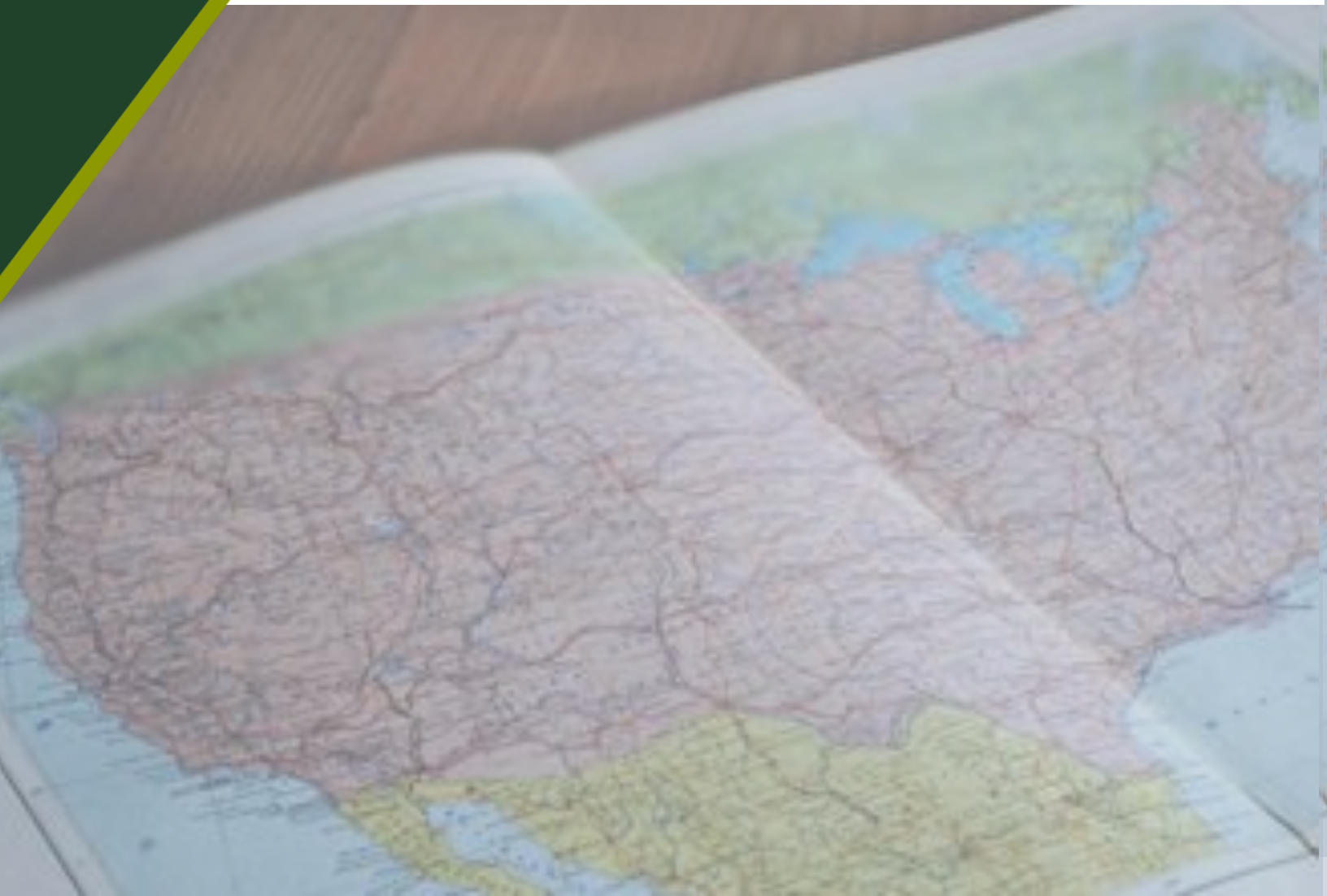




# Analysis of Service Use and Spending

Minnesota Waiver Reimagine Project  
Study 2, Task 2.5





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# INTRODUCTION

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## Background

The Human Services Research Institute (HSRI) is under contract with the Minnesota Department of Human Services (DHS), Disability Services Division (DSD) to complete two studies. The first will determine potential options for reconfiguring four Medicaid waivers that provide home and community-based services (HCBS) to people with disabilities. The second will determine an option or options for a unified individual budgeting model for the proposed reconfiguration, both for individuals utilizing waiver services through an agency model and those self-directing services through Consumer-Directed Community Supports (CDCS).

This paper presents the results of an analysis of current service use and spending patterns as outlined in Task 2.5 of Study 2.

The results of this analysis are intended to inform both studies. For Study 1, an understanding of the differences in the utilization of services across the four waivers will inform decision-making related to the service array for any reconfigured waiver or waivers as well as the potential fiscal implications for any changes to existing waiver structures. For Study 2, historical utilization will be a key determinant of any individual budgeting methodology and will be used to measure both individual- and system-level impacts of any methodology.

What follows are findings from this analysis, considerations, and a description of the methods used to complete this work.

## Summary of Findings

**Individuals' utilization patterns are** influenced by a number of factors that must be considered in order to derive meaningful conclusions. This analysis grouped individuals based on four factors:

- The waiver in which they are enrolled;
- Their living situation;
- Their age (whether they are children or adults—defined as over or under 18 years); and
- Their level of need (for adults only, using preliminary support level assignments developed by HSRI).

Based on these groupings, the analysis calculated average per-member, per-year (PMPY) costs.<sup>1</sup> To further explore differences in costs, the analysis created service groupings (for example, residential services, employment supports, medical and professional services, etc.) and considered differences in the types of services used, the amounts of service used, and the rates paid for services.

## Waiver

The waiver in which individuals are enrolled impacts service use due to differences in covered services and historic practices and expectations within waiver systems.

Figure 1 compares the average PMPY cost in fiscal year 2017 (FY17) by waiver for adults who received services in all 12 months FY17.

Figure 1

### Per-Member, Per-Year Cost for Adults, by Waiver, FY17

Waiver	PMPY
BI	\$84,185
CAC	\$202,942
CADI	\$45,824
DD	\$79,717

As the table demonstrates, the CAC Waiver has the highest average per-person cost for adults, more than double the cost of enrollees in the other waivers. Differences in service utilization and, by extension, average costs across the waivers are driven by a number of factors.

CAC Waiver enrollees have much greater assessed needs than those enrolled in the other waivers. In fact, of those assigned to a preliminary support level (see page 5 for details), 96% of CAC Waiver enrollees are assigned to one of the two highest support levels, compared to just 29% of enrollees across the other three waivers.

In the CADI Waiver, which has the lowest average cost, 55% of enrollees are assigned to the lowest support levels. Further, only 18% of CADI Waiver adult enrollees live in Corporate Foster Care, which is the most costly residential placement, compared to 48% of BI Waiver enrollees and 58% of DD Waiver enrollees.

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<sup>1</sup> As discussed in greater detail in the Methods section, analyses were limited to individuals who received a full-year of service (at least one unit of service in each of the 12 months of fiscal year 2017) and who did not change residential placement (for example, moving from a family home to a foster home).

Other notable observations from comparisons of per-member, per-year costs for adults across the waivers include:

- 63% of BI Waiver enrollees and 60% of DD Waiver enrollees reside in a full-time, paid residential setting. In contrast, only one-third of CADI Waiver enrollees and one-fifth of CAC Waiver enrollees are in such placements.
- The high average costs for CAC Waiver enrollees are due to high residential rates and significant utilization of nursing services. The average Corporate Foster Care rate for CAC Waiver enrollees is \$596 per day, more than double the \$253 average across the other three waivers. Adults living with family and not using CDCS used an average of more than \$176,000 per year in medical and professional services (primarily nursing) while adults living independently without CDCS used more than \$202,000 of such services. The averages in the other waivers are all less than \$4,000 per year.
- Outside of the CAC Waiver, average rates for residential and day habilitation services are generally comparable across the other three waivers after accounting for preliminary support levels.
- In every residential placement, DD Waiver enrollees use more day services than the all-waiver average, with amounts ranging from \$5,500 per year for those living independently without CDCS (compared to a \$1,200 average across the other three waivers) to \$15,300 for those in corporate foster care (compared to \$4,600).

## Living Situation

**Individuals’ living situations have one of the most significant impacts on service usage and associated costs.** Some impacts are obvious; paying for 24-hour care such as Corporate or Family Foster Care or Supported Living is more costly than paying for intermittent supports for someone living in their own home or family home. Others are less obvious. For example, individuals residing in full-time residential placements tend to have greater utilization of day habilitation services compared to those who live with family or independently.

Figure 2

### Per-Member, Per-Year Cost for Adults, by Living Situation, FY17

Living Situation	PMPY
Corporate Foster Care	\$103,988
Family Foster Care	\$77,038
Other Residential	\$53,441
With Family with CDCS	\$46,927
With Family without CDCS	\$41,564
Independent with CDCS	\$26,882
Independent without CDCS	\$25,012

Figure 2 compares the average PMPY cost for adults across all waivers based on their living situation. As expected, individuals receiving 24-hour residential care have the highest total cost, due both to the cost of residential care itself and to greater use of day habilitation services.

Considering corporate foster care as an example, \$88,000 of the \$104,000 total is associated with the Corporate Foster Care service. In comparison, individuals living with family without CDCS use an average of about \$26,000 of in-home personal supports and personal care assistance and those living independently without CDCS use about \$16,000 of these services. Individuals in corporate foster care placements used more than \$12,000 in day habilitation services compared to \$6,400 for those living with family without CDCS and \$1,800 for those living independently without CDCS.

The less intuitive comparison from Figure 2 relates to the differences between those living with family and those living independently. It might reasonably be assumed that the latter group would be more costly than the former because they presumably have fewer unpaid supports upon which to rely. However, the table shows that those living with family are receiving substantially more services than those living independently. Further investigation shows that this is explained partly—but not entirely—by differences in the needs of individuals in the groups. Specifically, those living independently are, unsurprisingly, more likely to be assigned to the lower support levels. Considering those who do not use CDCS, more than 75% of those living independently are assigned to preliminary support levels 1 and 2 compared to 40% of those who live with family. Figure 3 compares per-member, per-year costs for individuals living with family to those living independently based on preliminary support level.

Figure 3

**Per-Member, Per-Year Cost for Adults Living w/ Family and Living Independently, by Preliminary Support Level, FY17**

Preliminary Support Level	w/ Family w/o CDCS	Independent w/o CDCS	w/ Family w/ CDCS	Independent w/ CDCS
Support Level 1	\$15,115	\$14,892	\$20,701	\$21,158
Support Level 2	\$24,025	\$20,635	\$26,399	\$21,672
Support Level 3	\$43,611	\$41,357	\$34,696	\$28,206
Support Level 4	\$86,860	\$71,735	\$74,845	\$54,476
Support Level 5	\$47,707	\$31,119	\$49,803	\$29,397

Incorporating preliminary support levels into the comparison of per-member, per-year costs for those living with family to those living independently narrows the differences, but it remains noteworthy that individuals living with family regularly use more services than those living independently.

## Preliminary Support Levels

Individuals' preliminary support levels affect the costs of supporting them in several ways, impacting where individuals live (those with higher needs are more likely to receive costly full-time residential services), the types and amounts of other supports that they receive (for example, someone with medical needs will be more likely to access nursing services), and the rates paid for services. Figure 4 presents the average per-member, per-year cost based on preliminary support levels.

Figure 4

### Per-Member, Per-Year Cost for Adults by Preliminary Support Level, FY17

Preliminary Support Level	PMPY
Support Level 1	\$31,611
Support Level 2	\$43,003
Support Level 3	\$68,560
Support Level 4	\$94,854
Support Level 5	\$82,780

Further refinement of these support levels will be needed, but the preliminary levels are instructive. In particular, the table shows that there is already some degree of order within the disabilities waivers. In general, individuals with greater needs receive more services.

The differences in Figure 4 are partly due to relative differences across the support levels in their distribution across living situations, which, as noted previously, is a primary determinant of the cost of serving that person. Figure 5 illustrates the composition of each living situation based on preliminary support level.

Figure 5

### Distribution of Living Situation by Preliminary Support Level

	Corp. Foster Care	Family Foster Care	Other Residential	w/ Fam. w/ CDCS	w/ Fam. w/o CDCS	Ind. w/ CDCS	Ind. w/o CDCS
Level 1	7.4%	10.0%	11.9%	3.4%	10.5%	16.9%	29.1%
Level 2	22.2%	24.1%	32.8%	13.3%	29.7%	36.4%	46.3%
Level 3	31.5%	35.7%	29.9%	26.0%	30.8%	19.5%	11.8%
Level 4	8.6%	6.3%	9.4%	10.9%	9.9%	4.2%	3.9%
Level 5	30.4%	23.8%	16.0%	46.5%	19.1%	22.9%	8.9%

The table demonstrates that, in general, individuals living independently are more likely to have relatively modest needs (assigned to preliminary support levels 1 and 2) while those receiving full-time residential care are more likely to have comparatively greater needs (assigned to preliminary support levels 3, 4, and 5). The number of



families that are supporting higher-needs individuals is interesting and has implications for systems planning in terms of supporting these individuals when their families are no longer able to do so.

In addition to living situation, there is a correlation between the preliminary support levels and the services that individuals use. For example:

- Individuals in support level 4 (which is intended to include persons with significant medical conditions and needs) use far more medical and professional services—primarily nursing—than those in the other support levels.
- Spending on CDCS is greater amongst those in the higher support levels, which is expected given that CDCS budgets are tied to assessed needs.
- The use of personal care and other in-home services increases as support levels increase.
- The use of employment services decreases as support levels increase.

For services with rates that are customized (that is, established on an individual-by-individual basis based upon the intensity of support to be delivered by the provider), there is a correlation to the preliminary support levels. For example, the average rate for an adult in Corporate Foster Care assigned to preliminary support level 1 is \$235 per day compared to \$340 for those in preliminary support level 4 and \$306 for those in preliminary support level 5. For Adult Day Services, the average rate for those in preliminary support level 1 is \$3.30 per 15 minutes compared to \$3.67 for those in preliminary support level 5. Similarly, the average daily rate for Day Training and Habilitation with Transportation is \$79.40 for those in preliminary support level 1 compared to \$97.44 for those in preliminary support level 5.

## Age

**An individual’s age influences the amount of services they use.** Previous discussion has focused on adults because they constitute the majority of waiver enrollees, but also because they are generally more costly to serve than children who receive fewer services given typical parental responsibilities and the number of hours per year that they are in school. Additionally, children are less likely to be in costly residential placements. Figure 6 compares the average per-member, per-year cost for adults and children living with family.

Figure 6

### Per-Member, Per-Year Cost for Adults and Children Living with Family, FY17

Age	w/ Family w/o CDCS	w/ Family w/ CDCS
Adults	\$41,564	\$46,927
Children	\$50,908	\$43,870

Amongst those who do not use CDCS, children actually use considerably more services than adults. This difference is due primarily to much greater use of medical and professional services, largely nursing; children in this group used an average of \$15,200 per year compared to \$2,600 for adults. Children also used somewhat more personal assistance and respite services.

Spending amounts within the groups who use CDCS are comparable, which is likely influenced by the fact that the calculations through which CDCS budgets are established are the same for adults and children.



## FINDINGS

DHS seeks to consider options to combine or otherwise reconfigure the four waiver programs for Minnesotans with disabilities and to develop a budget methodology for individuals who receive services. **To support DHS' decision-making**, the HSRI team undertook analyses to understand waiver participants' current service use patterns.

To organize nearly \$2.5 billion in spending for more than 120 unique service procedure codes across the four waivers<sup>2</sup>, these analyses are presented for eight service groupings:

- Full-time *residential services*, such as Corporate and Family Foster Care, Corporate and Family Supported Living, and Customized Living;
- *Personal supports*, such as Adult Companion Services, In-Home Family Support, Independent Living Skills Training, and Homemaker Services;
- *Personal Care Assistance*, including State Plan PCA;
- *Day and employment services*, such as Day Training and Habilitation, Adult Day Care, and Supported Employment;
- *Respite*;
- *Consumer-Directed Community Supports (CDCS)*;
- *Medical and professional services*, including certain nursing and therapy services covered through the State Plan; and
- All *other services* not included in the previous categories, including Environmental Accessibility Adaptations and Specialized Medical Equipment and Supplies.

Discussion of each of these service groupings opens with a listing of the specific procedure code and modifier combinations that comprise the grouping and the amount spent on each service.

The analyses further consider utilization of these services based upon key characteristics that are typically associated with service use patterns:

- The waiver on which individuals are enrolled;
- **Individuals' living situation, for example, in** corporate foster care or living with family;
- **Individuals' age (whether they are** children or adults—defined as over or under 18 years); and

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<sup>2</sup> This total includes Personal Care Assistance and certain nursing and therapy services provided to waiver enrollees through the Medicaid State Plan.

- **Individuals'** support level based on preliminary analyses of MnCHOICES assessment data.

To ensure that the analyses reflect service patterns according to the listed characteristics, individuals who changed from one group to another (for example, they turned 18 or changed waivers during the year) are excluded. The analyses similarly exclude **individuals who did not receive a 'full year' of services (defined as at least one service during each of the 12 months of FY17)**. The remaining individuals **represent the 'analysis group'**.

