COLORADO
Department of Health Care Policy & Financing

Department of Health Care Policy and Financing
1570 Grant Street
Denver, CO 80203

January 30, 2020

The Honorable Rhonda Fields, Chair
Senate Health and Human Services Committee
200 E. Colfax Avenue
Denver, CO 80203

Dear Senator Fields:

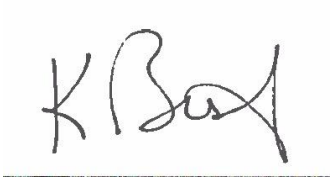
Enclosed please find a legislative report to the Senate Health and Human Services Committee from the Department of Health Care Policy and Financing on the Pilot Program on Complementary or Alternative Therapies.

Section 25.5-6-1303, C.R.S. requires the Department to conduct an independent evaluation of the pilot program to be completed no later than January 1, 2025. The state department shall provide a report of the evaluation to the health and human services committee of the senate and the public health care and human services committee of the house of representatives, or any successor committees. The report on the evaluation must include the following: (a) The number of eligible persons with disabilities participating in the pilot program; (b) The cost-effectiveness of the pilot program; (c) Feedback from consumers and the state department concerning the progress and success of the pilot program; (d) Any changes to the health status or health outcomes of the persons participating in the pilot program; (e) Other information relevant to the success and problems of the pilot program; and (f)Recommendations concerning the feasibility of continuing the pilot program beyond the pilot stage and changes, if any, that are needed.

Complementary and Integrative Health Services (CIHS) have been available to members on the Spinal Cord Injury (SCI) waiver since 2012 and the independent evaluation of CIHS has endeavored to answer the above the questions based on the requirements of statute. The conclusions available, based on the results of this evaluation are promising. "The CIHS waiver program should be continued. The program was successful in reducing, or at least not increasing, overall costs for care and improving patient self-reported quality of life. The program did not show statistically different gains in the areas of health status or employment, but the direction of the changes were positive." ("Final Report," NRC, Inc. 2019, p. 56)

If you require further information or have additional questions, please contact the Department's Legislative Liaison, Nina Schwartz at Nina.Schwartz@state.co.us or 303-866-6912.

Sincerely,



Kim Bimestefer
Executive Director

KB/LW

Enclosure(s): Complementary and Integrative Health Services Evaluation, Final Report September 30, 2019

Cc: Senator Faith Winter, Vice Chair, Health and Human Services Committee
Senator Larry Crowder, Health and Human Services Committee
Senator Jim Smallwood, Health and Human Services Committee
Senator Joann Ginal, Health and Human Services Committee
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Parrish Steinbrecher, Health Information Office Director, HCPF
Stephanie Ziegler, Cost Control and Quality Improvement Office Director, HCPF
Rachel Reiter, External Relations Division Director, HCPF
Nina Schwartz, Legislative Liaison, HCPF

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Department of Health Care Policy & Financing

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1570 Grant Street
Denver, CO 80203

January 30, 2020

The Honorable Susan Lontine, Chair
House Health and Insurance Committee
200 E. Colfax Avenue
Denver, CO 80203

Dear Representative Lontine:

Enclosed please find a legislative report to the House Health and Insurance Committee from the Department of Health Care Policy and Financing on the Pilot Program on Complementary or Alternative Therapies.

Section 25.5-6-1303, C.R.S. requires the Department to conduct an independent evaluation of the pilot program to be completed no later than January 1, 2025. The state department shall provide a report of the evaluation to the health and human services committee of the senate and the public health care and human services committee of the house of representatives, or any successor committees. The report on the evaluation must include the following: (a) The number of eligible persons with disabilities participating in the pilot program; (b) The cost-effectiveness of the pilot program; (c) Feedback from consumers and the state department concerning the progress and success of the pilot program; (d) Any changes to the health status or health outcomes of the persons participating in the pilot program; (e) Other information relevant to the success and problems of the pilot program; and (f)Recommendations concerning the feasibility of continuing the pilot program beyond the pilot stage and changes, if any, that are needed.

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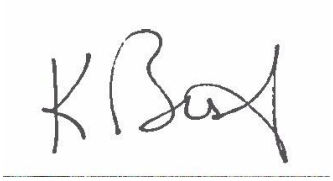

Kim Bimestefer
Executive Director

KB/LW

Enclosure(s): Complementary and Integrative Health Services Evaluation, Final Report September 30, 2019

Cc: Representative Yadira Caraveo, Vice Chair, Health and Insurance Committee
Representative Mark Baisley, Health and Insurance Committee
Representative Susan Beckman, Health and Insurance Committee
Representative Janet Buckner, Health and Insurance Committee
Representative Dominique Jackson, Health and Insurance Committee
Representative Sonya Jaquez Lewis, Health and Insurance Committee
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Nina Schwartz, Legislative Liaison, HCPF

COLORADO
Department of Health Care Policy & Financing

Department of Health Care Policy and Financing
1570 Grant Street
Denver, CO 80203

January 30, 2020

The Honorable Jonathan Singer, Chair
House Public Health Care and Human Services Committee
200 E. Colfax Avenue
Denver, CO 80203

Dear Representative Singer:

Enclosed please find a legislative report to the House Public Health Care and Human Services Committee from the Department of Health Care Policy and Financing on the Pilot Program on Complementary or Alternative Therapies.

Section 25.5-6-1303, C.R.S. requires the Department to conduct an independent evaluation of the pilot program to be completed no later than January 1, 2025. The state department shall provide a report of the evaluation to the health and human services committee of the senate and the public health care and human services committee of the house of representatives, or any successor committees. The report on the evaluation must include the following: (a) The number of eligible persons with disabilities participating in the pilot program; (b) The cost-effectiveness of the pilot program; (c) Feedback from consumers and the state department concerning the progress and success of the pilot program; (d) Any changes to the health status or health outcomes of the persons participating in the pilot program; (e) Other information relevant to the success and problems of the pilot program; and (f)Recommendations concerning the feasibility of continuing the pilot program beyond the pilot stage and changes, if any, that are needed.

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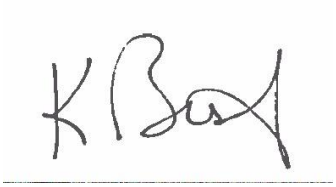

Kim Bimestefer
Executive Director

KB/LW

Enclosure(s): Complementary and Integrative Health Services Evaluation, Final Report September 30, 2019

Cc: Representative Dafna Michaelson Jenet, Vice Chair, Public Health Care and Human Services Committee
Representative Yadira Caraveo, Public Health Care and Human Services Committee
Representative Lisa Cutter, Public Health Care and Human Services Committee
Representative Serena Gonzales-Gutierrez, Public Health Care and Human Services Committee
Representative Sonya Jacquez Lewis, Public Health Care and Human Services Committee
Representative Lois Landgraf, Public Health Care and Human Services Committee
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Rachel Reiter, External Relations Division Director, HCPF
Nina Schwartz, Legislative Liaison, HCPF

Complementary and Integrative Health Services Evaluation

Final Report September 30, 2019

Prepared for the Colorado Department of Health Care Policy & Financing

September 2019

Prepared by:

NRC
National Research Center Inc

2955 Valmont Road • Boulder, Colorado 80301 • t: 303-444-7863 • f: 303-444-1145 • www.n-r-c.com

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Tables and Figures

Evaluation Background

The Home and Community Based Services – Spinal Cord Injury (HCBS-SCI) Pilot Waiver was created under the authority of Colorado Revised Statute §25.5-6-1303 (2009) and a waiver approved by the Centers for Medicare and Medicaid Services (CMS) pursuant to Section 1915 (c) of the Social Security Act. The HCBS-SCI Pilot Waiver allowed individuals with spinal cord injuries to receive alternative therapies, now called Complementary and Integrative Health Services (CIHS) (acupuncture, chiropractic care and massage therapy), in addition to other home- and community-based services already provided through the Elderly, Blind and Disabled (EBD) Waiver (with the exception that Alternative Care Facility, a residential service, is available under EBD but not included in the SCI Waiver).

The HCBS-SCI Pilot Waiver was established for a 3-year period, from July 1, 2012 through June 30, 2015. Each year, the waiver enabled up to 67 eligible individuals to receive CIHS for spinal cord injury. To participate in the pilot waiver, the individuals and their complimentary and integrative health service (CIHS) providers agreed to provide data, complete forms and respond to interviews or surveys related to the pilot waiver. National Research Center, Inc. (NRC) conducted the evaluation of this pilot waiver and submitted a final report to Colorado Department of Health Care Policy and Financing (HCPF or "the Department") in July of 2015.

The original pilot waiver showed promise but did not provide enough data to conclude whether SCI Waiver Members saw improvements in their conditions from the alternative therapies. The Department renewed the waiver for an additional five years (ending June 30, 2020) with some changes in response to the Pilot Waiver evaluation and other stakeholder input. Changes of note for this evaluation sought to rectify deficiencies in the Pilot Waiver related to ambiguity of "alternative therapies," a small sample size and bottlenecks to receiving services. These changes included:

- The descriptor, "alternative therapies" (acupuncture, chiropractic care and massage therapy) was changed to "complimentary and integrative health services (CIHS)."
- The definition of SCI was broadened to improve enrollment eligibility.
- The cap of 67 SCI Waiver Members was increased to 120, with the option to increase this cap if need is shown. This was intended to serve a larger group and provide a sufficient number of participants to draw conclusions in the evaluation. This also allowed the elimination of the waitlist.
- The requirement that CIHS providers be center-based, with a supervising physician at the site was removed. Individual CIHS providers and centers without physicians can now apply to become CIHS providers under the waiver. This was intended to ensure SCI Waiver Members had access to the CIHS, reducing the service bottlenecks experienced in the three-year pilot waiver.

NRC was retained to implement the evaluation for the new five-year SCI Waiver. The evaluation data gathering activities began in July 2015 and ended in March 2019. The evaluation was designed to assess whether:

- CIHS helped reduced the need for continuous or more expensive procedures, medications, and hospitalizations for a person with a spinal cord injury.
- The HCBS-SCI Waiver resulted in cost savings for the State compared to the estimated expenditures that would have otherwise been spent for the same persons with spinal cord injuries absent the waiver.
- CIHS led to any changes to the health status or health outcomes of persons using the services.
- CIHS led to any changes to the quality of life of persons using the services.
- CIHS allowed persons with a spinal cord injury to become and/or remain employed.

Additionally, the study was intended to identify any specific ways to improve the HCBS-SCI Waiver based on participant feedback and overall study findings.

2016-2019 Evaluation Components

Upon enrollment onto the Medicaid HCBS-SCI Waiver, each individual was provided a consent form by their case manager informing them of the evaluation and their participation in the study. The consent form was collected by the participant's CIHS provider prior to their first appointment. If an individual refused consent, they were not included in the evaluation.

To achieve the goals of the study evaluation, five components were implemented:

1. Provider-administered three question assessment that is conducted at the start of each CIHS session.
2. Self-administered assessments of health status, employment and quality of life, administered at the first CIHS appointment and annually (in March) and/or semi-annually (in March and September).
    a. Form 1: Self-Administered Health History (annually)
    b. Form 2: Self-Administered Health Assessment (semi-annually)
    c. Form 3: Self-Administered Quality of Life Assessment (WHOQOL-BREF, semi-annually)
    d. Form 4: Self-Administered Functional Assessment (CHART, annually)
3. Feedback surveys to assess satisfaction with the waiver and areas for improvement, implemented annually in April/May.
4. Analysis of data from the HCPF claims database, MMIS, to assess service usage and costs; results culled annually for the Annual Report.
5. Analysis of the ULTC 100.2 Long Term Care Assessment form, filled out by each participant's Medicaid Case Manager annually (and updated with changes in treatment plans); results culled annually for the Annual Report.

This report details the results of the four-year evaluation study.

Waiver Participant Details

CIHS Provider Enrollment

As of March 31, 2019, there were four CIHS providers enrolled:

- Spinal Cord Injury Recovery Project
  866 E. 78th Avenue
  Denver, CO 80229-5934
- The Chanda Plan Foundation (Lakewood)
  1630 Carr Street
  Lakewood, CO 80214
- The Chanda Plan Foundation (PEAK Center)
  3425 S. Clarkson Street
  Englewood, CO 80113-2811
- Unity Community Acupuncture
  1355 E 22nd Ave
  Denver, CO 80205-5220

SCI Waiver Member Enrollment and CIHS Use

As of March 31, 2019, there were 139 people on the SCI Waiver. Of these, 107 had claims made to HCPF for CIHS that received payment as of March 31, 2019 (the latest available claims data due to lags in the administrative processes) and [redacted] had never used CIHS through the SCI Waiver (i.e., no CIHS claims as of March 31, 2019).

Table 1: SCI Waiver Member Evaluation Participation Status

	Number
Total current SCI Waiver members	**139**
Had CIHS claims	**114**
Had CIHS claims and completed forms (at some point 2015-2019)	*101*
Had CIHS claims, but did not participate in evaluation	[redacted]
Had CIHS claims, but not during 2015-2019 evaluation period	[redacted]
Did not have CIHS claims as of March 31, 2019	[redacted]
New to waiver (not eligible for evaluation)	[redacted]
Never used CIHS (not eligible for evaluation)	[redacted]

Evaluation Participation

The primary difference between services provided under the EBD Waiver and the SCI Waiver is access to CIHS (the other difference is that Alternative Care Facility, a residential service, is available under EBD but not included in the SCI Waiver). As such, to best evaluate the effect of the SCI Waiver, only members who were using CIHS were included in the evaluation (i.e., those on the SCI Waiver who were not receiving CIHS were considered equivalent to not being on the SCI Waiver).

There were two components to the evaluation that SCI Waiver members could be included in: (1) the analysis of data from HCPF files to compare health care services paid for by Medicaid and long term care assessments and (2) analysis of the self-reported quality of life measures collected through evaluation forms (Forms 1 to 4 and the provider-administered three question assessment) described previously. While everyone who received CIHS paid for by Medicaid could be included in the first analyses, only those who filled out assessment forms could be included in the latter.

Of the 139 current SCI Waiver members, 107 had CIHS claims at some time between 2015 and 2019 and were included (if relevant) in latter analyses of the costs of health care under the SCI Waiver.

A total of 101 SCI Waiver members who received CIHS also completed at least one of the self-evaluation forms. In the last iteration of the form collection (March 2019), 77 participants completed Form 1. Form 1 was collected in March of each year, so the number of times a participant filled out this form was dependent on when they joined the SCI Waiver and started receiving CIH services. Table 3 shows the number of SCI Waiver members who completed an initial Form 1 self-assessment (101) and then the number who completed Form 1 one year later (85), two years later (70) and three years later (33).

Table 2: Number of Form 1 Evaluations Completed by Year

		Annually			
	At outset	2016	2017	2018	2019
Form 1: Self-Administered Health History (annually)	101	45	81	86	77

Note that start dates for each participant is unique, so not all were in the waiver each year. However, each should have completed all four forms at the outset of their care.

Table 3: Number of Form 1 Evaluations Completed by Iteration

		Iteration			
	At outset	1	2	3	4
Form 1: Self-Administered Health History (annually)	101	101	85	70	33

Note that start dates for each participant is unique, so not all were in the waiver each year. However, each should have completed all four forms at the outset of their care.

Forms 2 and 3 were collected in March and September of each year and again the number of times a participant filled out these forms was dependent on when they joined the SCI Waiver and started receiving CIH services. Table 4 and Table 6 show how many participants filled out Forms 2 and 3 each March and September. Table 5 and Table 7 show the number of SCI Waiver members who completed an initial Form 2 or 3 (101) and then the number who completed them at each 6 month interval after that initial self-assessment.

Seventy-seven of the waiver members who were known to be receiving CIHS, completed Forms 1, 2 and 3 in March 2019 (the final iteration of data collection).

Table 4: Number of Form 2 Evaluations Completed by Year

Form 2: Self-Administered Health Assessment (semi-annually)	At outset	Semi-Annually						
		June/July 2016	September 2016	March 2017	September 2017	March 2018	September 2018	March 2019
	101	17	43	58	79	81	65	77

Note that start dates for each participant is unique, so not all were in the waiver each year. However, each should have completed all four forms at the outset of their care.

Table 5: Number of Form 2 Evaluations Completed by Iteration

Form 2: Self-Administered Health Assessment (semi-annually)	At outset	Semi-Annually						
		1	2	3	4	5	6	7
	101	101	83	75	68	46	33	[redacted]

Note that start dates for each participant is unique, so not all were in the waiver each year. However, each should have completed all four forms at the outset of their care.

Table 6: Number of Form 3 Evaluations Completed by Year

Form 3: Self-Administered Quality of Life Assessment (WHOQOL-BREF, semi-annually)	At outset	Semi-Annually						
		June/July 2016	September 2016	March 2017	September 2017	March 2018	September 2018	March 2019
	101	[redacted]	43	59	78	79	64	77

Note that start dates for each participant is unique, so not all were in the waiver each year. However, each should have completed all four forms at the outset of their care.

Table 7: Number of Form 3 Evaluations Completed by Iteration

Form 3: Self-Administered Quality of Life Assessment (WHOQOL-BREF, semi-annually)	At outset	Semi-Annually						
		1	2	3	4	5	6	7
	101	101	81	76	67	45	33	[redacted]

Note that start dates for each participant is unique, so not all were in the waiver each year. However, each should have completed all four forms at the outset of their care.

Similar to Form 1, Form 4 was collected in March of each year and Table 8 shows the number of evaluation participants who completed the form each year. Table 9 shows the number of SCI Waiver members who completed an initial Form 4 (101) and then the number who completed Form 4 one year later (80), two years later (66) and three years after (32) their initial self-assessment.

Seventy-four of the waiver members who were known to be receiving CIHS, completed Form 4 in March 2019 (the final iteration of data collection).

Table 8: Number of Form 4 Evaluations Completed by Year

Form 4: Self-Administered Functional Assessment (CHART, annually)	At outset	Annually			
		2016	2017	2018	2019
	101	45	79	81	74

Note that start dates for each participant is unique, so not all were in the waiver each year. However, each should have completed all four forms at the outset of their care.

Table 9: Number of Form 4 Evaluations Completed by Iteration

Form 4: Self-Administered Functional Assessment (CHART, annually)	At outset	Iteration			
		1	2	3	4
	101	101	80	66	32

Note that start dates for each participant is unique, so not all were in the waiver each year. However, each should have completed all four forms at the outset of their care.

Participant Demographics

Participant demographics were culled from the most recently completed Form 1 and from the Medicaid registration/claims database. As shown in Table 10, a majority of participants were male (63%), single (67%) and relied on Social Security (78%) for their income. There was a wide age range, about half had a high school education or less and half had a college degree and 40% live alone. Close to half were able to drive themselves (45%) while [redacted]% relied on others to drive them and others used buses or taxis for their primary transportation. Most did not drink alcohol (57%), smoke cigarettes (87%) or use other tobacco products (95%).

Table 10: Demographic Profile of SCI Waiver Evaluation Participants

		Percent	Number
	Male	63%	64
	Female	37%	37
Gender	Total	100%	101
	18 to 34	[redacted]%	[redacted]
	35 to 54	54%	55
	55 or older	[redacted]%	[redacted]
Age	Total	100%	101
	Disabled	65%	64
	Unemployed	[redacted]%	[redacted]
	Part time	[redacted]%	[redacted]
	Full time	[redacted]%	[redacted]
	Retired	[redacted]%	[redacted]
	Sick leave	[redacted]%	[redacted]
	Student	[redacted]%	[redacted]
Work status	Total	100%	99
	Social Security	78%	77
	Disability Comp	[redacted]%	[redacted]
	Other	[redacted]%	[redacted]
	Salary	[redacted]%	[redacted]
	Pension	[redacted]%	[redacted]
Income Source	Total	100%	99
	Drive	45%	45
	Others drive	[redacted]%	[redacted]
	Taxi	[redacted]%	[redacted]
	Other	[redacted]%	[redacted]
	Bus	[redacted]%	[redacted]
Primary mode of transportation	Total	100%	99

Demographic Profile of SCI Waiver Evaluation Participants (continued)

		Percent	Number
	Single	67%	68
	Married	[redacted]%	[redacted]
	Divorced	[redacted]%	[redacted]
	Widowed	[redacted]%	[redacted]
	Separated	[redacted]%	[redacted]
Marital status	Total	100%	101
	Alone	40%	40
	Parents or siblings	[redacted]%	[redacted]
	Spouse	[redacted]%	[redacted]
	Children	[redacted]%	[redacted]
	Significant other	[redacted]%	[redacted]
	Friends	[redacted]%	[redacted]
	Other	[redacted]%	[redacted]
Live with	Total	100%	101
	House	58%	59
	Apartment	36%	36
	Other	[redacted]%	[redacted]
	Retirement housing	[redacted]%	[redacted]
Live in	Total	100%	101
	Grade School	[redacted]%	[redacted]
	High School	43%	43
	College	39%	39
	Postgraduate	[redacted]%	[redacted]
Highest grade completed	Total	100%	101
	No	57%	58
	Yes	43%	43
Drink alcoholic beverages	Total	100%	101
	No	[redacted]%	[redacted]
	Yes	[redacted]%	[redacted]
Smoke cigarettes	Total	100%	101
	No	[redacted]%	[redacted]
	Yes	[redacted]%	[redacted]
Use other tobacco products	Total	67%	68

Source: Gender and age from HCPF database, all other items from each participant's most recently completed Form 1 (questions 1 to 10).

Just under half of the evaluation participants (48%) received their spinal cord injury (SCI) 10 or more years prior to this evaluation. Most had injuries in the C1-8 region (77%) and 52% were quadriplegic.

Table 11: Injury Profile of SCI Waiver Evaluation Participants

Years with SCI	Less than 2 years	[redacted]%	[redacted]
	2-5 years	[redacted]%	[redacted]
	6-9 years	[redacted]%	[redacted]
	10 or more years	48%	46
	Total	100%	95
Level of SCI (can choose more than one)	C5-C8	42%	41
	C1-C4	35%	34
	T6-T12	[redacted]%	[redacted]
	T1-T5	[redacted]%	[redacted]
	L1-L5	[redacted]%	[redacted]
	S1-S5	[redacted]%	[redacted]
	Total	100%	98
Type/Result of SCI (can choose more than one)	Quadriplegia	52%	51
	Paraplegia	[redacted]%	[redacted]
	Tetraplegia	[redacted]%	[redacted]
	Other	[redacted]%	[redacted]
	Total	100%	98

Source: Most recently completed Form 1 (questions 11 to 13).

