

5-2022

## Assessing Nutritional Health Knowledge in Sharing Clinic Patients with Diabetes

Minden Huntrods  
*University of Nebraska Medical Center*

Follow this and additional works at: [https://digitalcommons.unmc.edu/coph\\_slce](https://digitalcommons.unmc.edu/coph_slce)



Part of the [Dietetics and Clinical Nutrition Commons](#), [Human and Clinical Nutrition Commons](#), [Other Pharmacy and Pharmaceutical Sciences Commons](#), and the [Public Health Commons](#)

---

### Recommended Citation

Huntrods, Minden, "Assessing Nutritional Health Knowledge in Sharing Clinic Patients with Diabetes" (2022). *Capstone Experience*. 195.

[https://digitalcommons.unmc.edu/coph\\_slce/195](https://digitalcommons.unmc.edu/coph_slce/195)

This Capstone Experience is brought to you for free and open access by the Master of Public Health at DigitalCommons@UNMC. It has been accepted for inclusion in Capstone Experience by an authorized administrator of DigitalCommons@UNMC. For more information, please contact [digitalcommons@unmc.edu](mailto:digitalcommons@unmc.edu).

# **ASSESSING NUTRITIONAL HEALTH KNOWLEDGE IN SHARING CLINIC PATIENTS WITH DIABETES**

## **Student Name and Concentration**

Minden L. Huntrods, Health Promotion

## **Committee Information**

Chair – Melissa Tibbits, PhD

Member 2 – Fabio Almeida, PhD, MSW

Member 3 – Kristen Cook, PharmD, BCPS

Member 4 – Jessica Downes, PharmD, BCACP, CDCES

## **Abstract**

Effective diabetes prevention and management relies on nutritional behaviors, thus a basic level of health knowledge is important for patients with diabetes and their caregivers in their quest to acquire acute glycemic control and minimize negative health outcomes (Ley et al., 2014). The purpose of this study was to assess the nutrition-related health knowledge of patients living with diabetes who are seen at the UNMC Sharing Clinic by use of a verbal questionnaire. This nutritional health knowledge assessment was a quantitative, prospective, survey-based study utilizing descriptive statistics. Approximately 86% of patients were proficient in food group and nutritious foods knowledge but only 57%, 44%, and 29% of patients were proficient in the categories of meal timing, hypoglycemia safety, and carbohydrate counting respectively. These results suggest there is significant room for nutritional education that could positively impact chronic disease state management as well as glycemic safety in Sharing Clinic patients.

## **Background and Literature Review**

Diabetes is a significant cause of morbidity and mortality in the United States, evidenced by the approximately 34 million Americans that have diabetes and its standing as the seventh leading cause of death in the United States (Centers for Disease Control and Prevention, 2020 February 18). Diabetes prevention and management are largely impacted by food and nutrition behaviors. Diets high in fruits, vegetables, and whole grains and low in red meats, highly processed grains, and added sugars have

historically been associated with overall lower risk of developing diabetes and better glycemic control of already established diabetes (Ley et al., 2014)

Health knowledge is an integral part of tackling nutrition-related challenges in managing blood glucose and ultimately impacts chronic disease state control and overall outcomes (Cha et al., 2014). Health knowledge may be described as information or skills obtained by health-related experiences or health education in addition to understanding at the theoretical or practical level of health and healthcare (Chin et al., 2011). Lower levels of knowledge of topics like nutritional quality and portion size are generally associated with negative health outcomes (Cha et al., 2014). According to previous studies, patients with diabetes that are maintained in a primary care setting who have insufficient health and nutritional knowledge are more likely to have severe complications caused by poor glycemic control including increased incidence of retinopathy compared to their more health knowledgeable peers (Schillinger et al., 2002).

Historical research has shown that patients who are uninsured are less likely to have a significant understanding of their health compared to their insured counterparts. Studies have revealed that approximately 2 million Americans with diabetes aged 18 to 64 years are without healthcare insurance. Most patients 65 years of age or older with diabetes have health insurance but often require additional supplemental insurance in order to cover the costs of medications, regular provider visits, and preventative measures (Stark Casagrande & Cowie, 2012). Additionally, those who had low levels of knowledge were generally more likely to identify within a minority racial or ethnic group, have less education, be of older age, have cognitive disability, or be generally less healthy (Levy & Janke, 2016).

