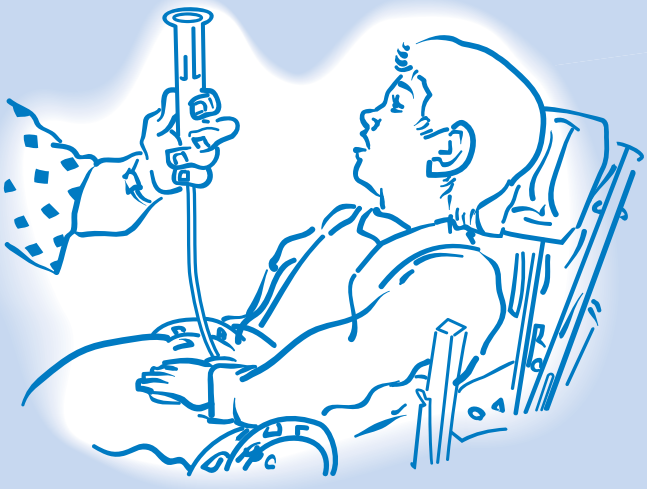
Medicaid Reimbursement for Medical Nutrition Products and Nutrition Services for Children with Special Health Care Needs:

A Washington State Case Studies Report



Washington State Department of Health
Children with Special Health Care Needs Program

Medicaid Reimbursement for Medical Nutrition Products and Nutrition Services for Children with Special Health Care Needs:

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Contents

Abstract

Case studies of children with special health care needs, who were receiving Medicaid-reimbursed medical nutrition products, were collected during 2001 in Washington State. The purpose of the report was to document the costs and health/nutrition outcomes of providing medical nutrition products and nutrition services by a certified dietitian (CD). In this selected case series, all 17 children had medical and nutrition diagnoses warranting nutrition services and Medicaid nutrition products. By the last CD contact, 83% of the diagnosed nutrition problems were resolved or improved. Of the "no improvement" diagnoses, the majority were related to chronic conditions that caused long-term feeding problems and dysphagia, which require on-going nutrition services and feeding interventions. Since almost half of the children had feeding problems, there is a demonstrated need for interdisciplinary feeding team services for this population.

Although there was a range in cost reimbursement for medical nutrition products and nutrition services for these 17 cases, the median product reimbursement was $220 per child per month, and nutrition services was an average of $83 per child during the entire data collection period. Reimbursement of nutrition products and services, however, did not cover the total costs. Children with special health care needs should receive medical nutrition products and supplies, and be provided regular nutrition monitoring and evaluation by a qualified registered dietitian as determined by medical necessity, in order to prevent complications, improve their health status, and avoid additional health care expenditures.

Executive Summary

Children with special health care needs are at increased risk for nutrition and feeding problems, secondary to medical conditions or diagnoses, impaired self-feeding or oral motor skills, cognitive delays, inadequate or inappropriate diet, and behavioral disorders. Some children require special medical foods and supplements, tube feedings or other specialized feeding equipment in order to grow and be adequately nourished. Without appropriate nutrition support, these at-risk children have poorer health outcomes, more frequent hospitalizations, and are less able to participate in educational and therapy programs.

A major barrier to providing nutrition services to children with special health care needs is payment or reimbursement for such services, both in the public and private sectors. Although it has been demonstrated that providing medical nutrition therapy (MNT) can reduce hospital costs, frequency of physician visits, and medication costs for such diseases as diabetes and hyperlipidemia, the coverage remains limited. In most health plans, benefits for preventive nutrition services or anticipatory guidance are not common.

In 2001, a series of 17 case studies of children with special health care needs enrolled in the Washington State Medical Assistance Administration (MAA) program were collected. This effort followed a 2000 update and expansion of the Medical Nutrition Program, which provides reimbursement for medically necessary nutrition products and related supplies for children enrolled in Medicaid. A significant change included the requirement that a certified dietitian (CD) provide evaluations within 30 days of initiation of medical nutritionals. Criteria for the case series included: beginning a new nutrition product, and/or new to the CD's practice, and a minimum of two contacts during the year. Limitations included: the cases were not randomly selected, the medical/nutrition diagnoses did not represent the usual distribution in the population, there was no control group, and health/nutrition outcomes may have been influenced by other services or unknown variables.

Data collected included demographic information, medical and nutrition diagnoses, health status, medical nutrition product, feeding methods, amount of product used, medications, growth data, MNT provided, CD contacts and time, and nutrition outcomes. Reimbursements rates for medical nutrition products and nutrition services were the Washington MAA ones in effect at that time.

The results of this selected case series, revealed that all children had medical and nutrition diagnoses warranting nutrition services and MAA nutrition products. By the last CD contact, 83% of the diagnosed nutrition problems were resolved or improved. A majority of the "no improvement" diagnoses were related to chronic conditions that caused long-term feeding problems and dysphagia, requiring long-

term intervention. Since almost half of the children had feeding problems, there is a demonstrated need for interdisciplinary feeding team services for this population. Although there was a range in cost reimbursement for medical nutrition products for these 17 cases, the median product reimbursement was $220 per month. The average reimbursement for nutrition services was $83 per child during the data collection period, with a range of $31.89 (1 reimburseable contact) to $223.23 (7 contacts). Reimbursement of nutrition products and services, however, did not cover the total costs. Further analysis is needed to quantify the anticipated savings in health care expenditures from these interventions.

This report supports improved nutrition and health status in children receiving nutrition services in conjunction with Medicaid medical nutrition products. Overall, children in Washington State who are enrolled in Medicaid are receiving a higher level of coverage for medical nutrition products and nutrition services than those covered by private health plans or health maintenance organizations (HMOs). There are no limits on nutrition services for children when deemed medically necessary. This level of Medicaid coverage, however, is not universal in other states. Therefore, some children with special health care needs may not be receiving an appropriate product, may not have periodic monitoring and evaluation by a registered dietitian, and their families may be paying significant out-of-pocket expenses to assure the health and development of their child.

Further efforts are needed to address the public and private health policies that cover medical nutrition products and services for children with special health care needs, including advocating for improved coverage. While studies documenting health and nutrition outcomes in children receiving the products and nutrition services are also needed, this report supports the following position:

Children with special health care needs should receive medical nutrition products and supplies, and be provided regular nutrition monitoring and evaluation by a qualified registered dietitian as determined by medical necessity, in order to prevent complications, improve their health status, and avoid additional health care expenditures.

Introduction

Children with special health care needs are defined by the federal Maternal and Child Health Bureau (MCHB), Department of Health and Human Services as "those who have or are at increased risk for chronic physical, developmental, behavioral, or emotional conditions, and who require health and related services of a type or amount beyond that required by children generally" (1). Children with special health care needs include those with birth defects, injury as a result of trauma, perinatal drug exposure, neurological consequences of premature birth, sequelae of infection such as meningitis, and cancer. "At risk" includes those with very low birth weight, metabolic disorders, extreme poverty, absence of social support, child abuse or neglect, and environmental causes, i.e. air pollution, second-hand smoke and lead exposure.

Developmental disabilities is another descriptive category given to children with special needs who require additional health, education and related services. According to the Developmental Disabilities Assistance and Bill of Rights Act (2), developmental disability is a severe chronic disability of a person five years and older which:

- is attributable to a mental or physical impairment or combination
- is manifested before age 22 years
- is likely to continue indefinitely and results in substantial functional limitations in three or more of these areas of major life activity:
    - self care
    - receptive/expressive language
    - learning
    - mobility
    - self-direction
    - capacity for independent living, and
    - economic sufficiency.

The developmental disability can result from chromosomal abnormalities, congenital anomalies, neuromuscular dysfunction, mental retardation, and similar conditions.

Using the MCHB definition of children with special health care needs (but excluding those in the at risk category), a national phone survey of this population under 18 years of age was conducted in 2001 by the National Center for Health Statistics, Centers for Disease Control and Prevention (3). Those results indicated a national prevalence of 12.8% of children were those with special health care needs. For Washington State the prevalence was 14%. In an earlier report, 18% of children in

Washington State in 1993 had some type of chronic condition such as respiratory disorders, musculoskeletal disorders and attention deficit disorder (4). In excluding "at risk" children in the recent national survey, it is quite likely that there are more children, especially those under six years, who require health and related services beyond those for healthy children.

It has been estimated that at least 40% of children with special health care needs are at nutrition risk; with some conditions and diagnoses, it may be considerably higher (5,6). The following factors contribute to increased nutrition and feeding problems in this population:

- Altered or increased nutrient needs for growth and development related to diagnosis
- Delayed or impaired oral motor skills required for sucking, swallowing, eating and drinking
- Need for tube feedings or other specialized feeding equipment, or special medical foods and supplements
- Altered digestion, absorption, metabolism and excretion related to inherited or acquired disorders, surgery or medications
- Cognitive impairments or behavioral disorders that result in inappropriate or inadequate food intake or feeding practices/behaviors
- Limited self-feeding or dependence on others for feeding
- Food insecurity, limited financial resources for food, or limited caregiver knowledge of appropriate nutrition and feeding information

A major barrier to providing nutrition services to this population of children is payment or reimbursement for such services, both in the public and private sectors. Although it has been demonstrated that providing medical nutrition therapy (MNT) can reduce hospital costs, frequency of physician visits, and medication costs for such diseases as diabetes and hyperlipidemia (7), there continue to be challenges and limits to making needed nutrition referrals and providing adequate follow-up. In most health plans, coverage for preventive nutrition services or anticipatory guidance is not common.

A project to address the nutrition services costs of children with special health care needs was conducted in Washington State in the mid-1990's (8). Thirty case studies were collected from 20 registered dietitians (RD) and 10 community feeding teams, including diagnosis and nutrition/feeding problems, interventions provided, outcomes, and interventions avoided (based on health and nutrition status prior to intervention). Using standardized cost formulas, costs were estimated for the nutrition and feeding team interventions, and for interventions avoided. The greatest improvements in these children were in improved or appropriate growth, and improved dietary intake, but also in decreased illness and hospitalization,

improved feeding skills and feeding behavior, decreased constipation, and better progress in feeding development. For 28 of the 30 children, the estimated medical costs savings after providing the RD or feeding team services ranged from $180 in a one year period, to $9980 in a two-year period of time. The recommendation from the published case series was:

Nutrition and feeding problems should be referred for assessment and intervention by qualified nutrition professionals and other health care professionals who have experience and training with children with special health care needs and their families, in order to realize an overall cost benefit in health care expenditures.

