

Evaluation of the Children's Medical Services Program of the New Mexico Department of Health

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January 2020

■ INTRODUCTION & BACKGROUND

According to the American Academy of Pediatrics, care coordination is “a process that links children and youth with special health care needs and their families with appropriate services and resources in a coordinated effort to achieve good health”.¹ Children's Medical Services (CMS), located in the Family Health Bureau of the Public Health Division in the Department of Health, provides care coordination services to children and youth with special health care needs (CYSHCN). These are children and youth younger than twenty one who experience one or more moderate-to-severe medical conditions that have the potential to negatively affect their long-term health or ability to function and which require specialized health care or other services.

The program employs multidisciplinary, bilingual staff including licensed social workers, nutritionists, nurses and others to provide health and related care coordination to 4,654 children and their families. CMS also provides over 160 pediatric specialty outreach clinics throughout the state, including Cleft Lip and Palate, Neurology, Endocrine, Nephrology, Genetics, Metabolic, Cardiology, Gastroenterology, Cystic Fibrosis and Asthma.

The program also provides safety net payments for medical care for clients that are non-Medicaid eligible, including primary, specialty and dental care. There is a cap of \$15,000 per client.

In 2019, the program director asked the staff of the Evaluation Services Unit of the Center for Development and Disability to conduct a program evaluation of CMS, with three parts:

- Assessing the role that CMS plays in providing care coordination;
- assessing the impact of the program on clients and their families; and
- costs of providing care coordination.

Key Findings

- The clients CMS works with have higher-than-average medical needs, and live in families that experience higher levels of adverse childhood experiences.
- Care coordination by CMS includes but goes far beyond health care alone. CMS plays a critical role in helping families of children with special health care needs navigate complex systems in areas including health services, social services, and assistance programs such as Medicaid and education.
- Care coordination needs of CMS clients are not one-time events, but rather needs which require ongoing, long-term work by CMS social workers.
- Satisfaction with care coordination provided by CMS ranked significantly above that found in national studies of care coordination. Over 99% of families reported that the work of CMS social workers had a positive impact on the quality of life of their child and were satisfied with the care coordination services they received. A national study found that 59.2% of families reported receiving adequate care coordination.
- When asked about their unmet needs, the most frequently mentioned need was behavioral health services, mentioned by nearly 11% of respondents. This reflects the well-documented scarcity of behavioral health providers in the state, particularly in rural areas.
- Children's Medical Services is a cost-effective program. While the average cost per encounter for CMS social workers is \$10.18, a national study found that the average cost per-encounter for care coordination provided by physicians is \$21.63.

METHODOLOGY

To assess the role of CMS social workers in providing care coordination, evaluators adapted a care coordination measurement tool originally developed by Richard Antonelli et. al. at Boston Children's Hospital² that has been used to examine care coordination provided by primary care physicians in institutional settings. The instrument was revised for use in care coordination in home and community-based settings by non-medical staff. A copy of the instrument is in Attachment One.

Over a two month period, CMS social workers completed an on-line version of the instrument for each encounter they had with a client and family. 4,303 encounters were documented for 1,642 unduplicated clients. The instrument asked CMS social workers about:

- The type of care coordination needs provided by the social worker;
- The time involved in providing coordination for different types of needs;
- The methods used to provide care coordination;
- The outcomes of care coordination provided; and
- The medical complexity of the client and the social complexity of the client's family.

Medical complexity was calculated based on the number of primary and specialist health care providers each client had, while family social complexity was calculated by the number of adverse childhood events experience by the families of CMS clients.

To gather the perceptions of clients about the services they received, a brief survey was developed and distributed to family members who accompanied their children to visits at CMS clinic sites throughout the state. Respondents had the option of returning the completed surveys directly or placing them in an envelope, sealing it and handing it to the receptionist to be mailed to evaluation staff at the Center. 256 responses were received. The survey asked questions concerning:

- How long they had been receiving services from CMS;
- Their satisfaction with the work of the CMS staff who worked with them,

- The impact which CMS services had on the quality of life of their child receiving services; and
- Which service-related needs were most pressing for them.

A copy of the survey is in Attachment Two.

