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Kathleen Humphries

*University of Montana Rural Institute - Research and Training Center on Disability in Rural Communities*

L. Rosenzweig

*University of Montana - Missoula*

P. Cushing

*University of Montana Rural Institute - Research and Training Center on Disability in Rural Communities*

R. Licitra

*University of Montana Rural Institute - Research and Training Center on Disability in Rural Communities*

University of Montana Rural Institute

ScholarWorks-Reports@mso.umt.edu

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## Registered Dietitians' Service to Group Homes for Adults with Developmental Disabilities

K. Humphries\*, L. Rosenzweig, P. Cushing and R. Licitra

*The University of Montana Rural Institute, 52 Corbin Hall, Missoula, MT 59812, USA*

**Abstract:** An online survey of registered dietitians was conducted to characterize their professional activities for providers of residential services for adults with intellectual or developmental disabilities (IDD) in the United States. The goal of the survey was to characterize the nutrition services delivered in community based group homes and the registered dietitians performing them. Forty nine RDs responded fully to the survey, indicating significant hours spent providing consultation on food service, clinical dietetics, staff training, dietary monitoring and administrative nutrition services. The most common services are conducting nutritional assessments of residents and providing direct service in the form of menus for the homes and/or clinical evaluation and compliance monitoring of therapeutic diets. Through this survey we discovered that there is a wide variety of arrangements, services, and hours spent in nutrition services delivery in group homes. This survey also indicates a strong need for additional training for the nation's dietitians to serve this nutritionally vulnerable population.

**Keywords:** Disability, health disparities, community nutrition.

### INTRODUCTION

Adults with intellectual or developmental disabilities (IDD) in the United States, some 3.2% of the noninstitutionalized population [1], experience poorer health than the general population [2-4]. Healthy People 2020, our nation's health improvement blueprint, identifies Americans with disabilities as a health disparities population [5] and in 2002, the U.S. Surgeon General declared improved nutrition to be a national priority for adults with intellectual or developmental disabilities in particular [6].

Adults with IDD ideally live in the community in residential settings that are the least restrictive possible and in communities of their choosing [7]. For individuals with more significant functional impairments, a small community-based group home with 24-hour staff support is an option that all 50 states, to some degree, offer their citizens who receive residential services.

Dietary intake in community-dwelling adults with intellectual or developmental disabilities is inadequate, with diets high in fat and empty calories and deficient in fruits and vegetables, whole grains, and dairy products [8-14]. Specifically, previous research has shown that the foods provided in the group homes is not adequate to support the residents' needs [15]. Further, among adults with IDD overweight and obesity, bowel and gastrointestinal dysfunction, diabetes, nutrient deficits, cardiovascular disease, and osteoporosis are a significant problem [16-25]. Many of these limiting secondary conditions are related to dietary intake.

As a nutritionally vulnerable population, adults with intellectual or developmental disabilities (IDD) may benefit from professional nutrition services [10]. However, little evaluation has been undertaken to describe which services are being provided or the extent of those services. There are approximately 84,000 group homes licensed in the United States for adults with intellectual or developmental disabilities. Surveys of which and how many of these homes utilize professional dietetics services have not been undertaken.

Professional services from registered dietitians (RDs) are not required by most states for licensure of IDD group homes. Further, RD services are typically not covered by Medicaid, the funding used to support the majority of the residences. So, although many of the nutrition-related secondary conditions may be prevented or managed effectively with nutrition guidance, many residential service providers may not use or may under-use professional nutrition services. Nutrition services might then be considered optional for this population in these settings. When a provider therefore makes a commitment to providing nutrition services in their group homes, the nature of the effective services and the range of service options are particular to that provider. RDs primarily are hired as private consultants to perform a range of services that they and the providers agree is beneficial to the residents and cost effective for the agency.

Dietetics has specialties in many areas. One such area is IDD, a subsection of behavioral health nutrition. RDs who work with adults with IDD have competence in the standard dietetics curriculum and additional expertise in common conditions related to nutrition in this population (e.g. obesity, gastrointestinal dysfunction, dysphagia, drug/nutrient interactions).

