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# A Characterization of the Medical-Legal Partnership (MLP) of Nebraska Medicine

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# Abstract

This research study was completed at Legal Aid of Nebraska's Health, Education, and Law Project through the partnership it has formed working with Nebraska Medicine and Iowa Legal Aid. Traditionally, health and disease have always been viewed exclusively as "healthcare" issues. But with healthcare consistently growing towards holistic approaches to help patients, we now know there are deeper, structural conditions of society that can act as strong driving forces of a person's poor daily living conditions that can negatively impact health. The importance of a Medical-Legal Partnership is that it considers a patient's social determinants of health (SDHs). The goal of this quality improvement study was to enhance the effectiveness of future Health, Education, and Law Project (HELP) outreach and operations and to analyze the effect the project has on the patients that it aids and the community. Using quantitative and qualitative methods, including statistical analysis and one-on-one in-person interviews, a characterization of the patients/clients who receive aid was formed. By means of this study, we were able to generate a picture of who is receiving aid, what problems they are facing, where they are coming from, and why such aid is necessary to successfully receive appropriate healthcare.


# Introduction

## Placement Site

Legal Aid of Nebraska (LAN) is a not-for-profit civil law organization which serves people in all 93 counties of Nebraska. Legal Aid's attorneys, paralegals and support staff assist low-

income men, women and children with their professional legal expertise. Legal Aid's Health Education & Law Program (HELP) assists hospital patients specifically with civil legal issues that may be negatively affecting their health and well-being. Legal Aid's mission statement is the following: "To promote justice, dignity, hope and self-sufficiency through quality civil legal aid for those who have nowhere else to turn." (LAN, 2017).

The following paragraph, pulled from Legal Aid of Nebraska's website, best describes the life-changing work they do:

> For more than 50 years, Legal Aid of Nebraska has provided dignity, hope, self-sufficiency and justice through quality civil legal aid. That's the important job of Legal Aid of Nebraska. Legal Aid is a problem solver, standing side by side with low income, diverse Nebraskans – enforcing laws, protecting rights, all the while addressing urgent needs and shining a light on what more could be done. Each morning, in homes across Nebraska, proud yet low-income families rise and spend another day struggling to make ends meet, to keep their children safe, to protect what little they have in the world — simply to keep it all together in the face of life's curveballs and crises (About Legal Aid of Nebraska, 2018).

## Purpose of Research

A person's health is determined by much more than personal behavior and access to health care services; it's shaped by a person's environment- where someone learns, plays, works and lives. Specifically, 60% of a person's health is determined by social factors, including:

housing and utilities; income and health insurance; education and employment; legal status; and personal and family stability (The Need, 2017).

The site location for this research study was at Legal Aid of Nebraska's Health, Education, and Law Project (HELP). HELP is also known as a medical – legal partnership (MLP), which is a collaboration between Legal Aid of Nebraska and several of the major health systems in the state. This research focused solely on data from the MLP formed between Legal Aid of Nebraska, Iowa Legal Aid, and Nebraska Medicine that took place between January 2013 and December 2017. Medical – legal partnerships provide legal intervention to help address those social and environmental factors that may be negatively contributing to patient health and well-being. They initially began exclusively in the oncology department but have expanded over the years to include patients from perinatal, PCMH clinics, inpatient trauma, inpatient psychiatry, inpatient psychiatric consults, and those under the care of the solid organ transplant team. The MLP is working to expand program offerings to high risk populations in Neurology.

Attorneys and poverty lawyers "have an in-depth understanding of relevant policies, laws, and systems, and seek out solutions at the individual and policy levels to a range of health-related social and legal needs" (The Need, 2017). With proper training, lawyers can solve complex problems in non-clinical areas that can positively affect a person's health. As the National Center for Medical Legal Partnerships puts it, "Using legal expertise and services, the health care system can disrupt the cycle of returning people to the unhealthy conditions that would otherwise bring them right back to the clinic or hospital" (The Need, 2017). Studies have shown fewer than one in five legal problems experienced by low income individuals are addressed with the help of an attorney who understands how to successfully navigate the legal

system. The Medical Legal Partnership runs throughout the U.S. at 155 hospitals, 139 health centers, 34 health schools, 126 legal aid agencies, 52 law schools, and 64 pro bono partners.

In 2016, it was reported that MLPs helped more than 75,000 patients in over 41 states to resolve legal issues that were impeding their health, trained more than 11,000 health care providers to better understand and screen patients for health-related social needs, and engaged in projects designed to improve how clinics and policies address health-related social conditions for entire communities.

Studies show that when legal expertise and services are used to address social needs:

- People with chronic illnesses are admitted to the hospital less frequently
- People more commonly take their medications as prescribed
- People report less stress
- Clinical services are more frequently reimbursed by public and private payers
- Less money is spent on health care services for the people who would otherwise frequently go to the hospital (NCMLP, 2017)

In a 2016 survey by the Milken Institute School of Public Health done across the country, health care organizations reported that 86% saw improved health outcomes for patients, 64% reported improved patient compliance with medical treatment, and 38% reported improved ability to perform "at the top of their license" when referring to the benefits of MLP services (NCMLP, 2017). Should this analysis find the MLP to be having a significantly beneficial impact, Nebraska Medicine could consider allocating the partnership more resources for future

endeavors, such as increasing its capacity and ability to open up to new and changing populations. (NCMLP, 2017)

At its most basic functioning, the MLP usually follows this series of events: a community member becomes a patient of Nebraska Medicine, through conversation with a trained healthcare professional (i.e. physician, nurse, social worker) a legal need is identified, the healthcare professional will then refer the patient to the appropriate legal aid to set up a meeting with an attorney. Patients in need of services that the MLP provides are already dealing with the poor health of a family member or are ill themselves and do not have the time or energy to also fight any legal battles. The MLP provides patients the ability to rightfully receive coverage for their healthcare or to absolve them of any social determinants effecting their health in a negative way. By standing up for them, the patient can have peace of mind and focus on their recovery. This can in turn produce quicker discharges for patients to return to their normal lives, help in preventing frequent visits to the hospital or emergency room, and not leave the patient or hospital in debt. This quality improvement study provided an in-depth understanding of the demographics of the patients/clients that are receiving aid. This knowledge can genuinely aid in a patient-centered approach to be able to better identify populations to expand their outreach to.

## Literature Review

Healthcare and civil legal aid have been working together intermittently for centuries. The earliest documentation of an unofficial MLP can be traced all the way back to 1967 when Dr. Jack Geiger, who worked at Delta Health Center in Mound Bayou, Mississippi, to address

patients' food and housing problems. Then, in the 1980's, many healthcare organizations began to work with civil legal aid agencies to meet the end-of-life needs of AIDS patients. That brings us to the year 1993 in which the MLP was first formed. It was developed at Boston Medical Center and headed by Dr. Barry Zuckerman. His healthcare team traced repeat pediatric asthma patients' problems back to moldy apartments where landlords were not complying with sanitary codes. This quickly led to them reaching out to Greater Boston Legal Services for help and an official Medical-Legal Partnership was soon born (Lawton, 2014).

It would not be until 2001 when *The New York Times* ran an article about this MLP in Boston that the idea spread like wildfire. The partnership began fielding numerous calls from other institutions who were interested in replicating the program for themselves. Within five years there were almost 75 new MLPs formed around the country. In 2006, The National Center for Medical-Legal Partnerships was launched. Initially it helped programs navigate the challenges that arose with upstart MLPs, such as capacity, resources, and training. Just seven years after launching, it helped another 175 programs begin and broadened its technical assistance strategies to increase impact (Lawton, 2014).

The National Center for Medical-Legal Partnership defines MLP as:

> "A health care and legal services delivery model that aims to improve the health and well-being of vulnerable individuals, children and families by integrating legal assistance into the medical setting. MLPs address social determinants of health and seek to eliminate barriers to health care in order to help vulnerable populations meet their basic needs and stay healthy (NCMLP, 2017)."

In 2013, the NCMLP moved to Milken Institute School of Public Health at George Washington University in Washington D.C.. Its mission is "to mainstream an integrated medical-legal approach to health for people and populations (Lawton, 2014). The NCMLP has three main objectives:

- Transform the focus of healthcare and civil legal aid practice from people to populations;
- Build and inform the evidence base to support the medical-legal partnership approach; and
- Redefine inter-professional education with an emphasis on training healthcare, public health and legal professionals together.

There are over 300 MLPs nationwide today and that number continues to grow. Approximately 66% of these partnerships occur at either general hospital / health systems or federally-qualified health centers, with 41% of them having been active for over five years (Regenstein et. al., 2017). These teams of social workers, case managers, navigators, and lawyers working alongside clinicians has demonstrated enormous diversity in patient populations served, size, structure, and scope. MLPs work together to identify vulnerable patients who have unmet civil legal needs, such as those related to housing, public benefits, and education. They work to train healthcare professionals to recognize these "health-harming legal needs" and what they can do to help. The NCMLP is working extensively on closing knowledge gaps related to MLPs, including establishing standard practices, capturing their financial impact, and growing, improving, and sustaining their infrastructure (Regenstein et. al., 2017).

MLPs focus on three key activities. First, they provide legal assistance in the health care setting. Legal professionals meet with families to identify and address those circumstances affecting their health that are amenable to legal intervention. Second, MLPs work to transform health care practice by educating health care professionals about the significance of social determinants of health. Third, MLPs work toward policy change by addressing local, state, and federal laws and regulations that can stand in the way of maintaining good health.

To fully understand the impact of a medical-legal partnership on patient health, it's first important to grasp societal factors that affect a person's health, specifically, social determinants of health. Social determinants of health are environmental and societal factors that contribute to a person living either a healthy or unhealthy life. One study explained social determinants of health as;

> The conditions in which people are born, grow, live, work and age, conditions or circumstances that are shaped by families and communities and by the distribution of money, power, and resources at global, national, and local levels and affected by policy choices at each of these levels (Viner et al., 2012).

In a study by Ahnquist et al., researchers wanted to specifically examine the economic and social factors affecting health. It was concluded from the research that there are a few major factors that contribute to poor health outcomes; low social capital, poor individual economic situation, and when shared- researchers found they seem to contribute to even poorer health outcomes (Ahnquist, Wamala, & Lindstrom, 2012).

A person's neighborhood also plays an important role in a person's health. Examples include access to services and resources, supervision and safety, social norms within

neighborhood communities, and connections to others outside the family can all potentially affect health. There is an assortment of evidence in the literature which states that across cultures, young people in lower socioeconomic situations are more likely to engage in unhealthy behaviors. These behaviors include everything from substance abuse, sexual intercourse, exercise, diet, even and self-management of chronic disorders (Viner et al., 2012).

MLPs are always looking for ways to demonstrate the financial value of their services both to patients and their healthcare organizations. It is common for MLPs to calculate total financial benefits to patients that result of legal services, such as Medicaid enrollment or food stamp benefits. However, only 11% of MLPs calculate the health care dollars recovered by their partner healthcare organization. From the data collected on this topic, the median dollar amount of total financial benefits received by all patient-clients served by each MLP was $81,595 in the past year, while healthcare organizations saw median financial benefits of $119,013 per MLP (Regenstein et. al., 2017). But with so few MLPs collecting this information it is difficult to know the reliability of this data.

