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An Investigation of Current Practices in Management  
Rotations in Dietetic Internships

Emily Vaterlaus

A thesis submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of  
Master of Science

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April 2012

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## ABSTRACT

### An Investigation of Current Practices in Management Rotations in Dietetic Internships

Emily Vaterlaus  
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Master of Science

**Background:** Leadership and management skills are critical to moving the dietetics profession forward; acquisition of those skills begins in the Dietetic Internship (DI). This study examined DI program components related to higher mean scores on the Foodservice and Management domain of the Registration Examination for Dietitians and compared Program Director and Preceptor perceptions of management rotation structure.

**Methods:** All 242 DI Program Directors (excluding sponsoring institution) received a 47-item electronic questionnaire. Directors provided contact information for up to three DI management rotation primary preceptors. Preceptors received a 35-item electronic questionnaire regarding their perception of interns' management skill development. Analyses included Stepwise regression, Fisher's Exact test, Pearson's correlation, and Chi-squared.

**Results:** 125 Program Directors (51%) and 63 of 100 preceptors (63%) responded. Greater time spent working with front line staff rather than upper management levels was associated with lower Foodservice and Management domain scores on the RD Examination, but program emphasis/concentration and length of time in management rotations were not related. Directors and Preceptors have similar perceptions of most aspects of management rotations, but they perceive barriers to management experiences differently. More Preceptors than Directors felt sensitive issues like budget and personnel, students' attitude and knowledge base, and inadequate time frame interfered with "appropriate exposure to practical management" ( $p < 0.01$ ).

**Conclusion:** Structuring management rotations to spend more time working at upper levels of management and addressing preceptors' perceptions of barriers to meaningful experiences should increase the effectiveness of management skill acquisition and attitudes toward management among interns.

**Keywords:** dietetic internships, management, leadership, skill development

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# MANUSCRIPT

Prepared for the Journal of the Academy of Nutrition and Dietetics

## ABSTRACT

**Background:** Leadership and management skills are critical to moving the dietetics profession forward; acquisition of those skills begins in the Dietetic Internship (DI). This study examined DI program components related to higher mean scores on the Foodservice and Management domain of the Registration Examination for Dietitians and compared Program Director and Preceptor perceptions of management rotation structure.

**Methods:** All 242 DI Program Directors (excluding sponsoring institution) received a 47-item electronic questionnaire. Directors provided contact information for up to three DI management rotation primary preceptors. Preceptors received a 35-item electronic questionnaire regarding their perception of interns' management skill development. Analyses included Stepwise regression, Fisher's Exact test, Pearson's correlation, and Chi-squared.

**Results:** 125 Program Directors (51%) and 63 of 100 preceptors (63%) responded. Greater time spent working with front line staff rather than upper management levels was associated with lower Foodservice and Management domain scores on the RD Examination, but program emphasis/concentration and length of time in management rotations were not related. Directors and Preceptors have similar perceptions of most aspects of management rotations, but they perceive barriers to management experiences differently. More Preceptors than Directors felt sensitive issues like budget and personnel, students' attitude and knowledge base, and inadequate time frame interfered with "appropriate exposure to practical management" ( $p < 0.01$ ).

**Conclusion:** Structuring management rotations to spend more time working at upper levels of management and addressing preceptors' perceptions of barriers to meaningful experiences should increase the effectiveness of management skill acquisition and attitudes toward management among interns.

**Key Words:** dietetic internships, management, leadership, skill development

## INTRODUCTION

In today's complex social and healthcare climate, the Academy of Nutrition and Dietetics (the Academy) is calling for more Registered Dietitians (RD) to develop and demonstrate management and leadership skills (1-4). Management is the integration of unrelated resources into a system to accomplish predetermined organizational objectives. It involves planning, organizing, staffing, directing/leading and controlling to arrive at the organization's desired goals (5). Though leadership and management vary by definition, leadership skills should act in concert with management skills to meet desired outcomes (6,7). Leadership "is about managing energy, first in yourself and then in those around you (7)."

In 2003 and again in 2010, the Academy's House of Delegates' Mega Issues focused on demonstrating that management/leadership skills are relevant for dietitians regardless of practice area (8). Gould and Canter (3) made a call to educators and preceptors to generate enthusiasm for management equal to that for clinical practice in the educational process (3). Cluskey et al. (1) have indicated that management skills are what will transform dietitians into the "change agents" that are needed to advance the profession. Academy Presidents Pavlinac, Rodriguez, and Escott-Stump have each boldly appealed for the development of leadership throughout the profession (4,9,10).

To be an entry-level RD, a composite skill set encompassing clinical nutrition, foodservice management, and community nutrition is necessary, and the Academy has clarified its stand that management and leadership skills are to be woven through each aspect of the profession (3,4,8,9). Barr et al. (11) identified the supervised practice experience as a major contributor to the development of ability, confidence, knowledge, skills, and competence as an

RD. The 2008 Accreditation Council for Education in Nutrition and Dietetics (ACEND) Eligibility Requirements and Accreditation Standards (ERAS) included an increased emphasis on management and leadership proficiency over the 2002 ERAS (12,13). The 2008 management/leadership competencies are broader and thus more easily met in practice areas beyond foodservice alone. Dietetic Internship (DI) Program Directors rely heavily on preceptors to ensure that the interns have opportunities to complete the learning competencies throughout the rotations. The DI is responsible for training new preceptors regarding the DI's expectations for the program, communicating preceptor expectations to interns, evaluating interns, and providing appropriate feedback to interns (14). Based on their evaluation of the program and intern feedback, Program Directors are required by ACEND to provide ongoing training to preceptors (12).

Dreyfus and Dreyfus (15) investigated the process of skill acquisition and identified five stages that individuals go through to develop skills from the novice to expert levels. Didactic education provides a foundation for supervised practice. Once in supervised practice, an intern has the opportunity to apply knowledge with the assistance of a preceptor who assists him or her in gaining relevant experience that yields what Dreyfus and Dreyfus (15) term "competency" as an RD. A dietitian becomes an expert only through further focused practice over time (16).

Research regarding current practice of management/leadership skill development for dietetic interns has not been identified. The purpose of this study was to explore current practice in management rotations, to investigate how DIs meet the management/leadership competencies, to identify factors in DI program structure related to a higher mean score on the Foodservice and Management domain of the Registration Examination for Dietitians, and to compare DI program

director and preceptor perception of the components of DI program structure and the management rotation experience.

## **MATERIALS AND METHODS**

All 242 Directors of Dietetic Internships accredited by ACEND (excluding sponsoring institution) received a 47-item questionnaire via email that surveyed information relative to program demographics and structure. The questionnaire was developed by researchers and piloted using Coordinated Program Directors. Program Directors provided names and contact information for up to three primary preceptors from management/leadership rotations. A 35-item questionnaire was sent to 100 primary management preceptors to investigate their perception of interns' management skill development and DI program structure. The questionnaire was piloted using the sponsoring institution's management preceptors. The Institutional Review Board approved the study protocol and all participants indicated informed consent by completing the questionnaires.

Results were analyzed using SAS (version 9.2, Cary, NC) and R Software (version 2010, Vienna, Austria). Program Directors provided mean scores on the Foodservice and Management domain of the Registration Examination for Dietitians from 2006-2010. Overall mean scores were calculated and a model using stepwise regression was used to determine relationships between higher mean scores and various structural components of DIs (DI's concentration/emphasis, multiple exposures to competencies at various rotations, time requirement for management/leadership rotations, and allocation of intern time at rotation).

To determine Program Director and Preceptor perception differences regarding how interns allocate their time during a management rotation, a two sample t-test was performed.

Fisher's Exact Permutation test showed perception differences on the level of communication between Program Directors. Finally, Pearson's Chi-squared test revealed perception differences regarding possible roadblocks for providing interns with appropriate exposure to practical management experiences.

## **RESULTS**

There were 125 Program Director respondents (response rate 51%) and 63 Preceptor respondents (63% response rate). The majority of Program Directors (35%) have been in their current position 11+ years, hold Master's Degrees (70%), and all are Registered Dietitians as required by ACEND (2). The majority of Preceptors have acted as management/leadership Preceptors for 11+ years (24 of 61), hold Master's Degrees (31 of 62), and are Registered Dietitians (55 of 61).

Table 1 shows characteristics of the Dietetic Internship (DI) programs. Five years of Foodservice and Management domain mean scores for DIs were obtained and ranged from 11.38 to 19.78 on a one to 30 scale. The average score from participating DIs was 16.21. All DIs either have transitioned or are transitioning from 2002 ERAS to 2008 ERAS as required by ACEND. The majority of programs (82%) have converted to the 2008 ERAS, and of those, 51% adopted them in 2009. For the programs functioning according to the 2008 ERAS, 52% indicated that they have additional and/or different management rotations included in their programs due to competency requirement changes. The majority of programs (54%) were sponsored by a university and 34% were housed in a healthcare facility.

Programs were asked to identify their concentration (2008 Standards) or emphasis (2002 Standards). Forty-five percent had a clinical/Medical Nutrition Therapy (MNT) concentration,

while only 8% reported a management/administrative concentration. Several didactic components were used to support management rotations; the majority of programs (81%) used projects, 74% used assignments, and 26% used a course (or courses).

Program Directors reported total hours the DI allocated to management/leadership rotations and how much of that time was spent specifically focused on foodservice management (the traditional management rotation). Responses spanned from 12 to 600 hours; the most common range reported was 200-299 hours.

Fifty-six percent of Program Directors indicated that they trained preceptors through informal email/telephone conversations and 51% used written materials (binders, pamphlets, handbooks). Seven percent of Program Directors reported that no training was provided to preceptors.

Fifty-five Program Directors provided open-ended responses of their insight into improving management/leadership rotations. Program Directors reported that they would like to see more structure, time allotted, upper level management exposure, leadership opportunity, intern involvement in department, focus on the big picture, experience with budgets and human resource management, and completion of “real projects” and “hands on” opportunities. It was also suggested that DPDs need to stimulate more excitement for management in the undergraduate education and that management concepts beyond foodservice should be introduced to undergraduates.

Table 2 shows in which rotations Program Directors intend for their interns to meet management/leadership competencies. Program Directors ranked up to three rotations for each management/leadership-related competency of the ERAS based on the guidelines under which

the program was functioning (2002 or 2008). For both 2002 and 2008 ERAS, the most frequently used sites were hospital foodservice (34%, 28%), hospital clinical (13%, 23%), and community/public health (13%, 19%) sites. Though changes were noted in rotation sites between programs using the 2002 and 2008 ERAS, the differences were not statistically significant.

From a list of possible complaints that interns might have regarding Foodservice Management rotations specifically, Program Directors reported that lack of task structure and lack of intern interest were most common (both at 33%). Twenty-nine percent of respondents selected “other” and the additional comments included that managers were too busy, not skilled as preceptors, disengaged, or unprofessional.

Most Preceptors reported that they evaluated management interns as needed throughout the rotation (18 of 56) or only at its completion (15 of 56). Ninety-six percent of Program Director respondents reported that interns completed a site/preceptor evaluation upon completion of an administrative/ management rotation, and 36 of 82 stated the feedback was provided to preceptors following each academic year.

Table 3 identifies some of the preceptors’ perceptions of the management/leadership rotations and the preceptor experience. The majority of preceptors (33 of 51) reported that there were no major differences in objectives or expectations between DI programs if they worked with interns from more than one program. Preceptors reported a mean total of 43% of their work day being spent directly with an intern, with individual preceptor responses ranging from 10-100% of the work day.

Preceptors were also asked about their perception of the preceptor role. Preceptors reported being trained annually (24 of 56) or as needed with program changes (24 of 56). The majority of preceptors (44 of 55) felt adequately trained by the DI to perform as management preceptors and the remainder reported feeling partially trained. Similarly, 57 of 58 Preceptors responded that they strongly agreed or agreed with the statement, “In general, I *understand* my role as preceptor.” All preceptors either agreed or strongly agreed to the statement, “In general, I *enjoy* my roles as preceptor.” Finally, 50 of 58 Preceptors agreed or strongly agreed that working with interns in management rotations helped them in their role as a manager/leader.

Table 4 shows perception differences between Program Directors and Preceptors. Both Program Directors and Preceptors were asked to estimate the allocation of intern time during management/leadership rotations. Program Directors and Preceptors reported relatively similar distributions of time (percent of time spent with upper level managers, managers, supervisors, front line staff, completing projects, and other activities). Both groups estimated that the greatest amount of time per intern day was allocated to completing projects (Program Directors estimated 26% and Preceptors estimated 31% of an intern’s day). The next highest allocation reported by both groups was spending time with managers (22%, 21% respectively).

Program Directors and Preceptors disagree that their level of intercommunication is adequate (P value = 0.01). More Program Directors are dissatisfied with the level of communication than are Preceptors.

Both groups were asked to identify roadblocks to providing interns with appropriate exposure to practical management experience. The perceptions of the groups varied significantly (P value < 0.01). Program Directors deemed sensitivity issues (budgets, personnel) (29%),



students' attitude/interest (20%), and reliance on preceptor (19%) to be the greatest roadblocks. Preceptors rated inadequate time frame (27 of 107 responses), students' attitude/interest (24 of 107 responses), sensitivity issues (budget, personnel) (23 of 107 responses), and student's conceptual base (20 of 107 responses) to be the greatest roadblocks. Multiple responses were allowed, and the Pearson's Chi-squared test does not identify which individual perceptions were different.

Finally, mean scores from the Foodservice and Management domain of the Registration Examination for Dietitians were analyzed in a model with the program concentrations/emphases, data regarding multiple exposures to management/leadership competencies, hourly requirement for management rotations, and allocation of intern time during a management rotation. The only variable that has a statistically significant relationship with domain scores was the amount of time that interns spent (based on the Program Director's estimation) working with front line staff. Greater time spent working with front line staff was associated with lower Foodservice and Management domain scores on the Registration Examination for Dietitians.

## **DISCUSSION**

The Academy has made a clear effort to improve the management/leadership development of dietetics professionals (8,13), and the results of this study show that 52% of Program Directors have additional and/or different management rotations included in their DIs due to the transition to 2008 ERAS. The newer ERAS include fewer but broader competency statements that allow for the skills to be addressed in a variety of practice settings (13).

Some positive findings about management/leadership preceptors are that they all agreed or strongly agreed that they enjoy precepting. Fifty-seven of 58 agreed or strongly agreed that

they understand their role, 44 of 55 felt adequately trained, and 50 of 58 agreed or strongly agreed that precepting helps them in their role as a manager. With recent efforts to increase the number of preceptors available for students/interns, this data supports what past Academy President Judith Rodriguez (17) wrote, “When we serve as preceptors we are challenged to keep our knowledge current, and teaching someone else reinforces our own knowledge.” She also stated, “The more we are servant leaders, the more we sharpen our skills (17).”

If educators and preceptors want to promote management/leadership skill development for interns, it is valuable to know that increased time spent working alongside front line staff rather than with upper management levels is associated with lower scores on the Management domain of the Registration Examination for Dietitians. Knowing this, Program Directors have a responsibility to train preceptors as to how an intern’s time should be spent during a rotation. Higher level skills like planning, organizing, staffing, directing/leading, and controlling can be learned in each practice setting (including foodservice), however the allocation of time spent has an impact on the purpose of the experience. Intern time is better spent working with and observing supervisors, managers, and executives or working on projects rather than working alongside front line staff.

It is disconcerting that 7% of Program Directors reported that no training was provided to preceptors. Program Directors have the responsibility to provide “ongoing training based on evaluation by the program director and feedback from interns (12).” Program Directors would like to see interns having more upper level management exposure, leadership opportunities, department involvement, and experience with budgets and human resources during management rotations. Training and clarifying expectations with preceptors might lead to desired changes.

Also, training may facilitate more collaboration between Program Directors and preceptors, allowing for more consistent feedback and communication.

It is heartening to discover that regardless of concentration/emphasis, interns are demonstrating an understanding of dietetics management on the Registration Examination for Dietitians. In this study, 45% of programs had a clinical/MNT concentration, 21% had a community/public health concentration and only 8% had an administration/management concentration. This finding is consistent with and supportive of the vision that “management principles transcend disciplines and practice areas (3).” It also indicates that the ACEND foundation knowledge and competencies are preparing interns regardless of DI concentration area (18).

