MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES: RATE STUDY FOR ADULT DAY CARE SERVICE

FEBRUARY 19, 2020

The State of Missouri Department of Health and Senior Services (DHSS) contracted with Mercer Government Human Services Consulting (Mercer), part of Mercer Health & Benefits LLC, to perform a rate study on the Adult Day Care (ADC) waiver service. This document presents a summary of the data sources reviewed, the issues considered, the analysis performed and the results of the study.

BACKGROUND

Within DHSS, the Division of Senior and Disability Services (DSDS) oversees the delivery of community-based services for various Missouri populations and programs. DSDS administers three 1915(c) waivers that provide home and community-based services (HCBS) and supports to seniors and adults with disabilities. These waivers include the Aged and Disabled (AD) Waiver, the ADC Waiver and the Independent Living (IL) Waiver. Through these waivers, DHSS aims to establish and maintain a community-based system of care and offer an array of services to meet each individual's support needs.

While the target population and array of covered services varies for each of these programs, the definitions and provider qualifications for a given service are generally consistent across the programs. In addition, the rates for a given service are not generally differentiated by program. Based on discussions with DHSS and a review of the waivers, DHSS's fee schedule rates are updated by the State Legislature through the State of Missouri annual budgeting and appropriations process. The State Legislature works independently with legislative budgetary and research staff and obtains input from DHSS, the Missouri provider industry and advocates. One fee schedule rate is developed for each service, and that rate applies to all providers statewide.

RATE STUDY SCOPE

This rate study focuses on the ADC service which is administered by DSDS through the AD and ADC 1915(c) waivers. DHSS initiated the study to understand if the ADC fee schedule rates being paid to providers are reasonable and appropriate given current market conditions and to ensure compliance with requirements from the Centers for Medicare and Medicaid Services (CMS). At the request of DHSS, Mercer modeled market-based ranges for ADC for the SFY 2019 time period.

OVERVIEW OF RATE STUDY PROCESS

The rate study involved several key steps, which began in October 2018 and were conducted through August 2019. First, Mercer obtained and reviewed relevant DHSS documents to ensure a clear understanding of the service and to identify key cost components associated with service delivery. For the service, Mercer held discussions with DHSS to determine whether each cost component should be modeled within the rates. After reviewing the staffing qualifications outlined in the service definition and

program manuals, Mercer developed a summary of key staffing requirements (refer to Appendix A). Using the Bureau of Labor Statistics (BLS) wage data, Mercer proposed service-specific job positions necessary for providers to meet the staffing requirements, appropriately support individuals and deliver high quality services. Mercer then conducted research to obtain market data related to each market-based cost component and also administered a provider questionnaire to collect data to benchmark against the market data. Each of these key steps is described in more detail in subsequent paragraphs.

Mercer facilitated discussions with DHSS throughout the study to ensure alignment of the rate development process with DHSS's expectations of providers. These expectations applied to various elements of service delivery such as staff qualifications, competitive wages, training time, overtime and other allowable service-related expenses. DHSS selected assumptions for each of the key cost components based on current marketplace conditions and provider feedback, and Mercer modeled this information to establish a SFY 2019 rate range. In cases where market data or provider questionnaire data was not available to inform a specific cost component (e.g., productivity), Mercer developed assumptions based on discussions with DHSS.

SERVICE DEFINITIONS AND DHSS EXPECTATIONS FOR SERVICE DELIVERY

As part of the study, Mercer reviewed several documents containing background information on the ADC service. In addition, DHSS and Mercer held several meetings to ensure Mercer had a clear understanding of DHSS's expectations for providers delivering this service. Key information reviewed included:

- Missouri regulations and service manuals (dated January 2018) that described 1915(c) waiver services
- Waiver service definitions included in Appendix C of the 1915(c) waivers
- Missouri licensure regulations cited within the service definitions
- Data analyses and other relevant information provided by DHSS

Note that the study was based upon an understanding of the service definitions, regulations and other DHSS policies as of June 2019. If the service definitions, regulations, policies or any other material aspect related to this service changes, the study results may need to be revised accordingly.