To examine the cost of care coordination services, evaluators conducted three studies, evaluators first conducted a search of the national literature on the cost of care coordination by health care providers (e.g., primary care providers) versus non-medical staff. Secondly, they conducted an analysis of care coordination costs within CMS based on the level of medical and social complexity using de-identified salary data provided by CMS.

FINDINGS

Care Coordination By CMS Includes but Goes Far Beyond Health Care Alone. CMS Plays A Critical Role In Helping Families of Children with Special Health Care Needs Navigate Complex Systems in Areas Including Social Services, Assistance Programs Such as Medicaid and Education.

The top three activities CMS social workers engaged in involved coordination of various types of health-related services (See Table One). Nearly 54% of encounters were for clinical management - establishing and maintaining an integrated plan to address the health needs of the client in collaboration with the client and his or her family - followed by coordination of appointments and making follow-up or referral visits.

Much of the work of CMS social workers involves coordinating various types of health care, including developing clinical management plans, coordinating appointments and making referrals., reflecting the fact that 65% of CYSHCN in the state have two or more chronic, moderate-to-serious health conditions.

This no doubt reflects the fact that 65% of children and youth with special health care needs in the state have two or more health conditions. Managing health care and related services for children with multiple chronic, moderate-to-serious health conditions presents a continuous challenge for caregivers.

Table One

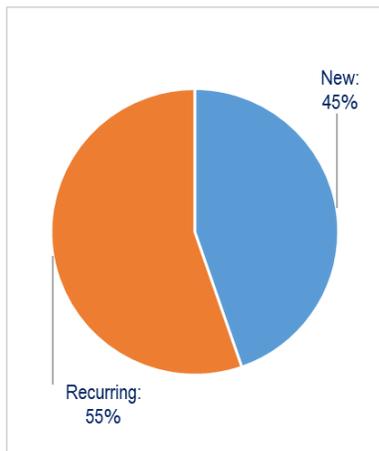
Care Coordination Activities by CMS Social Workers

Care Coordination Need	% of Encounters
Clinical management	53.6%
Coordinating appointments	29.7%
Follow-up/referrals	24.7%
Coordination of services (schools, agencies, payers)	16.6%
Insurance coverage/Reimbursement	15.4%
Intake/Renewal Assessment	14.3%
Advocacy	9.9%
Nutrition, Food access	5.5%
Social services (housing, transportation, resources)	3.6%
School/Education, IEP & 504s	2.5%
Others with less than 2% of encounters: Behavioral/Developmental/Mental Health, Navigating Medicaid and Waivers, Case closure, Prescription issues, Social Security/SSDI, Transition, DME, Therapists, Guardianship, Legal/Judicial, CYFD, Respite	2% or fewer of encounters

Care coordination needs of CMS clients are not one-time events, but rather involve ongoing, long-term problems. 55% of the issues CMS social workers deal with are recurring (Figure One).

Figure One

One-Time Vs. Recurring Encounters



CMS cli-

ents have

higher-than-average medical needs. 58% of clients have moderate or intense medical needs, measured by the number of medical providers for the child (Figure Two).

They also come from families that are experiencing higher levels of adverse childhood experiences. These include such things as domestic violence, substance abuse, a parent being incarcerated, poverty or a lack of access to food. 50% of clients come from families with two or more ACES (Figure Three).