The most common medical conditions and symptoms experienced by evaluation participants were muscle, neck, joint and back pain. About half were also currently experiencing sleep problems, and most had trouble sleeping in the past.

Table 12: Diagnosed Medical Conditions and Symptoms for SCI Waiver Evaluation Participants

	Current		Current or Past	
	Number	Percent	Number	Percent
Neck pain	61	60%	79	80%
Muscle pain	60	59%	75	76%
Joint pain	56	55%	71	72%
Back pain	52	51%	68	69%
Sleep problems	47	47%	67	68%
Seasonal allergies	35	35%	56	57%
Headaches	[redacted]	[redacted]	49	49%
Vision problems	[redacted]	[redacted]	41	41%
Anxiety	[redacted]	[redacted]	48	48%
Arthritis	[redacted]	[redacted]	[redacted]	[redacted]
Memory problems	[redacted]	[redacted]	32	32%
Depression	[redacted]	[redacted]	46	46%
Chronic fatigue	[redacted]	[redacted]	31	31%
Skin problems	[redacted]	[redacted]	41	41%
Osteoporosis	[redacted]	[redacted]	[redacted]	[redacted]
Heartburn	[redacted]	[redacted]	37	37%
Obesity	[redacted]	[redacted]	[redacted]	[redacted]
Thyroid problems	[redacted]	[redacted]	[redacted]	[redacted]
Difficulty chewing or swallowing	[redacted]	[redacted]	[redacted]	[redacted]
High blood pressures	[redacted]	[redacted]	[redacted]	[redacted]
Diabetes	[redacted]	[redacted]	[redacted]	[redacted]
High cholesterol	[redacted]	[redacted]	[redacted]	[redacted]
Hearing problems	[redacted]	[redacted]	[redacted]	[redacted]
Asthma	[redacted]	[redacted]	[redacted]	[redacted]
Migraines	[redacted]	[redacted]	[redacted]	[redacted]
Eye disease	[redacted]	[redacted]	[redacted]	[redacted]
Kidney problems	[redacted]	[redacted]	[redacted]	[redacted]
Lung disease	[redacted]	[redacted]	[redacted]	[redacted]
Blood clots	[redacted]	[redacted]	[redacted]	[redacted]
Ulcers	[redacted]	[redacted]	[redacted]	[redacted]
Seizures	[redacted]	[redacted]	[redacted]	[redacted]
Heart disease	[redacted]	[redacted]	[redacted]	[redacted]
Stroke	[redacted]	[redacted]	[redacted]	[redacted]
Cancer	[redacted]	[redacted]	[redacted]	[redacted]
No current conditions	[redacted]	[redacted]		

Source: Most recently completed Form 1, Question 14: Have you had any of the following diagnosed medical conditions or symptoms? Check one: Currently, In the past, or Never

Cost and Utilization of CIHS

Notes on Comparisons by Year

SCI Waiver participants generally participated in the HCBS-EBD (Elderly, Blind, & Disabled) waiver before enrolling in the SCI Waiver. Therefore, for most participants, Medicaid claims costs can be tracked pre and post joining the SCI Waiver.

As discussed above, the primary difference between services provided under the EBD waiver and the SCI Waiver is access to complimentary and integrative health services (the other difference is that Alternative Care Facility, a residential service, is available under EBD but not included in the SCI Waiver). As such, for the purpose of this study, the start date for determining the impact of the SCI Waiver is the first day the participant received a CIHS.

The start date for first year of CIHS differs for each SCI Waiver participant, so calendar years were not used for comparisons. Throughout the report, years were defined as "1 Year Pre," "1 Year Post," "2 Years Post," etc., anchored on the first date the individual started CIHS.

While this is the report for the 2016-2019 evaluation study, many of the current participants also participated in the three-year pilot Waiver (2012-2015) and therefore had been receiving CIHS for up to five full years.

To ensure comparability, annual usage and costs were only included if the participant had participated for the full year (i.e., all 12 months in "1 Year Pre," or "1 Year Post," or "2 Years Post," etc.).

Utilization of CIHS

The number of units of CIHS that had been paid for by Medicaid under the SCI Waiver are shown in Table 13 (with claims ending March 31, 2019). These exclude participants who left the waiver and those with only partial years on the waiver. The "years post" shown in Table 13 and throughout the report were tethered to each individual's starting date (the date of their first CIHS).

Massage therapy was the most frequently used CIHS with an average of 116 units being used by 105 people in their first year of joining the SCI Waiver and starting CIHS treatments. Acupuncture was second most frequently used (used by 94 people in the first year, with an average of 93 units in that year) and chiropractic was accessed less often (used by 73 people in the first year, with an average of 30 units in that year).

Table 13: Hours and Cost of CIHS Paid for by Medicaid (Full Year Data)

Full Year (adjusted)		Number of Participants	Total Cost	Average cost per person using modality	Total Units	Average Units per person using modality
	1 Year Post	N=94	$160,130	$1,704	8,695	93
	2 Year Post	N=52	$65,997	$1,269	3,551	68
	3 Year Post	N=[redacted]	$40,338	$[redacted]	2,170	[redacted]
	4 Year Post	N=[redacted]	$35,678	$[redacted]	1,916	[redacted]
Acupuncture	5 Year Post	N=[redacted]	$31,273	$[redacted]	1,684	[redacted]
	1 Year Post	N=73	$48,063	$658	2,203	30
	2 Year Post	N=34	$27,698	$815	1,282	38
	3 Year Post	N=[redacted]	$20,552	$1,209	958	[redacted]
	4 Year Post	N=[redacted]	$23,722	$1,395	1,002	[redacted]
Chiropractic	5 Year Post	N=[redacted]	$23,299	$1,456	976	[redacted]
	1 Year Post	N=105	$174,308	$1,660	12,228	116
	2 Year Post	N=59	$81,926	$1,389	5,720	97
	3 Year Post	N=[redacted]	$38,475	[redacted]	2,686	[redacted]
	4 Year Post	N=[redacted]	$36,352	[redacted]	2,540	[redacted]
Massage	5 Year Post	N=[redacted]	$45,619	[redacted]	3,192	[redacted]

[1] *Each paid unit is 15 minutes.*
Data source: Medicaid claims billing database, claims ending March 31, 2019.

Overall Medicaid Costs (Including CIHS)

Changes in Healthcare Costs

As Medicaid claims rates may change each fiscal year, comparisons of real dollars (not adjusted for changes in reimbursement rates) may hide real changes in expenditures. As such, in this report past health care costs were adjusted to 2017-18 dollars based on the rate changes below.

Table 14: Changes in Medicaid Reimbursement Rates

State Fiscal Year	Rate Change
2009-10	1.5% decrease as of Sept and 1% decrease beginning December
2010-11	1% decrease effective July
2011-12	None
2012-13	None
2013-14	8.26% increase effective July
2014-15	2% increase effective July
2015-16	0.5% increase effective July
2016-17	None
2017-18	1.4% across the board effective October and Emergency Transportation 7.01% increase effective July
2018-19	1% increase effective July 2018 and a 1 % increase effective January 2019

Source: HCPF (email correspondence 6/14/2019)

Overall Medicaid Costs

Table 15 shows the costs for all claims paid by Medicaid for SCI Waiver members who used CIHS. The number and composition of participants changes each year (as members have been on the waiver and used CIHS for differing lengths of time), but overall the pattern is a relatively stable or slightly downward trend in cost. The differences are not statistically significant.

Table 16 shows only those who had a full year of claims data both pre and post starting CIHS. For this cohort there a was $206,421 (4%) reduction in the total Medicaid costs in the year after starting CIHS ($5,024,201 versus $4,817,780).

Table 15: Total Medicaid Costs by Year (all CIHS users)

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	78	$5,180,903	$66,422	$57,540	$10	$281,953
1 Year Post	**107**	**$6,640,968**	**$62,065**	**$47,458**	**$104**	**$304,264**
2 Years Post	66	$4,523,512	$68,538	$52,073	$2	$278,466
3 Years Post	46	$3,029,892	$65,867	$58,528	$1,353	$289,432
4 Years Post	42	$2,474,660	$58,920	$55,398	$2,160	$311,555
5 Years Post	33	$2,160,346	$65,465	$53,518	$1,117	$280,519

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Table 16: Total Medicaid Costs by Year (with at least one full year pre and post CIHS)

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	**74**	**$5,024,201**	**$67,895**	**$58,400**	**$10**	**$281,953**
1 Year Post	**74**	**$4,817,780**	**$65,105**	**$50,130**	**$104**	**$304,264**
2 Years Post	50	$3,388,729	$67,775	$53,597	$2	$278,466
3 Years Post	36	$2,361,973	$65,610	$62,102	$1,353	$289,432
4 Years Post	33	$1,893,619	$57,382	$56,694	$2,160	$311,555
5 Years Post	[redacted]	$1,709,336	$[redacted]	$56,699	$1,117	$280,519

Data source: Medicaid claims billing database.

Only included if participated for one full year pre and post CIHS. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

The following tables show trend data only for CIHS users who had full years of data for one year prior to starting CIHS and at least two years post. This allowed comparisons across years for the same group of SCI Waiver members (the same people in each year).

The data for these CIHS recipients with full years of data for several years, showed decreasing trends in total Medicaid claims costs after starting CIHS.

Table 17: Total Medicaid Costs by Year (with at least one full year pre and two full years post CIHS)

	Count	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	50	$3,523,503	$70,470	$61,644	$10	$281,953
1 Year Post	50	$3,453,929	$69,079	$55,117	$4,212	$304,264
2 Year Post	50	$3,388,498	$67,770	$53,589	$2	$278,466

Data source: Medicaid claims billing database.

Only included if participated for one full year pre and two full years post CIHS. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Table 18: Total Medicaid Costs by Year (with at least one full year pre and three full years post CIHS)

	Count	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	36	$2,742,698	$76,186	$67,206	$133	$281,953
1 Year Post	36	$2,626,817	$72,967	$60,626	$5,384	$304,264
2 Year Post	36	$2,442,234	$67,840	$59,245	$2	$278,466
3 Year Post	36	$2,362,127	$65,615	$62,100	$1,353	$289,432

Data source: Medicaid claims billing database.

Only included if participated for one full year pre and three full years post CIHS. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Overall Medicaid Costs Compared to EBD Waiver Members

As outlined in the section discussing the department's Long Term Care Assessment (see page 39), compared to EBD Waiver members who qualify for the SCI Waiver (see Table 52), SCI Waiver members (Table 51) had higher scores for memory and behavior but lower scores in the areas of bathing, dressing, toileting, mobility, transferring and eating. Those who join the SCI Waver likely had more severe injuries than the average person who qualifies for the SCI Waiver but has not joined it. As such, the EBD Waiver members who qualify for the SCI Waiver but have not joined it are not an appropriate cohort for comparing Medicaid claims costs with and without access to CIHS; they may require less care overall.

However, as a benchmark for the direction change in Medicaid claims costs, the trend for total Medicaid costs for the EBD Waiver Members who qualify for the SCI Waiver, but have not joined the SCI waiver, have seen a slight upward trend. Average costs in Years 4 and 5 are statistically significantly larger than Years 1 and 2 and average costs in Years 6 and 7 are statistically significantly larger than Years 1, 2 and 3.

Table 19: Total Medicaid Costs by Year for EBD Waiver Members who qualify for the SCI Waiver

Year*	Count	Sum	Mean	Standard Deviation	Minimum	Maximum
EBD Year 1	4027	$48,306,890	$11,996	$22,226	$0	$267,779
EBD Year 2	3322	$41,853,787	$12,599	$24,965	$0	$386,858
EBD Year 3	2691	$36,521,612	$13,572	$26,676	$0	$382,390
EBD Year 4	2210	$34,215,067	$15,482	$32,043	$0	$626,495
EBD Year 5	1861	$29,716,786	$15,968	$30,214	$0	$405,559
EBD Year 6	1489	$24,440,877	$16,414	$30,541	$0	$502,831

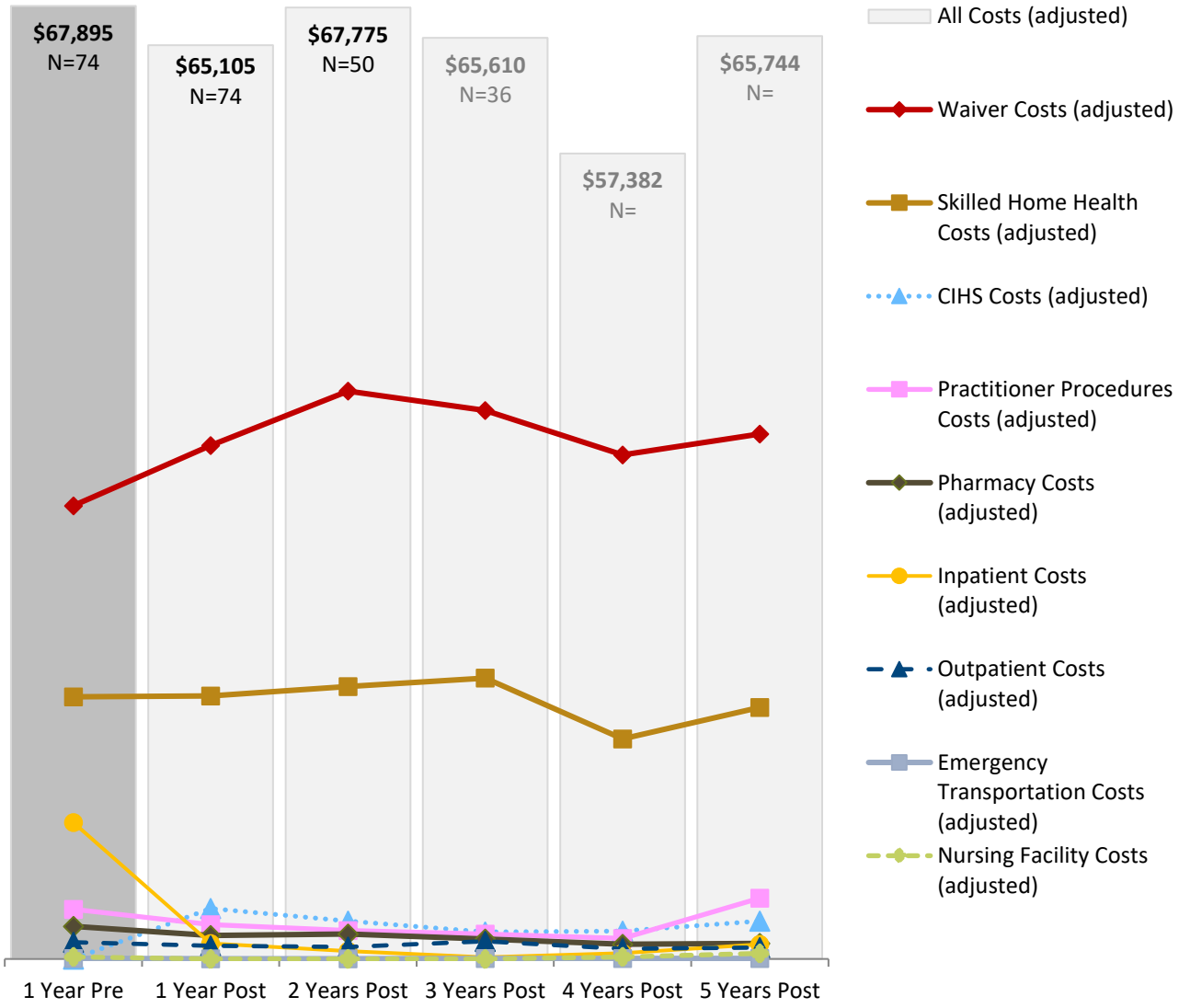
Data source: Medicaid claims billing database.

** Only included if participated for one full year of data for a given year, the time frame for this data is 2010 to 2018, but the EBD Year is anchored to when the EBD member waiver first had services in this time period. Health care costs were adjusted to 2017-18 dollars as discussed above.*

Medicaid Cost by Category

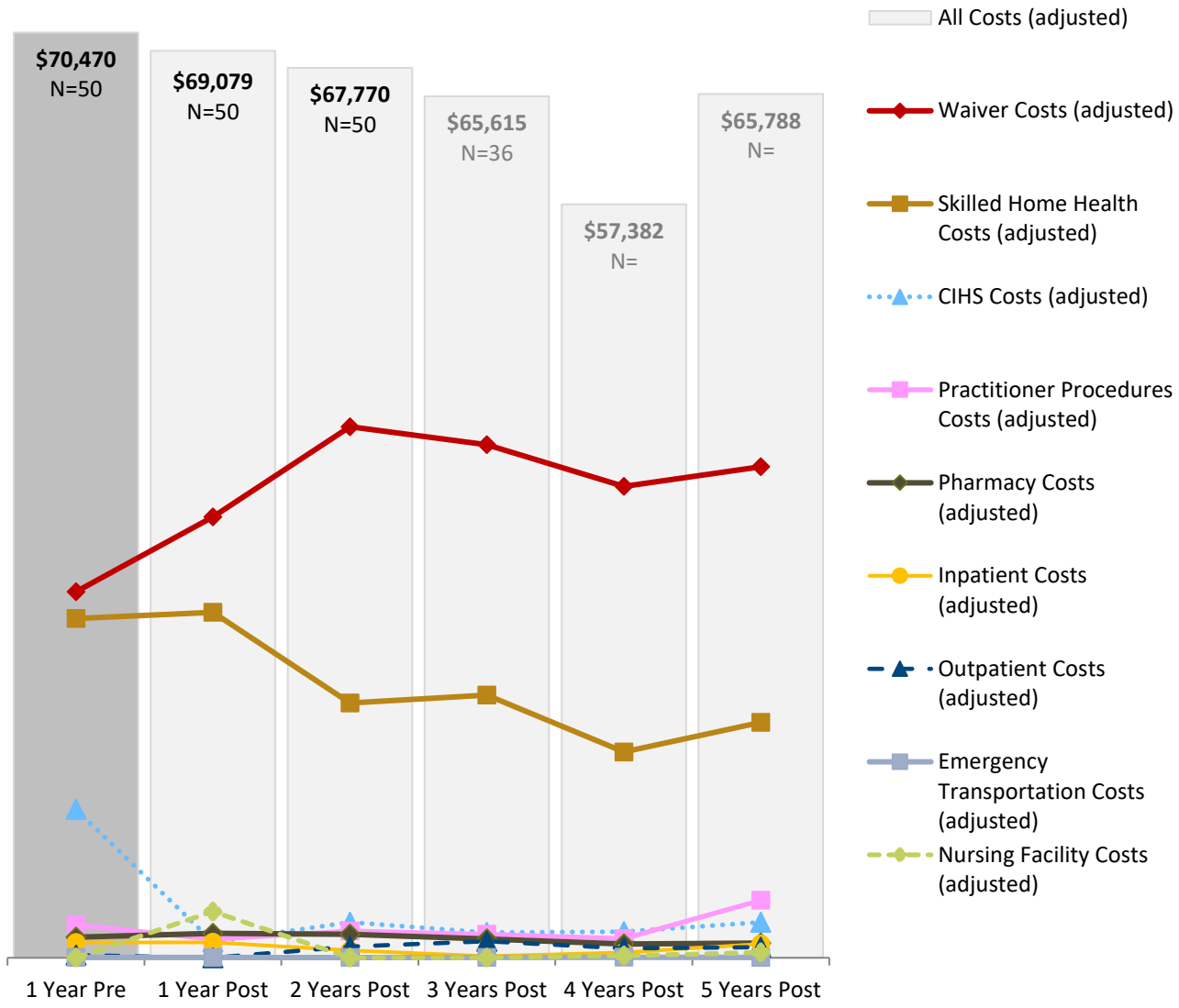
While it is hypothesized that the use of CIHS will lead to a reduction, or at least no increase, in overall Medicaid claims, not all Medicaid costs were expected to be impacted by CIHS use. Figure 1 shows all costs for those who had a full 12 months of data in each year. There was an increase in claims made for waiver services after CIHS were started and decreases in overall in-patient and pharmacy costs. Other claims remained relatively similar. Details for each are presented in the following pages.

Figure 1: Average Medicaid Costs by Category by Year (Adjusted for Cost Inflation) for those with at Least One Year of Costs Pre and Post CIHS



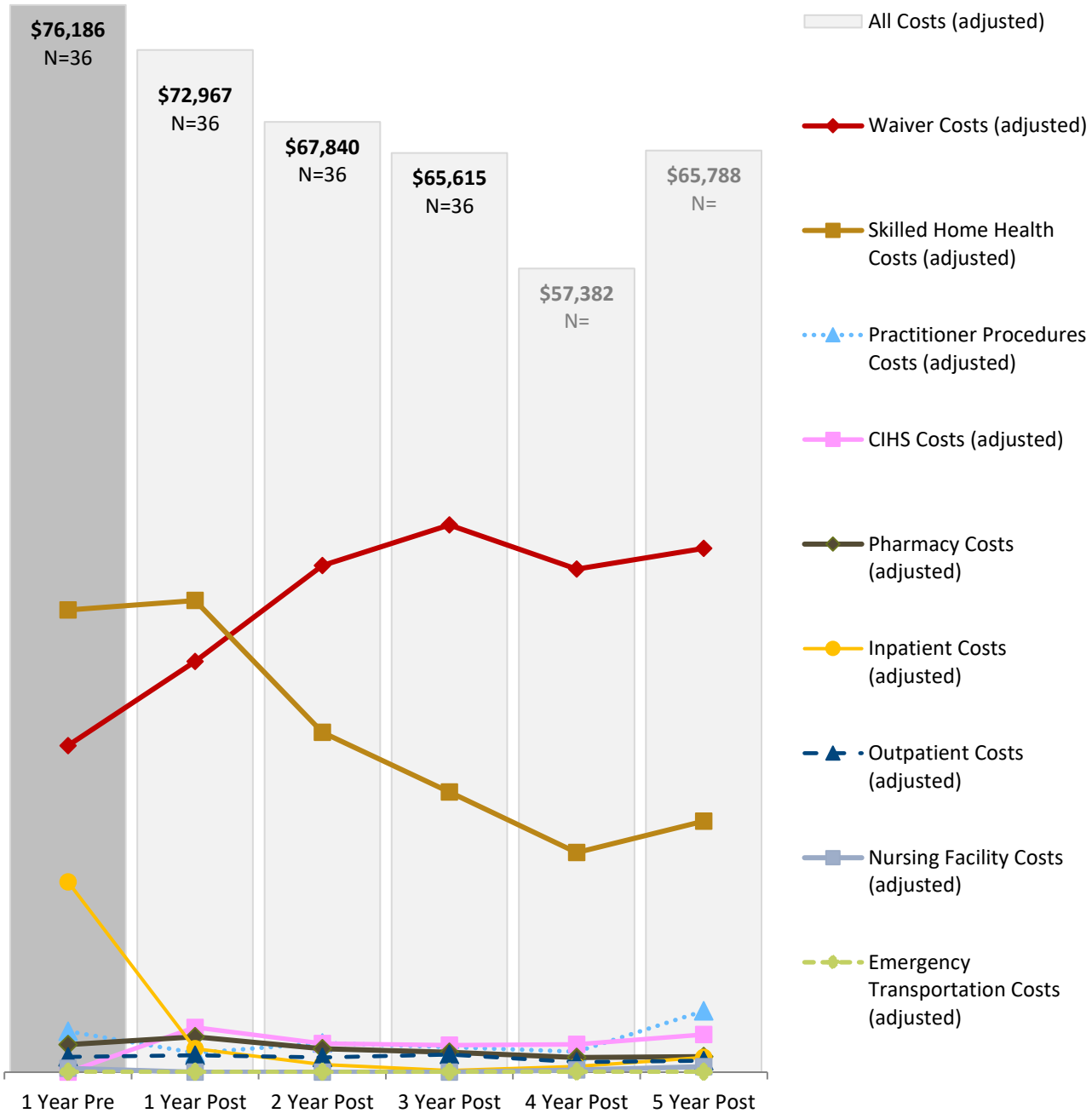
Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Figure 2: Average Medicaid Costs by Category by Year (Adjusted for Cost Inflation) for those with at Least One Year of Costs Pre and Two Years Post CIHS



Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Figure 3: Average Medicaid Costs by Category by Year (Adjusted for Cost Inflation) for those with at Least One Year of Costs Pre-CIHS and Three Years Post-CIHS



Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

CIHS Costs

CIHS were initiated once joining the SCI Waiver (1 Year Post) with average costs of $3,575 in the first year. Average CIHS costs dropped in the second (to $2,652) and third (to $2,160) years of receiving CIHS.