There was an expectation that Program Directors and Preceptors would have perception differences regarding the management/leadership rotation experience. The data indicate perception differences on several points; a major one being that a smaller percent of Program Directors than Preceptors identified key roadblocks for interns having appropriate exposure to practical management. Preceptors rated inadequate time frame, students’ attitude/interest, and sensitivity issues (budget, personnel) as the greatest challenges. Preceptors have daily interaction with interns and guide their skill development during rotations. Due to their proximity, Preceptors may be more aware of barriers than are Program Directors. Program Directors might benefit from seeking more feedback from preceptors regarding challenges at specific rotation sites to ensure that interns have the opportunity to achieve desired outcomes.

Additionally, Program Directors reported that the most frequent intern complaints regarding foodservice management rotations were lack of task structure and lack of intern

interest. Foodservice management rotations were specifically addressed in this research because historically they have been the rotations where management competencies were met. However, most students do not enter dietetics with a foodservice management focus. It may be to the DIs' advantage to attend to the roadblocks that preceptors recognize and the complaints that interns have that may be inhibiting the desired impact of a rotation. Addressing barriers is critical for assuring continued improvement in the development of management/leadership competencies. A possible strategy for improvement may include extending the hourly requirements of management rotations. The DI hours dedicated to management/leadership competencies have a very broad range (12-600 hours). Although time spent in management rotations was not related to higher mean scores on the Foodservice and Management domain of the Registration Examination for Dietitians, more time may provide an environment that fosters increased trust between preceptors and interns. Increased trust could potentially allow interns more exposure to sensitive topics (budget and personnel issues) and other more interesting and challenging aspects of management.

Program Directors could coordinate with preceptors to develop simulations, use masked financial data from industry, or create exercises from actual human resource management incidents to provide safer/modified experiences with the more sensitive issues that preceptors see as roadblocks. In addition, DPDs should respond to the call for advocating an early positive perception of management and to generating enthusiasm for management equal to that for clinical practice in the educational process. This effort may be most effective method for improving conceptual base and student interest (1,3). Further, DIs may consider using supplementary courses, simulations, projects, and seminars to strengthen interns' conceptual base of management/leadership principles throughout the duration of the DI. Training and

coordinating with preceptors to create a syllabus or general task list for interns may assist interns in feeling more secure with the lack of task structure that accompanies many management rotations and ensure that preceptors understand expectations.

The data show that Program Directors and Preceptors agree on how interns spend their time while in management/leadership rotations. Happily, this shared perception shows that Program Directors and Preceptors are both aware of the general day-to-day happenings in a rotation. This also demonstrates some evidence of appropriate communication and clarity of expectations.

## **CONCLUSIONS**

The determination that a program's concentration does not impact mean scores for the Foodservice and Management domain of the Registration Examination for Dietitians confirms that the foundation knowledge and competencies are fostering the development of competent general skills as they were designed to do (18).

There have been historic challenges with the development of management and leadership skills in the profession of dietetics (1,3,8). While foodservice management is still an extremely important part of a student dietitian's curriculum and experience, it is not a common focus for the majority of students/interns. Students may discount management entirely if their only exposure to it is with foodservice. Dreyfus and Dreyfus (15) indicated that management situations have innumerable relevant facts and features involved which makes it difficult to evaluate how each element acts together and influences other elements. In order to develop a high management skill level, concrete experiences in real situations are essential (15). If interns discount the foundation of management skill development, they will not seek opportunities to

acquire the higher level skills; this not only affects the level of professional progress for themselves, but also the profession. The efforts of the Academy, the HOD, and ACEND to shift management into its rightful role as a key piece of each practice area, including foodservice management, seem to be effective (52% of Program Directors reported changing/adjusting rotations used to meet these competencies with implementation of 2008 ERAS). Foodservice management continues to be very important part of the profession and should not be excluded from training rotations; the relevance of management and leadership principles and skills simply needs to be expanded. The Academy has made it very clear that career success is achieved when dietitians “internalize a management and leadership mindset (8).” With a continued push from the HOD and ACEND, RDs may see exponential growth in management/leadership capabilities and as a result, put the profession in an even better situation to influence families, communities, healthcare, and industry.

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## TABLES

<b>Table 1. Dietetic Internship (DI) Program Characteristics</b>		
<b>Characteristics</b>	<b>n<sup>a</sup></b>	<b>%</b>
<b>Mean Scaled Score (5 year average) on Foodservice and Management domain of Registration Examination for Dietitians</b>		
11-13.99	5	7.5
14-14.99	13	19.4
15-15.99	12	17.9
16-16.99	17	25.4
17-17.99	11	16.4
18-19.99	9	13.4
<b>Eligibility Requirements and Accreditation Standards (ERAS)</b>		
2002	22	17.9
2008	101	82.1
<b>If 2008 ERAS, adopted in</b>		
2009	51	51.0
2010	43	43.0
2011	6	6.0
<b>Has DI broadened management and leadership exposure through additional/different rotations with the adoption of 2008 ERAS?</b>		
Yes	52	52.0
No	48	48.0
<b>The DI is</b>		
Local	108	90.0
Local and Distance available	10	8.0
Distance	2	1.6
<b>Number of Interns Annually</b>		
2-9 Interns	50	41.7
10-15 Interns	45	38.3
16-60 Interns	25	20.8
<b>Internship Sponsoring Institution</b>		
University	69	54.3
Healthcare Facility	43	33.9
Government Agency	12	9.5
Contract Service Company	1	0.8
Other	2	1.6
<b>DI Concentrations/Emphases Categories<sup>b</sup></b>		
Clinical/Medical Nutrition Therapy (MNT)	62	45.2
Community/Public Health	29	21.2
Wellness/Education	15	10.9
Management/Administrative	11	8.0
General	10	7.3
Research	4	2.9
Other	6	4.4
<b>Total hours the DI allocated to management/leadership rotations</b>		
<100 hours	12	16.7
100-199 hours	14	19.4
200-299 hours	15	20.8
300-399 hours	17	23.6
>400 hours	14	19.4

<b>Table 1 continued. Dietetic Internship (DI) Program Characteristics</b>		
<b>Characteristics</b>	<b>n<sup>a</sup></b>	<b>%</b>
<b>Of total management/leadership hours, hours spent specifically in foodservice rotations</b>		
<100 hours	12	16.4
100-199 hours	11	15.1
200-299 hours	27	37.0
300-399 hours	16	21.9
>400 hours	7	9.6
<b>Total weeks allocated to management/leadership rotations</b>		
0 weeks	5	7.1
1-5 weeks	22	31.4
6-10 weeks	30	42.9
11-15 weeks	10	14.3
> 15 weeks	3	4.3
<b>Of total management/leadership weeks, weeks spent specifically in foodservice rotations</b>		
0 weeks	3	4.2
1-5 weeks	20	27.8
6-10 weeks	38	52.8
11-15 weeks	9	12.5
> 15 weeks	2	2.8
<b>Intern's most frequent complaints regarding Foodservice Management Rotations<sup>b</sup></b>		
Lack of interest	27	33.0
Lack of task structure	27	33.0
Time spent with administration/managers	21	26.0
Time spent in production	18	22.0
Time spent in meal service	8	10.0
No complaints	8	10.0
Time spent in dish room	5	6.0
Lack of prior exposure	6	7.0
Other	24	29.0
<b>Frequency that the DI formally updates/retrains management preceptors</b>		
As needed with program changes	42	52.0
Annually	27	33.0
As needed based on rotation's tenure in facility	18	22.0
Never	9	11.0
Every 2-4 years	8	10.0
Every 5+ years	0	0.0
<b>DI Training Methods for Preceptors</b>		
Informal phone/email conversations	56	68.0
Written materials (binders, pamphlets, handbook)	51	62.0
Live one-on-one training	33	40.0
Live group training	25	30.0
Preceptor link on DI website	14	17.0
Webinars/online modules created by DI	7	9.0
No training is provided	7	9.0
Other	9	11.0

<b>Table 1 continued. Dietetic Internship (DI) Program Characteristics</b>		
<b>Characteristics</b>	<b>n<sup>a</sup></b>	<b>%</b>
<b>Frequency of DI discontinuing a management site/ preceptor because experience was not meeting DI's expectations and/or ACEND standards</b>		
Never	32	40.0
Rarely	29	36.3
Sometimes	18	22.5
Frequently	1	1.3
<b>"It is challenging to schedule trainings for management preceptors"</b>		
Strongly Agree	31	38.2
Agree	19	23.5
Somewhat Agree	14	17.3
Neither Agree nor Disagree	7	8.6
Disagree	6	7.4
Strongly Disagree	4	4.9
<b>"Compared to clinical or community preceptor training, it is difficult to find appropriate training methods for management preceptors"</b>		
Strongly Agree	15	18.5
Agree	14	17.3
Somewhat Agree	15	18.5
Neither Agree nor Disagree	15	18.5
Disagree	14	17.3
Strongly Disagree	8	9.9
<sup>a</sup> n varies due to non-response		
<sup>b</sup> percent may be greater than 100 due to multiple responses		

<b>Table 2. Rotations used for meeting management/leadership competencies</b>						
	<b>2008 ERAS</b>		<b>2002 ERAS</b>		<b>2008 &amp; 2002 ERAS</b>	
	<b>Frequency</b>	<b>%</b>	<b>Frequency</b>	<b>%</b>	<b>Frequency</b>	<b>%</b>
Foodservice – Hospital	697	27.8	216	33.6	913	29.0
Clinical – Hospital	579	23.1	88	13.7	667	21.2
Community/Public Health	468	18.7	84	13.1	552	17.5
Foodservice – School	162	6.5	67	10.4	229	7.3
Foodservice – Other	121	4.8	35	5.4	156	5.0
Foodservice – Extended Care	93	3.7	24	3.7	117	3.7
Non-hospital Outpatient/Counseling	76	3.0	37	5.8	113	3.6
Leadership	70	2.8	21	3.3	91	2.9
Other	65	2.6	24	3.7	89	2.8
Clinical – Extended Care	61	2.4	20	3.1	81	2.6
Didactic	57	2.3	20	3.1	77	2.4
Foodservice – College	42	1.7	2	0.3	44	1.4
Simulations	18	0.7	5	0.8	23	0.7

**Table 3. Preceptor Perceptions of Management/Leadership Rotations**

<b>Characteristics</b>	<b>n<sup>a</sup></b>	<b>%</b>
<b>If preceptors work with more than one program, there are major differences in objectives/expectations between programs</b>		
Yes	8	15.7
No	33	64.7
I don't know	10	19.6
<b>Percent of preceptor's day spent working directly with an intern</b>		
< 25%	15	24.2
25-49%	20	32.3
50-74%	20	32.3
> 75%	7	11.2
<b>Inclusion of precepting interns in job description</b>		
Yes	47	77.1
No	14	23.0
<b>Do preceptors feel adequately trained by the DI to perform as management preceptors</b>		
Yes	44	80.0
Partially	11	20.0
No	0	0.0
<b>DI formally updates/retrains management preceptors</b>		
Annually	24	42.9
As needed with program changes	24	42.9
Never	5	8.9
Every 2-4 years	3	5.4
Every 5+ years	0	0.0
<b>In general, I understand my role as preceptor</b>		
Strongly Agree	39	67.2
Agree	18	31.0
Somewhat Agree	0	0.0
Neither Agree nor Disagree	1	1.7
Disagree	0	0.0
Strongly Disagree	0	0.0
<b>In general, I enjoy my role as preceptor</b>		
Strongly Agree	38	65.5
Agree	20	34.5
Somewhat Agree	0	0.0
Neither Agree nor Disagree	0	0.0
Disagree	0	0.0
Strongly Disagree	0	0.0
<b>Working with management interns helps me in my role as manager/leader</b>		
Strongly Agree	30	52.0
Agree	20	34.0
Somewhat Agree	7	12.0
Neither Agree nor Disagree	1	2.0
Disagree	0	0.0
Strongly Disagree	0	0.0
<b><sup>a</sup> n varies due to non-response</b>		

<b>Table 4. Perception Differences</b>					
<b>Characteristic</b>	<b>Program Directors</b>		<b>Preceptors</b>		<b>P value</b>
	<b>n<sup>a</sup></b>	<b>%</b>	<b>n<sup>a</sup></b>	<b>%</b>	
<b>Estimated allocation of intern time (% of day, average value of total responses)</b>					
Completing projects		26.0		31.0	0.07
Managers		22.0		21.0	0.73
Supervisors		21.0		18.0	0.24
Front line staff		17.0		16.0	0.55
Upper level managers, executives		10.0		9.0	0.31
Other		4.0		5.0	0.50
<b>“Level of communication with management preceptors (or DI) is adequate”</b>					
Strongly Agree	31	37.8	37	66.1	0.01
Agree	28	34.1	15	26.8	
Somewhat Agree	11	13.4	2	3.6	
Neither Agree nor Disagree	9	11.0	1	1.8	
Disagree	2	2.4	1	1.8	
Strongly Disagree	1	1.2	0	0.0	
<b>Interns fill out a site/preceptor evaluation for m following a management rotation</b>					
Yes	78	96.3	47	83.9	0.02
No	3	3.7	9	16.1	
<b>Greatest roadblock(s) for providing interns with appropriate exposure to practical management<sup>b</sup></b>					
Sensitivity issues (budgets, personnel)	44	29.0	23	40.0	< 0.01
Students' attitude/interest	30	20.0	24	41.0	
Reliance on preceptor/Unclear DI expectations	29	19.0	6	10.0	
Students' conceptual base	18	12.0	20	34.0	
Inadequate time frame	12	8.0	27	47.0	
Other	20	13.0	7	12.0	
<sup>a</sup> n varies due to non-response					
<sup>b</sup> percent may be greater than 100 due to multiple responses					

**APPENDIX A: COMPLETE INTRODUCTION AND LITERATURE REVIEW**

## INTRODUCTION

In a complex social and healthcare climate, the Academy of Nutrition and Dietetics is calling for more Registered Dietitians (RD) to develop and demonstrate management and leadership skills (1-4). It is recognized that management skills are what will transform dietitians into the “change agents” that are needed to advance the profession (1). Management principles are not requisite solely in foodservice management careers, but rather they “transcend disciplines and practice areas (3).”

Dietetics education involves both didactic coursework and supervised practice experiences. Course work is completed in the college/university setting but supervised practice relies heavily on qualified practitioners to host students/interns and provide them with relevant dietetics experience to develop necessary skills. Upon a student/intern’s completion of the educational experience and passing the Registration Examination for Dietitians, s/he should be competent in each aspect of dietetics practice (16).

The majority of students complete an undergraduate Didactic Program in Dietetics (DPD) and then enter Dietetic Internships (DI) as post-baccalaureate interns. There they complete the supervised practice component of their education and training. Research indicates that RDs recognize the DI as the greatest contributor to their ability, confidence, knowledge, skills, and competence as an RD (11). The Accreditation Council for Education in Nutrition and Dietetics (ACEND) has revised the 2008 Foundation Knowledge Requirements and Learning Outcomes for students/interns to include a greater proportion of management and leadership competencies (12,13). Dietetic Internship Program Directors are responsible for meeting ACEND’s educational requirements and maintaining professional relationships with preceptors hosting



interns. This includes training and updating preceptors regarding the learning competencies and experiences that need to be met (12). There are no known studies examining current practices in management rotations of DIs.

### **Objectives**

- 1) To investigate how DIs are meeting the management/leadership competencies established by the Accreditation Council for Education in Nutrition and Dietetics.
- 2) To identify factors in DI program structure that relate to higher mean scores on the Foodservice and Management domain of the Registration Examination for Dietitians.
- 3) To compare DI Program Director and Preceptor perception of the components of DI program structure and the management rotation experience.

### **Hypotheses**

Hypothesis I: There is a relationship between Dietetic Internship Programs that have higher mean scores for the Foodservice and Management domain on the Registration Examination for Dietitians and:

- a program's concentration/emphasis,
- multiple exposures to management/leadership competencies,
- time requirement for management rotations, and
- the percent of time interns spend working on administrative projects and with higher level managers.

Hypothesis II: There will be perception differences between Program Directors and Preceptors regarding program structure.