Using the information above, Mercer identified the key elements associated with the service that would need to be considered in the analysis and discussed with DHSS. Mercer then developed the following list of key cost components that may be incurred by providers in the delivery of the service:

- Direct care and other program staff wages
- Employee-related expenses (ERE) (e.g., health insurance, other benefits, employer taxes)
- Productivity (e.g., paid time off [PTO], training time, other non-billable time)

- Other service-related costs (e.g., transportation, supplies)
- Administration/overhead

MARKET DATA REVIEW

After determining the key cost components and appropriate staffing qualifications, market data was collected to inform the pricing of each of the cost components. Mercer primarily relied on publicly available market data (e.g., BLS data), which provides an independent perspective of what employers pay for specific cost components. Mercer collected Missouri-specific market data, where available, and benchmarked this against provider data for reasonability. In cases where data was not publicly available for a given cost component, Mercer relied on guidance from DHSS, Mercer's experience with other state HCBS programs and expectations communicated to states by CMS. Note that all assumptions and resulting rate range were reviewed with DHSS for appropriateness and consistency with their expectations and desired purchasing strategy.

The following sections provide detail on the information collected and resulting assumptions for each of the key cost components.

Hourly Wages

For purposes of wages, Mercer began by reviewing the job categories available in the BLS May 2017 wage data publication. The ADC service definition was reviewed to understand the key requirements of the service, including provider qualifications, licensing requirements and staffing requirements. Discussions were held to understand DHSS's expectations for direct care workers delivering the service. Based on this information, Mercer proposed specific job positions and position weightings.

Direct Care

For each job position, Missouri-specific statewide wage ranges from the BLS data were used in the modeling process. The 25th percentile wage was used for the lower bound of the wage range, the 50th percentile for the interim point in the range and the 75th percentile wage was used as the upper bound of the wage range. The wages were modeled to comply with the $8.60 per hour minimum wage effective January 1, 2019, and an inflationary factor based on BLS wage trends was applied to the wages to project them to the SFY 2019 time period. The resulting market wages were also benchmarked against provider data for reasonability. The direct care wage ranges are summarized in Table 1. For detail on the selected BLS job positions and weightings, please refer to Appendix B.

TABLE 1: ADC DIRECT CARE WAGE RANGES

STAFF CATEGORY	PROJECTED DIRECT CARE SFY 2019 WAGE RANGE[1]		
	LOWER BOUND	INTERIM POINT	UPPER BOUND
Direct Care Worker	$10.14	$13.04	$16.74

Based on discussions with DHSS, two types of direct care workers were considered in the rate study. In addition to the direct care workers who remain in the ADC facility during their shifts, consideration was also included for an additional direct care worker who takes ADC participants into the community to promote integration and access to community activities. This is an important component that enables ADC providers to meet the requirements of the HCBS Settings Final Rule.

In addition to modeling hourly wages, DHSS requested consideration for direct care staff overtime costs that providers incur to deliver the ADC service. Based on discussions with DHSS, Mercer included a 3% assumption in the rate modeling process to reflect the increased payroll costs due to direct care overtime hours paid at time and a half.

Other Program Staff

Besides direct care staff, consideration was also included for costs associated with other program staff who perform tasks necessary to deliver services to individuals. Based on discussions with DHSS and requirements outlined in the service definition and manual, ADC requires a staff person to supervise and oversee the direct care staff delivering the service. Additionally, the service also requires some form of nursing oversight.

DHSS indicated that individuals working in the supervisory role generally have more experience than direct care workers and often require higher education levels. The responsibilities of the supervisor include tasks such as staff training, supervision, monitoring and oversight of direct care workers. Similar to the direct care staff wage assumptions, the 25th percentile wage was used for the lower bound of the other program staff wage range, the 50th percentile for the interim point and the 75th percentile wage was used as the upper bound of the wage range (except for nursing positions where the 90th percentile was used at the upper bound).

Table 2 shows the wage ranges assumed for the other program staff positions. Note that an inflationary factor based on BLS wage trends was applied to the wages to project them to the SFY 2019 time period. For detail on the selected BLS job positions and weightings, please refer to Appendix B.

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[1] Based on Missouri-specific wages from the BLS (May 2017), inflated to the SFY 2019 time period using a BLS annual wage trend factor of 2.7%.