The Methodology section of this report describes the process for assigning individuals to the delineated groups and provides a detailed reconciliation to the number of individuals who received services during FY17.<sup>3</sup>

This section is organized around the eight service groupings with key observations focused on individual characteristics. The detailed analyses of utilization figures for **each procedure code within each of the four waivers according to individuals'** living situation, age group, and preliminary support level accompany this report as Attachments 1 – 4.

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<sup>3</sup> Unless otherwise noted, this report provides statistics for the individuals with a 'full year' of service in fiscal year 2017 and whose 'key characteristics' did not change during this period in order to inform decision-making regarding potential waiver reconfigurations and individual budgeting methodologies. Specifically, the analysis covers 32,524 individuals of the 47,317 persons who received any services in fiscal year 2017. Consequently, numbers reported here will not necessarily comport with figures reported elsewhere for all service recipients.

## Residential Services

Full-time residential services accounted for 56% of all FY17 spending included in this analysis (\$1.4 billion of \$2.5 billion in total) as detailed in Figure 7.

Figure 7

### FY17 Spending on Residential Services, All Recipients

Service	Code	FY17 Spend
Corporate Foster Care, Adult (BI, CAC, and CADI Waivers)	S5140-U9	\$395,713,275
Corporate Supported Living, Adult (Daily) (DD Waiver)	T2016-U9	\$744,538,877
Family Foster Care, Adult (BI, CAC, and CADI Waivers)	S5140	\$42,202,034
Supported Living Services, Adult (Daily) (DD Waiver)	T2016	\$35,523,180
Corporate Foster Care, Child (BI, CAC, and CADI Waivers)	S5145-U9	\$13,538,122
Corporate Supported Living, Child (Daily) (DD Waiver)	T2016-HA-U9	\$13,798,861
Family Foster Care, Child (BI, CAC, and CADI Waivers)	S5145	\$3,815,535
Supported Living Services, Child (Daily) (DD Waiver)	T2016-HA	\$3,684,514
Customized Living (BI and CADI Waivers)	T2031	\$18,581,560
Customized Living Services, 24-Hour (BI and CADI Waivers)	T2031-TG	\$125,595,478
Custom. Living, 24-Hour, Corporate Foster Care (BI and CADI Waivers)	T2031-TG-U9	\$72,607
Residential Care Services (BI and CADI Waivers)	T2033	\$7,167,810
<b>Total</b>		<b>\$1,404,231,853</b>

Within the analysis group, about 47% of adults and less than 5% of children received full-time residential services. Figures 8 and 9 report the counts by residential type and waiver.

Figure 8

**Counts of Adults in Analysis Group, by Waiver and Living Situation**

	BI	CAC	CADI	DD	Total
Corporate Foster Care/ Supported Living	465 (48.2%)	31 (18.1%)	2,812 (18.6%)	7,929 (58.2%)	11,237 (37.6%)
Family Foster Care/ Supported Living	24 (2.5%)	7 (4.1%)	408 (2.7%)	373 (2.7%)	812 (2.7%)
Customized Living/ Other Residential	121 (12.6%)	0 (0.0%)	1,971 (13.0%)	0 (0.0%)	2,092 (7.0%)
Non-Residential	354 (36.7%)	133 (77.8%)	9,947 (65.7%)	5,320 (39.1%)	15,754 (52.7%)
<b>Total</b>	<b>964</b>	<b>171</b>	<b>15,138</b>	<b>13,622</b>	<b>29,895</b>

Figure 9

**Counts of Children in Analysis Group, by Waiver and Living Situation**

	BI	CAC	CADI	DD	Total
Corporate Foster Care/ Supported Living	0 (0.0%)	3 (1.8%)	39 (3.2%)	48 (4.0%)	90 (3.4%)
Family Foster Care/ Supported Living	0 (0.0%)	0 (0.0%)	21 (1.7%)	11 (0.9%)	32 (1.2%)
Customized Living/ Other Residential	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Non-Residential	24 (100.0%)	164 (98.2%)	1,177 (95.1%)	1,142 (95.1%)	2,507 (95.4%)
<b>Total</b>	<b>24</b>	<b>167</b>	<b>1,237</b>	<b>1,201</b>	<b>2,629</b>

The tables yield several key findings:

- Corporate foster care/supported living<sup>4</sup> is the primary full-time residential service used by adults, accounting for more than 11,000 of the approximately 14,000 total residential placements. As detailed below, these are generally the most costly residential models.
- The use of full-time residential services by adults varies significantly from waiver-to-waiver. Within the analysis group, more than 60% of BI and DD Waiver enrollees received full-time residential services in FY17 compared to 34% of CADI Waiver enrollees and only 22% of CAC Waiver enrollees. In general, greater use of residential services will result in higher per-person costs.
- Only 112 children in the analysis group—less than 5%—received full-time residential services in FY17.

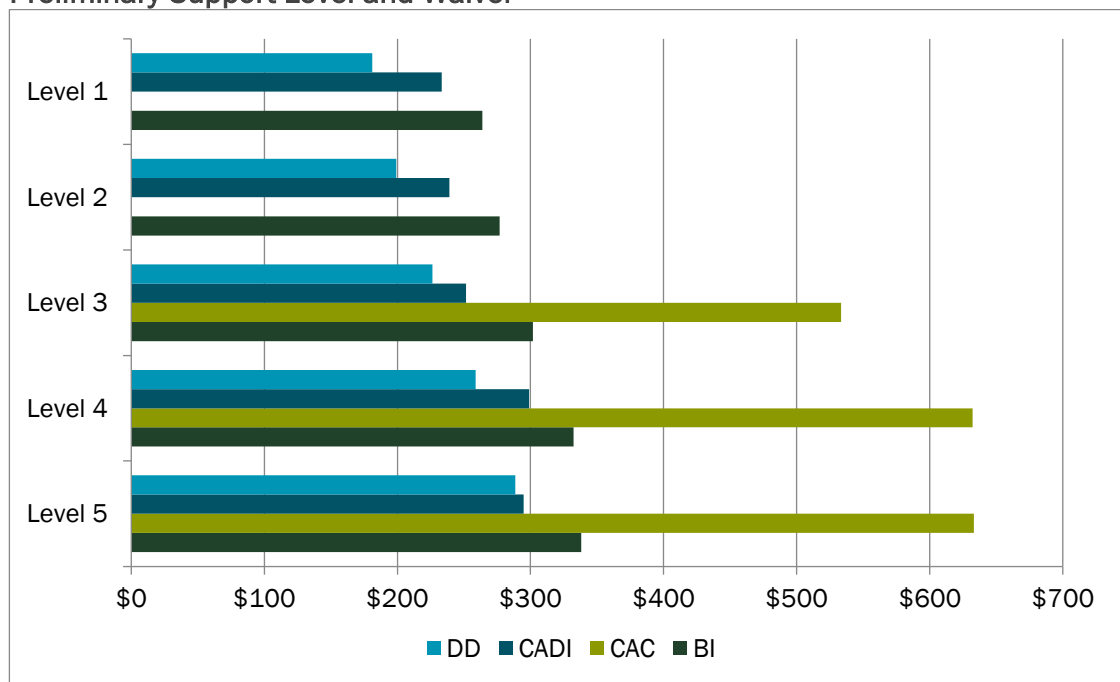
<sup>4</sup> The DD Waiver covers Supported Living while the other three waivers cover Foster Care, but the services are largely equivalent and are combined for discussion purposes.

Although there are significant differences in the number and proportion of individuals who access full-time residential services across the four disability waivers, the amount of services that an individual uses is consistently between 350 and 360 days per year regardless of waiver, the specific residential service used, or preliminary support level. This consistency demonstrates that individuals in these placements spend relatively few days away from their home.

Rates for these services are established on a person-by-person basis according to the level of support delivered by the service provider, which should produce higher rates for individuals with more significant needs. Comparing average rates to preliminary support levels generally demonstrates this relationship. However, there are significant differences in the average paid rate for a given service across the four waivers, even after accounting for support level. Figure 10 illustrates this point by reporting the average daily rate for adults receiving Corporate Foster Care/Supported Living services.

Figure 10

**Average Daily Rate in FY17 for Adult Corporate Foster Care/Supported Living, by Preliminary Support Level and Waiver**



The chart shows that individuals enrolled in the CAC Waiver were authorized for much higher rates than enrollees in the other waivers (although only 31 CAC Waiver enrollees in the analysis group received Corporate Foster Care in FY17). Amongst the other three waivers, there is a consistent pattern. BI Waiver enrollees received the next highest rates, followed by CADI Waiver enrollees, and then DD Waiver enrollees—who received the lowest rates.

The chart also shows that the average rate for individuals assigned to preliminary support level 4 is often greater than the average rate for those in preliminary support level 5, a fact that will be considered as the level criteria are finalized.

Detail regarding the average rate paid for the other full-time residential services by waiver and preliminary support level is included in Appendix B.

## Personal Supports

The personal supports service grouping includes a number of services that generally aid individuals who do not participate in CDCS and who do not receive a full-time residential service, that is, those who live independently or with family or other unpaid caregivers. This service grouping does not include Personal Care Assistance (PCA). Figure 11 summarizes spending totals on the services within this grouping.

Figure 11

### FY17 Spending on Personal Support Services, All Recipients

Service	Code(s)	FY17 Spend
Independent Living Skills Training (BI, CAC, and CADI Waivers)	H2032-TF H2032-TF-TT	\$59,822,627
Independent Living Skills Therapies (BI, CAC, and CADI Waivers)	H2032-TG H2032-HQ	\$17,494
Personal Support (DD Waiver)	S5135	\$48,168,486
Adult Companion Services (BI and CADI Waivers)	S5135	\$1,979,477
In-Home Family Support (DD Waiver)	S5125	\$33,834,650
Supported Living Services, Adult (15 Minutes) (DD Waiver)	T2017 T2017-U9	\$23,431,408
Homemaker and Chore Services (BI, CAC, CADI, and DD Waivers)	S5120 S5130 S5130-TF S5130-TG	\$22,450,376
Night Supervision (BI, CAC, CADI, and DD Waivers)	S5135-UA	\$563,014
Supported Living Services, Child (15 Minutes) (DD Waiver)	T2017-HA T2017-HA-U9	\$77,040
<b>Total</b>		<b>\$190,344,572</b>

The table shows that three services—Personal Support, In-Home Family Support, and Supported Living Services—are available only through the DD Waiver while Independent Living Skills Training is available through the other three waivers but not the DD Waiver. These services cover similar activities but have differing rate assumptions; in particular, the assumed wage for direct care staff is highest for



Independent Living Skills Training, Adult Companion Services, which is not considered a habilitative service, is available only in the BI and CADI Waivers.

### Adults Living with Family (without CDCS)

Across all waivers, about three-quarters of adults living with family and not using CDCS used some amount of personal supports in FY17. Of those who used these services, they received an average of 11 hours per week. Both the usage rates and usage amounts vary according to individuals' support levels, as shown in Figure 12.

Figure 12

#### Use of Personal Supports, Adults Living w/ Family w/o CDCS, FY17

Preliminary Support Level	% of Enrollees Using Service	Avg. Hrs./ Wk. for Users
Support Level 1	84%	4.5
Support Level 2	85%	6.2
Support Level 3	69%	10.4
Support Level 4	44%	8.5
Support Level 5	74%	12.0

The table shows that the percentage of enrollees who use these services is lower for those with more significant needs, with a particularly large drop in preliminary support level 4, in which only 44% of enrollees use these services. A review of the use of PCA services (discussed in the next section) suggests that PCA is being used in lieu of personal supports by individuals with more significant needs. However, for those who do use these services, the amounts used are generally higher for those with greater needs, ranging from 4.5 hours per week for those assigned to preliminary support level 1 to 12.0 hours for those in preliminary support level 5.

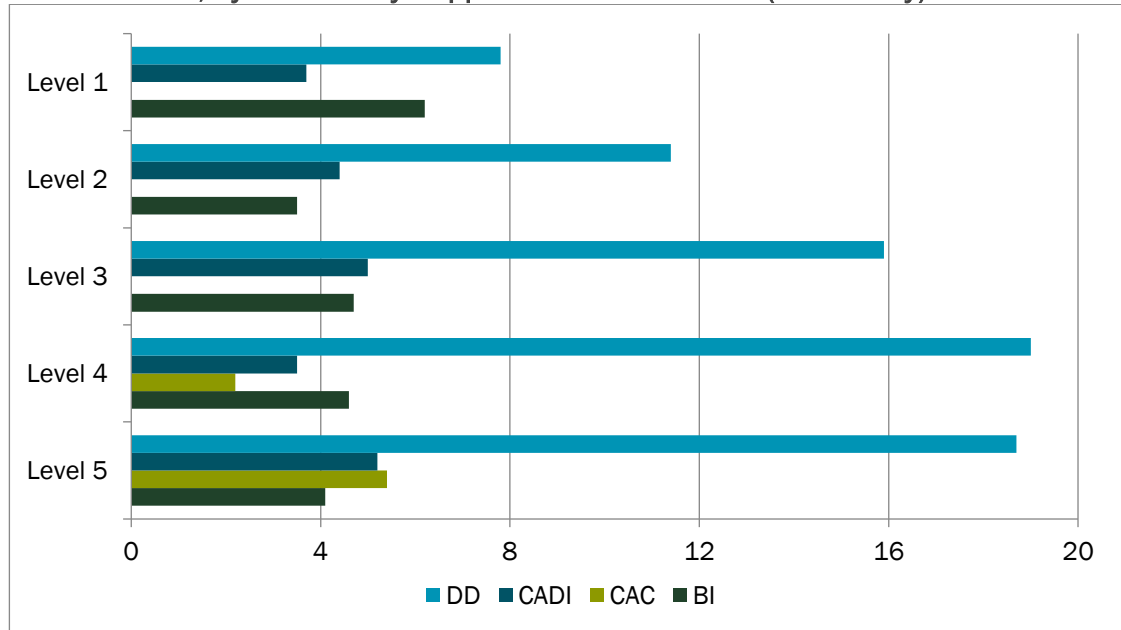
Within the waivers, DD Waiver enrollees are more likely to use these services. About 87% of adults in the analysis group living with family and not using CDCS in the DD Waiver use these services, compared to 69% of BI Waiver enrollees, 69% of CADI Waiver enrollees, and 23% of CAC Waiver enrollees.

Further, amongst the individuals who use these services, those enrolled in the DD Waiver use the most. Usage amounts are highest in the DD Waiver even after accounting for differences in preliminary support levels, as illustrated in Figure 13.

The chart portrays a marked difference between the DD Waiver and the other waivers. DD Waiver enrollees assigned to preliminary support levels 2 through 5 use at least twice as much as those in the waiver with the next highest usage amounts.

Figure 13

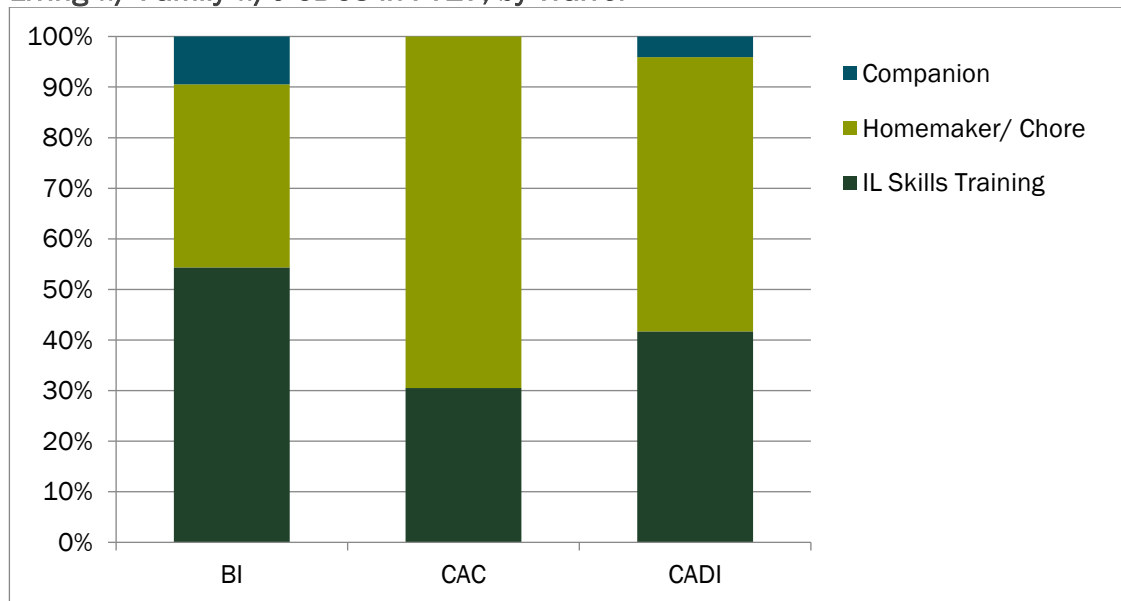
**Average Hours per Week of Personal Support in FY17 for Adults Living with Family Without CDCS, by Preliminary Support Level and Waiver (Users Only)**



The composition of the major components of the personal support usage for the BI, CAC, and CADI Waivers varies significantly, as depicted in Figure 14.