## Definitions

**Competencies**—Competencies are established by ACEND and are considered a “set of specific knowledge, abilities, skills, capabilities, judgment, attitudes and values that every entry-level practitioner is expected to know and do for employment in dietetics (12).”

**Coordinated Program (CP)** – ACEND-accredited education programs that synthesize required dietetics coursework and supervised practice experience (same hourly requirements as DI) at either the undergraduate or graduate level concurrent with the didactic instruction. Upon completion of a CP, the Program Director verifies a student’s completion of the CP, qualifying students to sit for the Registration Examination for Dietitians (21).

**Didactic Program in Dietetics (DPD)** – Provides dietetics coursework required by ACEND that leads to a bachelor’s or graduate degree. Graduates of ACEND-approved DPDs may receive verification forms from the DPD Program Director required to apply for a Dietetic Internship (19).

**Dietetic Internship (DI)** – ACEND-accredited supervised practice experience for DPD graduates. Currently, DIs must provide a minimum of 900 hours of supervised practice (2002 Standards of Education) and must transition to provide at least 1200 hours of supervised practice prior to the program’s next accreditation review (2008 Standards of Education). Program Directors verify intern completion of the program, qualifying interns to sit for the Registration Examination for Dietitians (20).

**Front Line Staff** – Employees who work directly with clients, patients, or customers rather than in managerial or administrative positions.

**Primary Preceptor** –ACEND defines a primary preceptor as “an individual in the supervised practice facility who oversees the practical experience and training provided to a student/intern

for a particular rotation(s), maintains appropriate contact with the Program Director and student/intern to coordinate planned learning experiences and assignments and conducts the student/intern evaluation (12).”

**Program Director**— The Accreditation Council for Education in Nutrition and Dietetics (ACEND) recognizes a Program Director as the “individual who meets the criteria as stated in the Eligibility Requirements and Accreditation Standards and is designated to ensure program accountability and communication with ACEND (12).”

**Rotation** – A rotation is a determined block of time devoted to developing competency through supervised practice learning experiences (either DIs or Coordinated Programs) (12).

**Supervised Practice**— ACEND defines supervised practice as “planned learning experiences in which knowledge, understanding and theory are applied to real-life situations; may be augmented by role-playing, simulation, case studies and/or other experiences in which students/interns actually perform tasks that contribute to acquisition of the competencies (12).”

## **LITERATURE REVIEW**

### **Management and Leadership**

Management and leadership are fundamental to the success of any organization. Management is the integration of unrelated resources into a system in order to accomplish predetermined objectives. Planning, organizing, staffing, directing/leading, and controlling are the main functions that managers use to arrive at the organization's desired goals (5). Management creates boundaries, focuses on production, and relies heavily on the principles of planning and budgeting, and effective management results in stability and efficiency (6). Management is thinking strategically, making appropriate decisions, and problem-solving (3). Essentially, the management function focuses on how organizational goals are effectively and efficiently achieved (2,6).

Though leadership and management vary by definition, leadership should act in concert with management to meet desired results and outcomes (6,7). Leadership "is about managing energy, first in yourself and then in those around you (7)." With leadership, the human factor is emphasized in attaining outcomes; it involves creating and sharing a vision, encouraging growth, inspiring and motivating followers, and making emotional connections for creating positive changes (6). Effective leadership is manifest in the combined effect of a leader's willingness and capability to influence others and the voluntary response of willing followers (7).

### **Recent History of Management in Dietetics**

The Academy of Nutrition and Dietetics considers "mega issues" to be overriding issues of strategic importance that must be addressed over the next five to ten years (22). During the 2003 Spring Academy's House of Delegates (HOD) meeting, this mega issue question was discussed: "How can the profession promote and strengthen the practical and theoretical management skills for both students and practitioners to ensure success (2)?" The Academy

recognized a disconcerting gap between current and desired practice in terms of dietitians' management skills. The HOD deemed it important for registered dietitians (RD) to:

- Integrate management skill sets across all areas of practice;
- Market to all stakeholders that the dietetics practitioner has expertise in management that can be utilized in all areas of dietetics practice; and,
- Demonstrate their effective role as managers in foodservice management areas and outside of the traditional foodservice arena (8).

Following the dialogue at the HOD meeting, a task force with representatives from the HOD, The Accreditation Council for Education in Nutrition and Dietetics (ACEND), Commission on Dietetics Registration (CDR), Dietetic Practice Groups (DPGs), and Professional Development Team, was created with the purpose of studying the management skills of RDs and Dietetic Technicians, Registered (DTR) (8). Together, a campaign was initiated with the purpose of stimulating Academy members' enthusiasm for management by promoting the varied resources and job opportunities available (8). Some of the campaign's main objectives included to:

- promote management as a critical practice area,
- change perception of management with students and new practitioners,
- create awareness of the value of management skills, and
- encourage the teaching of management as an integral part of all dietetics practice areas.

The campaign seemed to weaken over time and little of the project remains today (8).

In 2007, Cluskey et al. (1) revisited the campaign's concept and assessed management preparation in the field of dietetics at that time. They recognized that management skills are what will transform dietitians into the "change agents" that are needed to advance the profession. A major concept was that existing management education and training were ineffective at instilling the importance of management skills in students. The authors recommended that educational competencies be reviewed and reworked with the purpose of promoting management as a skill set for every dietetics practice area instead of a separate career course. They proposed that the image of management within dietetics needs to be valued, that dietitians in management positions should be seen as role models, and that education opportunities in management need to be offered. This commentary advocated that an early positive perception of management in the RD's experience will naturally draw him or her to pursue continuing education to develop further management skills.

In 2008, Gould and Canter (3) reaffirmed that management is an essential skill set that each dietitian needs to develop and that "management principles transcend disciplines and practice areas." Management is a core-concept in the entry-level dietetics curriculum that teaches human, physical, and financial resource management, often in concert with foodservice systems. Despite the common connection between management and foodservice systems in education, it is becoming more apparent that education needs to demonstrate that management skills can apply in every dietetics practice area. A call was made to educators and preceptors to generate enthusiasm for management equal to that for clinical practice in the educational process (3).

Also in 2008, it became apparent that the earlier campaign's progress had been insufficient and the HOD approved the formation of the Management Work Group (MWG) to

refocus the Academy's efforts (8). In 2009, the MWG declared its vision to be: "Management competencies are elevated in all areas of dietetics practice with maximized professional effectiveness and enhanced career growth (8)." The MWG encouraged the HOD to again discuss the concept of management in dietetics and another mega issue question was posed for the 2010 HOD spring meeting: "How can we effectively influence and encourage RD/DTRs to hold, aspire to hold, or function in a leadership or executive role in all environments?" There was a shift in the way that the question was posed – instead of using the term "management," the words "leadership or executive role" were employed. In preparation for the discussion, the HOD examined and discussed the issues and provided an HOD Backgrounder information sheet delineating the current state of affairs in regard to the following questions:

- What do we know about the needs, wants and expectations of members, customers and other stakeholders related to this issue?
- What do we know about the current realities and evolving dynamics of our members, marketplace, industry, and profession, that is relevant to this decision?
- What do we know about the capacity and strategic position of the Academy in terms of its ability to address this issue?
- What ethical/legal implications, if any, surround the issue (8)?

The expected outcomes for those participating in the discussion of this mega issue were:

"1) understand and value management and leadership skills as essential components of all areas of practice; and 2) recommend methods to internalize a management and leadership mindset that assures career success."

The Academy of Nutrition and Dietetics has emphasized the contribution that management and leadership skills can and should make to the field of dietetics. The 2009 Academy President, Jessie Pavlinac noted the greater consideration that consumers, media, and government officials have for nutrition in the current economic/social climate and with new legislation (9). Pavlinac warned dietitians that nutrition expertise can only benefit society if each practitioner “makes a personal commitment to answer the call to action and provide the leadership and services in food and nutrition that the public so clearly needs.” Further, she stated, “We need *leaders* in dietetics. We need every member to be a leader – at your worksite and in your communications with other health-care professionals and administrators, food and nutrition colleagues, the media, consumers, students, their parents, corporations, and legislators.”

The 2010 Academy President, Judith Rodriguez reviewed the importance of dietetic leadership at the 2010 Food and Nutrition Conference and Expo (4). She highlighted the importance of expanding leadership into the new health-care environment and stated: “As health care changes, so do the discipline of dietetics and the shape of the dietetics profession. How we respond to these changes will define us as a profession and determine our future relevance to the people of our country (4).” She shared her hope that “these themes of leadership and service will resonate for all of us, throughout this year and beyond. Leadership and service must be a part of everything we do (4).”

Most recently, 2011 Academy President, Sylvia Escott-Stump confirmed the value of leadership skills throughout the profession (10). Escott-Stump wrote, “How can we seize the opportunity for every family to recognize and have access to the essential “three D’s” – a doctor, a dentist, and a dietitian?” She went on to discuss that RDs have a strong process for obtaining and maintaining registration and that, “no one can question our technical knowledge.” However,



she made the point that technical skill is inadequate without “confidence, leadership, and genuine enthusiasm” if dietitians are to promote themselves as trusted and respected healthcare professionals to all customers and stakeholders (10).

With this resurgent focus on developing dietitians who capably demonstrate management and leadership skills in each practice area, the educational preparation of dietitians should be explored.

## **Dietetic Education**

### **Accreditation Council for Education in Nutrition and Dietetics**

The Accreditation Council for Education in Nutrition and Dietetics (ACEND) is the accrediting agency for all dietetics education programs (23). ACEND is devoted to establishing and enforcing Eligibility Requirements and Accreditation Standards (ERAS) for dietetics education programs which ensures quality education for students and interns. In a program’s accreditation cycle, a Program Assessment Report (PAR) is completed every five years and a site visit by ACEND representatives is completed every ten years. Program Reviewers create reports regarding the programs and they are submitted to the ACEND Board of Directors for final accreditation decisions (24).

New ERAS were established by ACEND in 2008 (12). These ERAS differ from the 2002 ERAS in that each type of education program has similar but distinct ERAS as opposed to one set for all program types. Further, the knowledge and competency statements are fewer but broader in 2008 ERAS. With this change, ACEND acknowledged the dietetics community’s call for a greater focus on management and included additional competency statements that address

management skills (see Appendix E). Dietetics educational programs are transitioning to the 2008 ERAS and are required to convert to them completely before their next reaccreditation assessments.

### **Educational Pathways**

To become an RD, students may choose from two available educational pathways (25). One available pathway is a Coordinated Program in Dietetics (CP) which synthesizes didactic learning with supervised practice experience. Graduation from a CP confirms a student's eligibility to sit for the Registration Examination for Dietitians administered by the Commission on Dietetics Registration (CDR). Coordinated Programs can be either at the undergraduate (30 programs available) or graduate (20 programs available) level (21).

The most common educational pathway requires that a student first earn a bachelor's degree through one of the 226 ACEND-accredited Didactic Programs in Dietetics (DPD) and then complete one of the 243 ACEND-accredited DIs (19-21, 25). The foundational didactic learning all takes place during the DPD, whereas the supervised practice is exclusively completed through the post-baccalaureate DI. Following successful completion of a DI, an intern qualifies to sit for the Registration Examination for Dietitians. When a student/intern passes the examination s/he becomes credentialed as an RD (25).

### **Didactic Program in Dietetics**

Most commonly, the RD's learning process commences during his/her undergraduate education in a Didactic Program in Dietetics (DPD) (11). The Foundation Knowledge and Skill content areas from the 2002 ERAS include communications, physical and biological sciences,

social sciences, research, food, nutrition, management, and health care systems (27). The Foundational Knowledge and Learning Outcomes for DPDs in 2008 (24) became program-type specific and have been restructured into five focus areas:

- 1) Scientific and Evidence Base of Practice: integration of scientific information and research into practice;
- 2) Professional Practice Expectations: beliefs, values, attitudes and behaviors for the professional dietitian level of practice;
- 3) Clinical and Customer Services: development and delivery of information, products and services to individuals, groups and populations;
- 4) Practice Management and Use of Resources: strategic application of principles of management and systems in the provision of services to individuals and organizations; and
- 5) Support Knowledge: knowledge underlying the requirements specified above.

Each focus area has specific knowledge requirements and learning outcomes that further clarify what ACEND expects DPD students to learn in their undergraduate education. Some knowledge requirements relevant to this research are that the DPD must provide opportunities to develop varied communication skills, learn management and business theory, learn principles of program and service delivery, and gain a foundation in quality management of food and nutrition services (24).

### **Dietetic Internships**

Dietetic Internships (DI) are supervised practice programs designed for DPD graduates to develop into competent practitioners. Supervised practice is defined as “hours in activities in

work environments under the guidance and oversight of a qualified practitioner designated as a preceptor, where students prepare for and perform specific responsibilities done by the preceptor (14).” Dietetic Internships are housed in a college or university, health care facility, federal or state agency, business or corporation (12). A DI is generally six to twelve months in length and is composed of various rotations in several practice settings (26). A rotation is a defined time period that an intern/student has supervision to realize planned learning experiences with the purpose of developing competence (12). Under the 2008 ERAS, DIs are required to select at least one, and no more than two, program concentrations that are consistent with the program’s mission statement (14). The 2002 ERAS allowed for program emphases but a program could choose to have a general emphasis and not specify a focus area. Some of the concentration areas that programs have selected are: clinical/Medical Nutrition Therapy (MNT), community/public health, research, foodservice systems, wellness promotion, leadership, and school foodservice (20). Regardless of concentration/emphasis, the core competencies remain applicable to all DIs.

The majority of DIs function as local programs meaning that the Program Director and the interns are in the same city/state/region. There are currently fifteen distance DI programs that allow for the interns to use supervised practice sites and preceptors from their own geographic areas (distant from the institution hosting the DI), which creates flexible opportunities for interns (20). Tuition costs vary among programs depending on factors like resident/non-resident status, graduate credit offered, and hosting institution’s costs (20). Programs can offer stipends of cash, meals, parking, housing, or health care but generally no stipend is provided (20).

Every DI is required to have a Program Director who meets ACEND’s established criteria. The director is responsible for maintaining ACEND’s ERAS as well as act as a liaison

between preceptors and interns. Similar to the DPD programs, ACEND has established program curriculum requirements and student learning outcomes/competencies to guide the supervised practice experience (12). The 2008 ERAS adjusted the required supervised practice experience from 900 hours to 1200 hours, thus DIs are at variable stages in the transitioning process based on their accreditation schedule. The dietetics supervised practice requirement dates back to 1927 when students were trained solely in the hospital setting (13). Now, the dietitian's role has expanded into the community, schools, government, and business, therefore requiring more time to facilitate experience in various practice areas. The creation of broader competency statements and the additional supervised-practice hour requirement provide increased opportunity for dietetic interns to view and experience management principles in areas beyond foodservice (13).

Barr et al. (11) asked 2,000 dietitians who had passed the Registration Examination for Dietitians between 1996 and 1999 to identify which areas of education/ professional development (DPDs, DIs, work experience, and continuing education) most contributed to their ability, confidence, knowledge, skills, and competence as an RD. Of the four areas, the DI/supervised practice component held the highest mean response for all five aspects of professional development. This research indicated that the DI is a unique and essential phase of education because it allows for interns to gain further knowledge and still have supervision and support as information is applied. The majority (64%) of the survey respondents indicated that clinical nutrition was their first practice area and only 12.6% of respondents reported that their first practice area was foodservice/management. Of the total respondents, 56.6% indicated they felt adequately prepared and 37.8% felt very prepared for their first job (11). The DI functions as a vital developmental stage for RDs.

Where undergraduate education was focused primarily on learning the concepts and theory of dietetics, the DI allows the intern to integrate that knowledge base with experience in each practice area. The DI is designed to provide adequate exposure and repetition in real situations for the development of appropriate competency. Successful completion of a DI indicates that the intern is qualified to sit for the Registration Examination for Dietitians and is capable of entry level practice as a dietitian (11).