Table 20: CIHS Costs by Year

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
2 Years Pre	[redacted]	$0	$0	$0	$0	$0
1 Year Pre	78	$0	$0	$0	$0	$0
1 Year Post	107	$382,501	$3,575	$1,745	$104	$6,845
2 Years Post	66	$175,039	$2,652	$1,831	$0	$6,550
3 Years Post	46	$99,366	$2,160	$2,153	$0	$5,863
4 Years Post	42	$95,752	$2,280	$2,160	$0	$7,063
5 Years Post	33	$100,191	$3,036	$2,138	$0	$6,510

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Table 21: CIHS Costs by Year (with at least one full year pre and post CIHS)

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
2 Years Pre	[redacted]	$0	$0	$0	$0	$0
1 Year Pre	**74**	**$0**	**$0**	**$0**	**$0**	**$0**
1 Year Post	**74**	**$265,814**	**$3,592**	**$1,674**	**$104**	**$6,845**
2 Years Post	50	$134,698	$2,694	$1,938	$0	$6,550
3 Years Post	36	$69,485	$1,930	$2,045	$0	$5,668
4 Years Post	33	$65,265	$1,978	$2,018	$0	$6,232
5 Years Post	[redacted]	$70,086	$[redacted]	$2,133	$0	$6,510

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). Only included if participated for one full year pre and post CIHS.

Waiver Services Costs

Waiver services include services such as non-medical transportation, personal emergency response systems, adult day care and unskilled personal and home care services. Needs for personal emergency systems, unskilled personal and home care services were not expected to change due to receiving CIHS services, while non-emergency transportation may increase as participants go to more CIHS appointments and potentially feel well enough to leave their homes more frequently for other purposes (less than one-half of participants were able to drive themselves).

The overall waiver costs (transportation and other services) showed an upward trend.

Table 22: Waiver Services Costs by Year

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	78	$2,518,525	$32,289	$31,343	$0	$126,375
1 Year Post	107	$3,740,331	$34,956	$31,616	$0	$117,392
2 Years Post	66	$2,670,009	$40,455	$32,507	$0	$124,315
3 Years Post	46	$1,735,927	$37,738	$34,304	$0	$152,716
4 Years Post	42	$1,512,483	$36,012	$32,679	$0	$100,708
5 Years Post	33	$1,303,661	$39,505	$32,242	$0	$97,574

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Table 23: Waiver Services Costs by Year (with at least one full year pre and post CIHS)

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	**74**	**$2,389,525**	**$32,291**	**$31,486**	**$0**	**$126,375**
1 Year Post	**74**	**$2,706,420**	**$36,573**	**$31,867**	**$0**	**$117,392**
2 Years Post	50	$2,022,225	$40,445	$33,035	$0	$124,315
3 Years Post	36	$1,406,411	$39,067	$35,504	$0	$152,716
4 Years Post	33	$1,184,884	$35,906	$32,723	$0	$100,708
5 Years Post	[redacted]	$972,437	$[redacted]	$31,427	$0	$96,121

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). Only included if participated for one full year pre and post CIHS.

Skilled Home Health Services Costs

Costs for skilled home health care services (such as occupational or physical therapy care or evaluations) did not show a strong trend up or down, and for those with a full year of data both pre and post CIHS, costs were similar.

Table 24: Skilled Home Health Services Costs by Year

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	78	$1,407,831	$18,049	$44,074	$0	$270,393
1 Year Post	107	$1,763,219	$16,479	$42,224	$0	$287,450
2 Years Post	66	$1,205,541	$18,266	$42,694	$0	$237,955
3 Years Post	46	$959,083	$20,850	$47,008	$0	$241,520
4 Years Post	42	$685,793	$16,328	$48,062	$0	$272,887
5 Years Post	33	$466,139	$14,125	$46,392	$0	$251,979

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Table 25: Skilled Home Health Services Costs by Year (with at least one full year pre and post CIHS)

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	**74**	**$1,381,745**	**$18,672**	**$45,103**	**$0**	**$270,393**
1 Year Post	**74**	**$1,387,210**	**$18,746**	**$46,814**	**$0**	**$287,450**
2 Years Post	50	$970,318	$19,406	$44,689	$0	$237,955
3 Years Post	36	$720,231	$20,006	$47,832	$0	$241,520
4 Years Post	33	$517,330	$15,677	$49,131	$0	$272,887
5 Years Post	[redacted]	$466,139	$[redacted]	$51,806	$0	$251,979

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). Only included if participated for one full year pre and post CIHS.

Pharmacy Costs

It is hypothesized that better pain management through CIHS will lead to a reduced need for pharmaceuticals to manage pain and depression. With one outlier removed, this data showed similar costs pre and post CIHS (Table 28). However, costs for that outlier did drop from pre to post CIHS.

Table 26: Pharmacy Costs by Year

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	78	$171,811	$2,203	$8,712	$0	$73,903
1 Year Post	107	$176,551	$1,650	$3,733	$0	$23,332
2 Years Post	66	$102,231	$1,549	$4,242	$0	$26,944
3 Years Post	46	$59,228	$1,288	$3,017	$0	$13,743
4 Years Post	42	$44,071	$1,049	$2,724	$0	$13,179
5 Years Post	33	$36,111	$1,094	$2,443	$0	$10,021

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Table 27: Pharmacy Costs by Year (with at least one full year pre and post CIHS)

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	**74**	**$171,801**	**$2,322**	**$8,932**	**$0**	**$73,903**
1 Year Post	**74**	**$124,103**	**$1,677**	**$4,176**	**$0**	**$23,332**
2 Years Post	50	$89,007	$1,780	$4,772	$0	$26,944
3 Years Post	36	$51,279	$1,424	$3,303	$0	$13,743
4 Years Post	33	$34,587	$1,048	$2,892	$0	$13,179
5 Years Post	[redacted]	$28,783	$[redacted]	$2,623	$0	$10,021

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). Only included if participated for one full year pre and post CIHS.

Table 28: Pharmacy Costs by Year (with at least one full year pre and post CIHS, and outlier removed)

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	**73**	**$97,898**	**$1,341**	**$2,957**	**$0**	***$14,946***
1 Year Post	**73**	**$100,771**	**$1,380**	**$3,328**	**$0**	***$15,385***
2 Years Post	50	$89,007	$1,780	$4,772	$0	$26,944
3 Years Post	36	$51,279	$1,424	$3,303	$0	$13,743
4 Years Post	33	$34,587	$1,048	$2,892	$0	$13,179
5 Years Post	[redacted]	$28,783	$[redacted]	$2,623	$0	$10,021

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). Only included if participated for one full year pre and post CIHS.

Practitioner Services Costs

Health maintenance requires regular visits to a primary physician, and this was not expected to change due to the introduction of CIHS. Data showed downward trend in cost for practitioner services after starting to receive CIH services. There was an upward tick in costs in year 5, but for a reduced number of participants.

Table 29: Practitioner Services Costs by Year

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	78	$262,873	$3,370	$7,159	$0	$39,890
1 Year Post	107	$259,209	$2,423	$4,351	$0	$34,656
2 Years Post	66	$164,376	$2,491	$4,783	$0	$26,995
3 Years Post	46	$95,033	$2,066	$3,788	$0	$21,887
4 Years Post	42	$85,643	$2,039	$3,854	$0	$22,588
5 Years Post	33	$191,601	$5,806	$7,986	$175	$36,745

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Table 30: Practitioner Services Costs by Year (with at least one full year pre and post CIHS)

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	**74**	**$261,268**	**$3,531**	**$7,318**	**$0**	**$39,890**
1 Year Post	**74**	**$181,197**	**$2,449**	**$4,816**	**$0**	**$34,656**
2 Years Post	50	$101,772	$2,035	$4,099	$0	$26,995
3 Years Post	36	$64,175	$1,783	$2,592	$0	$14,485
4 Years Post	33	$48,219	$1,461	$1,872	$0	$7,026
5 Years Post	[redacted]	$113,778	$[redacted]	$4,816	$175	$16,303

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). Only included if participated for one full year pre and post CIHS.

Inpatient Services Costs

Many of the inpatient services received by SCI Waiver participants were related to urinary and intestinal issues. These were areas that CIHS was hypothesized to improve, which may lead to reductions in needs for inpatient services. Data showed a significant drop in these costs, although less dramatically when the maximum cost was capped to exclude larger outliers.

Table 31: Inpatient Services Costs by Year

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	78	$718,858	$9,216	$33,872	$0	$211,579
1 Year Post	107	$188,716	$1,764	$7,367	$0	$57,044
2 Years Post	66	$140,419	$2,128	$13,942	$0	$113,004
3 Years Post	46	$25,389	$552	$3,125	$0	$21,155
4 Years Post	42	$16,069	$383	$1,899	$0	$12,207
5 Years Post	33	$27,182	$824	$3,151	$0	$17,308

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Table 32: Inpatient Services Costs by Year (with at least one full year pre and post CIHS)

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	**74**	**$718,858**	**$9,714**	**$34,717**	**$0**	**$211,579**
1 Year Post	**74**	**$82,128**	**$1,110**	**$4,417**	**$0**	**$29,160**
2 Years Post	50	$27,415	$548	$1,737	$0	$8,488
3 Years Post	36	$4,234	$118	$397	$0	$1,541
4 Years Post	33	$13,539	$410	$2,130	$0	$12,207
5 Years Post	[redacted]	$27,182	$[redacted]	$3,531	$0	$17,308

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). Only included if participated for one full year pre and post CIHS.

Table 33: Inpatient Services Costs by Year (with at least one full year pre and post CIHS, and with maximum capped)

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	**68**	**$46,202**	**$679**	**$2,938**	**$0**	**$18,929**
1 Year Post	**68**	**$33,010**	**$485**	**$1,936**	**$0**	**$11,923**
2 Years Post	45	$18,023	$401	$1,371	$0	$6,540
3 Years Post	32	$2,902	$91	$358	$0	$1,541

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). Only included if participated for one full year pre and post CIHS.

Outpatient Services Costs

Outpatient services such as imaging, lab work, and emergency room visits are services that may see a reduction in use if access to CIH services leads to improved overall health and fewer illnesses and injuries. The data suggested these costs were relatively steady.

Table 34: Outpatient Services Costs by Year

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	75	$83,769	$1,117	$2,223	$0	$16,175
1 Year Post	104	$127,349	$1,225	$2,309	$0	$9,430
2 Years Post	66	$51,876	$786	$1,315	$0	$4,753
3 Years Post	46	$54,706	$1,189	$1,873	$0	$6,806
4 Years Post	42	$28,793	$686	$1,030	$0	$4,472
5 Years Post	33	$25,593	$776	$2,049	$0	$10,565

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Table 35: Outpatient Services Costs by Year (with at least one full year pre and post CIHS)

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
1 Year Pre	**71**	**$83,769**	**$1,180**	**$2,269**	**$0**	**$16,175**
1 Year Post	**71**	**$69,546**	**$980**	**$1,964**	**$0**	**$9,430**
2 Years Post	50	$42,352	$847	$1,371	$0	$4,753
3 Years Post	36	$45,280	$1,258	$1,994	$0	$6,806
4 Years Post	33	$23,739	$719	$1,052	$0	$4,472
5 Years Post	[redacted]	$21,183	$[redacted]	$2,219	$0	$10,565

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year).Only included if participated for one full year pre and post CIHS.

Emergency Transportation Costs

While it was hoped that accessing CIHS will reduce the need for emergency medical transportation, this service was rarely used by SCI Waiver participants (both before and after joining the SCI Waiver). As such, the expense was not expected to change significantly.

Table 36: Emergency Transportation Costs by Year

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
2 Years Pre	47	$880	$19	$60	$0	$311
1 Year Pre	75	$2,721	$36	$126	$0	$702
1 Year Post	104	$2,011	$19	$67	$0	$321
2 Years Post	66	$1,559	$24	$101	$0	$592
3 Years Post	46	$1,314	$29	$89	$0	$491
4 Years Post	42	$1,137	$27	$132	$0	$839
5 Years Post	33	$753	$23	$68	$0	$321

Data source: Medicaid claims billing database. Costs are in real 2017/18 dollars adjusted for inflation. Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

Table 37: Emergency Transportation Costs by Year (with at least one full year pre and post CIHS)

Adjusted for Cost Inflation	Number	Sum	Mean	Standard Deviation	Minimum	Maximum
2 Years Pre	44	$880	$20	$61	$0	$311
1 Year Pre	**71**	**$2,721**	**$38**	**$130**	**$0**	**$702**
1 Year Post	**71**	**$1,303**	**$18**	**$64**	**$0**	**$292**
2 Years Post	50	$711	$14	$80	$0	$539
3 Years Post	36	$1,032	$29	$91	$0	$491
4 Years Post	33	$1,137	$34	$149	$0	$839
5 Years Post	[redacted]	$643	$[redacted]	$75	$0	$321

Data source: Medicaid claims billing database.
Only included if participated for one full year pre and post CIHS.

Nursing Facilities Costs

The use of nursing facility care in both the pre and post SCI years was so infrequent among participants that it was too small to measure change and had little impact on costs. Additionally, if a stay was longer than 30 days the participant would be removed from the EBD and/or SCI Waiver and their care would be funded through long term care.

Quality of Life Measurements

Treatment Session Self-Assessment

At the outset of each treatment session, for all three CIHS (acupuncture, chiropractic care and massage therapy), participants were asked three questions:

(1) How are you feeling, today on the following scale?
(2) How does this compare to your last visit?
(3) What is your area of primary concern today?

Table 38 shows the results from the first question. On average most respondents rated their pain issues at 4.2, where 0= no pain/issues and 10=worst pain/issues.

Table 38: Q1 Status at Treatment Session

	Acupuncture	Chiropractic	Massage	All
No pain/issues (0)	5%	4%	6%	6%
None/ mild (1)	4%	7%	4%	5%
Mild (2)	13%	15%	13%	13%
Mild/ moderate (3)	18%	22%	18%	19%
Moderate (4)	17%	18%	16%	17%
Moderate/ severe (5)	14%	13%	14%	14%
Severe (6)	11%	10%	11%	11%
Severe/ very severe (7)	8%	5%	9%	8%
Very severe (8)	5%	4%	5%	5%
Very severe/ worst (9)	2%	1%	1%	2%
Worst pain/issues (10)	2%	2%	1%	2%
Number of sessions	**3,156**	**1,809**	**5,029**	**9,994**
Average score	**4.2**	**3.9**	**4.2**	**4.2**

Source: On-Going Assessment Forms, Q1: How are you feeling, today on the following scale? 0= No pain/issues, 1=None/ mild, 2=Mild, 3=Mild/ moderate, 4=Moderate, 5=Moderate/ severe, 6=Severe, 7=Severe/ very severe, 8=Very severe, 9=Very severe/ worst, 10=Worst pain/issues.

Table 39 shows changes in ratings from the first the most recent session. As these ratings were made just before a session, it is not clear that a reduction in this rating should be seen across sessions. It may be that the session is beneficial, but that the benefits fade in the time between sessions and the participant returns for another session when the pain has again increased. Looking at the change from first to most recent session, some patients gave higher ratings of pain before their most recent session than had before their first session, some gave similar ratings, and some had lower ratings of pain before their most recent session compared to before their first session. Across the board a similar percent of participants saw improvements in ratings as saw ratings of pain worsen.

Table 39: Change in Q1 Status Score from Participant's First to Most Recent Treatment Session

	Acupuncture		Chiropractic		Massage	
Worse	N=30	36%	N=[redacted]	[redacted]%	N=46	48%
Same	N=[redacted]	[redacted]%	N=[redacted]	[redacted]%	N=[redacted]	[redacted]%
Improved	N=37	44%	N=[redacted]	[redacted]%	N=37	39%
Total	N=84	100%	N=61	100%	N=95	100%

Source: On-Going Assessment Forms, Q1 How are you feeling, today on the following scale?
Average rating where 0= No pain/issues, 1=None/ mild, 2=Mild, 3=Mild/ moderate, 4=Moderate, 5=Moderate/ severe, 6=Severe, 7=Severe/ very severe, 8=Very severe, 9=Very severe/ worst, 10=Worst pain/issues

The second question is a self-assessment of whether patients felt better or worse at their current session compared to the last session. Overall, most indicated that they felt the same (39%) or better (36%). This was similar across modalities.

Table 40: Q2 Self-Perceived Change from Last Treatment Session

	Acupuncture	Chiropractic	Massage	All
Much better	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Somewhat better	36%	[redacted]%	[redacted]%	28%
Same	[redacted]%	50%	40%	39%
Somewhat worse	[redacted]%	[redacted]%	[redacted]%	21%
Much worse	[redacted]%	[redacted]%	[redacted]%	[redacted]%
Number of people	**N=84**	**N=61**	**N=95**	**N=240**
Average score	**2.9**	**2.8**	**2.9**	**2.9**

Source: On-Going Assessment Forms, Q2: How does this compare to your last visit?
Average score where 1=Much better, 2=Somewhat better, 3=Same, 4=Somewhat worse, 5=Much worse

Clients were asked to tell their CIHS provider what primary concerns they wanted to address in the session. Table 41 outlines the frequency that each area of concern was mentioned across all sessions.

While issues with the neck/shoulder area, pain and upper body issues (back or trunk) were the most frequently addressed by all modalities, massage therapy was more often addressing neck/shoulder issues, chiropractic was most often focused on relieving pain in the upper body and those seeking treatment for sleep and depression issues were most often addressing these with acupuncture.

Table 41: Areas of Concern for Session

	Acupuncture	Chiropractic	Massage	All
Neck/shoulder	36%	44%	46%	42%
Upper body/back/core	30%	20%	33%	30%
Pain (ache, soreness)	25%	23%	35%	30%
Arms/hands	15%	20%	17%	17%
Legs /knees	18%	9%	16%	16%
Central (hip, buttocks, glutes, sacrum, pelvis)	13%	12%	18%	15%
Muscles tightness	8%	3%	16%	11%
Muscle spasms	11%	4%	9%	9%
Ankle/feet	9%	5%	8%	8%
Nerve Pain	7%	2%	8%	7%
GI (digestion, constipation, stomach, bloating, bowel)	9%	2%	3%	5%
Mental health (depression, sadness, anxiety, stress)	10%	2%	3%	5%
Head	6%	3%	4%	4%
Sleep (energy, fatigue, tired, exhausted)	8%	1%	3%	4%
Respiratory	5%	1%	2%	3%
UTI (bladder)	4%	1%	1%	2%
Reproductive (cervix, prostate)	2%	1%	1%	1%
Weight	0%	0%	1%	0%
Other	7%	4%	2%	4%
Nothing	1%	2%	3%	2%

Source: On-Going Assessment Forms, Q3 What is your area of primary concern today?
Note: could mention more than one concern.

Self-Administered Health Issue Assessment

At the initial treatment session and every March and September, participants were asked to complete the Form 2 Self-Administered Health Assessment. Those in the current study could have completed it up to seven times (at outset, September 2016, March and September 2017and 2018 and March 2019), but may have completed fewer iterations depending on when they started CIH services. The iterations shown in the tables below were based on each individual's CIHS start date.

Table 42 shows the average ratings for participants' first through fifth completion of Form 2. As fewer than [redacted] had completed six iterations, only five iterations are shown in the tables of results. On average, the most severe issues experienced by participants were muscle spasms and overall, muscle and nerve pain. Average ratings for overall pain were similar to national averages shown in Table 43.

Table 42: Self-Administered Health Issue Assessment by Iteration

	Average Rating by Iteration									
	1		2		3		4		5	
Overall pain	N=94	4.2	N=68	3.8	N=52	4.3	N=35	4.6	N=[redacted]	3.8
Nerve pain	N=99	3.5	N=82	3.4	N=74	3.6	N=68	3.5	N=45	3.5
Muscle pain	N=92	4	N=83	3.5	N=74	3.6	N=68	3.6	N=45	4
Urinary tract complications (UTI)	N=100	2.5	N=82	1.8	N=74	2.1	N=68	1.7	N=46	2.2
Bowel dysfunction	N=100	2.1	N=83	2	N=74	1.7	N=68	1.4	N=45	1.9
Pressure sores or skin breakdown	N=101	1.1	N=83	1.3	N=74	1.2	N=68	0.8	N=46	0.7
Joint problems	N=100	3	N=82	2.7	N=74	2.6	N=65	2.2	N=46	2.8
Muscle wasting or atrophy	N=99	3.5	N=83	3.1	N=74	2.9	N=68	2.7	N=46	3
Muscle spasms	N=101	4	N=82	4	N=74	3.5	N=68	3.5	N=46	3.4
Sadness, disinterest, depression	N=100	2.1	N=83	2.2	N=74	1.7	N=68	1.6	N=46	1.4
Pneumonia or other respiratory problems	N=101	0.9	N=83	0.3	N=74	0.4	N=67	0.5	N=46	0.5
Blood pressure issues	N=100	1.5	N=82	1.1	N=74	1.3	N=67	0.9	N=45	1.4

Source: Form 2 Self-Administered Health Assessment.