Figure 14

**Percentage Composition of Personal Support Hours for Adults in Analysis Group Living w/ Family w/o CDCS in FY17, by Waiver**



As shown in the chart, Independent Living Skills Training is the primary personal support service used in the BI Waiver (54% of total hours), while Homemaker and Chore services are the primary support in the CAC and CADI Waivers (69% and 54%, respectively). Companion services account for 9% of the personal support hours in the

BI Waiver and 4% of the hours in the CADI Waiver (as noted above, the service is not available to those enrolled in the CAC Waiver).

For adults in the analysis group living with family without CDCS in the DD Waiver, Personal Support services account for 67% of total personal support hours, followed by In-Home Family Support (31%), 15-minute Supported Living (1%), and Homemaker/ Chore services (1%).

### Adults Living Independently (without CDCS)

Nine-in-ten adults in the analysis group living independently without CDCS used some amount of personal supports in FY17. Service users received an average of 6 hours per week, which is substantially less than the 11-hour-per-week average for those who live with family. Much of this difference is because individuals living independently generally have less significant needs than those living with family; even after adjusting for these differences, however, individuals living independently still use fewer services than those living with family. Usage rates and amounts vary across **individuals'** preliminary support levels, as shown in Figure 15.

Figure 15

#### Use of Personal Supports, Adults Living Independently w/o CDCS, FY17

Preliminary Support Level	% of Enrollees Using Service	Avg. Hrs./ Wk. for Users
Support Level 1	93%	4.7
Support Level 2	93%	5.7
Support Level 3	78%	6.3
Support Level 4	65%	4.7
Support Level 5	90%	8.5

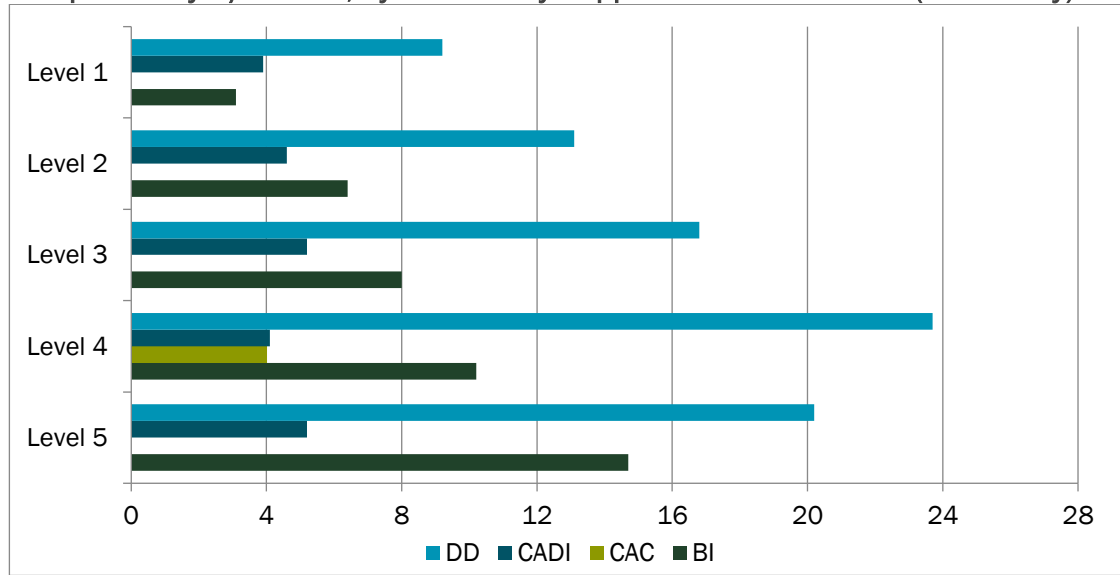
As observed for adults who live with family without CDCS, enrollees with more significant needs are somewhat less likely to use these services. Usage amounts are around five-to-six hours per week for services users in preliminary support levels 1 through 4, while those assigned to preliminary support level 5 use more than eight hours per week.

Use of personal supports by adults in the analysis group living independently without CDCS is high in three of the waivers: 99% of DD Waiver enrollees, 93% of BI Waiver enrollees, and 89% of CADI Waiver enrollees used these services in FY17. In contrast, only 8 of the 13 CAC Waiver enrollees (62%) living independently used these services.

As with adults living with family without CDCS, usage amounts for adults living independently without CDCS are highest amongst DD Waiver enrollees—who receive an average of 12.7 hours per week. This is true even after taking into account differences in preliminary support levels, as shown in Figure 16.

Figure 16

**Average Hours per Week of Personal Support in FY17 for Adults Living Independently w/o CDCS, by Preliminary Support Level and Waiver (Users Only)**

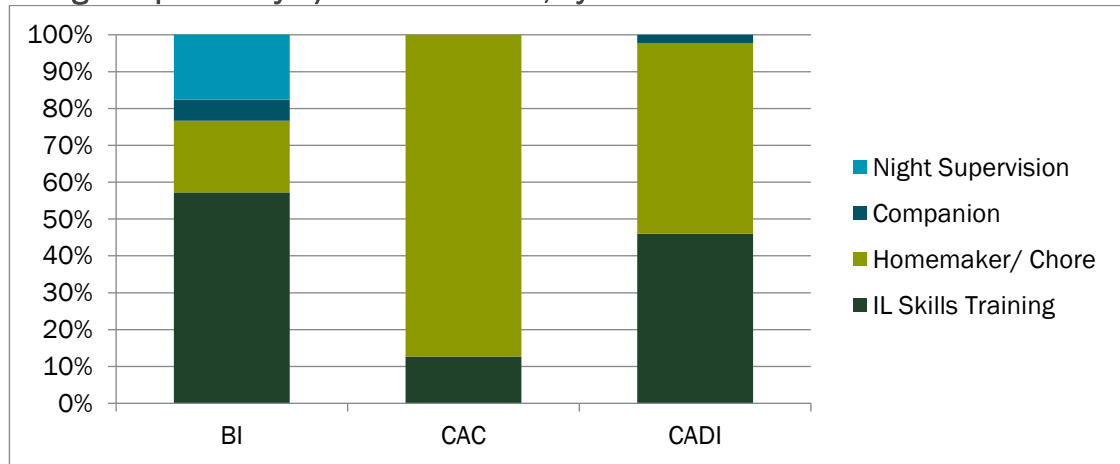


Once again, the difference between the DD Waiver and the other waivers is substantial. Across each of the preliminary support levels, individuals enrolled in the DD Waiver used more than those in each of the other waivers and, with the exception of preliminary support level 5, individuals using these services in the DD Waiver utilized at least twice as much as those in the BI Waiver, the waiver with the next highest usage amounts.

Figure 17 illustrates the composition of the major components of the personal support usage for the BI, CAC, and CADI Waivers.

Figure 17

**Percentage Composition of Personal Support Hours for Adults in Analysis Group Living Independently w/o CDCS in FY17, by Waiver**



Similar to observations for adults living with family without CDCS, Independent Living Skills Training is the primary personal support service used by adults in the analysis group living independently without CDCS in the BI Waiver (57% of total

hours), while Homemaker and Chore services are the primary support in the CAC and CADI Waivers (87% and 52%, respectively). Companion services account for 6% of the personal support hours in the BI Waiver and 2% of the hours in the CADI Waiver. Notably, night supervision is used by only 3% of adults in the BI Waiver (four individuals), but they use an average of 50 hours per week, resulting in this service accounting for 18% of total hours in the BI Waiver for this group of services.

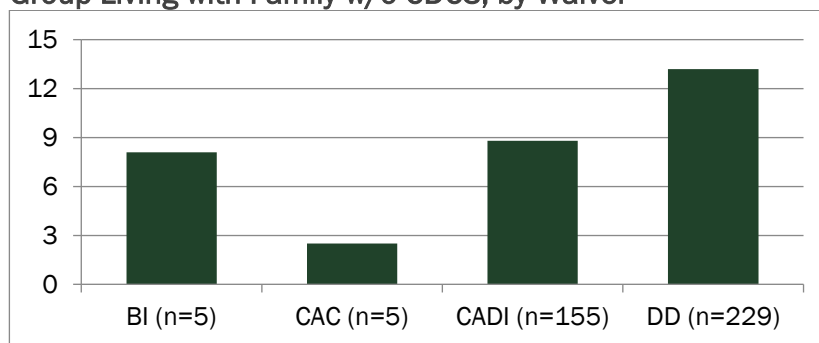
For adults in the analysis group enrolled in the DD Waiver and living with family without CDCS, Supported Living accounts for 80% of total personal support hours, followed by Personal Support services (16%), Homemaker/ Chore services (3%), and In-Home Family Support (1%).

### Children Living with Family (without CDCS)

Children in the analysis group living with family without CDCS are less likely to use the services in the personal support grouping than adults living with family without CDCS; 53% of children used some amount of these services in FY17 compared to 76% of adults. Usage rates vary by waiver, led by the DD Waiver (71% of 323 children received some amount of personal supports), followed by the BI Waiver (5 of 9 children, or 56%), the CADI Waiver (43% of 359 children), and the CAC Waiver (5 of 46 children, or 11%). Usage amounts also vary by waiver, as shown in Figure 18.

Figure 18

**Average Hours per Week of Personal Support in FY17 for Children in Analysis Group Living with Family w/o CDCS, by Waiver**



Of the children who use these services, those enrolled in the DD Waiver use the most support, an average of more than 13 hours per week. CADI Waiver enrollees use about 9 hours per week while enrollees in the other two waivers use fewer hours (although there are only five children in both the BI and CAC Waivers who use these services). More than 95% of the total hours received by BI and CADI Waiver enrollees are billed as Independent Living Skills Training. For the five CAC Waiver enrollees, all of the hours were billed as Homemaker or Chore services. For DD Waiver enrollees, nearly three-quarters of the hours were billed as In-Home Family Support with most of the remaining hours billed as Personal Support services.

## Personal Care Assistance

**Minnesota’s Medicaid State Plan** covers Personal Care Assistance (PCA) to assist eligible individuals with activities of daily living such as eating, grooming, and dressing; instrumental activities of daily living such as shopping and meal planning; observation and redirection of behaviors; and health-related procedures and tasks. The amount of PCA that an individual is authorized to receive is based on an assessment of need and varies from 1.25 hours to 24 hours per day.

Within the disability waivers, PCA is not available to those receiving 24-hour residential supports or to those participating in CDCS. For those who are eligible for **PCA, the waivers cover ‘extended’ PCA for individuals who need PCA hours beyond** what the State Plan allows.

Figure 19 summarizes PCA spending.

Figure 19

### FY17 Spending on Personal Care Assistance, All Recipients

Service	Code(s)	FY17 Spend
State Plan Personal Care Assistance	T1019 T1019-TT T1019-HQ T1019-UA T1019-U6	\$185,248,801
Waiver Extended Personal Care Assistance	T1019-UC T1019-TT-UC T1019-HQ-UC	\$18,316,608
<b>Total</b>		<b>\$203,565,409</b>

More than 90% of PCA services received by waiver enrollees are delivered through the State Plan. Considering both State Plan and waiver PCA, 99% of total billing is delivered on a one-to-one basis.

### Adults Living with Family (without CDCS)

Across all waivers, 43% of adults in the analysis group living with family without CDCS used some amount of PCA in FY17. Of these adults, 30% (13% of all adults living with family and not using CDCS) used waiver PCA services in addition to their State Plan PCA.

Of those who used any PCA services, they received an average of 37 hours per week across both State Plan and waiver PCA. Considering State Plan PCA only, the average usage amount was 34 hours per week. Of those using waiver PCA, the average usage amount was 11 hours per week.

Overall usage rates, use of waiver PCA, and total usage amounts vary according to **individuals’** preliminary support levels, as shown in Figure 20.

Figure 20

**Use of Personal Supports, Adults Living with Family w/o CDCS, FY17**

Preliminary Support Level	% of Enrollees Using Any PCA	% of Enrollees Using Waiver PCA <sup>a</sup>	Avg. Hrs./ Wk. for Users
Support Level 1	9%	2%	9.9
Support Level 2	39%	11%	20.1
Support Level 3	62%	18%	36.2
Support Level 4	83%	32%	60.0
Support Level 5	59%	20%	37.2

<sup>a</sup>Enrollees who used Waiver PCA is a subset of those using any PCA (the difference between the two figures is the percentage that used State Plan PCA only).

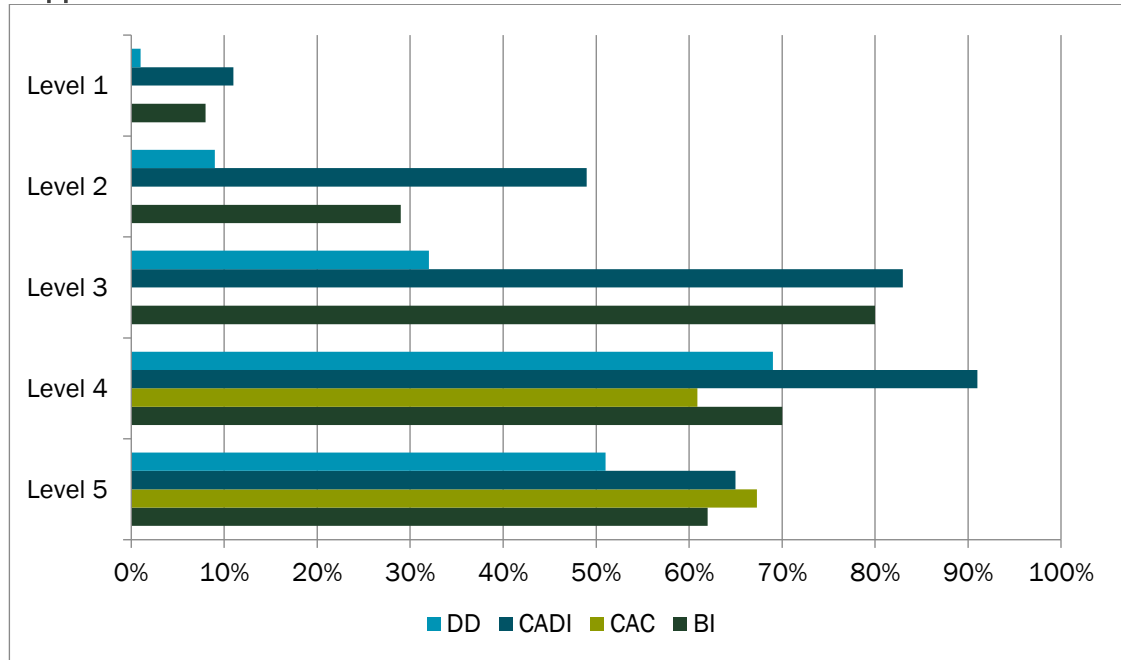
The table demonstrates the relationship between the use of PCA and the preliminary support levels:

- Only 9% of those assigned to support level 1 used any PCA compared to 83% of those in preliminary support level 4.
- Similarly, only 2% of those in support level 1 used waiver PCA to supplement their State Plan PCA allowance compared to 32% of those in preliminary support level 4.
- PCA usage amounts are also correlated with support levels. Those in preliminary support level 4 used an average of 60 hours per week, six times as much as the 10 hours per week used by those in preliminary support level 1. Most of this difference relates to State Plan PCA. For the waiver PCA **‘supplement’ the variance in usage was less dramatic; amongst users, those in preliminary support level 1 used an average of 9 hours per week compared to 16 hours for those in preliminary support level 4.**
- Preliminary support level 5 does not follow this pattern; PCA usage rates and amounts for this group are similar to preliminary support level 3.

The PCA usage rate amongst adults in the analysis group living with family and not using CDCS varies widely across the waivers, ranging from 22% of those in the DD Waiver to 68% of those in the CAC Waiver. A significant portion of this difference, however, appears to be related to differences in support levels, as illustrated in Figure 21.

Figure 21

**PCA Usage Rates in FY17 for Adults Living with Family w/o CDCS, by Preliminary Support Level and Waiver**

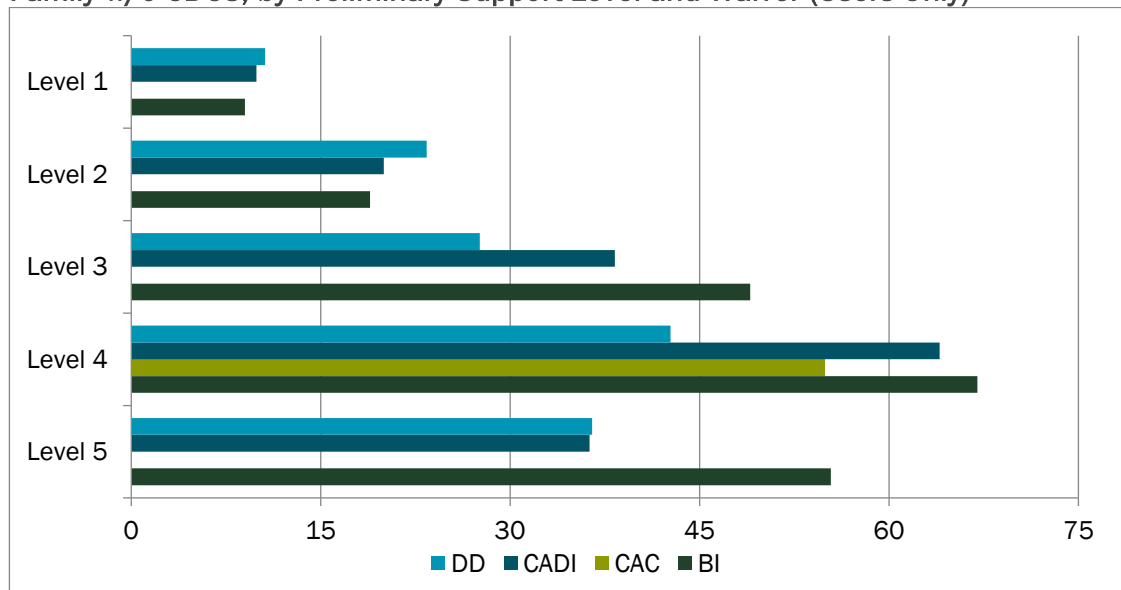


The chart demonstrates that DD Waiver enrollees are consistently less likely to use PCA than enrollees in the other waivers—although the differences are less significant when considering preliminary support levels—but are more likely to use services in the personal supports grouping as discussed above. Across the other three waivers, with some exceptions, usage rates are similar within each of the support levels.