Background

In November 2000, the Washington State Medical Assistance Administration (MAA) of the Department of Social and Health Services (DSHS) updated and expanded the Medical Nutrition Program, which provides reimbursement for medically necessary nutrition products and related supplies for children enrolled in Medicaid. Medical necessity must be tied to a documented diagnosis. Children in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) must use all of the formula/food resources that they are eligible for in that program before seeking any MAA reimbursement. (9)

A significant change in the Medical Nutrition Program at that time also included the requirement that a certified dietitian (CD) provide evaluations beginning January 1, 2001. In Washington State, a certified dietitian is a registered dietitian (RD). As stated from the guidance:

"A certified dietitian must evaluate all clients 17 years of age and younger within 30 days of initiation of medical nutritionals, and periodically (at the discretion of the certified dietitian) while on medical nutritionals. A copy of this evaluation must be retained in the client's file."(10)

Purpose

These changes in the state MAA Medical Nutrition Program provided an opportunity to analyze costs (reimbursed or not), nutrition status outcomes, and use of nutrition services in children who participated in the program. The purpose of collecting this series of case studies of children with special health care needs was to:

- Document the costs associated with the provision of medical nutrition products through appropriate nutrition services

- Describe the growth and nutrition outcomes for children receiving Medicaid reimbursement for medical nutrition products and nutrition services.

Methods

To meet the criteria of the project, the children had to use medical nutrition products supplied by MAA, and receive nutrition services from a CD. The data collection period was from January 1, 2001 to December 31, 2001.

The cases were collected and documented by CDs in Washington State who are members of the Children with Special Health Care Needs (CSHCN) Nutrition Network. These dietitians receive training to provide nutrition services for children with special health care needs from a contract between the Center on Human Development and Disability at the University of Washington and the Washington Department of Health, Children with Special Health Care Needs Program. They are employed in WIC programs, local health departments, CSHCN programs in local health departments, hospitals, home health agencies and early intervention programs.

Eligible children included those 1) beginning a new nutrition product, and/or 2) new to the CD's practice, during the collection period. A minimum of two contacts was required to determine results. See Appendix A for data collection form and Appendix B for Washington map of location of case studies. The case study data information was synthesized and summarized by the University of Washington.

Information collected included:

- Demographic information
- Medical diagnosis (ICD-9 codes*)
- Nutrition diagnosis (ICD-9 codes*)
- Health status (initial and final contacts)
- Medical nutrition product, feeding method, and amount used per 24 hours
- MAA code for medical nutrition product
- Medications
- Growth data (length/height for age, weight for age, head circumference for age, weight for length or Body Mass Index (BMI) for age)
- Medical nutrition therapy provided

- Minutes per contact, location of contact, and travel information
- Nutrition outcome data

* (ICD-9 – International Classification of Diseases, 9th revision)

Cost Determinations

Project staff determined the costs of medical nutrition products and nutrition counseling services for each case based on Washington MAA Medical Nutrition Program 2001 allowable fees (9,10). The allowable rate for a product is the maximum amount that Washington MAA program will pay for an item. If the allowable rate does not match the actual cost of an item, the client cannot be billed for the remainder. Medicaid rates may be higher than the actual costs of products due to accounting, dispensing and delivery fees. Monthly product costs were calculated using a 30-day month and rounded to the nearest dollar.

For nutrition products, the maximum Medicaid allowable is based on a unit of 100 kilocalories (kcal) of formula. For some modular products (MCT oil, protein or carbohydrate powders), the units are fluid ounce, weight ounce, or tablespoons. These allowable rates are calculated based on a variety of factors, including customary charges and indirect expenses for providing the nutrition products to patients. The total monthly kcal provided by the child's product(s) were calculated, rounded to the nearest 100 kcal, and then multiplied by the allowable rate.

For example, a child receives 476 kcal per day of PediaSure formula as a supplement. For one month that would be 476 x 30 = 14,280 kcal (rounded to 14,300) = 143 units (of 100 kcal). The PediaSure allowable rate is $1.02/100 kcal; 143 x $1.02 = $145.86 per month ($146).

A nutrition counseling session was based on a minimum of 25 minutes of direct interaction between the CD and a client/caregiver in an office, outpatient setting or the home. Sessions could be either initial assessment or follow-up treatment/ counseling. Either procedure had a maximum allowable fee of $31.89 per session. Phone contacts or travel time are not allowable reimbursements, but this information was included in these cases to track hidden expenses. Costs for nutrition services were calculated by multiplying the number of allowable contacts by $31.89.

(Note: In July, 2002 the MAA revised the procedure codes and allowable fees for medical nutrition therapy [MNT] provided by a CD, to be in agreement with national adoption of CPT codes for MNT. The new allowable fee is now $10.47 per 15 minutes unit, either initial or subsequent assessment. The maximum allowed is two hours [8 units] for initial assessment per year, and one hour (4 units) for subsequent assessments per day. There are no limits on the number of total visits per year if they are medically necessary.)

Limitations of the project

There are several limitations in interpreting the information in this case series, which include:

- Case studies were not randomly selected (were only from caseloads of the CSHCN Nutrition Network)
- Only children on Medicaid were included
- CDs were not randomly assigned (contributed by volunteers from the CSHCN Nutrition Network)
- Medical/nutrition diagnoses do not represent the usual distribution in the population
- Data collection was limited to a calendar year or last CD contact
- Health/nutrition outcomes may have been influenced by other services or unknown variables
- Cases have some missing data, i.e. growth parameters
- Costs of products and services were interpreted to be equal to Washington State Medicaid reimbursement rates, not actual costs

Results

A total of 20 cases were submitted to the University of Washington during the time period, but only 17 were complete and met all the criteria for the Medical Nutrition Program. The key summary results of the cases are presented here. For more detailed information see the individual cases beginning on page 23.

The 17 cases are nearly equally distributed by sex, and reflect an age span of 9 days to 17 years, 11 months (Table 1). They represent a total of 55 CD contacts (31% initial contacts and 69% follow-up contacts). Over half of the contacts were in a clinical setting, about one-quarter were home visits, and 20% were phone contacts (Table 1).

Table 1. Contact Information

Total Cases		17
Males		9
Females		8
Age	<24 months	7
	2-5 years	4
	6-12 years	3
	13-18 years	3
Total RD contacts		55
Initial contacts		17 (31%)
Follow-up contacts		38 (69%)
Location		
Clinic contacts		31 (56%)
Home contacts		13 (24%)
Phone contacts		11 (20%)
Contacts	≤30 min	23 (42%)
	30-60 min.	27 (49%)
	60-90 min	5 (9%)
Cases with	1 f/u contact	6 (35%)
	2 f/u contacts	6 (35%)
	3 f/u contacts	2 (12%)
	4+ f/u contacts	3 (18%)

Medical and Nutrition Diagnoses

The presenting problems and health status of the children in these cases varied in severity and intensity. Some were infants with developmental delay who had failure-to-thrive, food allergies or iron deficiency anemia (Cases 2 and 4); others were older children with multiple developmental and health conditions requiring long-term nutrition intervention (Cases 6 and 13). See Figure 1 for frequency and age distribution of the 20 medical diagnoses identified in these cases. Many children had more than one medical diagnosis; 12 had one or two medical diagnoses, while five children had four or more medical diagnoses.