Integrating interventions into the primary care setting that are targeted at health knowledge simultaneously addresses race/ethnic and educational health disparities and access to care (Bennett et al., 2009). To date, there are few studies addressing nutritional health knowledge of patients with diabetes in the setting of student-run clinics for underserved patients, and consequently, the purpose of the project was to assess the nutrition-related health knowledge of patients living with diabetes who are seen at the student-run UNMC Sharing Clinic (Student Health Alliance Reaching Indigent Needy Groups). The

Sharing Clinic works to improve the overall wellbeing of residents in the Omaha-metro area by providing free healthcare and human services to those who need it, while simultaneously providing a learning environment for UNMC students in medicine, pharmacy, nursing, physical therapy, psychiatry, laboratory, and the physician assistant program (Sharing Clinic, 2020). According to members of the Sharing Clinic Faculty Board, an assessment of health and nutritional knowledge within the Sharing Clinic system has not been completed for approximately ten years.

This study was designed to answer two research questions: (1) How knowledgeable are Sharing Clinic patients with diabetes about nutrition?; and (2) About which nutrition topics are patients most and least knowledgeable?

## **Data and Methods**

This nutritional health knowledge assessment was a quantitative, prospective, survey-based study utilizing descriptive statistics. Ethical approval was obtained through the UNMC Institutional Review Board, and informed consent was required of all participants. Ten patients were identified for the study by screening those who presented to Sharing Clinic each week. Eligibility criteria included an age of at least 19 years, receipt of care at Sharing Clinic, had a diagnosis of diabetes mellitus, and provided verbal consent. Data was collected by a single investigator in the form of a dietitian-reviewed, multiple choice, verbal questionnaire to quantitatively assess nutritional health knowledge. Patients that declined participation at a single visit were asked for participation at subsequent visits. The Nebraska Medicine interpretive services line was used for all patients that were not English-speaking. The questionnaire included topics of basic macronutrients, hypoglycemic events, carbohydrate servings, meal timing, and nutrient-dense food sources. Basic macronutrient questions were focused on assessing a patient's ability to identify foods that belong in major food groups including carbohydrates, proteins, and fats. Hypoglycemia questions were focused on identifying if a patient understood what steps to take during a hypoglycemic event in order to safely stabilize their blood glucose level. Other questions included determining if a patient understood a single serving size of common carbohydrate-rich foods. Meal timing

questions targeted the importance of consuming regular meals to avoid hypoglycemic events, and nutrient-dense food source questions were designed to identify if patients understood the difference between high-calorie, low-micronutrient foods from moderate-calorie, nutrient-dense foods. Additional information collected from patients and the electronic health record included age, gender, comorbidities, preferred languages, hemoglobin A1c, duration of diabetes, and duration of insulin use. Specific comorbidities included in the assessment of the study were based on the identified areas of opportunity from the 2015 Community Needs Health Assessment for Douglas, Sarpy, & Cass Counties in Nebraska and Pottawattamie County in Iowa.

Prospective assessment of nutritional health knowledge was based on the percentage of correct answers, including percentage of correct answers from each general topic (basic macronutrients, serving sizes, glycemic indices, fast-acting carbohydrates, and general healthy diet questions). The primary outcome, nutritional knowledge proficiency, was defined as the percentage of patients who answered all questions correctly within a nutritional category, and the percentage of individual questions answered correctly was also assessed. The percentage of questions answered correctly from each topic was compared to the average percentage answered correctly. Because of the limited number of patients involved in the study, all data was analyzed through Microsoft Excel.

## **Results**

A total of 7 patients completed the verbal questionnaire. As previously described, all patients had a diagnosis of diabetes mellitus, were over the age of 18 years, and received care at Sharing Clinic. Patient demographic information can be seen in Table 1. A majority of patients identified themselves as female, had Type 2 Diabetes Mellitus, and preferred English as their primary language. Patient race and ethnicities varied but were predominantly White/Caucasian, followed by Hispanic/Latinx, followed by Black/African American. The average patient age was 49 years, and the average years with diabetes

mellitus, years with insulin, and hemoglobin A1c were 24 years, 13 years, and 8.1% respectively. Table 2 describes many of the comorbid conditions the participants managed including hypertension, heart disease, hyperlipidemia, and depression. No patients had concurrent cancer, chronic obstructive pulmonary disease, or chronic kidney disease.

The average percentage of correct answers from each category as well as individual questions are shown in Table 3. The average of all questions answered correctly was 67.14%. Within the food group category, 85.71% of questions were answered correctly, and 92.86% of questions were correctly answered within the nutritious foods group. Carbohydrate counting, hypoglycemia safety, and meal timing questions were answered correctly 35.72%, 64.29%, and 57.14% respectively. Both questions within the food group category were answered correctly by 85.71% of patients. One hundred percent of patients answered the added-sugar question correctly within the nutritious foods category, and 85.71% answered the high-fiber question correctly. Within the carbohydrate counting category, carbohydrate serving questions were answered correctly by 28.57% and 42.86% of patients respectively, and questions regarding

