CMR 414.408(B); and 3) the CSN services are medically necessary to treat an illness or injury in accordance with 130 CMR 414.409(D).

<sup>8</sup> 130 CMR 414.02 defines a Nurse as a person licensed as a registered nurse or a licensed practical nurse by a state’s board of registration in nursing.

<sup>9</sup> 130 CMR 414 states the requirements for nurses who contract with MassHealth as an independent nurse, and 130 CMR 403 sets forth similar requirements under the HHA program regulation.

<sup>10</sup> 130 CMR 414.41 sets forth the prior authorization requirements for Independent Nurses necessary for the provision of CSN services; 130 CMR 403.410(C) sets forth the requirements for HHAs to acquire PA for CSN services

<sup>11</sup> The CCM Program coordinates community long-term services and support for MassHealth members with complex medical needs and their caregivers.

<sup>12</sup> 130 CMR 414.402 defines Complex-Care Member as “a MassHealth member whose medical needs, as determined by the MassHealth agency or its designee, are such that he or she requires a nurse visit of more than two continuous hours of nursing services to remain in the community.” <https://www.mass.gov/files/documents/2017/09/29/130cmr414.pdf>

biennial report on the provision of CSN care, refers to individuals as “patients.” (Appendix A). This current report will refer generally to those receiving MassHealth CSN services as *patients* or *CSN patients*.

Massachusetts defines care management as a function performed by the MassHealth agency or its designee that assesses and reassesses the medical needs of complex-care patients and authorizes or coordinates community long-term services and supports (LTSS) that are medically necessary for such patients to remain safely in the community.<sup>13</sup> Indeed, complex-care patients are medically vulnerable, may have multiple and varied diagnoses, and may depend on technology. The pediatric complex-care patient population is growing as a result of medical improvements in care that have led to a substantial increase in the number of children surviving previously fatal conditions.<sup>14</sup> Children with medical complexities frequently have a congenital or acquired multisystem disease, a severe neurologic condition with marked functional impairment, and/or technology dependence for activities of daily living.<sup>15</sup>

The CCM Program coordinates LTSS for patients in Massachusetts who receive CSN care. The CCM Program authorizes service based on specific needs of patients, including CSN and home/personal care support, along with physical, occupational, and speech therapy, and medical and respiratory equipment and supplies.<sup>16</sup> The CCM Program coordinates services with HHAs and independent nurses as appropriate to meet the individual CSN needs of complex-care patients.<sup>17</sup> CCM also coordinates with other LTSS service providers as needed to support the needs of CCM patients. These home- and community-based services allow many complex-care patients to avoid relying on equivalent care in an institutional setting.

Currently, the CCM staff manually assist patients in identifying available CSN providers that meet their needs and preferences, having both providers and patient families fill out a weekly checklist. Starting in 2022, MassHealth will use funds from the American Rescue Plan Act (ARPA) to design and develop an electronic directory and transition this manual matching process into an electronic version. The electronic directory will be available to CCM staff, CSN providers, and to patients and their families. This is intended to ease the process of identifying and connecting with available providers that match both the professional skills and time frames needed for service.

Figure 1 displays the primary diagnoses for all patients currently enrolled in CSN services.

Figure 2 displays the top five diagnostic categories for adults and children receiving CSN services. These top diagnoses are present in 618 out of 884 (73%) of patients receiving CSN services.

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<sup>13</sup> 130 CMR 403.402 <https://www.mass.gov/doc/130-cmr-403-home-health-agency/download>

<sup>14</sup> Coller R, Nelson B, Sklansky D, et.al. Preventing Hospitalizations in Children with Medical Complexity: A Systematic Review. *Pediatrics*. November 2014. Accessed 13 December 2019: <http://pediatrics.aappublications.org/content/early/2014/11/05/peds.2014-1956>.

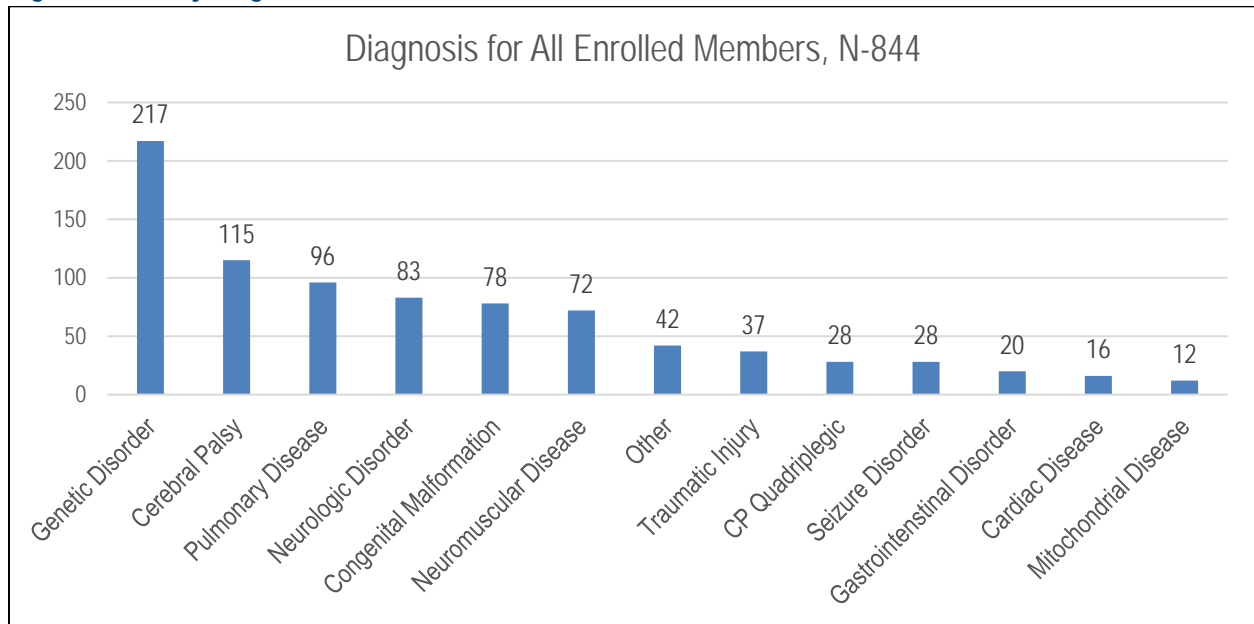
<sup>15</sup> Cohen E, Kuo D, Agrawal R, et.al. Children With Medical Complexity: An Emerging Population for Clinical and Research Initiatives. *Pediatrics*. Mar 2011; 127(3):529-538. Accessed 13 December 2019: <http://pediatrics.aappublications.org/content/127/3/529.short>.

<sup>16</sup> Community Case Management. *Commonwealth Medicine*. January 28, 2018. Accessed 5 December 2019: <https://commed.umassmed.edu/our-work/2018/01/28/community-case-management>.

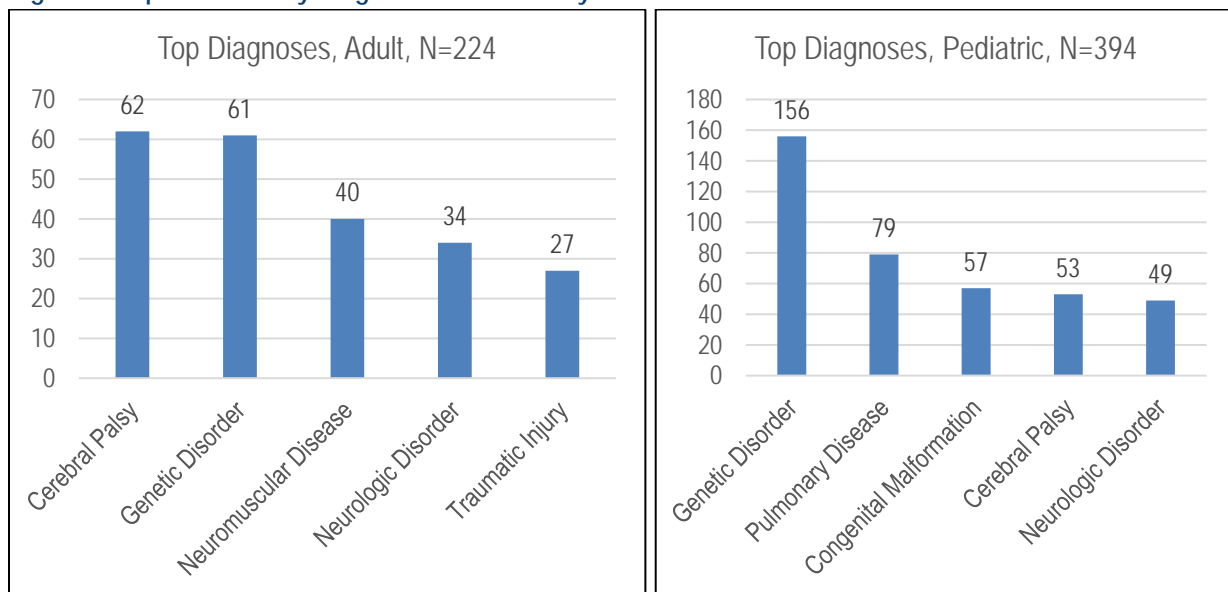
<sup>17</sup> 130 CMR 403.412 Complex-Care Members.



**Figure 1. Primary Diagnosis for All Enrolled CCM Patients<sup>18</sup>**



**Figure 2. Top Five Primary Diagnoses for Currently Enrolled Adult and Pediatric CCM Patients**



<sup>18</sup> Member distribution by diagnosis provided by MassHealth and the CCM Program, reported by MassHealth as a representative view of members enrolled in the CCM program as of November 2020.

### 2.3 Section 24 Requirements

This section provides the analyses specific to each of the eight questions delineated by the legislature for the biennial report of MassHealth CSN services. The report follows the sequence of questions set forth in the Section 24 requirements.