Figure 1. Medical Diagnoses – Frequency and Age Distribution

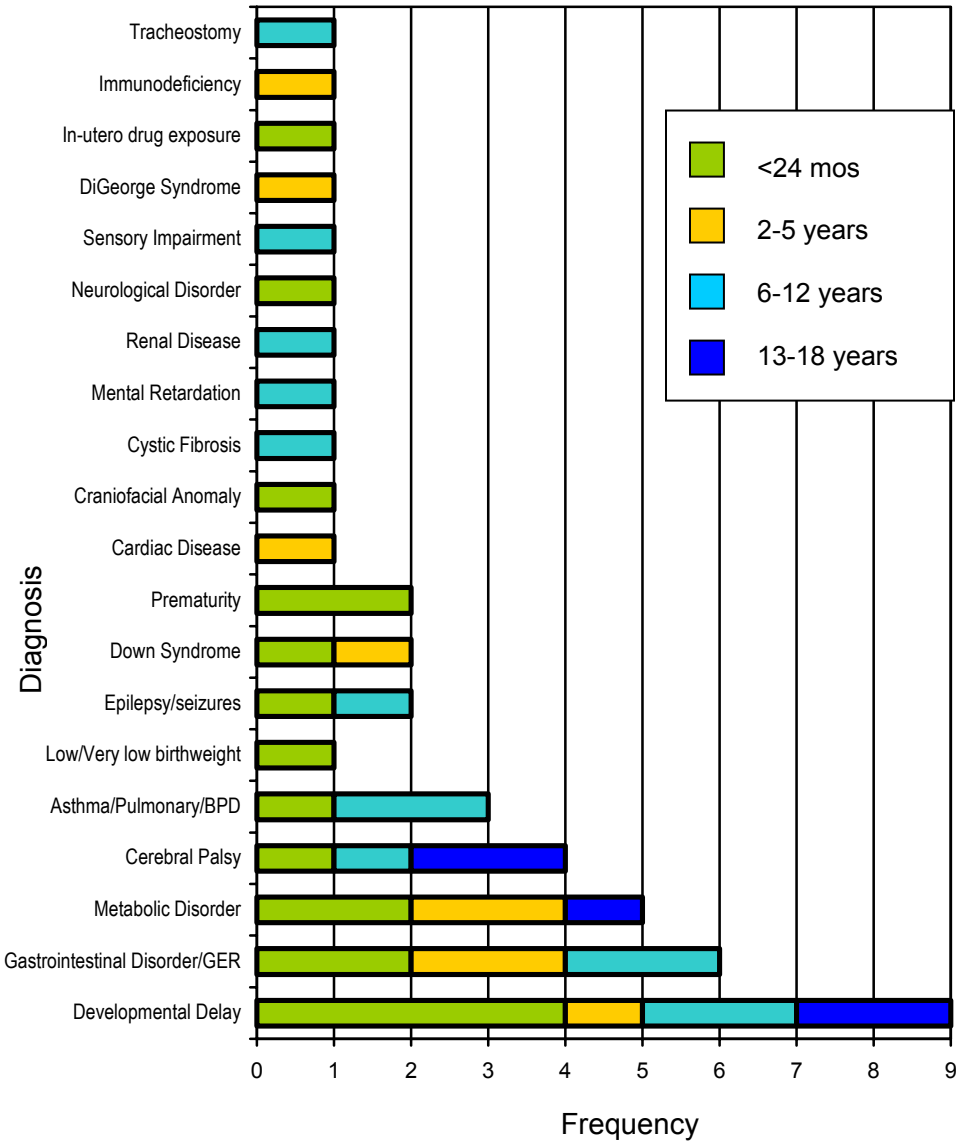
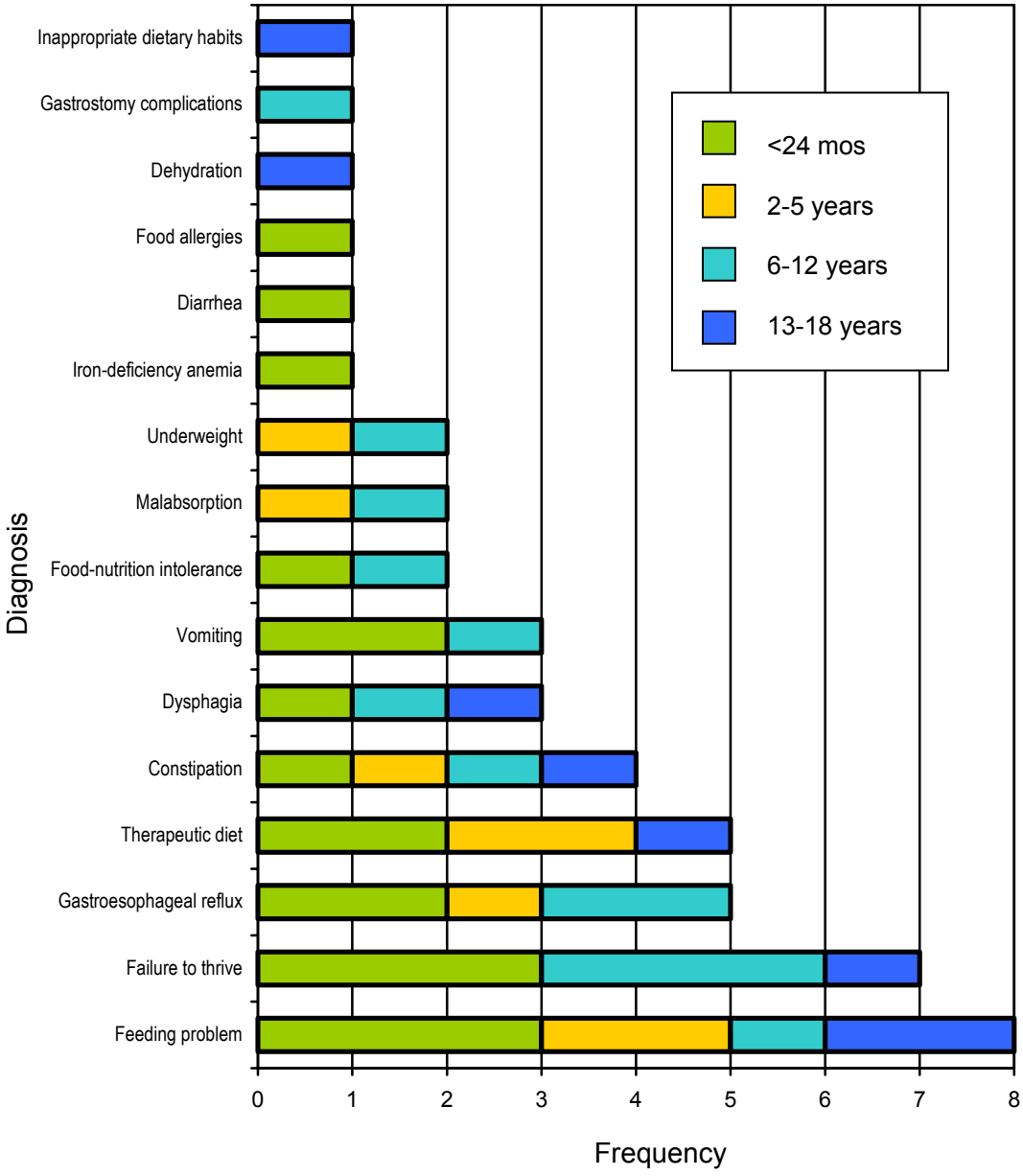


Figure 2 includes the frequency and age distribution of the nutrition diagnoses assigned to the children. Although 16 different diagnoses were used in these cases, almost half of the children were diagnosed with a feeding problem, followed by 41% having a diagnosis of failure-to-thrive (FTT). Seven children had one or two nutrition diagnoses, another seven had three or four nutrition diagnoses, and three had five or more nutrition diagnoses.

Figure 2. Nutrition Diagnoses – Frequency and Age Distribution



Growth and Intake

Growth data collected at the beginning of the study period indicate that this group of children was at high nutritional risk. Initial growth data (weight, height/length, and weight/length or BMI) was available in at least 14 of the 17 cases (Table 2). Using less than the 5th percentile as a cutoff point, 43% of the children were less than the 5th percentile for length/ height for age, 47% were less than the 5th percentile for weight for age, and 29% were less than the 5th percentile for weight for length or BMI for age. Because there was less complete growth data available at the end of the data collection period, it is difficult to compare in this small number (Table 3). However, in the 10 children with final weight/length or BMI, none were less than the 5th percentile for age, and only one was in the 5th-10th percentile for age. In these 10 cases, 8 of 10 had weight for length or BMI between 10th – 90th percentiles for age, suggesting improved growth secondary to adequate nutrition. These improvements in growth can also be seen in reviewing the individual cases beginning on page 23.

Table 2 Growth Parameters – Initial Contact*

	Height/Length for Age	Weight for Age	Weight-for-length or BMI for Age**
<5th%	6	7	4
5th-10th%	0	3	2
10-25th%	3	1	0
25-50th%	4	0	1
50-75th%	0	1	4
75-90th%	1	3	2
90-95th%	0	0	1
>95th	0	0	0

* Number of cases: Height/length = 14; weight = 15; Weight/ length or BMI = 14

** BMI = Body Mass Index

Ten children received all of their nourishment orally, four were totally enterally fed, and the remaining three children received a combination of oral and enteral nutrition. Those requiring enteral feeding are more at risk for tube feeding complications, fluid imbalance, and feeding problems that interfere with adequate intake of nutrients.

Table 3 Growth Parameters – Final Contact*

	Height/Length for Age	Weight for Age	Weight-for-length or BMI for Age **
<5th%	3	3	0
5th-10th%	1	2	1
10-25th%	3	5	2
25-50th%	3	0	4
50-75th%	0	2	1
75-90th%	1	1	1
90-95th%	0	0	1
>95th	0	0	0

* Number of cases: Height/length = 11; weight = 13; Weight/ length or BMI = 10

** BMI = Body Mass Index

Ten children received one or more medications; one child received nine regular medications. Since many medications can interact with food and formula to inhibit

optimal digestion, absorption or metabolism of nutrients, it is critical to monitor medication-nutrient interactions regularly, especially when medications are used long-term. These characteristics of tube feeding and frequent medication use imply the need for regular nutrition reassessment and monitoring.

Nutrition Products and Nutrition Services

Since the data collection was tied to the requirement that children receiving medical nutrition products be evaluated by a CD (not a previous requirement for receiving products), many of the children were already receiving these products at the initial contact. Only two of the 17 children were not using a medical nutrition product before the data was collected. During the time of the data collection, however, the CD provided medical nutrition therapy (MNT) by changing, increasing, or adding products, depending on the individual child's needs (e.g. to increase energy intake, provide more optimal nutrient composition, increase tolerance of food/fluids). As can be seen in Table 4, the products used by the children before and during the nutrition intervention were not appreciably different. However, more standard infant formulas were used prior to the CD contact than after the CD intervention, suggesting that the new products were more appropriate for the special needs of these children as they aged.

Table 4. Medical Nutrition Products Used

Prior Products Used	New Products Used
Alimentum	Compleat Pediatric (2 children)
Boost	Ensure Plus (2 children)
Compleat Pediatric	Microlipid
Enfamil with iron	Neocate
Ensure Plus	Nubasic Fruit Drink
Ensure Pudding	Nutramigen
Kindercal	Nutren Jr.
Lofenalac (2 children)	PediaSure (2 children)
Neocate	PediaSure w/fiber (3 children)
PediaSure (2 children)	Peptamen Jr (2 children)
Phenyl Free	Phenyl Free 1
Polycose	Phenyl Free 2 (3 children)
Prosobee	Product 80056
Resource	Prosobee
Scandi Shakes	
Similac	
Soy infant formula	

The type of medical nutrition therapy (MNT) provided for these children is described in Table 5. The most frequent MNT activities, as

Table 5. Medical Nutrition Therapy Provided

Medical Nutrition Therapy	Initial Contact (# children)	Follow-up Contacts (# children)
Nutrition Assessment	13	2
Nutrition Reassessment	4	11
Diet Analysis	9	7
Feeding Assessment	1	1
Nutrition Education	10	8
Diet Adjustment/Instruction	13	11
Weight Check	14	13
Stature Check	12	11
Enteral Feeding Instructions	2	

expected, were nutrition assessment/reassessment and monitoring growth parameters, followed by nutrition education, diet adjustment/instruction, and diet analysis. These are all standard and appropriate components of MNT for CDs serving pediatric clients.

Table 6. Nutrition Outcomes (Based on Nutrition Diagnoses)

	Nutrition Outcome		
Nutrition Diagnosis (#)	**Resolved (#)**	**Improved (#)**	**No improvement (#)**
Feeding problem (8)		5	3
Failure to thrive (7)		6	1
Gastroesophageal reflux (5)		5	
Therapeutic diet (5)		5	
Constipation (4)	1	3	
Dysphagia (3)			3
Vomiting (3)		3	
Food-nutrition intolerance (2)		2	
Malabsorption (2)		2	
Food allergies (1)		1	
Underweight (2)	1	1	
Iron-deficiency anemia (1)	1		
Diarrhea (1)	1		
Dehydration (1)		1	
Gastrostomy complications (1)		1	
Inappropriate dietary habits (1)			1
Total	**4 (9%)**	**35 (74%)**	**8 (17%)**

Nutrition Outcomes

Nutrition outcomes for each case, based on nutrition diagnoses, were rated by the CD as resolved (e.g., child no longer has iron-deficiency anemia; constipation resolved); improved (e.g., growth parameters document body mass index above the 5th percentile; decreased frequency of dehydration episodes); or no improvement (e.g., stable dysphagia prevents progress in oral intake). As noted in Table 6, 9% of the diagnoses were resolved, 74% were improved, and 17% showed no improvement. The four diagnoses that were resolved included constipation, iron-deficiency anemia, underweight, and diarrhea. Of the cases where problems improved, outcomes documented included improved growth or weight gain, increased tolerance of oral or enteral feedings, appropriate therapeutic diet to treat metabolic disorders, altering formula or food to correct malabsorption or food-nutrient intolerance, and providing optimal fluid needs.