Figure Two

Medical Complexity of CMS Clients: Number of Health Care Providers

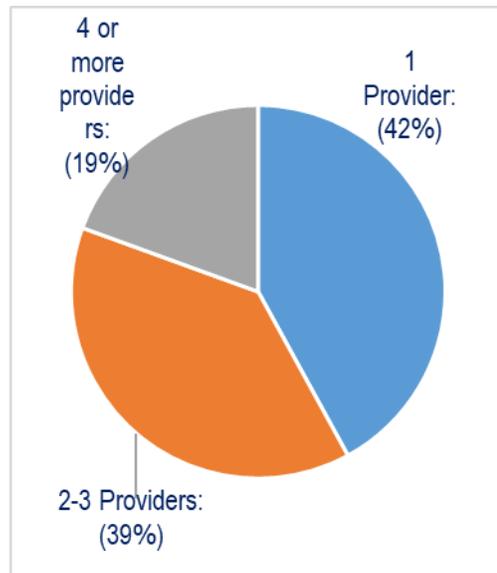
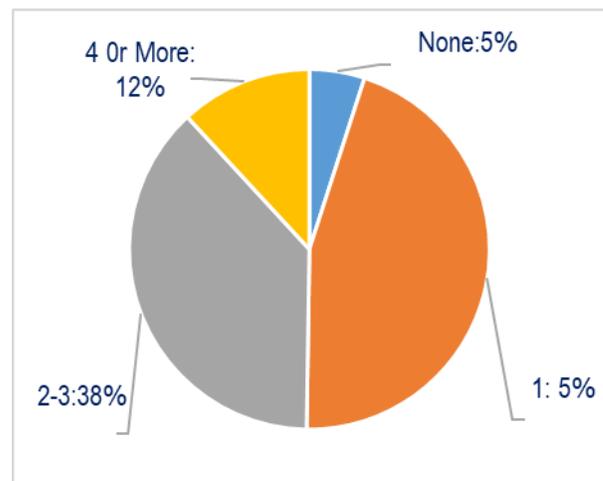


Figure Three

Social Complexity of CMS Clients: Number of Adverse Childhood Experiences



Nearly all families receiving services from CMS think that the work of CMS has increased the quality of life of their child. Over 99% said that the work of the CMS social worker had increased their child's quality of life, and were also satisfied with the care coordination services provided by CMS (Table Two). This compares favorably to national figures. In one study, that 59.2% of families reported receiving adequate care coordination.³

Children's Medical Services is a cost-effective program. While the average cost per encounter for CMS social workers is \$10.18, a national study found that the average cost per-encounter for care coordination provided by physicians is \$21.63.

Table Two

Perceptions of Families Towards the Work of CMS Social Workers

	Strongly Agree / Agree	Disagree
My CMS social worker has had a positive impact on the quality of life of my child	99.6%	0.4%
I am satisfied with the care coordination services received from Children's Medical Services	99.6%	0.4%

Families positive perceptions of the work of CMS increases the longer they stay with the program. While 40% of families who have been with the program one year or less strongly agree with the statement "My CMS social worker has had a positive impact on the quality of life of my child", that figure rises to 84% for families with the program over two years (Table Three).

Table Three

Perceptions of Families Towards the Work of CMS Social Workers Over Time

STRONGLY AGREE to:	Years Receiving CMS Services		
	<1 Year	Between 1-2 Years	2+ Years
My CMS social worker has had a positive impact on the quality of life of my child	60%	67%	84%
I am satisfied with the care coordination services received from Children's Medical Services	62%	73%	86%

Comments made by clients reflect these positive assess-

ments. One parent remarked that *My CMS Social worker is fast and thinks of things I have not even thought of to help further my child's care and growth. She is kind and encouraging and wants the best for her and my family,* Several parents made special mention of the value of CMS clinics being held at locations throughout the state, with a typical comment being *Very thankful that the clinics are willing to come to Las Cruces, thank you for that, really helps.*

Several parents made special mention of the value of CMS clinics being held at locations throughout the state.

The way in which CMS social workers interacted with families was universally rated very highly. Either 99% or 100% of clients who responded agreed that the social workers with whom they worked were respectful, supportive, understanding of their needs, responsive and explained things in an understandable way (Table Four).

Table Four

Perceptions of Families Towards CMS Social Workers

My CMS Social Worker:	Strongly Agree/Agree	Disagree
Shows respect for my family and me	100%	0%
Supports my family and me	99%	1%
Understands the needs of my child and my family	100%	0%
Responds to my phone calls, emails or texts in a reasonable amount of time	100%	0%
Explains things to me in a way I can understand	100%	0%
Does a good job of coordinating all the services my child gets.	100%	1%

Respondents were appreciative of the way in which CMS social workers interacted with them. One parent commented:

I had never heard of these medical services, but I am glad I know about them now. My social worker is AMAZING. She demonstrates that she is able to help in any way possible and is very kind & respectful.

Another commented:

The service has provided the best support for my daughter, for her physical, emotional, and developmental well-being and for the family.