Figure 22 shows usage amounts across the preliminary support levels and waivers.

Figure 22

**Average Hours per Week of PCA in FY17 for Adults in Analysis Group Living w/ Family w/o CDCS, by Preliminary Support Level and Waiver (Users Only)**





## Adults Living Independently (without CDCS)

Across the four waivers, fewer than a third (32%) of adults in the analysis group living independently without CDCS used some amount of PCA in FY17. Of these adults, 29% (9% of all adults living independently and not using CDCS) used waiver PCA services in addition to their State Plan PCA.

On average, those who used PCA received an average of 26 hours per week across both State Plan and waiver PCA. Considering State Plan PCA only, the average usage amount was 24 hours per week. Of those using waiver PCA, the average usage amount was 10 hours per week.

Overall usage rates, use of waiver PCA, and total usage amounts vary according to **individuals' preliminary** support levels, as shown in Figure 23.

Figure 23

### Use of Personal Supports, Adults Living Independently w/o CDCS, FY17

Preliminary Support Level	% of Enrollees Using any PCA	% of Enrollees Using Waiver PCA <sup>a</sup>	Avg. Hrs./ Wk. for Users
Support Level 1	7%	1%	9.1
Support Level 2	35%	9%	16.5
Support Level 3	77%	25%	36.7
Support Level 4	87%	38%	55.2
Support Level 5	33%	11%	26.5

<sup>a</sup>Enrollees who used Waiver PCA is a subset of those using any PCA (the difference between the two figures is the percentage that used State Plan PCA only).

As observed for adults living with family, there is a relationship between the use of PCA and the preliminary support levels:

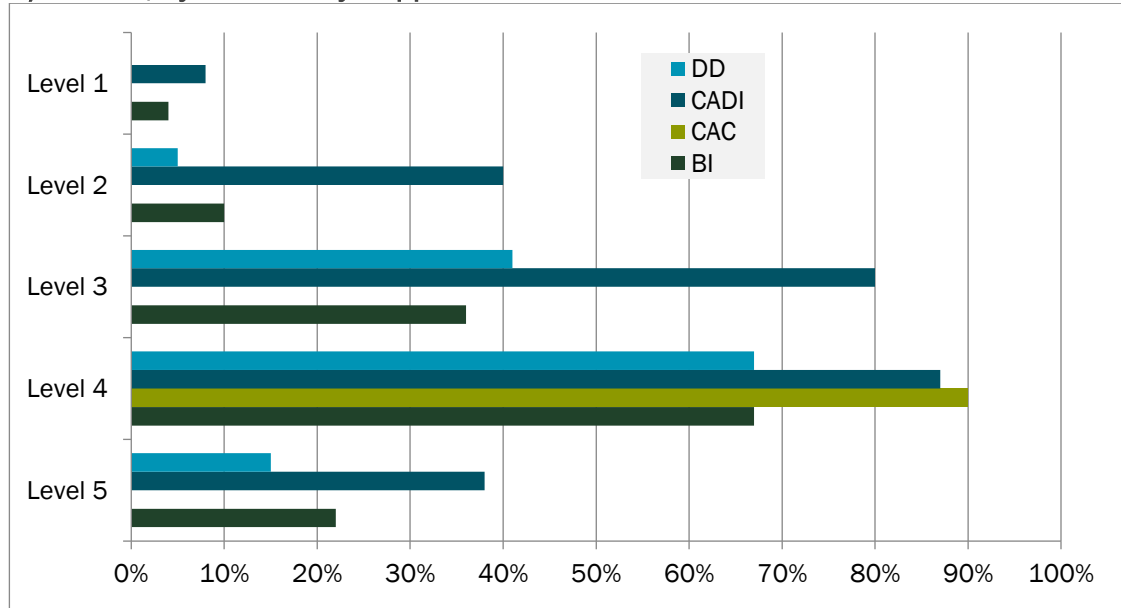
- Only 7% of those assigned to preliminary support level 1 used any PCA compared to 87% of those in preliminary support level 4.
- Similarly, only 1% of those in preliminary support level 1 used waiver PCA to supplement their State Plan PCA allowance compared to 38% of those in preliminary support level 4.
- PCA usage amounts are also correlated with preliminary support levels. Those in preliminary support level 4 used an average of 55 hours per week, six times as much as the 9 hours per week used by those in preliminary support level 1. Most of this difference relates to State Plan PCA. For the waiver PCA **'supplement' the variance in usage was less dramatic; amongst users**, those in preliminary support level 1 used an average of 5 hours per week compared to 20 hours for those in preliminary support level 4.

- Preliminary support level 5 does not follow this pattern; usage rates and amounts for this group are similar to preliminary support level 2.

Considering the waivers individually, DD and BI Waiver enrollees are much less likely to use PCA (5% and 13%, respectively) than those enrolled in the CADI (37%) and CAC Waivers (85%—of 13 individuals). These trends are evident even when accounting for preliminary support levels, as seen in Figure 24.

Figure 24

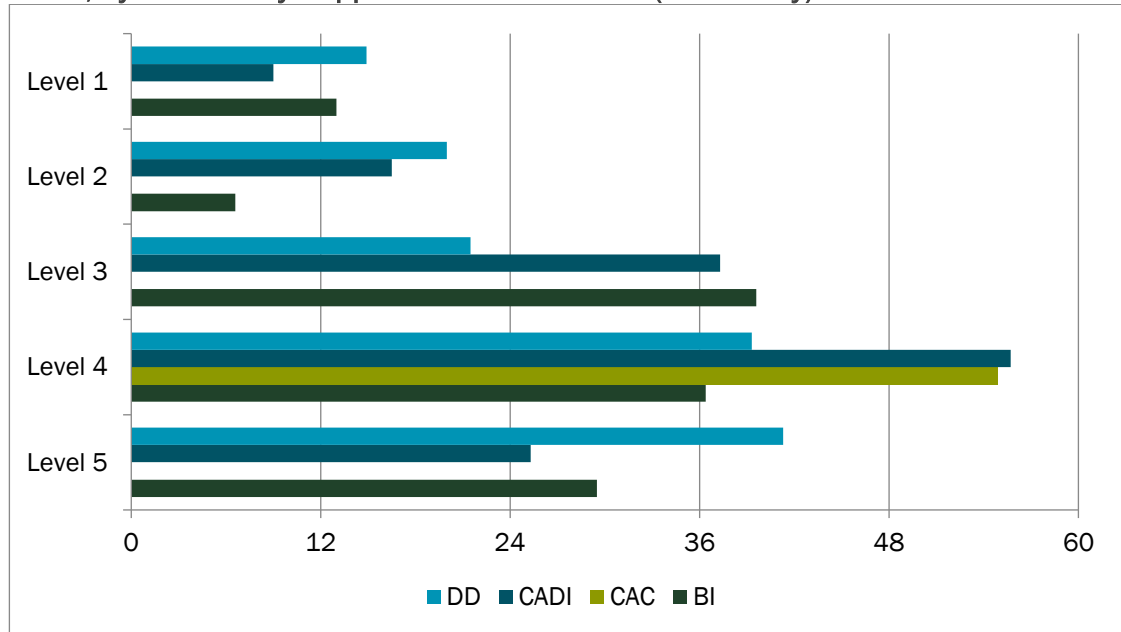
**PCA Usage Rates in FY17 for Adults in the Analysis Group Living Independently w/o CDCS, by Preliminary Support Level and Waiver**



Usage amounts are reasonably similar across the waivers after accounting for the preliminary support levels, as shown in Figure 25.

Figure 25

**Average Hours per Week of PCA in FY17 for Adults Living Independently w/o CDCS, by Preliminary Support Level and Waiver (Users Only)**



**Children Living with Family (without CDCS)**

Children in the analysis group living with family without CDCS are more likely to use PCA than adults living with family without CDCS; 58% of children used some amount of these services in FY17 compared to 43% of adults. Usage rates are highest amongst CADI Waiver enrollees (66%) and are similar amongst the BI, CAC, and CADI Waivers, ranging between 50% and 56%.

Usage amounts are relatively similar across the waivers, ranging from a low of 27 hours per week received by DD Waiver enrollees to a high of 37 hours per week received by CADI Waiver enrollees.

## Day and Employment Services

The day and employment services grouping includes day care, day habilitation, prevocational, and supported employment services for adults. These services represent the second-largest category of spending, after residential services. Figure 26 summarizes spending totals on the services within this grouping.

Figure 26

### FY17 Spending on Day and Employment Services, All Recipients

Service	Code(s)	FY 2017 Spend
Day Training & Habilitation w/ Transportation (Day/ Part-Day) (DD Waiver)	T2020 T2020-U5	\$178,654,213
Day Training & Habilitation w/o Transportation (15 Minutes) (DD Waiver)	T2021	\$2,832,060
Day Training & Habilitation w/ Trans. Pilots (DD Waiver)	T2021-TF T2021-UB	\$25,368
Structured Day Program (Day) (BI Waiver)	T2020	\$1,353,232
Structured Day Program (15 Minutes) (BI Waiver)	T2021	\$1,093,186
Adult Day Services (Day) (BI, CADI, and DD Waivers)	S5102	\$13,040,576
Family Adult Day Services (Day) (BI, CAC, CADI, and DD Waivers)	S5102-U7	\$78,045
Adult Day Services (15 Minutes) (BI, CADI, and DD Waivers)	S5100	\$6,674,820
Adult Day Services, Bath (15 Minutes) (BI, CADI, and DD Waivers)	S5100-TF	\$71,348
Family Adult Day Services (Day) (BI, CAC, CADI, and DD Waivers)	S5100-U7	\$51,864
Prevocational Services (Day) (BI and CADI Waivers)	T2014	\$17,664,240
Prevocational Services (Hour) (BI and CADI Waivers)	T2015	\$6,612,181
Supported Employment (15 Minutes) (BI, CAC, CADI, and DD Waivers)	T2019 T2019-TT	\$16,908,729
<b>Total</b>		<b>\$245,059,862</b>

The table demonstrates that **the waivers rely on different services for individuals'** daytime activities. Within the BI Waiver, the primary service is Structured Day Program, which includes intensive therapeutic interventions that focus on reduction of maladaptive behavior, sensory/motor development, and social skills training. Adult Day Service is the primary service within this grouping for CADI Waiver enrollees. **These programs are intended to improve individuals' ability to care for themselves** and to offer opportunities for community participation, but do not include the intensive therapeutic interventions of Structured Day Programs. Day Training and Habilitation programs are developed for individuals with developmental disabilities to allow them to participate in community life.

Adult Day Services are covered by all three of these waivers (the CAC Waiver covers **only Family Adult Day Services, which are provided in a caregiver's home**), but is the only option in the CADI Waiver other than Prevocational Services and Supported Employment. Of the total spending across Adult Day Services, 67% is expended on services for CADI Waiver enrollees.

In general, payment rates are highest for Structured Day Program with an average daily rate of \$109.49 although it does not cover transportation to and from the program; followed by Day Training and Habilitation—which does include transportation—with an average daily rate of \$90.94; and trailed by Adult Day Services at \$79.22 per day, which does not include transportation.

Prevocational Services are only covered by the BI and CADI Waivers and comprise 38% and 52%, respectively, of expenditures within this service grouping for these waivers. Supported Employment is covered by all waivers and accounts for 5% of spending within this service grouping within the DD Waiver, 12% within the BI Waiver, and 15% within the CADI Waiver.<sup>5</sup> Other than Family Adult Day Services, the CAC Waiver covers only Supported Employment within this service grouping, but enrollees in this waiver used a total of only \$11,000 of services in FY17 so this waiver is not discussed further in this section.

## Adults in Corporate Foster Care

Three-quarters of adults in the analysis group living in a corporate foster care setting accessed day and employment services in FY17. Given that individuals in these settings cannot access Personal Care Assistance (PCA) or other personal supports described above (with limited exceptions), this statistic means that 25% of adults in corporate foster care are not receiving regular paid supports other than their residential staff. It is unknown whether they have jobs without paid supports or are spending time in the community independently or with natural supports. The fact that usage rates are lowest for those assigned to preliminary

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<sup>5</sup> Total expenditures are influenced by differences in payment rates. It would be preferable to consider proportions of service units, but the use of both 15-minute/hourly and daily billing units would require imprecise conversions to a standard unit.

support level 1—individuals who are most likely to be able to participate in the community or employment independently—suggests that this may be occurring to some extent. Figure 27 illustrates usage rates based on preliminary support levels.

Figure 27

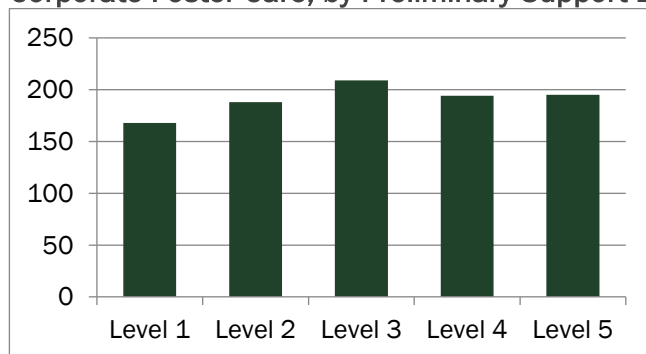
**Use of Day and Employment Services by Adults in Corporate Foster Care, by Preliminary Support Level, FY17**

Preliminary Support Level	% of Enrollees Using Service
Support Level 1	55%
Support Level 2	70%
Support Level 3	79%
Support Level 4	64%
Support Level 5	68%

As shown previously in Figure 26, most spending on day and prevocational services was based on daily units of services rather than 15-minute or hourly variations of the service (Supported Employment is only billed in 15-minute increments). Sixty-four percent of adults living in a corporate foster care setting **received ‘daily unit’ day and prevocational services** in FY17. On average, these users received 202 days of service, with some variability based on preliminary support level as seen in Figure 28.

Figure 28

**Average Days per Year of Day and Prevoc. in FY17 for Adults in Analysis Group in Corporate Foster Care, by Preliminary Support Level**



The chart shows those in preliminary support level 1 used the least amount of supports—an average of 168 days per year—while those in support level 3 used the most: 209 days.

Within the BI and CADI Waiver, Prevocational Services account for the majority of daily units of service, representing 50% and 86%, respectively, of the totals in these waivers. In the DD Waiver, Day Training and Habilitation represented nearly all daily unit billing.

Far fewer individuals used 15-minute/hourly unit services—only 15% (the sum of the percentage of individuals using daily and 15-minute/hourly services exceeds the total usage rate because some individuals used services billed for both unit types in FY17). Users of these services used an average of only 7.2 hours per week. Usage amounts varied somewhat across the preliminary support levels, ranging between 5.7 and 8.2 hours per week.

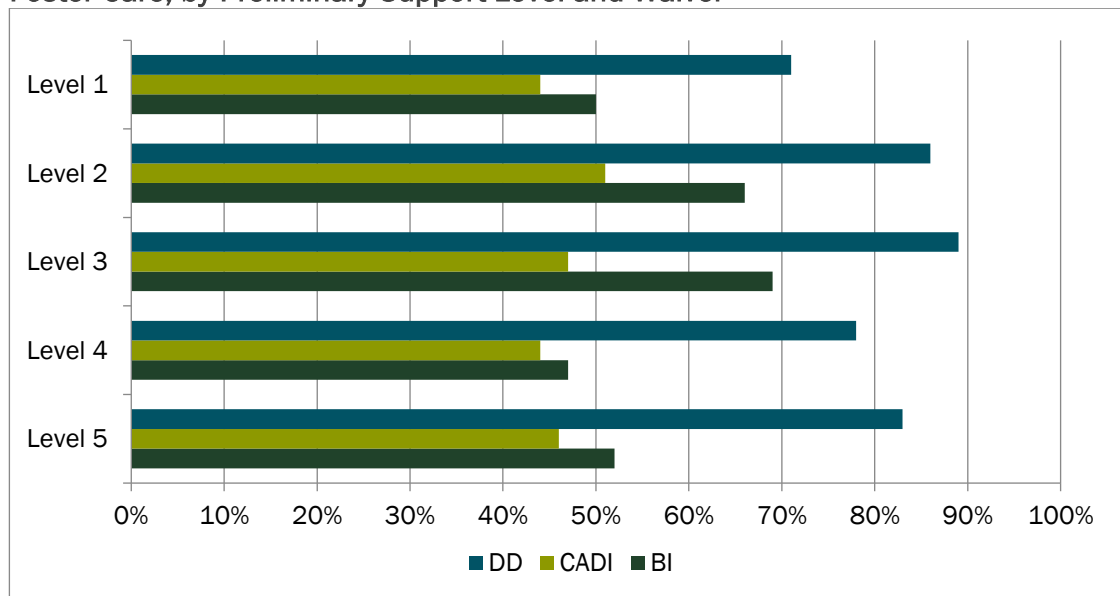
Within the BI Waiver, 42% of these hours were Prevocational Services, 37% were Structured Day Program, and the remainder were Adult Day Services. In the CADI Waiver, Prevocational Services accounted for 68% of billed hours with the balance billed as Adult Day Services. Adult Day Services account for the majority (54%) of service hours in the DD Waiver with Day Training and Habilitation accounting for the remainder.