## **Preceptors**

As interns meet the established competencies through various rotations, they work with different qualified practitioners who act as preceptors responsible for hosting and guiding the experience. Program Directors are to provide formal or informal training to preceptors and maintain communication to assist in facilitating the most effective experiences for interns (14). The DI is responsible for training new preceptors regarding the DI's expectations for the program, communicating preceptor expectations to interns, evaluating interns, and providing appropriate feedback to interns (14). Regular training updates for preceptors concerning changes in rotations and information for preceptor skill improvement by the DI are required by ACEND. The Commission on Dietetic Registration offers free continuing education modules addressing precepting and is available to all RDs and non-RDs that host interns (14). The nature of dietetics supervised practice requires that practitioners perform the preceptor role in addition to their typical work day responsibilities (28). Preceptors play a significant role in assuring that interns are given adequate experience to assist them in developing competence as entry-level dietitians. Program Directors, preceptors, and interns must work in concerted effort for the development of the interns' competency.

Jay and Hoffman (29) examined whether Central Michigan University DI preceptors and their departments benefited from the presence of dietetic interns. Preceptors from clinical, foodservice, and community settings were surveyed. Of the respondents, 55% believed that the department benefited and 45% believed that the department “broke even” by hosting interns. Of interest in this study is that clinical preceptors rated the professional benefits of hosting interns higher than did the foodservice preceptors. The authors suggested that this may be related to the preceptor’s RD status (fewer foodservice preceptors were RDs). This research also showed that preceptors expect that interns be motivated, be professional in behavior, and communicate appropriately. Jay and Hoffman (29) made the point that the continuing commitment of preceptors and evaluation of intern programs are key factors that will effect change in the dietetics profession.

Marincic and Francfort (28) surveyed preceptors from 20 randomly selected programs regarding their perceptions of rewards, support, and commitment to the preceptor role. A positive correlation was found between commitment of preceptors to their role and their perceived support of the educational program. Of preceptor respondents, 58% stated that they received no training for their role as preceptor, 32% stated that they received informal training, and only 10% reported that they received formal training. The authors concluded that supervised practice programs need to enhance their training and support to preceptors (28). One key element of support for preceptors is availability of open communication with faculty throughout the experience. Additionally, due to their major role played in DIs, preceptors should be involved in the development, implementation and evaluation of the educational program with which they work (28). It is the educational institution’s responsibility to develop and maintain relationships with its supervised practice sites.

Wilson (30) investigated the preceptor's role in the educational process. Due to the student's transition to becoming a fully-trained professional during an internship, preceptors may find it difficult to ascertain what their role should be as they engage with interns. Wilson (30) identified the responsibility of Program Directors to provide effective training to both new and experienced preceptors with changes to new ERAS. Of the preceptors surveyed in Wilson's study, 83.2% felt that they had an "excellent" or "good" understanding of what was expected of them as preceptor. Despite that response, 87.9% indicated that training materials for their role as preceptor would benefit them.

Finally, the Academy has been focusing on recruiting additional RDs to serve as preceptors for interns. Past Academy President, Judith Rodriguez focused much of her energy on this cause. She addressed Academy members with this message, "The education of dietetics students is a very important need in our profession; many [ACEND]-accredited dietetic technician programs, didactic programs in dietetics, and dietetic internships need preceptors and mentors. Think of those who mentored you: Can you now give something back by mentoring today's students? (17)" Preceptors play a vital role in the educational process. Their needs and perceptions must be attended to if the educational process is to be effective.

### **Registration Examination for Dietitians**

After completing a CP or DI, an intern/student is eligible to take the Commission on Dietetics Registration's Registration Examination for Dietitians. The examination is presented in a computerized multiple choice format (31). The number of questions varies depending upon the examinee's demonstration of competence as the exam progresses, but each person will have at



least 125 questions and up to 145 questions. Of those questions, 25 are pre-test questions and 100-120 are scored questions (31).

Score reports include the examinee's overall scaled score and sub-scaled scores for the Food and Nutrition Sciences and Foodservice Systems/Management areas. Scores are scaled, meaning they are adjustments of raw scores that compensate for variation relative to the difficulty of the questions received (32). A passing overall scaled score is 25 or higher. The Food and Nutrition Sciences sub-scale score includes three domains: Food and Nutrition Sciences; Nutrition Care Process and Model; and Counseling, Communication, Education and Research. The Foodservice Systems/Management sub-scale includes two domains: Foodservice Systems and Management. Sub-scale scores can range from one to 30. Passing the examination relies solely on the total scaled score, not the sum of sub-scaled scores. An examinee must wait 45 days to retake the Registration Examination for Dietitians if s/he fails (32). The CDR sends appropriate documentation to newly registered dietitians and then the RDs are responsible for obtaining appropriate licensing or certification from their state's professional licensing department.

Program Directors receive institutional reports in February and August annually from the CDR (31). The institutional score report includes scaled scores for program graduates, percentile ranks, national mean scores, institutional examinee mean scores, and sub-scaled scores for both concept areas. Examinees have the option of releasing their names to Program Directors at the beginning of the exam (31). Also, there is an annual ACEND report showing the institution and national total and sub-scaled scores for the previous five years.

### **Skill Acquisition**

Dreyfus and Dreyfus investigated the process of skill acquisition and identified five stages that individuals go through to develop skills from novice to expert level. The five stages in the Dreyfus model are: novice, advanced beginner, competence, proficiency, and expertise (15). They recognized that skill acquisition most commonly begins through written or verbal instruction but these stages take individuals from the basic facts and rules to the “know-how” to perform. Dreyfus and Dreyfus indicate that people generally approach new skills as novices and then appropriately advance through the stages – the stage itself is not reflective of the whole person, rather the development in that specific skill. Further, advancement through the stages can pause or halt at any level in the process and not everyone reaches the expert level.

Management skills reside in what Dreyfus and Dreyfus (15) termed an *unstructured* problem area due to the innumerable relevant facts and features involved in management situations. Other skills that fall into the unstructured area are nursing, social interactions, and teaching; the complexity of the situations faced differs from doing mathematical problems or solving puzzles which are considered examples of structured problem areas. Also, in unstructured areas it is difficult to evaluate how each element acts together and influences other elements. In order to develop a high skill level in any unstructured problem area, Dreyfus and Dreyfus acknowledge the indispensability that concrete experiences in real situations hold.

The first stage of skill acquisition is novice (15). In this stage, an individual begins by recognizing objective facts and features associated with the skill and relies on rules for determining actions. There is no context for the rules, facts, or features; the novice simply recognizes them and acts as directed by the established protocol. Students in DPDs/CPs begin in this phase as they are exposed to the core curriculum concepts (16).

Progressing to the advanced beginner stage happens when performance has improved enough to be considered “marginally acceptable (15).” This improvement results from substantial experience dealing with real situations and “meaningful elements”. It is during this stage that beginners start recognizing situational elements in addition to the context-free rules, facts, and features from the previous stage (15). Dietetic interns enter the DI as novices but develop through this stage over the course of the program’s supervised practice (16).

After greater experience, an individual begins being overwhelmed by the context-free and situational elements and finds it necessary and appropriate to make hierarchal decisions. Prioritization is now a capability, but also a necessity because of the overwhelming nature of everything involved. This third stage is what Dreyfus and Dreyfus (15) deem competency. The individual is now aware and skilled enough to choose an organizing plan and execute it. It is in this stage that an individual becomes emotionally involved in the results of his or her decisions. The person potentially feels great satisfaction or devastation depending on the outcomes of his or her actions. A difference here is that in the previous stages, decisions were unemotional because there were steps and rules to follow and adherence to them was satisfying enough. This is the last stage in which an individual breaks all of the elements down in order to problem-solve. The Academy considers this phase to generally start as an individual enters the field as an RD after passing the Registration Examination for Dietitians and continues through the first three years of practice (16).

Proficiency and expertise require even greater experience (15). Proficiency is achieved when an individual can intuitively use patterns without having to break them down into individual components – a holistic approach to situations. This stage is marked by intuitive understanding but continues to use analytical thinking for developing strategy and action plans.

Skillfully practicing in a long-term environment, developing operational skills and beginning to acquire specialist credentials are indications of proficiency for dietitians (16).

Expertise is the final stage and is developed when an individual is no longer aware or conscious of the process used to make decisions and solve problems because it has become so much a part of him or her (15). The individual is not cavalier or haphazard, but rather experienced enough that when a situation arises, so do potential strategy, tactics, and actions in his/her mind. The critical thinking skills developed in earlier stages are now applied to analyzing intuition and acting accordingly. The expert dietitian builds and maintains his/her knowledge, skills, and credentials and possibly has achieved the “advanced practice” level (16).

To be an entry-level RD, a composite skill set involving clinical nutrition, foodservice management, and community nutrition is necessary. As previously explored, the Academy has clarified its stand that management and leadership skills are to be woven through each aspect of the profession (3,4,8,9). Application of the model of skill acquisition should begin during the educational process and supervised practice of the student dietitian.

The Academy has expressed the importance of each dietitian employing management skills regardless of practice area (1-3). Much of the Academy’s focus for implementing this vision has been on education (8,13). The Accreditation Council for Education in Nutrition and Dietetics has ensured that undergraduate curricula instruct students in foundational theory; learning outcomes are met through coursework. The didactic foundation is reinforced through relevant experiences in the DI that provide the environment for skill development (16). Because the DI relies so heavily on the interns and preceptors, it becomes necessary to investigate what

the current practices are in management rotations and how effectively the experiences are producing the desired outcomes.

## **APPENDIX B: COMPLETE METHODS**

## **METHODS**

### **Research Instrument**

The research instrument was composed of two different questionnaires: Survey A for DI Program Directors and Survey B for Primary Management Preceptors (Appendix G). Each survey instrument included demographic and study-related questions. The study-related questions focused on DI program structure, components of management rotations, and preceptor training and communication perceptions. Researchers formulated the questionnaires and tested their face validity through the pilot study.

The demographics in the Program Director survey addressed time as Dietetic Internship (DI) Program Director, highest level and area of education, previous management experience, and percent of work time devoted to the DI. (Gender was not surveyed as Program Directors are predominantly female, not allowing for meaningful comparison among programs by Program Director gender.) The study-specific questions covered topics such as identifying in which rotation(s) management/leadership competencies are met, program demographics (such as ERAS version and scores on the Foodservice and Management domain of the Registration Examination for Dietitians), program structural components, and elements of preceptor training, feedback and communication. Finally, there was a section for Program Directors to provide contact information for up to three of the DI's primary management rotation preceptors.

The demographics in the Preceptor version of the survey included gender, highest level of education, RD status, current practice area, job title, and years as a management rotation preceptor. Study-specific questions for the Preceptor version included topics such as program structural components, and preceptor training, feedback, and communication.

### **Pilot Study**

The survey instruments and procedures were piloted with ten Coordinated Programs (CPs). This was appropriate because DIs and CPs share the same structure and competencies for supervised practice experiences but using CPs conserved the population of interest. None of the CP Directors provided contact information for Primary Preceptors; to test the preceptor version of the questionnaire, five primary management/leadership preceptors from Brigham Young University's DI were asked to participate in the pilot study. The CP directors and primary preceptors received the pilot versions of their respective letters of transmittal and questionnaires accompanied by an additional questionnaire regarding the survey instrument and procedures. The pilot study followed the planned study procedure. The Program Directors and Primary Preceptors each received:

- A pilot cover letter (Appendix H)
- A pilot response questionnaire (Appendix H)
- Initial notification postcard (an electronic copy) (Appendix I)
- Survey cover letter (Appendix G)
- Questionnaire (Appendix G)

Four Program Director questionnaires and five primary preceptor questionnaires were returned. Researchers reviewed respondents' suggestions and made some wording changes based on their feedback.

### **Sample Size and Selection**

The study population consisted of 242 Dietetic Internship Program Directors (the entire population of DIs minus the sponsoring institution's DI) and their Primary Preceptors from management/leadership rotations. Contact information for the 242 DI Program Directors was obtained through the Accreditation Council for Education in Nutrition and Dietetics (ACEND) database of Dietetic Internships. The final step of the Program Director version of the questionnaire asked Program Directors to provide names and contact information for three Primary Preceptors from some of the DI program's management/ leadership-focused rotations.

### **Approval**

Approval to complete this survey was obtained through Brigham Young University's Institutional Review Board for Human Subjects (Appendix E).

### **Survey Questionnaire Distribution**

Dietetic Internship Program Directors received a postcard notification that they would soon receive an email containing a link to the electronic questionnaire. A letter of transmittal at the beginning of the questionnaires explained the purpose of the research and contained a



consent statement; questionnaire completion indicated consent. Program Directors were informed in the letter of consent that \$1.00 would be donated to the Academy of Nutrition and Dietetics Foundation Scholarship fund for each returned questionnaire.

After receiving Preceptor contact information from Program Directors, a postcard notification was sent to each Preceptor listed alerting him/her that the electronic questionnaire link would arrive via email within a few days. The electronic survey, including the letter of transmittal and consent statement, was sent via email for completion.

### **Follow-up**

For both groups (Program Director and Primary Preceptor), three follow-up emails were sent as needed, approximately a week and a half apart from each other and a “thank you” email was sent upon survey completion (Appendix H). As promised, \$1.00 for each Program Director survey was sent to the Academy of Nutrition and Dietetics Foundation Scholarship fund (\$125 total).

### **Data Analysis**

Statistics were analyzed using SAS software (version 9.2, Cary, NC) and R (version 2010, Vienna, Austria). Frequency data was obtained for all survey questions from Qualtrics output.

The average of the five Management domain scores of the Registration Examination for Dietitians provided by Program Directors was calculated for each program. These mean scores were used in determining if a relationship existed between higher mean scores on the Registration Examination for Dietitians and a program’s emphasis/concentration, multiple

exposures to management/leadership competencies, hourly requirement for management rotations, or the allocation of intern time spent during a rotation. Relationships were examined using stepwise regression with an F-test to determine use of the full or reduced model.

A two sample t-test (without controlling for false discovery rates) was completed to determine if there was a significant difference in the perception of Program Directors and Preceptors about intern time allocation during management/leadership rotations. A two sample t-test was used to determine perception differences about CDR online Preceptor training awareness. Also, a two-sample t-test was performed to discover differences in Program Directors' encouragement of the training completion and Preceptor's completion rates. Fisher's Exact Permutation test determined perception differences on the level of communication between Program Directors and Preceptors and whether post-rotation site evaluations were completed by interns. Pearson's Chi-squared test determined perception differences between Program Directors and Preceptors regarding possible roadblocks for providing interns with appropriate exposure to practical management experience.

## **APPENDIX C: COMPLETE RESULTS**

## **RESULTS**

### **Response Rate**

The entire population (242 programs) of Dietetic Internships (DI) (minus the sponsoring institution's DI) registered with ACEND was invited to participate. Of those, 125 Program Directors (51%) opened and submitted the survey electronically. Participating Program Directors provided 100 Preceptors' names and their relevant contact information. Electronic questionnaires were sent to each of the Preceptors, and 63 participated (63%).

### **Demographic Information**

#### **Demographic Characteristics**

Demographic characteristics of Program Directors and Preceptors are listed in Table 1. The majority of Program Directors (35%) have been in their current position 11+ years, hold Master's Degrees (70%), and all are Registered Dietitians as required by ACEND (12). The majority of Preceptors are female (87%), have acted as management/leadership Preceptors for 11+ years (39%), hold Master's Degrees (50%), and are Registered Dietitians (90%).

For both Program Directors (55%) and Preceptors (57%), the highest degree areas were nutrition/dietetics related. For Preceptors, the administrative/management area was the next most common category (22%) for highest degree area. The most common areas in which Program Directors reported having current or prior management experience were education (68%), clinical (53%), and foodservice (51%) settings. The majority (66%) of Preceptors indicated that their current practice area was foodservice and the next most common practice area was clinical nutrition (20%).