Of the eight cases that did not improve, three were feeding problems, three were dysphagia, one was failure-to-thrive, and one was inappropriate dietary habits. These children had two or more medical diagnoses of cerebral palsy, Down syndrome, gastroesophageal reflux disease, pulmonary disorder, and/or gastrointestinal disease. Thus they presented with static neurological disorders and other medical complications that limited the degree with which the feeding problems or dysphagia could be improved or resolved by nutrition intervention alone in one year. Without continued nutrition assessment and monitoring, the health status of these children would be at risk.

Costs of Nutrition Counseling Services

The nutrition counseling contacts could be in an office, outpatient setting or at the child's home. Using $31.89 per direct contact session of 25 minutes or more, the range of nutrition services costs for these cases was $31.89 (1 contact) to $223.23 (7 contacts). The average reimbursement for nutrition services for each case during the data collection period was $82.83. There was little variability from one age grouping to another (see Table 7).

Table 7. Reimbursement for Nutrition Services

Ages (# of children)	Average Reimbursement
<24 months (7)	$82.00
2 – 5 years (4)	$71.75
6 -12 years (3)	$95.67
13 – 18 years (3)	$95.67
Total (17)	$82.83

Phone follow-up contacts and travel time for home visits are not reimbursable components of nutrition services. Seven children received a total of 10 phone contacts, lasting an average of 27 minutes each. Six children received 20 home visits, with an average of 46 miles and 33 minutes travel per home visit. Thus, there was a total of over 13 hours used by the CDs in phone contacts and travel time that were not billable.

Cost Reimbursement for Medical Nutrition Products

Cost reimbursements for each case study were calculated based on the amount of the product used per month, plus the allowable MAA reimbursement. For these 17 cases, the monthly cost reimbursement ranged from $25 (metabolic formula for a newborn) to $1698 (tube feeding specialty formula [6 cans/day] for severely neurologically impaired 9 ½

Table 8. MAA Reimbursement for Medical Nutrition Products

Reimbursement Cost Per Month	Number of children
<$100	4
$101-300	6
$301-500	1
$501-700	1
$701-900	1
$901-1100	0
$1102-1300	2
$1301-1500	0
$1501-1700	2
Average reimbursement per child per month	**$510**
Median reimbursement per child per month	**$220**

year old). Using the highest cost reimbursements for each case, the average per month was $510. However, the median reimbursement was $220, suggesting lower monthly totals for more children. In fact 10 of the 17 children had medical nutrition product reimbursements that were less than $300 monthly (see Table 8).

Summary of Results

In summary, in these selected case studies, all children had medical and nutrition diagnoses warranting nutrition services and MAA nutrition products. By the last CD contact, 83% of the diagnosed nutrition problems were resolved or improved. A majority of the "no improvement" diagnoses were related to chronic conditions that caused long-term feeding problems and dysphagia, requiring long-term nutrition services and feeding interventions. Since almost half of the children had feeding problems, there is a demonstrated need for interdisciplinary feeding team services for this population. Although there was a range in cost reimbursement for medical nutrition products and nutrition services for these 17 cases, the median product reimbursement was $220 per month, and nutrition services was an average of $82.83 per child during the data collection period. Reimbursement of nutrition products and services, however, did not cover the total costs.

Discussion

It is well documented that children with special health care needs are at risk for nutrition and feeding problems (11). When these conditions and problems are not adequately addressed, the child and family may incur increased infection and illness that interfere with activities of daily living, greater health care costs, and missed days of school and work (8,12). This report (of a series of 17 case studies) supports improved nutrition and health status in children receiving nutrition services in conjunction with Medicaid medical nutrition products. One could ask – what would the health and nutrition outcomes be if the medical nutrition products had not been covered by Medicaid? What if the CD had not been involved to assess the child's nutritional status, modify or change the product and its use, or provide ongoing monitoring of growth, nutritional adequacy, and feeding issues? Although there were no control cases included (those not receiving the nutrition services with the nutrition products), the intervention and assessment provided by the CD in these cases likely contributed to the positive outcomes. Further analysis is needed to quantify the anticipated savings in health care expenditures from these interventions.

These medical nutrition products include specialized formulas for metabolic disorders or for chronic medical conditions where there are no appropriate food substitutes. They also include products that are added to food or other formulas in order to meet the child's specific nutrient and growth needs. For children that are fed by tube, specialized formulas are the obvious choice. It is possible that some of the products taken orally by children could be blenderized from foods provided by

the family. However, for children with chronic illness this is usually not a desirable option, because of the danger of food contamination, possible unbalanced nutritional content, inadequate fluids, and poor palatability.

Despite the appropriateness and successful results of using medical nutrition products for children with special health care needs with certain conditions, access to these products by families is often contingent on insurance policies, whether public or private. Using two of the cases as examples, out-of-pocket expenses were estimated for the medical nutrition products (See boxes).

Box 1

Case 15 is a 21 month old male who was consuming 1000-1230 cc of PediaSure with Fiber, an average of 1183 kilocalories, daily. Since he was eligible for the WIC program, WIC was the first provider for PediaSure. In Washington State 108 eight-ounce cans are the maximum monthly amount provided by WIC. This child was consuming more than the provided monthly allotment so Medicaid provided the remainder at an average monthly reimbursement of $101. If this child was not eligible for the WIC program or Medicaid, various payment methods could be used to provide PediaSure.

Option 1: Private medical insurance with no coverage for medical nutrition products. Some insurance companies will cover the cost of feeding tube supplies (tubing, syringes, pumps and associated personnel cost and delivery) but not the actual "food." Costs for supplies and formula are determined by each home health care supply agency. In summer of 2003, the average wholesale price (AWP) for PediaSure was approximately $60 per case of 24 cans from a selected agency. The agency may not charge for the cost of formula shipping/delivery if other supplies are being provided. For this child the average cost for the family would be $380 per month.

If a family was only using PediaSure as an oral feeding and did not need supplies the agency may charge for shipping; in Washington State shipping a case of 24 cans costs an average of $7. This would be added to the product cost for the family for an average total of $424 per month.

Option 2: In Washington State, when private insurance denies the cost of a medical nutrition product, eligible families can apply for the state to cover the formula cost. When this occurs the rate paid to the home health care supply agency would reflect the current allowable reimbursement of $362 per month.

Option 3: Private insurance, which covers a portion of the cost of a medical nutrition product with a patient co-pay. The family co-pay varies with insurance coverage, but this example uses a 20% co-pay. Using the mentioned AWP the insurance company would pay $48 dollars per case and the family would pay $12 per case. For this family the cost would average $76 per month. Depending on feeding method (oral or enteral), shipping charges of $7 per case may or may not be added.

Option 4: If the family needed more PediaSure with Fiber and wanted to purchase it retail, generally only cartons of 6 cans are available on the shelf unless arrangements are made with the store manager. The cost in the Seattle area for six cans ranged from $12.49 at a chain supermarket to $17.77 from a local independent pharmacy in 2003.

The product was not routinely stocked in these retail outlets, and the supermarkets stocked only 36-48 cans at a time.

If the family needed to buy all of their PediaSure from the local supermarket or pharmacy, the cost would range from $313 to $445 a month. This would mean frequent shopping trips for PediaSure without a guarantee that the product and amount needed would always be available. Many store managers encourage families to discuss special orders with them.

Box 2

Case 12 is a 4 year 7 month old male with Phenylketonuria (PKU), requiring a special metabolic formula, Phenyl Free 2. He was consuming an average of 20 scoops of the powdered formula daily, providing 1443 kilocalories. The monthly Medicaid reimbursement for Phenyl Free 2 was $1507.

In Washington State, for children not eligible for Medicaid, the Department of Health participates in a multi-state formula contract for these PKU formulas and other formulas for metabolic disorders. This contract is made directly with the manufacturer at a reduced rate per case. Not all states are able to provide this service to children with PKU. In Washington State, insurance reimbursement for metabolic formulas is mandated by law. If this family had private insurance with a 20% co-pay, they would need to pay $169 per month out-of-pocket for the formula.

Large corporations that are self-insured are exempt from the Washington State law requiring reimbursement for metabolic formulas. One health plans allow a maximum of $1500 yearly for these metabolic products. For the amount of the product used by this child (5 cases per month at $845), the family would have to pay $8640 of the $10,140 yearly cost.

Families may spend considerable time and energy with their insurance provider, determining eligibility and coverage for medical nutrition products. Some insurance plans may deny coverage for these products, while other plans may have deductibles of $1000-1500 yearly for the category including medical nutritional products. These scenarios and situations make it clear that there can be considerable family expenses incurred for these needed nutritional products, even for families with private insurance coverage. And if they couldn't pay for the nutritional product, there is risk the family might substitute inappropriate foods or products, or use other feeding short-cuts. This could result in children who don't grow well, are not adequately nourished, have diminished immunity, and are not strong and alert enough to take advantage of educational and therapy programs.

How these children and others with special health care needs would be covered for nutrition services by a registered dietitian within the private insurance sector is difficult to determine, and would obviously vary from one health plan to another. A recent report addressed that question by surveying health maintenance organizations (HMOs) and preferred provider organizations (PPOs) in each state, using

hypothetical scenarios of children with special needs (13). The results indicated that ancillary therapies and mental health services were the benefits least likely to be available to the hypothetical children. Of the 98 health plans surveyed, only 20% included nutrition counseling services. Of these few, a quarter had limits on number of visits, i.e. one per lifetime, three per year, and almost all required copayments. Nutrition counseling for obesity was covered in about half of the plans with nutrition benefits.

It is clear that in Washington State, Medicaid provides more thorough coverage, with no limits on nutrition services for children when deemed medically necessary. Based on the national survey data and clinical experience, children in Washington State who are enrolled in private health plans or HMOs are likely not receiving the level of coverage for nutrition products and services that MAA provides. In addition, there are children with special health care needs in the state who are eligible for MAA but are not enrolled in the program. How they are receiving any needed medical nutrition products or nutrition counseling is unknown.

Children with special health care needs should receive health and nutrition services that include preventive components as well as specialty care. In recent years, several national organizations and agencies have provided outcome goals, policy statements and other guidelines to assure that children with special needs are as healthy as possible.

The American Academy of Pediatrics (AAP) has recently published a policy statement, "Reimbursement for foods for special dietary use" (14). Although several states require coverage for special foods for children with inborn errors of metabolism, third-party payment is inconsistent with other conditions. The statement recommends legislation to mandate consistent coverage for special dietary foods, related supplies, and services for children with designated medical conditions. Almost 70 diagnoses and conditions for which foods for special dietary use might be reimbursed are listed. The statement includes support for reimbursement of equipment (e.g. tubes, bags, pumps) to provide the food, and for coverage of health care professionals to administer and monitor the safe administration of these foods and products.