Nine percent of adults in the analysis group living in corporate foster care received Supported Employment services in FY17. Usage rates were correlated with preliminary support levels as 20% of those assigned to support level 1 used the service, as did 15% of those in support level 2, 4% of those in support levels 3 and 4, and 9% of those in support level 5. Usage amounts were modest and consistent across the support levels, ranging from 4.9 hours to 6.8 hours per week.

Figure 29 compares usage rates of day and employment services across the waivers.

Figure 29

**Day/Employment Usage Rates in FY17 for Adults in the Analysis Group in Corp. Foster Care, by Preliminary Support Level and Waiver**

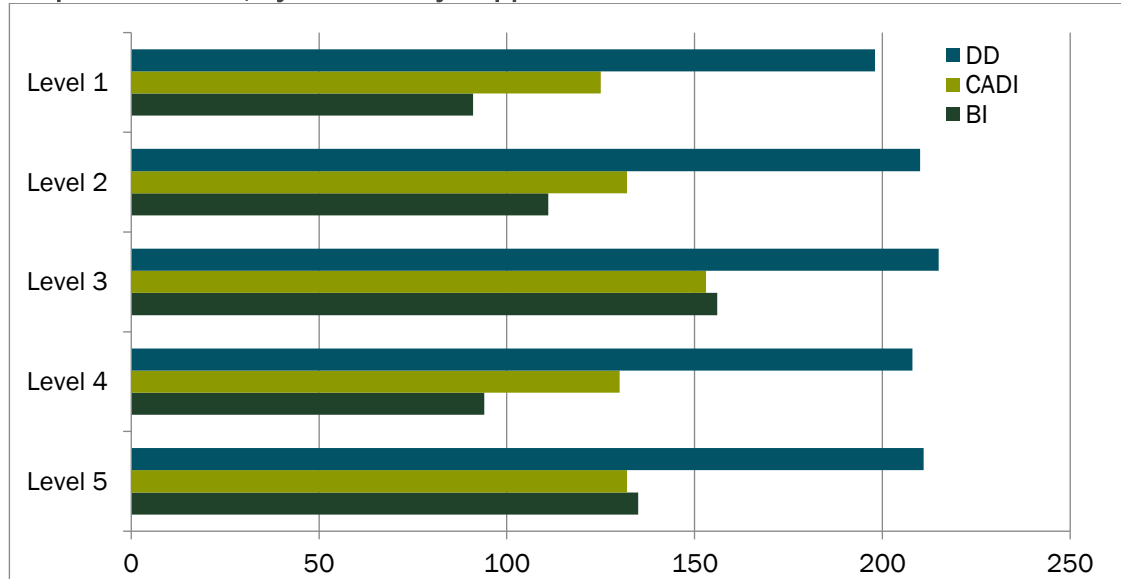


Overall, DD Waiver enrollees are substantially more likely to use these services. In FY17, 85% of adults enrolled in the DD Waiver and living in corporate foster care used these services, compared to 59% and 49% of those in the BI and CADI Waivers, respectively. Within each of the waivers, individuals with the fewest assessed needs and those with the most assessed needs were generally less likely to use day and employment services.

Amongst users of daily unit day and prevocational services, DD Waiver enrollees tend to use more services than those in the other waivers, as shown in Figure 30.

Figure 30

**Daily Unit Day/Prevoc. Days per Year in FY17 for Adults in the Analysis Group in Corp. Foster Care, by Preliminary Support Level and Waiver**



Service users in the DD Waiver used an average of 212 days per year of service compared to 137 days used by those in the CADI Waiver and 129 days used by those in the BI Waiver. The chart also demonstrates that within the CADI and DD waivers, usage amounts do not vary much by support level. While there is considerable variation amongst those enrolled in the BI Waiver, there is no discernable trend.

In contrast to the daily unit services, the use of 15-minute/hourly day and prevocational services is lower in the DD Waiver compared to the BI and CADI Waivers. Specifically, only 10% of DD Waiver enrollees used these services compared to 28% of those enrolled in the CADI Waiver and 35% of those in the BI Waiver. Service users in the DD Waiver used about five hours per week, on average, compared to about seven hours per week used by those in in the BI and CADI Waivers.

The use of Supported Employment services was similar across the waivers. Usage rates for the BI, CADI, and DD Waivers were between 8% and 11%, and the typical usage amount was approximately five hours per week in each of the three waivers.

**Adults in Family Foster Care**

Of the adults in the analysis group living in a family foster care setting, 65% used some amount of day and employment services in FY17, somewhat less than the 75% usage rate amongst those in corporate foster care settings. Similar to the preceding discussion of adults in corporate foster care, the usage rate means that 35% of adults in family foster care are not receiving regular paid supports other than their residential staff, though they may be accessing the community independently or with



natural supports. Usage rates are lowest for levels 1 and 4, totaling 44% and 42%, respectively, while usage rates for the other levels ranged from 63% to 68%.

Of those who do use day and employment services, the largest number of enrollees—51%—used daily unit day and prevocational services. Users received an average of 189 days of service in FY17, a total that did not vary substantially across the preliminary support levels.

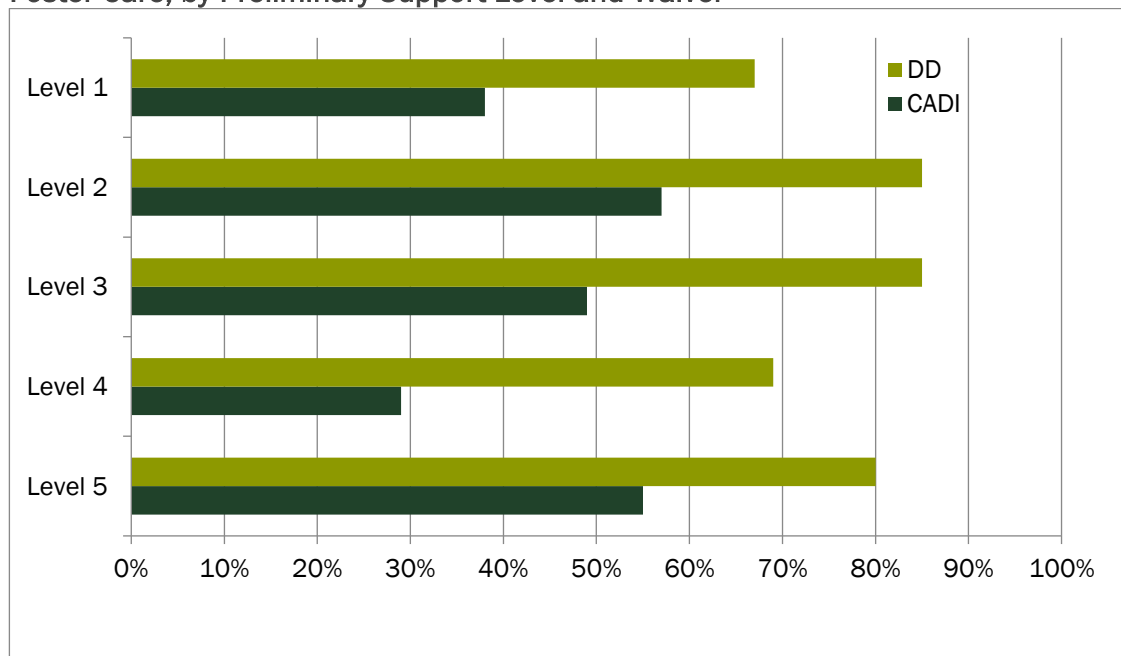
In comparison, only 19% of adults in family foster care used 15-minute/hourly unit services, averaging 6.9 hours per week.

Twelve percent of adults in the analysis group living in family foster care received Supported Employment services in FY17. Usage rates were similar to those of adults in corporate foster care and were correlated with preliminary support level: 19% of those assigned to level 1 received Supported Employment in FY17, as did 14% of those in level 2, 5% of those in level 3, 6% of those in level 4, and 13% of those in level 5. Usage amounts varied significantly across the preliminary support levels, ranging from 0.6 hours per week to 10.6 hours per week, though these figures are impacted by the small number of individuals receiving these services.

An evaluation across waivers includes only the CADI and DD Waivers as there are only 24 BI Waiver enrollees residing in family foster care. Comparing these two waivers, DD Waiver enrollees are much more likely to use day and employment services than CADI Waiver enrollees regardless of preliminary support level, as demonstrated in Figure 31.

Figure 31

**Day/Employment Usage Rates in FY17 for Adults in the Analysis Group in Family Foster Care, by Preliminary Support Level and Waiver**



The overall usage rates—82% for DD Waiver enrollees and 52% for CADI Waiver enrollees—are similar to the usage rates for those in corporate foster care settings.

Daily unit day and prevocational services are the largest component of day and employment services for both waivers, used by 74% of DD Waiver enrollees and 32% of CADI Waiver enrollees. Adults in the DD Waiver used significantly more services, an average of 209 days in FY17 compared to 148 days used by CADI Waiver enrollees. Within the waivers, usage amounts were fairly consistent across the preliminary support levels. Within the CADI Waiver, Prevocational Services accounted for 92% of total days of services; within the DD Waiver, Day Training and Habilitation comprise 95% of total service days.

CADI Waiver enrollees are more likely to use 15-minute/hourly unit day and prevocational services than DD Waiver enrollees, 28% to 8%. Amongst users of these services, CADI Waiver enrollees also use slightly more services, an average of 6.6 hours per week compared to 5.4 hours for DD Waiver enrollees. Prevocational Services represent 63% of service hours used by CADI Waiver enrollees in family foster care with Adult Day Services accounting for the rest. Within the DD Waiver, Adult Day Services comprise 53% of service hours while Day Training and Habilitation account for the rest.

The use of Supported Employment services was slightly higher in the CADI Waiver across each of the preliminary support levels. Overall, 14% of adults in the analysis group in family foster care enrolled in the CADI Waiver accessed Supported Employment compared to 9% of those enrolled in the DD Waiver. Enrollees in the DD Waiver used somewhat more services, however, 6.2 hours per week on average compared to 3.9 hours used by CADI Waiver enrollees.

### **Adults in Other Residential Settings (Customized Living, Residential Care Services)**

These residential services only pertain to the BI and CADI Waivers and the number of individuals in these settings is dramatically higher in the CADI Waiver (1,971 enrollees) than in the BI Waiver (121 enrollees). Thus, the cross-waiver totals are not particularly informative (i.e., they effectively reflect usage rates and amounts of the CADI Waiver).

In the CADI Waiver, day and employment services were used by only 16% of the adults in the analysis group receiving other full-time residential supports in FY17. This usage rate was nearly the same across individuals in each of the preliminary support levels. Usage rates were higher for the BI Waiver, totaling 55% of enrollees, with higher usage rates associated with the higher preliminary support levels.

In the CADI Waiver, more individuals used daily unit day and prevocational services than used 15-minute/hourly unit services. Of those using daily unit services, they received an average of 93 days of service in FY17, the largest component of which was Prevocational Services. Users of 15-minute/hourly unit services received an average of 6.3 hours per week with Adult Day Services being the largest component.

In the BI Waiver, a slightly larger number of individuals used 15-minute/hourly unit day and prevocational services than used daily unit services. On average, users of 15-

minute/hourly services received 11.2 hours per week; Structured Day Program was the most used service. Those using daily unit services received an average of 87 days of service in FY17. Prevocational Services was the most used daily unit service.

Supported Employment was used by only 3% of the CADI Waiver enrollees in these residential settings and users received, on average, only 2.1 hours of service per week. The numbers amongst BI Waiver enrollees were slightly higher; 4% of these individuals used the service and they received an average of 4.4 hours per week.

### **Adults Living with Family (without CDCS)**

Less than one-half (49%) of adults in the analysis group living with family and not using CDCS services accessed day and employment services in FY17. Usage rates varied by preliminary support level: level 1 (34% usage rate), level 2 (35%), and level 4 (28%) had usage rates less than 40%, while half of those in level 3 (51%) and level 5 (49%) used these services.

Most day and prevocational services were billed based on daily units of service. These daily unit services were used by 39% of adults living with family without CDCS in FY17. On average, these users received 179 days of service. There was only modest variability based on preliminary support level, ranging from a low of 155 days for those assigned to preliminary support level 1 to a high of 180 days for those assigned to preliminary support level 3.

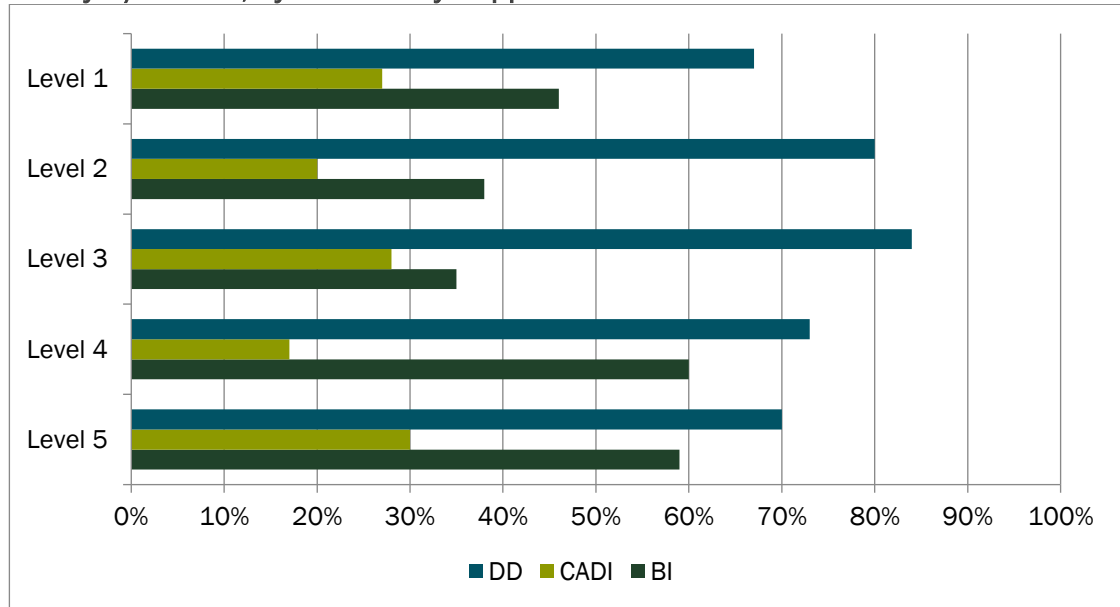
Only 11% of adults living with family without CDCS used 15-minute/hourly day and prevocational services. Users of these services used only 6.6 hours per week on average. Overall usage amounts did not differ substantially across the preliminary support levels, ranging between 5.4 and 7.0 hours per week.

Nine percent of adults in the analysis group living with family without CDCS received Supported Employment services in FY17. As observed for other residential groupings, usage rates were correlated with preliminary support level as 16% of those assigned to level 1 used the service, as did 10% of those in level 2, 5% of those in level 3, 2% in level 4, and 8% of those in level 5. Usage amounts were modest and consistent across the levels, ranging from 3.1 hours to 5.2 hours per week.

DD Waiver enrollees are substantially more like to use day and employment services, as seen in Figure 32.

Figure 32

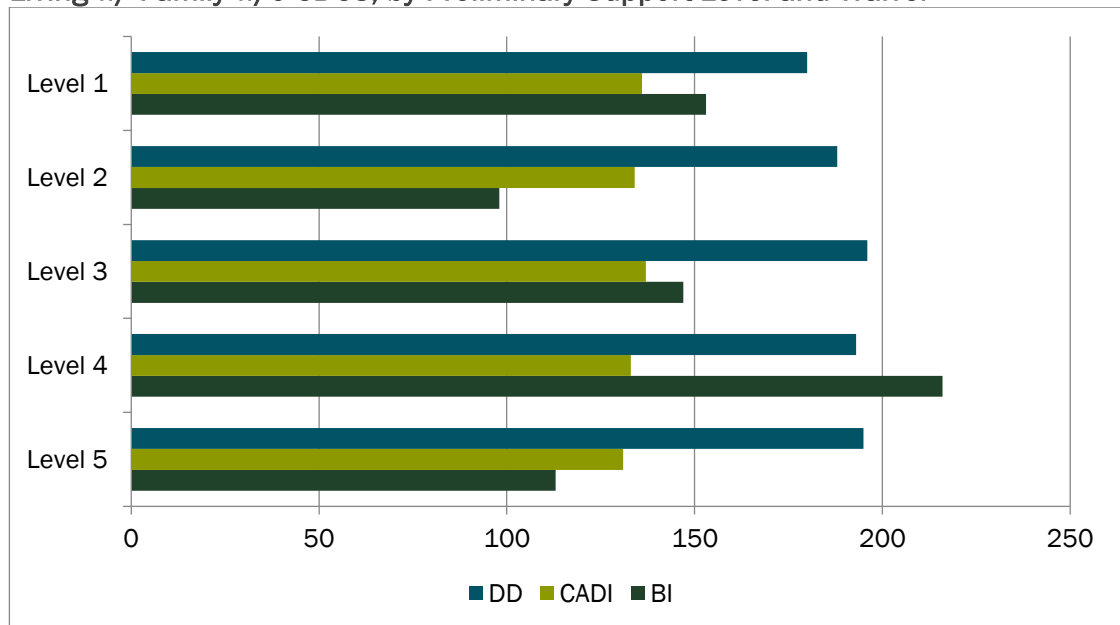
**Day/Employment Usage Rates in FY17 for Adults in the Analysis Group Living w/ Family w/o CDCS, by Preliminary Support Level and Waiver**



Overall, 80% of adults enrolled in the DD Waiver and living with family without CDCS used day and employment services in FY17, compared to 50% of BI Waiver enrollees and 26% of CADI Waiver enrollees. Usage rates are higher amongst DD Waiver enrollees for each of the preliminary support levels. Further, not only are DD Waiver enrollees more likely to use these services, but when they do use them, they tend to receive more, as shown in Figure 33.