<b>Table 1. Demographic Characteristics of Program Directors and Preceptors</b>				
<b>Characteristic</b>	<b>Program Directors</b>		<b>Preceptors</b>	
	<b>n<sup>a</sup></b>	<b>%</b>	<b>n<sup>a</sup></b>	<b>%</b>
<b>Gender</b>				
Female			54	87.1
Male			8	12.0
<b>Time in Current Role (As Director or Preceptor)</b>				
Less than 1 year	11	8.8	3	4.9
1-3 years	22	17.6	11	18.0
4-6 years	27	21.6	13	21.3
7-10 years	21	16.8	10	16.4
11+ years	44	35.2	24	39.3
<b>Highest Level of Education</b>				
Associate's Degree			2	3.2
Bachelor's Degree			17	27.4
Some post-grad, no degree			10	16.1
Master's Degree	88	70.4	31	50.0
Doctoral Degree	37	29.6	2	3.2
<b>Highest Degree Area (by category)</b>				
Nutrition/Dietetics	66	55.5	28	57.1
Education/Wellness	22	18.5	7	14.3
Administrative/ Management	13	10.9	11	22.4
Community	11	9.2	2	4.1
Other	7	5.9	1	2.0
<b>RD Status</b>				
Yes			55	90.2
No			6	9.8
<b>Current Practice Area</b>				
Foodservice			40	65.6
Clinical Nutrition			12	19.7
Other			8	13.1
Public Health/Community			1	1.6
<b>Management Experience in These Areas<sup>b</sup></b>				
Education	84	68.0		
Clinical Nutrition	65	53.0		
Foodservice	63	51.0		
Community/Public Health	38	31.0		
Other	4	3.0		
None	3	2.0		
<sup>a</sup> n varies due to non-response				
<sup>b</sup> percent may be greater than 100 due to multiple responses				

## **Dietetic Internship Characteristics**

Table 2 shows characteristics of the Dietetic Internship (DI) programs. Five years of Foodservice and Management Domain mean scaled scores for DIs were obtained, and ranged from 11.38 to 19.78 on a one to 30 scale. The average score from participating DIs was 16.21. All DIs either have transitioned or are transitioning from 2002 ERAS to 2008 ERAS as required by the Accreditation Council for Education in Nutrition and Dietetics (ACEND). The majority of programs (82%) have converted to the 2008 ERAS, and of that group, 51% adopted them in 2009. For the programs functioning according to the 2008 ERAS, 52% indicated that they have additional and/or different management rotations included in their programs due to competency changes. Ninety percent of programs operate locally and the majority (60%) of local programs operated in an urban area. The majority of programs (68%) reported fall start dates for the internship. Programs varied from two to 60 interns accepted annually, with 42% reporting total interns per year within the range two to nine. The majority of programs (54%) were sponsored by a university and 34% were hosted by a healthcare facility.

Programs were asked to identify their concentration (2008 standards) or emphasis (2002 standards) (up to two as permitted in ACEND guidelines). Forty-five percent had a clinical/Medical Nutrition Therapy (MNT) concentration, while only 8% reported a management/administrative concentration. Several didactic components support management rotations; the majority (81%) used projects, 74% used assignments, and 26% used a course (or courses). Twenty-two percent indicated that they use “other” didactic components to support the management experience, such as guest speakers, chat topics/discussions, case studies, readings, and team building activities. Of the Program Directors surveyed, 48% had a requirement for interns to have previous dietetics related work/volunteer experience. Of that group, the majority

(60%) did not specify a definite number of hours, 20% require greater than 500 hours, and 20% require fewer than 500 hours.

### **Time Requirements**

Program Directors were asked to report both total hours and weeks the DI allocated to management/leadership rotations. A follow-up question asked how much of that time was spent specifically focused on foodservice management (the traditional management rotation). Responses were fairly well distributed across the range of 12-600 hours, the average being 262 hours. Most DIs (37%) require foodservice management experiences within the range of 200-299 hours and 22% reported within the range of 300-399 hours. DIs averaged 247 hours for solely foodservice rotations. The majority (43%) of Program Directors reported that 6-10 weeks of the DI were dedicated solely to management/leadership rotations. Similarly, the majority (53%) of Program Directors indicated that of total weeks spent in management/leadership rotations, 6-10 weeks were spent specifically in foodservice rotations.

### **Training**

Program Directors were asked a series of questions regarding the DI's preceptor training methods and perceptions. Fifty-six percent of Program Directors indicated that they trained Preceptors through informal phone/email conversations, 51% used written materials (binders, pamphlets, handbooks), 33% employed live one-on-one training, and 25% used in-person group training. Seven percent of Program Directors indicated that no training was provided to Preceptors. When formal training was provided, the majority of Program Directors (34%) reported that the rotation site's intern coordinator/Primary Preceptor was present and 27% indicated that each preceptor with whom interns worked was present. Twenty-seven percent of

Program Directors described formal preceptor training frequency to be annually and 52% indicated that it was completed as needed with program changes. The majority (61%) of Program Directors reported that they “never” or “rarely” stop using management sites/preceptors because the experience was not meeting the DI’s expectations and/or ACEND standards. Fifty percent of Program Directors either strongly agreed or agreed that it is challenging to schedule training for management preceptors. Twenty-nine percent strongly agreed or agreed that compared to clinical or community preceptor training, it is difficult to find appropriate training methods for management preceptors.

### **Improving Management/Leadership Rotations**

Fifty-five Program Directors provided open-ended responses of their insight into improving management/leadership rotations. The response feedback targeted different aspects of the DI experience. Comments were focused on issues with preceptors, the DI, rotations, or interns. Some of the ideas and suggestions regarding preceptors included only using preceptors with the RD credential and wanting more accountability for preceptors through their annual performance evaluations. Many wanted to provide more training for preceptors, create a preceptor-to-preceptor mentoring program, provide additional guidance for rotations with specific outcomes, include preceptors in the development stage of learning experiences, and add extra coursework or simulations to support the practical experiences. For rotations, Program Directors mentioned that they would like to see more structure, time allotted, upper level management exposure, leadership opportunity, intern involvement in department, focus on the big picture, experience with budgets and human resource management, and completion of “real projects” and “hands on” opportunities. It was suggested that DPDs need to stimulate more



excitement for management in the undergraduate education and that management concepts beyond foodservice should be introduced to undergraduates.

Some of the comments addressed what the programs had already done to improve their management/leadership rotations. One Program Director reported the initiation of a management seminar which resulted in more exposure and discussion about management concepts with the support of guest speakers. Another respondent uses smaller facilities for management rotations when possible because she finds that preceptors have more time to engage with interns. One DI prepares interns by explaining what activities they may be asked to participate in. A different DI redesigned its required projects so that the interns' projects required the input and assistance of upper-level management. And finally, one program shared that with the adoption of 2008 ERAS, it significantly reduced the amount of time interns were spending doing front line staff tasks. This program also added activities like training staff, human resource management activities, time requirements for monitoring food production/service areas and clinical staff, and different projects (cost benefit analysis, budget control, business plans). The DI also requires that interns provide an analysis of their observations and recommendations for improvement. The Program Director indicated that this approach has improved intern interest and has benefited the department managers by providing an "outside" perspective on operations.

**Table 2. Dietetic Internship (DI) Program Characteristics**

<b>Characteristics</b>	<b>n<sup>a</sup></b>	<b>%</b>
<b>Mean Scaled Score (5 year average) on Foodservice and Management domain of Registration Examination for Dietitians</b>		
11-13.99	5	7.5
14-14.99	13	19.4
15-15.99	12	17.9
16-16.99	17	25.4
17-17.99	11	16.4
18-19.99	9	13.4
<b>Eligibility Requirements and Accreditation Standards (ERAS)</b>		
2002	22	17.9
2008	101	82.1
<b>If 2008 ERAS, adopted in</b>		
2009	51	51.0
2010	43	43.0
2011	6	6.0
<b>Has DI broadened management and leadership exposure through additional/different rotations with the adoption of 2008 ERAS?</b>		
Yes	52	52.0
No	48	48.0
<b>The DI is</b>		
Local	108	90.0
Local and Distance available	10	8.0
Distance	2	1.6
<b>Internship Start Dates<sup>b</sup></b>		
Fall	81	68.0
Summer	38	32.0
Winter	14	12.0
<b>Number of Interns Annually</b>		
2-9 Interns	50	41.7
10-15 Interns	45	38.3
16-60 Interns	25	20.8
<b>Internship Sponsoring Institution</b>		
University	69	54.3
Healthcare Facility	43	33.9
Government Agency	12	9.5
Contract Service Company	1	0.8
Other	2	1.6
<b>DI Concentrations/Emphases Categories<sup>b</sup></b>		
Clinical/Medical Nutrition Therapy (MNT)	62	45.2
Community/Public Health	29	21.2
Wellness/Education	15	10.9
Management/Administrative	11	8.0
General	10	7.3
Research	4	2.9
Other	6	4.4
<b>Didactic components employed to support management rotations</b>		
Projects	66	81.0
Assignments	60	74.0
A course (or courses)	21	26.0
Unit in a course	7	9.0
Other	18	22.0

<b>Table 2 Continued. Dietetic Internship (DI) Program Characteristics</b>		
<b>Characteristics</b>	<b>n<sup>a</sup></b>	<b>%</b>
<b>Requirement for interns to have previous dietetic work/ volunteer experience</b>		
Yes	58	47.9
No	63	52.1
<b>Total hours the DI allocated to management/leadership rotations</b>		
<100 hours	12	16.7
100-199 hours	14	19.4
200-299 hours	15	20.8
300-399 hours	17	23.6
>400 hours	14	19.4
<b>Of total management/leadership hours, hours spent specifically in foodservice rotations</b>		
<100 hours	12	16.4
100-199 hours	11	15.1
200-299 hours	27	37.0
300-399 hours	16	21.9
>400 hours	7	9.6
<b>Total weeks allocated to management/leadership rotations</b>		
0 weeks	5	7.1
1-5 weeks	22	31.4
6-10 weeks	30	42.9
11-15 weeks	10	14.3
> 15 weeks	3	4.3
<b>Of total management/leadership weeks, weeks spent specifically in foodservice rotations</b>		
0 weeks	3	4.2
1-5 weeks	20	27.8
6-10 weeks	38	52.8
11-15 weeks	9	12.5
> 15 weeks	2	2.8
<b>Frequency that the DI formally updates/retrains management preceptors</b>		
As needed with program changes	42	52.0
Annually	27	33.0
As needed based on rotation's tenure in facility	18	22.0
Never	9	11.0
Every 2-4 years	8	10.0
Every 5+ years	0	0.0
<b>DI Training Methods for Preceptors</b>		
Informal phone/email conversations	56	68.0
Written materials (binders, pamphlets, handbook)	51	62.0
Live one-on-one training	33	40.0
Live group training	25	30.0
Preceptor link on DI website	14	17.0
Webinars/online modules created by DI	7	9.0
No training is provided	7	9.0
Other	9	11.0
<b>Individuals present when formal training occurs</b>		
Site's intern coordinator/Primary Preceptor	34	44.0
No formal training is provided	27	35.0
Each Preceptor with whom interns work	25	32.0
Administrator/upper management	6	8.0

<b>Table 2 Continued. Dietetic Internship (DI) Program Characteristics</b>		
<b>Characteristics</b>	<b>n<sup>a</sup></b>	<b>%</b>
<b>Frequency of DI discontinuing of a management site/ preceptor because experience was not meeting DI's expectations and/or ACEND standards</b>		
Never	32	40.0
Rarely	29	36.3
Sometimes	18	22.5
Frequently	1	1.3
<b>“It is challenging to schedule trainings for management preceptors”</b>		
Strongly Agree	31	38.2
Agree	19	23.5
Somewhat Agree	14	17.3
Neither Agree nor Disagree	7	8.6
Disagree	6	7.4
Strongly Disagree	4	4.9
<b>“Compared to clinical or community preceptor training, it is difficult to find appropriate training methods for management preceptors”</b>		
Strongly Agree	15	18.5
Agree	14	17.3
Somewhat Agree	15	18.5
Neither Agree nor Disagree	15	18.5
Disagree	14	17.3
Strongly Disagree	8	9.9
<sup>a</sup> n varies due to non-response		
<sup>b</sup> percent may be greater than 100 due to multiple responses		

Table 3 shows in which rotations Program Directors intend for their interns to meet management/leadership competencies. Program Directors ranked up to three rotations for each management/leadership-related competency of the ERAS based on the guidelines under which the program was functioning (2002 or 2008). The programs functioning under the 2002 ERAS primarily used rotations in hospital foodservice (34%), the community/public health sector (13%), and the clinical setting in a hospital (13%). Similarly, programs functioning with the 2008 ERAS predominantly met these competencies in the hospital foodservice setting (28%), hospital clinical setting (23%) and community/public health sector (19%). Though a smaller percent of 2008 programs used foodservice, there is no statistically significant difference of rotation use between 2002 and 2008 ERAS.

<b>Table 3. Rotations used for meeting management/leadership competencies</b>						
	<b>2008 ERAS</b>		<b>2002 ERAS</b>		<b>2008 &amp; 2002 ERAS</b>	
	<b>Frequency</b>	<b>%</b>	<b>Frequency</b>	<b>%</b>	<b>Frequency</b>	<b>%</b>
Foodservice – Hospital	697	27.8	216	33.6	913	29.0
Clinical – Hospital	579	23.1	88	13.7	667	21.2
Community/Public Health	468	18.7	84	13.1	552	17.5
Foodservice – School	162	6.5	67	10.4	229	7.3
Foodservice – Other	121	4.8	35	5.4	156	5.0
Foodservice – Extended Care	93	3.7	24	3.7	117	3.7
Non-hospital Outpatient/Counseling	76	3.0	37	5.8	113	3.6
Leadership	70	2.8	21	3.3	91	2.9
Other	65	2.6	24	3.7	89	2.8
Clinical – Extended Care	61	2.4	20	3.1	81	2.6
Didactic	57	2.3	20	3.1	77	2.4
Foodservice – College	42	1.7	2	0.3	44	1.4
Simulations	18	0.7	5	0.8	23	0.7

## **Characteristics of Management/Leadership Rotations**

Characteristics of the Management/Leadership rotations are shown in Table 4. The majority of Program Directors (60%) reported that only one intern was assigned to a practice site for a management/administrative rotation at one time, and 26% of Program Directors reported that two interns were assigned simultaneously. Of Preceptor respondents, 72% indicated that they had access to or received intern resumes prior to the rotations. Nearly all Program Directors (99%) surveyed required a final evaluation of the intern by the preceptor, but the majority (62%) of programs did not require mid-rotation evaluations. Thirty-two percent of Preceptors indicated that evaluations were performed as needed, 27% only completed final evaluations, and 23% completed both a midpoint and a final evaluation. Upon completion of an administrative/management rotation, 96% of Program Director respondents reported that interns completed a site/preceptor evaluation, and 44% stated the feedback was provided to preceptors following each academic year. Feedback to preceptors was provided through various methods; the majority of preceptors (53%) reported receiving it through a standardized form.

From a list of possible complaints that interns might have regarding Foodservice Management rotations specifically, Program Directors selected the most common ones based on their experience (they could mark all that applied). Program Directors reported that lack of task structure and lack of intern interest were the most common complaints (both at 33%). Twenty-nine percent of respondents selected “other” and while some of the comments reflected the lack of task structure or need for flexibility, the additional comments included that managers were too busy, not skilled as preceptors, disengaged, or unprofessional.

**Table 4. Management/Leadership Rotation Characteristics**

<b>Characteristic</b>	<b>Program Directors</b>		<b>Preceptors</b>	
	<b>n<sup>a</sup></b>	<b>%</b>	<b>n<sup>a</sup></b>	<b>%</b>
<b>Number of interns assigned to rotation simultaneously</b>				
1	49	59.8	32	57.1
2	21	25.6	18	32.1
3	8	9.8	1	1.8
4+	4	4.9	5	8.9
<b>Additional co-workers that serve as management preceptors at an institution</b>				
0-1			20	33.9
2-4			25	42.4
5-12			14	23.7
<b>Preceptors have access to or receive intern resumes prior to rotation</b>				
Yes	49	59.8	41	71.9
No	33	40.2	16	28.1
<b>Preceptors are responsible for evaluating intern performance on this schedule</b>				
As needed			18	32.1
Final ONLY			15	26.7
Midpoint and final ONLY			13	23.2
Weekly			9	16.1
Never			1	1.8
<b>Mid-rotation intern evaluations completed</b>				
Yes	31	37.8		
No	51	62.2		
<b>Final intern evaluations completed</b>				
Yes	79	98.7		
No	1	1.3		
<b>If final evaluation, do DI representatives observe?</b>				
Yes	24	30.4		
No	55	69.6		
<b>How often intern feedback is shared with preceptors</b>				
Following each academic year	36	43.9		
Variable, as needed	28	34.1		
Following each intern's rotation	15	18.3		
Following 2-3 years	3	3.7		
Never	0	0.0		
<b>Form of intern feedback to preceptors</b>				
Standardized form			25	53.0
Formal meeting			21	45.0
Informal verbal			19	40.0
Email			16	34.0
<b>Intern's most frequent complaints regarding Foodservice Management Rotations<sup>b</sup></b>				
Lack of interest	27	33.0		
Lack of task structure	27	33.0		
Time spent with administration/managers	21	26.0		
Time spent in production	18	22.0		
Time spent in meal service	8	10.0		
No complaints	8	10.0		
Time spent in dish room	5	6.0		
Lack of prior exposure	6	7.0		
Other	24	29.0		
<sup>a</sup> n varies due to non-response				
<sup>b</sup> percent may be greater than 100 due to multiple responses				

## Perception Information

### Preceptor Perception

Table 5 identifies some of the Preceptors' perceptions of the management/leadership rotations and the preceptor experience. The majority of Preceptors (65%) reported that there were no major differences in objectives or expectations between DI programs if they worked with interns from more than one. Thirty-four percent of Preceptors reported that their organization hosted management rotations for 6-10 weeks per year and 22% reported less than five weeks per year. Preceptors reported a mean total of 43% of their work day being spent directly with an intern, with individual Preceptor responses ranging from 10-100% of the work day. Seventy-seven percent of Preceptors reported the inclusion of precepting in their job descriptions.