TABLE 2: ADC OTHER PROGRAM STAFF WAGE RANGES

STAFF CATEGORY	PROJECTED SUPERVISOR SFY 2019 WAGE RANGE[2]		
	LOWER BOUND	INTERIM POINT	UPPER BOUND
Supervisor	$14.94	$18.33	$23.83
Nursing Oversight	$24.96	$30.13	$42.86

Assumptions for the ratio of other program staff to direct care workers were based on service definition requirements, information collected from providers and discussions with DHSS. An assumption of one supervisor to ten direct care staff (1:10) and a ratio of one nurse to 25 direct care staff (1:25) were assumed.

ERE

There are various components that make up the ERE cost category. The items considered included:

- Health insurance for full-time employees
- Employer taxes (Federal Insurance Contributions Act [FICA]/Federal Unemployment Tax Act [FUTA]/ State Unemployment Tax Act [SUTA])
- Workers' compensation
- Retirement benefits for full-time employees
- Other benefits (e.g., short-term disability/long-term disability, life insurance) for full-time employees

Since some ERE benefits were only factored in for full-time employees, service-specific assumptions were made regarding the percentage of direct care staff who were full-time and part-time. ADC direct care workers were modeled at 95% full-time and 5% part-time.

The ERE cost components were priced based on data for Missouri private sector employees in comparable industries. The analysis performed for each of these assumptions is outlined below and resulted in total ERE assumptions ranging from roughly 28% to 37% of wages.

Health Insurance (Medical/Dental/Vision)

To establish the employer cost for health insurance, Mercer reviewed BLS market studies on employer health care costs. When reviewing this information, Mercer analyzed national and Missouri-specific data

[2] Based on Missouri-specific wages from the BLS (May 2017), inflated to the SFY 2019 time period using a BLS annual wage trend factor of 2.7%.

points. After discussing the assumption with DHSS, the resulting amount was trended to the SFY 2019 period using a BLS health insurance inflation factor.

Employer Taxes
To comply with state and federal tax requirements of employers, FICA, FUTA and SUTA amounts were assumed as part of the rate development process. Mercer used information published by the Internal Revenue Service to identify costs for FUTA and FICA and data from the Missouri Department of Labor for SUTA.

Workers' Compensation, Retirement Benefits and Other Benefits
For workers' compensation costs, Mercer reviewed rates published by the Missouri Department of Insurance.

For retirement and other benefits, Mercer reviewed BLS data. An assumption was included to cover employer costs for full-time workers related to retirement benefits and other benefits including short-term disability, long-term disability and life insurance.

Total Compensation (Wages and ERE)
Although the wage and ERE assumptions were established separately, the assumptions on a total compensation basis (i.e., wages and ERE combined) were reviewed with DHSS. The focus on total compensation aims to address the fact that some providers may choose to pay lower wages and offer a more robust benefit package to their employees, while other employers may provide higher wages with fewer benefits.

Productivity

The next cost component considered in the review process was non-billable time. Mercer assumed that an average full-time direct care worker could work 2,080 total hours per year (average shift of eight hours per day). As part of the direct care worker's activities, there are some tasks that are considered non-billable (i.e., the worker is being paid by the provider, but he/she is not delivering services to the individual that can be billed as a Medicaid service). Some examples include PTO and time the direct care worker spends attending staff meetings. The major components of non-billable time are summarized below.

PTO
Based on information published by BLS and provider survey data, Mercer assumed a range of 15 to 27 days of PTO (includes vacation, holiday and sick time) for full-time staff of agency services and a range of zero to five days of PTO for part-time staff.

Training Time
DHSS expects that providers are training direct care staff on an ongoing basis so they can ensure the health and welfare of individuals to whom they are delivering services. DHSS regulations outline a minimum number of direct care worker training hours that are expected to be completed annually. Based on the expected time associated with the training sessions and the fact that agency providers experience employee turnover, assumptions were established separately for new employees and experienced

employees and blended together based on an assumed turnover rate. For new direct care workers, an assumption of 2½ days of training per year was included in the agency modeling process. For experienced direct care workers, the assumption was 1¼ days per year.

Other Non-Billable Time
This category includes direct care worker non-billable tasks that are required as part of service delivery but not billable to Medicaid due to the participant not being present. Examples include direct care workers needing to attend staff meetings and documenting case notes. Discussions were held with DHSS regarding the amount of non-billable time that would reasonably be expected during a typical work day and an assumption of 94% was utilized.