Figure 33

**Daily Unit Day/Prevoc. Days per Year in FY17 for Adults in the Analysis Group Living w/ Family w/o CDCS, by Preliminary Support Level and Waiver**



The chart displays the average use of daily unit day and prevocational services. DD Waiver enrollees used an average of 194 days of service, compared to 134 days for CADI Waiver enrollees and 116 days for BI Waiver enrollees. Within each waiver, usage amounts were similar across the preliminary support levels (the BI Waiver amount for level 4 represents only two individuals). Prevocational Services comprised the majority of daily unit services in the BI and CADI Waivers: 54% of the daily units used by BI Waiver enrollees and 52% of those used by CADI Waiver enrollees. Almost all daily unit services in the DD Waiver are Day Training and Habilitation.

Services billed using 15-minute/hourly units make up a larger portion of day and prevocational services in the BI and CADI Waivers but are used less than daily unit services in all three waivers. In the BI Waiver, 24% of individuals used 15-minute/hourly services, averaging 6.5 hours per week; in the CADI Waiver, 10% of individuals used an average of 7.0 hours per week; and in the DD Waiver, 11% of individuals used an average of 3.7 hours per week. Prevocational Services comprised 41% of the service hours in the BI Waiver and 53% in the CADI Waiver. In the DD Waiver, 59% of the 15-minute/hourly services are Day Training and Habilitation and 41% are Adult Day Services.

Fewer individuals used Supported Employment services. These services were used by 15% of BI Waiver enrollees, including 31% of those assigned to level 1; 12% of DD Waiver enrollees, including 30% of those assigned to level 1 and 24% of those in level 2; and only 6% of CADI Waiver enrollees. In each of the waivers, the average service user received about three hours per week.

### **Adults Living Independently (without CDCS)**

Adults living independently without CDCS services are less likely to use day and employment services than other adults in the analysis group. In FY17, only 27% of this group used any day and employment services. Usage rates were in a relatively narrow range across the preliminary support levels except that only 12% of those assigned to preliminary level 4 used these services.

As observed for the other residential groupings, the largest number of adults living independently used daily unit day and prevocational services. Daily unit services were used by 15% of the individuals in this group in FY17. On average, these users received 137 days of service, with little variation based on preliminary support levels.

Eight percent of adults living independently without CDCS used 15-minute/hourly day and prevocational services. Users of these services used only 6.7 hours per week on average. Usage amounts varied from an average 5.6 hours per week for those in preliminary support level 5 to an average of 10.2 hours for those in preliminary support level 4.

Ten percent of adults in the analysis group living independently without CDCS received Supported Employment services in FY17. By preliminary support level, usage rates varied, ranging from 3% for those assigned to preliminary support levels 3 and 4

to 13% of those in preliminary support level 1. Usage amounts were modest, ranging from 2.1 hours to 5.5 hours per week based on support level.

Usage rates varied significantly by waiver: 70% of adults enrolled in the DD Waiver and living independently without CDCS used day and employment services in FY17, compared to 38% of BI Waiver enrollees, and 19% of CADI Waiver enrollees. DD Waivers enrollees are substantially more likely to use these services across each of the preliminary support levels. Usage rates within a waiver were largely consistent across the preliminary support levels, as seen in Figure 34.

Figure 35 displays the average annual use of daily unit day and prevocational services.

Figure 34

**Day/Employment Usage Rates in FY17 for Adults in the Analysis Group Living Independently w/o CDCS, by Preliminary Support Level and Waiver**

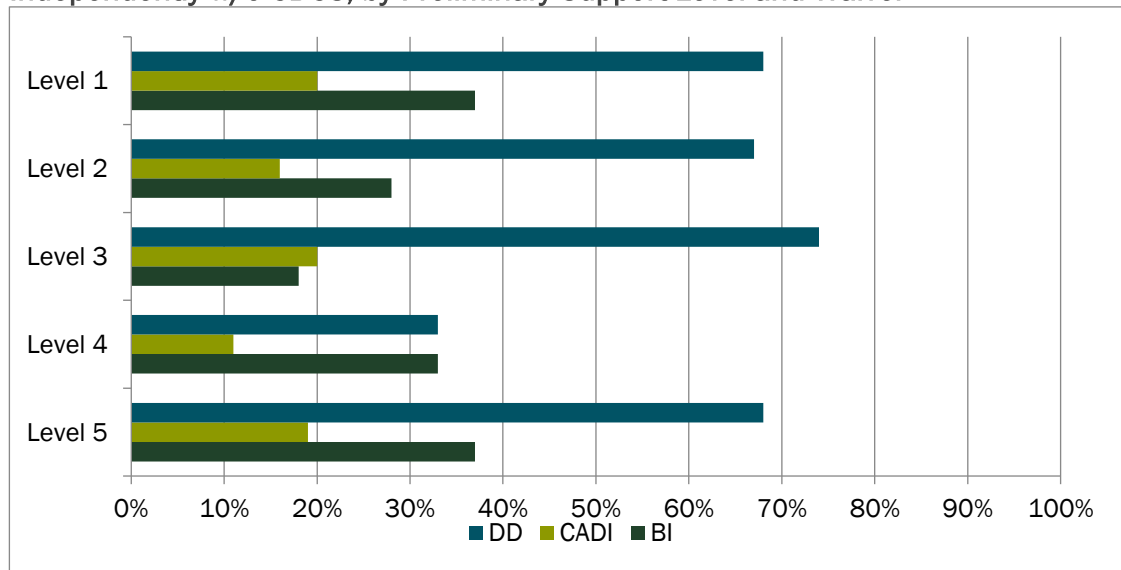
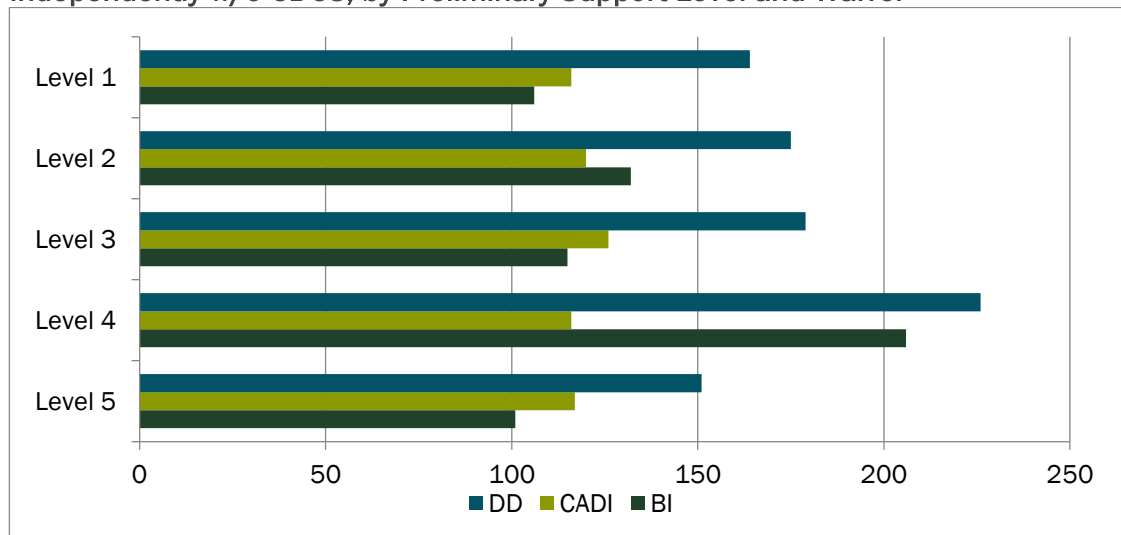


Figure 35

**Daily Unit Day/Prevoc. Days per Year in FY17 Adults in the Analysis Group Living Independently w/o CDCS, by Preliminary Support Level and Waiver**



As observed throughout this section, DD Waiver enrollees tend to use more services than those enrolled in the other waivers, an average of 166 days per year compared to 117 days within the CADI Waiver and 115 days within the BI Waiver. As also previously observed, there is generally modest variation in usage amount across the preliminary support levels within a waiver.

In terms of the composition of services, the primary service used by DD Waiver enrollees is Day Training and Habilitation (more than 99% of daily units, most of which is billed using for the service that includes transportation). The primary service in the BI Waiver is Prevocational Services (72% of daily units) and the primary service in the CADI Waiver is Adult Day Services (56% of daily units).

Adults living independently with CDCS and enrolled in the BI Waiver are somewhat more likely to use 15-minute/hourly unit services than daily unit services. Usage rates are still low, however; 19% of BI Waiver enrollees use these services, averaging 5.1 hours per week. Most of this usage relates to Prevocational Services. In the CADI Waiver, 8% of enrollees use an average of 6.9 hours per week with Prevocational Services being the largest component of these services. Seven percent of DD Waiver enrollees use an average of 3.4 hours per week. As with daily unit rates, most 15-minute/hourly unit services in the DD Waiver are Day Training and Habilitation.

Usage of Supported Employment in the DD Waiver is higher for individuals living independently compared to other living situations. Nearly a third (32%) of DD Waiver enrollees used Supported Employment in FY17, including 38% of those assigned to preliminary support level 1, 27% in support level 2, and 32% in support level 5. Usage amounts, though, are low; on average, users receive 2.8 hours of support per week. The use of Supported Employment is less in the BI Waiver (15% of individuals using 3.2 hours per week) and the CADI Waiver (6% using an average of 2.9 hours per week).

## Respite

Respite provides relief to the caregivers (often families) of individuals with disabilities. Spending on Respite services, which is summarized in Figure 36, accounts for approximately one % of total waiver expenditures.

Figure 36

### FY17 Spending on Respite Services, All Recipients

Service	Code(s)	FY 2017 Spend
In-Home Respite (15 Minutes)	S5150	\$16,590,255
In-Home Respite (Daily)	S5151	\$895,956
Out-of-Home Respite (15 Minutes)	S5150-UB	\$4,271,500
Out-of-Home Respite (Daily)	H0045 H0045-PO	\$2,776,001
<b>Total</b>		<b>\$24,533,712</b>

As illustrated in the table, the majority of Respite is delivered in the individual's home and is typically provided for fewer than 10 hours at a time (after 10 hours, the daily rates must be billed).

All four waivers cover Respite services, but individuals enrolled in the DD Waiver are substantially more likely to use the service than those in the other disability waivers, as illustrated in Figures 37 and 38.

Figure 37

**Percentage of Adults in Analysis Group Living w/ Family w/o CDCS Who Use Respite<sup>a</sup> and Average Hours/Days per Year Used<sup>b</sup>, by Waiver**

		BI	CAC	CADI	DD
<b>Any Respite</b>	% Using	13%	3%	5%	51%
<b>Hourly Respite</b>	% Using	11%	3%	4%	47%
	Avg. Hrs./ Yr.	849	2,500	437	470
<b>Daily Respite</b>	% Using	4%	0%	2%	8%
	Avg. Days/ Yr.	17	0	32	28

<sup>a</sup>Individuals may use both hourly and daily respite during the year; the 'Any Respite' percentages are unduplicated counts.

<sup>b</sup>Reported average is the mean.

Figure 38

**Percentage of Children in Analysis Group Living w/ Family w/o CDCS Who Use Respite<sup>a</sup> and Average Hours/ Days per Year Used<sup>b</sup>, by Waiver**

		BI	CAC	CADI	DD
<b>Any Respite</b>	% Using	22%	7%	42%	62%
<b>Hourly Respite</b>	% Using	22%	4%	35%	50%
	Avg. Hrs./ Yr.	63	528	428	542
<b>Daily Respite</b>	% Using	0%	2%	11%	19%
	Avg. Days/ Yr.	0	7	20	29

<sup>a</sup>Individuals may use both hourly and daily respite during the year; the 'Any Respite' percentages are unduplicated counts.

<sup>b</sup>Reported average is the mean.

More than half (51%) of the adults in the DD Waiver living with family and not using CDCS used any Respite service in FY17, compared to 13% or less in the other three waivers. This translates to only 21 adults in the BI Waiver and 4 adults in the CAC Waiver; there are even smaller numbers of children using Respite.

Due to the modest use of Respite outside of the DD Waiver, comparisons of the amounts of service used across waivers is of limited value. Considering the adults in the analysis group across all waivers, the use of Respite is positively correlated with



individuals’ preliminary support levels. Figure 39 displays the percentage of adults living with family without CDCS who use hourly Respite and, of those users, the average number of hours received annually based on the preliminary support levels.

Figure 39

**Use of Hourly Respite, Adults Living w/ Family w/o CDCS, FY17**

Preliminary Support Level	% of Enrollees Using Service	Avg. Hrs./ Yr. for Users
Support Level 1	3%	476
Support Level 2	8%	387
Support Level 3	23%	409
Support Level 4	15%	539
Support Level 5	25%	536

As the table demonstrates, individuals with more significant needs are more likely to use hourly Respite—with only 3% of those assigned to preliminary support level 1 accessing the service compared to 25% of those in support level 5. However, once an individual opts to use hourly Respite, the amount they use is relatively consistent regardless of support level, ranging from 387 hours per year for those in preliminary support level 2 to 539 hours for those in preliminary support level 4.

## Consumer-Directed Community Supports (CDCS)

As described in the Consumer Directed Community Supports Consumer Handbook<sup>6</sup>, CDCS allows individuals to exercise greater control over their services and supports. Individuals who choose this option are responsible for developing a CDCS community support plan, for managing their service providers who may include family and friends, and for managing their annual budget. Individuals may directly employ their support workers or may select and direct their workers while relying on another entity to serve as the workers’ employer.

CDCS includes four categories of services and supports:

1. Personal assistance “to do things for [the individual] or remind [the individual] to do things.” This category includes assistance with activities of daily living such as dressing, bathing, eating, or grooming as well as instrumental activities of daily living such as shopping, cleaning, and managing finances.
2. Treatment and training including “assistance with learning something new or relearning, train[ing the individual’s] support worker to meet [their]

<sup>6</sup> <https://edocs.dhs.state.mn.us/lfserver/Public/DHS-4317-ENG>. Accessed July 1, 2018.

individual needs, [and] specialized health care such as private duty nursing or skilled nursing.”

3. **Environmental modifications and provisions including “help with cleaning/ chore services, special clothing adapted for [the individual], modifications to where [the individual] lives, [and] assistive technology, and assistive technology.”**
4. **Self-direction support activities including “services, supports and expenses related to designing and implementing CDCS.”**

Figure 40 reports total spending on the four CDCS categories in FY17.

Figure 40

**FY17 Spending on CDCS Services, All Recipients**

<b>Service</b>	<b>Code(s)</b>	<b>FY 2017 Spend</b>
Personal Assistance	T2028-U1	\$122,206,475
Treatment and Training	T2028-U2	\$40,266,088
Support Activities	T2028-U4 T2028-U8 T2040	\$26,173,660
Environmental Modifications and Provisions	T2028-U3	\$8,995,159
<b>Total</b>		<b>\$197,641,382</b>

The budget that an individual receives to ‘purchase’ CDCS services is based on his or her MnCHOICES assessment and various mathematical adjustments outlined in policy.

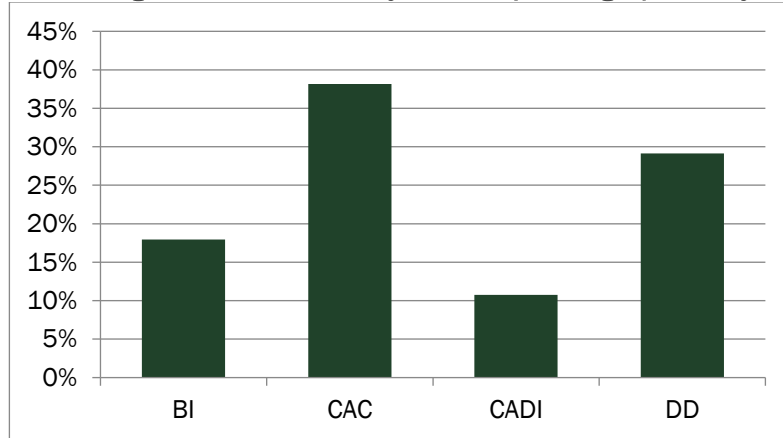
Other than case management, individuals who choose CDCS are not permitted to receive other waiver services.