<b>Table 1. Patient Demographics</b>	
<b>Age</b>	
<i>Range</i>	41-53
<i>Average</i>	49
<b>Gender</b>	
<i>Female</i>	71.4% (n = 5)
<i>Male</i>	28.6% (n = 2)
<b>Diabetes Type</b>	
<i>Type 1</i>	28.6% (n = 2)
<i>Type 2</i>	71.4% (n = 5)
<b>Race/Ethnicity</b>	
<i>White/Caucasian</i>	57.1% (n = 4)
<i>Black/African American</i>	14.3% (n = 1)
<i>Hispanic/Latinx</i>	28.6% (n = 2)
<b>Preferred Language</b>	
<i>English</i>	71.4% (n = 5)
<i>Spanish</i>	28.6% (n = 2)
<b>Years with Diabetes Mellitus</b>	
<i>Range</i>	1-50
<i>Average</i>	24
<b>Years with Insulin</b>	
<i>Range</i>	0-50
<i>Average</i>	13
<b>HbA1c%</b>	
<i>Range</i>	6.5-9.3
<i>Average</i>	8.1

<b>Table 2. Patient Comorbidities</b>	
<b>Hypertension</b>	57.1% (n = 4)
<b>Heart Disease</b>	28.6% (n = 2)
<b>Cancer History</b>	0% (n = 0)
<b>Hyperlipidemia</b>	71.4% (n = 5)
<b>Chronic Obstructive Pulmonary Disease</b>	0% (n = 0)
<b>Kidney Disease</b>	0% (n = 0)
<b>Depression</b>	28.6% (n = 2)

hypoglycemia safety were answered correctly by 85.71% and 42.86% of patients. Finally, both questions surrounding the importance of meal timing were answered correctly by 57.14% of patients,

<b>Table 3. Questionnaire Response</b>	
<b>Food Groups</b>	<b>85.71%</b>
<i>Which is an example of a food with a high number of carbohydrates?</i>	85.71%
<i>Which of the following foods is high in carbohydrates?</i>	85.71%
<b>Nutritious Foods</b>	<b>92.86%</b>
<i>Which of the following is high in added sugars?</i>	100.00%
<i>Which is an example of a high-fiber food?</i>	85.71%
<b>Carbohydrate Counting</b>	<b>35.72%</b>
<i>Which of the following is considered one serving of carbohydrate?</i>	28.57%
<i>Which of the following is one carbohydrate serving?</i>	42.86%
<b>Hypoglycemia Safety</b>	<b>64.29%</b>
<i>Which of the following foods is best to bring blood sugar back up to normal range quickly?</i>	85.71%
<i>Which food should be eaten if your blood sugar is &lt;70 mg/dL?</i>	42.86%
<b>Meal Timing</b>	<b>57.14%</b>
<i>Why can it be dangerous for people living with diabetes to skip meals?</i>	57.14%
<i>Why is it important to eat more than one meal each day when using insulin?</i>	57.14%
<b>Total Score</b>	<b>67.14%</b>

Nutritional knowledge proficiency is shown in Table 4. Proficiency was defined as answering all questions correctly within a nutritional category. Proficiency was demonstrated in

<b>Table 4. Nutritional Knowledge Proficiency*</b>	
<b>Food Groups</b>	<b>85.71%</b>
<b>Nutritious Foods</b>	<b>85.71%</b>
<b>Carbohydrate Counting</b>	<b>28.57%</b>
<b>Hypoglycemia Safety</b>	<b>43.86%</b>
<b>Meal Timing</b>	<b>57.14%</b>
<b>Total Score</b>	<b>60.20%</b>
*Proficiency is defined as answering all questions correctly within a nutritional category.	

85.71% of patients within the categories of food groups and nutritious foods, 57.14% in the meal timing category, 43.86% in the hypoglycemia safety category, and 28.57% in carbohydrate counting. The proficiency average of all nutritional knowledge categories was 60.20%.

## **Discussion**

As described above, diabetes mellitus is a disease that is significantly impacted by food and nutrition choices (Ley et al., 2014). Additionally, a limited understanding of nutritional quality, portion sizes, and food content has broad negative effects on one's health, including chronic disease state control (Cha et al., 2014). Although patients in this study had an adequate understanding of food groups and nutritious foods, suggesting some basic knowledge of nutrition, knowledge of was severely lacking in areas of meal timing, hypoglycemia safety, and carbohydrate counting, which may be contributing to poor diabetes control and can even be dangerous under certain circumstances.

Having a satisfactory understanding of both food groups and the nutritious content of food suggest that patients at Sharing Clinic have a general understanding of the more fundamental components of nutritional health knowledge. These topics are crucial building blocks in understanding some of the more complex components of diabetes management with nutrition. Reinforcing basic information regularly as education is provided at Sharing Clinic in the future regarding more difficult topics including carbohydrate counting, meal timing, and hypoglycemia awareness would be essential in ensuring foundational mastery.