In Healthy People 2010, the following six core outcomes are identified for children with special health care needs to measure progress in family-centered care and appropriate health care systems:

1. Families of children with special health care needs will partner in decision making at all levels and will be satisfied with the services they receive.
2. All children with special health care needs will receive coordinated, ongoing comprehensive care within a medical home.

3. All families of children with special health care needs will have adequate private and/or public insurance to pay for the services they need.
4. All children will be screened early and continuously for special health care needs.
5. Community-based service systems will be organized so families can use them easily.
6. All youth with special health care needs will receive the services necessary to make transitions to all aspects of adult life, including adult health care, work, and independence. (15)

A medical home refers to a source of ongoing, comprehensive, family centered care in the child's community. It should provide preventive services, immunizations, growth and developmental assessments, screening, health care supervision and patient/family counseling. Screening and referral for needed nutrition services by a primary or specialty care provider will help guarantee that care provided to a child is indeed comprehensive.

The core outcomes 2, 3 and 4 above are particularly relevant to children with special health care needs who require medical nutrition products for optimal growth and development, as well as the nutrition counseling to monitor and re-assess their status. Early and continuous nutrition screening helps identify problems before they become more severe, and also provides an opportunity for anticipatory guidance and general nutrition promotion. *Bright Futures in Practice: Nutrition* provides guidelines for a developmental approach to nutrition screening, assessment and counseling that complements the *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents* (16,17). The nutrition screening for children with special health care needs includes the usual growth, biochemical and dietary intake data, but also clinical or medical conditions affecting nutrition and eating, and feeding problems or delays, therapeutic diets, and family concerns.

Position Statement

Children with special health care needs should receive medical nutrition products and supplies, and be provided regular nutrition monitoring and evaluation by a qualified registered dietitian as determined by medical necessity, in order to prevent complications, improve their health status, and avoid additional health care expenditures.

Recommendations

- Medical nutrition therapy (MNT) benefits for children with special health care needs should be included in all health care plans, both public and private, to help prevent severe nutrition and growth problems
- All children with special health care needs should receive early and continuous screening for nutrition problems by primary care providers or other health care professionals
- Reimbursement of nutrition products for identified pediatric medical conditions should be included in the benefits packages of public and private health care plans
- Public and private health care plans should periodically review their benefit levels for nutrition services and medical products, incorporating consumer/family input and satisfaction
- State Medicaid programs, State Title V programs, health care plans, and nutrition providers should collaborate on documenting the coverage for nutrition products and MNT with nutrition and health outcomes.

Key to Case Studies

Criteria	Explanation of criteria
Site	Setting where CD gathered information e.g. hospital, outpatient clinic, community, home.
Client	Age at start of individual data collection and sex
Medical Diagnosis	Based on selected list; see Data Collection Form in Appendix A for details. These diagnoses determined by the primary or specialty care provider at the time of the nutrition referral.
Nutrition Diagnoses	Based on selected ICD–9 codes; see Data Collection Form in Appendix A for details. The ICD–9 codes are from the International Classification of Diseases, 9th ed., Clinical Modifications. This manual is used universally to identify diagnosis for billing purposes.
Initial Health Status	Determined from records by CD.
Medications	Medications and vitamin/mineral supplements used during the course of data collection
Prior Medical Nutrition Product	Medical nutrition product used before child enrolled in data collection project.
New Medical Nutrition Product and Modifier	Name of medical nutrition product and MAA modifier codes assigned by the State of Washington. Both the products and the codes are included in the MAA Medical Nutrition Billing Instructions (see Reference 9). The MAA modifier codes are determined by several criteria including: ▪ Age (4 years or younger, 4-18 years) ▪ Oral or tube-fed ▪ WIC status (WIC denial, intolerant to WIC-provided formulas, needs are in excess of WIC allotment) ▪ Nutritional status (feeding problem, increased energy/nutrients needs) ▪ Complete products or modifiers, i.e. protein, fat, carbohydrate
Feeding Method	Oral, enteral or both
Intervention Summary	Summary of CD's activities related to nutrition and feeding. See Data Collection Form in Appendix A for examples.

Growth	Summary of available growth data during course of project.
Nutrition Outcomes	Outcomes for each ICD – 9 nutrition diagnosis listed above. Outcomes determined by individual CD using these guides: 1. Problem Improved 3. Worse 5. New Diagnosis 2. No Improvement 4. Resolved Identified
Health Status at conclusion of data collection	CD evaluation of health status at end of data collection period for this specific client.
Allowable Reimbursement: Medical Nutrition Product per 30 days	Cost of Medical Nutrition Product based on Washington State MAA maximum allowable reimbursement. Reimbursement for medical nutrition products is provided at a specific individual rate per 100 kilocalories used.
Allowable Reimbursement: Nutrition Services	Cost of billable nutrition services provided by CD; based on $31.89 per allowable contact

CASE 1

Site	Tertiary pediatric hospital
Client	17 month old male, corrected age for 27 week gestation
Medical Diagnosis	Cerebral palsy, developmental delay, seizures, gastroesophageal reflux disease, neurological disorder, intrauterine drug exposure
Nutrition Diagnoses	Constipation – 564.0 Dysphagia – 787.2 Feeding problems – 783.3 Gastroesophageal reflux – 530.81 Vomiting – 787.03
Initial Health Status	Feeding mostly at night while asleep
Medications	Phenobarbitol, Topamax (topiramate), Duphalac (lactulose), Clonazepam, Lorazepam, Lamictal (lamotrigine), multivitamin
Prior Medical Nutrition Product	Alimentum
New Medical Nutrition Product and Modifier	Compleat Pediatric – 2C
Feeding Method	Enteral
Intervention Summary	Child seen in 4 clinic visits. The CD provided MNT, including nutrition reassessment, diet analysis, nutrition education, diet adjustment, weight and stature checks. An average of 721 cc of Compleat Pediatric was consumed daily providing 721 kilocalories.
Growth	Initial weight was 3rd to 5th percentile, then 5th-10th percentile by age 22 months corrected age (unable to obtain accurate length)
Nutrition Outcomes	Constipation – 564.0 (improved) Dysphagia – 787.2 (no improvement) Feeding problems – 783.3 (improved) Gastroesophageal reflux – 530.81 (improved) Vomiting – 787.03 (improved)
Health Status at end	GERD/vomiting much improved status/post Nissen fundoplication Weight gain of 1.1kg (2.4 lbs.) in 5 months Decreased frequency of illness
Allowable Reimbursement: Medical Nutrition Product per 30 days	Compleat Pediatric - $220
Allowable Reimbursement: Nutrition Services	4 contacts (3.25 hours) = $127.56

CASE 2

Site	Medical center feeding team
Client	9 month old female
Medical Diagnosis	Developmental delay
Nutrition Diagnoses	Anemia-Iron Deficiency –280.9 Food Allergies (egg, milk, wheat, citrus) – 693.1
Initial Health Status	Iron deficiency anemia; had been on unpasteurized goat's milk for 4 months; decreased growth velocity
Medications	Benadryl
Prior Medical Nutrition Product	Enfamil with iron
New Medical Nutrition Product and Modifier	Nutramigen –2F* Neocate –2E
Feeding Method	Oral
Intervention Summary	Child seen in 2 clinic visits with 2 phone contacts. The CD provided MNT through nutrition assessment, nutrition reassessment, diet analysis, feeding assessment, nutrition education, diet adjustment and instruction, weight and stature checks. An average of 900 cc of Nutramigen was consumed daily providing 603 kilocalories. After follow-up CD assessment, an average of 960cc of Neocate was consumed daily providing 640 kilocalories, a change secondary to increased eczema on child's entire body.
Growth	Weight moved from 10-25th to 10th% and stayed at that point for duration of data collection; length moved form 10th-25th to 25th%; weight for length 25-50th%
Nutrition Outcomes	Anemia-Iron Deficiency –280.9 (resolved) Food Allergies 693.1 (improved allergy control)
Health Status at end	Improved growth Use of Neocate and discontinuation of goat's milk improved all over body rash and iron deficiency anemia Overall development also improving
Allowable Reimbursement: Medical Nutrition Product per 30 days	Nutramigen - $630 (only used 2 weeks) Neocate - $668
Allowable Reimbursement: Nutrition Services	2 contacts (3 hours) = $63.78 2 phone calls (50 minutes) – no Medicaid reimbursement

*Child initially put on Nutramigen, which could be supplied by WIC. However, two weeks after initial contact Neocate was prescribed.

CASE 3

Site	Hospital Outpatient Clinic
Client	8 year 10 month old male
Medical Diagnosis	Asthma/Pulmonary Disease/BPD, developmental delay, renal disease, sensory impairment, Hepatitis A
Nutrition Diagnoses	Constipation –564.0 Failure to Thrive –783.41 Feeding Problems –783.3 Gastroesophageal Reflux (alkaline reflux) –530.81 Gastrostomy Complications –536.4
Initial Health Status	Numerous ear and eye infections; visual impairment; chronic constipation; growth- no increase in weight or length for 6 months
Medications	Amoxicillin, Xalatan (Latanoprost - May and June 2001); Metamucil begun October 2001
Prior Medical Nutrition Product	Scandi Shakes, Kindercal, Resource, Polycose Powder
New Medical Nutrition Product and Modifier	Nutren Jr. – 2T (1.5 months) Nubasic Fruit Drink – 2T (3 months)
Feeding Method	Oral and enteral
Intervention Summary	Child seen in 3 clinic visits. The CD provided MNT through nutrition assessment, nutrition reassessment, diet analysis, nutrition education, diet adjustment and instruction, weight and stature check. For six weeks an average of 250 cc of Nutren Jr. was consumed daily providing 250 kilocalories. For the next three months an average of 326 cc of Nubasic Fruit Drink was consumed daily providing 326 kilocalories.
Growth	Gain of 1.6 kg and 1 cm in 4.5 months; BMI improved from <3rd percentile to the 5th percentile
Nutrition Outcomes	Constipation –564.0 (improved) Failure to Thrive -783.41 (improved) Feeding Problems -783.3 (improved) Gastroesophageal Reflux –530.81 (improved) Gastrostomy Complications – 536.4 (improved)
Health Status at end	Improved appetite and increased variety of foods consumed; helping to prepare food
Allowable Reimbursement: Medical Nutrition Product per 30 days	Nutren Jr. -$77 (used six weeks) Nubasic Fruit Drink - $100
Allowable Reimbursement: Nutrition Services	3 contacts (3 hours) = $95.67