\*Address correspondence to this author at the The University of Montana Rural Institute, 52 Corbin Hall, Missoula, MT 59812, USA;  
Tel:406.243.2515; Fax: 406.243.2349;  
E-mail: [khumphries@ruralinstitute.umt.edu](mailto:khumphries@ruralinstitute.umt.edu)

A project was undertaken to characterize the nutrition services that do exist in the community based group homes by surveying RDs who conduct professional practice there. The goal of the survey was to better understand the role of registered dietitians in the health of adults with intellectual or developmental disabilities (IDD) who live in community-based group homes.

## METHODOLOGY

A small group of professional nutritionists (first three authors) collaborated to draft questions to characterize the nutrition services being conducted in group homes and to describe the registered dietitians' involvement. The universe of potential nutrition services activities was determined through 1) preliminary sampling of RDs to establish the categories of services and specific tasks within the survey, 2) exhaustive lists of all the services the three authors have provided in their home states (Montana, New York, and Tennessee) and, 3) by searching the archives of the Behavioral Health Nutrition Dietary Practice Group (BHN) of the Academy of Nutrition and Dietetics' (AND) listserv for entries indicating any nutrition services that listserv members provide.

This exhaustive list was combined where possible into 26 service activities within five categories, including food services, clinical services, training, monitoring, and administrative. The survey was approved by the BHN Executive Committee of the Academy of Nutrition and Dietetics.

Registered dietitians were sought to complete the survey who identified themselves as professionals who provide dietetics services in this setting. The respondents were members of the BHN or who were known to BHN members as working professionals in this specialty.

The AND is the sole national registering body for dietitians, who have to be active members to practice legally in most states. Within AND there are specialty areas, or Dietary Practice Groups (DPG), of which an individual RD joins one or more. Continuing education, electronic professional conversation, practice information, and specialty publications are disseminated through the DPGs.

Respondents were instructed to complete the survey for one residential service provider, even if he/she worked for more than one. If the respondent worked with more than one service provider, he/she was instructed to select the most typical one and respond with just that provider in mind. Respondents were instructed not to add all the various providers for whom they work and their time spent with them together for their survey responses.

The questions about services were asked in the following format: "Do you provide the following (food service/clinical/training/monitoring/administrative) services?" From that question we obtained data on numbers and percentages of RDs who provided the 26 services at all in group homes.

The follow-up question for each of the 26 activities was: "Approximately how many hours do you spend in that activity with this provider per month?" The response options were "<1 hour/month," "1-5 hours/month," "5-10 hours/month," "10-15 hours/month," ">15 hours/month."

The survey was formatted onto SurveyGizmo and made available to the BHN membership. Recruitment occurred on the BHN listserv and through requests to the membership to invite other RDs in the field of IDD nutrition to take the survey. SurveyGizmo was selected as a highly accessible option for online surveys. A recruitment announcement was posted on the listserv and any member of the listserv was eligible to take it. We also encouraged the listserv members to tell other dietitians who work in the group home setting to take the survey. The survey was active for seven weeks in the fall, 2010.

The data from the respondents was transferred into Excel, where it was cleaned and coded. Coding was completed by one researcher (Licitra), with 10% of the data duplicate coded by a different researcher to control for errors. Few judgments were required in this straightforward coding scheme and the coding accuracy was over 99%.

The data were manipulated and analyzed in SPSS. The entire research team met to interpret the results.

## RESULTS

### Respondents

Forty-nine registered dietitians responded to the online survey. The average number of years respondents had been working as a dietetics professional with adults with IDD was 11.3 years (1-5 years=16%; 6-10 years=20%; 11-15 years=10%; >15 years=53%). Fifty-three percent of the respondents reported having received no additional training in this specialty or with adults with IDD beyond the standard dietetics curriculum.

Respondents reported receiving help and information in the field of nutrition and disability from the Dietary Practice Groups of the Academy of Nutrition and Dietetics (50%), individuals such as their supervisor or other registered dietitians (31%). They look to their professional organizations primarily for professional resources (65%), but also to internet searches (28%) and journals or toolkits (8%). Continuing education is required to maintain active RD status and the respondents found information regarding continuing education units in this field through their professional organizations (48%), webinars and workshops (19%), newsletters and journals (19%), and other (14%).