The data used to answer these questions come from several sources. First, BerryDunn used data reported by MassHealth, and independently analyzed MassHealth claims data.<sup>19</sup> BerryDunn also collected data directly from the HHAs that employ nurses providing CSN services. The survey included the 22 agencies that MassHealth identified as having billed and received payment for services in fiscal year (FY) 2021. Of this survey group, 10 agencies responded. These responding agencies represented the largest and most active agencies, accounting for 93% of total CSN payments. These responding agencies provided services to 895 of a total of 986 patients receiving CSN services in FY 2021, covering 91% of CSN patients in that year.

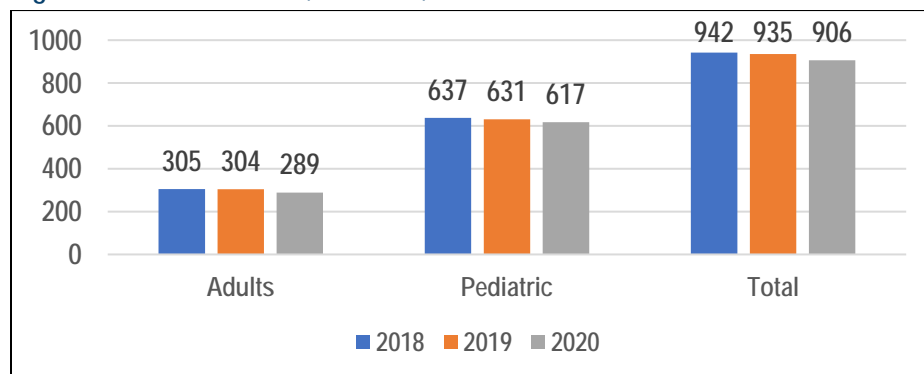
#### Number of Pediatric and Adult Patients Requiring CSN Care

This section reports the number of pediatric and adult patients requiring CSN care. Reported trends are based on data provided for CYs 2018, 2019, and 2020.

MassHealth requires prior authorization (PA) to pay claims for CSN services. CSN patients were identified for inclusion in the total count if they had CSN hours paid on a date that fell within any of the three reporting years.

This study defines pediatric patients as individuals under 21 years of age, and it defines adult patients as 21 years of age or older.<sup>20</sup> A portion of these patients represents individuals who may qualify for institutional-level care.<sup>21</sup> The number of pediatric and adult patients who had authorized hours in each year is shown in Figure 3. The total number of adult, pediatric, and total patients with a PA for CSN care has declined in each of the three years observed, with 906 total patients in 2020.

**Figure 3. Number of Adult, Pediatric, and Total Patients with a PA for CSN<sup>22</sup>**



<sup>19</sup> For purposes of this study, Procedure Codes – T1002, T1003 were used by MassHealth to identify members and determine authorized and used hours.

<sup>20</sup> Age is calculated as of the first day of the measurement period.

<sup>21</sup> 130 CMR 519.001 MassHealth Coverage Types.

<sup>22</sup> Data Provided by MassHealth.

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## Average and Median Number of CSN Hours Authorized, and Average and Median Number of CSN-Authorized Hours Actually Delivered

This section reports estimates of the average and median number of CSN hours authorized by MassHealth per day, week, month, and year for pediatric and adult patients. The number of CSN hours delivered are measured within this report by the hours that MassHealth actually paid for CSN services.

MassHealth's PA provides a total aggregate amount of authorized hours over the PA period. The PA time frames vary and are between one day and two years. MassHealth does not prescribe how much or when authorized hours can be used in a given day, week, or month. This biennial report then uses MassHealth's total aggregate PA figure to derive estimates of the average hours authorized per day, week, and month.

MassHealth reports modifying the number of authorized hours within a PA period in 70% of cases.<sup>23</sup> The MassHealth data system captures and reports the final number of hours authorized, and historical adjustments and modifications are not reportable. Since a PA can be effective on any calendar day, the data are grouped into three 12-month calendar years. From its data systems, MassHealth pulled authorized and paid hours for all PAs with an effective date during the three CYs (2018, 2019, 2020), and prior to the start of the three years. Because a PA can have an effective date any day of the year and many PAs have long time spans, many PAs spanned more than one CY, so BerryDunn allocated authorized hours across calendar periods that aligned authorized and paid hours. Authorized and paid hours were included in a reporting period based on the payment dates for hours paid.

In order to estimate authorized hours by day, week, and month, BerryDunn took the total authorized hours for the PA period and divided the hours into month, week, and day segments. However, as noted, the PAs total reported authorized hours represent the MassHealth final authorized amount, and PAs are often subject to modification during their authorization period. As well, note again that BerryDunn's estimates do not represent the actual number of hours a patient was authorized for CSN services on any given day, week, or month during the PA period.

Table 1 and Table 2 present the total authorized hours, total paid hours, and estimated average and median authorized and paid hours per day, week, month, and year for adult and for pediatric patients. Questions 2 and 3 delineated by the legislature for the biennial report of MassHealth CSN services ask for the average and median hours authorized and paid per CSN patient. Table 1 and Table 2 report these measures on a per-patient basis.<sup>24, 25</sup>

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<sup>23</sup> MassHealth email communication. November 24, 2021.

<sup>24</sup> Underlying data for Tables 2 and 3 provided by MassHealth.

<sup>25</sup> Note: The previous CHIA CSN biennial report presented these measures based on a PA line item basis rather than a patient basis. The current report changes this method, because it is possible for a CSN patient to have more than one authorization in any reporting period, depending upon timing. It is also possible for any authorization to have more than one line item. For example, a separate line item is used for different procedure codes and could also be used if a nurse is treating more than one CSN patient at the same time.

**Table 1. Adult Authorized and Paid Hours – Age ≥ 21** <sup>26, 27</sup>

	2018		2019		2020	
	AUTHORIZED	PAID	AUTHORIZED	PAID	AUTHORIZED	PAID
Day – Average	9.42	6.30	9.08	6.09	9.02	6.11
Day – Median	8.74	5.57	8.44	5.33	8.45	5.15
Week – Average	65.91	44.11	63.55	42.60	63.14	42.78
Week – Median	61.21	39.02	59.09	37.33	59.18	36.04
Month – Average	286.59	191.81	276.33	185.22	274.56	186.02
Month – Median	266.16	169.66	256.91	162.33	257.34	156.70
Year – Average	1,544	1,047	1,526	1,031	1,542	1,023
Year – Median	1,063	642	1,096	593	1,124	621
Year – Total Hours	1,103,743	758,959	1,083,390	742,310	1,014,373	687,487

**Table 2. Pediatric Authorized and Paid Hours – Age <21** <sup>25, 26</sup>

	2018		2019		2020	
	AUTHORIZED	PAID	AUTHORIZED	PAID	AUTHORIZED	PAID
Day – Average	7.32	4.81	7.20	4.75	7.21	4.52
Day – Median	6.31	3.81	6.34	3.79	6.45	3.73
Week – Average	51.22	33.64	50.43	33.24	50.47	31.66
Week – Median	44.15	26.64	44.39	26.51	45.16	26.11
Month – Average	222.71	146.27	219.25	144.52	219.44	137.66
Month – Median	191.96	115.85	193.01	115.26	196.36	113.54
Year – Average	1,170	772	1,190	783	1,225	748
Year – Median	759	429	811	466	842	405
Year – Total Hours	1,801,129	1,209,701	1,742,647	1,168,159	1,738,694	1,079,093

<sup>26</sup> The difference between authorized and delivered hours might be due to a number of reasons, including a modification of the total number of authorization hours within the authorization period. The MassHealth data system only captures the final modified hours. See Appendix B for staffing-related reasons.

<sup>27</sup> The basis of the average and median calculations is per patient. In the 2019 biennial report, the basis for the average and median statistics was per PA line item. It is possible in any reporting period for a CSN patient to have more than one PA depending upon timing, and for any PA to have more than one PA line item. For example, a separate PA line item is used for different procedure codes. Given the change in basis, the average and median statistics in the 2019 biennial report are not comparable to this report.

## Total CSN Hours Authorized and Delivered Per Month and Year, Adult and Pediatric

This section provides a summary of the total number of CSN care hours that were authorized and delivered per month and year for CYs 2018, 2019, and 2020. As noted previously, hours delivered are measured by the number of hours MassHealth reports as billed and paid. As well, hours authorized by day, week, and month are estimates derived from the total aggregate hours authorized during the PA period. Again, note that this report uses number of hours paid by MassHealth as a measure of hours delivered.

The figures below display the number of authorized and paid hours daily, weekly, monthly, and yearly, per patient. These figures generally show a steady or slight downward trend in the average number of authorized and paid hours. However, the CCM pediatric population shows a modest increase in the average number of authorized hours by year, while the average number of hours paid decreased slightly by year (Figure 5, Panel B). The average daily, weekly, and monthly authorized and paid hours for the CCM pediatric population follows the trends of the total CCM population.

Table 3 and Figure 4 display the total number of authorized and paid nursing hours for the total CSN population, and for adults and children for 2018 through 2020. Children account for over 60% of total authorized and paid services.

Overall, 2020 shows a substantial drop in the percentage of authorized hours paid annually, with a total decline of 3.6 percentage points from 2018 to 2020. The decline occurred most substantially for children, from 67% to 62% of authorized hours. Figure 4 displays the trend—total, adult, and pediatric—from 2018 through 2020.