The MLP of Nebraska Medicine does have a system of calculating its own Return on Investment (ROI). When legal intervention results in:

- Patient becoming approved for Social Security Supplemental Income (SSI) or Social Security Disability Insurance, their retroactive and future Medicaid payments are counted towards ROI
- Patient being approved for SSI or SSDI, the patient is eligible for Medicare 24 months from their onset date. Future Medicaid payments are counted toward ROI

- Successful insurance appeal for specific procedure. Insurance payment for that procedure is counted toward ROI

These calculations may not show the full extent of what it returns to Nebraska Medicine. The situations detailed above only account for money that is or will be paid to the hospital but does not account for how their services facilitate quicker discharges or reductions in hospital visits. These are factors that significantly save money for the hospital internally and knowing these numbers would likely add impressive monetary value to the MLP, but they are almost impossible to calculate. Even so, according to the process stated above, Nebraska Medicine has seen a 1,831% ROI from 2015 – 2017 through its investment in the MLP.

A study by Teufel et. al. evaluated cost benefit of an MLP in southern Illinois between 2002-2006 and from 2007-2009. The MLP was known as the Medical-Legal Partnership of Southern Illinois (MLPSI). This MLP began offering services to underserved and economically disadvantaged individuals in seven impoverished rural counties. For their purposes, they calculated their data on recovered health care dollars using ROI and cost benefit ratio (CBR). CBR was calculated as the quotient of the sum of Medicaid adjusted health care recovery dollars (dividend) and the sum of dollars dedicated by the hospital system to the medical-legal partnership (divisor). ROI was calculated by taking the difference between the health dollars recovered and the dollars invested by the hospital, and then dividing that difference by the same number of dollars invested (Teufel et. al., 2012). The results from this paper show significant benefit during the time frames that were examined. CBR and ROI saw 321% and 221%

returns from 2002-2006, and 419% and 319% returns respectively from 2007-2009 (Teufel et. al., 2012).

There are still a number of knowledge gaps that exist concerning MLPs. The first gap is seen in assessing patient needs. A study done by the National Center for Medical-Legal Partnerships (NCMLP) found a lack in standard tools or instruments used to assess legal needs in clinical settings. There is a lack of information sharing across programs that could be used to find best-practice measures with regard to the mechanisms through which MLPs learn about their patients' legal needs, assess their capacity, and connect them with appropriate services (Beeson et. al., 2013). Recent statistics show only 57% of existing MLPs regularly participate in data sharing, with 24% having no participation at all (Regenstein et. al., 2017).

Secondly, there is no uniform benchmark for what constitutes a legal need across MLP programs. To identify this threshold would help MLPs to improve their services and heighten their capacity to meet patients' needs. Another evidence gap is seen in evaluating MLP service quality. There is very little literature where MLP service quality is the focus and there are no existing common metrics of quality, outcomes, or processes of care.

A third knowledge gap is that there is limited literature on how MLPs have intended or achieved impact at the policy and regulatory level. The last known knowledge gap is the need to develop empirical evidence to support the expansion of the MLP model as more and more partnerships are begun around the country. MLPs have the ability to integrate real-world health and legal solutions which makes progress in empirical evidence and practical knowledge on this delivery system model fundamental in order to bring their services to those in need (Beeson et. al., 2013).

There is a surprising lack of prior research to be found on the types of populations that are commonly served by an MLP and why, as well as their outcomes. In reality, without MLPs across the country, providers, other health professionals and staff members at the hospitals simply do not always have the necessary tools and resources to assist with the home environments of their patients. Because few tools truly diagnose and combat the issues of the social determinants of health, many providers are reluctant to screen for issues for which they cannot address effectively (McCabe & Kinney, 2010). MLPs help to bridge the gap because of the multi-disciplinary approach to help with patient care outside the walls of the hospital.

As more attention is paid to social determinants of illness, medical – legal partnerships around the country are trying to combat social factors that may be contributing to adverse health.

# Research Methods

## Settings

The research question being addressed in this study was, "What role does the MLP of Nebraska Medicine play for the patients it aids and the community?" Selection of the data points to be analyzed, interview questions and methods, and interviewees were decided by discussions between the graduate researcher, research committee, site preceptor, and the Manager of Research and Evaluation of LAN. Through these discussions, the most relevant and important data points, interview questions, and interviewees were decided.

Both Legal Aid of Nebraska and Iowa Legal Aid use a version of Open Case Management (OCM) system called "Pika CMS." This system is a user friendly, web-based, centralized case management system tailored to meet the specific needs of the not-for-profit legal services program. The Pika system uses an SQL database which allows the organization to run custom reports directly off the database and can access and share files from anywhere.

The Pika database system has over 500 fields of information entry. LAN currently has 138 fields of coded data points. From the total amount of fields of entry, 118 were selected as most relevant to be analyzed. Out of these 118 variables, 70 were categorical and 47 were numerical. The full list of provided data variables can be found in the appendix.

While many variables are easy to understand, such as Gender, Age, and State, there were some that are more complex. Variables such as Income, Percent Poverty, Intake Type, Percent Poverty, and Problem Coding were significantly analyzed but are likely unfamiliar to most. Income is a numerical variable that describes the amount of money the client earns annually. Intake Type describes the method of how the MLP came into contact with the Nebraska Medicine patient. Within this variable are, among others, the outcomes of Outreach and Referral. Outreach occurs when a legal aid attorney or representative is present at the hospital and is able to speak with the patient promptly after being referred, while Referral occurs when a healthcare professional contacts the MLP, usually electronically, when a representative is not currently present. Percent poverty is a calculation of a household's total annual income compared to the federal guideline for poverty threshold.

Lastly, Problem Coding refers to the specific problem case of each client as defined by the Case Service Report (CSR) Handbook by the Legal Services Corporation (LSC). The handbook

currently has 80 codes, numbered from 01 – 99, relating to a specific problem that a legal aid organization can help with. Similar problem codes are grouped together into ten categories. All codes within a category share a similar beginning number.

Although Legal Aid of Nebraska and Iowa Legal Aid use the same database system and work collaboratively within the MLP, they do not share data freely between their respective entities. This required receiving two separate excel sheets of data points, one from each legal aid organization. This made the acquisition of data a bit more complicated but was helpful to have it start out as separated where the data could be analyzed by each set individually according to their respective legal aid. A third document was created by the graduate researcher that combined both legal aid's similar data points together in order for total MLP analysis to be conducted.

The data variables provided were used to describe univariate statistics of the population being aided by the MLP. Statistics tables and charts were formulated by SPSS Statistics Software while graphics and visuals were created using Tableau Software. Some images were edited further within Microsoft PowerPoint. In addition to this quantitative data, qualitative data was also formed through conducting one-on-one interviews with former clients. Through these interviews, themes will be identified in order to add appropriate context to the quantitative findings.

## One-On-One Interviews

One-on-one interviews were conducted with former patients / clients. The purpose of these interviews is to allow former clients to, in their own words, describe any relevant issues

they were facing prior to MLP aid, their experience working with the MLP, and any changes that occurred as a result of that aid. The identity of interviewees will remain anonymous and their responses will be de-identified. Interviews were audio recorded for the purpose of later transcribing them to text to be analyzed for codes and themes. Interviewees were identified through the Pika database of each respective legal aid and screened through the site preceptor to determine if the aid received by the participant would provide an appropriate interview. An example being that if all a client received was education material in the mail they would not be able to give a detailed account of significant involvement with the MLP and its operations and thus would not be considered.

Interviews took place in private rooms of the College of Public Health at UNMC, lasting from 20-30 minutes. Interviewees were required to be able to transport themselves to the interview. Prior to beginning the interview, participants were thoroughly informed that they could speak freely and honestly, they can choose to not speak about anything that may be upsetting to them, can end the interview at any time, the interview will have no effect on their current or future healthcare, and that it would be audio recorded. If the participant agreed to those measures, a waiver was signed, and the interview commenced. These former clients must have a case status as "closed," meaning the client was aided by the respective legal aid organization to capacity and nothing more can or will be done in that specific case.

## Design

To "characterize" anything is to "mark or distinguish characteristics of" or to "describe." It is essentially providing context to the "Five Ws:"

- **Who** is involved?
- **What** happened?
- **Where** did it take place?
- **When** did it take place?
- **Why** did that happen?

The answers to these questions when considering any topic are the basics needed when gathering information or problem solving. They create the formula for compiling the complete story on a subject matter. Each question was addressed in order to characterize the types of patients the MLP provides aid to.

## Participants

The data analyzed was received by the graduate researcher in Excel sheet format from each respective organization. The initial Excel sheet file included all patient referrals from Nebraska Medicine from January 2013 to December 2017 that were designated as "Closed" cases. Under these parameters, Legal Aid of Nebraska provided 1,583 individual cases with Iowa Legal Aid providing 176 cases. Similar data points were combined by the graduate student on a separate Excel sheet totaling 1,759 individual cases.

As stated previously, there is a wide range of the extent of aid received by any given Nebraska Medicine patient that is referred to the MLP. This range can include aid as simple as a single meeting where a client is given basic legal advice on their specific situation or sent education material in the mail; to some clients being represented in court and being aided in their legal battle over multiple years.

This provided a unique challenge to the data analysis. It is important to characterize all the patients of Nebraska Medicine who are being referred to the MLP, regardless of the extent of aid received, as they are being identified by healthcare professionals as in need of legal services. It is also important to key in on those patients who are receiving what is considered "significant services" as they are likely more time and resource consuming, but also likely to have a larger benefit to the patient and hospital.

This causes the necessity for the data to be presented in two ways. The first will be "All Referrals," where any patient that is referred to the MLP, regardless of problem type or extent of aid received, will be analyzed within this group. The second will be called "Significant Services," which is determined by the client's "Close Code." The "Close Code" is the coding given to the client case file when it is finished to capacity and describes the extent of services or the end result. For the "Significant Services" grouping, clients with close codes of A (Counsel and Advice), Q (Administrative Closing), B (Brief Service), and Y (Legal Education Only) were removed as these were not considered as receiving significant services from the MLP. Once these cases were removed, Legal Aid of Nebraska was left with 650 cases, while only 19 cases remained from Iowa Legal Aid, totaling 679 cases of significant service.

Any missing data is described as "Null." It is worth noting that "Null" data means the entry field for that variable was left empty and is significantly different than even placing a zero into a field. This causes "Null" data to have a profound effect on all variables, especially numerical, as "Null" fields are not considered in any statistical calculations.

For the purpose of this research project, the data analysis will focus strongly on the "All Referrals" data set, as the goal is to characterize the population that is being referred by

Nebraska Medicine to the MLP. Both data sets will be analyzed similarly, and any contributing discrepancies found will be identified and discussed. All tables, graphs, and figures of the data analysis from "Significant Services" can be found in the appendix.

## Coding

It was previously mentioned in known knowledge gaps of MLPs that there is a lack of information sharing across programs. This lack of information sharing includes not only best-practice measures and mechanisms to assess and address patient needs, but also how case files are coded within each MLPs database. Without a similar coding system, MLPs are not able to compare data with one another, including patient demographics or services provided. While it is an issue when MLPs cannot communicate with one another, the problem is magnified when the legal entities within a single MLP are not well aligned.

This problem was encountered when attempting to combine the similar data variables from each legal aid. Out of the 70 categorical variables provided by each legal aid, there were at least some differences found in 16 variable codings, with 12 of these bearing no similarities at all to one another. Some of the variables included in these discrepancies were ethnicity, citizen, residence, main benefit, and outcome. Another issue seen is that each organization can code for the same thing but in different manners. An example of this being seen in the general outcome of a case. Legal Aid of Nebraska describes what takes place in their coding for “Outcome,” while Iowa Legal Aid uses “Main Benefit.” Even though they are describing the same thing, they are difficult to attempt to compare.