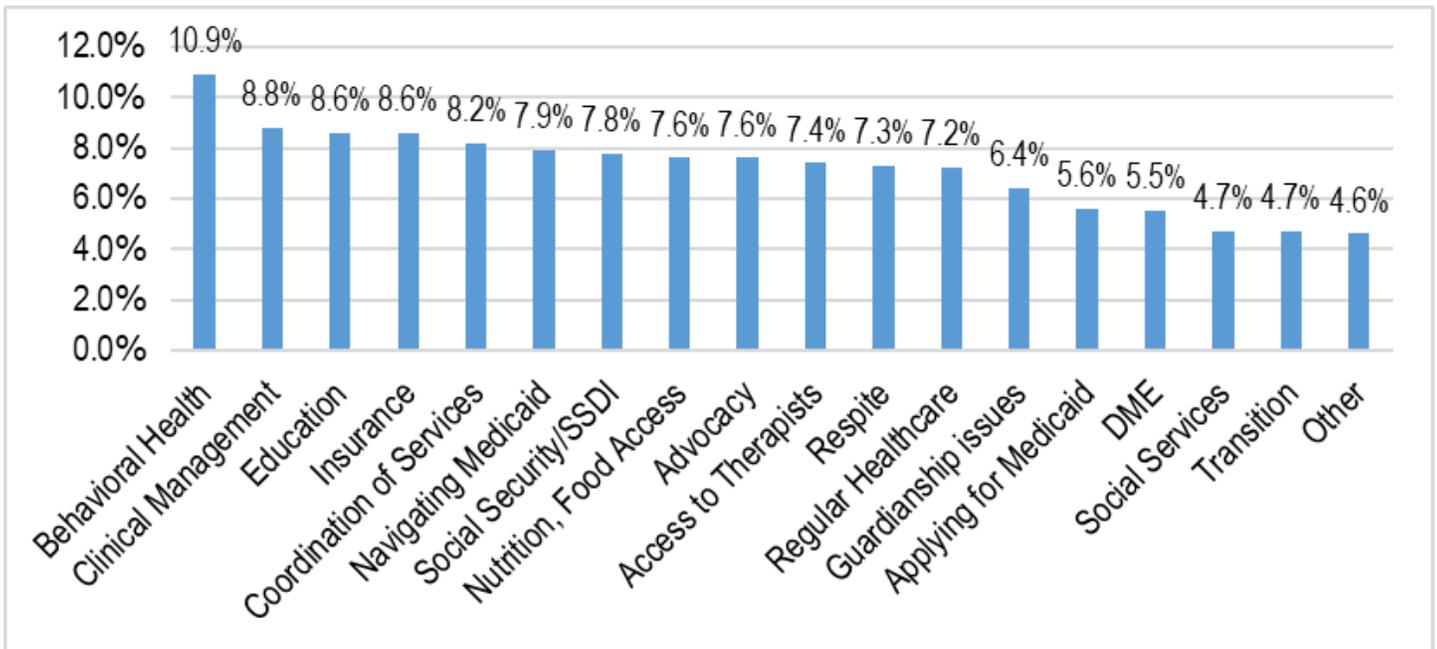
Families were also asked about what the biggest unmet needs were for their child—not based on the services they received from CMS, but in terms of overall unmet needs of their child. Figure Four presents the results.

The largest unmet need, mentioned by nearly 11% of respondents, was behavioral health services. This finding is aligned with a recent report by the Department of Health and Human Services office of Inspector General⁴

that found that the state is severely lacking in behavioral health services, particularly in rural areas.

Others included clinical management (8.8%), insurance (8.6%), coordination of services (8.2%). Given the complexity of systems of health care and social services, assisting families of children with higher-than-average health care needs who live in families with complex social needs with navigating those systems of care is especially important.

Figure Four
Unmet Needs of Children and Youth with Special Health Care Needs



Care coordination by CMS social workers is cost-effective. Table Five shows the cost-per encounter for clients with varying levels of medical and social complexity. Clients with higher levels of both medical (number of health care providers) and social (number of adverse childhood experiences in the family) have higher per-encounter costs, due to the greater levels of complexity involving multiple health or other service providers.

Care coordination by CMS social workers is cost-effective. While the average cost per client encounter for CMS social workers is \$10.18, a national study found that the average cost of care coordination provided by physicians is \$21.63.