Carbohydrate counting can be a helpful tool in dosing insulin as well as generally understanding effects on the body following a carbohydrate-heavy meal. Future education provided by the care team at Sharing Clinic may assist in providing patients with the tools they need to better understand a single serving of carbohydrate, not only reducing large glycemic plasma changes but helping in weight management and developing a more balanced diet. Accessible resources demonstrating carbohydrate serving sizes may be helpful in assisting this patient population in their nutritional knowledge advancement on this topic.

Meal timing is an incredibly important factor to consider for patients who use insulin on a daily basis. Often doses of long-acting insulin are fixed in a way that require patients to consume meals in a consistent matter from day-to-day in order to reduce the risk of a low blood sugar crisis. It is crucial for all patients have a prescription for insulin to have, at a minimum, a basic understanding of how insulin

impacts blood sugars throughout the day and the importance of eating regular meals. This will be a relevant educational point for the Sharing Clinic team in educating their patients in the future, as skipped meals with insulin use can result in very dangerous situations.

Hypoglycemia is another word for low blood sugar and all patients taking medications to decrease their plasma glucose should be educated regarding safety mechanisms in the event they encounter a low blood sugar event. This includes readiness to consume foods that are high in simple carbohydrates with little to no fat or protein as well as a plan for how often to use their glucometer and when to call for help. Hypoglycemia can be deadly, and Sharing Clinic patients will need significant education regarding this topic, as results showed a variable response to current knowledge.

Strengths of this study include the recruitment of licensed dietitians for the creation of the nutritional knowledge questionnaire, which provided key insight in appropriate wording and education. Additionally, the questionnaire was created with this specific patient population in mind, making the results uniquely applicable to the Sharing Clinic patient population. Use of the Nebraska Medicine translator line provided a uniform, unbiased interpretive service for all patients who were non-English speaking, and having the questionnaire read aloud reduced confounding related to literary capacity of each patient. Finally, by having a single administrator of the questionnaire, it was less likely that errors or biases occurred during the research-patient interactions.

Limitations included a very specific patient population, which reduces the applicability of this study outside of the Sharing Clinic population. Additionally, the sample size was very small, which ultimately limited the types of analysis that could be conducted on the data. Unfortunately, a subgroup analysis was not performed to assess the relationship between patient demographics and nutritional knowledge proficiency. The in-house development of the questionnaire eliminated the opportunity for pilot testing of the questions, which reduced the internal validity of the results and could have skewed the results based on the writing of the question.

Although patients with diabetes often have similar comorbidities, it would be incredibly difficult to draw concrete conclusions from this study and apply it to the general population. Because the sample

size was so small, no meaningful statistical results were prepared, additionally decreasing the relevance of this data outside the specific Sharing Clinic population. This study may serve as an important first-step in ensuring adequate nutritional knowledge and education of Sharing Clinic patients, and future educational materials may be created as a result. Future studies across more patients with diabetes at Nebraska Medicine could be assessed regarding their nutritional health knowledge in an attempt to provide a standard, patient-friendly education on nutrition to improve diabetes outcomes.

In conclusion, the patients in this study were relatively knowledgeable in the areas of food group identification and nutritious foods but have room for further education regarding some nutritional topics including meal timing, carbohydrate counting, and hypoglycemia safety.

## Bibliography

Bennett, I. M., Chen, J., Soroui, J. S., & White, S. (2009). The contribution of health literacy to disparities in self-rated health status and preventive health behaviors in older adults. *The Annals of Family Medicine*, 7(3), 204-211. <https://doi.org/10.1370/afm.940>

Centers for Disease Control and Prevention. (2020, February 18). *National Diabetes statistics report, 2020*. <https://www.cdc.gov/diabetes/library/features/diabetes-stat-report.html#:~:text=%34.2%20million%20Americans%E2%80%94just%20over,1%20in%20%E2%80%94have%20prediabetes>

Centers for Disease Control and Prevention. (2020, August 10). *FastStats*. <https://www.cdc.gov/nchs/fastats/health-insurance.htm>

Cha, E., Kim, K. H., Lerner, H. M., Dawkins, C. R., Bello, M. K., Umpierrez, G., & Dunbar, S. B. (2014). Health literacy, self-efficacy, food label use, and diet in young adults. *American Journal of Health Behavior*, 38(3), 331-339. <https://doi.org/10.5993/ajhb.38.3.2>

Chin, J., Morrow, D. G., Stine-Morrow, E. A., Conner-Garcia, T., Graumlich, J. F., & Murray, M. D. (2011). The process-knowledge model of health literacy: Evidence from a componential analysis of two commonly used measures. *Journal of Health Communication*, 16(sup3), 222-241. <https://doi.org/10.1080/10810730.2011.604702>

Institute of Medicine Committee on Health Literacy. (2004). What Is Health Literacy? In L. Nielsen-Bohlman, A. M. Panzer, & D. A. Kindig (Eds.), *Health literacy: A Prescription to End Confusion* (2nd ed.). National Academies Press.