# Results

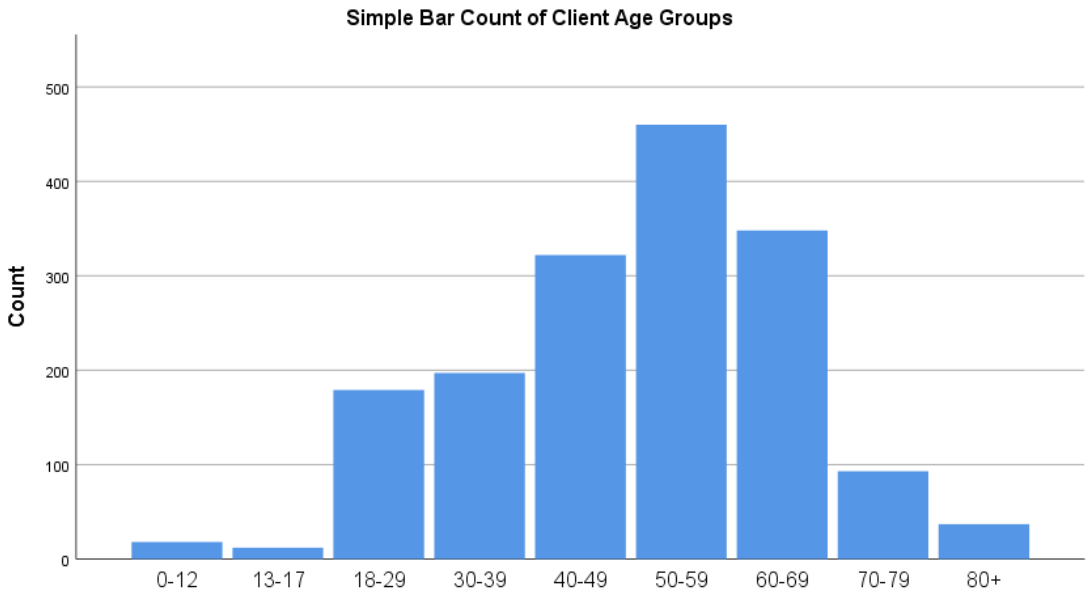
## Data Analysis: Characterization of All Referrals

The first question asked by many is always the "who." The data provided a strong amount of information to be able to describe the demographics of the patients of Nebraska Medicine who are receiving aid from the MLP.

| **Gender** | **No. of Records (n=1,759)** | **Percent of total** |
|---|---|---|
| Female | 1,035 | 59 |
| Male | 669 | 38 |
| Null | 54 | 3 |
| **Race / Ethnicity** | | |
| White | 1,054 | 60 |
| Black | 330 | 19 |
| Null | 132 | 8 |
| Hispanic | 91 | 5 |
| refused | 67 | 4 |
| **Citizenship Status** | | |
| Citizen | 1,522 | 87 |
| Null | 197 | 11 |
| Eligible Alien | 32 | 2 |
| **Language** | | |
| English | 1,617 | 92 |
| Null | 90 | 5 |
| Spanish | 34 | 2 |
| **Marital Status** | | |
| Married | 554 | 32 |
| Single | 481 | 27 |
| Divorced | 352 | 20 |
| Null | 204 | 12 |
| Widowed | 110 | 6 |
| Separated | 52 | 3 |
| **Persons Helped** | | |
| 1 | 675 | 38 |
| 2 | 495 | 28 |
| Null | 213 | 12 |
| 3 | 157 | 9 |
| **Adults Involved (19+ y/o)** | | |

| | | |
|---|---|---|
| 1 | 885 | 50 |
| 2 | 583 | 33 |
| Null | 212 | 12 |
| 3 | 64 | 4 |
| **No. Children Involved** | | |
| Null | 975 | 55 |
| 0 | 340 | 19 |
| 1 | 194 | 11 |
| 2 | 141 | 8 |
| **Disabled** | | |
| No | 1,156 | 66 |
| Null | 335 | 19 |
| Yes | 267 | 15 |
| **Veteran** | | |
| No | 1,519 | 86 |
| Null | 176 | 10 |
| Yes | 63 | 4 |

*Table 1:* Frequency table of demographic variables of All Referrals




*Graph 1:* Bar graph of client age groups for All Referrals

Graph 1 shows the counts and range of all client referrals for age. It is clear that the age group of "50-59" contains the highest count, but the average age was calculated to be 49.7 years old. There were 1,668 cases with a recorded client age, leaving 91 cases with no data for this variable.

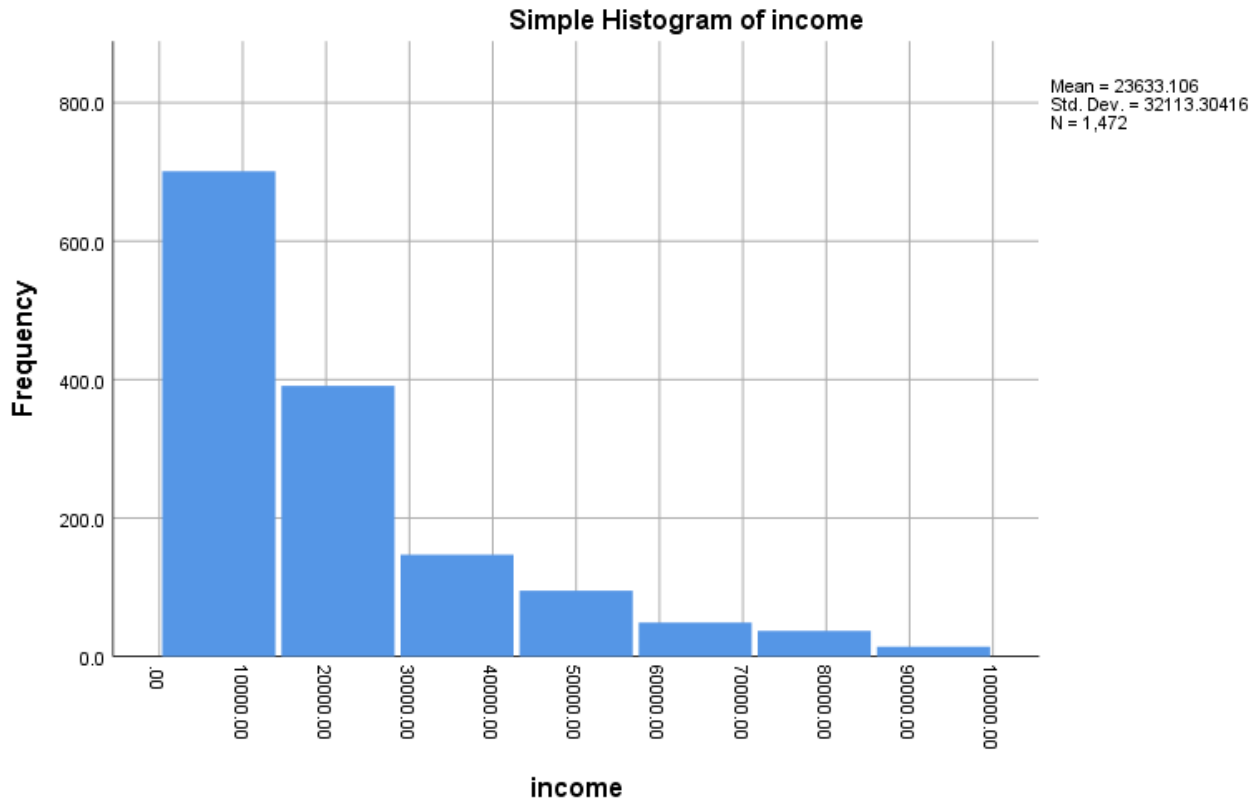



*Figure 1:* Histogram of Annual Income for All Referrals

In 2017, Federal Poverty Guidelines regulated that an income of $12,060 for a "Household Size" of 1 placed that household at 100% poverty. With every additional person within a household, the total income increased just over four-thousand dollars annually to remain at the 100% poverty line. These guidelines only refer to household size and do not consider how many within the household actually bring in any income. As seen above in Figure

1 the average income for a patient referred to the MLP is $23,633 annually. This average places any household size under four below the 100% poverty threshold (Families USA, 2017).

The average found here could potentially be significantly lower, as only 1,472 cases had recorded data for annual income. Meaning that 287 cases were left with no data for this variable. These clients may not have had a source of income or not one high enough to be relevant to their problem case and this variable was simply skipped over instead of actually entering in zero into the database.

| **Income Type** | **No. of Records (n=1,759)** | **Percent of Total** |
|---|---|---|
| Employment | 473 | 27 |
| Null | 308 | 18 |
| SSDI | 280 | 16 |
| No Income | 202 | 11 |
| Soc. Sec. Retirement | 133 | 8 |
| SSI | 123 | 7 |
| **Assets** | | |
| Negative - 0 | 896 | 51 |
| 0-999 | 290 | 16 |
| 1,000-4,999 | 137 | 8 |
| 5,000-9,999 | 51 | 3 |
| 10,000-19,999 | 41 | 2 |
| 20,000-49,999 | 31 | 2 |
| 50,000-100,000 | 18 | 1 |
| 100,000+ | 31 | 2 |
| Null | 267 | 15 |

*Table 2:* Frequency table of relevant socio-economic variables for All Referrals

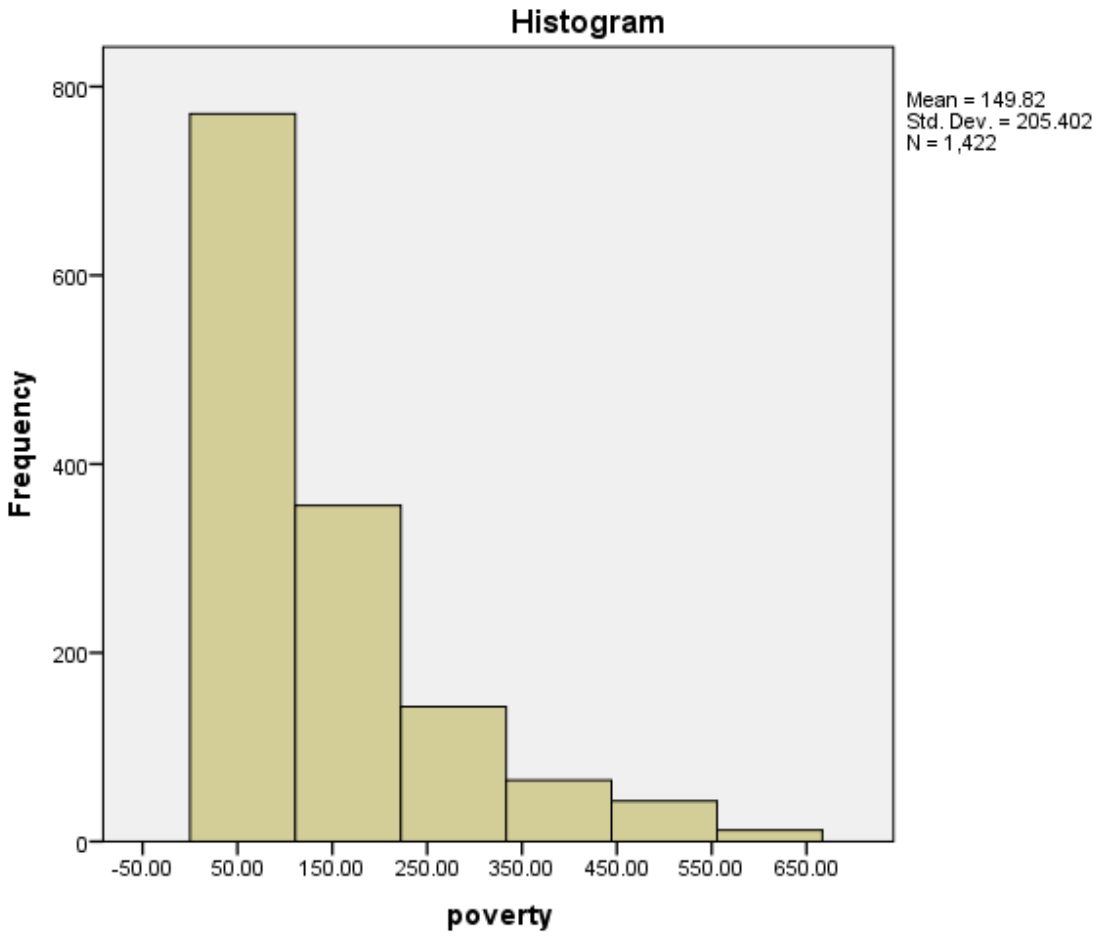



*Figure 2:* Histogram of Percent Poverty for All Referrals

Table 2 seen above shows the relevant economic variables that were analyzed. It can be seen that only 27% of referrals are employed at the time of their problem case while the remainder of referrals are receiving government assistance or have no income at all. Figure 2 clearly shows the highest frequency of patients living between 0-100% percent poverty. These results describe a population that likely has limited access to healthcare and few options to be able to pay for what they need.