However, cost-per encounter for CMS social workers is significantly less than that provided by physicians. The average cost-per encounter by CMS social workers is \$10.18. In a national study, the per-encounter cost for care coordina-

tion by physicians was \$21.63, or more than twice the cost.⁵

Table Five
Cost Per Encounter by CMS Social Workers Based on Medical and Social Complexity

Level of Intensity	Medical	Social
None	--	\$8.26
Mild	\$9.94	\$10.88
Moderate	\$15.04	\$15.38
Intense	\$18.34	\$20.55

References

1. Committee on Children with Disabilities. (1999). Care coordination: integrating health and related systems of care for children with special health care needs. *Pediatrics*, 104(4), 978-981
2. Cordeiro, A., Davis, R. K., Antonelli, R., Rosenberg, H., Kim, J., Berhane, Z., & Turchi, R. (2018). Care Coordination for Children and Youth With Special Health Care Needs: National Survey Results. *Clinical pediatrics*, 57(12), 1398-1408.
3. Turchi, R. M., Berhane, Z., Bethell, C., Pomponio, A., Antonelli, R., & Minkovitz, C. S. (2009). Care coordination for CSHCN: associations with family-provider relations and family/child outcomes. *Pediatrics*, 124(Supplement 4), S428-S434.
4. U.S. Department of Health and Human Services Office of Inspector General . Provider Shortages and Limited Availability of Behavioral Health Services in New Mexico's Medicaid Managed Care. Report OEI-02-17-00490, September 2019
5. Antonelli, R. C., Stille, C. J., & Antonelli, D. M. (2008). Care coordination for children and youth with special health care needs: a descriptive, multisite study of activities, personnel costs, and outcomes. *Pediatrics*, 122(1), e209-e216



The mission of the Center for Development and Disability is to advance exemplary services, research, education and policies to support the well being of all New Mexicans.

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The evaluation of Care coordination by CMS social workers was supported grant number FY20UNM 021080 from the New Mexico Department of Health, Family Health Bureau. The opinions expressed do not represent the official posi-

Children's Medical Services Care Coordination Tool

FACE SHEET

Employee ID: Enter your 6-digit employee ID number

DOH Region: Check the region in which the client lives.

NE = Colfax, Guadalupe, Harding, Los Alamos, Mora, Rio Arriba, San Miguel, Santa Clara, Santa Fe, Taos, Union

NW = Cibola, McKinley, San Juan

Metro = Bernalillo, Sandoval, Valencia & Torrance

SE = Chaves, Curry, De Baca, Eddy, Lea, Lincoln, Quay & Roosevelt

SW = Catron, Dona Ana, Grant, Hidalgo, Luna, Otero, Sierra & Socorro

Total Time spent: estimate time spent on this encounter in minutes

Was the encounter a new or recurring issue?

NEW = first time you've encountered issue with family

RECURRING = issue has occurred at least once before with this family

1. **Level of Medical Complexity:** Sum the PCP plus the total number of Medical Specialists (MD, DO, FNP, etc.) involved

Mild = 1 **Moderate** = 2-3 **Intense** = 4+ **None** = 0

2. **Level of Family/Social Complexity:** Sum the number of social barriers affecting the family

Mild = 1 **Moderate** = 2-3 **Intense** = 4+ **None** = 0

Social Barriers:

- CYFD involvement
- Domestic Violence
- Food Access
- Language Barrier
- Parent died
- Parent divorced or separated
- Parent incarcerated
- Parent mentally ill
- Poverty
- Substance Abuse
- Transportation access
- Undocumented

3. **Which care coordination needs did you address?** Check all that apply

4. **What did you do to address this/these issue(s)?** Check all that apply

5. **With whom did you communicate?** Check all that apply

6. **Which types of communication did you use?** Check all that apply

7. **What was the result of this encounter?** Check one

- If the case is closed, check either *Family's needs met* or *Family's needs unmet*
- If the case is on-going, check *Outcome pending* or *Unknown*

Employee ID: _____

Today's date: _____

CMS/MPI #: _____

DOH Region: NE NW Metro SE SW

Total time spent (in minutes): _____

Was this encounter a new or recurring issue?