Levy, H., & Janke, A. (2016). Health literacy and access to care. *Journal of Health Communication*, 21(sup1), 43-50. <https://doi.org/10.1080/10810730.2015.1131776>

Ley, S. H., Hamdy, O., Mohan, V., & Hu, F. B. (2014). Prevention and management of type 2 diabetes: Dietary components and nutritional strategies. *The Lancet*, 383(9933), 1999-2007. [https://doi.org/10.1016/s0140-6736\(14\)60613-9](https://doi.org/10.1016/s0140-6736(14)60613-9)

Schillinger, D., Grumbach, K., Piette, J., Wang, F., Osmond, D., Daher, C., Palacios, J., Diaz Sullivan, G., & Bindman, A. B. (2002). Association of health literacy with diabetes outcomes. *JAMA*, 288(4), 475. <https://doi.org/10.1001/jama.288.4.475>

*Sharing Clinic*. University of Nebraska Medical Center (2020). Retrieved April 24, 2022, from <https://www.unmc.edu/sharing/clinics/sharing-clinic.html>

Stark Casagrande, S., & Cowie, C. C. (2012). Health insurance coverage among people with and without diabetes in the U.S. adult population. *Diabetes Care*, 35(11), 2243-2249. <https://doi.org/10.2337/dc12-0257>

## **Biography & CV**

Minden L. Huntrods is a fourth-year PharmD and MPH student with a focus in health promotion at the University of Nebraska Medical Center. She received bachelor's degrees in animal science and nutritional science from the Iowa State University in Ames, Iowa. She will be pursuing post-graduate pharmacy training at Indiana University Health in Indianapolis, Indiana following graduation. Her interests include emergency medicine, underserved communities, health promotion, and practice areas where pharmacy and public health intersect.

# Minden L. Huntrods

27198 510<sup>th</sup> St., Walnut, IA 51577 | (712) 249-8850 | minden.huntrods@unmc.edu

## EDUCATION

**Doctor of Pharmacy Candidate** August 2018-Present  
University of Nebraska Medical Center (UNMC)  
College of Pharmacy  
*Omaha, NE*  
Anticipated Graduation: May 7, 2022

**Master of Public Health** January 2019-Present  
University of Nebraska Medical Center (UNMC)  
College of Public Health  
*Omaha, NE*  
Anticipated Graduation: May 7, 2022

**Bachelor of Science, Nutritional Science** August 2013-May 2018  
Iowa State University  
College of Agriculture and Life Sciences  
*Ames, IA*  
Graduation: May 2018  
*Summa cum laude*

**Bachelor of Science, Animal Science** August 2013-May 2018  
Iowa State University  
College of Agriculture and Life Sciences  
*Ames, IA*  
Graduation: May 2018  
*Summa cum laude*

## CERTIFICATIONS AND LICENSES

**Advanced Cardiac Life Support (ACLS) Certification** 2021-Present  
*American Heart Association*

**Opioid Overdose Response Training and Naloxone Distribution** 2021-Present  
*American Pharmacists Association*

**Community Pharmacy Point of Care Testing Certification** 2020-Present  
*National Association of Chain Drug Stores*

**Pharmacy Based Immunization Delivery** 2019-Present  
*American Pharmacists Association*

**Basic Life Support (BLS) for Healthcare Providers** 2018-Present  
*American Heart Association*

**Nebraska Pharmacy Intern License No. 9383** 2018-Present  
*Nebraska Board of Pharmacy*

**Iowa Pharmacy Intern License No. 7367**  
*Iowa Board of Pharmacy*

2018-Present

**WORK EXPERIENCE**

**Methodist Jennie Edmundson Memorial Hospital**

May 2019-Present

*Pharmacist Intern – 16 hours per week*

Council Bluffs, IA

Pharmacist-in-charge: Melanie Ryan, Pharm.D.

Responsibilities:

- Work closely with other pharmacy employees to provide optimal patient care
- Obtain pertinent medication, allergy, and immunization information in order to update the electronic health record
- Provide medications to patients via unit dose and sterile intravenous compounding
- Assist with additional tasks and projects including a medication cost savings research project

**Nebraska Medicine Clinic Outpatient Pharmacy**

May 2018-May 2019

*Pharmacist Intern – 16 hours per week*

Omaha, NE

Pharmacist-in-charge: Allison Beachler, Pharm.D.