Other Service-Related Costs
In addition to staff wages, ERE and productivity assumptions, Mercer also considered other service-related costs that agency providers incur to deliver these services. These costs include staff training sessions (e.g., cost of the actual training session or materials), service-related supplies (e.g., food costs) and transportation costs (e.g., vehicle costs or fuel). An assumption of 8% was included to account for the facility costs necessary to deliver this service.

Administrative Costs
Administrative costs include expenses such as management, administrative office space, equipment and supplies, recruitment, information technology, human resources, billing, finance and accounting, legal, and other indirect costs necessary for program operations. Based on industry standards, CMS expectations and discussions with DHSS, a 10% administrative cost load factor was included.

Group Rates
ADC is delivered in a group setting (e.g., one direct care worker is delivering services to more than one participant at the same time). To develop rate ranges for services provided in a group setting, an average group size assumption was needed. Mercer worked with DHSS and collected information from providers to establish an average ADC group size assumption that ranged from four to five individuals. To arrive at the group rates per unit of service, Mercer divided the rate ranges that were developed for a one-to-one (1:1) staffing ratio by the average group size assumption.

Unit Definition
The rate range was developed on a “per hour” basis, and then this hourly rate range was divided by four to develop the 15-minute unit rate range.

RATE RANGE SUMMARY AND OBSERVATIONS
Table 3 compares DHSS’s SFY 2019 ADC Medicaid fee schedule rates to the market-based rate ranges that were developed based on the assumptions described in this document. As shown in the table, DHSS’s ADC SFY 2019 fee schedule rates fall slightly above the lower bound of the modeled rate ranges.

It is important to note that ADC services can be delivered by two staff with up to 16 participants. Based on feedback from providers, there are often cases where this ratio of 2:16 (or 1:8) does not occur in practice.

For example, there may be days where some individuals are sick or on vacation and do not attend the ADC center, which results in the services being delivered via a smaller ratio (e.g., 1:5). As mentioned previously, the rate ranges were modeled based on an assumed average group size ranging from four to five individuals.

TABLE 3: SFY 2019 FEE SCHEDULE RATES COMPARED TO MARKET-BASED MODELED RATE RANGE

SERVICE	PROCEDURE CODE AND MODIFIER	UNIT	SFY 2019 DHSS FEE SCHEDULE RATE	SFY 2019 MARKET-BASED MODELED RATE RANGE			PERCENT CHANGE BETWEEN SFY 2019 RATES AND MODELED RATES		
				LOWER BOUND	INTERIM POINT	UPPER BOUND	LOWER BOUND	INTERIM POINT	UPPER BOUND
Adult Day Care									
ADC	S5100 HB	15 min.	$2.29	$2.22	$3.11	$4.48	-3.1%	35.8%	95.7%
AD	S5100 HC	15 min.	$2.29	$2.22	$3.11	$4.48	-3.1%	35.8%	95.7%

FUTURE CONSIDERATIONS

In addition to completing a rate study specific to the SFY 2019 time period, DHSS requested information on how the modeled rates would be impacted by future Missouri minimum wage increases. DHSS and Mercer discussed the Missouri Proposition B (Minimum Wage) legislation passed in November 2018. The legislation includes a phase-in of minimum wage increases over the course of five years as shown in the table below.

TABLE 4: SUMMARY OF MINIMUM WAGE PHASE-IN

TIME PERIOD	MINIMUM WAGE (PER HOUR)	DOLLAR INCREASE YEAR OVER YEAR	PERCENT INCREASE YEAR OVER YEAR
Prior to January 1, 2019	$7.85	N/A	N/A
Beginning January 1, 2019 (during SFY 2019)	$8.60	$0.75	9.6%
Beginning January 1, 2020 (during SFY 2020)	$9.45	$0.85	9.9%
Beginning January 1, 2021 (during SFY 2021)	$10.30	$0.85	9.0%
Beginning January 1, 2022 (during SFY 2022)	$11.15	$0.85	8.3%
Beginning January 1, 2023 (during SFY 2023)	$12.00	$0.85	7.6%

As mentioned previously, the market-based hourly wages used to model the SFY 2019 rate range were at least $8.60 to ensure compliance with the minimum wage increase effective January 1, 2019. No additional adjustments were needed for purposes of the SFY 2019 rate study. When the next minimum wage increase occurs on January 1, 2020, the lower bound of the SFY 2019 modeled rate ranges for some services will continue to be compliant with minimum wage requirements (i.e., lower bound assumed hourly wage was above $9.45 per hour), but this will eventually no longer be the case effective with the minimum wage increase effective on January 1, 2021.