CASE 4

Site	Local health department
Client	7 month old male
Medical Diagnosis	Developmental delay
Nutrition Diagnoses	Failure to Thrive –783.41
Initial Health Status	Slow growth and poor intake
Medications	None
Prior Medical Nutrition Product	None – Prosobee Infant Formula supplied by WIC
New Medical Nutrition Product and Modifier	Microlipid – 9C
Feeding Method	Oral
Intervention Summary	Child seen in 1 home and 1 clinic visit. The CD provided MNT, including nutrition assessment, nutrition education, weight and stature check. An average of 810 cc of Prosobee concentrated to 24kcal/oz and 30 cc of Microlipid were consumed daily providing 783 kilocalories (135 kcal from Microlipid).
Growth	Weight moved from 3rd to 5th%; length moved from 10th to 10-25th%, and weight/length increased from 5th to 10-25th %
Nutrition Outcomes	Failure to Thrive –783.41 (improved)
Health Status at end	Improved growth; increased energy intake with Microlipid
Allowable Reimbursement: Medical Nutrition Product per 30 days	Microlipid = $38
Allowable Reimbursement: Nutrition Services	2 contacts (1.45 hours) = $63.78 12 miles roundtrip (30 minutes) – No Medicaid reimbursement

CASE 5

Site	Home health agency
Client	14 year 8 month old female
Medical Diagnosis	Cerebral palsy, developmental delay
Nutrition Diagnoses	Constipation –564.0 Dysphagia –787.2 Feeding Problems –783.3 Inappropriate Dietary Habits –V69.1
Initial Health Status	Medical history unavailable Per mother, child fairly healthy without upper respiratory issues
Medications	Metamucil, Pediatric Multivitamin
Prior Medical Nutrition Product	PediaSure (without fiber) used for several years
New Medical Nutrition Product and Modifier	Ensure Plus – 2T PediaSure with Fiber – 2T (family made decision to begin after 1 month trial of Ensure Plus)
Feeding Method	Oral
Intervention Summary	Child assessed through 1 home and 1 phone contact. The CD provided MNT through nutrition assessment, diet analysis, diet adjustment and instruction, weight and stature check. An average of 240 cc of Ensure Plus was consumed daily, providing 355 kilocalories. An average of 240 cc of PediaSure with Fiber will be consumed daily, providing 237 kilocalories. Decision to return to use of PediaSure was made by family.
Growth	No change noted
Nutrition Outcomes	Constipation –564.0 (improved) Dysphagia –787.2 (no improvement) Feeding Problems –783.3 (no improvement) Inappropriate Dietary Habits –V69.1 (no improvement)
Health Status at end	No illness or hospitalization
Allowable Reimbursement: Medical Nutrition Product per 30 days	Ensure Plus = $72 (one month of use) PediaSure with Fiber = $72
Allowable Reimbursement: Nutrition Services	1 contact (1 hour) =$31.89 48 roundtrip miles (1 hour) – No Medicaid reimbursement 1 phone contact (10 minutes) – No Medicaid reimbursement

CASE 6

Site	Local pediatric clinic
Client	17 year 11 month old female
Medical Diagnosis	Cerebral palsy, developmental delay
Nutrition Diagnoses	Failure to Thrive –783.41 Dehydration –276.5 Feeding Problem –783.3
Initial Health Status	Weight loss, dehydration
Medications	None
Prior Medical Nutrition Product	Ensure pudding as supplement, 1 to 2 four ounce containers daily
New Medical Nutrition Product and Modifier	PediaSure – 2T
Feeding Method	Oral
Intervention Summary	Child seen in 1 home and 6 clinic visits. The CD provided MNT through nutrition assessment, diet analysis, nutrition education, weight and stature check. An average of 960 cc of PediaSure was consumed daily providing 948 kilocalories.
Growth	Unable to assess linear growth; consistent weight gain continued to be a problem until child (now an adult) was placed in stable foster home. CD continued contacts to ensure weight gain. Gain of 2.3 kg (5 lbs.) in 2 months. Still below 5th% but improved social interaction.
Nutrition Outcomes	Failure to Thrive –783.41 (improved) Dehydration – 276.5 (improved) Feeding Problem – 783.3 (improved)
Health Status at end	Improved growth and response to contact
Allowable Reimbursement: Medical Nutrition Product per 30 days	PediaSure - $290
Allowable Reimbursement: Nutrition Services	7 contacts (5.75 hours) = $223.23 29 roundtrip miles (40 minutes) – No Medicaid reimbursement

CASE 7

Site	Pediatric specialty clinic
Client	12 month old female
Medical Diagnosis	Metabolic Disorder (Phenylketonuria)
Nutrition Diagnoses	Therapeutic Diet –V65.3
Initial Health Status	Very good
Medications	None
Prior Medical Nutrition Product	Lofenalac, started at 20 days of age
New Medical Nutrition Product and Modifier	Phenyl-Free 2 – 3C
Feeding Method	Oral
Intervention Summary	Child assessed in 1 clinic and 1 phone contact. The CD provided MNT through nutrition reassessment, nutrition education, weight and stature checks. An average of 15 scoops (264 grams) of Phenyl-Free 2 was consumed daily to provide 1080 kilocalories.
Growth	Growth within normal limits at 1st contact; no data collected at 2nd contact
Nutrition Outcomes	Therapeutic Diet –V65.3 (improved)
Health Status at end	Growth in channel; blood phenylketonuria levels are in range of excellent control
Allowable Reimbursement: Medical Nutrition Product per 30 days	Phenyl-Free 2 - $1,128
Allowable Reimbursement: Nutrition Services	1 contact (30 minutes) = $31.89 1 phone contact (10 minutes) – No Medicaid reimbursement

CASE 8

Site	Pediatric specialty clinic
Client	9 day old male
Medical Diagnosis	Down syndrome (Trisomy 21), metabolic disorder (Phenylketonuria), prematurity
Nutrition Diagnoses	Therapeutic Diet –V65.3
Initial Health Status	Premature twin, trisomy 21, phenylketonuria, hospitalized until 3 weeks old, Phenyl-Free 1 introduced at 9 days of age
Medications	None
Prior Medical Nutrition Product	None
New Medical Nutrition Product and Modifier	Phenyl-Free1 – 3C
Feeding Method	Oral
Intervention Summary	Child evaluated in 2 phone contacts and 1 clinic contact over 1 month. The CD provided MNT through nutrition assessment, nutrition reassessment, diet adjustment and instruction, weight check. An average of 16 grams of Phenyl-Free 1 was consumed daily, providing 80 kilocalories.
Growth	Gain of 2.5 lbs. in 4 weeks; weight only parameter reported
Nutrition Outcomes	Therapeutic Diet –V65.3 (improved)
Health Status at end	Growing well; blood levels in range of excellent control
Allowable Reimbursement: Medical Nutrition Product per 30 days	Phenyl-Free 1 - $25
Allowable Reimbursement: Nutrition Services	1 contact (30 minutes) = $31.89 2 phone contacts (40 minutes) – No Medicaid reimbursement

CASE 9

Site	Local health department
Client	3 year 3 month old male
Medical Diagnosis	DiGeorge syndrome, developmental delay, GI disorder (60% small bowel resection), immunodeficiency, cardiac disease
Nutrition Diagnoses	Feeding Problems –783.3 Malabsorption –579.9 Underweight-Undesirable –783.4
Initial Health Status	Frequent hospitalizations and infections for first 3 years of life; feeding tube removed earlier this year; weight gain of just over 1 pound between July 2000 and May 2001
Medications	Calcium gluconate, Rocaltrol (Calcitrol), Lactinex (Lactobacillus), fluoride, Flovent (Fluticasone) by nebulizer, Pediatric Complete vitamin/mineral supplement. At f/u only pediatric chewable multiple vitamin
Prior Medical Nutrition Product	Neocate mixed at 24 kcal/oz for 3 years
New Medical Nutrition Product and Modifier	Peptamen Junior Oral –3F
Feeding Method	Oral
Intervention Summary	Child assessed in 2 home visits. The CD provided MNT through nutrition assessment, nutrition reassessment, diet analysis, stature check. An average of 750 cc of Peptamen Junior was consumed daily, providing 750 kilocalories.
Growth	Below 5th % for weight, length, and BMI. However gain of 0.9 kg and 3 cm growth in 6 months prior to heart surgery.
Nutrition Outcomes	Feeding Problems –783.3 (improved) Malabsorption –579.9 (improved) Underweight-Undesirable –783.4 (improved)
Health Status at end	After successful heart surgery and subsequent brief hospitalization to treat post-surgical infection, returned to taking Peptamen Junior as supplement.
Allowable Reimbursement: Medical Nutrition Product per 30 days	Peptamen Jr. - $783
Allowable Reimbursement: Nutrition Services	2 contacts (1.45 hours) = $63.78 60 roundtrip miles (2 hours) – No Medicaid reimbursement

CASE 10

Site	Pediatric specialty clinic
Client	4 year 7 month old female
Medical Diagnosis	Metabolic disorder (mild ornithine transcarbamylase deficiency)
Nutrition Diagnoses	Therapeutic Diet –V65.3
Initial Health Status	Chronically unwell; episodes of severe illness with hospitalization
Medications	Sodium benzoate, L-carnitine
Prior Medical Nutrition Product	None
New Medical Nutrition Product and Modifier	80056 –3K
Feeding Method	Oral
Intervention Summary	Child was assessed in 2 clinic visits. The CD provided MNT through nutrition assessment, nutrition reassessment, diet analysis, nutrition education, diet adjustment and instruction, weight and stature check. An average of 16 scoops of Product 80056, then 1 cup of powder used, providing 650 kilocalories daily.
Growth	Grew well in spite of chronic illnesses; concern over higher rate of weight gain
Nutrition Outcomes	Therapeutic Diet –V65.3 (improved); new issue identified as overweight (parents used 1 ½ cups versus prescribed 1 cup of product 80056).
Health Status at end	Healthy, with no further hospitalizations
Allowable Reimbursement: Medical Nutrition Product per 30 days	Product 80056 - $131
Allowable Reimbursement: Nutrition Services	2 contacts (1.25 hours) = $63.78

CASE 11

Site	Pediatric specialty clinic
Client	16 year 10 month old female
Medical Diagnosis	Metabolic disorder (Phenylketonuria)
Nutrition Diagnoses	Therapeutic Diet – V65.3
Initial Health Status	Very good
Medications	None
Prior Medical Nutrition Product	Phenyl-Free
New Medical Nutrition Product and Modifier	Phenyl-Free 2 – 3M
Feeding Method	Oral
Intervention Summary	Child assessed in 1 clinic and 1 phone contact. The CD provided MNT through nutrition assessment, diet analysis, nutrition education, diet adjustment and instruction, weight and stature check. An average of 15 scoops (264 grams) of Phenyl Free 2 was consumed daily, providing 1080 kilocalories.
Growth	Appropriate and within normal limits
Nutrition Outcomes	Therapeutic Diet –V65.3 (improved)
Health Status at end	Appropriate growth; blood phenylalanine levels in good control
Allowable Reimbursement: Medical Nutrition Product per 30 days	Phenyl-Free 2 - $1,128
Allowable Reimbursement: Nutrition Services	1 contact (30 minutes) = $31.89 1 phone contact (20 minutes) – No Medicaid reimbursement