- NEW RECURRING

1. What was the level of medical complexity for this encounter? (Check one)

- Mild Moderate Intense None Unknown

2. What was the level of family/social complexity?

- Mild Moderate Intense None Unknown

3. Which care coordination needs did you address? (Check ALL that apply)

- Advocacy
- Behavioral/ Developmental/ Mental Health
- Clinical management
- Coordinating appointments
- Coordination of services (schools, agencies, payers)
- CYFD
- DME
- Education, IEP & 504s
- Follow-up/referrals
- Guardianship
- Insurance Coverage/ Reimbursement
- Legal/ Judicial
- Navigating Medicaid and Waivers
- Nutrition, Food Access
- Prescription issues
- Respite
- School
- Social Security/SSDI
- Social services (housing, transportation, resources)
- Therapists
- Transition
- Other: _____

4. What did you do to address this/these issue(s)? (Check ALL that apply.)

- Advocated for family/patient
- Assisted with filling out applications
- Brief Intermittent Counseling
- Coordinated health care
- Coordinated social services (housing, transportation, resources)
- Delegated tasks to family
- Educated family on navigating Medicaid and Waivers
- Enrolled families in programs
- Explained the system, next steps
- Follow-up
- Getting Physician signatures
- Intake / Renew Assessments / Care Plan / Service Plan
- Made referrals
- Performed a chart review
- Reviewed other records, labs, reports
- Researched/found resources and/or services
- Resolved or made progress on prescription and/or reimbursement issues
- Other: _____

5. With whom did you communicate? (Check ALL that apply)

- Advocacy
- CMS Staff/Supervisor/Social Worker
- CYFD
- Family/Parent/Guardian/Client
- PCP
- Specialist/ Hospital/ Clinic
- Payer
- Pharmacy
- School/ Vocational group
- Agency
- Service provider
- Legal/ Judicial
- Other: _____

6. Which types of communication did you use? (Check ALL that apply)

- Phone
- Face to face
- Fax
- Snail Mail (Postal delivery)
- Email
- Team meeting

7. What was the result of this encounter? (Check one)

- Family's needs met
- Outcome pending
- Family's needs unmet
- Unknown
- N/A



Children’s Medical Services Family Satisfaction Survey

1. How long has your family been receiving help from Children’s Medical Services?

- Less than one year
 Between one and two years
 More than two years

2. How much do you agree or disagree with each statement about the help your child receives from your CMS social worker?

My CMS Social Worker:	Strongly Agree	Agree	Disagree	Strongly Disagree
a. Shows respect for my family and me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Supports my family and me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Understands the needs of my child and my family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Responds to my phone calls, emails or texts in a reasonable amount of time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Explains things to me in a way I can understand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Does a good job of coordinating all the services my child gets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Overall;

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. My CMS social worker has had a positive impact on the quality of life of my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. I am satisfied with the care coordination services received from Children’s Medical Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Do you have any comments you’d like to make about the care coordination your child gets?



SURVEY ON UNMET NEEDS FOR CHILDREN AND YOUTH WITH SPECIAL HEALTH CARE NEEDS IN NEW MEXICO

What are the most important needs for your child, and have they been met?

Below are listed possible things your child may need. For each, please tell us how much how much each need has been met or unmet.

How Much is Each of the Following an Unmet Need for Your Child?				
	No need at all – this isn't an issue/need for my child	My child's needs are mostly met in this area	This is an important unmet need for my child	This is a critical unmet need for my child
Behavioral/ Developmental/ Mental Health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinical management (coordinating medical/health appointments and services)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordination of services (schools, agencies, payers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Durable Medical Equipment (wheelchair, blood sugar monitor, nebulizer, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education (help with IEP's, 504s or other educational needs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Guardianship issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Navigating Medicaid or the Medicaid Waivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insurance Coverage/ Reimbursement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrition, Food Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social Security/SSDI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finding/Maintaining regular health care for my child	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinical management (coordinating medical/other health appointments, prescriptions, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting respite care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Someone to advocate for my child	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social services (housing, transportation, resources)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to therapists (OT, PT, SLP, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transition (school, work or health)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Applying for Medicaid or the Medicaid Waivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>