Preceptors were also asked about their perception of the preceptor role. Preceptors reported being trained annually (43%) or as needed with program changes (43%). The majority of Preceptors (80%) felt adequately trained by the DI to perform as management preceptors and the remainder (20%) reported feeling partially trained. Similarly, 98% of Preceptors responded that they strongly agreed or agreed with the statement, "In general, I *understand* my role as preceptor." All Preceptors (100%) either agreed or strongly agreed to the statement, "In general, I *enjoy* my roles as preceptor." Finally, 86% of Preceptors agreed or strongly agreed that working with interns in management rotations helped them in their role as a manager/leader.



**Table 5. Preceptor Perceptions of Management/Leadership Rotations**

<b>Characteristics</b>	<b>n<sup>a</sup></b>	<b>%</b>
<b>If preceptors work with more than one program, there are major differences in objectives/expectations between programs</b>		
Yes	8	15.7
No	33	64.7
I don't know	10	19.6
<b>In the calendar year, preceptor's organization generally hosts management rotations:</b>		
< 5 weeks	12	19.7
6-10 weeks	21	34.4
11-15 weeks	9	14.8
16-20 weeks	8	13.1
21-25 weeks	6	9.8
> 25 weeks	5	8.2
<b>Percent of preceptor's day spent working directly with an intern</b>		
< 25%	15	24.2
25-49%	20	32.3
50-74%	20	32.3
> 75%	7	11.2
<b>Inclusion of precepting interns in job description</b>		
Yes	47	77.1
No	14	23.0
<b>Do preceptors feel adequately trained by the DI to perform as management preceptors</b>		
Yes	44	80.0
Partially	11	20.0
No	0	0.0
<b>DI formally updates/retrains management preceptors</b>		
Annually	24	42.9
As needed with program changes	24	42.9
Never	5	8.9
Every 2-4 years	3	5.4
Every 5+ years	0	0.0
<b>In general, I understand my role as preceptor</b>		
Strongly Agree	39	67.2
Agree	18	31.0
Somewhat Agree	0	0.0
Neither Agree nor Disagree	1	1.7
Disagree	0	0.0
Strongly Disagree	0	0.0
<b>In general, I enjoy my role as preceptor</b>		
Strongly Agree	38	65.5
Agree	20	34.5
Somewhat Agree	0	0.0
Neither Agree nor Disagree	0	0.0
Disagree	0	0.0
Strongly Disagree	0	0.0

<b>Table 5 Continued. Preceptor Perceptions of Management/Leadership Rotations</b>		
<b>Characteristics</b>	<b>n<sup>a</sup></b>	<b>%</b>
<b>Working with management interns helps me in my role as manager/leader</b>		
Strongly Agree	30	52.0
Agree	20	34.0
Somewhat Agree	7	12.0
Neither Agree nor Disagree	1	2.0
Disagree	0	0.0
Strongly Disagree	0	0.0
<b><sup>a</sup>n varies due to non-response</b>		

### **Program Director and Preceptor Perception Differences**

Table 6 shows perception differences between Program Directors and Preceptors. Both Program Directors and Preceptors were asked to estimate the allocation of intern time during management/leadership rotations. Program Directors and Preceptors reported relatively similar distributions of time (percent of time spent with upper level managers, managers, supervisors, front line staff, completing projects, and other activities). Both groups estimated that the greatest amount of time per intern day was allocated to completing projects (Program Directors estimated 26% and Preceptors estimated 31% of an intern’s day). The next highest allocation for both groups was spending time with managers (22%, 21% respectively).

Fourteen percent of Program Directors are either ambivalent or disagree/strongly disagree with the statement, “Level of communication with management preceptors is adequate.” Program Directors and Preceptors do not share the same perception that their level of communication with each other is adequate (P value = 0.01). While 72% of Preceptors perceive that intern resumes were available to them prior to a rotation, only 60% of Program Directors reported that preceptors have access (P value = 0.13). A resume showing experience could allow preceptors to customize the rotation or expectations for interns.

Both groups were asked to identify the greatest roadblocks for providing interns with appropriate exposure to practical management experience; the perceptions of the groups varied significantly (P value = 0.00). Program Directors deemed sensitivity issues (budgets, personnel) (29%), student's attitude/interest (20%), and reliance on preceptor (19%) to be the greatest roadblocks. Preceptors rated inadequate time frame (47%), student's attitude/interest (41%), sensitivity issues (budget, personnel) (40%), and student's conceptual base (34%) to be the greatest roadblocks. While the model does not allow identifying which were different, the percentages were clearly higher from the Preceptor's perspective.

More Program Directors (96%) are aware of the CDR's online Dietetics Preceptor Training Program than are Preceptors (64%) (P value = 0.00). Also, 86% of Program Directors indicated that they encouraged completion of the online training but only 33% of Preceptors reported completion.

Finally, mean scores from the Management domain of the Registration Examination for Dietitians were used in a model with the program concentrations/emphases, data regarding multiple exposures to management/leadership competencies, hourly requirement for management rotations, and allocation of intern time during a management rotation. It was discovered that the only variable that has a statistically significant relationship with exam scores is the amount of time that interns spend (based on the Program Director's estimation) working along front line staff. Greater time spent working with front line staff was associated with lower Foodservice and management domain scores on the Registration Examination for Dietitians.

<b>Table 6. Perception Differences</b>					
<b>Characteristic</b>	<b><u>Program Directors</u></b>		<b><u>Preceptors</u></b>		<b>P value</b>
	<b>n<sup>a</sup></b>	<b>%</b>	<b>n<sup>a</sup></b>	<b>%</b>	
<b>Estimated allocation of intern time (% of day, average value of total responses)</b>					
Completing projects		26.0		31.0	0.07
Managers		22.0		21.0	0.73
Supervisors		21.0		18.0	0.24
Front line staff		17.0		16.0	0.55
Upper level managers, executives		10.0		9.0	0.31
Other		4.0		5.0	0.50
<b>“Level of communication with management preceptors (or DI) is adequate”</b>					
Strongly Agree	31	37.8	37	66.1	0.01
Agree	28	34.1	15	26.8	
Somewhat Agree	11	13.4	2	3.6	
Neither Agree nor Disagree	9	11.0	1	1.8	
Disagree	2	2.4	1	1.8	
Strongly Disagree	1	1.2	0	0	
<b>Interns fill out a site/preceptor evaluation for m following a management rotation</b>					
Yes	78	96.3	47	83.9	0.02
No	3	3.7	9	16.1	
<b>Greatest roadblock(s) for providing interns with appropriate exposure to practical management<sup>b</sup></b>					
Sensitivity issues (budgets, personnel)	44	29.0	23	40.0	< 0.01
Students' attitude/interest	30	20.0	24	41.0	
Reliance on preceptor/Unclear DI expectations	29	19.0	6	10.0	
Students' conceptual base	18	12.0	20	34.0	
Inadequate time frame	12	8.0	27	47.0	
Other	20	13.0	7	12.0	
<b>I am aware of the Commission on Dietetics Registration's (CDR) Preceptor Training Program</b>					
Yes	78	96.2	37	63.7	< 0.01
No	3	3.7	21	36.2	
<b>I encourage completion of CDR's online Dietetics Preceptor training (Directors) or I have completed it (Preceptors)</b>					
Yes	68	86.1	13	22.4	< 0.01
No	11	13.9	45	77.6	
<sup>a</sup> n varies due to non-response					
<sup>b</sup> percent may be greater than 100 due to multiple responses					

## **APPENDIX D: COMPLETE DISCUSSION**

## DISCUSSION

The primary purpose of this study was to investigate how DIs are meeting the management/leadership competencies established by ACEND. By exploring responses of Program Directors and Preceptors, a better understanding of current practice in management rotations is now available.

The majority of Program Directors (52%) who had transitioned their programs to the 2008 ERAS reported that the program had added or changed the management rotations included in the curriculum. The 2008 ERAS include fewer but broader competency statements that allow for the skills to be addressed in a variety of practice settings (13). With 52% of Program Directors reporting this change, it becomes evident that the transition from 2002 to 2008 ERAS has had its desired impact.

Some positive findings about management/leadership Preceptors are that 100% agreed or strongly agreed that they enjoy precepting, 98% agreed or strongly agreed that they understand their role, 80% felt adequately trained, and 86% agreed or strongly agreed that precepting helps them in their role as a manager. With recent efforts to increase the number of preceptors available for students/interns, this data supports what past Academy President Judith Rodriguez declared, “When we serve as preceptors we are challenged to keep our knowledge current, and teaching someone else reinforces our own knowledge (17).” She also stated, “The more we are servant leaders, the more we sharpen our skills.”

It is disconcerting that 7% of Program Directors reported that no training was provided to Preceptors. Program Directors have the responsibility to provide “ongoing training based on evaluation by the program director and feedback from interns (12).” A natural first step for these

DIs is to initiate a preceptor training program. By training, more collaboration will take place and feedback can be exchanged between preceptors and program directors more conveniently and frequently.

Hypothesis I expected a relationship between DIs with higher mean scores for the Foodservice and Management domain on the Registration Examination for Dietitians and the program's concentration/emphasis, multiple exposures a DI provided for meeting management/leadership competencies, hourly requirement for management rotations, and the percent of time interns spent with different levels of staff. The data support this hypothesis in only one area – higher estimated amounts of time that interns spent working alongside front line staff was associated with lower scores on the Management domain of the Registration Examination for Dietitians. Knowing this, Program Directors have a responsibility to train preceptors as to how an intern's time should be utilized at a rotation. Intern time is better spent working with and observing supervisors, managers, and executives or working on projects rather than working alongside front line staff.

It is very positive to discover that regardless of concentration/emphasis, interns are demonstrating an understanding of dietetics management on the examination – in this study, 45% of programs had a clinical/MNT concentration, 21% had a community/public health concentration and only 8% had an administration/management concentration. This finding is consistent with and supportive of the vision that “management principles transcend disciplines and practice areas (3).” It also indicates that the ACEND foundation knowledge and competencies prepare all interns in each aspect of the profession (18).

There was an expectation with Hypothesis II that Program Directors and Preceptors would have perception differences regarding the management/leadership rotation experience. The data support perception differences on several points. One major perception difference discovered is that Program Directors and Preceptors view roadblocks to interns having appropriate exposure to practical management differently. Program Directors deemed sensitivity issues (budgets, personnel) (29%), student's attitude/interest (20%), and reliance on preceptor (19%) to be the greatest roadblocks. Preceptors rated inadequate time frame (47%), student's attitude/interest (41%), sensitivity issues (budget, personnel) (40%), and student's conceptual base (34%) to be the greatest roadblocks. A smaller percent of Program Directors had these concerns. Preceptors have daily interaction with interns and guide their skill development during rotations. Due to their proximity, preceptors may be more aware of barriers than are Program Directors. Program Directors might want to seek more feedback from preceptors regarding challenges at specific rotation sites to ensure that interns have the opportunity to achieve desired outcomes.

Additionally, Program Directors reported that the most frequent intern complaints regarding foodservice management rotations were lack of task structure and lack of intern interest. Foodservice management rotations were specifically addressed in this research because historically they have been the rotations where management competencies were met. However, most students do not enter dietetics with a foodservice management focus. It may be to the DIs' advantage to attend to the roadblocks that preceptors recognize and the complaints that interns have that may be inhibiting the impact of a rotation. Eliminating or working around barriers are key to assuring continued improvement in the development of management/leadership competencies. A possible strategy for improvement may include extending the hourly



requirements of management rotations. The DI respondents' hours dedicated to management/leadership competencies is very broad (12-600 hours). Although time spent in management rotations was not related to higher mean scores on the Management domain of the Registration Examination for Dietitians, it may provide an environment that fosters more trust between preceptors and interns. This trust potentially could allow interns more exposure to sensitive topics (budget and personnel issues) and other more interesting and challenging aspects of management. Dreyfus and Dreyfus (15) indicated that management situations have innumerable relevant facts and features involved which makes it difficult to evaluate how each element acts together and influences other elements. In order to develop a high management skill level, concrete experiences in real situations are essential (15). If interns do not have a foundation of management skill development, they will not seek opportunities to acquire the higher level skill which not only affects the level of professional progress for themselves, but also the profession.

Program Directors may coordinate with preceptors in the development of simulations with masked data from industry or create exercises from real human resource management experiences that could provide safer/modified experiences with the more sensitive issues that preceptors see as roadblocks. Another possible improvement may require that DPDs respond to the call for advocating an early positive perception of management and to generating enthusiasm for management equal to that for clinical practice in the educational process. This effort may be most effective method for improving conceptual base and student interest (1,3). Further, DIs may consider using supplementary courses, simulations, projects, and seminars to strengthen interns' conceptual base of management/leadership principles throughout the duration of the DI. By addressing management principles over time through a course or seminar, interns are more

likely to consider how those principles apply as they complete their various rotations. Training and coordinating with preceptors to create a syllabus or general task list for interns may assist interns in feeling more secure with the lack of task structure that accompanies many management rotations and ensure that preceptors understand expectations. More Program Directors would like to see an improvement in their communication with Preceptors and these activities would make intercommunication purposeful.

The data supports several other perception differences. One difference is that more Program Directors than Preceptors deem their communication to be inadequate. Another is that fewer Preceptors than Program Directors believe that interns fill out site evaluations post-rotation. More Program Directors are aware of the availability of online CDR preceptor training than are preceptors and more Program Directors encourage preceptors to complete the CDR preceptor training than there are preceptors who have taken it.

The data does not support a perception difference in how interns spend their time while in management/leadership rotations. Happily, this shared perception shows that Program Directors and Preceptors are both aware of the general day-to-day happenings in a rotation. This also demonstrates some evidence of appropriate communication and clarity of expectations.

## CONCLUSION

There have been historic challenges with the development of management and leadership skills in the profession of dietetics (1,3,8). While foodservice management is still an extremely important part of a student dietitian's curriculum and experience, it is not a common focus for the majority of students/interns. Students may have discounted management entirely because their only exposure to it was with foodservice. The efforts of the Academy, the HOD, and ACEND to shift management into its rightful role as a key piece of each practice area, including foodservice management, seem to be effective (52% reported changing/adjusting rotations used to meet these competencies with implementation of 2008 ERAS). Foodservice management continues to be a very important part of the profession and should not be excluded; the relevance of management principles and skills simply needs to be expanded. The Academy has made it very clear that career success is achieved when dietitians "internalize a management and leadership mindset (8)."

Further, the determination that a program's concentration does not impact mean scores for the Foodservice and Management domain of the Registration Examination for Dietitians confirms that the required foundation knowledge and competencies are fostering the development of competent general skills as they were designed (18). With a continued push from the HOD and ACEND, RDs may see exponential growth in management/leadership capabilities and as a result, put the profession in an even better situation to influence families, communities, healthcare, and industry.