Average rating where 0=not at all, 1=not at all/mild, 2=mild, 3=mild/moderate, 4=moderate, 5=moderate/severe, 6=severe, 7=severe/very severe, 8=very severe, 9=very severe/worst and 10=worst. Timing of iterations varies by start date for SCI services. SCI Waiver members are intended to complete Form 2 when they start services and every March and September following.

Table 43: National Severity of Average Pain Scores by Post Injury Year

Post-Injury year	1 (N= 8387)	5 (N= 5654)	10 (N= 4264)	15 (N= 3238)	20 (N= 3009)	25 (N= 2879)	30 (N= 2429)	35 (N= 1323)	40 (N= 377)
Past 4 weeks' usual level of pain	4.2	4.4	4.5	4.4	4.3	4.2	4.3	4.2	4.2

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version (Table 107). Includes all Form IIs entered into the database since March 1, 2001.

Table 44 shows the change in the rating from the first to the most recent evaluation for those participants who completed at least two iterations of Form 2 (and had ratings for the item on both iterations). The average ratings from the first and most recent evaluations were not statistically different, but generally more clients showed decreases in the intensity of symptoms (improved) than had decreases in the intensity of symptoms (felt worse).

Table 44: Changes in Self-Administered Health Issues from First to Most Recent Assessment

		Average score (SD)		Change in score (percent of participants)		
	Number	Initial	Last	Improved	Same	Worse
Overall pain	N=85	4.2 (2)	4.2 (2.2)	46%	[redacted]%	[redacted]%
Nerve pain	N=89	3.6 (2.3)	3.3 (2.5)	49%	[redacted]%	[redacted]%
Muscle pain	N=82	3.9 (2.1)	3.8 (2.3)	51%	[redacted]%	[redacted]%
Urinary tract complications (UTI)	N=92	2.3 (2.5)	1.9 (2.4)	37%	[redacted]%	[redacted]%
Bowel dysfunction	N=93	2.1 (2.5)	1.6 (1.9)	[redacted]%	[redacted]%	[redacted]%
Pressure sores or skin breakdown	N=94	1.1 (1.9)	0.9 (1.7)	[redacted]%	59%	[redacted]%
Joint problems	N=94	3 (2.5)	2.2 (2.4)	47%	[redacted]%	[redacted]%
Muscle wasting or atrophy	N=91	3.3 (2.6)	3 (2.5)	45%	[redacted]%	[redacted]%
Muscle spasms	N=91	3.8 (2.7)	3.2 (2.3)	48%	[redacted]%	[redacted]%
Sadness, disinterest, depression	N=94	2.1 (2.2)	1.8 (2)	[redacted]%	39%	[redacted]%
Pneumonia or other respiratory problems	N=92	0.6 (1.4)	0.5 (1.1)	[redacted]%	65%	[redacted]%
Blood pressure issues	N=94	1.4 (2.1)	1.4 (2.1)	[redacted]%	54%	[redacted]%

Average rating where 0=not at all, 1=not at all/mild, 2=mild, 3=mild/moderate, 4=moderate, 5=moderate/severe, 6=severe, 7=severe/very severe, 8=very severe, 9=very severe/worst and 10=worst.

Timing of iterations varies by start date for SCI services. SCI Waiver members are intended to complete Form 2 when they start services and every March and September following.

Comparison between those participants who completed Form 2 at the initial visit and at least once more, difference is between initial assessment and most recent assessment.

Source: Form 2 Self-Administered Health Assessment.

WHOQUAL-Bref Assessment

The World Health Organization Quality of Life –BREF instrument (WHOQOL-BREF, Form 3) is a 26-item measure that asks individuals to self-report their quality of life in four primary domains: (1) physical capacity, (2) psychological well-being, (3) social relationships and (4) environment. Multiple studies have confirmed the cross-cultural reliability and validity of the WHOQOL with SCI patient populations of diverse backgrounds[1,2] In addition to its strong psychometric properties, the WHOQOL-BREF has the advantage of being easy to score and requiring minimal time and effort for both patient and physician. The instrument places measures patients' own perception of their quality of life within the past two weeks, allowing researchers to assess changes in patients' recovery experiences over time.

At the initial treatment session and every March and September, participants were asked to complete the Form 3: WHOQOL-BREF Assessment. Those in the 2016-2019 study could have completed it up to five times (at outset, September 2016, March and September 2017and 2018 and March 2019), but may have completed fewer iterations depending on their start date. The iterations shown in the following tables were based on each individual's CIHS start date.

The average WHOQOL-BREF domain scores calculated from assessments made at the initial visit and subsequent iterations are shown in Table 45. Participants had the highest average scores for their environment and the lowest average score physical health and social relationships.

Table 45: WHOQOL-BREF Average Scores by Iteration

	Iteration											
	1		2		3		4		5		6	
Environment	N=98	53	N=79	55	N=75	58	N=67	58	N=43	60	N=33	58
Psychological	N=99	63	N=79	64	N=74	64	N=67	65	N=44	66	N=33	70
Physical health	N=96	54	N=80	55	N=74	59	N=65	59	N=44	62	N=33	62
Social relationships	N=100	69	N=80	70	N=75	71	N=66	72	N=43	75	N=33	72

Average score where 100=best and 0=worst.

Timing of iterations varies by start date for SCI services. SCI Waiver members were intended to complete Form 3 (WHOQOL-BREF) when they start services and every March and September following.

Physical health includes activities of daily living, dependence on medicinal substances and medical aids, energy and fatigue, mobility, pain and discomfort, sleep and rest and work capacity.

Psychological includes bodily image and appearance, negative feelings, positive feelings, self-esteem, spirituality/religion/personal beliefs, thinking, learning, memory and concentration.

Social relationships include personal relationships, social support and sexual activity.

Environment includes financial resources, freedom, physical safety and security, health and social care, accessibility and quality, home environment, opportunities for acquiring new information and skills, participation in and opportunities for recreation/leisure activities, physical environment (pollution/noise/traffic /climate) and transportation.

Data source: Form 3 Self-Administered Quality of Life Assessment (WHOQOL-BREF).

[1] *Hu Y, Mak JN, Wong YW, Leong JC, & Luk, KD (2008). Quality of life of traumatic spinal cord injured patients in Hong Kong.*

[2] *Jang Y, Hsieh CL, Wang YH, Wu YH (2004). A validity study of the WHOQOL-BREF assessment in persons with traumatic spinal cord injury.*

Table 46 shows the change in the WHOQOL-BREF domain scores from the initial assessment and the most recent assessment. For those who completed the initial and at least one follow-up WHOQOL-BREF assessment, average ratings were similar in both iterations for all four domains. Compared to population benchmarks for the USA general population (see Table 47) evaluation participants had higher scores on average for environmental factors, similar for psychological and lower scores on average for social relationships and physical health. For three of the four categories, more clients showed improvement from the first to last iteration than saw scores worsen.

Table 46: Changes in WHOQOL-BREF Average Scores Initial Compared to Most Recent Assessment

		Average score (SD)[2]		Change in score (percent of participants)		
	Number	Initial	Last	Better/ more satisfied	Same	Worse/ less satisfied
Environment	N=92	69 (17)	71 (15)	47%	[redacted]%	[redacted]%
Psychological	N=91	63 (18)	63 (17)	41%	[redacted]%	[redacted]%
Social relationships	N=88	55 (24)	55 (23)	40%	[redacted]%	[redacted]%
Physical health	N=90	53 (17)	55 (17)	36%	[redacted]%	[redacted]%

Average score where 100=best and 0=worst. Timing of iterations varies by start date for SCI services. SCI Waiver members were intended to complete Form 3 (WHOQOL-BREF) when they start services and every March and September following.

Comparison between those participants who completed Form 3 at the initial visit and at least once more, difference is between initial assessment and most recent assessment.

Physical health includes activities of daily living, dependence on medicinal substances and medical aids, energy and fatigue, mobility, pain and discomfort, sleep and rest and work capacity.

Psychological includes bodily image and appearance, negative feelings, positive feelings, self-esteem, spirituality/religion/personal beliefs, thinking, learning, memory and concentration.

Social relationships include personal relationships, social support and sexual activity.

Environment includes financial resources, freedom, physical safety and security, health and social care, accessibility and quality, home environment, opportunities for acquiring new information and skills, participation in and opportunities for recreation/leisure activities, physical environment (pollution/noise/traffic /climate) and transportation.

Data source: Form 3 Self-Administered Quality of Life Assessment (WHOQOL-BREF).

Table 47: Comparative WHOQOL-BREF Domain Scores

			Dutch Rehabilitation Patients[3]			UK Patients by Condition[4]	
Mean (SD)	USA General Population[1]	Brazil SCI (N=47)[2]	Musculo-skeletal (N=280)	Chronic pain (N=174)	Neurological (N=59)	Musculo-skeletal (N=493)	Neurological (N=45)
Environment	59	55	73 (11)	70 (12)	70 (11)	60 (17)	68 (16)
Psychological	69	64	70 (12)	66 (12)	69 (13)	55 (18)	57 (18)
Social relationships	66	69	77 (16)	71 (17)	73 (19)	62 (23)	63 (21)
Physical health	78	59	57 (13)	51 (13)	53 (15)	40 (20)	55 (20)

1 S.M. Skevington, M. Lotfy & K.A. O'Connell. (2004) The World Health Organization's WHOQOL-BREF quality of life assessment: Psychometric properties and results of the international field trial A Report from the WHOQOL Group, WHO Centre for the Study of Quality of Life, Department of Psychology, University of Bath, Bath, UK. Average score was converted from a 20-point scale to a 100-point scale for comparability.

2 e Franca, I. S., Coura, A. S., de Franca, E. G., Basilio, N. N., & Souto, R. Q. (2011). Quality of life of adults with spinal cord injury: A study using the WHOQOL-bref. Revista da Escola de Enfermagem da USP, 45 (6), 1364–1371.

3 Ernst Schrier, Irene Schrier, Jan H. B. Geertzen, and Pieter U. Dijkstra. Quality of life in rehabilitation outpatients: normal values and a comparison with the general Dutch population and psychiatric patients. Average score was converted from a 20-point scale to a 100-point scale for comparability.

4 Skevington, S. M., & McCrate, F. M. (2012). Expecting a good quality of life in health: Assessing people with diverse diseases and conditions using the WHOQOL-BREF. Health Expectations, 15(1), 49–62.

Functional Status Measurements

At their initial CIHS treatment appointment and every March thereafter, evaluation participants were asked to complete the Craig Handicap Assessment and Reporting Technique (CHART, Form 4)[3] to assess their day-to-day functionality. The CHART is a 27-item self-report measure designed to assess six dimensions of disability identified by the World Health Organization: (1) physical independence, (2) cognitive independence, (3) mobility, (4) occupation, (5) social integration and (6) economic self-sufficiency. Because the CHART asks respondents to quantify specific behaviors (e.g., "On a typical day, how many hours are you out of bed?"), it can index disability more objectively than similar inventories that tap into respondent attitudes or beliefs about their disability.

At the time of the initial visit, participants' highest average scores were for social integration, cognitive independence and mobility and the lowest average scores were for occupation and economic self-sufficiency.

CHART Functional Assessment

Table 48: CHART Average Domain Scores by Iteration

	Iteration							
	1		2		3		4	
Physical independence	N=100	65	N=80	63	N=66	68	N=32	63
Cognitive independence	N=95	76	N=75	78	N=65	77	N=31	71
Mobility	N=101	75	N=80	75	N=66	78	N=32	78
Occupation	N=101	38	N=80	44	N=66	50	N=32	48
Social integration	N=91	81	N=75	83	N=64	76	N=30	82
Economic self sufficiency	N=80	48	N=68	44	N=55	52	N=30	43

Average score where 100=best and 0=worst.
Timing of iterations varies by start date for SCI services. SCI Waiver members were intended to complete Form 4 (CHART) when they start services and every March following.
Data source: Form 4 Self-Administered Functional Assessment (CHART).

[3] Whiteneck GG, Charlifue SW, Gerhart KA, Overhosler JD, Richardson GN (1992). Quantifying handicap: A new measure of long-term rehabilitation outcomes.

Comparing ratings for those who completed at least two assessments, the initial and most recent scores were statistically similar, but in the areas of mobility and occupation more people saw their scores improve than saw them worsen. Compared to the National CHART Domain Scores, social integration and mobility were similar to the national benchmark, but physical independence and occupation had lower scores.

Table 49: CHART Average Domain Scores Initial Compared to Last Assessment

CHART Domain	Number	Average score (SD)		Change in score (percent of participants)		
		Initial	Last	Improved	Same	Worse
Social integration	N=81	81 (23)	78 (24)	[redacted]%	[redacted]%	37%
Cognitive independence	N=84	76 (26)	77 (24)	40%	[redacted]%	[redacted]%
Mobility	N=90	75 (26)	77 (23)	48%	[redacted]%	[redacted]%
Physical independence	N=89	66 (32)	66 (34)	[redacted]%	[redacted]%	46%
Economic self sufficiency	N=73	47 (36)	51 (37)	[redacted]%	46%	[redacted]%
Occupation	N=90	39 (33)	47 (37)	56%	[redacted]%	[redacted]%

Average score where 100=best and 0=worst.
Timing of iterations varies by start date for SCI services. SCI Waiver members were intended to complete Form 4 (CHART) when they start services and every March following.
Comparison between those participants who completed Form 4 at the initial visit and at least once more, difference is between initial assessment and most recent assessment.
Data source: Form 4 Self-Administered Functional Assessment (CHART).

Table 50: National CHART Domain Scores for Persons with SCI by Post-Injury Year

Average score (number)	1	5	10	15	20	25	30	35	40
Social integration	86.5 (10,243)	86.1 (6,917)	86.1 (5,136)	87.1 (4,241)	86.8 (3,729)	87.2 (3,012)	86.0 (2,398)	86.5 (1,315)	85.1 (375)
Cognitive independence	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mobility	73.5 (10,435)	77.2 (7,041)	78.0 (5,173)	78.9 (4,280)	78.8 (3,767)	78.8 (3,046)	76.2 (2,429)	76.3 (1,324)	75.6 (374)
Physical independence	71.5 (10,504)	76.8 (7,078)	78.5 (5,200)	80.7 (4,294)	83.2 (3,780)	83.3 (3,056)	84.1 (2,434)	87.0 (1,329)	87.9 (378)
Economic self-sufficiency	NA	NA	NA	NA	NA	NA	NA	NA	NA
Occupation	49.2 (10,314)	58.3 (6,978)	59.7 (5,147)	62.3 (4,243)	63.7 (3,739)	65.6 (3,029)	63.2 (2,407)	60.8 (1,316)	58.5 (378

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version (Tables 100 to 103). Includes all Form IIs entered into the database since January, 1996.

Long Term Care Assessment

Functional status under the HCBS SCI and EBD waivers is measured using the Uniform Long Term Care (ULTC) 100.2 Assessment. This form is filled out by a Medicaid Case Manager annually and, in the rarer instance, within six months of a significant change in functional abilities that warrant a reassessment or change to scoring. As such, there may be more than one functional assessment completed in a given year. For comparison purposes, we report the scores for the last functional assessment completed in the given year, assuming this is most representative of how that year's services had influenced the participant's functionality.

On average participants were most independent in the areas of memory (the age appropriate ability to acquire and use information, reason, problem solve, complete tasks or communicate needs in order to care for oneself safely) and behavior (the ability to engage in safe actions and interactions and refrain from unsafe actions and interactions). They were most dependent in the areas of transferring, bathing, dressing, toileting and mobility. A detailed description of each assessment category can be found in *Appendix B: ULTC 100.2 Long Term Care Assessment Protocol.*

Compared to EBD Waiver members who qualify for the SCI Waiver (see Table 52), SCI Waiver members (Table 51) had higher scores for memory and behavior but lower scores in the areas of bathing, dressing, toileting, mobility, transferring and eating. Those who sign up may be better able to advocate for themselves, but likely had more severe injuries than the average person who qualifies for the SCI Waiver but has not signed up.

Table 51: Long Term Care Assessment Scores by Year (SCI Waiver Members)

	Year relative to the start date of SCI Waiver													
	2 Years Pre		1 Year Pre		1 Year Post		2 Years Post		3 Years Post		4 Years Post		5 Years Post	
	N	Sc	N	Sc	N	Sc	N	Sc	N	Sc	N	Sc	N	Sc
Bathing	101	29	136	32	125	34	102	33	68	34	53	31	48	31
Dressing	101	31	136	34	125	35	102	36	68	39	53	36	48	37
Toileting	101	31	136	33	125	36	102	36	68	34	53	34	48	35
Mobility	101	29	136	29	125	30	102	30	68	32	53	33	48	33
Transferring	101	17	136	19	125	20	102	21	68	20	53	19	48	20
Eating	101	55	136	57	125	60	102	60	68	61	53	59	48	59
Behaviors	101	88	136	86	125	85	102	88	68	86	53	88	48	88
Memory/Cognition Deficit	101	94	136	90	125	90	102	90	68	93	53	91	48	90

Average rating where 100=independent, 66.7=mostly independent, 33.3=mostly dependent and 0=dependent.
See Appendix B: ULTC 100.2 Long Term Care Assessment Protocol for further details on how independence is rated for each activity of daily living (ADL).
N=Number of participants
Sc=Score
Data source: ULTC 100.2 Long Term Care Assessment.

Table 52: Long Term Care Assessment Scores by Year (EBD Waiver Members*)

	Year 1		Year 2		Year 3		Year 4		Year 5	
	N	Sc	N	Sc	N	Sc	N	Sc	N	Sc
Bathing	1387	42	1122	41	512	37	496	37	443	40
Dressing	1387	50	1122	49	512	45	496	46	443	47
Toileting	1387	57	1122	56	512	50	496	52	443	52
Mobility	1387	35	1122	34	512	34	496	35	443	34
Transferring	1387	36	1122	34	512	33	496	34	443	32
Eating	1387	70	1122	70	512	68	496	68	443	68
Behaviors	1387	81	1122	81	512	81	496	79	443	79
Memory/ Cognition Deficit	1387	77	1122	76	512	75	496	75	443	75

** EBD Waiver members who qualify for the SCI Waiver.*
Average rating where 100=independent, 66.7=mostly independent, 33.3=mostly dependent and 0=dependent.
See Appendix B: ULTC 100.2 Long Term Care Assessment Protocol for further details on how independence is rated for each activity of daily living (ADL).
N=Number of participants
Sc=Score
Data source: ULTC 100.2 Long Term Care Assessment.

Waiver Stakeholder Annual Feedback

Each year in April/May, SCI Waiver members who were receiving CIHS, CIHS providers and SCI Waiver case managers and supervisors were asked to complete a survey that asked about their overall experience with the SCI Waiver. These surveys gathered input on how the process worked and also asked stakeholders for their impressions of the effectiveness of the waiver. An overview of the results for the 2019 survey is presented in this section. Detailed results from the annual feedback survey is provided in *Appendix A: Participant, Provider and Case Manager Experience Surveys*. In April/May 2019, 41 SCI Waiver members completed the survey, along with 15 Medicaid case managers and case manager supervisors and 23 CIHS providers (chiropractors, acupuncturists, massage therapists and staff tasked with managing the waiver in the provider office).

Impact of SCI Waiver on Participants

When asked if they would recommend joining the SCI Waiver to other people with spinal cord injuries, 100% of respondents to the SCI Waiver Member survey and case manager survey, said they would recommend joining the SCI Waiver. When asked why they would recommend the waiver almost all participants cited their increased quality of life and reduction in pain.

"I truly believe that if you treat the whole body you will get better results, I know I have. It has helped me both physically and emotionally."

"I would recommend [the SCI Waiver] because the body in my opinion was designed to move and as a person who utilizes a wheelchair for movement the body gets stiff and prescription medications cannot alleviate these problems."

"I would recommend joining the SCI Waiver because it has improved my attitude and does give me relief from pain which is the main reason I joined!"

"The therapies I've reached have greatly impacted my life for the better medically, emotionally and spiritually. I've had less hospital stays than I have ever had!!"

"It has benefited me and kept me mobile. It has aided my well-being and has made me stronger. It has given me positive reinforcement."

"My life has changed dramatically because of the therapies offered and the truly accessible facility! I feel like a regular client at the facility and not an 'odd' client. I feel 100% safe with the providers! This is a must in my life and I beg Medicaid to continue the SCI Waiver!!"

"The service offered and paid for by being on the SCI waiver are essential to my well-being and my everyday ADL's. Without these services my pain level and functionality would be greatly diminished!!!"

"I love the way the waiver doing. I've been hoping...they made me hope. I can do some things I couldn't do before. I go to school now because I can stand, I can go to class…"

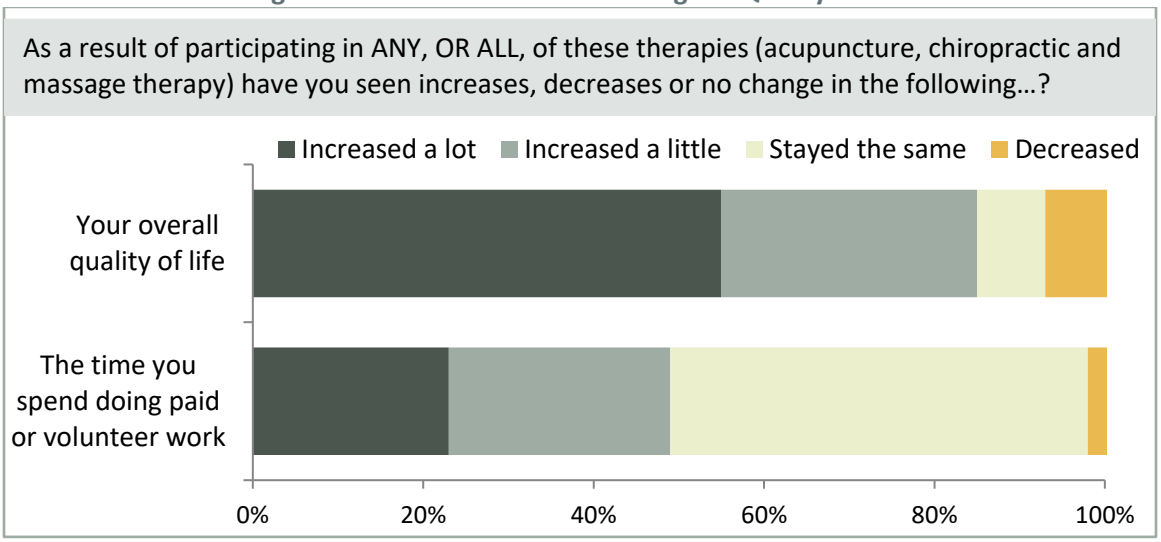
(See Appendix A: Participant, Provider and Case Manager Experience Surveys for all participant comments)

Case managers and supervisors echoed these comments, as they had heard the same from their clients.