**Table 3. Total CSN Paid-to-Authorized Hour**

TOTAL PATIENTS			
	TOTAL AUTHORIZED	TOTAL PAID	PERCENT PAID TO AUTHORIZED
2018	2,904,871	1,968,660	67.8%
2019	2,826,037	1,910,469	67.6%
2020	2,753,067	1,766,580	64.2%

ADULT PATIENTS			
	TOTAL AUTHORIZED	TOTAL PAID	PERCENT PAID TO AUTHORIZED
2018	1,103,743	758,959	68.8%
2019	1,083,390	742,310	68.5%
2020	1,014,373	687,487	67.8%

PEDIATRIC PATIENTS			
	TOTAL AUTHORIZED	TOTAL PAID	PERCENT PAID TO AUTHORIZED
2018	1,801,129	1,209,701	67.2%
2019	1,742,647	1,168,159	67.0%
2020	1,738,694	1,079,093	62.1%

**Figure 4. Percent of Authorized Hours Paid, Annual, 2018 – 2020**

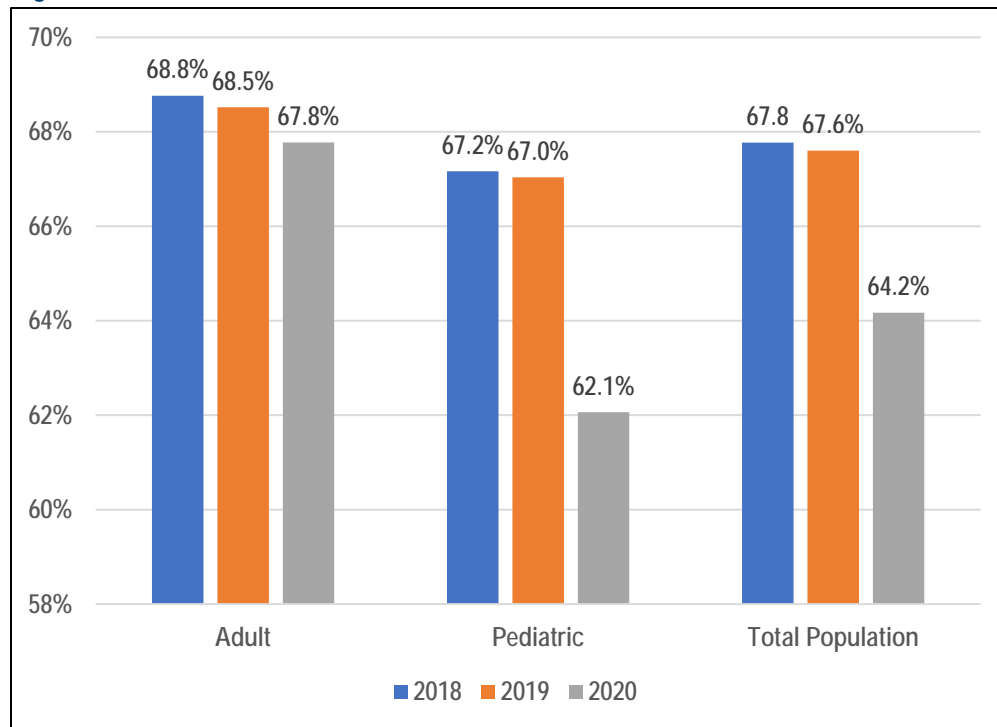
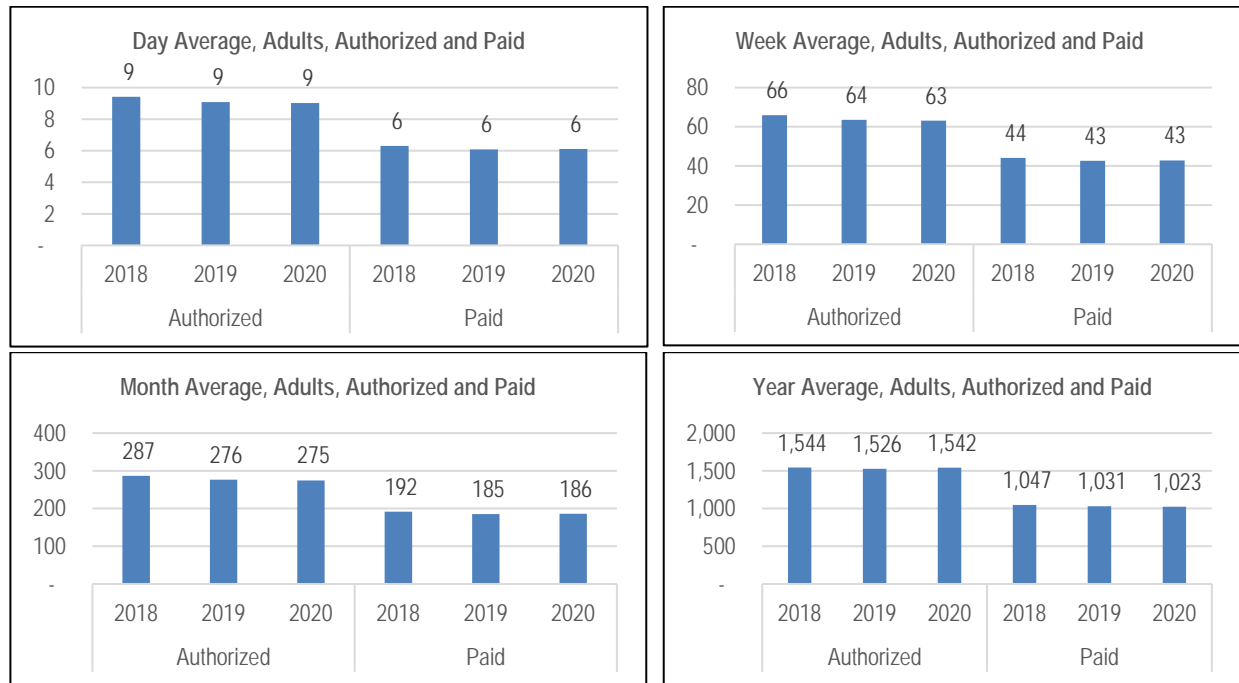


Figure 5 displays details about the average authorized and paid hours, per patient, per day, week, month, and year, CY 2018 through CY 2020.

Figure 6 displays the trend at a monthly level for total, adult, and pediatric hours authorized and paid. In 2020, the percentage of hours paid declined substantially with the onset of the COVID-19 pandemic in March. In the last quarter of 2020, the percentage of authorized hours paid rebounded for adults. The percentage of authorized hours paid for the pediatric population has yet to rebound to pre-pandemic levels. It has, however, improved significantly since the onset of the pandemic in the spring/summer 2020.