Responsibilities:

- Performed traditional retail tasks including data entry, product dispensing, and point of sale responsibilities
- Completed non-sterile compounding
- Assisted within the specialty medication team preparing and packing specialty medications
- Contacted patients due for INR monitoring through the Internal Medicine Ambulatory Care Clinic

**Hy-Vee, Inc.**

January 2016-May 2018

*Pharmacy Technician – 25 hours per week*

Ames, IA

Pharmacist-in-charge: Brittany Bruce, Pharm.D.

Responsibilities:

- Performed data entry and submitted claims to insurance
- Dispensed medications and counted inventory
- Communicated with providers regarding new over-the-phone prescriptions, prescription errors, and prior authorizations

**LEADERSHIP**

**SHARING Clinic Research Team Member**

September 2021-Present

*UNMC Student-Run Interprofessional Clinic – Appointed*

- Collaborated with research committee to develop a research project that will provide valuable information regarding health knowledge in SHARING patients
- Developed and provided patients with a verbal questionnaire to assess current health knowledge
- Made recommendations to the SHARING research committee to improve the

nutritional health knowledge within the patient population seen in clinic

**Justice, Equity, Diversity, and Inclusion Committee Member** February 2021-Present  
*UNMC College of Pharmacy – Volunteer*

- Arranged a college-wide diversity, equity, and inclusion presentation by the UNMC Director of Inclusion
- Helped develop an elective course in the College of Pharmacy focused on Bioethics and Social Determinants of Health
- Coordinated college-wide training on diversity, equity, and inclusion through local non-profit, Inclusive Communities

**Mentor-Mentee Program Mentor** September 2020-Present  
American Pharmacists Association-Academy of Student Pharmacists (APhA-ASP)  
*UNMC College of Pharmacy – Volunteer*

- Serve as a source of advice and support to first-, second-, and third-year pharmacy students at UNMC

**Fundraising Co-Chair** August 2019-Present  
*UNMC College of Pharmacy Class of 2022 – Elected*

- Collaborated in organizing, promoting, and distributing fundraising products on behalf of the Class of 2022
- Interacted with fundraising co-chairs from other classes in order to provide unique fundraising opportunities across the College of Pharmacy

**Class Officer** August 2019-Present  
*UNMC College of Pharmacy Class of 2022 – Elected*

- Served as an executive team member of behalf of the UNMC College of Pharmacy Class of 2022
- Prioritized mental health education by suggesting peer counseling training to help peers

**SHARING Clinic Pharmacy Administrator** March 2020-April 2021  
*UNMC Student-Run Interprofessional Clinic – Appointed*

- Worked with physicians and preceptors to ensure appropriately priced prescriptions for Sharing and Goodlife Clinic patients
- Verified orders placed by medical and physician assistant students to ensure appropriateness therapeutically as well as from a health disparity standpoint
- Served as a resource for pharmacy providers at SHARING Clinic

**SHARING Clinic Pharmacy Faculty Recruiter** March 2020-April 2021  
*UNMC Student-Run Interprofessional Clinic – Appointed*

- Communicated with and recruited pharmacy faculty to precept at SHARING and Goodlife clinics
- Provided reminders of upcoming commitments at clinic, answered questions, and provided thank-you notes to preceptors

**SHARING Clinic Quality Improvement Committee Member** March 2020-April 2021  
*UNMC Student-Run Interprofessional Clinic – Appointed*

- Worked within an interprofessional team to troubleshoot problems at clinic and implement appropriate changes

- Organized influenza immunization clinics for patients when SHARING clinic was strictly telehealth

**Operation Heart Committee Co-Chair**

March 2020-May 2021

American Pharmacists Association-Academy of Student Pharmacists (APhA-ASP)

*UNMC College of Pharmacy – Appointed*

- Led a committee focused on student-run direct patient care events and educational opportunities for pharmacy students
- Collaborated with the outpatient cardiology ambulatory care pharmacist to protocolize student involvement in INR reminder calls, cardiac rehab appointments, and smoking cessation
- Organized monthly journal club sessions by pairing faculty with second- and third-year pharmacy students for improved journal club understanding and practice

**Curriculum Committee Co-Chair**

January 2020-May 2021

Student Interprofessional Society (SiS)

*UNMC – Appointed*

- Interacted with other co-chairs to facilitate interprofessional collaboration between students for a variety of colleges at UNMC
- Organized interprofessional case series presentations between the colleges of pharmacy and dentistry on the topics of opioid use, antibiotics, and drugs that can contribute to xerostomia
- Planned an educational lunch and learn focused on access to different specialty care services in the Omaha and Lincoln area for underserved populations