> *"My SCI clients using these waiver services seem happier and healthier than those who do not. Every client has nothing but praise for these services and definitely seem to enjoy a higher quality of life!"*
>
> *"Based on reports from other individuals I work with on the SCI Waiver, alternative therapies are beneficial. Client report they have improved ROM, decreased muscle spasms, decreased pain, and overall feeling of comfort that they did not experience prior to the use of alternative therapies."*
>
> *"…Although the effects of an SCI affect each person differently, each injury remains life altering. To enable someone with a debilitating injury the ability to remain independent and reside independently in their own home is a huge feat. To listen to stories of how some are beginning to regain some range of motion, or feeling is incredible. To receive phone calls that a client has been able to decrease pain management due to reduction in spasms and increase in spasticity is tremendous…"*
>
> *(See Appendix A: Participant, Provider and Case Manager Experience Surveys for all participant comments)*

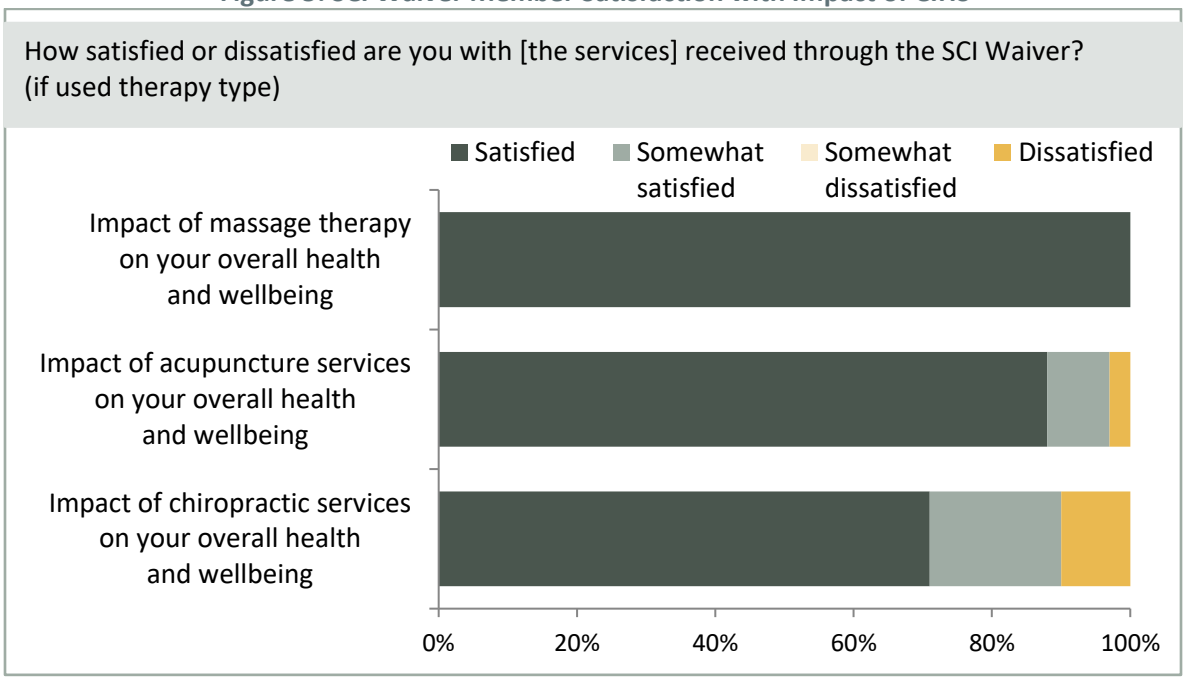
Most SCI Waiver Member survey respondents said they thought receiving CIHS had increased their quality of life a lot (55%) or a little (30%). Almost half also said it had resulted in a lot or at least a little increase in the time they spent doing paid or volunteer work (49%).

Figure 4: SCI Waiver Member Change in Quality of Life



When asked how satisfied they were with the impact of each of the CIHS modalities on their health and wellbeing, a large majority were satisfied with the outcomes and most others were somewhat satisfied. Satisfaction was highest with the outcomes of massage therapy.

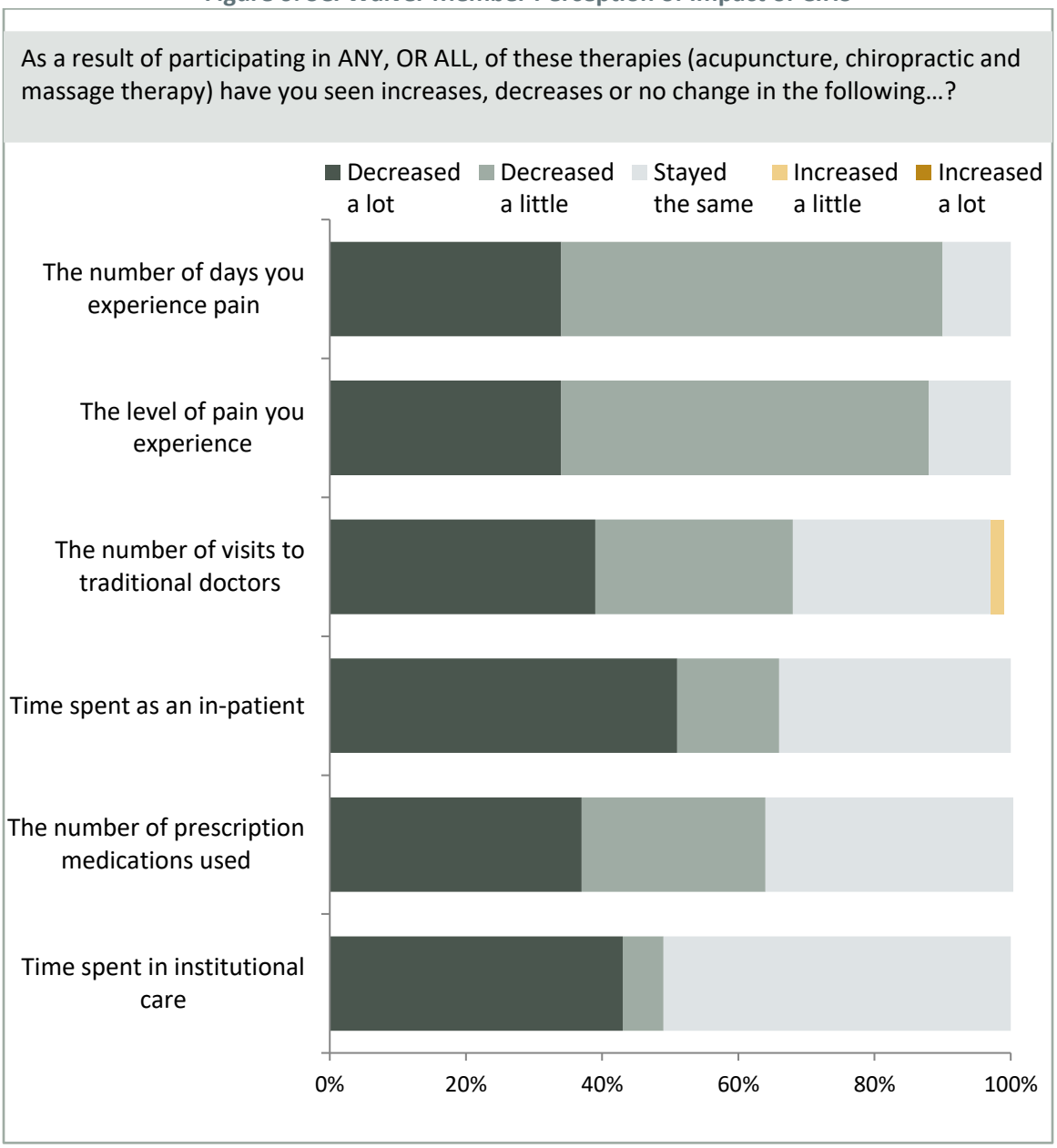
Figure 5: SCI Waiver Member Satisfaction with Impact of CIHS



The most commonly cited result of receiving CIHS was a decrease in pain; 90% of participant respondents said that they experienced pain on fewer days and 88% said their level of pain had decreased as a result of CIHS.

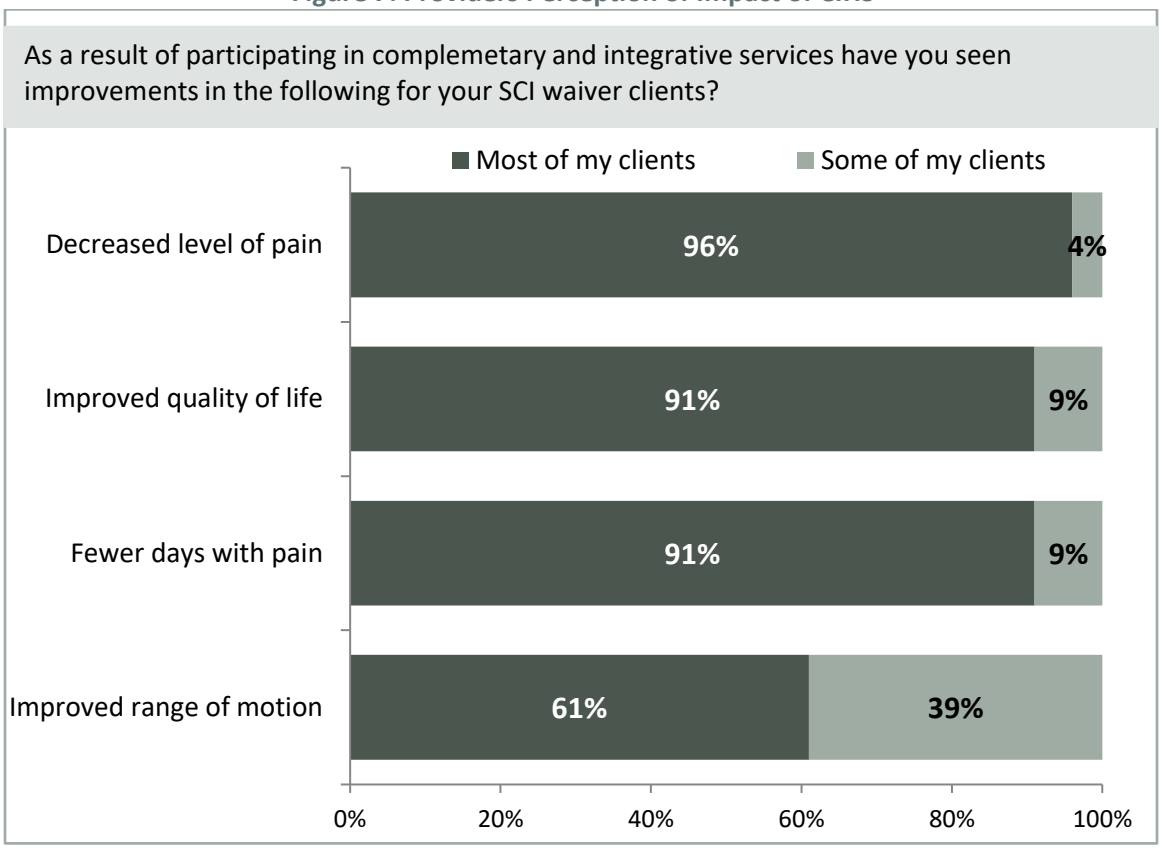
Seven in ten also said they were able to decrease number of traditional doctor visits and 6 in 10 decreased the number of prescription medications that they used.

Figure 6: SCI Waiver Member Perception of Impact of CIHS



CIHS providers also perceived an improvement in the quality of life of their SCI Waiver clients. One hundred percent of providers said that most, or at least some, of their clients had an improved quality of life, reduced level of pain, improved range of motion and fewer days with pain.

Figure 7: Providers Perception of Impact of CIHS



Satisfaction with CIHS Service Implementation

SCI Waiver participants were generally satisfied with the overall quality of the services they received from massage therapists (100% satisfied or somewhat satisfied), acupuncturists (97% satisfied or somewhat satisfied) and chiropractors (90% satisfied or somewhat satisfied). A similar proportion of participants were also satisfied with how safe they felt while getting these services.

However, [redacted] or [redacted] SCI waiver members had specific complaints about specific providers. It may be helpful for these organizations to develop appropriate mechanisms for feedback, if they do not already have them in place.

Figure 8: SCI Waiver Member Satisfaction with Overall Quality of Services

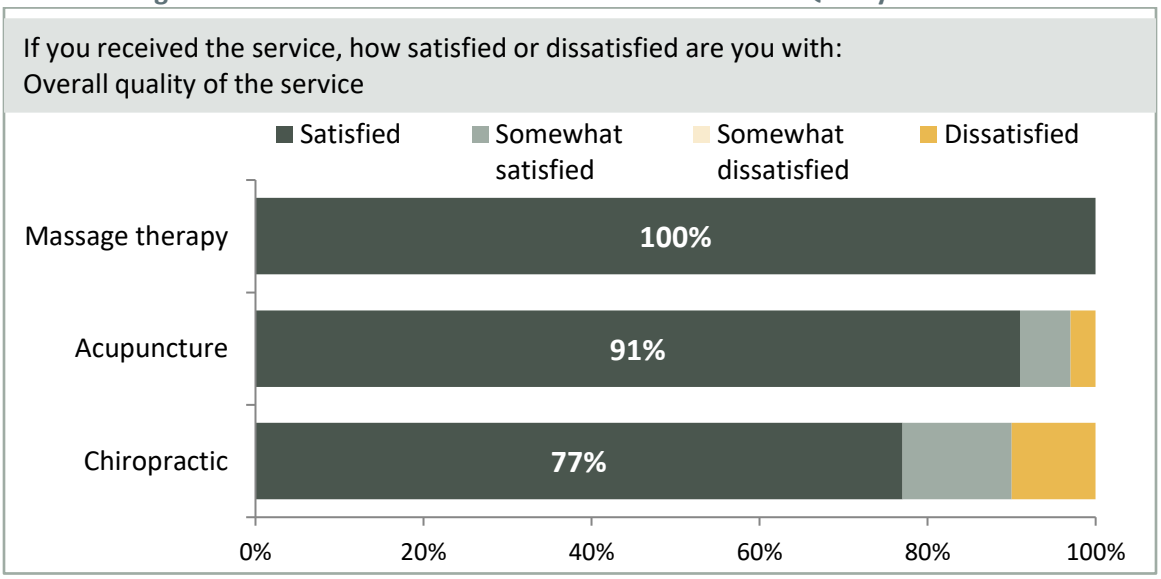
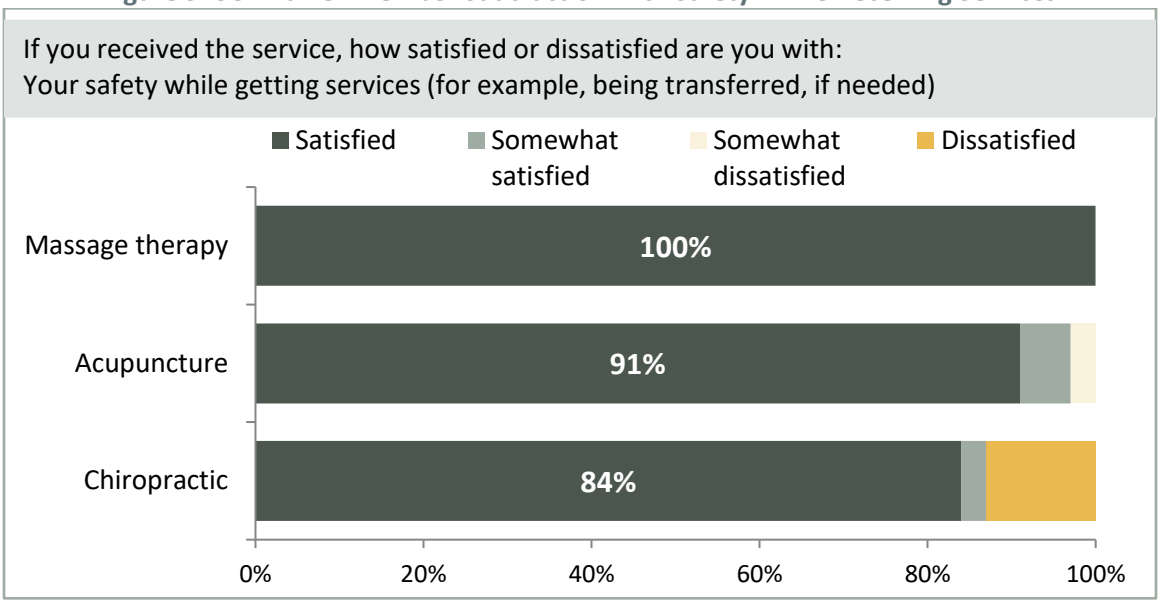
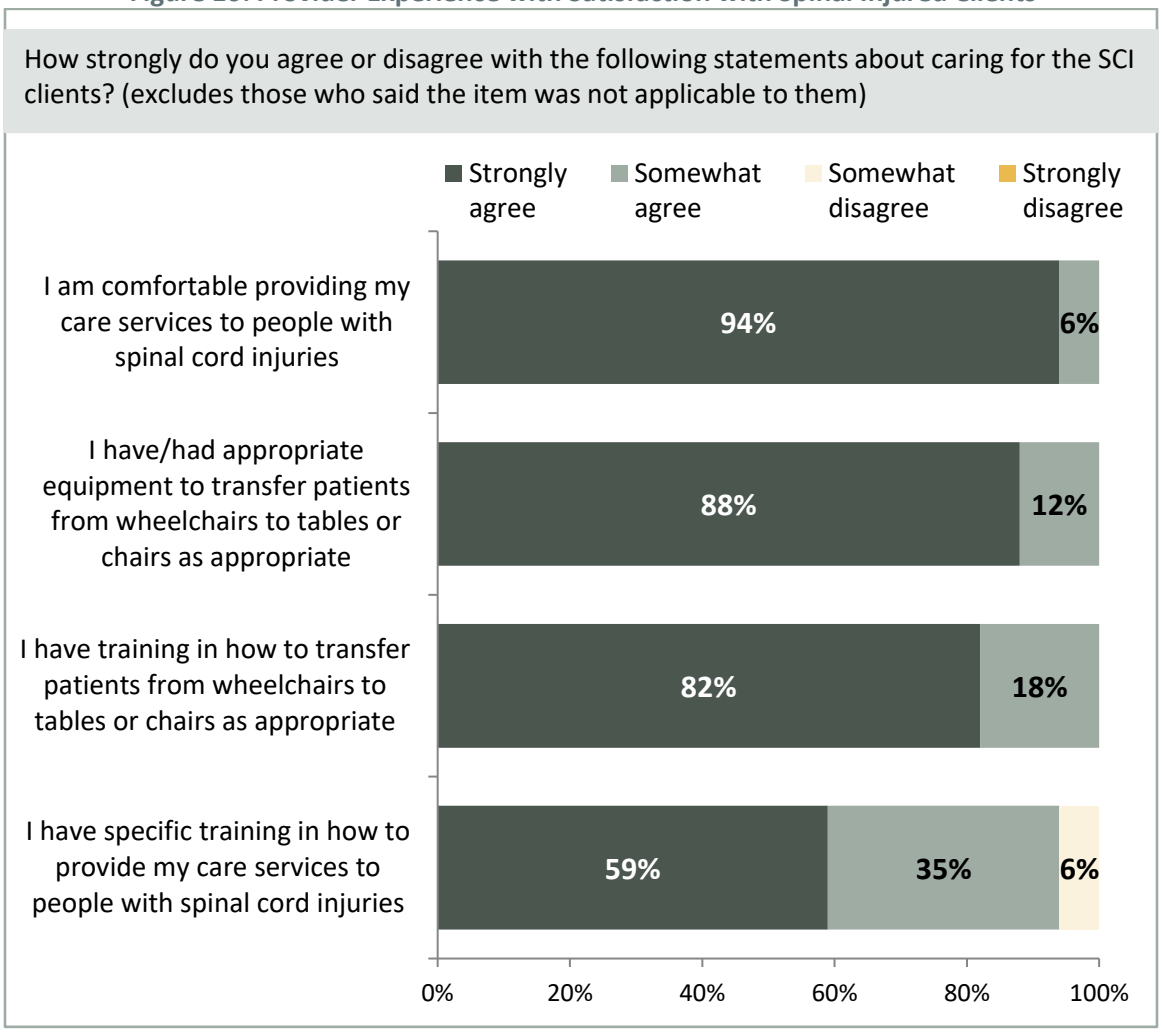


Figure 9: SCI Waiver Member Satisfaction with Safety While Receiving Services



SCI Waiver participants generally felt safe getting services, and most CIHS providers had training in providing services to people with spinal cord injuries. This was a significant improvement from the three-year pilot Waiver and reflects an effort to ensure this training has been provided.