**Figure 5. Average Authorized and Paid Hours, Per Patient, Per Day, Week, Month, and Year, 2018 – 2020**

**Panel A: Adults**



**Panel B: Pediatric**

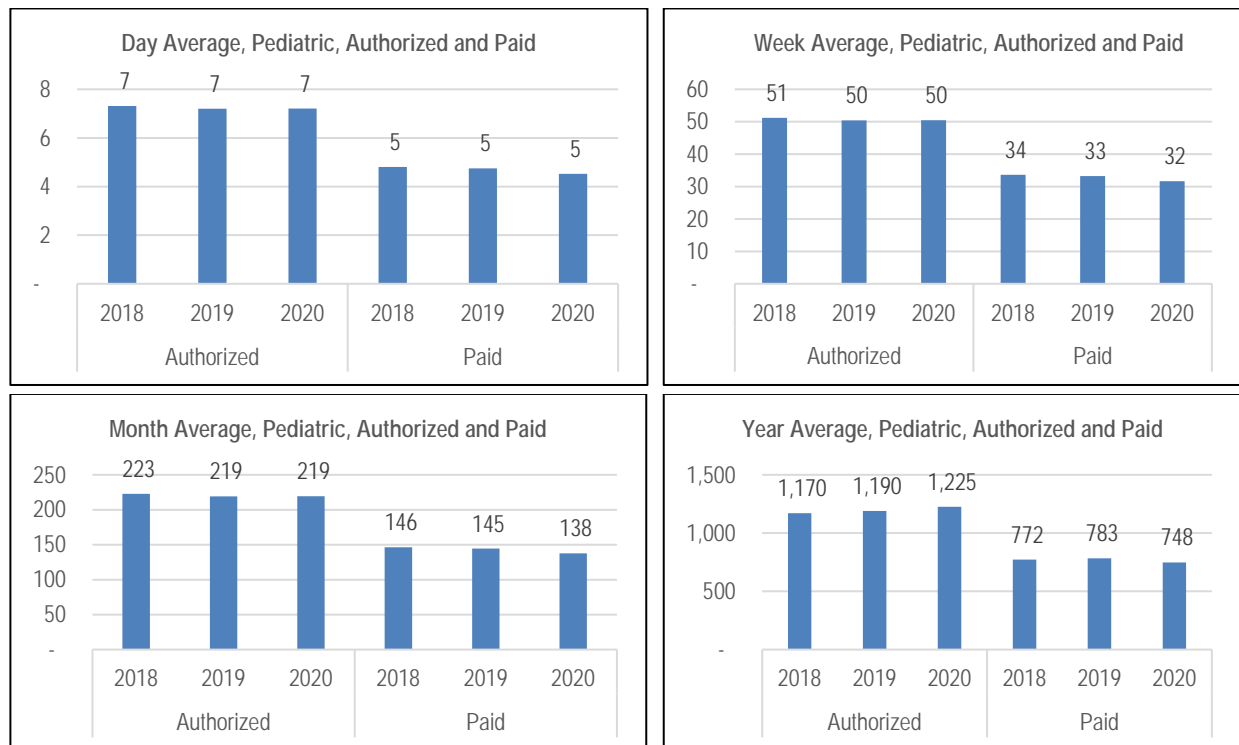
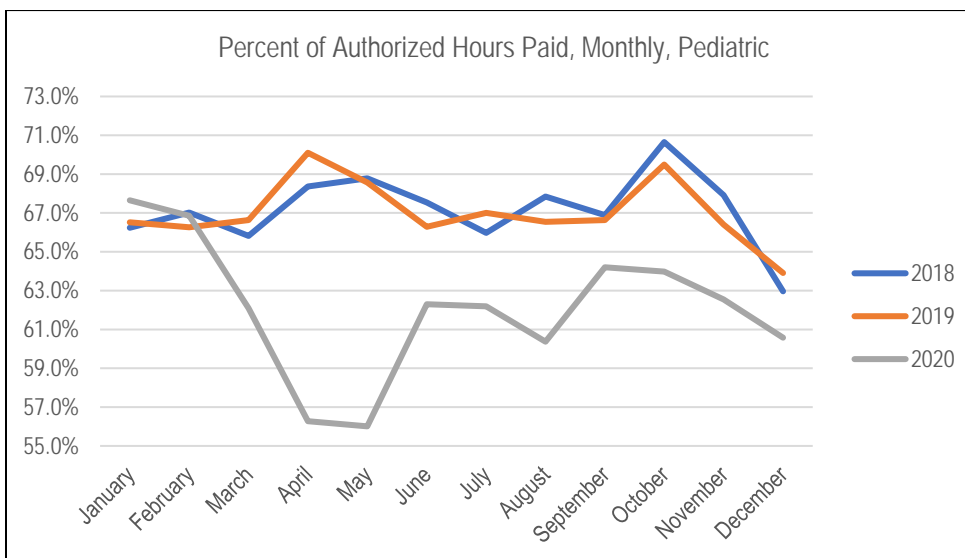
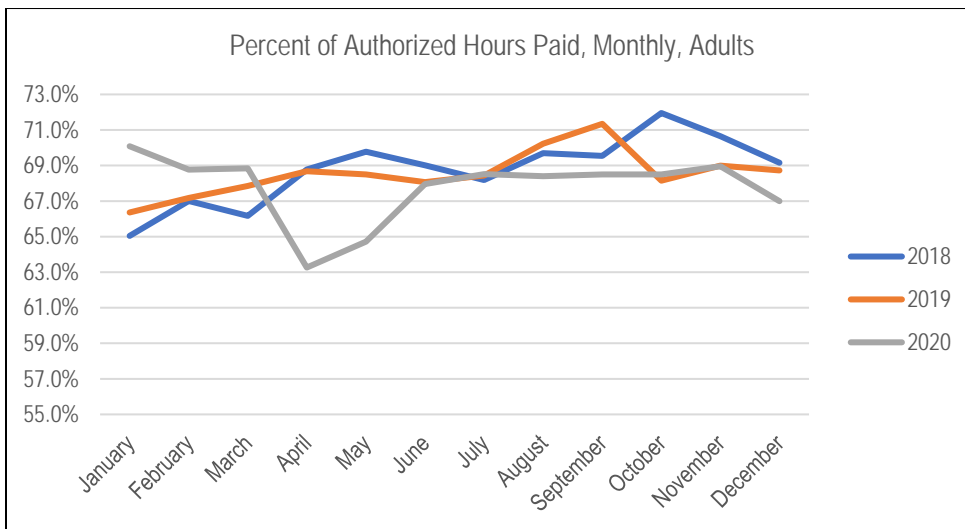
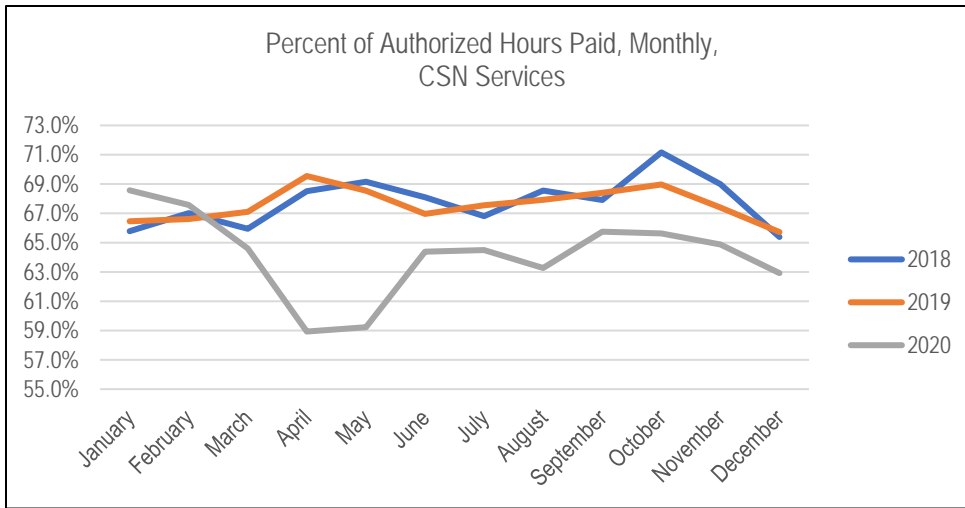


Figure 6. Percent of Authorized Hours Paid, Monthly – Total, Adult, and Pediatric





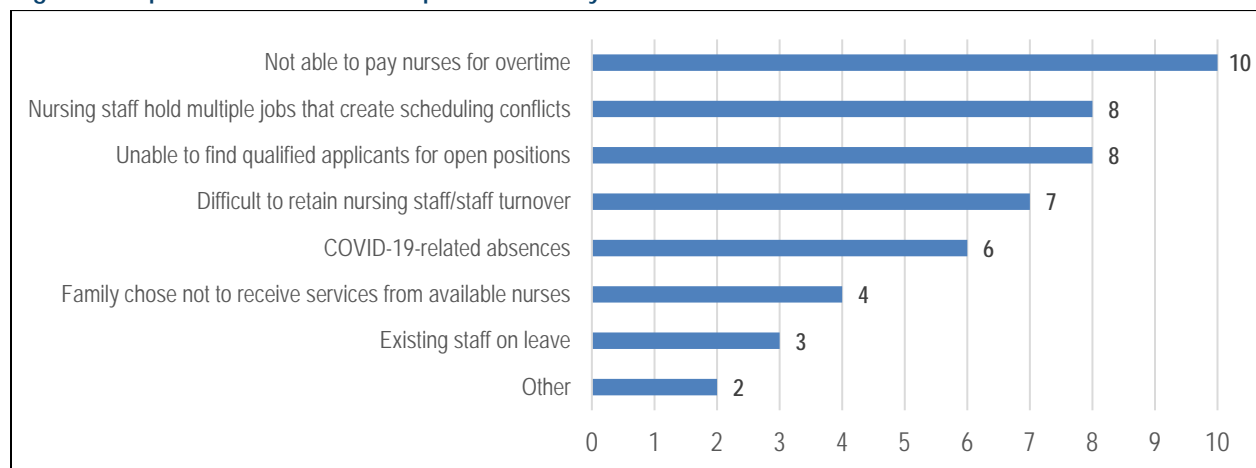
### Unfilled Authorized Hours

The number of CSN services authorized per patient and the proportion of authorized services delivered per patient can vary widely across the population. The authorized hours not delivered are referred to as “unfilled hours.” Several factors contribute to this gap in delivered services, including difficulty recruiting and retaining qualified nurses, shortage of nurses in the patient’s geographic area who meet their individual medical and personal needs, the nurse becoming unavailable due to unexpected illness or scheduling conflicts, or larger nursing workforce shortages. Authorized CSN hours might also not get delivered because a patient or their family prefers to use their CSN hours in other ways that best meet their individual needs. For example, patients may decline CSN services from specific providers due to previous histories with the provider, or patients may choose to flex their hours from week-to-week or month-to-month. MassHealth reports that, during the height of the COVID-19 public health emergency, many CCM families chose to forgo nursing services in an effort to reduce the number of individuals (and potential exposure) in their homes. MassHealth identified a more complete list of potential reasons, included in Appendix B.

The provision of CSN services requires identifying a nurse who can care for the unique and complex needs of a patient needing CSN services. A nurse must be prepared to deliver the services required to treat a patient, and match the schedule of the patient’s specific needs. Even with that, the patient/family must then agree to the nurse assigned to provide the care. If the patient chooses to decline services from the nurse identified, the CCM program will continue to work with the patient to find another nurse who will be a better match for as long as the patient wishes.

The BerryDunn survey of HHAs asked about staffing levels and challenges. Nine of the 10 responding agencies that had been paid for services in FY 2021 reported that they could not fill hours requested by patients and authorized by MassHealth. These agencies report that they were able to fill, on average, 64% of authorized hours, with responses ranging from 20% to 90%. Figure 7 lists the frequency that responding HHA agencies note impediments to filling authorized CSN hours.

**Figure 7. Reported Reasons That Impede the Ability to Meet Need/Demand for CSN Services**



Comments from survey respondents most frequently cited low nursing pay rates (N=7). One respondent also noted that nurses need training on patients on ventilators, and another noted that the family interviewing process might delay the nurse's start of care, causing the nurse to choose or request to pick up hours elsewhere.

The survey respondents reported that their agencies are able to perform the initial (RN-provided) intake visit -- but some of these agencies also noted that their decision to perform an intake visit is often dictated by their future ability to staff the case. One HHA respondent reported that intake visits are only conducted if the HHA has nurses available to provide care. Another HHA respondent indicated that initial intake visits may be delayed until the HHA has more confidence in its ability to staff the case. The HHAs that had billed and been paid in FY 2021 reported that their agencies are able to perform an initial (RN-provided) evaluation request.

An important note about overtime pay: All of the reporting agencies noted the inability to pay overtime (because MassHealth does not reimburse HHAs a CSN overtime rate) as their top impediment to filling CSN hours. The survey of HHAs, in a separate question specific to overtime, noted that MassHealth does not currently offer providers overtime pay for nursing services, and asked "Does your agency allow nurses to work overtime?" and "If your agency allows overtime for nurses, please list your agency hourly payment rates to nurses (range/average) for CSN services." Eight of the 10 responding agencies reported that they do pay nurses for overtime, despite MassHealth not providing such payment to agencies. These agencies offered the following comments:

- We have no choice. If we were to tell a family that an available nurse can't work due to us not wanting to pay overtime, they would be extremely upset.
- [Overtime pay is] very limited and only with office prior approval—on a case by case situation.
- We do provide OT in certain situations, based on agency discretion. It is too costly to allow broadly in the current environment and with no agency OT reimbursement.
- [Overtime pay is covered for] short notice night shift cancellations, recent discharges, illness of patient, illness of caregiver.
- Due to COVID, families are limiting the number of nurses in the home, forcing some nurses into OT in order to provide adequate staffing in emergency situations.