The following section aims to answer the question of "What happened." It looks to elaborate on the data that shows how clients are put into contact with the MLP, what problem cases the MLP provides aid for, and outcomes of those cases once they are closed.

| **Problem** | **No. of Records (n=1,759)** | **Percent of Total** |
|---|---|---|
| Advanced Directives / Power of Attorney | 388 | 22 |
| Wills and Estates | 289 | 16 |
| SSDI | 157 | 9 |
| SSI | 127 | 7 |
| Guardianship / Conservatorship | 120 | 7 |
| Medicaid | 85 | 5 |
| Divorce / Separation / Annulment | 64 | 4 |
| **Case Problem Categories** | | |
| Miscellaneous | 703 | 40 |
| Income Maintenance | 327 | 19 |
| Family | 270 | 15 |
| Health | 137 | 8 |
| Housing | 123 | 7 |
| Consumer / Finance | 110 | 6 |
| Employment | 41 | 2 |
| Juvenile | 24 | 1 |
| Individual Rights | 24 | 1 |
| Education | 6 | <1 |

*Table 3:* Frequency table for Problem and Categories of All Referrals

The "Miscellaneous" problem category contains the problem codes 91-99. As seen in Table 3, it accounts for 40% of the total referrals from Nebraska Medicine. This is more than double what the next highest problem category, "Income Maintenance," contributes.

| **Miscellaneous Problem Category** | **No. of Records (n=1,759)** | **Percent of Total** |
|---|---|---|
| Advanced Directives /Powers of Attorney | 388 | 22 |
| Will / Estates | 289 | 16 |

| | | |
|---|---|---|
| Other Misc. | 21 | 1 |
| Torts | 4 | <1 |
| Licenses | 1 | <1 |

*Table 4:* Frequency table of cases for the most common problem category (Miscellaneous)

Table 4 elaborates further on the "Miscellaneous" problem category as it shows the specific problem cases contained within it that contribute to the high volume of referrals from Nebraska Medicine. It can be seen that problem code 95 (Wills/Estates) and 96 (Advance Directives/Powers of Attorney) contribute over 38% of total referrals just themselves. Advanced Directives / Power of Attorney cases are when a person formalizes legal documents that allow a patient to direct end-of-life care or name a substitute decision maker. Wills and Estates is the creation of a legal document that provides instructions on what will happen to a person's assets after their death. This high percentage can be attributed to the department of the hospital that the MLP has been providing aid to the longest; oncology.

| **Close Code** | **#** | **%** |
|---|---|---|
| Counsel and Advice | 548 | 31 |
| Extensive Services | 479 | 27 |
| Administrative Closing | 333 | 19 |
| Brief Service | 160 | 9 |
| Admin Agency Decision | 97 | 6 |
| Uncontested Court Decision | 65 | 4 |
| Legal Education Only | 35 | 2 |
| Contested Court Decision | 14 | 1 |
| Null | 10 | 1 |
| Negot. Settlement (w/ Lit.) | 10 | 1 |
| Negot. Settlement (w/o Lit.) | 6 | <1 |
| Appeals | 1 | <1 |

*Table 5:* Frequency table for Close Codes for All Referrals

Table 5 shows the frequencies of the types of outcomes for all problem cases. The results show that four out of the top five most frequent close codes, accounting for 65% of the total, are not considered as providing significant services to the client.

The following data set will deeply examine the geographical locations that All Referrals have been coming from. Data will go as broad as to have a breakdown by state, and as detailed as to key in on metro area zip codes contributing the highest volume of referrals.

| **State** | **No. of Records (n=1,759)** | **Percent of Total** |
|---|---|---|
| Nebraska | 1,488 | 85 |
| Iowa | 186 | 11 |
| Null | 70 | 4 |
| Missouri | 3 | <1 |
| South Dakota | 3 | <1 |
| Florida | 2 | <1 |
| Wyoming | 2 | <1 |
| Colorado | 1 | <1 |
| Kansas | 1 | <1 |
| Minnesota | 1 | <1 |
| Oregon | 1 | <1 |
| **County** | | |
| Douglas | 960 | 55 |
| Sarpy | 182 | 10 |
| Null | 102 | 6 |
| Pottawattamie | 78 | 4 |
| Lancaster | 55 | 3 |
| **City** | | |
| Omaha | 993 | 56 |
| Bellevue | 80 | 5 |
| Null | 70 | 4 |
| Council Bluffs | 60 | 3 |
| Lincoln | 45 | 3 |
| **Zip Code** | | |
| 68111 | 162 | 9 |
| 68104 | 110 | 6 |
| Null | 86 | 5 |

| | | |
|---|---|---|
| 68107 | 75 | 4 |
| 68134 | 70 | 4 |
| 68105 | 62 | 4 |

*Table 6:* Frequency table of geographical data for All Referrals

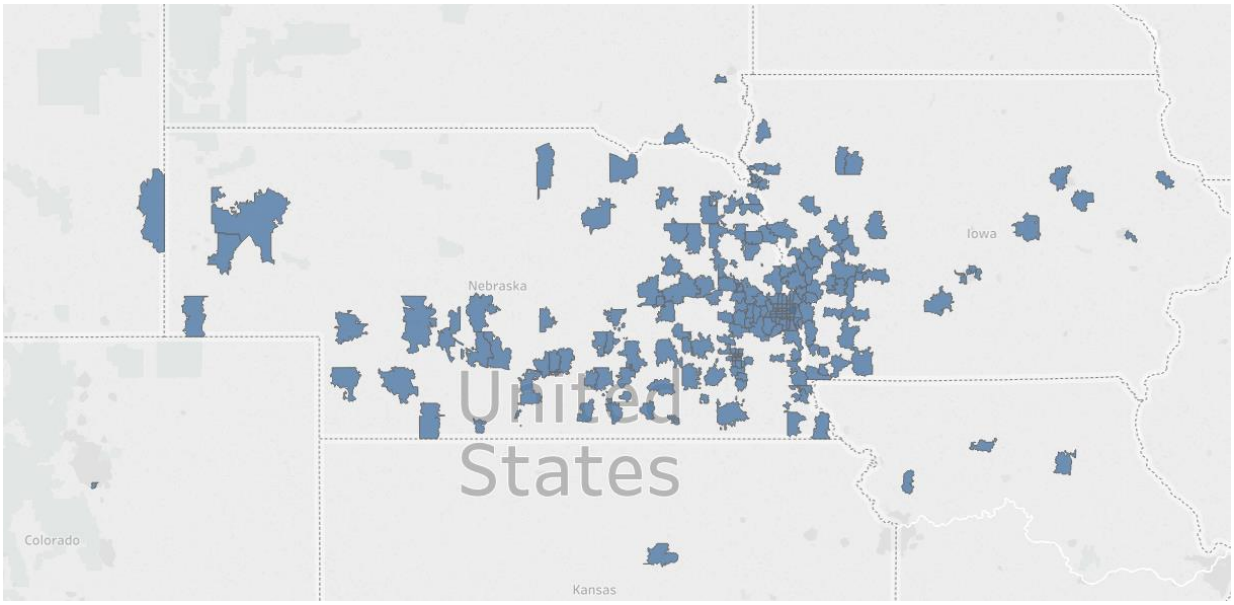



*Figure 3:* Map of extended Nebraska borders showing zip codes with at least one referral