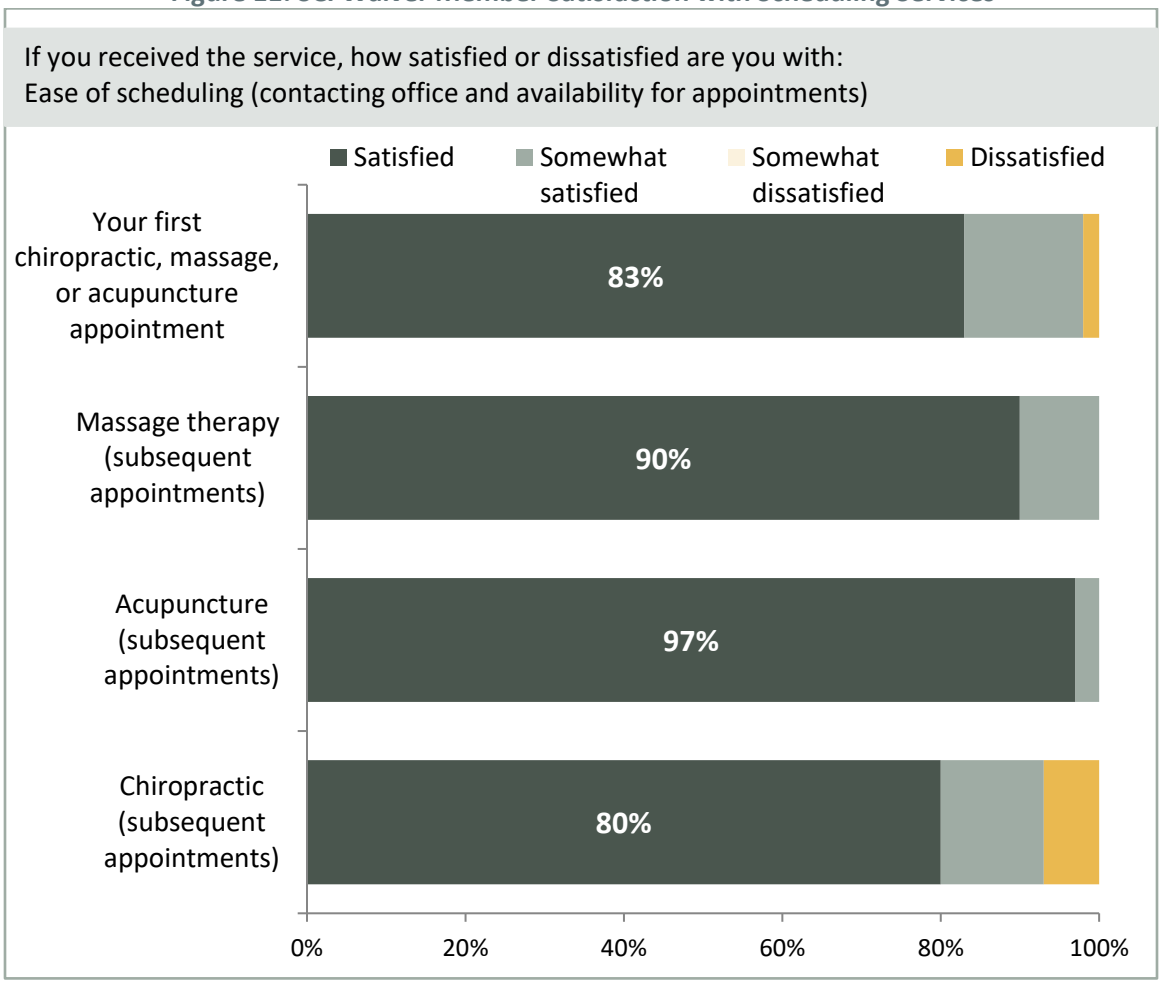
Figure 10: Provider Experience with Satisfaction with Spinal Injured Clients



Satisfaction with Scheduling CIHS

Respondents to the participant survey were satisfied with the ease of scheduling CIHS (Figure 11).

Figure 11: SCI Waiver Member Satisfaction with Scheduling Services

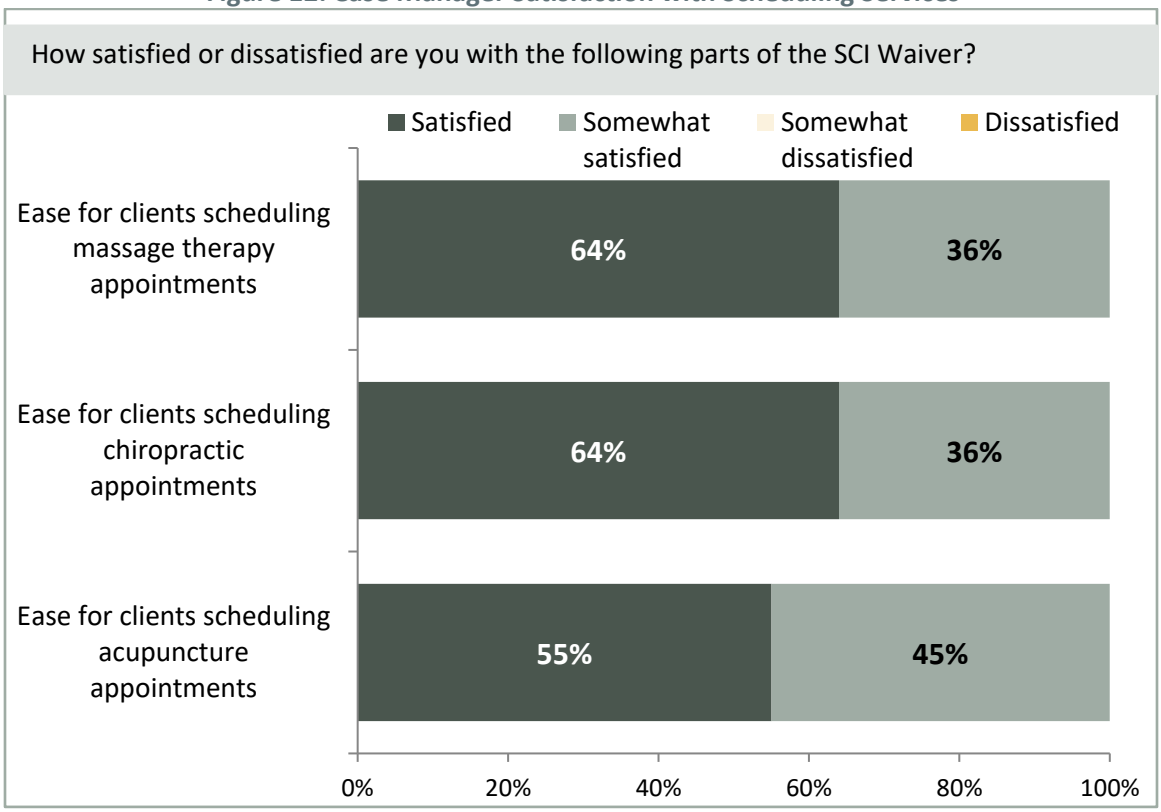


When asked if they had encountered any challenges accessing CIHS under the SCI Waiver, [redacted]% said yes (most common were troubles completing forms and a few were in the initial sign up in 2013 and said they were waitlisted at that time).

All case managers were at least somewhat satisfied with the scheduling processes, and most were fully satisfied, which was an improvement from the original three year pilot study when only about 60% were at least somewhat satisfied.

When asked about challenges accessing services, only 13% said their clients had encountered problems and the issues were related to a preferred provider not being available.

Figure 12: Case Manager Satisfaction with Scheduling Services



Satisfaction with SCI Waiver Administration

About one quarter of waiver participants who completed the survey said they had problems or challenges joining the SCI Waiver, but 93% were satisfied or somewhat satisfied with the ease of joining the waiver (Figure 13). Most case managers or supervisors were only somewhat satisfied with the ease of transferring clients from a different waiver (see Figure 14) and when asked further about the types of challenges, most had trouble getting forms from doctors or clients or getting financial approval.

Most case managers were at least somewhat satisfied with the ease of determining eligibility and enrolling clients.

Almost all of the SCI participant survey respondents were satisfied or somewhat satisfied with their CIHS plan.

Figure 13: SCI Waiver Member Satisfaction with Administration

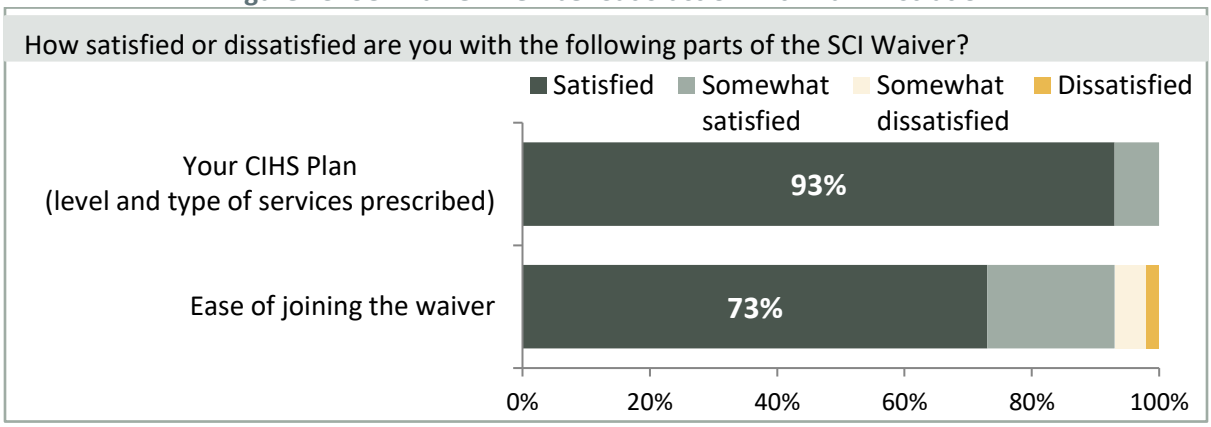
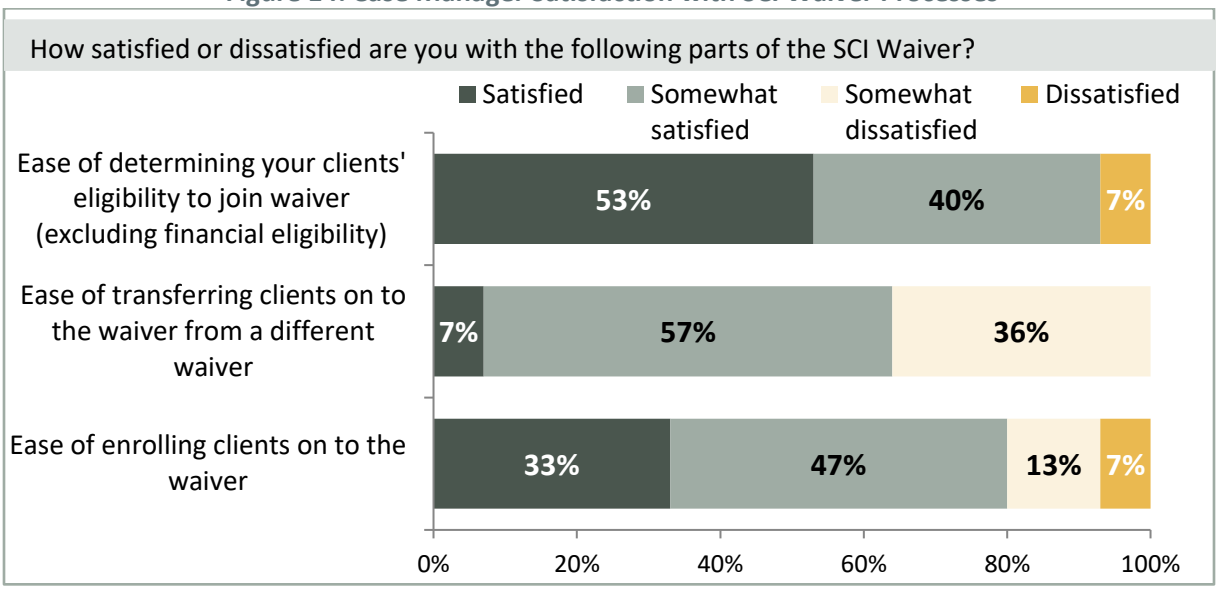
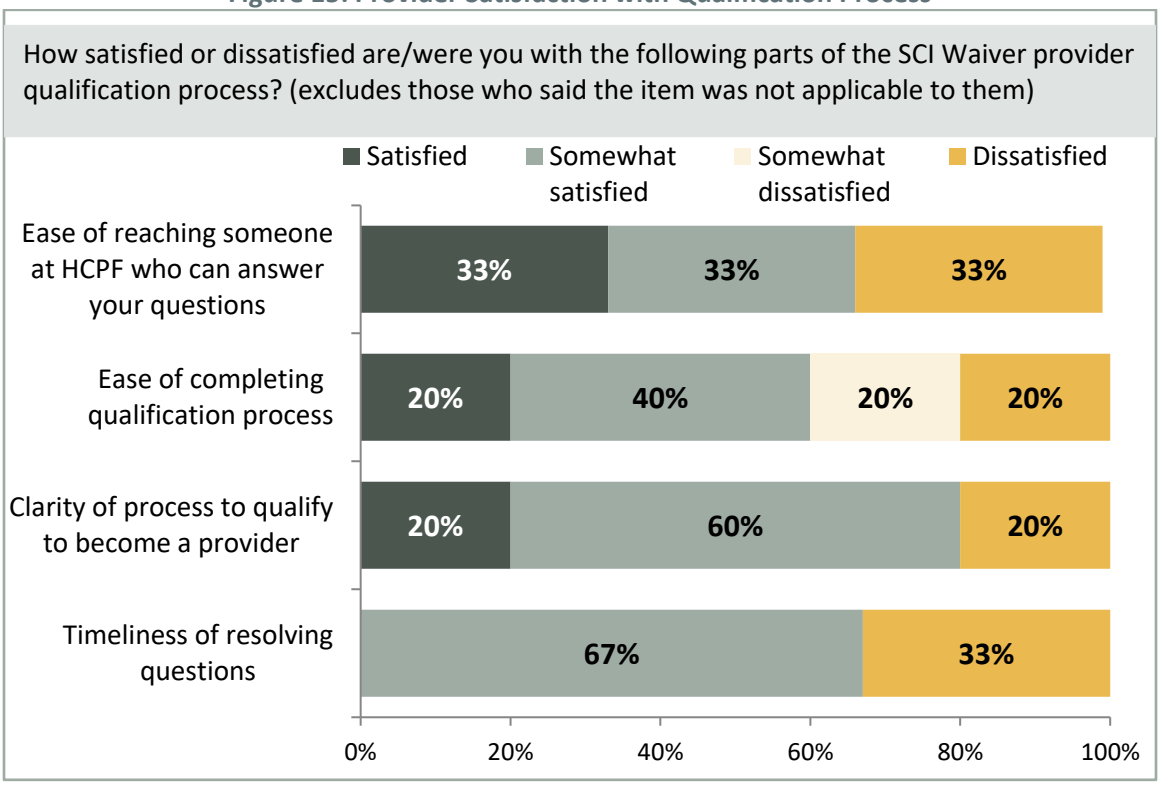


Figure 14: Case Manager Satisfaction with SCI Waiver Processes



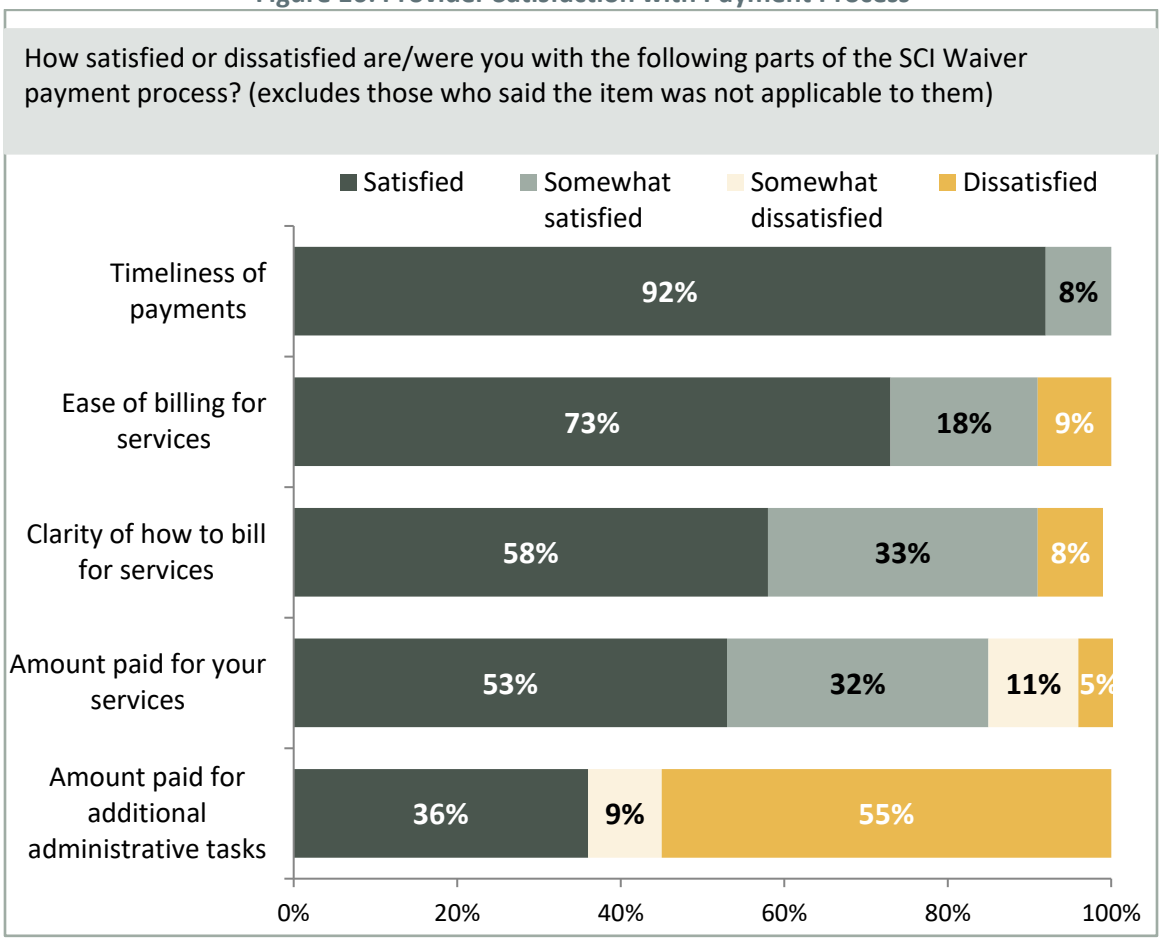
The few respondents to the provider survey, who were involved in the application process to become a SCI Waiver CIHS provider, were generally satisfied with that process.

Figure 15: Provider Satisfaction with Qualification Process



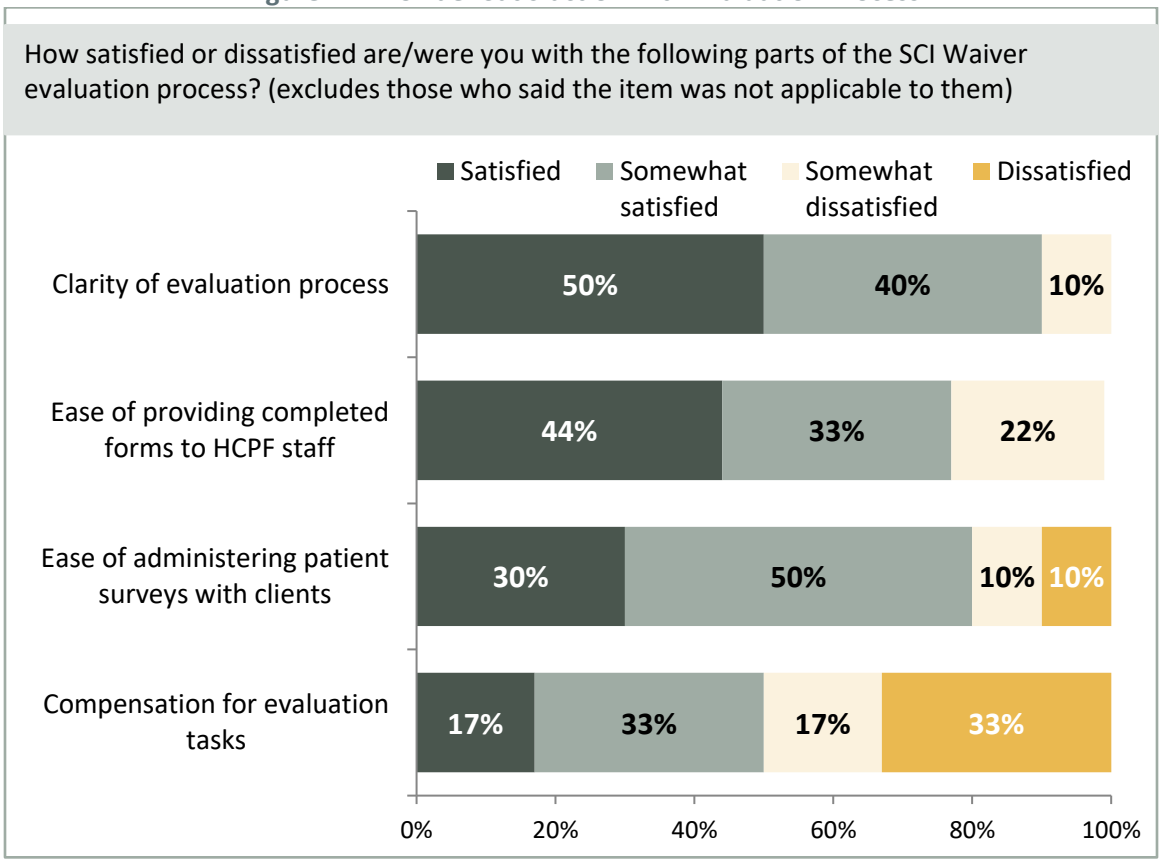
The billing process held some challenges for providers, but over half were fully satisfied with all but the level of compensation for administrative tasks.

Figure 16: Provider Satisfaction with Payment Process



While there were challenges in managing the data collection for the evaluation, providers were generally at least somewhat satisfied with the process, except for the amount of compensation.

Figure 17: Provider Satisfaction with Evaluation Process



Conclusions

This evaluation endeavored to answer 5 questions.

1. Did CIHS help reduce the need for continuous or more expensive procedures, medications, and hospitalizations for a person with a spinal cord injury?
2. Did the HCBS - SCI Waiver result in cost savings for the State compared to the estimated expenditures that would have otherwise been spent for the same persons with spinal cord injuries absent the waiver?

Evidence from the SCI Waiver participants included in our evaluation suggests that CIHS reduced the cost of care. When comparing pre-CIHS to post-CIHS Medicaid claims for participants who were on the EBD Waiver for a full year prior to starting CIHS and on the SCI Waiver for at least a full year receiving CIHS, overall Medicaid claims costs decreased.