MassHealth has proposed a permanent 20% rate increase to all CSN rates established under 101 CMR 361.00, along with a temporary allowance for agency overtime reimbursement, effective for dates of service on and after January 1, 2022. These payment increases address the primary challenges noted by agencies in filling CSN authorized hours. The changes are intended to infuse additional nursing hours into the CSN program and allow full use of the current workforce.

## Number of Nurses Caring for More Than One Patient

This section presents data on the number of nurses caring for more than one patient at a time and, for the patients cared for by those nurses, the aggregate proportion of CSN hours authorized and delivered. Again, this report measures hours delivered by the number of MassHealth-paid hours.

CSN services may be provided to multiple patients at a time. As set forth in 101 CMR 361.04, the multiple-patient nursing reimbursement rate is established in two tiers: reimbursement for two publicly aided individuals and rates for reimbursement for three or more publicly aided individuals.

Table 4 displays the MassHealth-reported information about independent nurses providing services to more than one patient at a time. MassHealth reports that during CY 2020, 13 of the 270 independent nurses enrolled in MassHealth provided care to multiple patients at a time.<sup>28</sup> This amounts to approximately 4.8% of the total number of contracted independent nurses reported by MassHealth.

Table 4 also reports that, for multi-patient cases performed by independent nurses, 93% of authorized services were paid in 2020. This far exceeds the overall paid-to-authorized percentage for CSN services, reported at 64% in 2020 (reported in Table 3, above).

**Table 4. Number of Independent Nurses Providing CSN Care to More Than One Patient**  
Aggregate Proportion of Paid Hours to Authorized Hours

TIME PERIOD	NUMBER OF INDEPENDENT NURSES	TOTAL AUTHORIZED HOURS	TOTAL PAID HOURS	RATIO OF PAID HOURS TO AUTHORIZED HOURS
2018	16	25,440	21,145	83%
2019	14	25,728	23,359	91%
2020	13	28,137	26,164	93%

MassHealth does not have comparable data about the number of multi-patient cases HHA-employed nurses serve. BerryDunn attained this data through its survey of HHAs that contract with MassHealth to provide CSN care. BerryDunn asked the HHAs how many of their nurses provided CSN services to more than one patient. Six of 10 HHAs responded that their agency nurses do provide care to more than one patient at a time. Table 5 displays the level of staffing reported by the HHAs, including the number of nurses caring for multi-patient cases. BerryDunn used the reported data to also calculate the ratio of agency RNs and LPNs per patient served.

<sup>28</sup> MassHealth reports a total of 264 independent nurses billed for the provision of CSN services in CY 2021. MassHealth personal communication, November 24, 2021.

In aggregate, approximately 4.5% of HHA nurses provide care to more than one patient at a time. This percentage is consistent with the 4.9% of independent nurses contracting directly with MassHealth who care for more than one patient at a time. Based on the information provided by MassHealth and the HHA survey responses, most patients receive CSN services individually with a nurse.

**Table 5. HHA Reported Staffing and Staffing Ratios**

	RN	LPN	TOTAL
HHA Nurses			
Total Employed	630	447	1,077
Total Contracted	431	334	765
Total Nurses	1,061	781	1,842
Total % Caring for More Than One Patient	57 (5.4%)	25 (3.2%)	82 (4.5%)

### Total Number of Nurses Providing CSN Services

This section reports the number of independent nurses who contract with MassHealth to provide CSN care, the number of nurses who provide CSN care through an HHA that contracts with MassHealth, and whether the total number of nurses providing such care is sufficient to fill all authorized CSN hours.

MassHealth reports that 264 independent nurses billed for the provision of CSN services for FY 2021.<sup>29</sup> Independent nurses provided care for 224 MassHealth patients, and received total MassHealth of \$12,480,129 for services delivered. This represents 14% of the \$88.5 million total CSN service paid by MassHealth in that year.

Most CSN services are provided through HHAs that bill MassHealth for these services—accounting for nearly \$76 million (86%) of CSN services in FY 2021. MassHealth provided a list of agencies that have billed and been paid for CSN services in FY 2021. BerryDunn obtained data through surveys of those agencies. These 22 HHAs served all of MassHealth's total of 986 unduplicated CSN patients in FY 2021. All 22 agencies that MassHealth actually paid for CSN services in FY 2021 received surveys, and 10 of these agencies responded. The responding agencies represent MassHealth CSN providers delivering approximately 93% of CSN agency services paid for by MassHealth in FY 2021, serving 895 (91%) of MassHealth's 986 total patients.<sup>30</sup>

HHAs were asked to report both the number of nurses they directly employ and also the number of nurses they engage under contract. Table 5, above, provides detail about the total number of RNs and LPNs employed and under contract to provide CSN services through HHAs that responded to the survey. BerryDunn then estimated the total number of nurses employed by and under contract with the 22 Massachusetts HHAs that provided CSN care in FY 2021, extrapolating from the responses to the HHA survey. BerryDunn assumes the ratio of nurses to patients in the

<sup>29</sup> MassHealth email communication, November 29, 2021.

<sup>30</sup> Calculated as the percentage of total cost of CSN services and total unduplicated patient count.

responding agencies represents the ratio in HHAs generally, and thereby applies this ratio to the total number of annual CSN patients.

The responding HHAs report engaging (both employed and under contract) 1,061 RNs and 781 LPNs, totaling 1,842 nurses providing CSN services<sup>31</sup> (Table 6). These 1,842 nurses as a whole provided care to 775 CSN patients in the month prior to survey response (October 2021). This yields an RN-to-patient ratio among the responding HHAs of 1.37 (RN) to 1 (patient), and an LPN to patient ratio of 1.01 (LPN) to 1 (patient).

**Table 6. Nurse to CSN Patient Ratio, Based on Survey Respondents**

	RN	LPN	TOTAL
Total Nurses	1,061	781	1,842
Total CSN Patients (October 2021)			775
Staffing Ratio: Provider to Patient	1.37:1	1.01:1	2.38:1

Table 7 displays the estimated total nurses providing CSN services through MassHealth-enrolled HHAs as a whole, modeled based on the survey responses. MassHealth reports that, in FY 2021, payment was made for services to 986 CSN patients in total. Applying the ratio of 1.37 nurses to 986 patients yields an estimate of approximately 1,351 RNs; the ratio of 1.01 LPNs to 986 CSN patients yields an estimate of 996 LPNs; the ratio of 2.38 nurses to 986 CSN patients yields a total of 2,347 total nurses estimated to serve HHA agencies in providing CSN care.

**Table 7. Estimated Total Nurses Providing CSN Services**

	RN	LPN	TOTAL
Staffing Ratio: Provider to Patient	1.37:1	1.01:1	2.38:1
Total CSN Patients FY 2021			986
Staffing Ratio: Provider to Patient	1,351	996	2,347

These figures provide only one piece in understanding whether the total number of nurses providing care is sufficient to fill all authorized CSN hours. A complete analysis of the workforce need, demand, and gaps would require measurement of 1) the specific number of actual CSN hours available (daily, weekly, monthly, yearly) from all employed HHA nurses (full-time and part-time); 2) the specific number of actual nursing hours available (daily, weekly, monthly, yearly) by all independent nurses providing CSN services, and a comparison of that supply figure with the total number of MassHealth-authorized hours.

The survey conducted by BerryDunn of HHAs provides a partial view of the number of nurses employed by HHAs and should be understood as an estimated head count. However, it does not yield needed specificity about the actual available CSN hours from this workforce. The attainment of a valid measure of element #1—the specific number of CSN hours available from all HHA-employed nurses—requires a more detailed modeling exercise that falls outside the scope of this study. Instead, this report relies on reports by the agencies about the degree to which they are able to fully use their existing workforce.

<sup>31</sup> Nurse staffing levels of individual agencies within the MassHealth CSN HHA provider network vary, ranging from 461—273 RNs and 188 LPNs—nurses to as few as one employed nurse providing CSN services.

Nine of 10 HHAs that responded to the BerryDunn survey report they do not have adequate staffing to meet the hours for CSN services as requested by patients and authorized by MassHealth. Asked for the approximate percentage of authorized CSN hours their agencies are able to fill, the respondents' answers range from 20% to 90%—averaging 64% among responding agencies.

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## Nurse Educational and Experience Requirements

Section 24 requires a description of the training, experience, and education levels of the nurses who provide CSN care.<sup>32</sup>

### Requirements for Independent Nurses

Independent nurses who contract directly with MassHealth to provide CSN care must comply with MassHealth regulations, including, but not limited to, 130 CMR 414.000 and 450.000.<sup>33</sup> In order to participate as a MassHealth independent nurse provider, a nurse must:

- Be licensed and in good standing as a nurse by the board of registration for the state in which the nursing services are provided
- Meet all provider eligibility requirements set forth in 130 CMR 450.212<sup>34</sup>
- Sign a MassHealth provider contract and receive a MassHealth provider number
- Notify MassHealth in writing within 14 days of any change in any information submitted in the provider application in accordance with 130 CMR 450.232(B)

Pursuant to 130 CMR 403.402, CSN services may be provided by a licensed nurse who independently enrolls as a provider in MassHealth, and thereby directly delivers and independently bills for authorized CSN services. MassHealth reports that most of its contracted independent nurses are RNs and LPNs. To be licensed as an RN or LPN in Massachusetts, the Board of Registration in Nursing requires licensure applicants to provide proof that they: 1) graduated from a board-approved nursing program; 2) are of good moral character, as defined by state law; and 3) have passed the National Council Licensure Examination (NCLEX).<sup>35</sup>

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<sup>32</sup> Children and adults receiving CSN care have complex medical conditions and often require medical equipment (e.g., ventilators), technology (e.g., various monitors), and therapy services, in addition to nursing care.