**Adults Living with Family**

Only 20% of adults in the analysis group who live with family choose CDCS, but this rate varies across the waivers, as illustrated in Figure 41. As the chart demonstrates, use of CDCS is particularly low—approximately 10%—amongst CADI Waiver enrollees compared to more than 25% of those in the DD Waiver and more than 35% of those in the CAC Waiver.

Figure 41

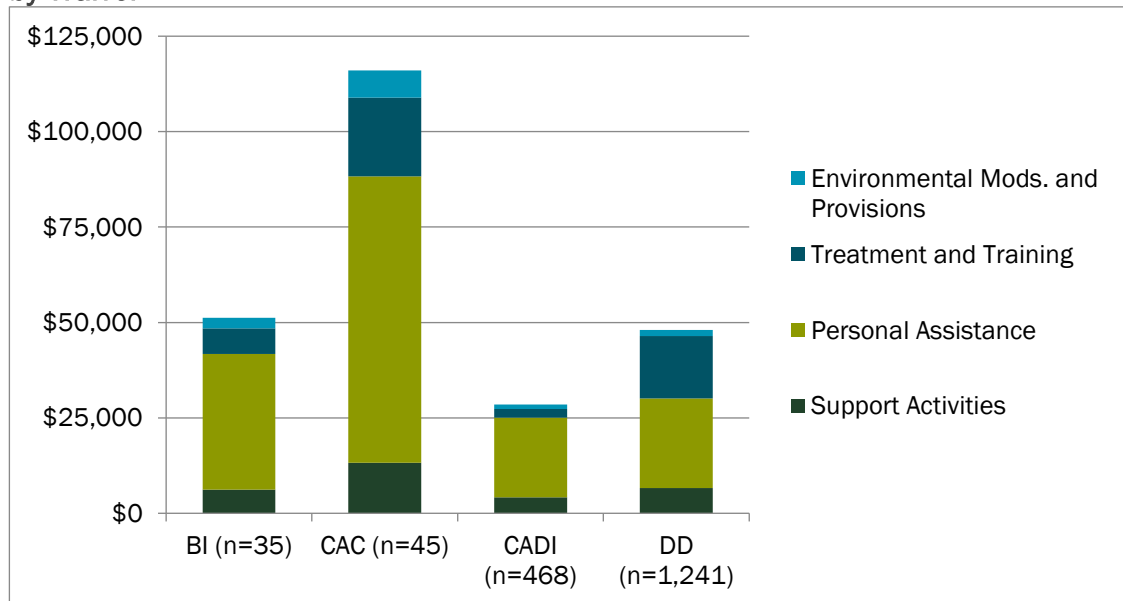
### Percentage of Adults in Analysis Group Living w/ Family Using CDCS, by Waiver



Within the analysis group, average annual spending on CDCS services was almost \$45,000. This figure, however, obscures significant differences across the waivers, as illustrated in Figure 42.

Figure 42

### CDCS Spending in FY17 by Category for Adults in Analysis Group Living w/ Family, by Waiver



The chart demonstrates substantial variability across the waivers. Average spending for CAC Waiver enrollees is more than four times as much as average spending for CADI Waiver enrollees and more than twice as much average spending for BI and DD Waiver enrollees.

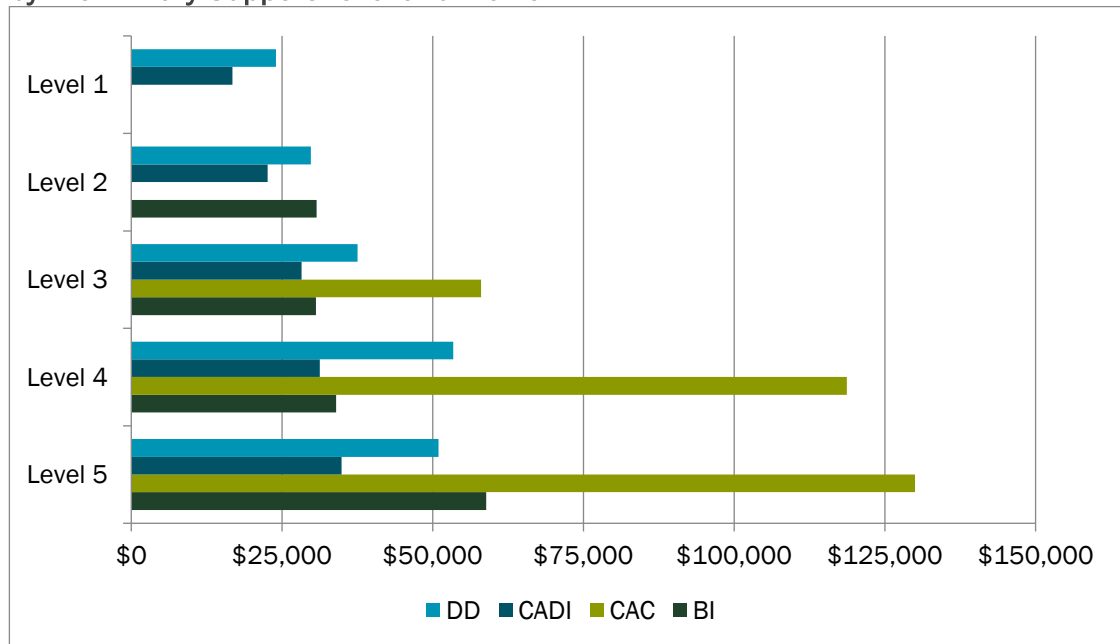
The differences in spending across waivers are partly, but not mostly, due to assessment profiles of individuals using the CDCS option in each waiver. Given that **CDCS budgets are tied to assessment of individuals' needs, it is expected that spending will be higher for those with greater needs.**

Overall, the CDCS option is disproportionately chosen by individuals with greater needs. Individuals assigned to preliminary support levels 4 and 5 account for 34% of the adults in the analysis group living with family, but more than 58% of those who chose CDCS.

The distribution of preliminary support level assignments varies across the waivers. Of the 45 adults in the analysis group living with family and using CDCS in the CAC Waiver, 43 have been assigned to a preliminary support level; of this group, 40 (93%) are assigned to preliminary support levels 4 or 5. In contrast, 66% of those using CDCS in the DD Waiver are assigned to these support levels. Even after accounting for these differences, though, there is significant variability across the waivers, as illustrated in Figure 43.

Figure 43

**Average CDCS Spending in FY17 for Adults in Analysis Group Living with Family, by Preliminary Support Level and Waiver**



In each of the preliminary support levels, CAC Waiver enrollees use the greatest amount of services (there were no CAC Waiver enrollees assigned to preliminary support levels 1 and 2) and CADI Waiver enrollees use the least.

Across the four waivers, personal assistance is used by 89% of adults in the analysis group living with family and using CDCS and is the largest category of spending, accounting for 62% of the aggregated total illustrated earlier in Figure 40. CAC Waiver enrollees averaged more than \$75,000 in personal assistance, compared to about \$21,000 for CADI enrollees.

The next largest category of spending is treatment and training, which constitutes 20% of the aggregated total. More than two-thirds of adults (68%) in the analysis group living with family and using CDCS use treatment and training. Notably, fewer than half of the individuals assigned to preliminary support level 4 use this service,

but when they do access it, they use the greatest amount, more than \$24,000 per user (rather than enrollee) per year. CAC Waiver enrollees use an average of \$20,556 in treatment and training services, somewhat more than the \$16,363 average amongst DD Waiver enrollees, but nearly nine times greater than the \$2,277 average for CADI Waiver enrollees.

Everyone who elects the CDCS option is required to receive some support in managing their plans and budgets. These support activities represent 13% of aggregated spending. Again, CAC Waiver enrollees use the greatest amount of these services, more than \$13,000 annually, almost exactly double the total for DD Waiver enrollees, who have the next highest total. As with the other categories of service, this difference is likely due in part to the comparatively greater needs of CAC Waiver enrollees using CDCS, but differences persist even after accounting for preliminary support level.

The remaining service category—environmental modifications and provisions—accounts for only 5% of aggregated spending. As with the other categories, the average is highest amongst CAC Waiver enrollees (\$7,153 per year) and lowest for CADI Waiver enrollees (\$1,162).

### Children Living with Family

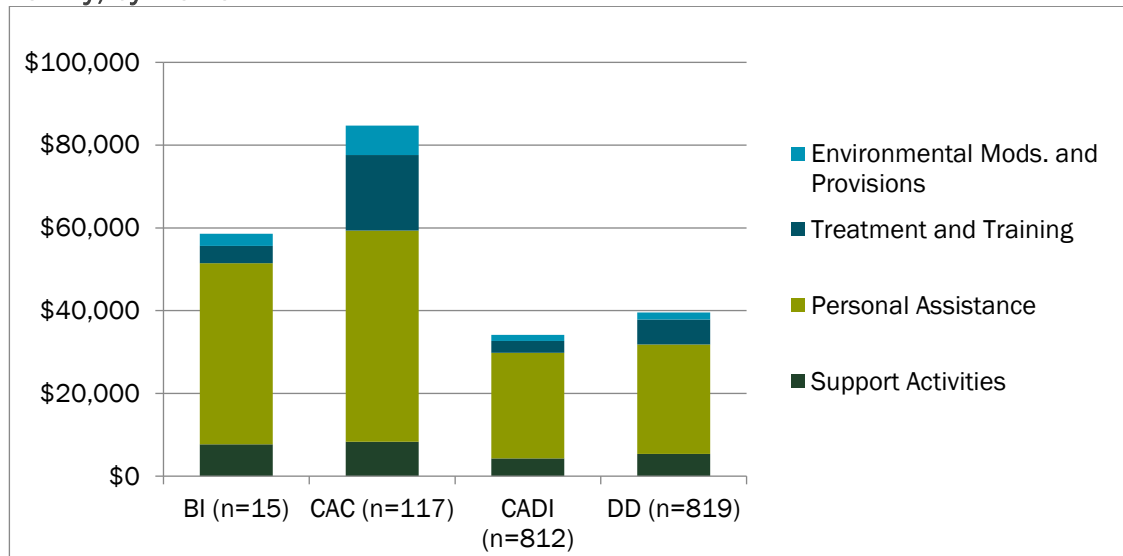
The CDCS option is particularly popular amongst children. More than 70% of children living with family in the analysis group used CDCS (1,798 out of 2,544), compared to only about 20% of adults living with family. It is believed that this difference is due in significant part to the fact that the budget algorithm does not distinguish between children and adults. Since children typically use fewer waiver services than adults (primarily because they receive services from their school for a significant portion of their day), a budget that is sufficient for a child may not meet the needs of an adult.

**The children's CDCS usage** rate is similar across the four waivers, ranging from about 63% in the BI Waiver to 72% in the CAC and DD Waivers.

Figure 44 reports CDCS spending by category for enrollees of each of the four waivers.

Figure 44

**CDCS Spending in FY17 by Category for Children in Analysis Group Living with Family, by Waiver**



The average CDCS spending amount across all four waivers was slightly more than \$40,000 in FY17. As was true for adults living with family and using CDCS, average spending is highest for CAC Waiver enrollees and lowest for CADI Waiver enrollees. The range in spending across waivers remained significant—\$84,735 for CAC Waiver enrollees and \$34,111 for CADI enrollees—but was smaller than the range observed for adults.

As demonstrated in the chart, personal assistance is the largest category of expenses, representing 70% of total CDCS spending across the four waivers. Nearly all children living with family and using CDCS—98%—used personal assistance services. CAC Waiver enrollees used the most, more than \$51,000, while CADI Waiver enrollees used the least, \$25,518.

Treatment and training was used by 57% of children in the analysis group and is the next largest category of spending, accounting for 13% of the aggregated total. Average spending amounts range from \$2,836 by CADI Waiver enrollees to \$18,209 for CAC Waiver enrollees.

As noted above, everyone who elects the CDCS option is required to receive some support in managing their plans and budgets. These support activities represent another 13% of aggregated spending, with dollar amounts ranging from \$4,323 for CADI Waiver enrollees to \$8,287 for CAC Waiver enrollees.

The environmental modifications and provisions category accounts for the remaining 5% of aggregated spending. As with the other categories, the average is highest amongst CAC Waiver enrollees (\$7,153 per year) and lowest for CADI Waiver enrollees (\$1,434). Although the lowest category of spending, these supports were still used by nearly two thirds of children in the analysis group living with family and receiving CDCS.

## Adults Living Independently

Less than 3% of adults in the analysis group who live independently use CDCS. The usage rates by waiver are reported in Figure 45.

Figure 45

### Counts of Adults Living Independently in Analysis Group, by Use of CDCS and Waiver

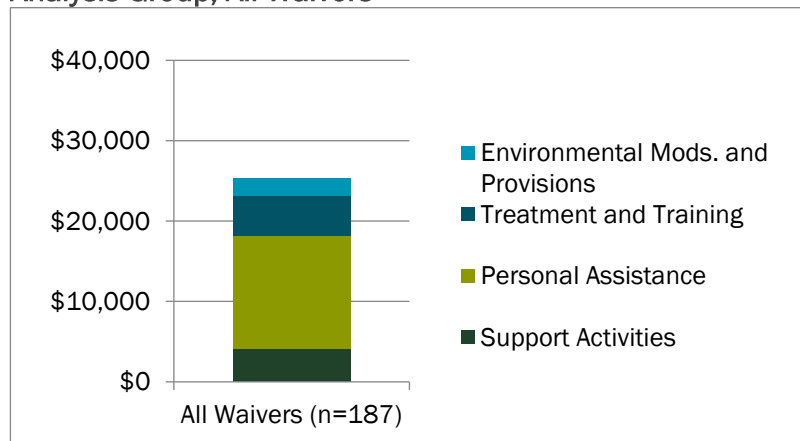
	BI	CAC	CADI	DD	Total
<b>Total</b>	159	15	5,601	1,058	6,833
<b>Using CDCS</b>	10 (6.3%)	2 (13.3%)	122 (2.2%)	53 (5.0%)	187 (2.7%)
<b>Not Using CDCS</b>	149 (93.7%)	13 (86.7%)	5,479 (97.8%)	1,005 (95.0%)	6,646 (97.3%)

Given the limited number of users (only two CAC Waiver enrollees and ten BI Waiver enrollees), comparisons across waivers may not be meaningful. The remainder of this subsection, therefore, primarily focuses on the totals across all waivers.

Figure 46 illustrates the composition of spending across the four categories of CDCS services.

Figure 46

### Percent CDCS Spending in FY17 by Category for Adults Living Independently in Analysis Group, All Waivers



Overall, an adult living independently and using CDCS used more than \$25,000 in services in FY17. This is notably less than the average of nearly \$45,000 for adults living with family highlighted earlier. This appears to be due to a combination of differences in assessed needs and waivers in which users are enrolled.

Amongst adults using CDCS and assigned to a preliminary support level, 58% of those living with family were assigned to preliminary support levels 4 and 5, the support levels for individuals with the greatest needs, compared to only 27% of those who live independently. This distribution is not surprising, as it expected that individuals with

the greatest needs will face more challenges in living independently. Across the adults living independently and using CDCS in the analysis group, those assigned to support levels 1 and 2 used an average of about \$20,000 in services per year compared to nearly \$52,000 per year by the five individuals in support level 4 (those assigned to support level 5 used an average of less than \$28,000).

Further, individuals enrolled in the CADI Waiver—the group with the lowest average spending amounts—represented 65% of adults living independently and using CDCS compared to 26% of adults living with family and using CDCS. Amongst CADI Waiver enrollees in the analysis group living independently and using CDCS, the average annual spending amount was about \$21,000 compared to \$33,000 per year by DD Waiver enrollees.

Across all waivers, spending by service category breaks out as follows:

- Personal assistance accounted for 55% of total spending and was used by 84% of adults in the analysis group;
- Treatment and training constituted 20% of the aggregated total and was used by half of the adults in the analysis group;
- Support activities represented 16% of the aggregated total; and
- Environmental modifications and provisions accounted for the remaining 9% of total spending.



## Medical and Professional Services

The medical and professional services grouping includes a number of services to meet recipients' health care needs, including home care nursing and home health aide, positive support, therapies, counseling, and specialist services. Figure 47 summarizes FY17 spending totals on the services within this grouping.

Figure 47

### FY17 Spending on Medical/Professional Services, All Recipients

Service	Code(s)	FY 2017 Spend
State Plan Home Care Nursing – Registered Nurse	T1002 T1002-TG T1002-TT	\$25,938,130
Waiver Extended Home Care Nursing – Registered Nurse (BI, CAC, and CADI Waivers)	T1002-UC T1002-UC-TG	\$1,322,939
State Plan Home Care Nursing – Licensed Practical Nurse	T1003 T1003-TG T1003-TT	\$16,985,708
Waiver Extended Home Care Nursing – Licensed Practical Nurse (BI, CAC, and CADI Waivers)	T1003-UC T1003-UC-TG	\$526,594
State Plan Skilled Nursing Visits	T1030 T1030-Q6	\$6,265,607
State Plan Home Health Aide	T1004 T1021	\$2,795,889
Positive Support (BI, CAC, CADI and DD Waivers)	H0025 H0025-TF H0025-TG	\$6,218,873
State Plan Physical Therapy	S9131-TF	\$50
Waiver Extended Occupational/ Physical Therapy (BI, CAC, and CADI Waivers)	S9129-UC S9131-UC	\$16,816
Waiver Extended Respiratory Therapy (BI, CAC, and CADI Waivers)	S5181-UC	\$98,311
Family Counseling (BI, CAC, CADI, and DD Waivers)	H0004	\$32,969
Specialist Services (BI, CAC, CADI, and DD Waivers)	T2013	\$941,787
<b>Total</b>		<b>\$61,143,673</b>

Spending on medical and professional services constitutes a little more than 2% of total expenditures included in this analysis. Most of this spending—83%—relates to nursing services and almost all of this is provided through the State Medicaid Plan.