Table 53: Total Medicaid Claims Costs by Year

	Year	Number of participants	Total cost	Average cost per participants	Percent change from cost "1 Year Pre"
For the 74 participants with at least one full year on waiver prior to CIHS and 1 full year using CIHS	**1 Year Pre**	**74**	**$5,024,201**	**$67,895**	
	1 Year Post	74	$4,817,780	$65,105	-4%
For the 50 participants with at least one full year on waiver prior to CIHS and 2 full years using CIHS	**1 Year Pre**	**50**	**$3,523,503**	**$70,470**	
	1 Year Post	50	$3,453,929	$69,079	-2%
	2 Year Post	50	$3,388,498	$67,770	-4%
For the 36 participants with at least one full year on waiver prior to CIHS and 3 full years using CIHS	**1 Year Pre**	**36**	**$2,742,698**	**$76,186**	
	1 Year Post	36	$2,626,817	$72,967	-4%
	2 Year Post	36	$2,442,234	$67,840	-11%
	3 Year Post	36	$2,362,127	$65,615	-14%

Data source: Medicaid claims billing database, adjusted for cost inflation.
Data is not included if the participant had only a partial year of services in the service year (i.e., was on the EBD or SCI Waiver for fewer than 12 months in that year). The time frame for each year varies by participant.

3. Did CIHS lead to any changes to the health status or health outcomes of persons using the services?

Ratings of functional status and quality of life as measured by comparing point- in-time scores on the evaluative forms (Self-Administered Health Issue Assessment, Uniform Long Term Care (ULTC) 100.2 Assessment, Craig Handicap Assessment and Reporting Technique (CHART) assessment and World Health Organization Quality of Life –BREF instrument (WHOQOL-BREF), did not show changes.

However, most SCI waiver members indicated that as a result of the treatment they experienced fewer days of pain, and a diminishment in the level of pain. The differences in these results may be due to tool sensitivity, small sample size or administration protocol. A potential flaw is that the assessments take place before a CIHS session, and the participant may be returning to receive treatment as the effects of the past treatment has diminished.

4. Did CIHS lead to any changes to the quality of life of persons using the services?

When asked to reflect on the impact of the waiver on their health and wellbeing (in annual surveys at the end of each evaluation year) most participants were effusive in their description of how the waiver improved their overall quality of life.

5. CIHS allowed persons with a spinal cord injury to become and/or remain employed.

On average there was a slight increase in the self-reported hours spent working, at school, homemaking, maintaining a home and volunteering. These differences were not statistically significant.

		Initial assessment		Final assessment		Average Difference	
	Number	Mean	Standard Deviation	Mean	Standard Deviation	**Mean**	**Standard Deviation**
Average hours a week spent working in a job for which you get paid?	90	3.80	9.50	5.13	11.49	**1.33**	**8.41**
Average hours a week spent in school working toward a degree or in an accredited technical training program (including hours in class and studying)?	90	2.52	9.13	2.76	9.43	**.23**	**12.58**
Average hours a week spent in active homemaking including parenting, housekeeping, and food preparation?	90	5.39	8.71	5.98	9.35	**.59**	**7.11**
Average hours a week spent in home maintenance activities such as gardening, house repairs or home improvement?	90	2.43	5.94	2.66	7.12	**.23**	**5.92**
Average hours a week spent in ongoing volunteer work for an organization?	90	1.17	3.54	1.68	4.31	**.51**	**5.23**

Timing of assessments varies by start date for SCI services. SCI Waiver members were intended to complete Form 4 (CHART) when they start services and every March following.
Data source: Form 4 Self-Administered Functional Assessment (CHART) Questions 18a through 18e.

Summary and Recommendations

Based on this evaluation, the following recommendations should be considered:

1. The CHIS waiver program should be continued. The program was successful in reducing, or at least not increasing, overall costs for care and improving patient self-reported quality of life. The program did not show statistically significant gains in the areas of health status or employment, but the direction of the changes were positive.

2. Waiver implementation was regarded positively by most participants, and has improved in the 2015-2019 evaluations. Overall, evaluation participants were content or often enthusiastic about the quality of their care at the CHIS sites. However, transportation for participants and reimbursement for providers are still areas of challenge for the waiver initiative and should be addressed.

3. Evaluation should remain part of the program to continue to monitor its successes and challenges, but modifications to the study design are recommended. Simplifying the amount of data collected from participants will reduce the evaluation costs and also reduce burden to staff and SCI Waiver members. More detailed suggestions for evaluation design changes are presented in *Appendix C: Evaluation Recommendations*.

Appendix A: Participant, Provider and Case Manager Experience Surveys

In April/May 2019 SCI Waiver participants, CIHS service providers and case managers for those on the SCI Waiver were asked to complete a survey to reflect on their experience with the SCI Waiver. The detailed results from the three surveys are shown in this appendix.

2019 SCI Waiver Member Annual Survey

Table 54: Satisfaction with SCI Waiver

1. How satisfied or dissatisfied are you with the following parts of the SCI Waiver?	Satisfied	Somewhat satisfied	Somewhat dissatisfied	Dissatisfied	No opinion/Not applicable	Total
	73%	20%	5%	2%	0%	100%
Ease of joining the waiver	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Ease of scheduling your first chiropractic care, massage, or acupuncture appointment	83%	15%	0%	0%	2%	100%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Your Alternative Therapy Care Plan (level and type of services prescribed)	93%	7%	0%	0%	0%	100%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Table 55: Initial Source of Information about SCI Waiver

2. How did you first find out about the SCI Waiver? (Check all that apply)	Number
My case manager told me about it	N=[redacted]
From the Chanda Plan Foundation	N=[redacted]
Friend or family member told me about it	N=[redacted]
Another SCI Waiver participant told me about it	N=[redacted]
Other, please specify:	N=[redacted]

Table 56: "Other" Initial Source of Information about SCI Waiver

2. [Other comment] How did you first find out about the SCI Waiver?	Number
Craig Hospital	N=[redacted]
Neurology	N=[redacted]
PDPPC Meeting	N=[redacted]
worked on legislation	N=[redacted]

Table 57: Frequency of Use of SCI Waiver Alternative Therapy Services

3. In the past year, while you have been on the SCI Waiver, how frequently did you receive these services through the SCI Waiver?	Never	A few times a year	Once a month or less	More than once a month	Total
	17%	2%	2%	78%	100%
Acupuncture	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	24%	15%	5%	56%	100%
Chiropractic	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	0%	2%	2%	95%	100%
Massage therapy	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Table 58: Satisfaction with Acupuncture Services

4. IF YOU RECEIVED ACUPUNCTURE. How satisfied or dissatisfied are you with acupuncture services received through the SCI Waiver?	Satisfied	Somewhat satisfied	Somewhat dissatisfied	Dissatisfied	Total
Ease of scheduling acupuncture (contacting office and availability for appointments)	97%	3%	0%	0%	100%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	91%	6%	0%	3%	100%
Overall quality of acupuncture services	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Your safety while getting acupuncture services (for example, being transferred, if needed)	91%	6%	3%	0%	100%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Impact of acupuncture services on your overall health and well	88%	9%	0%	3%	100%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Table 59: Satisfaction with Chiropractic Services

5. IF YOU RECEIVED CHIROPRACTIC SERVICES. How satisfied or dissatisfied are you with chiropractic services received through the SCI Waiver?	Satisfied	Somewhat satisfied	Somewhat dissatisfied	Dissatisfied	Total
Ease of scheduling chiropractic services (contacting office and availability for appointments)	80%	13%	0%	7%	100%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	77%	13%	0%	10%	100%
Overall quality of chiropractic services	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Your safety while getting chiropractic services (for example, being transferred, if needed)	84%	3%	0%	13%	100%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Impact of chiropractic services on your overall health and well	71%	19%	0%	10%	100%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Table 60: Satisfaction with Massage Therapy Services

6. IF YOU RECEIVED MASSAGE THERAPY SERVICES. How satisfied or dissatisfied are you with Massage Therapy Services received through the SCI Waiver?	Satisfied	Somewhat satisfied	Somewhat dissatisfied	Dissatisfied	Total
Ease of scheduling massage therapy (contacting office and availability for appointments)	90%	10%	0%	0%	100%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Overall quality of massage therapy services	100%	0%	0%	0%	100%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Your safety while getting massage therapy (for example, being transferred, if needed)	100%	0%	0%	0%	100%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Impact of massage therapy on your overall health and well	100%	0%	0%	0%	100%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Table 61: Change in Health as a Result of SCI Waiver Alternative Therapy Services

7. As a result of participating in ANY, OR ALL, of these therapies (acupuncture, chiropractic and massage therapy) have you seen increases, decreases or no change in the following…?	Increased a lot	Increased a little	Stayed the same	Decreased a little	Decreased a lot
The number of prescription medications used	0%	0%	37%	27%	37%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
The number of visits to traditional doctors	0%	2%	29%	29%	39%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Time spent as an in-patient in hospitals	0%	0%	34%	15%	51%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Time spent in institutional care	0%	0%	51%	6%	43%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
The number of days you experience pain	0%	0%	10%	56%	34%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
The level of pain you experience	0%	0%	12%	54%	34%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Your overall quality of life	55%	30%	8%	5%	3%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
The time you spend doing paid or volunteer work	23%	26%	49%	0%	3%
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Table 62: Types of Challenges Joining the SCI Waiver

8. What problems or challenges, if any, did you have in joining the SCI Waiver? (Check all that apply.)	Percent	Number
No problems or challenges	78%	N=[redacted]
I had trouble completing the forms	7%	N=[redacted]
No spots were available (I was put on a wait list)	2%	N=[redacted]
Other, please specify:	12%	N=[redacted]
Total	100%	N=[redacted]

Table 63: "Other" Types of Challenges Joining the SCI Waiver

8. [Other] What problems or challenges, if any, did you have in joining the SCI Waiver? (Check all that apply.)	Number
Had to wait for Medicaid buy-in for SCI Waiver to be approved	N=[redacted]
I had a hard time getting my case manager to sign me up	N=[redacted]
I had trouble getting the doctor filling it out the right way	N=[redacted]
I joined SCI Waiver in late 2012 or 2013. SCI Waiver was just beginning (if I remember right). SCI Waiver had its challenges in beginning	N=[redacted]
Seemed to be a long process to get on Medicaid first	N=[redacted]

Table 64: Types of Challenges Receiving Services on the SCI Waiver

9. What problems or challenges did you have receiving acupuncture, chiropractic or massage therapy services on the SCI Waiver? (Check all that apply.)	Percent	Number
No problems or challenges	71%	N=[redacted]
The service providers were too far away (would take too long to get there)	7%	N=[redacted]
The providers were too busy; they could not fit me in	7%	N=[redacted]
I could not find transportation to appointments	5%	N=[redacted]
I did not like the service center provider(s) that were available	5%	N=[redacted]
I did not like the individual therapists that were available	2%	N=[redacted]
Other, please specify:	22%	N=[redacted]
Total	100%	N=[redacted]

Table 65: "Other" Types of Challenges Receiving Services on the SCI Waiver

9. [Other] What problems or challenges did you have receiving acupuncture, chiropractic or massage therapy services on the SCI Waiver	Number
Challenging when changing schedule	N=[redacted]
[redacted] only saw me for 15 min. Didn't have me transfer and did not help treat my pain.	N=[redacted]
Had my civil rights violated at [redacted] by them not accepting my service dog to attend	N=[redacted]
No chiropractor on staff?	N=[redacted]
[redacted]	N=[redacted]
[redacted]	N=[redacted]
Transport is difficult	N=[redacted]
Transportation was/is a struggle	N=[redacted]
Trouble finding reliable transportation	N=[redacted]

Table 66: Recommend the SCI Waiver

10. If they were eligible, would you recommend joining the SCI Waiver to other people with spinal cord injuries?	Percent	Number
Yes	100%	N=41
No	0%	N=0
Total	100%	N=41

Table 67: Reasons Would Recommend the SCI Waiver

11. Please explain why you would recommend joining the SCI Waiver to other people with spinal cord injuries.	Number
Because it has greatly increased my quality of life!	N=[redacted]
Great benefits that can have a very positive impact on your health.	N=[redacted]
Great program makes my tolerable	N=[redacted]
Helps some with decreasing pain	N=[redacted]
I truly believe that if you treat the whole body you will get better results I know I have. It has helped me both physically and emotionally	N=[redacted]
I would recommend because the body in my opinion was designed to move and as a person who utilizes a wheelchair for movement the body gets stiff and prescription medications cannot alleviate these problems.	N=[redacted]
I would recommend it all the way around! The state of Colorado, those involved in the waiver, have worked through the bugs. It keeps getting better.	N=[redacted]
I would recommend joining the SCI waiver because it has improved my attitude and does give me relief from pain which is the main reason I joined!	N=[redacted]
I would recommend them because the SCI waiver provides more access to integrative therapy that ultimately helps me stay healthy and alive.	N=[redacted]
If they want chiropractic or massage, then yes. [redacted]	N=[redacted]
In my case that program help me to make my pain more manageable and allows me to meet more people with the same problems.	N=[redacted]
It can improve your quality of life, decrease in overall pain, and lessened need for medications	N=[redacted]
It has benefited me and kept me mobile. It has aided my well-being and has made me stronger. It has given me positive reinforcement.	N=[redacted]
It is a huge benefit to get all 3 services!	N=[redacted]
It is exactly the kind of therapy that you need	N=[redacted]
It's another opportunity to take care of yourself physically without struggling to pay out of pocket.	N=[redacted]
Just give them the info-up to them	N=[redacted]
Matches our lifestyle and needed services	N=[redacted]
Opportunities for different therapies; great staff; accessible location	N=[redacted]
Pain management	N=[redacted]
Recommend for overall health and well being	N=[redacted]

11. Please explain why you would recommend joining the SCI Waiver to other people with spinal cord injuries.	Number
Sitting all the time and overuse of muscles leaves us trying to catch up constantly and these services changed that so much.	N=[redacted]
The impacted of the services are important when living with health issues (which never go away) that come with having SCI.	N=[redacted]
The SCI waiver has allowed me to attain vital therapies that contribute to my healing daily. Western medicine and hospital care do Not compare to the knowledge and support of the [redacted] I would recommend the SCI waiver to anyone who has sustained a spinal cord injury and seeks 'alternative' modalities for health and healing.	N=[redacted]
The service offered and paid for by being on the SCI waiver are essential to my well-being and my everyday ADL's. Without these services my pain level and functionality would be greatly diminished!!!	N=[redacted]
The services help in so many ways and the clinicians understand SCI. So many people don't understand the needs of a person with SCI, but [redacted] staff really does! I really benefit physically and mentally from the services.	N=[redacted]
The therapies I've reached have greatly impacted my life for the better medically, emotionally and spiritually. I've had less hospital stays than I have ever had!!	N=[redacted]
the treatments have helped me a lot and have increased my range and motion	N=[redacted]
The waiver allows you to be a part of therapies you may not typically be able to be a part of because of cost. I would recommend anyone with a SCI join the waiver.	N=[redacted]
yes, because when you go for the waiver, you're going to get better. before having difficulty with my hand but when I joined I got strong with my hand and leg. I increased a lot of things on the waiver. if they join, they can get better.	N=[redacted]
You have kept me together, staying away from needing to visit the hospital, and being pain free!	N=[redacted]

Table 68: Additional Comments about SCI Waiver

12. Is there anything else you would like to share about your experience on the SCI Waiver?	Number
Amazing waiver. Thank you for the opportunity to be in the program it is awesome.	N=[redacted]
Awesome program - must keep it going. This service is invaluable in keeping me healthy, out of hospitals and off all opioid medications!	N=[redacted]
Excellent way to get out and about and to be around people with same type of disability.	N=[redacted]
Great services!	N=[redacted]
I am truly thankful for the waiver. My life would be nothing without it. Thank you	N=[redacted]
I LOVE [redacted] :)	N=[redacted]
I love the way the waiver doing. I've been hoping...they made me hope. I can do some things I couldn't do before. I go to school now because I can stand, I can go to class. Only god can do something for that company. I'm happy for it.	N=[redacted]
I strongly believe the SCI waiver should become a permanent part of the Medicaid program for those of us with long-term spinal cord injuries. Without constant therapy such as those modalities offer by the SCI waiver the a bind process for me (and I presume others) would become too painful and debilitating for me to continue to live alone and be a useful and functional member of my community!	N=[redacted]

12. Is there anything else you would like to share about your experience on the SCI Waiver?	Number
I would like [redacted] to accept feedback from clients. One employee posted on Facebook that 'Only people that own or operate businesses should be allowed to give business reviews', which is a horrible way to think. [redacted]	N=[redacted]
It has allowed me to stop taking pain meds!	N=[redacted]
It has made such a difference in my life, especially the massage. [NAME] and I look forward to seeing each other when I come to Chanda Foundation. She provides the best kind of support and relaxation. I enjoy her friendship. The environment and people at the Chanda Plan are wonderful, very comfortable and welcoming. It's the 'Chanda experience'	N=[redacted]
It should be increased to individuals outside of the Denver Metro Area	N=[redacted]
It's a great option to have for someone with my injury.	N=[redacted]
it's been life changing	N=[redacted]
Just that i enjoy that i have it.	N=[redacted]
Love it!	N=[redacted]
My life has changed dramatically because of the therapies offered and the truly accessible facility! I feel like a regular client at the facility and not an 'odd' client. I feel 100% safe with the provides! This is a must in my life and I beg Medicaid to continue the SCI waiver!!	N=[redacted]
My provider has a very positive attitude and that helps	N=[redacted]
no	N=[redacted]
Please don't ever stop. Get more locations. Get care in home.	N=[redacted]
Thanks to this program they give us the opportunity to feel better. In my case I feel 100% out of pain sometimes for a few hours or for a day.	N=[redacted]
The caregivers really listened and adapted to what was going on at any given time. They helped through a surgery and my recovery was much better compared to one a year before, before I had started receiving the care.	N=[redacted]
The [redacted] did nothing to alleviate my pain. Techniques were not helpful and the very limited amount of time (she) offered (15 min) was not worth the effort. [redacted] Very disappointed in the treatment.	N=[redacted]
The SCI waiver and services are quite literally keeping me healthy and alive, and I cannot thank everyone enough who works daily to ensure my health and well-being is on track and safe. Gratitude to All!	N=[redacted]

2019 Provider Annual Survey

Table 69: SCI Waiver Service Provider Role

1. What is your role in providing care under the SCI Waiver?	Percent	Number
Massage Therapist	35%	N=8
Other, please specify:	22%	N=5
Acupuncturist	17%	N=4
Chiropractor	13%	N=3
Provider Administrator	13%	N=3
Total	100%	N=23

Table 70: "Other" SCI Waiver Service Provider Role

1. What is your role in providing care under the SCI Waiver? (Other, Specify)	Count
behavioral health	N=1
Behavioral Health Provider	N=1
Billing Assistant	N=1
care coordination	N=1
Care Coordinator	N=1

Table 71: Date Started Working with SCI Waiver Participants

2. In what year and month did you start work with SCI Waiver participants?	Count
2012	N=2
2013	N=2
2014	N=2
2016	N=2
2017	N=8
2018	N=3
2019	N=4

Table 72: Continue to Work with SCI Waiver Participants

3. Are you still working with SCI Waiver participants?	Percent	Number
Yes	100%	N=23
No	0%	N=0

Table 73: Involvement with SCI Waiver Qualification Process

4. Were you involved in the process of qualifying to become a SCI Waiver service provider?	Percent	Number
No	78%	N=18
Yes	22%	N=5
Total	100%	N=23

Table 74: Satisfaction with SCI Waiver Qualification Process

5. [IF YES TO 4] How satisfied or dissatisfied are/were you with the following parts of the SCI Waiver provider qualification process? (excludes those who said the item was not applicable to them)	Satisfied	Somewhat satisfied	Somewhat dissatisfied	Dissatisfied	Total
Clarity of process to qualify to become a provider	20%	60%	0%	20%	100%
	N=1	N=3	N=0	N=1	N=5
Ease of completing qualification process	20%	40%	20%	20%	100%
	N=1	N=2	N=1	N=1	N=5
Ease of reaching someone at HCPF who can answer your questions	33%	33%	0%	33%	100%
	N=1	N=1	N=0	N=1	N=3
Timeliness of resolving questions	0%	67%	0%	33%	100%
	N=0	N=2	N=0	N=1	N=3

Table 75: Satisfaction with SCI Waiver Payment Process

6. How satisfied or dissatisfied are/were you with the following parts of the SCI Waiver payment process? (excludes those who said the item was not applicable to them)	Satisfied	Somewhat satisfied	Somewhat dissatisfied	Dissatisfied	Total
Amount paid for your services	53%	32%	11%	5%	100%
	N=10	N=6	N=2	N=1	N=19
Clarity of how to bill for services	58%	33%	0%	8%	100%
	N=7	N=4	N=0	N=1	N=12
Ease of billing for services	73%	18%	0%	9%	100%
	N=8	N=2	N=0	N=1	N=11
Timeliness of payments	92%	8%	0%	0%	100%
	N=11	N=1	N=0	N=0	N=12
Amount paid for additional administrative tasks	36%	0%	9%	55%	100%
	N=4	N=0	N=1	N=6	N=11

Table 76: Involvement with SCI Waiver Evaluation Process

7. Were you involved in administering program evaluation surveys to SCI Waiver participants?	Percent	Number
No	57%	N=13
Yes	43%	N=10

Table 77: Satisfaction with SCI Waiver Evaluation Process

8. [IF YES TO 7] How satisfied or dissatisfied are/were you with the following parts of the SCI Waiver evaluation process? (excludes those who said the item was not applicable to them)	Satisfied	Somewhat satisfied	Somewhat dissatisfied	Dissatisfied	Total
	50%	40%	10%	0%	100%
Clarity of evaluation process	N=5	N=4	N=1	N=0	N=10
Ease of administering patient surveys with clients	30%	50%	10%	10%	100%
	N=3	N=5	N=1	N=1	N=10
Ease of providing completed forms to HCPF staff	44%	33%	22%	0%	100%
	N=4	N=3	N=2	N=0	N=9
	17%	33%	17%	33%	100%
Compensation for evaluation tasks	N=1	N=2	N=1	N=2	N=6

Table 78: Involvement with Physical Care or Examinations

9. Did you provide physical care or examinations for your SCI Waiver clients?	Percent	Number
Yes	74%	N=17
No	26%	N=6
Total	100%	N=23