<sup>33</sup> 130 CMR 450.232(B) states that each MassHealth provider must notify the MassHealth agency in writing within 14 days of any change in any of the information submitted in the application. Failure to do so constitutes a breach of the provider contract. In no event may a group practice file a claim for services provided by an individual practitioner until the individual practitioner is enrolled and approved by the MassHealth agency as a member of the group. At its discretion, the MassHealth agency may require a provider to recertify, at reasonable intervals, the continued accuracy and completeness of the information contained in the provider's application. Failure to complete such recertification upon request by the MassHealth agency may result in termination of the provider contract.

<sup>34</sup> 130 CMR 403.405 and 403.406 state the HHA provider eligibility requirements in state and out of state. An HHA providing CSN care in Massachusetts must be a certified provider of home health services under the Medicare program by the Massachusetts Department of Public Health.

<sup>35</sup> Massachusetts Board of Registration in Nursing. Accessed 8 December 2019: <https://www.mass.gov/how-to/apply-for-a-nursing-license-by-exam>.

Beyond the statutory requirements set forth above and any specific state licensure requirements (e.g., Massachusetts Board of Nursing Standards for an RN or LPN), nurses who contract with MassHealth as independent nurses providing CSN care face no other training, education, or experience requirements.<sup>36</sup>

#### Requirements for Nurses Employed by HHAs

HHAs may provide CSN services as long as they meet the requirements set forth in 130 CMR 403.000 and 450.000.<sup>37</sup> Nurses employed by HHAs to provide CSN services must also be licensed as an RN or LPN, and thus must comply with the Board of Registration in Nursing requirements for licensure as discussed above. Through CY 2021, MassHealth also requires HHAs to be Medicare certified, and thus HHAs must comply with federal CMS Conditions of Participation for HHAs. However, new state regulations being promulgated as of January 1, 2021, will carve out agencies providing CSN services from the Medicare certification requirements.<sup>38</sup>

The BerryDunn survey of HHAs asked about the training, experience, and education requirements for nurses employed to provide CSN services. All of the responding HHAs confirmed adhering to MassHealth employment requirements for nurses providing CSN care, and half of the responding agencies noted requiring additional education, skills, work experience, or training. The additional requirements reported by respondents vary, including the following:

- Experience and additional training on trach, ventilator and/or total parenteral nutrition
- Two-step tuberculosis screening, Basic Life Support certification, and Cardiopulmonary Resuscitation (CPR) certification
- Minimum of four months of work experience
- At least one year of nursing experience, and a completed skills checklist for appropriate placement

One respondent noted “We provide extensive training to most of our new hire staff; most of the nurses that we hire do not have the required skills to take care of medically complex patients in the home.”

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<sup>36</sup> MassHealth conducts background and licensure checks on nurses seeking enrollment in the MassHealth independent nurse program.

<sup>37</sup> 130 CMR 414.000 states the requirements for the payment of nursing services, and 130 CMR 450.000 sets forth the Administrative and Billing regulations for the Division of Medical Assistance; 130 CMR 450.212 sets forth the Provider Eligibility Criteria to be eligible to participate in MassHealth as any provider type.

<sup>38</sup> MassHealth is promulgating a new provider regulation, as of January 1, 2022, at 130 CMR 438: Continuous Skilled Nursing Agency, which establishes CSN agency as a new provider type. <https://www.mass.gov/regulations/130-CMR-438000-continuous-skilled-nursing-agency>.

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## Reimbursement Rates

This section presents findings on reimbursement rates for independent nurses delivering CSN care as established in 101 CMR 361.04(2).<sup>39</sup> As required by Section 24, BerryDunn compared these rates:

- a) To the wages paid directly to nurses providing CSN care through HHAs that contract with MassHealth, and
- b) With the median wage rate paid to all nurses in Massachusetts.

This evaluation has two purposes:

- 1) To determine the adequacy of reimbursement rates offered by MassHealth to contracted nurses, and
- 2) To understand how the supply of nurses for CSN care might be affected by differences in pay rates across three groups—Independent Nurses providing CSN care, HHA-employed nurses providing CSN care, and Massachusetts nurses working in other health care sectors.

The Massachusetts Executive Office of Health and Human Services, in 101 CMR 361.04, establishes the reimbursement rates paid to independent RNs and LPNs who contract directly with MassHealth.<sup>40</sup> BerryDunn converted these rates from 15-minute units to hourly rates in order to compare them to HHA employee wages. Several other factors require consideration when assessing the relative wages among various nursing categories:

- Wage rates paid by HHAs to nurses providing CSN care are not publicly reported.
- Data from the federal Bureau of Labor Statistics (BLS) include a time lag and lack wage information specific to independent nurses.
- Provider rates paid to independent nurses will differ from wage rates paid to HHA-employed nurses in that the two rates do not treat fringe benefits and other applicable overhead costs similarly.
  - Independent nurses work as self-employed contractors. They charge hourly rates that build in the total cost of self-employment, including employer share of payroll taxes, health insurance, retirement contributions, and other fringe benefits, and overhead.<sup>41</sup>
  - In the case of HHA-employed nurses, the employing agency pays for the items that, for an independent nurse, are self-employment costs. HHA-employed nurses receive an hourly wage that does not reflect the overall hourly costs of employment incurred by the HHA as employer.
  - For this reason, the hourly rate for independent nurses (self-employed) would generally be higher than wages paid for HHA nurse employees who also receive employer-funded benefits.

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<sup>39</sup> 101 CMR 350.04 establishes rates for payment for home health services. 101 CMR 361.04 sets forth the rates of payment for CSN Services in the Home. For the purposes of this report, the rate comparisons are to those set forth in 101 CMR 361.04.

<sup>40</sup> Massachusetts Executive Office of Health and Human Services. 101 CMR 361.00: Rates for Continuous Skilled Nursing Services. 07/01/2020. <https://www.mass.gov/regulations/101-CMR-36100-rates-for-continuous-skilled-nursing-services>.

<sup>41</sup> U.S. Internal Revenue Service. Self-Employment Tax. <https://www.irs.gov/businesses/small-businesses-self-employed/self-employment-tax-social-security-and-medicare-taxes> See also: Orem, T. Self-Employment Tax: Understand & Calculate It for 2021-2022. Nerdwallet. December 14, 2021. <https://www.nerdwallet.com/article/taxes/self-employment-tax>; Fusion J. Cost of an Employee vs. Independent Contractor. <https://smallbusiness.chron.com/costs-employee-vs-independent-contractor-1077.html>.



The use of an adjustment factor allows better comparison between the rates paid to contracted independent nurses and the wages paid to HHA-employed nurses. BerryDunn applies here an adjustment factor of 0.77 to independent nurse rates, to separate the actual wage component from independent nurse self-employment expenses.<sup>42</sup>

BerryDunn obtained data about wage rates for RNs and LPNs employed by HHAs through surveying those agencies. Surveys were sent to 22 HHA agencies that MassHealth identified as receiving payment for CSN services in FY 2021, with 10 of these agencies responding. The responding MassHealth CSN providers account for approximately 93% of all MassHealth-paid CSN agency services in FY 2021. These responding providers served 895 (91%) of the 986 total MassHealth patients receiving CSN services in FY 2021. With this strong response by MassHealth's most active CSN providers, the survey data provide a robust measure for the questions of interest.

Alongside the survey data, BerryDunn reviewed 2020 data from the BLS, which reports average hourly wages paid to all RNs and LPNs in Massachusetts.<sup>43</sup> These hourly wages are averages and medians, and they do not include the dollar value of employer-paid benefits or account for factors such as overtime pay or bonus rates for working with multiple patients simultaneously. The BLS reports wage data within specific occupation sectors; BerryDunn used data from RNs and LPNs within the "Home Health Care Services" and compared to other healthcare service sectors.

Overall, the analysis of reimbursement rates for CSN services relies on three data sources: 1) BLS wage data for all Massachusetts RNs and LPNs; 2) wage information in the HHA survey data; and 3) Independent nurse reimbursement rates (adjusted by a factor of 0.77 for self-employment).

Table 8 and Table 9 present the hourly wages for RNs and LPNs. Wages are broken out separately by the number of patients treated at the same time (in most cases, one patient only) and the shift during which services are provided. Table 8 and Table 9 together allow comparison of the average hourly wages of nurses employed by HHAs to rates for independent nurses who contract directly with MassHealth to provide CSN services. An important note: The MassHealth-established CSN rates were set in July 1, 2020, through regulation, while the wages reported by HHAs responding to the BerryDunn survey reflect current wages as of late CY 2021, including enhancements in pay that have occurred since mid-2020 during the COVID-19 public health emergency.

**Table 8. Hourly Average and Percentile Wage, Nurses, Home Health Care, Massachusetts, 2020<sup>44</sup>**

	AVERAGE	10TH PERCENTILE	50TH PERCENTILE (MEDIAN)	90TH PERCENTILE
RN Hourly	\$41.27	\$29.70	\$39.20	\$56.79
LPN Hourly	\$28.97	\$22.98	\$28.69	\$36.91

<sup>42</sup> The 1.3 inflation factor from wages to service fees translates to a 0.77 factor to deflate fees to effective hourly wage/salary values. <https://www.salary.com/articles/pay-yourself-right-when-being-your-own-boss/>.

<sup>43</sup> Occupational Employment and Wage Statics. OEWS Research Estimates by State and Industry. May 2020. U.S. Bureau of Labor Statistics. [https://www.bls.gov/oes/current/oes\\_research\\_estimates.htm](https://www.bls.gov/oes/current/oes_research_estimates.htm).

<sup>44</sup> U.S. Bureau of Labor Statistics. Occupational Employment and Wage Statistics. OEWS Research Estimates by State and Industry [https://www.bls.gov/oes/current/oes\\_research\\_estimates.htm](https://www.bls.gov/oes/current/oes_research_estimates.htm).