CASE 12

Site	Pediatric specialty clinic
Client	4 year 7 month old male
Medical Diagnosis	Metabolic disorder (Phenylketonuria)
Nutrition Diagnoses	Therapeutic Diet –V65.3
Initial Health Status	Very good
Medications	None
Prior Medical Nutrition Product	Lofenalac from 10 days of age
New Medical Nutrition Product and Modifier	Phenyl Free 2 – 3M
Feeding Method	Oral
Intervention Summary	Child seen in 3 clinic visits. The CD provided MNT through nutrition assessment, diet analysis, nutrition education, diet adjustment and instruction, weight and stature check. An average of 20 scoops (352 grams) of Phenyl-Free 2 was consumed daily, providing 1443 kilocalories. This was increased to 21 scoops (370 grams) of Phenyl-Free 2, providing 1520 kilocalories, at the last contact.
Growth	Growth continues along previous channels – 75th% for height; 75th% for weight and 85th% for BMI
Nutrition Outcomes	Therapeutic Diet –V65.3 (improved)
Health Status at end	Growth in channel; blood phenylalanine levels are in good control
Allowable Reimbursement: Medical Nutrition Product per 30 days	Phenyl Free 2 – $1,521; with increased amount, cost will be $1,587
Allowable Reimbursement: Nutrition Services	3 contacts (1.5 hours) = $95.67

CASE 13

Site	Tertiary pediatric hospital
Client	9 year 6 month old male
Medical Diagnosis	Asthma/Pulmonary Disease/BPD, cerebral palsy, developmental delay, epilepsy/seizures, GERD, mental retardation, tracheostomy
Nutrition Diagnoses	Dysphagia -787.2 Failure to Thrive –783.41 Food-Nutrition Intolerance –579.8 Gastroesophageal Reflux –530.81 Underweight-Undesirable –783.4 Vomiting –787.03
Initial Health Status	Frequent episodes of pneumonia, tracheitis with hospitalization; fluctuating weight with no net gain for 2 years
Medications	Prilosec (omeprazole), Colace (docusate sodium), Tegretol (carbamazepine), Lamictal (lamotrigine), Neurontin (gabapentin), Lioresal (baclofen), Albuterol
Prior Medical Nutrition Product	Compleat Pediatric – 3 years
New Medical Nutrition Product and Modifier	Peptamen Junior – 3R (3 months) Peptamen Junior + Peptamen 1.5 – 3R (2 months)
Feeding Method	Enteral (gastrostomy feeding tube with boluses and drip)
Intervention Summary	Child assessed in 1 clinic/2 hospital visits. The CD provided MNT through nutrition assessment and reassessment, diet analysis, nutrition education, diet adjustment, weight and stature checks. An average of 1500 cc of Peptamen Junior was consumed daily providing 1500 kilocalories. After 3 months, 5 cans of Peptamen Junior plus 1 can Peptamen 1.5 was consumed daily to provide 1625 kilocalories.
Growth	Gain of 3.8 kg in 5 months with weight moving from 5-10th% to 10-25th%; accurate length data unavailable
Nutrition Outcomes	Dysphagia –787.2 (no improvement) Failure to Thrive –783.41 (improved) Food-Nutrition Intolerance –579.8 (improved) Gastroesophageal Reflux –530.81 (improved) Underweight-Undesirable –783.4 (resolved) Vomiting –787.03 (improved)
Health Status at end	Improved weight; illness/hospitalization unchanged
Allowable Reimbursement: Medical Nutrition Product per 30 days	Peptamen Jr. - $1,566 Peptamen Jr. + Peptamen 1.5 - $1,698
Allowable Reimbursement: Nutrition Services	3 contacts (2.5 hours) = $95.67

CASE 14

Site	Home health agency
Client	3 year 10 month old female
Medical Diagnosis	Down syndrome (Trisomy 21), GI disorder (slow gastric emptying)
Nutrition Diagnoses	Constipation –564.0 Feeding Problems –783.3 Gastroesophageal Reflux –530.81
Initial Health Status	No data
Medications	Reglan (metoclopramide)
Prior Medical Nutrition Product	Ensure Plus with Pediasure
New Medical Nutrition Product and Modifier	Ensure Plus – 3T
Feeding Method	Enteral (Bolus)
Intervention Summary	Child assessed in 2 clinic contacts and 3 phone contacts. The CD provided MNT through nutrition reassessment, nutrition education, diet adjustment and instruction, weight and stature check. An average of 720 cc of Ensure Plus was consumed daily providing 1065 kilocalories.
Growth	Over 2 months gained 0.48 kg and grew 1.5 cm, maintaining previous channels on CDC and Down syndrome charts
Nutrition Outcomes	Constipation –564.0 (resolved) Feeding Problems –783.3 (no improvement) Gastroesophageal Reflux –530.81 (improved)
Health Status at end	No hospitalizations
Allowable Reimbursement: Medical Nutrition Product per 30 days	Ensure Plus - $214
Allowable Reimbursement: Nutrition Services	2 contacts (1 hour) = $63.78 3 phone contact (45 minutes) – No Medicaid reimbursement

CASE 15

Site	Home health agency
Client	21 month old male (corrected age)
Medical Diagnosis	Asthma/Pulmonary Disease/BPD, developmental delay, GI disorder (GERD, delayed gastric emptying), VLBW infant (24 weeks gestation, 615 grams)
Nutrition Diagnoses	Failure to Thrive –783.41 Feeding Problems –783.3 Gastroesophageal Reflux –530.81 Vomiting –787.03
Initial Health Status	4 hospitalizations since birth; vomits 1-3 times daily; maintained growth less than or equal to 5th percentile
Medications	Hydrochlorothiazide, Spironolactone, Reglan (metoclopramide), Albuterol, Atrovent (ipratropium), Zantac (ranitidine), Prednisone, oxygen, Pulmicort (budesonide); during course of project Prednisone and oxygen decreased; Pulmicort added
Prior Medical Nutrition Product	Similac concentrated to 26 kcal/oz
New Medical Nutrition Product and Modifier	PediaSure with Fiber – 3T
Feeding Method	Enteral
Intervention Summary	Child assessed in 3 clinic contacts and 2 phone contacts. The CD provided MNT through nutrition reassessment, nutrition education, diet adjustment and instruction, weight and stature check. An average of 1000-1320 cc of PediaSure with Fiber was consumed daily providing 1000-1320 kilocalories.
Growth	Weight gain of 1.6 kg over 6 months moving from less than 5th% to 10-25th%; growth of 3.5 cm over 4.5 months and still at <5th%
Nutrition Outcomes	Failure to Thrive –783.41 (improved) Feeding Problems –783.3 (no improvement) Gastroesophageal Reflux –530.81 (improved) Vomiting –787.03 (improved)
Health Status at end	2 hospitalizations in 2001 for RSV; vomits once daily; maintained growth between 5th and 10th percentile
Allowable Reimbursement: Medical Nutrition Product per 30 days	PediaSure with Fiber cost (averaged over 6 months) above the WIC provided allotment - $101*
Allowable Reimbursement: Nutrition Services	3 contacts (1.45 hours) = $95.67 2 phone contacts (30 minutes) – No Medicaid reimbursement

*WIC provided 108 cans per month of PediaSure with Fiber. WIC allotment provided 72% of monthly energy needs.

CASE 16

Site	Home health agency
Client	19 month old female
Medical Diagnosis	Craniofacial anomaly, developmental delay
Nutrition Diagnoses	Diarrhea –787.91 Failure to Thrive –783.41 Feeding Problems –783.3 Food-Nutrition Intolerance –579.8
Initial Health Status	History of poor growth; multiple infections
Medications	None
Prior Medical Nutrition Products	Prosobee, PediaSure (1 month), Peptamen Junior (1 month), Prosobee + 80056 (3 months)
New Medical Nutrition Product and Modifier	Compleat Pediatric – 3V
Feeding Method	Oral (started with food tastes, progressed to table food by last contact plus bolus after meals) and enteral
Intervention Summary	Child assessed in 5 home visits. A CD provided MNT through nutrition assessment and nutrition reassessment, nutrition education, diet adjustment and instruction, weight and stature check. An average of 750-1125 cc of Compleat Pediatric consumed daily to provide a range of 750-1125 kilocalories
Growth	Grew 5.5 cm and gained 1.5 kg in 2.5 months; then lost weight when parent decreased amount due to child's cold. Weight/length had increased from 25th% to 50th% but then decreased to 10th%due to decrease in formula intake. Both weight and length continue to be less than 5th%
Nutrition Outcomes	Diarrhea –787.91 (resolved) Failure to Thrive –783.41 (no improvement) Feeding Problems –783.3 (improved) Food-Nutrition Intolerance –579.8 (improved)
Health Status at end	Decreased diarrhea and vomiting; tolerates food; improved oral intake
Allowable Reimbursement: Medical Nutrition Product per 30 days	Average over 7 months for Compleat Pediatric - $326
Allowable Reimbursement: Nutrition Services	5 contacts (3.7 hours) = $159.45 590 roundtrip miles (15 hours) – No Medicaid reimbursement

CASE 17

Site	Home health agency
Client	7 year 9 month old male
Medical Diagnosis	Cystic fibrosis, Gastritis
Nutrition Diagnoses	Failure to Thrive –783.41 Malabsorption –579.9
Initial Health Status	Poor growth since infancy; multiple illnesses, colds, infections
Medications	Ultrase
Prior Medical Nutrition Product	Boost (occasionally)
New Medical Nutrition Product and Modifier	PediaSure with Fiber – 3W
Feeding Method	Oral (table food as desired) and enteral
Intervention Summary	Child seen in 3 home visits over 1.5 months. The CD provided MNT through nutrition assessment, nutrition reassessment, weight and stature checks. An average of 720 cc of PediaSure with Fiber was consumed daily, providing 720 kilocalories.
Growth	Gain of 2.7 kg in 1.5 months; BMI increased
Nutrition Outcomes	Failure to Thrive –783.41 (improved) Malabsorption –579.9 (improved)
Health Status at end	Child eating more; increased strength and energy; no illnesses since gastrostomy feeding tube placed and PediaSure began
Allowable Reimbursement: Medical Nutrition Product per 30 days	PediaSure with Fiber - $220
Allowable Reimbursement: Nutrition Services	3 contacts (2.5 hours) = $95.67 183 roundtrip miles (3.25 hours) – No Medicaid reimbursement

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Appendix A

Case Study Collection Forms

Medical Nutrition Case Studies Project - Jan.1-Dec. 31, 2001

Identifying information will be kept confidential upon publication of this project.