Table 79: Satisfaction with SCI Waiver Evaluation Process

10. [IF YES TO 9] How strongly do you agree disagree with the following statements about caring for the SCI clients? (excludes those who said the item was not applicable to them)	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Total
I have specific training in how to provide my care services to people with spinal cord injuries	59%	35%	6%	0%	100%
	N=10	N=6	N=1	N=0	N=17
I am comfortable providing my care services to people with spinal cord injuries	94%	6%	0%	0%	100%
	N=16	N=1	N=0	N=0	N=17
I have training in how to transfer patients from wheelchairs to tables or chairs as appropriate	82%	18%	0%	0%	100%
	N=14	N=3	N=0	N=0	N=17
I have/had appropriate equipment to transfer patients from wheelchairs to tables or chairs as appropriate	88%	12%	0%	0%	100%
	N=15	N=2	N=0	N=0	N=17

Table 80: Improvements for SCI Waiver Participants

12. As a result of participating in alternative therapies have you seen improvements in the following for your SCI Waiver clients?	Most of my clients	Some of my clients	Few of my clients	None of my clients	Don't know	Total
	61%	39%	0%	0%	0%	100%
Improved range of motion	N=14	N=9	N=0	N=0	N=0	N=23
	91%	9%	0%	0%	0%	100%
Fewer days with pain	N=21	N=2	N=0	N=0	N=0	N=23
	96%	4%	0%	0%	0%	100%
Decreased level of pain	N=22	N=1	N=0	N=0	N=0	N=23
	91%	9%	0%	0%	0%	100%
Improved quality of life	N=21	N=2	N=0	N=0	N=0	N=23

Table 81: Greatest Barriers to Receiving Care

13. What were the greatest barriers for your clients in receiving care?	Count
Transportation	N=5
Transportation. And inability to admit need and reach out for support.	N=1
Transportation to the facility is the greatest barrier.	N=1
Transportation or illness	N=1
transportation & weather	N=1
Transportation / car problems	N=1
transportation health concerns, Dr. appointments, ER visits, hospitalizations	N=1
Time, transportation.	N=1
reliable transportation	N=1
Transportation To the clinic	N=1
It was transportation.	N=1
Car transportation, some have a hard time getting rides.	N=1
Process to get approved for SCI participation and services	N=1
Not being able to offer them more services than just once a week. Often times a patient could use 2-3 Alternative treatments per week for optimal benefits, especially when trying to help them reduce opioid medications and control their pain levels.	N=1
Knowing that it was an alternative option that was as effective as the traditional medical treatment approaches that came along with the spinal cord injury diagnosis.	N=1
Issues with the county and timeliness of enrollment. It has taken over 6 months for some clients to be enrolled on the SCI Waiver. [redacted] especially has been difficult to work with as there seems to be less processes and education in place regarding this waiver versus [redacted]. The processes seem to also be different between [redacted] making it confusion on the provider.	N=1
being aware of the program itself	N=1

Table 82: Desired Improvements to SCI Waiver

14. What would you most like to see changed about how the SCI Waiver program is administered?	Count
Some clients would benefit from longer sessions. 90 minutes would be ideal. Also, clarification with transportation and the medical vs non-medical rides.	N=1
shortened length of time for persons transitioning from EBD Waiver to SCI Waiver. improved communication flow between providers and case manager when a PAR is approved....I seldom get the actual PAR number to be able to look up unit usage in the portal.	N=1
providers to be paid something me for no shows	N=1
Offer it as a standard along with the diagnosis @ time of in-patient care. Not enough patience know that it's an option for them post diagnosis.	N=1
Nothing	N=1
Just get as many people help as possible	N=1
It is difficult to see how many credits people have left in their current care plan. Some people want to maximize the number of times they come in, but when it takes over an hour to figure out how many credits they have left, it is difficult to provide them with the best service.	N=1
Increased reimbursement for services as they are more specific and complex than working with able bodied population	N=1
Increased compensation for acupuncturist, massage therapist, and chiropractic services. Fines for clients that are no shows or cancel appointments at the last minute - occasionally they have just cause, but that doesn't assist on the administration expense of having people available, when no one shows up. Included Adaptive Exercise, this is crucial for health and wellness for all clients with SCI. I would state that Adaptive Exercise is better than the Integrative services for client improvement - yet it is not included. Program should be statewide!	N=1
Increased accessibility (geographic and diagnostic criteria	N=1
Increase the frequency of treatments for those trying to reduce their opioid intake	N=1
I'm not involved with how the waiver program is administered. It does seem that only people living in certain areas can participate, even though the Denver metro area covers a lot of territory. People in surrounding cities are unable to participate. I would like to see more people being able to use our services.	N=1
I would like to see the services available to more people with disabilities, not just those with SCI. The benefits are too great to ignore, both to the individuals and their quality of life but also to HCPF in terms of reduced cost and better health outcomes for people.	N=1
I would like to see it expanded and include more collaborative treatments.	N=1
I think it's amazing already!! I love being a part of it and working with our participants. Our administrative team does a phenomenal job with the billing, and so as a provider, I simply get a paycheck for all the sessions from the week prior- it's very seamless for me.	N=1
I am overqualified and under paid for my position. My position is thrown all challenges. My wish is that care coordination was written into the plan, because individuals frequently do not know how to navigate the systems that they are on, including as the SCI Waiver, Medicaid itself, Social Security, Medicare, Transportation, Housing are all samples of systems Care Coordination assist participants to get on/or stay on, which can literally keep people utilizing the SCI Waiver.	N=1

14. What would you most like to see changed about how the SCI Waiver program is administered?	Count
Be more like CDASS, where participants are allocated certain amount of money and they can choose their own providers. This would allow more choice and serve people better if issues with provider location and provider preference. The surveys are a huge burden and financial loss for the provider. All the work falls on the provider and many many admin hours are lost on this process. Based on the results already collect, these need to be removed. The amount of time to collect and send surveys is huge. Even the 3 questions asked at each appointment is a lot as we have to manually enter them into an excel sheet, so we have to pull every chart and every appointment individually. There seem to be multiple occasions when clients are kicked off the waiver or Medicaid for no reason. This causes big billing issues, and it is often a system error than true eligibility issue for the client. Not sure how to correct this, but very worrisome. Massage rates should be more similar to children's waivers as this is a delicate population just like children with intensive medical issues, and a lot of time is spent transferring clients, so appointments are always longer than what billed for. Units allowed should be 408 total without criteria on how many per modality. Some participants get a lot better results with acupuncture 2x/week versus acu and another modality. I would like this waiver expanded to those with other similar disabilities and cover a larger geographic region. We have many people who get upset that they cant get these services just because they live just outside one of the current counties.	N=1

Table 83: Additional Comments

15. Is there anything else you would like to share about your experience being a SCI Waiver service provider?	Count
This is so important to our community; I wish I could shout it from the mountain tops. More individuals need to enroll in the program.	N=1
Providers should be compensated for admin time on a per patient basis.	N=1
LOVE the amazing results that are changing lives	N=1
It's a really beautiful program serving a truly beautiful community- it's an absolute honor to be part of it! I enjoy sharing it with newly injured people at Craig and letting them know there's a world of welcoming support waiting for them when they are discharged.	N=1
It has changed not only the life of those who have a SCI, but mine as a provider as well.	N=1
I think it has been incredible	N=1
I love what the SCI Waiver is all about! It is wonderful to see people feeling better! Everyone works their tail feathers off to be the best for the participants. It is a beautiful thing to be a part of.	N=1
I am constantly humbled and incredibly thankful that I have had the opportunity to be a part of this program.	N=1
Honored!	N=1
Higher pay reimbursements.	N=1
Glad the waiver has been approved for another 5 years. Let's make it permanent within the medical field as a known, viable alternative option for everyone with an SCI.	N=1
For the most part, the billing experience has worked better than other insurance companies I have billed; however, when there is an issue, sometimes it takes a long time to get a hold of the correct person and get the issue resolved. For example, we have a SCI Waiver client that we have been unable to bill for nearly 1 year of service (according to the case manager, this is due to the fact that other vendors need to rescind their claims so that he can back out the PAR and revise it?)	N=1
Everyone always leaves feeling better than when they came. They are so grateful that they can benefit from the services we provide. More providers are needed to reach more people	N=1
Enjoying it very much	N=1

15. Is there anything else you would like to share about your experience being a SCI Waiver service provider?	Count
Appreciate the opportunity to provide my services through this program to many people who would not otherwise have access.	N=1

2019 Case Manager/Supervisor Annual Survey

Table 84: Satisfaction with SCI Waiver

1. How satisfied or dissatisfied are you with the following parts of the SCI Waiver?	Satisfied	Somewhat satisfied	Somewhat dissatisfied	Dissatisfied	Total
Ease of determining your clients' eligibility to join waiver (excluding financial eligibility)	53%	40%	0%	7%	100%
	N=8	N=6	N=0	N=1	N=15
Ease of enrolling clients on to the waiver	33%	47%	13%	7%	100%
	N=5	N=7	N=2	N=1	N=15
Ease of transferring clients on to the waiver from a different waiver	7%	57%	36%	0%	100%
	N=1	N=8	N=5	N=0	N=14
Ease for clients scheduling acupuncture appointments	55%	45%	0%	0%	100%
	N=6	N=5	N=0	N=0	N=11
Ease for clients scheduling chiropractic appointments	64%	36%	0%	0%	100%
	N=7	N=4	N=0	N=0	N=11
Ease for clients scheduling massage therapy appointments	64%	36%	0%	0%	100%
	N=7	N=4	N=0	N=0	N=11

Table 85: Improvements for Clients through SCI Waiver

2. As a result of participating in alternative therapies have you seen improvements in the following for your clients that participate in the SCI Waiver?	Most of my clients	Some of my clients	Few of my clients	None of my clients	Don't know	Total
	13%	7%	7%	0%	73%	100%
Fewer prescription medications used	N=2	N=1	N=1	N=0	N=11	N=15
	20%	13%	0%	0%	67%	100%
Fewer visits to traditional doctors	N=3	N=2	N=0	N=0	N=10	N=15
	33%	7%	7%	0%	53%	100%
Less time spent as an in-patient in hospitals	N=5	N=1	N=1	N=0	N=8	N=15
	33%	7%	7%	0%	53%	100%
Less time spent in institutional care	N=5	N=1	N=1	N=0	N=8	N=15
	33%	13%	7%	0%	47%	100%
Fewer days with pain	N=5	N=2	N=1	N=0	N=7	N=15
	40%	7%	7%	0%	47%	100%
Decreased level of pain	N=6	N=1	N=1	N=0	N=7	N=15
	40%	13%	13%	0%	33%	100%
Improved quality of life	N=6	N=2	N=2	N=0	N=5	N=15

Table 86: Challenges Assisting Clients in Joining the SCI Waiver

3. Did you have any problems or challenges assisting clients in joining the SCI Waiver?	Percent	Number
Yes	33%	N=5
No	67%	N=10
Total	100%	N=15

Table 87: Types of Challenges Assisting Clients in Joining the SCI Waiver

3a. [IF YES] What problems or challenges did you have assisting clients in joining the SCI Waiver? (Select all that apply)	Percent	Number
Getting the PMIP back from the Doctor in time	60%	N=3
Getting clients to complete the forms	20%	N=1
No spots were available (client was put on a wait list)	0%	N=0
Total	100%	N=5

Table 88: "Other" Types of Challenges Assisting Clients in Joining the SCI Waiver

3a. [Other][IF YES] What problems or challenges did you have assisting clients in joining the SCI Waiver? (Select all that apply)	Number
client reports degenerative spina condition that doesn't qualify as a spinal injury	N=1
Financial approval took 6 months	N=1
getting client coded from financial techs	N=1
Over Cost services, typically CDASS	N=1
with CDASS clients, making sure that there was a sync with Bridge, fiscal agent portal and CBMS was a headache	N=1

Table 89: Challenges Receiving Acupuncture, Chiropractic or Massage Therapy Services on the SCI Waiver

4. Have your clients had any problems or challenges receiving acupuncture, chiropractic or massage therapy services on the SCI Waiver?	Percent	Number
Yes	13%	N=2
No	87%	N=13
Total	100%	N=15

Table 90: Types of Challenges Receiving Services on the SCI Waiver

4a. [IF YES] What problems or challenges did your clients have receiving acupuncture, chiropractic or massage therapy services on the SCI Waiver? (Select all that apply)	Percent	Number
The service providers were too far away (would take too long to get there)	50%	N=1
The providers were too busy; they could not fit the client in	50%	N=1
Did not like the service center provider(s) that were available	50%	N=1
Did not like the individual therapists that were available	50%	N=1
Other, please specify:	50%	N=1
Could not find transportation to appointments	0%	N=0
Total	100%	N=2

Table 91: "Other" Types of Challenges Receiving Services on the SCI Waiver

4a. [Other] [IF YES] What problems or challenges did your clients have receiving acupuncture, chiropractic or massage therapy services on the SCI Waiver? (Select all that apply)	Number
CBMS did not match PAR eligibility	N=1

Table 92: Recommend the SCI Waiver

5. If they were eligible, would you recommend joining the SCI Waiver to other people with spinal cord injuries?	Percent	Number
Yes	100%	N=15
No	0%	N=0
Total	100%	N=15

Table 93: Reasons Would Recommend the SCI Waiver

[IF YES] Please explain why you would recommend joining the SCI Waiver to other people with spinal cord injuries.	Number
Based on reports from other individuals I work with on the SCI Waiver, alternative therapies are beneficial. Client report they have improved ROM, decreased muscle spasms, decreased pain, and overall feeling of comfort that they did not experience prior to the use of alternative therapies.	N=1
Because of the extra services available	N=1
extra benefits to program	N=1
For the specialized services offered.	N=1
I feel the SCI specific services are very helpful with mobility, ROM, reducing pain, and quality of life	N=1
it provides many more additional services to help there quality of life.	N=1
Many of my clients really appreciate and value the services available to them on the SCI Waiver, most notably the alternative therapies. I have been very impressed with the providers as well.	N=1
More services available to them.	N=1
My SCI clients using these waiver services seem happier and healthier than those who do not. Every client has nothing but praise for these services and definitely seem to enjoy a higher quality of life!	N=1
Seems to improve quality of life	N=1
some of them already pay for massage and the waiver would save money	N=1
The Acupuncture, Massage Therapy, and Chiropractic services have improved some of my clients' lives. I'm happy they have that option.	N=1
therapies are helpful	N=1
This waiver helps reduce individuals with pain and improve quality of life.	N=1
to receive services	N=1

Table 94: Additional Comments about SCI Waiver

6. Is there anything else you would like to share about your experience being a case manager for someone on the SCI Waiver?	Number
I have been working with individuals on the SCI Waiver for almost a year. I have enjoyed listening to each client's personal experience with receiving services to maintain their independence. Although the effects of an SCI affect each person differently, each injury remains life altering. To enable someone with a debilitating injury the ability to remain independent and reside independently in their own home is a huge feat. To listen to stories of how some are beginning to regain some range of motion, or feeling is incredible. To receive phone calls that a client has been able to decrease pain management due to reduction in spasms and increase in spasticity is tremendous. I will continue to work with those on the SCI Waiver and encourage alternative therapies as I do believe they are beneficial and provide positive results.	N=1
I really believe that the alternative therapies available to SCI clients are invaluable and very appreciated by the clients.	N=1
The OCC procedure is so difficulty and extremely time consuming. It is also very difficult to explain to the clients. I feel our SCI clients also have difficulty understanding our role.	N=1

Appendix B: ULTC 100.2 Long Term Care Assessment Protocol

The ULTC 100.2 Assessment form is filled out by a Medicaid Case Manager annually and each time a Medicaid participant under the Home and Community-Based Services Elderly, Blind and Disabled (HCBS-EBD) Waiver or the HCBS-SCI Waiver has a change in condition (like hospitalization).

Table 95: Long Term Care Eligibility Assessment Description of Activities of Daily Living (ADL) and Assessment Levels

ADL	ADL description	Independent (100)	Mostly independent (67)	Mostly dependent (33)	Dependent (0)
Bathing	The ability to shower, bathe or take sponge baths for the purpose of maintaining adequate hygiene.	The client is independent in completing the activity safely.	The client requires oversight help or reminding; can bathe safely without assistance or supervision, but may not be able to get into and out of the tub alone.	The client requires hands on help or line of sight standby assistance throughout bathing activities in order to maintain safety, adequate hygiene and skin integrity.	The client is dependent on others to provide a complete bath.
Dressing	The ability to dress and undress as necessary. This includes the ability to put on prostheses, braces, anti-embolism hose or other assistive devices and includes fine motor coordination for buttons and zippers. Includes choice of appropriate clothing for the weather. Difficulties with a zipper or buttons at the back of a dress or blouse do not constitute a functional deficit.	The client is independent in completing activity safely.	The client can dress and undress, with or without assistive devices, but may need to be reminded or supervised to do so on some days.	The client needs significant verbal or physical assistance to complete dressing or undressing, within a reasonable amount of time.	The client is totally dependent on others for dressing and undressing

ADL	ADL description	Independent (100)	Mostly independent (67)	Mostly dependent (33)	Dependent (0)
Toileting	The ability to use the toilet, commode, bedpan or urinal. This includes transferring on/off the toilet, cleansing of self, changing of apparel, managing an ostomy or catheter and adjusting clothing.	The client is independent in completing activity safely.	The client may need minimal assistance, assistive device, or cueing with parts of the task for safety, such as clothing adjustment, changing protective garment, washing hands, wiping and cleansing.	The client needs physical assistance or standby with toileting, including bowel/bladder training, a bowel/bladder program, catheter, ostomy care for safety or is unable to keep self and environment clean.	The client is unable to use the toilet. The client is dependent on continual observation, total cleansing, and changing of garments and linens. This may include total care of catheter or ostomy. The client may or may not be aware of own needs.
Mobility	The ability to move between locations in the individual's living environment inside and outside the home. Note: Score client's mobility without regard to use of equipment other than the use of prosthesis.	The client is independent in completing activity safely.	The client is mobile in their own home but may need assistance outside the home.	The client is not safe to ambulate or move between locations alone; needs regular cueing, stand-by assistance, or hands on assistance for safety both in the home and outside the home.	The client is dependent on others for all mobility.
Transferring	The physical ability to move between surfaces from bed/chair to wheelchair, walker or standing position; the ability to get in and out of bed or usual sleeping place; the ability to use assisted devices for transfers. Note Score client's mobility without regard to use of equipment.	The client is independent in completing activity safely.	The client transfers safely without assistance most of the time, but may need standby assistance for cueing or balance; occasional hands on assistance needed.	The client transfer requires standby or hands on assistance for safety; client may bear some weight.	The client requires total assistance for transfers and/or positioning with or without equipment.

ADL	ADL description	Independent (100)	Mostly independent (67)	Mostly dependent (33)	Dependent (0)
Eating	The ability to eat and drink using routine or adaptive utensils (including via tube feedings or intravenously). This also includes the ability to cut, chew and swallow food.	The client is independent in completing activity safely	The client can feed self, chew and swallow foods but may need reminding to maintain adequate intake; may need food cut up; can feed self if food brought to them, with or without adaptive feeding equipment.	The client can feed self but needs line of sight standby assistance for frequent gagging, choking, swallowing difficulty; or aspiration resulting in the need for medical intervention. The client needs reminder/assistance with adaptive feeding equipment; or must be fed some or all food by mouth by another person.	The client must be totally fed by another person; must be fed by another person by stomach tube or venous access.
Behaviors	The ability to engage in safe actions and interactions and refrain from unsafe actions and interactions (Note, consider the client's inability versus unwillingness to refrain from unsafe actions and interactions).	The client demonstrates appropriate behavior; there is no concern.	The client exhibits some inappropriate behaviors but not resulting in injury to self, others and/or property. The client may require redirection. Minimal intervention is needed.	The client exhibits inappropriate behaviors that put self, others or property at risk. The client frequently requires more than verbal redirection to interrupt inappropriate behaviors.	The client exhibits behaviors resulting in physical harm for self or others. The client requires extensive supervision to prevent physical harm to self or others.
Memory/ Cognition Deficit	The age appropriate ability to acquire and use information, reason, problem solve, complete tasks or communicate needs in order to care for oneself safely.	Independent no concern	The client can make safe decisions in familiar/routine situations, but needs some help with decision making support when faced with new tasks, consistent with individual's values and goals.	The client requires consistent and ongoing reminding and assistance with planning, or requires regular assistance with adjusting to both new and familiar routines, including regular monitoring and/or supervision, or is unable to make safe decisions, or cannot make his/her basic needs known.	The client needs help most or all of time.

Appendix C: Evaluation Recommendations

As more people join the SCI waiver it will be helpful to continue to evaluate the impact of CIHS services. To that end we would recommend that the department continue to analyze the Medicaid claims data. This is a lower burden activity as the data will continue to be collected (for its primary purpose of billing) and the queries required to extract the relevant data have been set up by department staff and can be invoked annually with a relatively small effort. The analyses cited in this report would be strengthened as both the number of SCI waiver members and the number of years members have used CIHS increase.

An area of interest to many of the members of the SCI Waiver Advisory Committee is whether CIHS is an effective alternative to reduce opioid use. Given the nature/structure of Medicaid claims data, there are inherent challenges in identifying opioid equivalencies in the pain medications, but if the department could develop a protocol to isolate these medications, it would be of interest to compare use over time.

The implementation of the quality of life assessment tools (Forms 1 through 4) create a burden for the Waiver members and the providers and have not shown change in pain levels or quality of life measures - although most waiver members express that they have felt improvements in both areas. As such, eliminating, reducing, or changing this aspect of the evaluation may be beneficial.

- One could assume that the mere act of continuing to seek CIH services implies they are of value to the waiver member and help to improve their quality of life. Additionally, reductions in other medical care costs, if the result of a reduced need for services, may imply an improved quality of life.
- Eliminating the collection of Forms 1 through 4 and implementing the annual survey (possibly with added questions) to gather participants opinions on the SCI waiver process and its impact would provide valuable input with greatly reduced burden. This along with the analysis of claims data would create a full picture of the levels of medical care, costs to the system, and participant satisfaction with the process.
- If there is strong interest in continuing the collection of Forms 1 to 4 with expectation that the increased number of evaluation participants will improve the sensitivity of the analysis, reducing the data collection to once a year in March would simplify the process for providers and could garner similar levels of comparative data.
- Regardless of the use of Forms 1 through 4, the ongoing treatment assessment was specifically burdensome, with a resultant poor consistency in data collection. The data itself did not add value to the evaluation. The ongoing treatment assessment should be discontinued in the evaluation, although it may be a useful tool for the care providers.