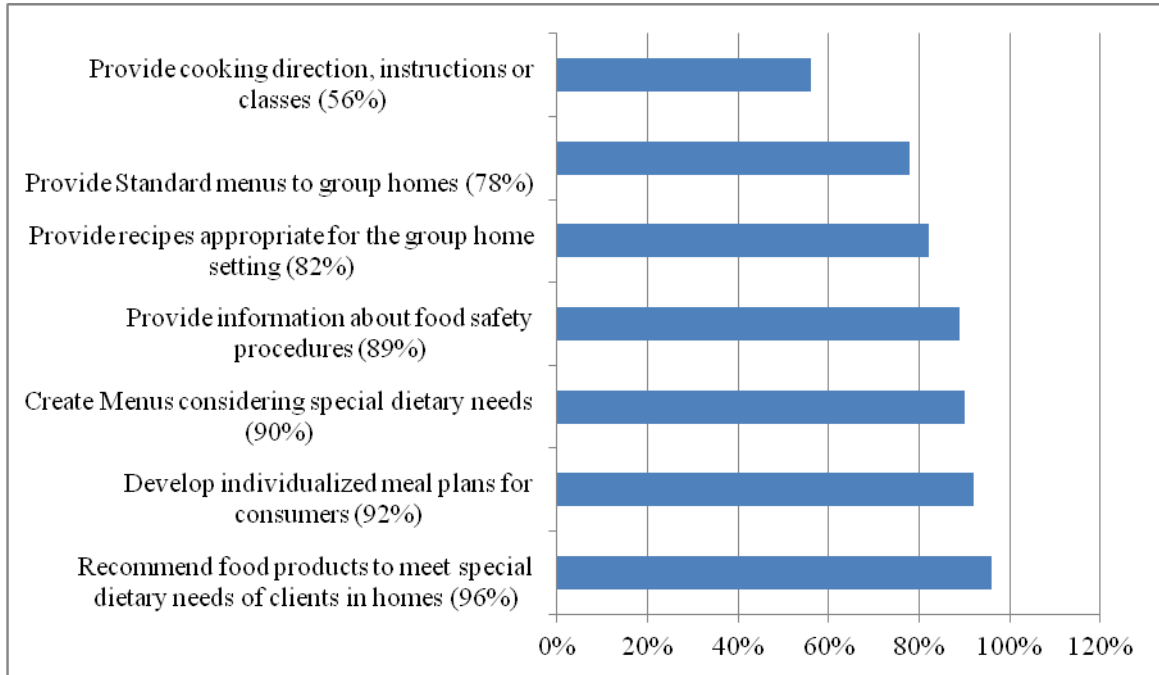
The residential services providers on whom the respondents were reporting operated a mean of 27 group homes (median = 12 homes). The homes were located in 19 states. Forty seven percent were located in urban or mostly urban areas, 14% in rural or mostly rural areas, and 39% in mixed areas. That is, some of the provider's homes were in rural and some in urban areas.

### Services Data

Table 1 shows the seven items in the food services category and the percentage of RD respondents who indicated that they provide that service.

Table 2 shows the five items for the clinical services category and the percentage of RD respondents who indicated that they provide that service.