This project will include a series of case studies of *children with special health care needs.* Its purpose is to demonstrate that having reimbursement systems in place to support the use of medical nutrition products with monitoring provided by Certified Dietitians (CD)/Certified Nutritionists (CN) will:

1. Improve health status for infants and children in Washington State
2. Result in savings in health care expenditures

This study will involve infants, children and adolescents (referred to here as child or children) using medical nutrition products supplied by the Medical Assistance Administration (MAA). Data derived from nutrition contacts with these children will be provided by CD/CNs in the State of Washington. Collection of the data will occur over a one-year period from 1/1/01 through 12/31/01. A child may be enrolled at any time during the year, including retroactively (i.e. a child can be enrolled from Jan. 2001 even though the form was received in July.).

Eligible children – Forms may be submitted for children whose nutrition needs are met partially or fully from products reimbursed through MAA. To be included in the study, a child must 1) begin a new product and/or 2) be new to the practice of the CD/CN. Do not include children who were receiving the same medical nutritional product prior to 1/1/01. (*Example: A child could be receiving an infant formula for 18 months with partial reimbursement by MAA starting in January. In March the child is switched to a high calorie pediatric product. This child is eligible for the study because of the switch to the high calorie pediatric product reimbursed by MAA. It does not matter whether the child was seen by the CD/CN prior to 1/1/01 or is new to the practice.*)

Directions:

A. CD/CN are encouraged to submit more than one case study, but only one case per MAA modifier code. The MAA codes are listed in the purple booklet from MAA entitled Medical Nutrition (Formerly part of Infusion/ Enteral/Parenteral) Billing Instructions, November 2000. Look under Section E, Modifiers/Criteria. See also the Medical Nutrition Program under Billing Instructions at:https://wws2.wa.gov/dshs/maa
B. Use one 4-page form for each child's record.
C. Complete pages 2 and 3 (*Participant Information Form* and *Initial Contact Form)* for each child who is new to the practice OR was previously seen but now has changed to a new nutrition product supplied by MAA funding on or after 1/1/01.
D. The last page, entitled *Subsequent Contact Form,* should be photocopied and used for each additional CD/CN visit through 12/31/01. If a child is contacted more than once in a month, complete only one form, using the most significant data for the month.
E. Note that each item is numbered. At times the numbers appear to be out of sequence or missing. ***Do not*** be concerned about this, as the numbers are significant for data entry only.
F. Clarification/examples for specifically numbered items:

Page 2, Item # 6 – Please identify specific chromosomal disorders, GI disorders and other medical diagnosis not listed in the table.
Item #14 – On Initial Contact Form and Subsequent Contact Form. See letter A above.
Item #29 – Please make sure to complete this question at the end of the study prior to mailing the forms to Sharon Feucht. Please contact Sharon with your questions (sfeucht@u.washington.edu or 206/685-1297).

Submission of Cases

Thank you so much for your willingness to submit case studies for this project. Mail all forms for each case submitted by January 15, 2002 to:

Sharon Feucht, MA, RD, CD
CHDD, University of Washington
Box 35-7920
Seattle, WA 98195-7920

Participant Information Form - Please complete this form for all children in this project.

1. County _____ Agency _____

Your Name _____

Email _____ Phone _____

2. First Name of Child _____ 3. Gender _____Male _____Female

4. Date of Birth _____/_____/_____ 5. Gestational Age at Birth in Weeks _____

6. **Medical Diagnoses – Please check all that apply.**

❑ Asthma/Pulmonary Disease/BPD	❑ Developmental Delay	❑ Orthopedic Problems
❑ PDD/Autism	❑ Epilepsy/Seizures	❑ Renal Disease
❑ Cancer	❑ G.I. Disorder: Identify - _____	❑ Sensory Impairment (visual, hearing)
❑ Cardiac Disease	❑ HIV Positive	❑ Spina Bifida
❑ Cerebral Palsy	❑ Mental Retardation	❑ High Risk Child
❑ Craniofacial Anomaly	❑ Metabolic Disorder	❑ Unknown
❑ Chromosomal Disorder: Identify- _____	❑ Muscular Dystrophy	❑ Low Birth Weight or Very Low Birth Weight Infant (specify) _____
❑ Cystic Fibrosis	❑ Neurological Disorder	❑ Other _____

7. **Nutrition Diagnoses. Please circle applicable codes. Add any comments to clarify your responses on the comment line below the table.**

280.9 Anemia-Iron Deficiency	579.8 Food-Nutrition Intolerance	765.10 Prematurity
783.0 Anorexia	530.81 Gastroesophageal Reflux	260 Protein Deficiency
564.0 Constipation	V69.1 Inappropriate Dietary Habits	V65.3 Therapeutic Diet
276.5 Dehydration	783.9 Low Metabolism	783.4 Underweight-Undesirable
787.91 Diarrhea	579.9 Malabsorption	787.03 Vomiting
V65.3 Dietary Surveil./counseling	263.1 Malnutrition – Mild	536.4 Gastrostomy Complications
787.2 Dysphagia	263.0 Malnutrition – Moderate	779.3 Feeding Problem in Newborn
783.41 Failure To Thrive	262 Malnutrition – Severe	Other:
783.3 Feeding Problems	278 Overweight-Undesirable	Other:

Comments: _____

8. Health status prior to initiation of this medical nutrition product (frequency of illnesses, number of hospitalizations, summary of growth etc):

_____

_____

9. Was a medical nutrition product (including infant formulas) used prior to 1/1/01? _____ Yes _____ No

10. If you answered yes to questions #9 list name of product and duration of use:

_____

AT COMPLETION OF PROJECT ON 12/31/01

(Complete all sheets when problem is resolved or on 12/31/01. Send this cover sheet and all data collection forms to address at bottom of page 1)

29. Health status at the end of the data collection period (frequency of illnesses, number of hospitalizations, summary of growth etc):

_____

_____

7/01 Medical Nutrition Product Case Studies Project – University of Washington and the Washington State Office of Children with Special Health Care Needs

Initial Contact Form - - All information will be kept confidential.

DATA for first contact beginning on or after 1/1/01

Today's Date ___ / ___ / ___

2. First Name of Child _____ 4. Date of Birth _____/_____/_____

11. New Medical Nutrition Product Used:_____

12. Feeding Method: _____ Oral _____ Enteral (Describe feeding tube and rate of administration etc):
_____

13. Amount of Medical Nutrition Product Used in 24 hours:_____

14. MAA Code Used to Supply Medical Nutrition Product _____

15. Medications:_____

Growth Data (using CDC Growth Charts: United States)

16. Length/Height _____ (inches or centimeters) _____%ile
(Circle) (Circle)

17. Weight _____ pounds, _____ ounces OR _____ kilograms _____%ile.

18. OFC _____ (inches or centimeters) _____%ile
(Circle)

19. Weight/length or Stature Percentile _____%ile **OR** 20. BMI_____%ile

Comments related to growth data: _____

Medical Nutrition Therapy

21. Total energy intake per day supplied by **medical nutrition product ONLY** _____

22. **Medical nutrition therapy provided.** Please check all that apply and describe "Other".

❑ Nutrition Assessment	❑ Feeding Assessment	❑ Weight check
❑ Nutrition Reassessment	❑ Nutrition Education	❑ Length/Stature Check
❑ Diet Analysis	❑ Diet adjustment and instruction	❑ Other:

Certified Dietitian/Nutritionist Contact Data

23. Minutes for this contact:_____

24. Clinic / home / phone contact
(Circle)

If applicable for a home visit:

25. Roundtrip Mileage:_____

26. Roundtrip travel time in minutes_____

7/01 Medical Nutrition Product Case Studies Project – University of Washington and the Washington State Office of Children with Special Health Care Needs

Please photocopy this form to make an original for additional nutrition contacts.

Subsequent Contact Form - - All information will be kept confidential.

Today's Date ___ / ___ / ___

2. First Name of Child _____ 4. Date of Birth _____/_____/_____

11. Current Medical Nutrition Product Used:_____

12. Feeding Method: _____ Oral _____ Enteral (Describe feeding tube and rate of administration etc:

_____

13. Amount of Medical Nutrition Product Used in 24 hours:_____

14. MAA Code Used to Supply Medical Nutrition Product _____

15. Medications:_____

Growth Data (using CDC Growth Charts: United States)

16. Length/Height _____ (inches or centimeters) _____%ile
(Circle) (Circle)

17. Weight _____ pounds, _____ ounces OR _____ kilograms _____%ile.

18. OFC _____ (inches or centimeters) _____%ile
(Circle)

19. Weight/length or Stature Percentile _____%ile **OR** 20. BMI_____%ile

Comments related to growth data: _____

Medical Nutrition Therapy

21. Total energy intake per day supplied by **medical nutrition product ONLY** _____

22. **Medical nutrition therapy provided.** Please check all that apply and describe "Other".

☐ Nutrition Assessment	☐ Feeding Assessment	☐ Weight check
☐ Nutrition Reassessment	☐ Nutrition Education	☐ Length/Stature Check
☐ Diet Analysis	☐ Diet adjustment and instruction	☐ Other:

Certified Dietitian Contact Data

23. Minutes for this contact:_____ 24. Clinic / home / phone contact
(Circle)

If applicable for a home visit: 25. Roundtrip Mileage:_____ and 26. Travel time in minutes_____

Nutrition Outcome Data – 27. Use the circled items (nutrition diagnosis) listed with Question #7 from the Participant Information Form (page 2). Write each circled item in the table below and evaluate the outcome for that item based on your assessment at this contact. Use the outcome entry numbers listed below to indicate the current status of each nutrition diagnosis. If a new nutrition diagnosis has arisen please list it and use the appropriate outcome entry number shown below (5).

Outcome Entries:

1. – Problem Improved 3. - Worse 5. – New Diagnosis Identified
2. – No Improvement 4. - Resolved

Nutrition Diagnosis	Outcome	Nutrition Diagnosis	Outcome

28. **Changes in Medical Diagnosis** – If applicable, use the diagnoses listed with Question #6 from the Participant Information Form (page 2), to indicate below any changed/new medical diagnoses since initial contact.

Appendix B

Location of Case Studies in Washington State

Location of Case Studies in Washington State