## **Limitations**

A limitation of this study is that interns were not surveyed to determine their perception of the management/leadership rotation experience. Also, in some regards the transition of DIs from 2002 to 2008 ERAS was a limitation. The full effect of 2008 ERAS program adjustments may have been clouded by using the average exam scores over the past five years. The results of changes in management rotations will not be evident in examination scores for several more years.

## **Further Research**

A next step could involve surveying interns to gain an understanding of their perspective of management rotations and the development of management/leadership skills. Another direction could involve studying the undergraduate DPD management/leadership curricula and measuring students' conceptual base and interest in a variety of management/leadership competencies. This could help identify how to improve the DI experience. Finally, it may be beneficial to perform a similar study in five years to measure the entire impact of these 2008 ERAS changes. In the current time frame, the changes are still recent and the DIs are at various steps in the transition to meet these new standards.

**APPENDIX E: ELIGIBILITY REQUIREMENTS AND ACCREDITATION  
STANDARDS MANAGEMENT/LEADERSHIP-RELATED COMPETENCIES**

2008 Management/Leadership-related Competencies

2002 Management/Leadership-related Competencies

## 2008 ERAS – Management/Leadership-related Competencies

1. Justify programs, products, services and care using appropriate evidence or data
2. Demonstrate active participation, teamwork, and contributions in group settings
3. Demonstrate initiative by proactively developing solutions to problems
4. Apply leadership principles effectively to achieve desired outcomes
5. Establish collaborative relationships with internal and external stakeholders, including patients, clients, care givers, physicians, nurses and other health professionals, administrative and support personnel to facilitate individual and organizational goals.
6. Demonstrate professional attributes such as advocacy, customer focus, risk taking, critical thinking, flexibility, time management, work prioritization and work ethic within various organizational goals
7. Demonstrate assertiveness and negotiation skills while respecting life experiences, cultural diversity and educational background
8. Develop and demonstrate effective communication skills using oral, print, visual, electronic and mass media methods for maximizing client education, employee training, and marketing
9. Demonstrate and promote responsible use of resources including employees, money, time, water, energy, food and disposable goods
10. Use organizational processes and tools to manage human resources
11. Apply systems theory and a process approach to make approach to make decisions and maximize outcomes
12. Conduct clinical and customer service quality management activities
13. Use current informatics technology to develop, store, retrieve and disseminate information and data
14. Prepare and analyze quality, financial or productivity data and develop a plan for intervention
15. Obtain and analyze financial data to assess budget controls and maximize fiscal outcomes.

## **2002 ERAS – Management/Leadership-related Competencies**

1. Interpret and incorporate new scientific knowledge into practice
2. Participate in organizational change and planning and goal-setting processes
3. Participate in the use of mass media to promote food and nutrition
4. Perform marketing functions
5. Supervise the integration of financial, human, physical, and material resources and services.
6. Manage safety and sanitation issues related to food and nutrition
7. Participate in human resources functions
8. Develop and measure outcomes for food and nutrition services and practice
9. Participate in facility management, including equipment selection and design/redesign of work units.
10. Supervise procurement, distribution, and service within delivery systems
11. Supervise quality improvement, including systems and customer satisfaction, for dietetics service and/or practice
12. Supervise production of food that meets nutrition guidelines, cost parameters, and consumer acceptance
13. Supervise development and/or modification of recipes/formulas
14. Supervise translation of nutrition into foods/menus for target populations
15. Supervise design of menus as indicated by the patient's/client's health status
16. Supervise community-based food and nutrition programs
17. Use current technologies for information and communication activities
18. Participate in business or operating plan development
19. Supervise the collection and processing of financial data
20. Participate in coding and billing of dietetics/nutrition services to obtain reimbursement for services from public or private insurers.

**APPENDIX F: IRB APPROVAL**



Institutional Review Board  
for Human Subjects



Brigham Young University  
A-285 ASB Provo, Utah 84602  
(801) 422-3841 / Fax: (801) 422-0620

April 12, 2011

Nora Nyland  
S-219 ESC  
Campus Mail

Re: E 110018

An Investigation of Current Practice in Dietetic Internship Management Rotations

Dear Emily Vaterlaus

This is to inform you that Brigham Young University's Institutional Review Board has reviewed your Amendment dated 4-8-2011 for the above captioned study. The changes to the study have been approved.

Please find the revised Informed Consent document enclosed. You will note that the date of approval at the bottom right hand corner has been updated on 4-12-2011. No other consent form should be used.

The approved period for the study ends on 1-17-2012. Any additional modifications in the research protocol, study site, personnel, or consent form during this time period must first be reviewed and approved by the IRB.

If you have any questions, please let us know. We wish you well with your research.

Sincerely,

A handwritten signature in black ink, appearing to read "Lane Fischer".

Lane Fischer, PhD. Chair  
Santee M.P. Munoz, Administrator  
Institutional Review Board for Human Subjects

## **APPENDIX G: SURVEY INSTRUMENT**

Program Director Cover Letter and Questionnaire

Primary Preceptor Cover Letter and Questionnaire

## Program Director Version



Dear \_\_\_\_\_,

Over the past decade, the American Dietetic Association has emphasized the value of management and leadership skills for all dietitians. These are the skills that protect and progress the profession, thus facilitating the dietitian's role as the *Nutrition Expert*. The Dietetic Internship (DI) provides a major developmental stage as interns apply theory and concepts in a secure setting while preceptors assist, instruct, and evaluate. There has been very little research regarding the development of management/leadership skills during this phase of education.

We are investigating:

- How DIs meet the Commission on Accreditation for Dietetics Education's management and leadership competencies,
- If there are identifiable factors in DI program structures that relate to higher mean scores on the Foodservice and Management portion of the Examination for Registered Dietitians, and
- How DI program directors and preceptors perceive the components of the DI program structure and the management rotation experience.

You have been invited to participate in this study of dietetics management/leadership education because of your role as Dietetic Internship Director.

This study has been approved by the Institutional Review Board (IRB) at Brigham Young University. If you have questions about your rights as a participant, you may call Lane Fischer, Chair of the IRB at (801) 422-3841. There are no known risks or discomforts associated with participation. Completion of the survey indicates your willingness to participate. Involvement in this research project is voluntary. You may withdraw at any time without penalty or refuse to participate entirely. Only combined results will be reported; individual responses will remain confidential.

The questionnaire should take approximately 20-30 minutes to complete. We recognize that this is a time commitment but please note that the survey software allows you to enter and exit the questionnaire at will, allowing for incremental completion.

For ease of completion, you may wish to locate these data from your records before starting:

- Commission on Accreditation for Dietetics Education (CADE)'s Registration Examination Five Year Summary Report
- Contact information for 3 primary preceptors at rotations designed to meet management/leadership competencies. [A brief electronic questionnaire (~10 minutes) will be sent to the primary preceptors to assess their perception of this component of training.]

The results of this study will be valuable in shedding light on what is currently happening in DIs to foster the development of leadership/management skills in our profession. In appreciation of your participation, \$1.00 will be donated to the American Dietetic Association Foundation Scholarship for each Program Director questionnaire returned.

- 1) Please complete the questionnaire by \_\_\_\_\_.
- 2) If you prefer a paper version of this questionnaire, click [here](#).

Sincerely,

Emily Vaterlaus, RD, CD

Graduate Student

[RDsleadandmanage.byu@gmail.com](mailto:RDsleadandmanage.byu@gmail.com)

Nora Nyland, PhD, RD, CD

[nora\\_nyland@byu.edu](mailto:nora_nyland@byu.edu)

1. Time as DI Program Director:
  - Less than 1 year
  - 1-3 years
  - 4-6 years
  - 7-10 years
  - 11+ years
  
2. Your highest level of education
  - Master's Degree
  - Doctoral Degree
 Highest Degree Area: \_\_\_\_\_
  
3. You have dietetics management experience in the following areas (mark all that apply):
  - None
  - Education
  - Foodservice
  - Clinical Nutrition
  - Community/ Public Health
  - Other: \_\_\_\_\_
  
4. What percent of your work time is devoted to the DI? \_\_\_\_\_%
  
5. The dietetic internship (DI) functions under which Eligibility Requirements and Accreditation Standards (ERAS)?
  - 2002       2008
 If 2008 ERAS, they were adopted in what academic year: \_\_\_\_\_
 

Has the DI has broadened management and leadership exposure through additional/different rotations with adoption of the 2008 ERAS?

  - Yes       No
  
6. The DI is:
  - Distance
  - Local
  - Both options available
  
7. If local, is the location:
  - Urban
  - Suburban
  - Rural
  
8. Internship start dates (Please select all that apply):
  - Summer
  - Fall
  - Winter
  
9. Number of interns annually: \_\_\_\_\_
  
10. The internship is housed in a:
  - University
  - Healthcare facility
  - Government agency
  - Contract service company
  - Other: \_\_\_\_\_
  
11. What is the DI's emphasis/concentration?  
\_\_\_\_\_
  
12. Does the DI require that interns have previous dietetic work experience?
  - Yes, \_\_\_\_\_ hours       No
  
13. From the *Commission on Accreditation for Dietetics Education (CADE)'s Five Year Summary Report*, please list the DI's past five **Foodservice** sub scores for the Institution (INST). (This reflects the Food Service Systems and Management subscore.)
 

2006: \_\_\_\_\_ 2007: \_\_\_\_\_ 2008: \_\_\_\_\_

2009: \_\_\_\_\_ 2010: \_\_\_\_\_



Please rank the top 3 rotations that are designed to meet the following competencies. Primary rotation should be ranked 1, additional rotations should be ranked 2 or 3. If only one rotation is used, only rank that rotation. If you use an "other" rotation, please indicate its name in the space provided.

**2008 Learning Competencies:**

	Food Service - College/University	Food Service - Extended Care	Food Service - Hospital	Food Service - School	Food Service - Other	Clinical - Hospital	Clinical - Extended Care	Clinical - Outpatient/Counseling	Community/Public Health	Leadership	Simulations	Didactic Course Work	Other
Justify programs, products, services and care using appropriate evidence or data													
Demonstrate active participation, teamwork, and contributions in group settings													
Demonstrate initiative by proactively developing solutions to problems													
Apply leadership principles effectively to achieve desired outcomes													
Establish collaborative relationships with internal and external stakeholders, including patients, clients, care givers, physicians, nurses and other health professionals, administrative and support personnel to facilitate individual and organizational goals.													
Demonstrate professional attributes such as advocacy, customer focus, risk taking, critical thinking, flexibility, time management, work prioritization and work ethic within various organizational goals.													
Demonstrate assertiveness and negotiation skills while respecting life experiences, cultural diversity and educational background													
Develop and demonstrate effective communication skills using oral, print, visual, electronic and mass media methods for maximizing client education, employee training, and marketing													
Demonstrate and promote responsible use of resources including employees, money, time, water, energy, food and disposable goods													
Use organizational processes and tools to manage human resources													
Apply systems theory and a process approach to make decisions and maximize outcomes													
Conduct clinical and customer service quality management activities													
Use current informatics technology to develop, store, retrieve and disseminate information and data													
Prepare and analyze quality, financial or productivity data and develops a plan for intervention													
Obtain and analyze financial data to assess budget controls and miximize fiscal outcomes													

14. How much time does the DI allocate to management/leadership rotations?

- a. \_\_\_\_\_ Total **hours**
- b. \_\_\_\_\_ Weeks dedicated **solely** to management/leadership

Of those weeks/hours, how many are spent specifically in **foodservice** rotations?

- c. \_\_\_\_\_ hours
- d. \_\_\_\_\_ weeks

15. Please estimate what percent of intern time is spent in the following activities during management rotation(s):

- \_\_\_\_\_ % Administrative projects
- \_\_\_\_\_ % Upper level management/  
executive level
- \_\_\_\_\_ % Managerial level
- \_\_\_\_\_ % Supervisory level
- \_\_\_\_\_ % Observing front line staff
- \_\_\_\_\_ % Working beside front line  
staff
- \_\_\_\_\_ % Other

16. How many interns are assigned simultaneously to a management rotation in the same institution?

- 1
- 2
- 3
- 4+

17. Do management preceptors receive or have access to interns' resumes prior to the rotation?

- Yes
- No

18. The level of communication that the DI has with management preceptors is adequate.

- Strongly Agree
- Agree
- Somewhat Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

19. Does the DI require that management preceptors complete a mid-rotation intern evaluation?

- Yes
- No

If no, why?

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---

---

20. Does the DI require that management preceptors complete a final evaluation for intern(s)?

- Yes
- No



If yes, do you or a DI representative attend/observe the final evaluation?

- Yes                       No

21. Do interns fill out a site/preceptor evaluation form following a management rotation?

- Yes                       No

If yes, how do preceptors receive intern feedback?

- They do not  
 Formal meeting  
 Informal verbal/email  
 Standardized form  
 Other: \_\_\_\_\_

How often is intern feedback shared with preceptors?

- Never  
 Following each intern's rotation  
 Following each academic year  
 Following 2-3 years  
 Variable, as needed

22. Students' most frequent complaints regarding **foodservice** management rotations are (Please select all that apply):

- I receive no complaints  
 Lack of interest  
 Lack of prior exposure  
 Lack of task structure  
 Time spent in dish room  
 Time spent in meal service  
 Time spent in production  
 Time spent with administration/managers  
 Other: \_\_\_\_\_

23. Which of the following **didactic** components does the DI employ to support the management rotations?

Select all that apply:

- Unit in a course  
 A course (or courses)  
 Assignments  
 Projects  
 Other:  
\_\_\_\_\_

24. What do you consider the greatest roadblock(s) for providing interns with appropriate exposure to practical management? (Please select all that apply)

- Sensitive issues (budgets, personnel)  
 Inadequate time frame  
 Student's attitude/interest  
 Student's conceptual base  
 Reliance on preceptor interpretation of competencies  
 Other:  
\_\_\_\_\_

25. What would you change to improve interns' experiences in management rotations?  
\_\_\_\_\_

26. I am **aware** of the Commission on Dietetic Registration's online *Dietetics Preceptor Training Program*.

- Yes     No

27. I **encourage** management preceptors who host my interns to complete the Commission on Dietetic Registration's online *Dietetics Preceptor Training Program*.

- Yes     No

28. In what ways does the DI provide training for management preceptors? (Please select all that apply)

- No training is provided  
 Live one-on-one training  
 Live group training  
 Preceptor link on DI website  
 Webinars/Online modules created by DI  
 Written materials (binders, pamphlets, or handbook)  
 Informal phone/email conversations  
 Other:
- 

29. When doing formal training for management rotations, the following individuals are present (Please select all that apply):

- No formal training is provided  
 Site's intern coordinator/primary preceptor  
 Each preceptor with whom interns work  
 Administrator/upper management

30. How often does the DI formally **update/retrain** management preceptors? Please select all that apply.

- Never  
 Annually  
 Every 2-4 years  
 Every 5+ years  
 As needed with program changes  
 As needed based on rotation's tenure in facility

31. The DI has stopped using a management site/preceptor because the experience was not meeting DI's expectations and/or CADE standards.

- Never  
 Rarely  
 Sometimes  
 Frequently

32. It is challenging to schedule trainings for **management** preceptors.

- Strongly Agree  
 Agree  
 Somewhat Agree  
 Neither Agree or Disagree  
 Disagree  
 Strongly Disagree

33. Compared to clinical or community preceptor training, it is difficult to find appropriate training methods for **management** preceptors.

- Strongly Agree  
 Agree  
 Somewhat Agree  
 Neither Agree or Disagree  
 Disagree  
 Strongly Disagree

***Please provide contact information for  
THREE primary preceptors at the DI  
rotations designed to meet CADE's  
management/leadership competencies.***

Name of Institution:

Name of Primary Preceptor:

Email:

Address:

Address 2:

City:

State:

Zip Code:

Name of Institution:

Name of Primary Preceptor:

Email:

Address:

Address 2:

City:

State:

Zip Code:

Name of Institution:

Name of Primary Preceptor:

Email:

Address:

Address 2:

City:

State:

Zip Code:

## Primary Preceptor Version



Dear \_\_\_\_\_,

Over the past decade, the American Dietetic Association has emphasized the value of management and leadership skills for all dietitians. The internship provides a major developmental stage as interns apply theory and concepts in a secure setting while preceptors assist, instruct, and evaluate. There has been little research regarding the development of management/leadership skills during this phase of education.