Table 9. MassHealth Provider Hourly Wages for RNs and LPNs, by Number of Patients and Shift<sup>45</sup>

## Single Patient Rates – Hourly

CODE	DESCRIPTION	INDEPENDENT NURSE RATES, JULY 2020	EMPLOYED CONVERSION FACTOR 0.77	RANGE FOR NURSES EMPLOYED BY REPORTING AGENCIES OCTOBER 2021
T1002	RN Services, Weekday	\$44.40	\$34.19	\$31.93 – \$50.00
T1002-UJ	RN Services, Nights	\$47.48	\$36.56	\$35.50 – \$50.00
T1002	RN Services, Holidays	\$63.60	\$48.97	\$52.50 – 69.00
T1003	LPN Services, Weekday	\$36.96	\$28.46	\$27.00 – \$40.00
T1003-UJ	LPN Services, Nights	\$39.60	\$30.49	\$28.53 – \$37.73
T1003	LPN Services, Holidays	\$53.28	\$41.03	\$42.00 – \$54.00

## Multiple-Patient Nursing, Two Publicly Aided Individuals – Hourly

CODE	DESCRIPTION	INDEPENDENT NURSE RATES, JULY 2020	EMPLOYED CONVERSION FACTOR 0.77	RANGE FOR NURSES EMPLOYED BY REPORTING AGENCIES, OCTOBER 2021
T1002-TT	RN Services, Weekday	\$64.16	\$49.40	\$44.93 – \$66.00
T1002-U1	RN Services, Nights	\$68.84	\$53.01	\$49.44 – \$54.00
T1002-TT	RN Services, Holidays	\$92.96	\$71.58	\$74.16 – \$92.40
T1003-TT	LPN Services, Weekday	\$53.68	\$41.33	\$40.03 – \$55.50
T1003-U1	LPN Services, Nights	\$57.56	\$44.32	\$42.53 – \$58.02
T1003-TT	LPN Services, Holidays	\$78.04	\$60.09	\$62.30 – \$77.14

## Overtime Rates – Hourly

CODE	DESCRIPTION	INDEPENDENT NURSE RATES, JULY 2020	EMPLOYED CONVERSION FACTOR 0.77	RANGE FOR NURSES EMPLOYED BY REPORTING AGENCIES, OCTOBER 2021
T1002-TU	RN Services, Weekday	\$63.60	\$48.97	1.5 times base rate
T1002-U4	RN Services, Nights	\$68.24	\$52.54	
T1002-TU	RN Services, Holidays	\$92.40	\$71.15	
T1003-TU	LPN Services, Weekday	\$53.28	\$41.03	
T1003-U4	LPN Services, Nights	\$57.16	\$44.01	
T1003-TU	LPN Services, Holidays	\$77.56	\$59.72	

The independent nurse rates established in July 2020 (once adjusted for self-employment costs) generally fall within the low- to mid-range of the wages reported by HHAs in late 2021 for their employed nurses. However, HHAs also compete with other healthcare sectors and with nearby states to hire and retain nursing staff.<sup>46</sup> Comparative wages for nurses may influence the supply of nurses for employment by HHAs and in CSN care.

<sup>45</sup> The MassHealth-authorized rates were set in a July 1, 2020, regulation, while the rates reported by HHAs responding to the BerryDunn survey reflect current rates in late 2021, including enhancements in pay that have occurred since mid-2020 under the COVID-19 public health emergency.

<sup>46</sup> Famakinwa J. Home Health Providers, Hospitals Are 'Fishing in the Same Pool' for Nursing Talent. Home Health Care News. March 21, 2021. <https://homehealthcarenews.com/2021/03/home-health-providers-hospitals-are-fishing-in-the-same-pool-for-nursing-talent/>.

Within Massachusetts, RNs and LPNs have options about practice settings for their work. Table 10 displays the average and median hourly wages for RNs and LPNs in Massachusetts for a range of practice settings that will compete for the hiring of nurses. Median hourly wages in 2020 for Massachusetts nurses employed by a home agency were \$34.74 for RNs and \$28.69 for LPNs. This wage falls below the wages available from hospital employment. The HHA employee wage is comparable to the median hourly wage for nurses in other non-hospital-based nursing practice settings within Massachusetts.

Nurses may also choose to practice in nearby states. Table 11 displays the average and median hourly wages for RNs and LPNs specifically practicing in Home Health Care Services. Massachusetts exceeds all of the neighboring states in RN and LPN hourly wages for home health care services.

**Table 10. Average and Median Hourly Wage, Nurses, Massachusetts Practice Settings, 2020<sup>47</sup>**

	RN		LPN	
	AVERAGE	MEDIAN	AVERAGE	MEDIAN
Home Health Care Services	\$41.27	\$39.02	\$28.97	\$28.69
Hospitals	\$49.32	\$47.05	\$31.02	\$30.17
General Medical and Surgical Hospitals	\$49.43	\$47.24	\$37.17	\$30.30
Ambulatory Health Care Services	\$42.08	\$39.07	\$28.58	\$28.37
Nursing and Residential Care Facilities	\$38.98	\$36.47	\$28.84	\$28.69
Nursing Care Facilities (Skilled Nursing Facilities)	\$39.13	\$36.65	\$28.92	\$28.76
Continuing Care Retirement and Assisted Living Facilities	\$39.87	\$36.51	\$29.02	\$28.81

**Table 11. Hourly Wage, Home Health Care Nurses, Massachusetts, Neighboring States, 2020<sup>48</sup>**

	RN		LPN	
	AVERAGE	MEDIAN	AVERAGE	MEDIAN
Massachusetts	\$41.27	\$39.02	\$28.97	\$28.69
Connecticut	\$38.92	\$38.52	\$27.39	\$27.68
New Hampshire	\$34.65	\$34.74	\$27.61	\$27.96
Rhode Island	\$36.55	\$36.35	\$27.76	\$28.13
Vermont	\$31.95	\$30.81	\$22.84	\$22.66

<sup>47</sup> U.S. Bureau of Labor Statistics. Occupational Employment and Wage Statistics. OEWS Research Estimates by State and Industry. [https://www.bls.gov/oes/current/oes\\_research\\_estimates.htm](https://www.bls.gov/oes/current/oes_research_estimates.htm).

<sup>48</sup> U.S. Bureau of Labor Statistics. Occupational Employment and Wage Statistics. OEWS Research Estimates by State and Industry. [https://www.bls.gov/oes/current/oes\\_research\\_estimates.htm](https://www.bls.gov/oes/current/oes_research_estimates.htm).

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## Rate Enhancements, Policy and Regulatory Changes, and COVID-Related Measures

MassHealth reimbursement rates for CSN services have increased several times since 2018. Table 13 list the series of payment and policy changes reported by MassHealth. Most recently, in July 2021, MassHealth implemented immediate, time-limited, across-the-board payment enhancements for its providers delivering Home- and Community-Based Services (HCBS),<sup>49</sup> including providers delivering CSN services.<sup>50</sup> Additional spending and reporting requirements for these payment enhancements were also issued to help ensure the increases were used to directly support the HCBS workforce. MassHealth has also proposed a permanent 20% rate increase for all CSN services and an allowance for agency overtime reimbursement effective for dates of service on and after January 1, 2022.

These recent and proposed payment increases, along with the proposed allowance for agency overtime, address the primary challenges noted by agencies in filling CSN authorized hours. The changes in payment policy are intended to immediately infuse additional nursing hours into the CSN program and allow full use of the current workforce. Nonetheless, HHAs struggle to recruit nurses amid the state's overall shortages in the nursing workforce—an existing shortage made more acute under the conditions of the COVID-19 public health emergency.<sup>51</sup> Indeed, a recently released study of Massachusetts' healthcare workforce reports that attrition and retirements among RNs have accelerated under the pandemic, given increasingly difficult working conditions and an aging RN workforce.

The Commonwealth has adopted other policies, beyond pay increases, aimed at augmenting the nurse workforce. These include easing employment of out-of-state nurses, nurses with expired licenses, and nursing students in their final semester of school. Among steps more targeted to CSN service provision: MassHealth is promulgating a new provider regulation at 130 CMR 438: Continuous Skilled Nursing Agency, which establishes CSN agency as a new provider type.<sup>52</sup>

MassHealth intends this new provider type and regulation to increase the number of agencies authorized to provide CSN care and, with this, expand the supply of CSN services. At the same time, existing CSN provider agencies have reported a shortage of nurses available for these services, and difficulty recruiting and retaining qualified providers. It is not clear whether, and to what degree, the number of participating agencies also constrains the ability to meet the MassHealth-authorized CSN hours.

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<sup>49</sup> Executive Office of Health and Human Services. 101 CMR 447.00: Rates for Certain Home- and Community-based Services Related to Section 9817 of the American Rescue Plan Act. <https://www.mass.gov/regulations/101-CMR-44700-rates-for-certain-home-and-community-based-services-related-to-section-9817-of-the-american-rescue-plan-act>.

<sup>50</sup> Executive Office of Health and Human Services. Home- and Community-Based Service Enhanced Rate Add-Ons using ARPA Funding. Memo to HCBS Providers delivering MassHealth Services. July 20, 2021. <https://www.mass.gov/doc/for-masshealth-providers-home-and-community-based-service-enhanced-rate-add-ons-using-american-rescue-plan-act-arpa-funding/download>.

<sup>51</sup> Taube, S., and Lipson, R. (September 2021). COVID-19 and the Changing Massachusetts Healthcare Workforce. Published by Harvard Kennedy School and the Massachusetts Healthcare Collaborative. <https://www.pw.hks.harvard.edu/post/ma-healthcare-workforce>.

<sup>52</sup> 130 CMR 438: Continuous Skilled Nursing Agency <https://www.mass.gov/regulations/130-CMR-438000-continuous-skilled-nursing-agency>.

**Table 12. MassHealth-Reported Payment and Policy Changes Related to CSN Services 2018 – 2021*****SFY19 (July 2018 – June 2019)***

- Last rate increase established under the standard rate-setting process promulgated in May 2018 and increased all CSN rates by 3.88%, effective February 2018, and increased agency CSN rates by 7.47%, effective April 2018.