**SHARING Clinic Re-Open Clinic Task Force Member**

June 2020-February 2021

*UNMC Student-Run Interprofessional Clinic – Volunteer*

- Worked with other students to optimize safety and patient care when transitioning from telehealth to physical clinic throughout the COVID-19 pandemic
- Advocated for the profession of pharmacy in returning to physical clinic while providing support to pharmacy providers during the transition

**President**

Alpha Zeta Agriculture and Life Sciences Honors Fraternity

December 2016-December 2017

*Iowa State University – Elected*

- Organized and led monthly meetings inclusive of guest speakers, philanthropy, and social events

**Vice President**

Alpha Zeta Agriculture and Life Sciences Honors Fraternity

December 2015-December 2016

*Iowa State University – Elected*

- Assisted the president in organizing monthly meetings and helped other members of the executive team in accomplishing their responsibilities

## **ACADEMIA AND TEACHING EXPERIENCE**

### **Teaching Assistant, Pharmaceutical Care II**

January 2021-May 2021

*UNMC College of Pharmacy*

*Professor: Paul Dobesh, Pharm.D, FCCP, BCPS*

- Assisted students in learning proper technique for obtaining blood pressure and pulse
- Taught appropriate technique for physical assessment including cardiology, pulmonology, and ear, nose, and throat

## **RESEARCH EXPERIENCE**

September 2021-Present

### **Primary Investigator**

*UNMC College of Public Health*

*Capstone Project: "Assessing Nutritional Health Knowledge in SHARING Clinic Patients with Diabetes"*

*Committee Members: Melissa Tibbits, PhD, UNMC College of Public Health*

*Fabio Almeida, PhD, MSW, UNMC College of Public Health*

*Kristen Cook, Pharm.D., BCPS, UNMC College of Pharmacy*

*Jessica Downes, Pharm.D., BCACP, CDCES, UNMC College of Pharmacy*

- Prepared project proposal for submission to capstone approval committee and received approval from the Institutional Review Board follow application submission
- Collected information from the electronic health record and interviewed patients at SHARING Clinic in order to determine nutritional health knowledge relating to diabetes
- Completed a comprehensive literature evaluation of all current publications relating to health knowledge, diabetes, and underinsured and underserved patients
- Results will be compiled into a final manuscript and presented to the UNMC Public Health Capstone Committee as well as other public health students

### **Primary Investigator**

June 2021

*Methodist Jennie Edmundson Memorial Hospital*

*Preceptor: Melanie Ryan, Pharm.D.*

- Assessed and compared the use of Exparel® and post-operative opioid use within Jennie Edmundson and Methodist Health System patients
- Presented results to inpatient pharmacists at Methodist Jennie Edmundson and provided slide deck for MJE Pharmacy Manager to present at P&T committee
- Provided statistical results to Methodist Health System and answered questions regarding results before results were provided to the health system P&T committee

### **Research Assistant**

May 2019-December 2019

*UNMC College of Pharmacy*

*Preceptor: Paul Dobesh, Pharm.D, FCCP, BCPS*

- Utilized the electronic health record to perform data entry in order to ultimately assess the risk of adverse outcomes in patients with cystic fibrosis taking a direct oral anticoagulant compared to subcutaneous enoxaparin
- Performed an extensive literature evaluation of current data relating to DOAC use in patients with cystic fibrosis
- Results currently published as abstract and will be compiled and presented in a final manuscript for publication in the future

## **PUBLICATIONS**

P.P. Dobesh, H.L. Brink, **M.L. Huntrods**, J. Cui, S.M. Sealer. Prevention of catheter complications in patients with cystic fibrosis: enoxaparin vs. a direct oral anticoagulant. *Res Pract Thromb Haemost* 2020;4(Suppl 1):1199:abstract PB2383. Presented as a virtual poster at the XXVIII Congress of the International Society of Thrombosis and Haemostasis, Virtual Meeting, July 2020.

## **PRESENTATIONS**

**“The HIV Epidemic and the MSM Population”** December 2020  
*UNMC College of Public Health*  
Video documentary for Health Disparities and Health Equity course

**“Volunteer Recruitment & Education with Ronald McDonald House Charities”** August 2020  
Applied Practice Experience (APEX)  
*UNMC College of Public Health*  
Project presentation to College of Public Health students, faculty, and preceptors