Wages comprise a large portion of the modeled rates, so the minimum wage increases will drive the rate ranges to increase in future years. However, there are other cost components considered in the rate ranges that won't necessarily change as a result of minimum wage increases. For example, it is unlikely that productivity assumptions will change as a result of a minimum wage increase. Questions have been raised as to whether wages for higher paid direct care workers and other program staff will also increase to maintain the current wage differential among these workers. For purposes of this analysis, Mercer assumed only the wages of workers not making at least minimum wage would increase.

Table 5 shows how the lower bound of the SFY 2019 ADC modeled rate ranges would need to be increased to comply with the increasing minimum wage. The percentages in Table 5 build off of each other. For example, the SFY 2019 rate would need to be increased by the cumulative impact of the

percentages in each of the four columns to determine the rate impact associated with the January 1, 2023 minimum wage level. Impacts were not analyzed at any other point in the rate range given the focus was to ensure the lower bound was compliant. Note that only the minimum wage increase was considered; other potential cost changes associated with cost of living increases or other market changes were not analyzed and are not reflected in Table 5.

TABLE 5: PROJECTED ESTIMATED IMPACTS TO SFY 2019 ADC MODELED LOWER BOUND RATES TO COMPLY WITH MINIMUM WAGE INCREASES

SERVICE	EFFECTIVE DATE			
	JAN 1, 2020	JAN 1, 2021	JAN 1, 2022	JAN 1, 2023
ADC	N/A	1.2%	6.1%	5.8%

STAKEHOLDER ENGAGEMENT

As mentioned previously, DHSS collected provider feedback on specific cost components during the rate study process. This feedback was reviewed and benchmarked against the market data to inform the rate study assumptions. Upon completion of the draft study, DHSS invited stakeholders to attend an in-person meeting on June 26, 2019 in the Fulton State Hospital Auditorium. Mercer presented a detailed overview of the rate study methodology and shared the slide deck with attendees. Mercer's presentation described the key rate study steps conducted, the data that was reviewed and the assumptions that were made. Mercer explained how the resulting rate ranges compared to DHSS's ADC fee schedule rates. In addition to having the opportunity to ask questions during the presentation, DHSS also provided stakeholders the opportunity to submit written feedback through August 15, 2019. DHSS and Mercer reviewed the feedback, held discussions and finalized the rate study.

LIMITATIONS AND CAVEATS

In preparing these ranges, Mercer considered publicly available market information and guidance from DHSS. Mercer reviewed the data and information for internal consistency and reasonableness, but did not audit them. If the data or information are incomplete or inaccurate, the values may need to be revised accordingly. The following limitations apply to the development of these ranges:

- Assumptions were based upon the service definitions contained in DHSS program manuals and 1915(c) waivers. When the service definition was not specific regarding a particular rate component, the applicable assumptions were developed in conjunction with DHSS.

- To the extent changes or clarifications are made to the service definitions, rate ranges may be impacted and need to be updated accordingly.

- Rate range assumptions were developed based upon market information available as of June 2019. Should additional information become available regarding the cost of providing these services, the rate ranges may need to be updated accordingly.

Rate ranges developed by Mercer are projections of future contingent events. Actual provider costs may differ from these projections. Mercer has developed these ranges on behalf of DHSS to support the delivery of the rate study services and ongoing program design decisions. Use of these ranges for any purpose beyond that stated may not be appropriate.

Potential providers are advised that the use of these ranges may not be appropriate for their particular circumstance, and Mercer disclaims any responsibility for the use of these rates by providers for any purpose. Mercer recommends that any organization considering contracting with DHSS analyze its own projected expenses and revenue needs for comparison to the rates offered before deciding whether to contract with DHSS.