Figures 48 and 49 present usage rates and amounts for State Plan Skilled Nursing services for adults in the analysis group.

Figure 48

**Usage Rates and Amounts of State Plan Home Care Nursing, RN by Adults in Analysis Group, by Waiver and Living Situation**

		BI	CAC	CADI	DD
<b>Corporate Foster Care/ Supported Living</b>	Usage Rate	0%	6%	< 1%	0%
	Users/Enrollees	(0/465)	(2/31)	(4/2,812)	(0/7,929)
	Avg. Annual Hrs.	-	882 hrs	58 hrs	-
<b>Family Foster Care/ Supported Living</b>		0%	71%	1%	0%
		(0/24)	(5/7)	(1 /408)	(0/373)
		-	2,251 hrs	2,796 hrs	-
<b>Customized Living/ Other Residential</b>		0%	-	< 1%	-
		(0/121)	-	(1/1,971)	-
		-	-	52 hrs	-
<b>W/ Family w/o CDCS</b>		1%	79%	1%	< 1%
		(1/160)	(58/73)	(26/3,878)	(4/3,021)
		28 hrs	3,165 hrs	901 hours	1,439 hrs
<b>W/ Family w/ CDCS</b>		0%	16%	0%	0%
		(0/35)	(7/45)	(0/468)	(0/1,241)
		-	971 hrs	-	-
<b>Independent w/o CDCS</b>		0%	85%	1%	0%
		(0/149)	(11/13)	(37/5,479)	(0/1,005)
		-	3,920 hrs	407 hrs	-
<b>Independent w/ CDCS</b>		0%	0%	0%	0%
		(0/10)	(0/2)	(0/122)	(0/53)
		-	-	-	-

Figure 49

**Usage Rates and Amounts of State Plan Home Care Nursing, LPN by Adults in Analysis Group, by Waiver and Living Situation**

		BI	CAC	CADI	DD
<b>Corporate Foster Care/ Supported Living</b>	Usage Rate	0%	10%	< 1%	0%
	Users/Enrollees	(0/465)	(3/31)	(1/2,812)	(0/7,929)
	Avg. Annual Hrs.	-	5,312 hrs	457 hrs	-
<b>Family Foster Care/ Supported Living</b>		0%	86%	0%	0%
		(0/24)	(6/7)	(0/408)	(0/373)
		-	2,192 hrs	-	-
<b>Customized Living/ Other Residential</b>		0%	-	< 1%	-
		(0/121)	-	(2/1,971)	-
		-	-	153 hrs	-
<b>W/ Family w/o CDCS</b>		1%	74%	< 1%	< 1%
		(1/160)	(54/73)	(15/3,878)	(4/3,021)
		3,882 hrs	2,639 hrs	1,413 hrs	1,115 hrs
<b>W/ Family w/ CDCS</b>		0%	11%	0%	0%
		(0/35)	(5/45)	(0/468)	(0/1,241)
		-	1,229 hrs	-	-

		BI	CAC	CADI	DD
<b>Independent w/o CDCS</b>		0% (0/149) -	69% (9/13) 2,729 hrs	< 1% (12/5,479) 916 hrs	0% (0/1,005) -
<b>Independent w/ CDCS</b>		0% (0/10) -	0% (0/2) -	0% (0/122) -	0% (0/53) -

The use of State Plan Skilled Nursing services is highly correlated with the waiver in which an individual is enrolled. In the BI, CADI, and DD Waivers, no more than approximately 1% of adults in any living situation used these services in FY17. In comparison, 49% of CAC Waiver enrollees used Registered Nurse services and 45% used Licensed Practical Nurse services (some used both).

Those using State Plan Skilled Nursing used substantial amounts of service, particularly within the CAC Waiver. Amongst the adults in the CAC Waiver using nursing services, the average number of RN hours received was nearly 3,000—more than 57 hours per week; and the average number of LPN hours received was more than 2,600—more than 50 hours per week.

The high usage rates and amounts in the CAC Waiver appears to be impacted to some degree by the fact that many enrollees have medical needs, based on the preliminary support level assignments. Of the 159 adults in the analysis group enrolled in the CAC Waiver with a preliminary support level assignment, 127 are assigned to preliminary support level 4, which was developed to identify those individuals with significant medical needs. These individuals are driving the high usage numbers in the CAC Waiver. However, individuals assigned to preliminary support level 4 outside of the CAC Waiver do not receive State Plan Skilled Nursing services at anywhere near the same rate. Only about 2% of those in preliminary support level 4 outside of the CAC Waiver use these services.

The pattern is similar for children in the analysis group. The majority of those enrolled in the CAC Waiver received Skilled Nursing services (though they received fewer hours than adults) while only a relative handful of those in the other waivers received services.

Adults in the BI, CADI, and DD Waivers are more likely to use State Plan Nursing Visit services than the hourly Skilled Nursing services summarized in Figures 48 and 49. Even these services were used by relatively few individuals, however. Of the adults in the analysis group, 6% of BI Waiver enrollees, 10% of CADI Waiver enrollees, and 1% of DD Waiver enrollees used Nursing Visit services. On average, enrollees in each of these waivers received between 30 and 40 visits in FY17.

Very few adults, even those enrolled in the CAC Waiver, used Extended Skilled Nursing covered through the waivers. A total of only 11 adults in the BI, CAC, and CADI Waivers used Extended RN services and only 9 used Extended LPN services.

Usage of State Plan Home Health Aide services is minimal. The service was used by 13% of those enrolled in the BI Waiver, who used an average of 371 hours; 7% of DD

Waiver enrollees using an average of 145 hours; 4% of CAC Waiver enrollees using an average of 1,912 hours, and 0.002% of CADI Waiver enrollees using an average of 871 hours.

Of the adults in the analysis group, Positive Support services were used only by BI Waiver and CADI Waiver enrollees. Figure 50 presents usage rate and amount data for these two waivers.

Figure 50

**Usage Rates and Amounts of Positive Support by Adults in Analysis Group, by Waiver and Living Situation**

		<b>BI</b>	<b>CADI</b>
<b>Corporate Foster Care/ Supported Living</b>	Usage Rate Users/Enrollees Avg. Annual Hrs.	25% (115/465) 67 hrs	5% (137/2,812) 99 hrs
<b>Family Foster Care/ Supported Living</b>		17% (4/24) 149 hrs	2% (7/408) 70 hrs
<b>Customized Living/ Other Residential</b>		39% (47/121) 399 hrs	1% (28/1,971) 604 hrs
<b>W/ Family w/o CDCS</b>		26% (42/160) 183 hrs	1% (39/3,878) 198 hrs
<b>Independent w/o CDCS</b>		28% (42/149) 227 hrs	1% (33/5,479) 433 hrs

The table demonstrates that Positive Support services are used by individuals in all residential placements and are used significantly more by BI Waiver enrollees. In general, there are not large differences based on preliminary support level. In the BI Waiver, the usage rate for preliminary support levels 1, 2, 3, and 5 ranged from 21% to 27%. Those in preliminary support level 4 were least likely to use the service with only 8% of these enrollees accessing these services. In the CADI Waiver, 5% of adults in the analysis group assigned to preliminary support level 5 used these services; the usage rate was 1% for the other preliminary support levels.

## Other Services

Services not included in the previously discussed service groupings are assigned to the other services grouping. Figure 51 reports FY17 spending on these services.

Figure 51

### FY17 Spending on 'Other' Services, All Recipients

Service	Code(s)	FY 2017 Spend
Case Management (BI, CAC, CADI and DD Waivers)	T1016-UC T1016-UC-TF	\$90,966,862
Transportation (BI, CAC, CADI and DD Waivers)	S0215-UC T2003-UC	\$13,194,924
Day Habilitation and Training Transportation (DD Waiver)	T2002	\$1,769,363
Home Delivered Meals (BI, CAC, CADI and DD Waivers)	S5170 S5170-U7	\$9,476,024
24-Hour Emergency Assistance (BI, CAC, CADI and DD Waivers)	H2011 T2034	\$13,034,054
Crisis Respite (BI, CAC, CADI and DD Waivers)	S9125 T1005 T1005-TG	\$11,310,361
Specialized Supplies and Equipment (BI, CAC, CADI and DD Waivers)	T2029 T2029-NU T2029-UE	\$2,152,259
Environmental Accessibility Adaptations – Homes and Vehicles (BI, CAC, CADI and DD Waivers)	T1028 S5165 T2039-UD T2039 S5165-U3	\$19,752,560
Personal Emergency Response System (PERS) (BI, CAC, CADI and DD Waivers)	S5160 S5161 S5162	\$2,298,365
Housing Access Coordination (BI, CAC, CADI and DD Waivers)	H2015 H2015-UB H2015-UC H2015-UD H2015-TS	\$1,378,964
Transitional Services (BI, CAC, CADI and DD Waivers)	T2038 T2038-U1 T2038-U2	\$620,366
Family Training (BI, CAC, CADI and DD Waivers)	S5110	\$579,945
Caregiver Living Expenses (BI, CAC, CADI and DD Waivers)	S5126	\$129,134
<b>Total</b>		<b>\$166,663,181</b>

Other than case management, these services are generally used by relatively few individuals. Usage highlights include:

- More than 90% of Transportation services by expenditures is billed using the T2003-U3 code for one-way trips (excluding the Day Training and Habilitation Transportation services that are covered only in the DD Waiver). Individuals living independently without CDCS were most likely to use this service, with nearly half (47%) accessing the service in FY17. Across all living situations, usage rates were highest in the BI and CADI Waivers.
- Home Delivered Meals were used by 45% of adults living independently without CDCS and 18% of those living with family without CDCS. Usage was highest amongst CADI Waiver enrollees: 52% of those living independently and 31% of those living with family used the service.
- More than 99% of 24-Hour Emergency Assistance is billed using the daily T2034 code. Almost 600 adults in the analysis group received this assistance in FY17, of whom 437 live independently (7% of all those living independently without CDCS). The service appears to be provided on a continuous basis as the average user received 309 days of support.
- A Crisis Respite service was used by 365 adults in the analysis group in FY17. The usage rate was highest amongst individuals in a corporate foster care setting; about 2.5% of those in these placements received Crisis Respite.
- Of the total expenditures reported in Figure 51 for Environmental Accessibility Adaptations, \$14.2 million was associated with home installations and \$5.0 million was associated with vehicle installations (the balance of spending supported assessments).



## CONSIDERATIONS

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Minnesota has been on an extended journey to develop an individual budget methodology. There are many elements that DHS has put into place that are conducive to the development of these budgets. DHS has:

- Established **principles and intentions** that are consistent with person-centered principles;
- Expanded the **services available** to offer a broad range of access to individuals across the four waivers;
- Established a **rates framework** through the Disability Waiver Rate System (DWRS) for agency-provided service; and
- Is considering an **individual budget methodology** that will best meet the needs of individuals served among the four waivers.

### Next Steps

With the research conducted to date, including the analysis presented here, Minnesota can begin to make decisions about how the analysis may inform the budget methodology that is developed for Minnesotans with disabilities. The following are the necessary next steps to facilitate such a decision.

Complete individual budget methodology proposal work to develop the criteria that will allow levels to be assigned to each person. Once this work is complete, the final levels will be applied to individuals receiving services by each service and the information will be used to update understanding of service use and to begin to consider service mixes.

Decide on implications for Study 1. Work is ongoing to determine which services will remain in a consolidated framework. These decisions will impact the services that are included as part of the service mix. Many of these decisions have fiscal implications that will affect both Study 1 and Study 2.

Draft service mixes. As part of this approach, we will draft service mixes for individuals receiving services. We will work with DHS staff to develop these service mixes. We will share information about the services mixes and their development with an expert panel and will seek feedback to improve the development of the service mixes. We will finalize the services mixes with DHS and will determine the fiscal impacts of implementing the proposed model and service mixes.



## BACKGROUND AND APPROACH

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This report summarizes findings from an analysis of paid claims for fiscal year 2017 (July 1, 2016 through June 30, 2017). This section briefly describes the data used in the analysis and the methodologies employed to analyze the data.

The Disability Services Division provided several datasets to HSRI, including:

- Claims paid in fiscal year 2017 for services provided through the four disabilities waivers as well as certain State Medicaid Plan services for waiver enrollees. The State Plan services were those for which the waivers cover an extended benefit for amounts in excess of what is covered by the State Plan, including Personal Care Assistance and nursing services. This is only a small portion of the State Plan services and, for example, is not inclusive of physician care, inpatient or outpatient hospital services, or prescription drugs.
- Service authorization data, which included the waiver in which services were authorized.
- MnCHOICES assessment data. HSRI used this information to construct five preliminary support levels for adults. These preliminary support levels will be revised and finalized. No framework was developed for children, but the preliminary support levels were used in this analysis to illustrate existing differences in service usage based on individual needs.
- Individual demographic data, such as date of birth.

From these datasets, a record was created for each individual, listing key characteristics of the individual and the amounts of service they received during the fiscal year based on the following methodology:

- Claims data was used to identify each unique service recipient and the services they used.
- Authorization data was used to determine the waiver or waivers in which individuals were enrolled during the year.
- Determination of residential placement was a two-step process.
- Full-time paid residential services—Corporate Foster Care/ Supported Living, Family Foster Care/ Supported Living, Customized Living, and Residential Care Services—were determined based on paid claims.
- For those who did not receive full-time paid residential services, the screening files were used to determine if the individual lived with family or independently. If this information was not available in the screening records for an individual, they were assumed to be living with family.



- Individuals living with family or living independently were further subdivided based on whether or not they used Consumer Directed Community Supports (CDCS).

Since the report compares and contrasts service usage across and within waivers, the analysis sought to identify those individuals for whom such comparisons could reasonably be made. In particular, individuals had to meet two criteria:

- **They must have received a ‘full year’ of service, meaning they** had at least one paid claim in each of the 12 months of fiscal year 2017. This criteria ensured that the utilization of someone who received one month of service was not compared to someone who received 12 months of service.
- They must not have had any **changes in ‘key characteristics’ that typically** influence service usage. Specifically, in fiscal year 2017, they could not have changed waivers, had their eighteenth birthday, or changed residential placement.

Figure 52 provides a reconciliation of the total number of individuals who received waiver services in fiscal year 2017 to the number ultimately included in the analysis based on these criteria.

Figure 52

#### Reconciliation of Total Waiver Population to Analysis Group

<b>Individuals with Claims</b>	<b>47,317</b>
Less than 12 Months of Service	(11,093)
Changed Waivers During the Year	(175)
Turned 18 During the Year	(369)
Changed Residential Placement During the Year	(3,156)
<b>Total Analysis Group</b>	<b>32,524</b>

After establishing the analysis group and assigning individuals to cohorts based on their key characteristics, detailed analyses of service utilization were undertaken. To help to organize the number of services provided and in recognition of service substitution, the analysis aggregated services into eight service groupings:

- Residential services
- Personal supports
- Personal Care Assistance (PCA)
- Day and employment services
- Respite
- Consumer-Directed Community Supports (CDCS)

- Medical and professional services
- Other services

Brief descriptions of each service grouping and a listing of the procedure code-modifier combinations included in each can be found in the introductions of the service group sections in the Findings portion of this report.

For each individual service, the analysis determined the average amount of service used by individuals in each cohort. Then, the analysis determined the number of individuals in each cohort that actually used the service. For those that used the service, average usage is calculated as well as the 25<sup>th</sup> percentile, the median, and the 75<sup>th</sup> percentile.

Within a service grouping, various subtotals are presented. For example, within the day and employment services grouping, the analysis reports the number of individuals in each cohort that used any service within the grouping, the number of individuals who used a service billed on a daily basis and the amount of service used, the number of individuals who used a service billed on a 15-minute/hourly basis and the amount of service used, and the number of individuals who used an employment service and the amount of service used.

The utilization analyses tables for each waiver are included with this report as Attachments 1 through 4.

Users of this analysis should recognize the following limitations:

- A significant number of individuals were excluded from this analysis as shown in Figure 52. The analysis did not consider the extent to which the excluded individuals have usage patterns that are similar to or different from those who were included in the analysis.
- The analysis can highlight differences in service use patterns, but the claims themselves cannot explain the reasons for these differences.
- DHS is in the process of changing service requirements and/or rate and billing guidelines for many services so, in some instances, historic services will not be representative of future services.
- The preliminary support levels will be revised so, while differences noted in this report will likely be similar based on updated criteria, they will not be exact.

Despite these limitations, the utilization analyses provide a number of insights that will be considered as options for waiver reconfiguration and budgeting approaches are developed.