## **PROFESSIONAL ORGANIZATIONS**

**Student Member, American Society of Health-System Pharmacists (ASHP)** September 2021-Present

**Member, Phi Lambda Sigma Leadership Society** December 2020-Present  
*Beta Xi Chapter, UNMC College of Pharmacy*

**Student Member, Midwest College of Clinical Pharmacists (MCCP)** August 2020-Present

**Member, Rho Chi Pharmacy Honor Society** March 2020-Present  
*Alpha Epsilon Chapter, UNMC College of Pharmacy*

**Member, Student Interprofessional Society (SiS)** January 2020-Present  
*UNMC*

**Student Member, American College of Clinical Pharmacy (ACCP)** August 2018-Present

**Member, ACCP Student Chapter** August 2018-Present  
*UNMC College of Pharmacy*

**Student Member, American Pharmacists Association (APhA)** August 2018-Present

**Member, American Pharmacists Association – Academy of Student Pharmacists (APhA-ASP)** August 2018-Present  
*UNMC College of Pharmacy*

**Member, Student Society of Health-System Pharmacists (SSHP)** August 2018-Present  
*UNMC College of Pharmacy*

**Student Member, Nebraska Pharmacists Association (NPA)** August 2018-Present

**HONORS AND AWARDS**

**UNMC College of Pharmacy Awards and Honors**

Phi Lambda Sigma Honorary Leadership Society, Beta Xi Chapter	December 2020-Present
Rho Chi Pharmacy Honor Society, Alpha Epsilon Chapter	March 2020-Present
UNMC College of Pharmacy Student Spotlight	December 2021
UNMC College of Pharmacy Dual Degree Testimonial	August 2021
Lajoie Gibbons Pharmacy Scholarship	August 2021
Sarah E Cohen Feldman Scholarship	August 2021
Dean's Pharmacy Leadership Award and Scholarship	August 2021 August 2020
UNMC Tuition Scholarship	August 2021 August 2020 August 2019
UNMC College of Pharmacy Dean's List	Spring 2021 Fall 2021 Spring 2020 Fall 2019 Spring 2019 Fall 2018
Non-Resident Tuition Scholarship	August 2020 August 2019 August 2018
Phyllis Rhodes Trust Scholarship	January 2020
Walgreens Diversity Scholarship	January 2019
Plough Pharmacy Scholarship	August 2018

**Iowa State University Awards and Honors**

Distinguished graduation, <i>summa cum laude</i>	May 2018
Iowa State University Dean's List	Fall 2013-Spring 2018
Iowa State University Honors Program	Spring 2014-Spring 2018
Elinor L and Walter R Fehr Endowed Scholarship	August 2016
Excellence in Agriculture Rice Estate Scholarship	January 2015
Duane Hinkley Agriculture Scholarship	August 2014

Iowa State University Future of Agriculture Scholarship	August 2013
National FFA Scholarship	August 2013
Cardinal Scholar Recognition	August 2013
Level 1 Academic Recognition Award	August 2013

### **PROFESSIONAL ACTIVITIES**

**Letter of Support, University of Nebraska President's Excellence Awards** November 2021  
*UNMC College of Pharmacy*

- Selected by the Dean's office to provide a letter of support on behalf of the College of Pharmacy for a teaching award

**Pharmacy Leadership Workshop** February 2019  
 Student Society of Health-System Pharmacy March 2018  
*Creighton and UNMC Colleges of Pharmacy*

- Participated in leadership and professionalism training

### **COMMUNITY SERVICE**

**SHARING Clinic** May 2019-Present  
*UNMC*

- Served as a pharmacy provider, administrator, or researcher with an interdisciplinary team at a student-run free clinic for under- or uninsured patients

**Bountiful Baskets Food Co-Op** January 2018-Present  
*Walnut, IA*

- Unloaded, sorted, packaged, and delivered fresh produce to participating elderly and disabled community members participating

**COVID-19 Immunization Clinic** January 2020  
*Methodist Jennie Edmundson Memorial Hospital, Council Bluffs, IA*

- Assisted in drawing up and administering COVID-19 vaccinations in a hospital-wide immunization clinic

**Front Desk and Thank You Volunteer** August 2018-August 2020  
*Ronald McDonald House Charities, Omaha, NE*

- Welcomed guests, provided directions, played with children, and wrote thank you letters on behalf of the Ronald McDonald House in Omaha
- Updated and refreshed the volunteer handbook and created volunteer training modules

**Apples a Day Nutrition Education** March 2019  
*Omaha Liberty Elementary School, Omaha, NE*

- Provided education to elementary-aged students on nutrition, exercise, and a healthy lifestyle

**Bridge to Care**

November 2018

*Omaha Benson High School, Omaha, NE*

- Performed skin safety education and sun damage checks for the refugee population in Omaha

**Susan G. Komen Race for the Cure**

October 2018

*Baxter Arena/Aksarben Village, Omaha, NE*

- Supported the UNMC College of Pharmacy team by walking and participating in activities for women fighting breast cancer and survivors