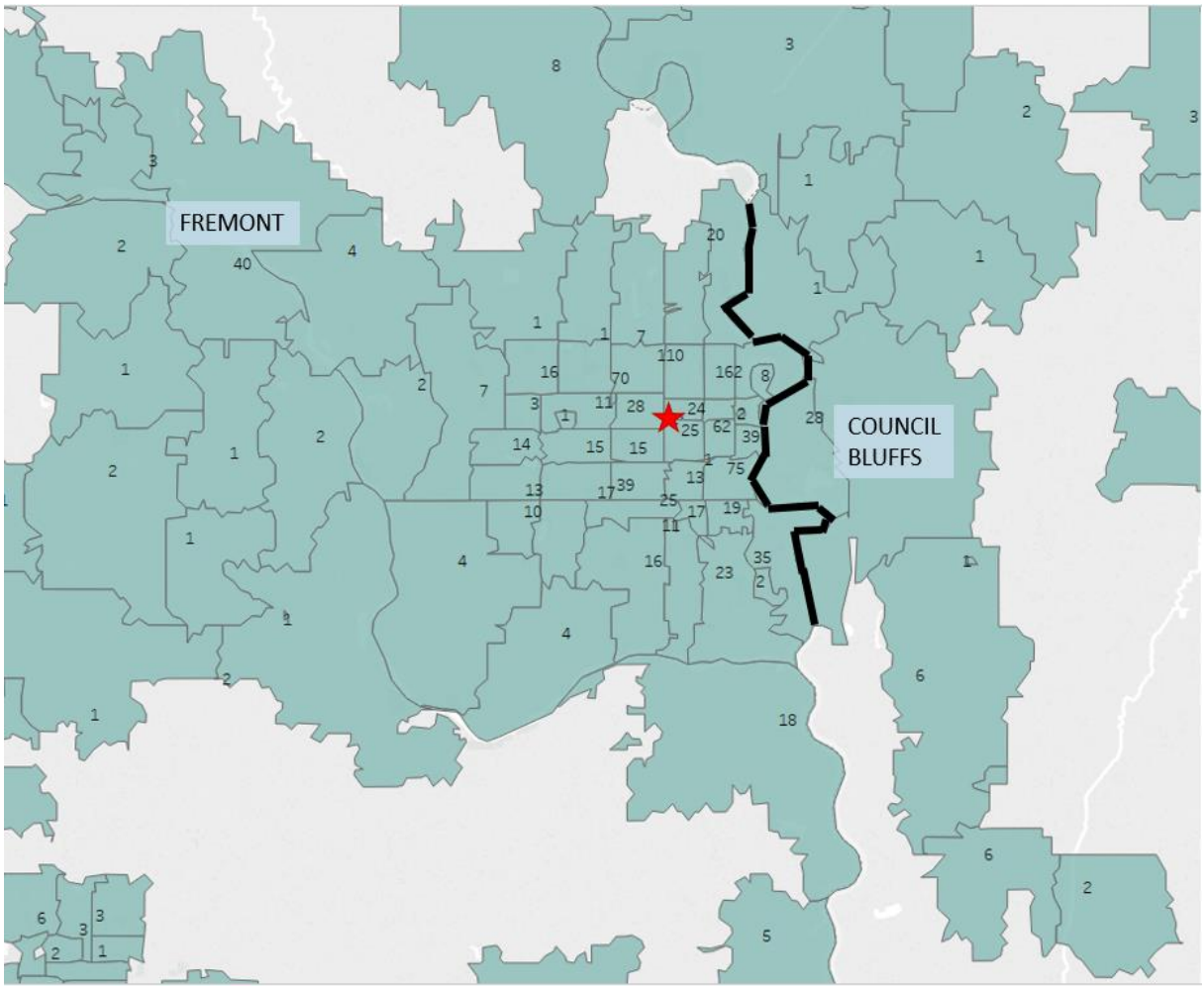



*Figure 4:* Zip code map of extended metro area showing All Referral counts

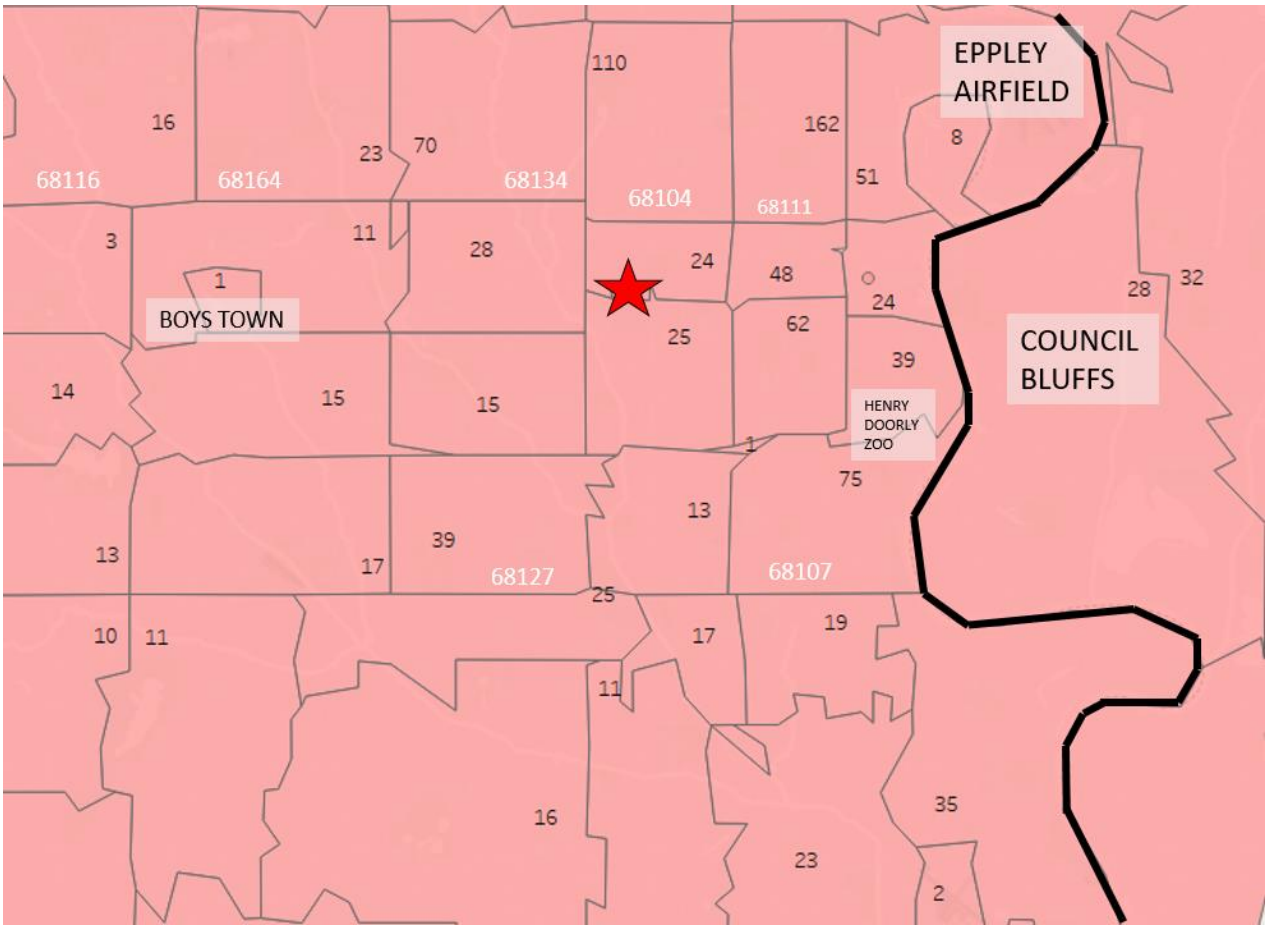



*Figure 5:* Zip Code map of metro area showing All Referrals

In the figures above, the red star symbolizes the location of Nebraska Medicine. The most telling is Figure 5, which shows the high volume of referrals coming from adjacent zip codes to the location of the hospital. There is an especially troubling area in three zip codes to the north of Nebraska Medicine, contributing over 340 referrals. What factors make this area have such a high need for aid?

When it comes to the question of "when" regarding this research, the time frame of any single case can vary widely, from a one-time meeting to multi-year legal battles. All cases analyzed in this project occurred from January 2013 to December 2017 and had to have a status of "Closed" prior to the beginning of the year 2018.

The last question to be answered is the "why." Although the MLP first comes in contact with their referrals when they are already patients of the hospital, the goal of the partnership is to look upstream at what social determinants are having an effect on their health. The following section explores the methods with which the MLP becomes associated with the patient, the organizations and departments making the referrals, and the funding source that makes providing resources to patients possible.

| **Intake Type** | **No. of Records (n = 1,759)** | **Percent of Total** |
|---|---|---|
| Outreach | 967 | 55 |
| Telephone | 625 | 36 |
| Referral | 92 | 5 |
| Walk-In | 58 | 3 |
| **Referred By** | | |
| UNMC Oncology | 460 | 26 |
| Medical-Legal Partnership | 404 | 23 |
| Null | 361 | 21 |
| Other | 175 | 10 |
| UNMC Midtown Baker Place | 147 | 8 |
| UNMC Transplant | 97 | 6 |
| **Funding** | | |
| Medical Legal Partnership NE | 1,285 | 73 |
| General LSC | 289 | 16 |
| Health and Law Project / UNMC | 105 | 6 |

Table 7: Frequency table for relevant operations variables

## All Referrals and Significant Services Discrepancies

As stated previously, a second data set was analyzed in similar fashion to the "All Referrals" data set. This data set only considered client cases that received enough aid from the MLP to be considered as having significant involvement. As such, this data set is called

"Significant Services." The demographic in this data set is important to have knowledge of as they are likely the most time and resource consuming. This data set could be key to determining the most effective populations to expand outreach to.

The data group for All Referrals contained 1,759 cases, while Significant Services contained 679, a reduction of 1,080 cases. Interestingly, there are not many intriguing differences, aside from volume, that occurred when separating all those referred from those who received significant aid from the MLP. Some of the most prevalent changes that occurred include:

- Citizenship increase by 11%, from 87% to 98%
- Average percent poverty increase from 149.82% to 177.92%
- Average client age increased from 49.7 to 50.8
- Average annual income increase of $4,485
- Cases in Nebraska increased from 85% to 94%, Iowa decreased from 11% to 3%

These results show that patients who receive a significant amount of services are a higher likelihood to be a citizen, are less likely in poverty due to an increased annual income, are slightly older, and much more likely living within Nebraska. Not having any significant changes between these groups can be seen as a positive finding because everyone who is referred will have the same chance at receiving appropriate services. There do not appear to be any particular factors that exclude some referrals over others.

## One-On-One Interview Results

Five one-on-one interviews were conducted throughout the timeframe of this project. Interviewees included four females and one male. Problem cases for these five interviewees included 56 (Long Term Health Care Facilities), 74 (SSDI), 75 (SSI), and 95 (Wills and Estates). The sample, though small, was able to include many of the most common problem cases that the MLP provides aid for as seen above in Table 3.

All interviews were transcribed to text and coded to identify major themes. The interviews were set up to essentially follow through the timeline of each former client's experience with the MLP. Due to how the interviews were structured, three major themes became clear: pre-MLP issues, MLP procedures and involvement, and MLP aid results. These themes are connected to one another as they follow in order sequentially to tell each client's story.

The first theme, pre-MLP issues, aimed to have the interviewees speak about what brought them to Nebraska Medicine and the legal and health issues the client was initially facing upon arrival. Questions asked during this theme included the timeframe of their involvement and describing barriers to healthcare. All interviewees were very open in their accounts of their initial issues. One was gracious enough to share *"I had a [operation] four years ago and my assistance from Social Security only covered for three years. They terminated my assistance...and I'm still struggling with my health. I didn't know what to do."* Another interesting interviewee stated, *"So my [family member] and I had a doctor's appointment and [they were] kind of throwing a tantrum just due to the issue we are going through with [other*

*family member]. ...the physician explained it all and she set us up that we could receive the help from legal. Even through the courthouse legal aid told me no, but because of the physician, because of the partnership we were able to have my [family member] represented."*

The second theme identified, MLP involvement and procedures, included questions such as how they came about to receiving to aid, what professionals did they speak to, and describing what the MLP did, or attempted to do, for them. One interviewee stated, *"I had to sue long-term disability. [They] were giving me a hard time and I was getting these bills so I went to social work to try to work with them to make arrangements for payments. While I was in there...[the social worker] said let me make a phone call. We have a representative from legal aid that could come in and you could talk to her. So she came in and I told her about my situation. She contacted me two or three times. I gave her the information she needed and it all just went through. It was the smoothest process ever. They reject you maybe twice before you actually get approved. They have hearings and I had none of that. [The MLP] handled everything, and it was wonderful. Absolutely wonderful. I couldn't ask for anything better."*

Another interviewee stated, *"Actually [social work] contacted legal aid for me and then legal aid contacted me. [Legal aid] set up a hearing with Social Security to meet with me and the attorney was with me. [Legal aid] helped me explain my health situation. I have disability status which gives me [insurance] which covers my medical expenses and prescriptions. And they followed up, just making sure they really handled it."*

One interviewee had high praise for the hospital staff stating, *"The social workers are fantastic. If one was gone, another checked in on us just to see if we needed anything; meal*

*tickets, gas cards, anything. They were there to support us and help if we had any questions. They'll fight for you tooth and nail here [at Nebraska Medicine]."*

The last theme, MLP aid results, included questions about how their health and overall lives changed as result of the aid they received, speculating how their problem may have turned out without the option of an MLP, and any recommendations or changes to the MLP process. The interviewees had very positive remarks on how it changed their lives including, *"I'm able to remain independent. I can live by myself and care for myself. I don't have to rely on someone else to try and help me with my medical care,"* and, *"I was able to focus more on my health care, not the stress and worry of how I was going to finance things because they took that away. I was able to take care of [my health] instead of having to run round and round and go to court."* Another stated, *"I didn't have to rely on [my family] as much as I would have. I would have to ask them to do this or do that or pay for this or pay for that or borrow money. I didn't have to do any of that because of the partnership. I was simply amazed at that."*

Each interview became a bit more serious when asked what they believe may have happened without the option of MLP aid. One interviewee stated, *"I could have lost my house...my car...could have gotten sued for medical expenses. [I could have] actually gotten sicker because of the worry over these issues,"* and *"I probably would've moved out of state just to avoid [the family member] wreaking havoc in our lives."*

Some interviewees found it to be truly life saving as they stated, *"…[the MLP] had a big effect on my life. Not to be dramatic but it really saved my life because I really don't know what I would have done. I didn't really have any other options,"* and *"I was really just trying to hold on*

*to some hope and I was just getting very depressed. I sometimes think I would have just ended up in a mental hospital or something because I don't think I can handle the stress of the situation. I know it sounds dark to say but I really didn't want to live. I didn't want to be a burden to my family."*

Finally, each client was asked to describe their overall experience with the MLP and if they would recommend it to others in similar situations. Responses included, *"Wonderful. Absolutely wonderful. It is a very good program. If they decided to not have that partnership it would be very detrimental to a lot of people,"* and *"I would recommend it to people. That would be the first thing I would say,"* and *"I absolutely would [recommend it], yeah. I'm really grateful that this is set up here, that this is an option."* An interviewee even stated that they already had recommended it to someone. One thankful interviewee stated the MLP as *"a blessing. Simply put, a blessing. I'm not sure where the situation would've went if we didn't have it."*

## Additional Comments

The number of interviews conducted was the minimum of the goal number the project was aiming to accomplish. There were many factors that contributed to this low number such as the timeframe to complete them, requirement to be able to transport themselves to the interview, and being unable to provide any compensation. Major obstacles were first encountered in simply deciding who to attempt to contact. The former client needed to have received significant services and ideally have a problem case that the MLP regularly aids. The next obstacle came when contacting the interviewees. Many of them had limited contact

information and were very confused to be contacted by a graduate student. Even after having everything explained to them, many simply did not feel comfortable speaking on such sensitive issues with a stranger that was not an attorney.