***SFY20 Q1&Q2 (July – December 2019)***

- In July 2019, MassHealth removed CSN rates from 101 CMR 350.00 and established a stand-alone rate regulation for CSN services at 101 CMR 361.00.

***SFY20 Q3 (January – March 2020)***

- MassHealth issued COVID-19 flexibilities to ease the provision of CSN services. Many remain in effect until the end of the federal public health emergency.
- CSN flexibilities include: allowing independent nurses to work and be reimbursed for up to 80 hours per week and 16 hours per day, allowance of telehealth for consultative services, including assessments; easier access to overtime rates for independent nurses; expansion of who can order home health services; and allowance for CCM to conduct assessments via telehealth.
- Many of these flexibilities were codified through provider bulletins in January 2021 and again in June 2021.

***SFY20 Q4 (April – June 2020)***

- In April 2020, and through Administrative Bulletin (AB) 20-23, MassHealth issued a 10% rate add-on for all CSN services due to the COVID-19 pandemic. These rate add-ons were effective April 1, 2020, through July 31, 2020.
- In June 2020, MassHealth issued an additional 10% rate add-on, calculated to include the previous rate add-on issued in April 2020, through AB 20-63. This second add-on was effective May 1, 2020, through July 31, 2020.

***SFY21***

- MassHealth established permanent rate increases under 101 CMR 361.00 in July 2020, increasing all CSN rates by 1.57%.
- MassHealth issued a 10% rate add-on to all home- and community-based services (HCBS) included in the American Rescue Plan Act (ARPA), including for CSN services.
  - In addition to the standard 10% rate add-on for all HCBS programs, MassHealth issued an additional 20% rate add-on for CSN services provided by independent nurses and home health agencies.
  - The approximately 30% rate add-on for CSN services was established under 101 CMR 447.000, effective for dates of service from July 1, 2021, through December 31, 2021.
- MassHealth extended the standard 10% rate increase for all HCBS programs, including CSN, until June 30, 2022.
- MassHealth proposed a permanent 20% rate increase to be established in 101 CMR 361.00 for all CSN services, effective on January 1, 2022.
- MassHealth proposed a temporary allowance for HHAs to bill and be reimbursed for overtime services.

## 3.0 Conclusion

A gap exists in the provision of CSN care in Massachusetts for children and adults with complex medical needs. Of the 2.8 million hours of CSN service hours authorized by MassHealth in 2020, 1.77 million (64%) were actually delivered (paid). Compared to 2018 and 2019, 2020 shows a substantial drop in the percentage of authorized visits delivered (paid) annually. The decline occurred most substantially for children, from 67% to 62%. In 2020, the percentage of hours delivered (paid) declined substantially with the onset of the COVID-19 pandemic in March. In the last quarter of 2020, this ratio of authorized-to-delivered services largely rebounded for adults, but did not rebound to previous years' levels for the pediatric population.

Many reasons might contribute to why authorized hours might not be delivered. Nine of 10 HHAs that responded to the BerryDunn survey report lacking adequate staffing to provide CSN hours as requested by patients and authorized by MassHealth. Asked for the approximate percentage of authorized CSN hours their agencies are able to fill, the respondents' answers ranged from 20% to 90%—averaging 64%.

Most patients receive care on a one-to-one nurse-to-patient basis, although a nurse may provide CSN care to more than one patient at a time. Approximately 4.5% of patients receiving CSN care from HHAs are being treated by an RN or LPN simultaneously with at least one other patient. This percentage is consistent with the 4.8% of independent nurses contracting directly with MassHealth who care for more than one patient at a time.

The wages paid to nurses by HHAs compare favorably to the rates paid by MassHealth to independent nurses. But HHAs compete with other healthcare provider sectors and with nearby states in order to hire and retain nursing staff. The degree to which wages for CSN services are comparable to nurse wages in other healthcare settings may influence the supply of nurses for such employment. Federal data indicate that Massachusetts' median wage for HHA nurses compares well to the median hourly wage for nurses in other non-hospital-based nursing practice settings within Massachusetts. Additionally, Massachusetts exceeds all of the neighboring states in RN and LPN hourly wages for home healthcare services.

MassHealth payment rates for CSN services have increased several times since 2018. Most recently, in July 2021, CSN providers were among those receiving immediate, time-limited, across-the-board payment enhancements. MassHealth has also proposed a permanent 20% rate increase for all CSN services, along with allowance for agency overtime reimbursement, effective for dates of service on and after January 1, 2022. These payment increases address the primary challenges noted by agencies in filling CSN authorized hours. The changes are intended to infuse additional nursing hours into the CSN program and allow full use of the current workforce.

Increased compensation for nurses providing CSN services might mitigate some of the gap between authorized and delivered hours. However, nurses base their employment decisions on many factors, and challenges remain in matching the specific and complex needs of each patient and family to available nurses. MassHealth, with new regulations, may be able to expand the number of agencies providing CSN services. But CSN staffing and service gaps persist amid the overall state and national shortages in the nursing workforce—an existing shortage made more acute under the conditions of the COVID-19 public health emergency. This broader policy challenge will continue to affect CSN and healthcare service delivery broadly throughout Massachusetts.

## Appendix A

MGL Chapter 12C §24: Report on the provision of continuous skilled nursing care<sup>53</sup>

The center, in conjunction with MassHealth, shall prepare a biennial report on the provision of continuous skilled nursing care as defined in 101 CMR 361 and 130 CMR 403.402. The report shall include, but not be limited to: (i) the number of pediatric patients and the number of adult patients requiring continuous skilled nursing care; (ii) the average and median number of continuous skilled nursing hours authorized by MassHealth per day, week, month and year for pediatric patients and for adult patients; (iii) the average and median number of authorized continuous skilled nursing hours actually delivered per day, week, month and year for pediatric patients and for adult patients; (iv) the total number of continuous skilled nursing hours authorized and actually delivered by MassHealth per month and year for pediatric patients and for adult patients; (v) the number of nurses providing continuous skilled nursing care to more than 1 patient at a time and, for the patients cared for by those nurses, the aggregate proportion of authorized continuous skilled nursing hours to utilized continuous skilled nursing hours; (vi) the number of nurses who contract with MassHealth to provide continuous skilled nursing care, the number of nurses who provide continuous skilled nursing care through a home health agency that contracts with MassHealth and whether the total number of nurses providing such care is sufficient to fill all authorized continuous skilled nursing hours; (vii) a description of the training, experience and education levels of the nurses who contract with MassHealth to provide continuous skilled nursing care; and (viii) an evaluation of the adequacy of the reimbursement rates for continuous skilled nursing care as established in 101 CMR 350.04 and a comparison of those rates against: (A) the rate paid to nurses who contract directly with MassHealth to provide continuous skilled nursing care; (B) the portion of the reimbursement rate paid directly as wages to nurses providing continuous skilled nursing care through a home health agency that contracts with MassHealth; and (C) the median wage rate paid to all nurses in the commonwealth.

Not later than January 1 of each even-numbered year, the report shall be filed with the secretary of health and human services, the clerks of the senate and the house of representatives, the joint committee on healthcare financing, the joint committee on public health and the senate and house committees on ways and means. The center shall make the report publicly available on its website.

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<sup>53</sup> <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleIII/Chapter12C/Section24>

## Appendix B

### Potential Reasons that CSN-Authorized Hours May Not be Delivered (Filled): Reported by MassHealth<sup>54</sup>

- The member might not find a nurse in their area with availability that matches their needs.
- The member might have declined offers by HHAs or Independent Nurses to cover portions of their authorized hours. Member reasons for their decline could be:
  - The member does not believe the nurse is the right fit.
  - The member does not feel the nurse has the skills and/or training to safely care for their needs.
- The member dislikes a non-nursing related attribute of the nurse, i.e., smoker, gender, perceived physical capabilities of the nurse, etc.
- The member chooses not to fill their hours with nursing because:
  - The member prefers the personal care assistant option, in which the family uses personal care assistant services in lieu of CSN.
  - The member prefers to “bank” authorized hours for later use.
- The member does not want to set scheduled shifts, but would rather nurses to be flexible with their availability.
- The member is waiting for a specific nurse to be available through a HHA or to obtain Independent Nurse provider number.
- The member travels and does not take nursing with him/her.
- A member’s hours are filled, but the nurse gets sick, goes on vacation, etc. and there is no coverage from the agency and/or other co-vending providers.
- A member’s hours are filled, but their nurse ends up leaving the agency, or ending their contract with MassHealth to pursue other personal or career opportunities.
- The member is brand new (under 3 months) in the CCM Program and is working to find nursing availability.
- The member is hospitalized during a period of time for which they would typically receive CSN services.
- The member is hospitalized for an extended period of time and provider assigned to a new case.
- The member’s condition changes and they no longer need services authorized (or some portion of).
- The member’s living arrangements change so that CSN services are no longer necessary, i.e., they move out of state, they move to a setting that offers nursing, etc.
- Member discharged due to difficult or unsafe member/family behaviors impacting care and staff safety
- The member passes away before the end of the PA period.

### Unfilled Hours during the COVID-19 Public Health Emergency

- The number of unfilled CSN hours increased during the COVID-19 pandemic because:
  - Many families chose to forgo CSN hours in order to mitigate the risk of exposure to COVID-19
  - CSN nurses increasingly recruited and hired by hospitals and other healthcare institutions  
CSN nurses were exposed to or in close contact with someone who contracted COVID-19, resulting in the nurse needing to self-isolate

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<sup>54</sup> This list was provided by MassHealth, via email, November 25, 2021. It is not intended as an exhaustive list, and does not represent frequency or relative importance of identified reasons.





For more information, please contact:

CENTER FOR HEALTH INFORMATION AND ANALYSIS

501 Boylston Street  
Boston, MA 02116

(617) 701-8100

[www.chiamass.gov](http://www.chiamass.gov)

[@Mass\\_CHIA](https://twitter.com/Mass_CHIA)

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