**Table 1. Food-related Services Provided**



**Table 2. Clinical Services Provided**

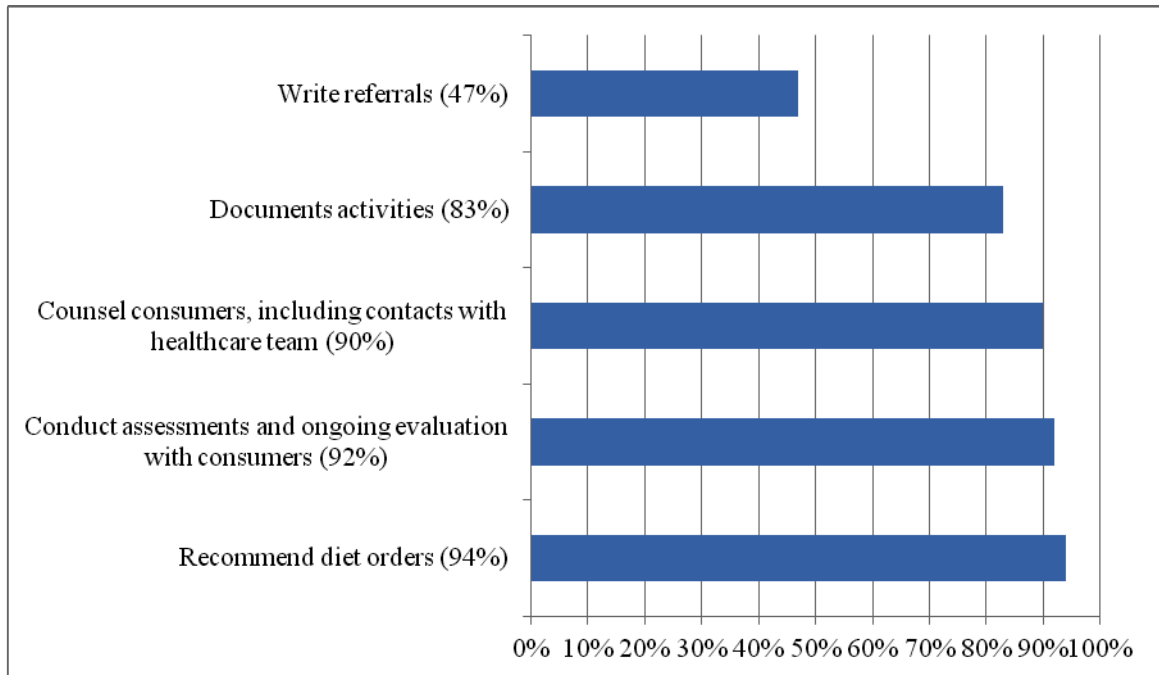


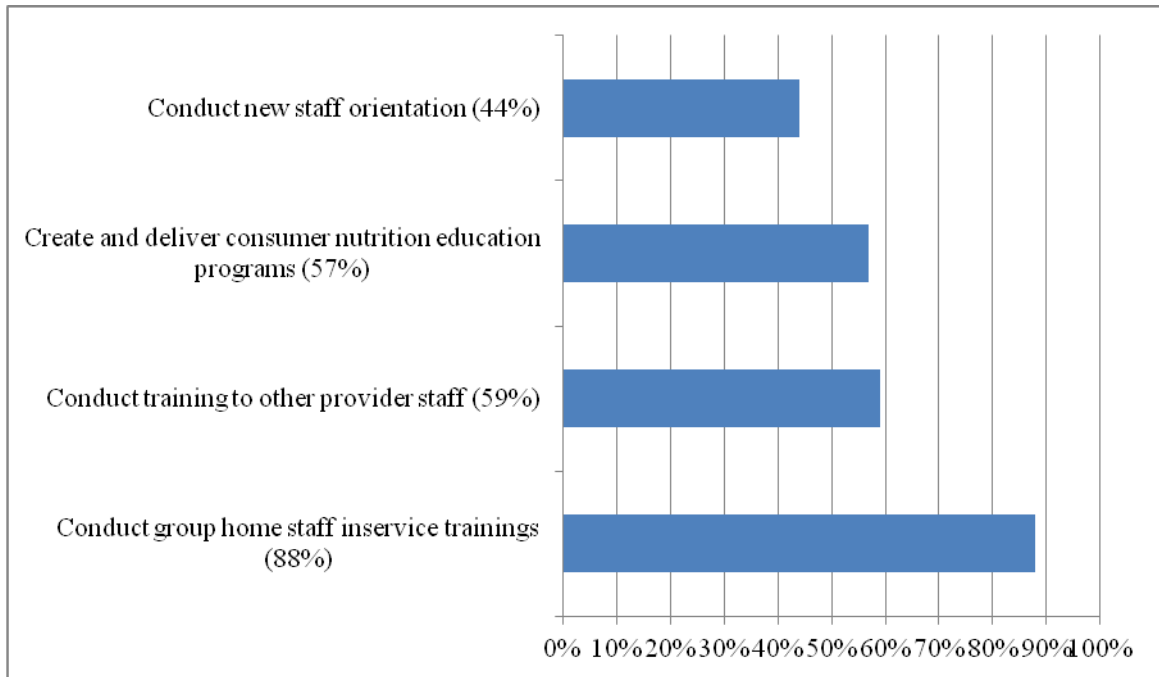
Table 3 shows the four items for the training services category and the percentage of RD respondents who indicated that they provide that service.