The relatively small number of interviews also leaves the results open to bias. The results show that the overall experience of those interviewed was exceedingly positive. This is a logical occurrence as those with a positive experience are very willing to share their story as a way to "give back" to the partnership that aided them in their time of need. While on the other hand, most people are not comfortable speaking with a stranger on such sensitive topics, especially if the outcome was negative. Also, most of the interviewees had little to no recommendations or changes to the processes of the MLP. Anecdotal evidence of MLPs shows that negative experiences do frequently occur. The organization should be encouraged to collect data from a wider group in order to encompass a full spectrum of client experiences and to follow up with clients to identify areas of improvement when possible.

## Strengths and Limitations

The strengths of this research project were many. Client data was available for a four year period which provided a high volume of cases available to be analyzed. Also, once the variables were compiled, the findings were relatively easy to analyze and be understood by all stakeholders. The one-on-one interviewees covered varied problem cases that were also some of the most common that the MLP aids their clients with. This research also used both quantitative and qualitative research methods, both adding more context to the results found. Lastly, this project had no costs and can be easily replicated at other partnerships.

This study did encounter a number of limitations that have significant effect on the results. The first limitation was the logistics of the data set received. Of the variables analyzed, 21 of them were missing at least 10% of their data points, with five variables missing over 88%. The volume of missing data, along with many variables having discrepancies in coding made a sizeable portion of variables unable to analyzed. Included with data limitations is the fact that clients can receive MLP aid for multiple issues at one time or multiple times over a period of time, but each problem case is separate in and of itself. This research did not account for any number of clients having multiple cases at any point in time. The volume of this occurrence could significantly skew results.

Another limitation is that the HELP Project works with multiple healthcare organizations but this study only focused on cases from Nebraska Medicine. A similar data analysis on other healthcare organization data could identify other population gaps. The one-on-one interviews had a high likelihood of volunteer bias as almost all the interviewee experiences were positive. Lastly, it is unlikely that the findings of this research can be generalized to other populations.

## Discussion / Recommendations

By compiling univariate statistics and conducting qualitative interviews this research helped LAN's Health, Education, & Law Project improve upon their operations by evaluating the patients / clients they have provided aid to. The results from the project should give the MLP staff a better idea about potential departments and communities to expand their outreach to and increased knowledge of how the patient views their procedures.

The results from this quality improvement study helped to conclude a few major findings. The demographics of the patients receiving aid are explicitly shown and can be used to identify populations to expand operations to or determine gaps in populations that are not receiving enough aid. The study results lay out geographical context of the specific locations and range of referrals, which shows an alarming amount of referrals coming from zip codes just north of the hospital. This research also singled out the sixteen variables that are seeing discrepancies in coding between both legal aids. Lastly, through qualitative interviews, it was shown that many patients are unaware of the HELP Project, but are extremely grateful for their advocacy. Many patients are happy to recommend it to others despite their case outcome.

The MLP is already doing amazing work, but with these results there are a number of recommendations that can be made to begin to bolster the weaker aspects of the organization. The most significant improvement that can be made is to begin a collaborative effort to document and code case files according to a set standard. Doing this will eliminate the discrepancies found and allow more streamlined information sharing not only with one another, but with MLPs across the country. Another recommendation for future work is to begin determining the demographics of patients seen within departments of Nebraska Medicine currently outside the MLP scope. Should funding be increased and operations expanded, the partnership should look to continue to be efficient with resources and reach out to populations who are most in need. Lastly, being more proactive in client follow-ups post-case would be advantageous in the continued identification of operational improvement.

## Discussion

Complete healthcare is becoming more of a team effort, between all varieties of professionals, with each passing day. It is vital that an organization knows where it fits within the healthcare process and is able to be on the same page as all the entities it collaborates with. An organization must first recognize its weaknesses in order to begin to attempt to make them strengths.

Overall, the MLP of Nebraska Medicine, Legal Aid of Nebraska, and Iowa Legal are undoubtedly doing life-changing, and likely life-saving work. They are many patients only option when it comes to healthcare coverage and getting back to their normal lives. This study shows the astounding positive effects that the MLP has on the patients of Nebraska Medicine. The partnership allows the hospital to operate more efficiently and build upon their distinguished reputation within the community.

## Conclusion

The results of a characterization analysis can be important to an organization in many ways. An organization whose aim is to aid those in the community must know as much as they can about their community. Having knowledge of the demographics of your community is essential in forming trusting relationships and is useful when seeking out similar populations to expand operations to. Furthermore, by knowing who you are currently aiding, you can also identify populations you may not be reaching and begin to fill that gap. Future work should look to create a standard of coding and case documenting among the organizations and the identification of effective populations to expand operations to.

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## Service Learning/Capstone Experience Reflection

My Service Learning / Capstone Experience at Legal Aid of Nebraska was a very enlightening experience. Working within the Medical-Legal Partnership allowed me to fully partake in experiences that you simply cannot get in a classroom. Although every project is unique, I felt as though mine transcended public health as I was able to interact with not only health professionals but legal professionals, patients, and lay people as well. Everyone involved with the MLP should be commended for the life-changing work they do every day for their clients and the patients of Nebraska Medicine.

As for the Service Learning portion of my project, I was fortunate to be able to help with participant recruiting for the Robert Wood Johnson Foundation Grant currently under the supervision of Dr. Hongmei Wang of the College of Public Health and Kelly Shaw-Sutherland of

Legal Aid of Nebraska. The grant funded a study that looked to assess and address the needs of patients who have visited the emergency room of Nebraska Medicine multiple times within the last year.

I was added to the team and given scheduled times to come in and make phone calls to contact the participants who qualified. These shifts had me accessing a shared database where patient information was kept, contacting these patients by phone, conducting a survey with them over the phone, and recording the results of each phone call made. I found this to be a very enjoyable experience as it felt very good to be a contributing team member and to speak with participants with the hopes of helping them. I was able to strengthen my abilities of working within a team as well as interpersonal skills to be kind, patient, and non-judgmental while administering surveys.

My other Service Learning activities had me sitting on many meetings, shadowing during patient consults, and observing office and employee interactions. I was fortunate to sit in on many meetings, including a "Huddle" meeting at Jennie Edmundson hospital in Council Bluffs, IA. These were weekly meetings where a representative of almost every department within the hospital was present to speak about every current in-patient. This included staff from pharmacy, emergency, coding, social workers, and case managers all coming together to speak about the best plan of action for every patient. This process allows the building of relationships among the staff and was very fast-paced and efficient with everyone contributing as needed.

The team at Iowa Legal Aid was gracious enough to let me observe one of their staffing meetings. These are weekly meetings where all employees come together to discuss new referrals. They decide if they are able to provide any services and which attorney would be best

to take the lead. Lastly, on multiple occasions I was able to join an attorney as they met with a patient to speak about their legal issues. This was difficult at times as these patients are in a time of need and it often happens that some of their issues cannot be legally resolved while others can. I was able to watch the attorneys speak to the patient with poise and understanding.

I believe my Capstone research to be one of the greatest professional learning experiences I've encountered so far. It was challenging enough to formulate a project around my Public Health academia but this project required interactions with legal professionals and situations with which I did not have any experience.

The first challenge of the research was the acquisition and analysis of the data provided. I was not expecting my data to come from multiple sources. This required time to analyze each separately, combine the similar variables together, then analyze it again. This problem was magnified as I began to find differences in documentation and coding between the legal aid organizations.

The most difficult aspect of my project was the one-on-one interviews. It required the most planning of all the activities I performed. I'd had very little experience in creating, arranging, conducting, transcribing, and coding interviews. Recruiting participants began to be very time consuming. I first needed to identify former clients (out of the over 1,700 cases given to me) who received a significant amount of aid, sending names of potential interviewees to my site preceptor to be screened for appropriateness, I would then attempt to make with them. Due to not having any funds and needing the interview to be audio recorded, it was a requirement that the client meet with me in person and on their own accord. Not surprisingly, the vast majority I spoke with were unwilling to help. Luckily, I was able to interview a select

few and the experience was very rewarding. I am now confident in all aspects of my interview abilities.

Overall, this project was a very valuable experience that is leaving me with a gratifying sense of accomplishment. I was able to practice first-hand all of the skills I had been learning throughout the program and see the tremendous impact that this partnership has on Nebraska Medicine and the community. The upstream work they do resolving patients' social determinants of health is truly watching public health in action. I strengthened and gained many valuable career skills and was inspired to continue my professional progress in public health to help those in need.

## Acknowledgements

I would like to thank Legal Aid of Nebraska for being my official site host for my Service Learning/Capstone Project. I want to specifically thank Ann Mangiameli for being my official site preceptor and taking on added responsibilities to provide me the opportunity to conduct this research project. Ann was very helpful in providing all opportunities available for me to immerse myself into the organization and learn as much as I could in my short time. I very much appreciate Ann's patience with me when the project at times did not proceed according to plan.

I also would like to thank my committee members, Dr. Fernando Wilson and Dr. Ronald Shope. I was very appreciative of their patience with me as the process to determine exactly what my research would entail was challenging at times. They were always very open to my ideas and provided excellent guidance throughout the project, always willing to take time to meet with me, provide feedback, and answer any questions.

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# Appendices

## A: One-On-One Interview Questions

Note that all of the following questions were not necessarily asked at every interview or in any particular order. Questions asked were determined by patient openness and tailored to their specific problem case.