You have been invited to participate in this study of dietetics management/leadership education because you were identified as a preceptor by a Dietetic Internship (DI) director with whom you work.

As a management preceptor for dietetic interns, you provide a great service to the profession of dietetics. Because of your vital role in the supervised practice phase of education for dietitians, we value your perspective on current training practices. We are specifically investigating:

- How DIs meet the Commission on Accreditation for Dietetics Education's management and leadership competencies,
- If there are identifiable factors in DI program structures that relate to higher mean scores on the Foodservice and Management portion of the Examination for Registered Dietitians and
- How DI program directors and preceptors perceive the components of the DI program structure and the management rotation experience.

This study has been approved by the Institutional Review Board (IRB) at Brigham Young University. If you have questions about your rights as a participant, you may call Lane Fischer, Chair of the IRB at (801) 422-3841. There are no known risks or discomforts associated with participation.

Completion of the survey indicates your willingness to participate. Involvement in this research project is voluntary. You may withdraw at any time without penalty or refuse to participate entirely. There will be no reference to your identification at any point in the research. Only combined results will be reported; individual responses will remain confidential. The questionnaire should take approximately 10-15 minutes to complete.

The results of this study will shed light on what is currently happening to foster the development of leadership/management skills in DIs. We appreciate the contribution of your perspective and time.

Sincerely,

Emily Vaterlaus, RD, CD

Graduate Student

[RDsleadandmanage.byu@gmail.com](mailto:RDsleadandmanage.byu@gmail.com)

Nora Nyland, PhD, RD, CD

[nora\\_nyland@byu.edu](mailto:nora_nyland@byu.edu)

1. Gender:
  - Female       Male
  
2. My highest level of education
  - Associate Degree
  - Bachelor's Degree
  - Some post-grad, but no degree
  - Master's Degree
  - Doctoral Degree
 Highest Degree Area: \_\_\_\_\_  
 \_\_\_\_\_
  
3. I am a Registered Dietitian.
  - Yes       No
 I am a Dietetic Technician, Registered.
  - Yes       No
  
4. My **current** practice area is:
  - Foodservice
  - Clinical Nutrition
  - Public Health/Community
  - Business/ Entrepreneurial
  - Other: \_\_\_\_\_
  
5. My job title is: \_\_\_\_\_
  
6. Precepting dietetic interns is included as part of my job description.
  - Yes
  - No
  - I don't know
  
7. During my career, I have acted as a management/leadership rotation preceptor for dietetic interns for:
  - Less than 1 year
  - 1-3 years
  - 4-6 years
  - 7-10 years
  - 11+ years
  
8. In addition to my role as a preceptor, \_\_\_\_\_ others serve as management preceptors at my institution.
  
9. If your institution works with more than one dietetics program, are there major differences in objectives/expectations for management rotations between programs?
  - Yes
  - No
  - I don't know
 Why/How?: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  
10. My organization generally hosts interns in **management** rotations \_\_\_\_\_ total weeks per calendar year?
  - < 5 weeks
  - 6-10 weeks
  - 11-15 weeks
  - 16-20 weeks
  - 21-25 weeks
  - >25 weeks
  
11. When hosting an intern, please estimate what percentage of a management preceptor's day is spent working directly with an intern? \_\_\_\_\_%
  
12. Please estimate what percent of **intern time** is spent in the following activities?
  - \_\_\_\_\_ % Administrative projects
  - \_\_\_\_\_ % Upper level management/ executive level
  - \_\_\_\_\_ % Managerial level
  - \_\_\_\_\_ % Supervisory level
  - \_\_\_\_\_ % Observing front line staff
  - \_\_\_\_\_ % Working beside front line staff
  - \_\_\_\_\_ % Other

13. What would you consider the greatest roadblock(s) for providing interns with appropriate exposure to practical management? Please check all that apply:

- Sensitivity issues (budgets, personnel)
- Inadequate time frame
- Student's attitude/interest
- Student's conceptual base
- Unclear expectations from internship program
- Other:

\_\_\_\_\_

14. I am **aware** of the Commission on Dietetic Registration's online *Dietetics Preceptor Training Program*.

- Yes  No

15. I have **completed** the Commission on Dietetic Registration's online *Dietetics Preceptor Training Program*.

- Yes  No

16. In general, I **understand** my role as preceptor.

- Strongly Agree
- Agree
- Somewhat Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

17. In general, I **enjoy** my role as preceptor.

- Strongly Agree
- Agree
- Somewhat Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

18. Working with management interns helps me in my role as a manager/leader.

- Strongly Agree
- Agree
- Somewhat Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

The remainder of questions involves program-specific responses. Please note the DI Programs are assigned to columns below:

Questions	<DI #1> (will provide names of program here)	<DI #2>
I receive or have access to interns' resumes prior to the management rotation.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Number of interns I work with simultaneously during one management rotation:	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4+	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4+
How much time is an intern scheduled for a management rotation at your facility?	_____ weeks _____ hours/week	_____ weeks _____ hours/week
The level of communication that I have with the DI program director or representatives is adequate.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither Agree or Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither Agree or Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
As a preceptor, how often are you responsible for evaluating an intern's performance?	<input type="checkbox"/> Never <input type="checkbox"/> Weekly <input type="checkbox"/> Midpoint and final ONLY <input type="checkbox"/> Final ONLY <input type="checkbox"/> As needed	<input type="checkbox"/> Never <input type="checkbox"/> Weekly <input type="checkbox"/> Midpoint and final ONLY <input type="checkbox"/> Final ONLY <input type="checkbox"/> As needed
Do you receive feedback from the internship program regarding <b>the intern's perception</b> of the management rotation? If yes, - In what form?  - How often?	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Formal meeting <input type="checkbox"/> Informal verbal <input type="checkbox"/> Email <input type="checkbox"/> Standardized form <input type="checkbox"/> Other:  <input type="checkbox"/> Following each intern's rotation <input type="checkbox"/> Following each academic year <input type="checkbox"/> Variable, as needed	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Formal meeting <input type="checkbox"/> Informal verbal <input type="checkbox"/> Email <input type="checkbox"/> Standardized form <input type="checkbox"/> Other:  <input type="checkbox"/> Following each intern's rotation <input type="checkbox"/> Following each academic year <input type="checkbox"/> Variable, as needed



How often does the DI <b>update/retrain</b> you regarding your role as a preceptor?	<input type="checkbox"/> Never <input type="checkbox"/> Annually <input type="checkbox"/> Every 2-4 years <input type="checkbox"/> Every 5+ years <input type="checkbox"/> As needed with program changes	<input type="checkbox"/> Never <input type="checkbox"/> Annually <input type="checkbox"/> Every 2-4 years <input type="checkbox"/> Every 5+ years <input type="checkbox"/> As needed with program changes
Do you feel <b>adequately trained</b> by the dietetic internship program to perform as a management preceptor?	<input type="checkbox"/> Yes <input type="checkbox"/> Partially <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> Partially <input type="checkbox"/> No

Thank you for your participation!

**Note:** This questionnaire was prepared so that Preceptors could respond to the questions differently for each program with which they worked. However, no Preceptor name was submitted by more than one Program Director, so this feature of the questionnaire was not used.

## **APPENDIX H: PILOT MATERIALS**

Pilot Letters

Pilot Questionnaires

## Program Director Version

Dear \_\_\_\_\_:

You have been selected to participate in the pilot study for a research project on management/leadership skill development during the supervised practice phase of dietetics education.

We would appreciate your assistance with testing the survey instrument and study procedures. This involves:

- Reading the notification postcard
- Reading the initial cover letter (which includes the informed consent statement)
- Responding to the questionnaire (please provide primary preceptor information as directed as we will be contacting them in order to test the instruments and study procedures in the second phase of the study)
- Answering questions on the pilot questionnaire regarding the postcard, survey cover letter, and questionnaire.

There are some references to Dietetic Internships that are included in the questions that may seem irrelevant; we do recognize your affiliation with a Coordinated Program. The questions are included to maintain the integrity of the pilot survey.

You may exit and return to the questionnaire as needed. Please submit the study questionnaire upon completion. Please submit this by February 16, 2011. Thank you for your assistance.

Your feedback will help us make the research effective and meaningful.

Thank you,

Emily Vaterlaus, RD, CD

Nora Nyland, PhD, RD, CD

Graduate Student

## Primary Preceptor Version

Dear \_\_\_\_\_:

You have been selected to participate in the pilot study for a research project on management/leadership skill development during the supervised practice phase of dietetics education. We have selected you for participation because we have both worked with you in other capacities and trust you and your judgment. Please help us refine our research tools by responding to this survey.

We would appreciate your assistance with testing the survey instrument and study procedures. This involves:

- Reading the notification postcard
- Reading the initial cover letter (which includes the informed consent statement)
- Responding to the questionnaire
- Answering questions on the pilot questionnaire regarding the postcard, survey cover letter, and questionnaire.

Submit the questionnaire upon completion. Please submit this by \_\_\_\_\_, 2011. Thank you for your assistance.

Your feedback will help us make the research effective and meaningful.

Thank you,

Emily Vaterlaus, RD, CD

Nora Nyland, PhD, RD, CD

Graduate Student

## Pilot Questionnaire – Program Director

Answer the questions about each of the following:

	<b>Post Card</b>		<b>Survey Cover Letter</b>		<b>Survey</b>	
	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>No</b>
1. Was it clear?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
2. Was it concise?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
3. Was it easily understood?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
4. Did you have any questions after reading the components?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						

Answer the following questions about the survey:

1) Is the wording of any question confusing?  Yes  No  
If yes, which question(s)?

2) Is the survey itself readable?  Yes  No  
Comments:

3) Is the flow of questions logical?  Yes  No  
Comments:

4) Are there barriers to Program Directors giving primary preceptor names and contact information to researchers?  Yes  No  
Comments:

5) Are there any additional questions or issues that you feel should be addressed in the survey?  
 Yes  No  
Comments:

6) Approximately how long did it take for you to complete the survey?

7) Please give any other suggestions or comments:

Thank you for your assistance!

## Pilot Questionnaire – Primary Preceptor

Answer the questions about each of the following:

	<b>Post Card</b>		<b>Survey Cover Letter</b>		<b>Survey</b>	
	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>No</b>
1. Was it clear?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
2. Was it concise?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
3. Was it easily understood?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
4. Did you have any questions after reading the components?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						

Answer the following questions about the survey:

- 1) Is the wording of any question confusing?  Yes  No  
If yes, which question(s)?
  
- 2) Is the survey itself readable?  Yes  No  
Comments:
  
- 3) Is the flow of questions logical?  Yes  No  
Comments:
  
- 4) Do you feel comfortable with the Dietetic Internship Program Director providing your name and contact information to researchers?  Yes  No  
Comments:
  
- 5) Are there any additional questions or issues that you feel should be addressed in the survey?  
 Yes  No  
Comments:
  
- 6) Approximately how long did it take for you to complete the survey?
  
- 7) Please give any other suggestions or comments:

Thank you for your assistance!



## **APPENDIX I: ADDITIONAL CORRESPONDANCE**

Postcard

Follow-ups

Postcard

*Dietetic Internships,*  
**Management**  
&  
**Leadership**



An electronic survey will arrive in your in-box very soon from [RDsLeadandManage.byu@gmail.com](mailto:RDsLeadandManage.byu@gmail.com). We are investigating how management and leadership training is happening in Dietetic Internships across the nation.

Please take the time to respond, we need your input!

Thank you in advance,

Emily Vaterlaus, RD, CD  
Graduate Student

Nora Nyland, PhD, RD, CD

## Program Director Follow-ups



**Brigham Young University**  
S-221 ESC  
Provo, UT 84602  
(801) 422-3912/ FAX: (801) 422-0258  
[RDsLeadandManage.byu@gmail.com](mailto:RDsLeadandManage.byu@gmail.com)

Dear (Program Director),

We recently sent you an email asking you to respond to a survey regarding management/leadership education for dietetic interns. Your response to this survey is important and will help us understand current training practices across the nation. The questionnaire should take approximately 20-30 minutes to complete. We recognize that this is a time commitment but please note that the survey software allows you to enter and exit the questionnaire at will, allowing for incremental completion. We encourage you to take a few minutes and complete the survey.

Your response is important. Getting direct feedback from Program Directors concerning this aspect of training is valuable. Please take the opportunity to complete the survey by **Wednesday, May 11th**. Thank you for your help by completing the survey.

Sincerely,

Emily Vaterlaus, RD, CD  
Graduate Student  
[RDsleadandmanage.byu@gmail.com](mailto:RDsleadandmanage.byu@gmail.com)

Nora Nyland, PhD, RD, CD  
[nora\\_nyland@byu.edu](mailto:nora_nyland@byu.edu)



**Brigham Young University**

S-221 ESC

Provo, UT 84602

(801) 422-3912/ FAX: (801) 422-0258

[RDsLeadandManage.byu@gmail.com](mailto:RDsLeadandManage.byu@gmail.com)

Dear (Program Director),

We know how busy you are and we appreciate how valuable your time is. We are hoping you may be able to give about 20-30 minutes of your time during the next few days to share your perspective and experience with the current management/leadership training for dietetic interns. In appreciation of your participation, \$1.00 will be donated to the American Dietetic Association Foundation Scholarship for each Program Director questionnaire returned.

Thank you in advance for completing the survey. Your response is important!

Sincerely,

Emily Vaterlaus, RD, CD  
Graduate Student  
[RDsleadandmanage.byu@gmail.com](mailto:RDsleadandmanage.byu@gmail.com)

Nora Nyland, PhD, RD, CD  
[nora\\_nyland@byu.edu](mailto:nora_nyland@byu.edu)



**Brigham Young University**

S-221 ESC

Provo, UT 84602

(801) 422-3912/ FAX: (801) 422-0258

[RDsLeadandManage.byu@gmail.com](mailto:RDsLeadandManage.byu@gmail.com)

Dear (Program Director),

We really don't want to be annoying (it may be too late!), so this is the last reminder to complete the management/leadership survey. Many directors have responded already, but your response will strengthen our understanding of how interns gain their initial exposure to dietetics management. We appreciate your time and expertise in this endeavor. Please complete the survey in the next week or so.

Sincerely,

Emily Vaterlaus, RD, CD

Graduate Student

[RDsleadandmanage.byu@gmail.com](mailto:RDsleadandmanage.byu@gmail.com)

Nora Nyland, PhD, RD, CD

[nora\\_nyland@byu.edu](mailto:nora_nyland@byu.edu)

## Primary Preceptor Follow-ups



Dear (Preceptor),

We recently sent you an email asking you to respond to a survey regarding management/leadership education for dietetic interns. Your response to this survey is important and will help us understand current training practices across the nation.

The questionnaire should take approximately **5-10 minutes** to complete. Receiving direct feedback from preceptors concerning this aspect of training is valuable. Please take the opportunity to complete the survey by **Wednesday, July 13th**.

Thank you for your help by completing the survey!

Emily Vaterlaus, RD, CD  
Graduate Student

Nora Nyland, PhD, RD, CD



Dear (Preceptor),

We know how busy you are and we appreciate how valuable your time is. We are hoping you may be able to give about **5-10 minutes** of your time during the next few days to share your perspective and experience with the current management/leadership training for dietetic interns.

Thank you in advance for completing the survey. Your response is important!

Sincerely,

Emily Vaterlaus, RD, CD  
Graduate Student

Nora Nyland, PhD, RD, CD



Dear (Preceptor),

We really don't want to be annoying (it may be too late!), so this is the last reminder to complete the management/leadership survey. Many directors have responded already, but your response will strengthen our understanding of how interns gain their initial exposure to dietetics management. We appreciate your time and expertise in this endeavor. Please complete the survey in the next week or so.

Sincerely,

Emily Vaterlaus, RD, CD  
Graduate Student  
[RDsleadandmanage.byu@gmail.com](mailto:RDsleadandmanage.byu@gmail.com)

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## “Thank You” Email



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Dear (Program Directors or Preceptor),

Thank you for completing the survey regarding management/leadership training in dietetic internships! We sincerely appreciate your time and expertise in helping us understand current practice in this area.

Sincerely,

Emily Vaterlaus, RD, CD

Graduate Student

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## **APPENDIX J: COMPLETE REFERENCES**

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