Table 4 shows the five items for the monitoring services category and the percentage of RD respondents who indicated that they provide that service.

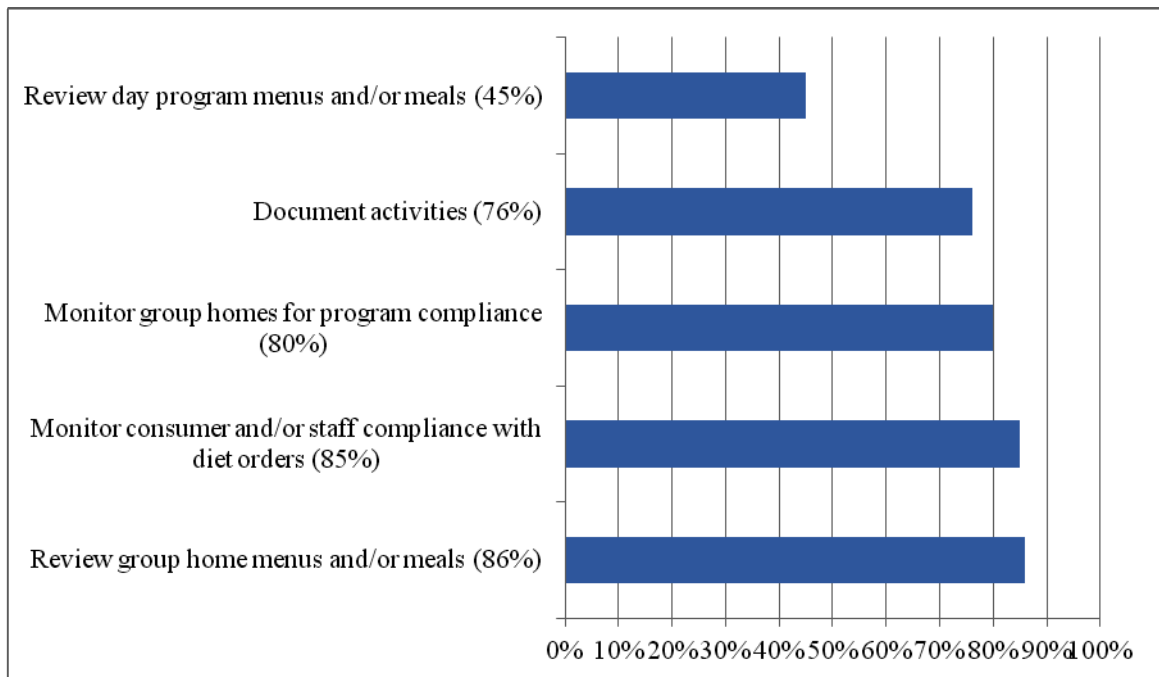
Table 5 shows the five items for the administrative activities category and the percentage of RD respondents who indicated that they provide that service.

Among the top five activities that are represented in the services that RDs provide for group homes were: recommending food products to meet special dietary needs (95.9% of RDs provide this service), developing individualized meal plans for consumers (91.7%), creating menus considering