*-What was the timeframe of your involvement with the MLP?*

*-Were you the only one to receive aid from the MLP?*

*-Describe any barriers you / your family faced to access healthcare prior to MLP aid*

*-Describe your / your family's ability to access necessary medications prior to / after MLP aid*

*-Describe your ability to access healthy foods prior to / after MLP aid*

*-Describe how you came about to receiving aid from the MLP*

*-Describe what the MLP was able to / attempted to do for you*

*-Describe any changes in your life, with respect to your / your family's health and healthcare access that happened as a result of MLP services. Were there any effects on your family / those closest to you?*

*-Had the MLP not been there to help you, what do you believe you would've done / would've happened?*

*-Would you recommend the MLP to others in your similar situation?*

*-Would the MLP be helpful to any healthcare challenges you may be facing currently?*

*-Do you believe it's likely you will need MLP aid again in the future?*

*-How would you describe your overall experience?*

## B: Additional Interviewee Quotes

*"It's hard to do [legal battles] on your own when you already don't feel well and you're already weak and you're trying to prove that you're not well. You need an advocate. You need someone to stand with you and just kind of help you sort through the red tape, the paperwork, and the phone calls. It's just it's a lot to deal with."*

*"I had never heard of it before and to have an attorney right there for you. It was just amazing."*

*"It's just it's hard when you're struggling with your health. You need help, you need these advocates. You need assistance because you're already battling your own physical problems, and then you have legal and financial and...it's just too much. It's too much to handle on your own."*

*"If I ever needed [help again] I would definitely contact them"*

*"Instead of having people try to go on their own, trying to find people, because when you're dealing with an illness like my [family member] had and you're scared to death and don't know what's going to happen the next day from the next day. You don't have time to call people. You really don't. You more or less are worrying about life and death in that situation."*

## C: Data Variables

| **Categorical Variables** | | |
|---|---|---|
| number | asset_type3 | address2 |
| client_id | asset_type4 | address3 |
| office | citizen | city |
| problem | outcome | state |
| sp_problem | main_benefit | zip |
| status | case_county | county |
| open_date | good_story | area_code |

| | | |
|---|---|---|
| close_date | case_address | phone |
| close_code | case_address2 | phone_notes |
| reject_code | case_city | area_code_alt |
| funding | case_state | phone_alt |
| referred_by | case_zip | phone_notes_alt |
| intake_type | funding2 | email |
| income_type0 | funding3 | birth_date |
| income_type1 | referred1 | language |
| income_type2 | referred2 | gender |
| income_type3 | referred3 | ethnicity |
| income_type4 | iola_benefit | disabled |
| income_type5 | iola_affected | residence |
| income_type6 | iola_impact | marital |
| income_type7 | veteran_household | frail |
| asset_type0 | first_name | veteran |
| asset_type1 | last_name | rural |
| asset_type2 | address | |

| **Numerical Variables** | | |
|---|---|---|
| income | adults | iola_ba7 |
| assets | children | iola_mb7 |
| poverty | persons_helped | iola_label8 |
| annual0 | client_age | iola_ba8 |
| annual1 | iola_ba1 | iola_mb8 |
| annual2 | iola_mb1 | iola_label9 |
| annual3 | iola_ba2 | iola_ba9 |
| annual4 | iola_mb2 | iola_mb9 |
| annual5 | iola_ba3 | iola_label10 |
| annual6 | iola_mb3 | iola_ba10 |
| annual7 | iola_ba4 | iola_mb10 |
| asset0 | iola_mb4 | iola_label11 |
| asset1 | iola_ba5 | iola_ba11 |
| asset2 | iola_mb5 | iola_mb11 |
| asset3 | iola_ba6 | poverty_income_only |
| asset4 | iola_mb6 | |

| **Variables with Discrepancies** | | | |
|---|---|---|---|
| office | intake_type | adults | funding |
| sp_problem | marital | main_benefit | status |
| citizen | reject_code | outcome | problem |
| ethnicity | residence | persons_helped | referred_by |

## D: Significant Services Data Analysis Results

| Gender | No. of Records (n=679) | Percent of Total |
|---|---|---|
| Female | 402 | 60 |
| Male | 266 | 40 |
| Null | 1 | <1 |
| **Ethnicity** | | |
| White | 456 | 68 |
| Black | 121 | 18 |
| Hispanic | 34 | 5 |
| refused | 24 | 4 |
| Asian, Pacific Islander | 17 | 3 |
| **Citizenship** | | |
| Citizen | 653 | 98 |
| Eligible Alien | 11 | 1 |
| Null | 4 | <1 |
| Legal Permanent Resident | 1 | <1 |
| **Language** | | |
| English | 644 | 96 |
| Spanish | 13 | 2 |
| Null | 8 | 1 |
| **Marital Status** | | |
| Married | 245 | 37 |
| Single | 172 | 26 |
| Divorced | 162 | 24 |
| Widowed | 42 | 6 |
| Null | 36 | 5 |
| Separated | 12 | 2 |
| **No. Persons Helped** | | |
| 1 | 276 | 41 |
| 2 | 228 | 34 |
| 3 | 77 | 11 |
| 4 | 43 | 6 |
| 5 | 23 | 3 |
| **No. Adults Involved (19+ y/o)** | | |
| 1 | 368 | 55 |
| 2 | 264 | 39 |
| 3 | 24 | 4 |
| Null | 8 | 1 |

| | | |
|---|---|---|
| **No. Children Involved** | | |
| Null | 344 | 51 |
| 0 | 135 | 20 |
| 1 | 93 | 14 |
| 2 | 57 | 9 |
| 3 | 20 | 3 |
| 4 | 17 | 3 |
| **Disabled** | | |
| No | 472 | 70 |
| Null | 123 | 18 |
| Yes | 74 | 11 |
| **Veteran** | | |
| No | 631 | 94 |
| Yes | 37 | 6 |
| Null | 1 | <1 |

*Table 8:* Frequency table for demographic variables for Significant Services

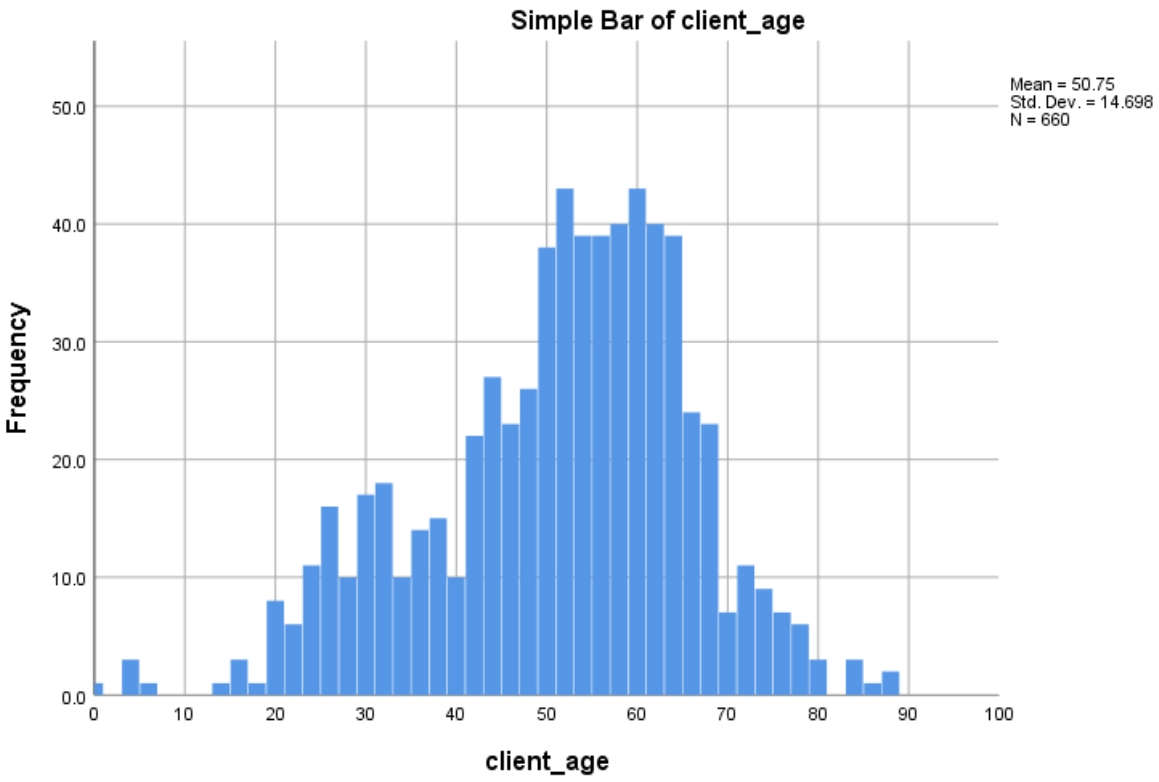


*Figure 6:* Bar graph of Client Age for Significant Services

| Problem | No. of Records (n = 679) | Percent of Total |
|---|---|---|
| Advanced Directives / Power of Attorney | 247 | 37 |

| | | |
|---|---|---|
| Wills and Estates | 171 | 26 |
| SSI | 51 | 8 |
| Guardianship / Conservatorship | 51 | 8 |
| SSDI | 46 | 7 |
| Divorce / Separation / Annulment | 18 | 3 |
| **Problem Category** | | |
| Miscellaneous | 420 | 63 |
| Income Maintenance | 106 | 16 |
| Family | 94 | 14 |
| Health | 17 | 3 |
| Housing | 15 | 2 |
| Consumer / Finance | 11 | 2 |
| Juvenile | 6 | 1 |
| Employment | 3 | <1 |

*Table 9:* Frequency table for Problem and Categories for Significant Services

| **Miscellaneous Problem Category** | **No. of Records (n = 679)** | **Percent of Total** |
|---|---|---|
| Advance Directives / Powers of Attorney | 247 | 37 |
| Will and Estates | 171 | 25 |
| Other Misc. | 2 | <1 |

*Table 10:* Frequency table for problem cases within Miscellaneous category for Significant Services

| **Close Code** | **No. of Records (n = 679)** | **Percent of Total** |
|---|---|---|
| Extensive Services | 479 | 71 |
| Admin. Agency Decision | 97 | 15 |
| Uncontested Court Decision | 65 | 10 |
| Contested Court Decision | 14 | 2 |
| Negot. Settlement (w/ Lit.) | 10 | 2 |
| Negot. Settlement (w/o Lit.) | 6 | 1 |
| Appeals | 1 | <1 |

*Table 11:* Frequency table of Close Codes for Significant Services

| **State** | **No. of Records (n = 679)** | **Percent of Total** |
|---|---|---|
| Nebraska | 628 | 94 |
| Iowa | 27 | 4 |
| Null | 9 | 1 |
| Missouri | 2 | <1 |
| South Dakota | 2 | <1 |
| Colorado | 1 | <1 |

| | | |
|---|---|---|
| Florida | 1 | <1 |
| Kansas | 1 | <1 |
| **County** | | |
| Douglas | 388 | 60 |
| Sarpy | 84 | 13 |
| Dodge | 27 | 4 |
| Lancaster | 24 | 4 |
| Null | 23 | 4 |
| Lincoln | 13 | 2 |
| **City** | | |
| Omaha | 413 | 62 |
| Bellevue | 31 | 4 |
| Lincoln | 19 | 3 |
| Fremont | 18 | 3 |
| La Vista | 15 | 2 |
| North Platte | 12 | 2 |
| **Zip Code** | | |
| 68111 | 53 | 8 |
| 68105 | 35 | 5 |
| 68104 | 33 | 5 |
| 68107 | 31 | 4 |
| 68134 | 25 | 4 |