This methodology document assumes the reader is familiar with the DHSS programs and waivers, Medicaid eligibility and projection techniques. It is intended for DHSS and should not be relied upon by third parties. Other readers should seek advice of qualified professionals to understand the technical nature of these results. This document should only be reviewed in its entirety.

APPENDIX A — SERVICE SUMMARY CHART

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APPENDIX A: SERVICE SUMMARY CHART

The Missouri Department of Health and Senior Services (DHSS) engaged Mercer Government Human Services Consulting (Mercer) to perform a rate study on the Adult Day Care (ADC) service that DHSS administers through the Aged and Disabled (AD) and ADC 1915(c) waivers. The subsequent table provide a high-level description of the ADC service with the associated procedure code, unit definition and state fiscal year (SFY) 2019 Medicaid fee schedule rate. The table also presents various service definition and DHSS regulation requirements that are associated with key cost components under consideration during the rate study process.

SERVICE NAME	KEY ELEMENTS OF SERVICE	SERVICE SETTING	CODE, UNIT AND RATE	STAFFING RATIO	PROVIDER QUALIFICATION REQUIREMENTS	OTHER KEY COST COMPONENTS
ADC	Provides continuous care and supervision of disabled adults in a licensed adult day care setting. Services include, but are not limited to, assistance with activities of daily living, planned group activities, food services, client observation, skilled nursing services as specified in the plan of care, and transportation. Subject to Chapter 192, RSMo and 19 CSR 30-90	Adult day care facility and day trips into the community	ADC Waiver: S5100HB — 15 minutes SFY 2019 Rate: $2.29 AD Waiver: S5100HC — 15 Minutes SFY 2019 Rate: $2.29	Two staff for groups of 2–16 participants; three staff for groups of 17–24 participants	Direct Care Worker • At least 18-years old • Qualified by education, training, experience or demonstrated competence in order to perform the duties required by the written job description • Able to read, write and follow directions Program Director • Responsible for day-to-day operation of the program • Qualified by demonstrated competence, specialized background, education or experience to manage day-to-day operations Nurse • Oversees medical services, if offered by facility	• Service is authorized up to ten hours per day, for a max of five days per week • Provider must arrange or provide transportation to and from the day care setting at no cost to the participant (reimbursement for this task limited to two hours of transportation per day) • Includes transportation to planned activities • Includes meal service • May offer other services including: counseling, rehab and medical • Staff training requirements (CPR, First-aid and ongoing quarterly) • Facility costs

APPENDIX B — BLS OCCUPATIONS AND WAGE ASSUMPTIONS

Adult Day Care

(A) Occupational Code	(B) Occupational Title	(C) Job Position Weighting	(D) Lower Bound Hourly Wage[1,2]	(E) Interim Point Hourly Wage[1,2]	(F) Upper Bound Hourly Wage[1,2]
21-1093	Social and Human Service Assistants	100%	$ 10.14	$ 13.04	$ 16.74
		Direct Care Worker Wages	**$ 10.14**	**$ 13.04**	**$ 16.74**
		Annual Salary	**$ 21,092**	**$ 27,121**	**$ 34,824**
39-1021	First-Line Supervisors of Personal Service Workers	50%	$ 12.48	$ 16.28	$ 22.19
29-2061	Licensed Practical and Licensed Vocational Nurses	50%	$ 17.39	$ 20.38	$ 25.48
		Supervisor Wages	**$ 14.94**	**$ 18.33**	**$ 23.83**
		Annual Salary	**$ 31,069**	**$ 38,128**	**$ 49,576**
29-1141	Registered Nurses	100%	$ 24.96	$ 30.13	$ 42.86
		Nursing/Oversight Wages	**$ 24.96**	**$ 30.13**	**$ 42.86**
		Annual Salary	**$ 51,925**	**$ 62,675**	**$ 89,152**

[1] Based on Missouri-specific, statewide BLS wage data published May 2017 and trended to SFY 2019 period. BLS data from: http://www.bls.gov/.

[2] Weighted wage ranges reflect the 25th percentile at the lower bound, the 50th percentile at the interim point, and the 75th percentile at the upper bound for all occupational titles except 'Licensed Practical and Licensed Vocational Nurses' and 'Registered Nurses', which reflect the 90th percentile at the upper bound.