**Table 3. Training Services Provided**



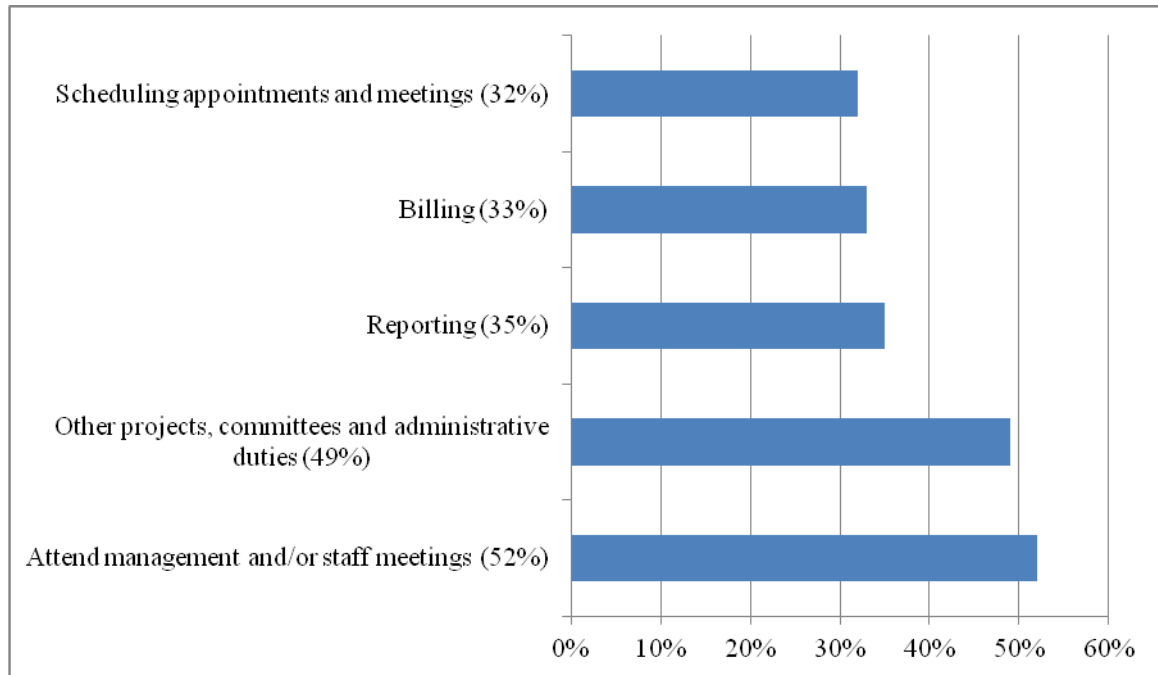
**Table 4. Monitoring Services Provided**



special dietary needs (89.6%), recommending diet orders (93.9%), conducting assessments and ongoing evaluation with consumers (91.8%).

The smallest percentage of respondents reported providing these services: scheduling appointments and meetings (31.9% of RDs provide this service), billing (32.6%), reporting (34.8%), conducting new staff orientation (43.8%), and reviewing day program menus and/or meals (44.9%),

RDs reported the approximate number of hours they spend on each of the 26 activities, if they indicated they performed those activities at all (Table 6). It was impossible to break out the number of hours in each activity per group home because some activities for some RDs served more than one home (e.g. providing standardized menus). Instead, the activities were ranked by the total number of hours that RDs indicated they spent per month on them, averaged over the past 12 months. The average time spent on the activity is

**Table 5. Administrative Services Provided**

the weighted average for the given number of respondents and the number of hours reported, using the midpoint of the categorical range. The average time spent on the activity was computed by take the sum of the products of the midpoint of each time range multiplied by the number of respondents for that time range, then dividing by the total number of respondents for that activity. {For example, the average time spent on the Clinical Services activity *conduct assessments and ongoing evaluation with consumers* was calculated finding the sum of the values: 1hr/mo\*1 response+3 hr/mo\*17 responses+7.5 hr/mo\*4 responses+12.5 hr/mo\*11 responses+15 hr/mo\*12 responses and dividing by the number of responses (45)}

Table 7 collapses the 26 specific activities back into their five categories and shows that the RDs who reported doing the given activity at all, spent the most time on food service and the least amount of time on training.

## DISCUSSION AND CONCLUSION

This was a preliminary survey to characterize the nutrition services delivered in community based group homes and the registered dietitians performing them. It is the first survey of its kind to examine the activities related to nutrition offered by nutrition professionals to this vulnerable population. The survey and its results set the stage for additional research into how the services provided affect the food systems in the homes and the residents' dietary intake and their health.

This study was one part of the answer to the question, "what dietetics services are being provided to adults with IDD, a group who has a large number of nutrition related secondary conditions, who live in the community?" The implication will be for which services and how much service is advisable for this population to manage their nutrition related

conditions and to manage the food systems in these settings. Other studies will be necessary to understand the breadth of availability of dietetics services in group homes nationwide.

When a residential services provider commits to utilizing nutrition services, what services are delivered? The answer appears to be that the RD is hired to conduct nutritional assessments of residents and to provide direct service in the form of menus for the homes and/or clinical evaluation and compliance monitoring of therapeutic diets.

It should be noted that this survey was sent to the Behavioral Health Nutrition Dietary Practice Group of the AND, and the results reflect the use of the AND professional resources for information, help, and continuing education. This limited the sample and probably underrepresents RDs who have a small practice with this population or who do not identify themselves strongly with this part of their practice. Also, it is possible that some group homes and residential services providers use nutrition professionals who are not either registered dietitians or active members of the BHN DPG and that those nutrition services are systematically different than what these RD respondents provide.