*Table 12:* Frequency table of geographical variables for Significant Services

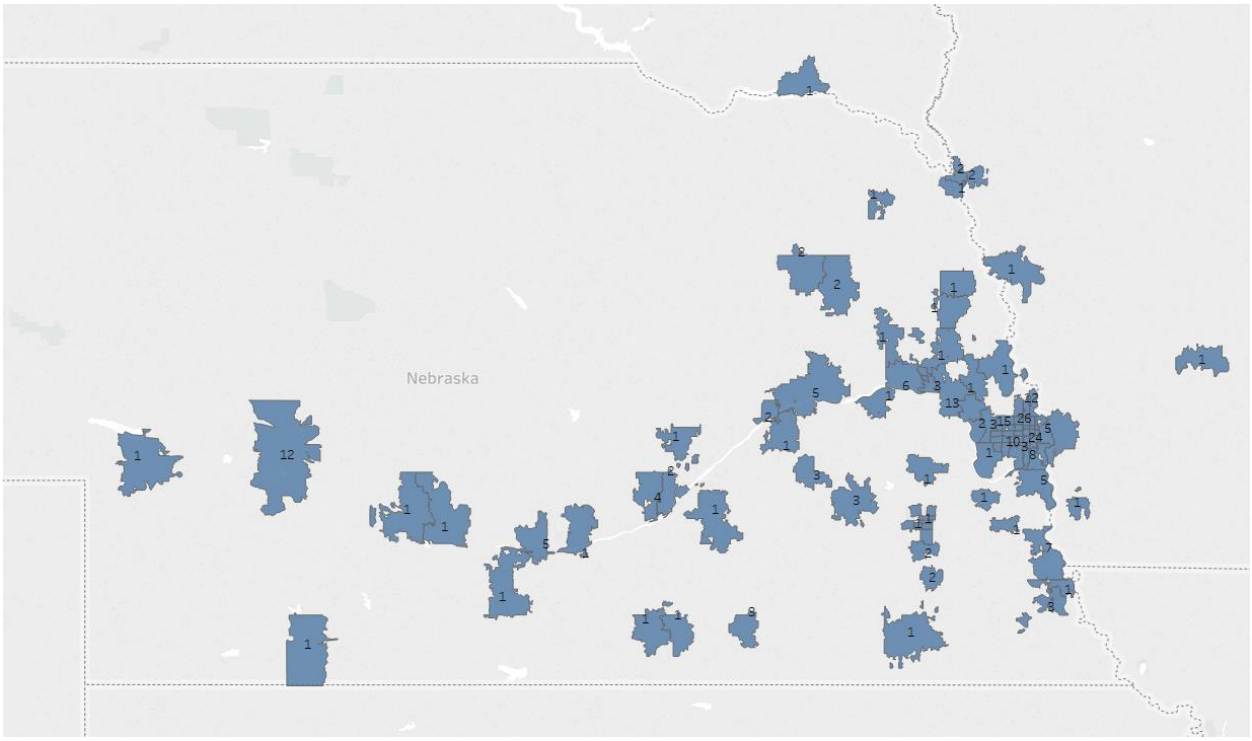


*Figure 7:* Zip Code map of total case counts for Significant Services

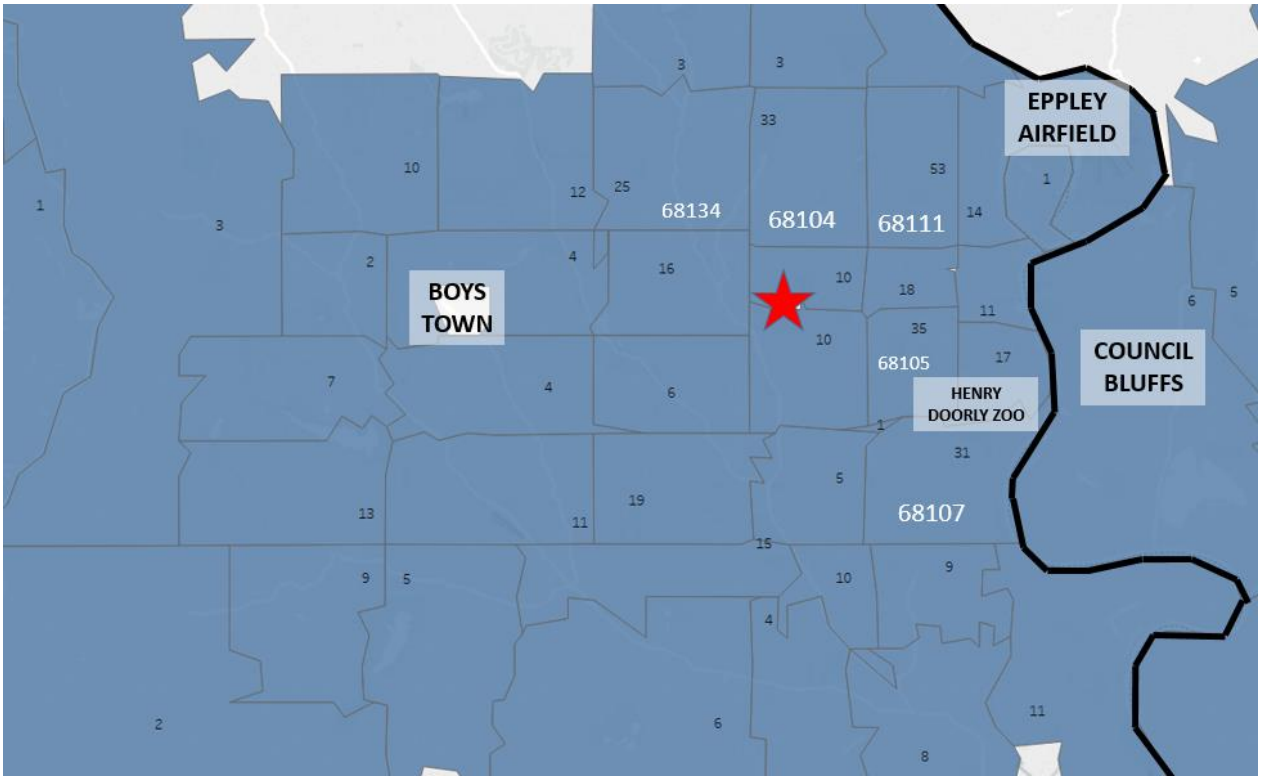


*Figure 8:* Zip Code map of metro area containing total case counts for Significant Services

| Intake Type | No. of Records (n = 679) | Percent of Total |
|---|---|---|
| Outreach | 363 | 54 |
| Telephone | 261 | 39 |
| Walk-In | 32 | 5 |
| Referral | 5 | <1 |
| Online | 5 | <1 |
| **Referred By** | | |
| UNMC Oncology | 230 | 34 |
| Medical Legal Partnership | 162 | 24 |
| Null | 139 | 21 |
| UNMC Transplant | 44 | 7 |
| UNMC Midtown Baker Place | 43 | 6 |
| **Funding** | | |
| Medical Legal Partnership NE | 492 | 73 |
| General LSC | 156 | 23 |
| Health and Law Project / UNMC | 10 | <1 |

*Table 13:* Frequency table of relevant operations variables for Significant Services

| Assets | No. of Records (n = 679) | Percent of Total |
|---|---|---|
| Negative – 0 | 395 | 59 |
| 0-999 | 112 | 17 |
| 1,000-4,999 | 66 | 10 |
| 5,000-9,999 | 20 | 3 |
| 10,000-19,999 | 23 | 3 |
| 20,000-49,999 | 13 | 2 |
| 50,000-100,000 | 7 | 1 |
| 100,000+ | 15 | 2 |
| Null | 18 | 3 |

*Table 14:* Frequency table of total assets value for Significant Services

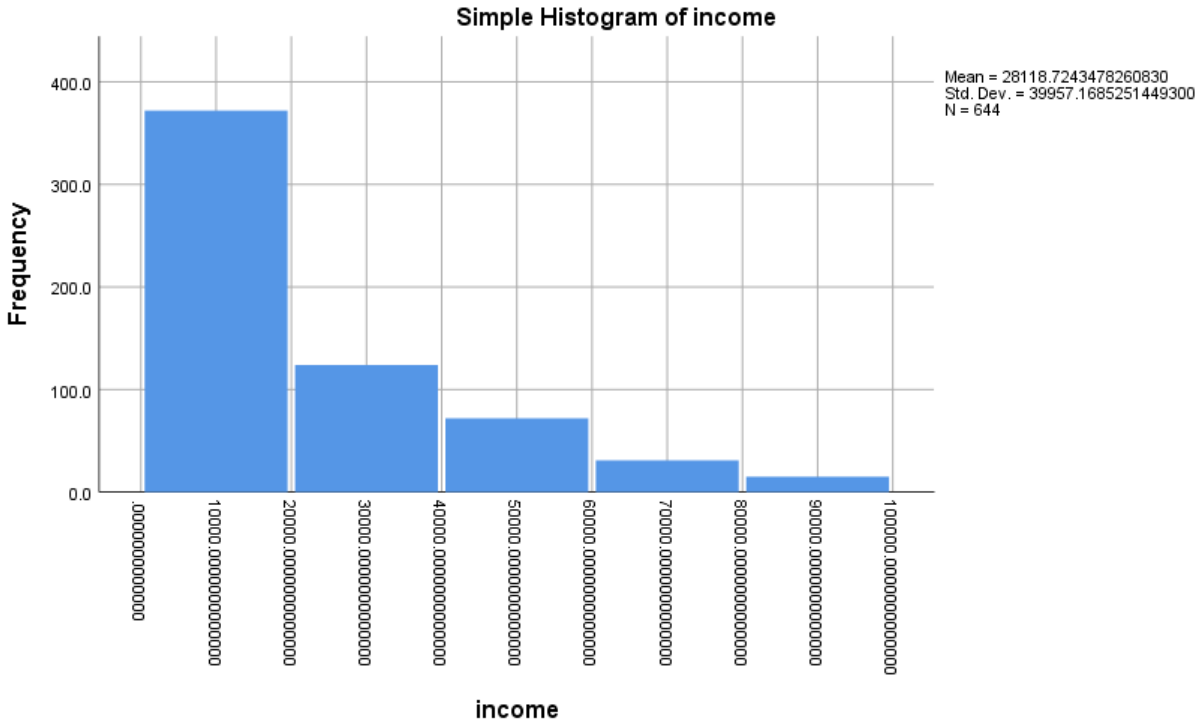


*Figure 9:* Histogram of annual income for Significant Services

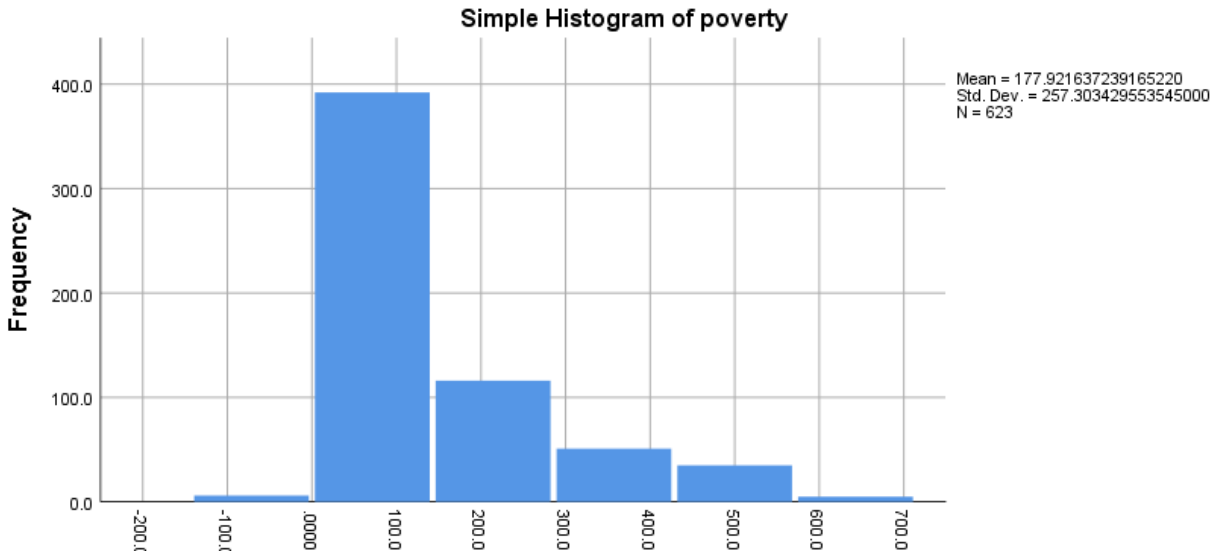


*Figure 10:* Histogram of percent poverty for Significant Services