The hours associated with the tasks and services that these RDs provided to group homes should not be understood to represent the activities of all RDs. If so, the numbers would be vastly overinflated, when in fact the use of dietetics services in community based IDD group homes appears to be very low overall.

Similarly, many group homes (it is not clear how many due to lack of research) do not have dietetic services available at all. Therefore it is not appropriate to conclude that the average hours that these RDs devoted to the activities in this study are typical across all U.S. group homes.

**Table 6. Average Number of Hours Spent on Services Tasks**

Rank	Activity	Average Time Spent on Task Per Month (Hours)
1	Conduct assessments and ongoing evaluation with consumers	8.9
2	Create Menus considering special dietary needs	4.4
3	Document activities-Clinical	4.1
4	Counsel consumers, including contacts with healthcare team	3.7
5-6	Monitor consumer and/or staff compliance with diet orders	3.6
5-6	Develop individualized meal plans for consumers	3.6
7	Review group home menus and/or meals	3.4
8-10	Document activities-Monitoring	3.3
8-10	Monitor group homes for program compliance	3.3
8-10	Scheduling appointments and meetings	3.3
11-13	Attend management and/or staff meetings	3.1
11-13	Reporting	3.1
11-13	Conduct group home staff in-service trainings	3.1
14-16	Provide information about food safety procedures	3.0
14-16	Provide recipes appropriate for the group home setting	3.0
14-16	Provide standard menus to group homes	3.0
17-19	Provide cooking direction, instructions or classes	2.9
17-19	Recommend diet orders	2.9
17-19	Create and deliver consumer nutrition education programs	2.9
20-21	Recommend food products to meet special dietary needs of clients in homes	2.8
20-21	Conduct new staff orientation	2.8
22-23	Review day program menus and/or meals	2.6
22-23	Other projects, committees and administrative duties	2.6
24	Conduct training to other provider staff	2.1
25	Billing	1.7
26	Write referrals	1.3

Through this survey we discovered that there is a wide variety of arrangements that RDs make to deliver nutrition

**Table 7. Average Number of Hours Spent on Services by Category**

Task	Time (Average Hours Per Month Per RD)
Food services	21.7
Clinical services	20.9
Training	10.9
Monitoring	16.2
Administrative	13.8

services to this diverse audience of residential services providers. This, in part, may reflect the range of food service provision within residential services, even within the broad category of “community-based group homes.” Dietetics services and food service guidance are regulated by each state. Eleven states require the use of registered dietitians and an additional five states require a nutrition professional to supervise the food service or particular aspects of it. Therefore, while hiring a dietitian to assess the dietary needs of residents or provide food or clinical services may be best practice among the nutrition profession, it is not expected for group home licensure for the majority of states. A residential services provider who does procure dietetics services is going above and beyond what is required in licensing guidelines and what is being reimbursed through typical funding channels for these residential settings.

Initially, we asked in the survey for respondents to quantify the time allotted to each of the service activities. Analysis proved impossible with the current survey. Because of the large range of number of homes operated by different providers (1-350+ homes) and consequently served by a single RD, this was not a simple question for analysis. In some cases, an RD developed menus that were used by dozens of homes and in other cases the menu was made for one home. When we used a simple formula to divide the RD's time on menu planning across the homes benefiting from it, the results did not reflect the reality of the service provision.

However, knowing this complicating factor, we will be able to design future surveys, using the results of this one, to begin to analyze the time-related elements to nutrition services in this setting, including possibly making recommendations for best use of RD services

Adults with IDD represent a nutritionally vulnerable population. The fact that over half of the RDs who responded to the survey had received no additional training in this specialty or with adults with IDD beyond the standard dietetics curriculum is problematic. The BHN DPG has some resources available to those RDs who are members [26], but does not direct a specialty area in nutrition for disability. This survey indicates a strong need for additional training for the nation's nutrition services providers who wish to assess, counsel, educate and prescribe diets to independent adults with disabilities.

## CONFLICT OF INTEREST

The authors confirm that this article content has no conflicts of interest.

## ACKNOWLEDGEMENTS

Declared none.

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