

Finding Causes for Limb Loss:

What are the leading factors of limb loss for diabetic patients in the CNMI?

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The Commonwealth of the Northern Marianas has had a history of prevalent and aggressive diabetes. However, due to geographical isolation and underdevelopment, the issue of limb loss causation on the Northern Marianas Islands has largely gone underresearched. This essay outlines a local study that will identify key causes of limb amputation for diabetic patients in Saipan, while also collecting and presenting qualitative data from diabetes patients, healthcare providers, and diabetes experts.

First, the local relevance must be established. Along with other Non-Communicable diseases (NCD), an abnormally large percent of the local population is diabetic; securing the NMI numerous top ten rankings for diabetes prevalence over the last decade (“Diabetes rate,” 2006). One of the most devastating consequences of being diabetic is the loss of a limb. In the NMI, this is also a significant issue, which is only worsened by lack of healthcare facilities and prevention and treatment options. Currently, there is only one treatment facility on island for amputation patients, and a 2013 study shows that the opening of this awareness and treatment service center aided in a decline in diabetic amputee patients since 2006 (Ichiho, Robles, & Aitaoto, 2013). However, diabetic patients still prevalently suffer limb loss in the NMI; much like other Pacific Island country (PIC) peoples and indigenous Australians (Robinson et al., 2016). The prevalence of limb loss can then be better understood through an examination of possible causes.

Therefore, a study into the causes of limb loss for diabetic patients in the NMI can be performed through surveys, interviews, meta-data analysis, and data collection. Surveys can be distributed to healthcare professionals and diabetic patients using the resources of the researcher (a medical professional student) and fellow researchers from local (Chamorro and Carolinian)

communities. Surveys will be performed more selectively and will be focused on those directly treating or helping the prevention of limb loss in diabetic patients, as well as two family members of the aforementioned researcher participants. Additionally, comparisons with other studies on PICs and indigenous Australians will be completed utilizing current literature on leg amputation within specific populations genetically and geographically similar to those within the NMI.

The project can be completed over the 16 week time period following the schedule outlined in Table 1. This schedule allows for ample revision time and two weeks for quantitative collection and processing, since interviewing is a longer process than handing out surveys. While one week is very dedicated to surveying, it will also be open throughout the process. By securing writing time, there will also be an opportunity to utilize additional resources if needed.

Additionally, multiple weeks are dedicated to interviews (if not totally, then partially) to fit the lead researcher's schedule; which is heavily reliant on weekend meetings. Two weeks are dedicated to the editing process for refinement of the essay. Resources such as the Northern Marianas College's English Language Lab (ELL) and peer reviews will be utilized. This will also allow for advanced inclusion of media, tables, and assorted figures. The planned schedule displayed in Table 1 is open to adjustment according to demands of the project and advice of the supervising instructor (Dr. Kimberly Bunts-Anderson).

Table 1.

Week	Focus	Due Dates	Resources Used
Week 1	Learning the required formats and gaining resources.		

Week 2	Will pick possible topics for the project and orient self with research concepts.	Topics Due	
Week 3	Outlining the persuasive essay and gathering data and literature.	Sep 8, Thesis and Outline Due	EBSCO, Library
Week 4	Writing the persuasive essay.	Sep 11, Rough Draft Due	EBSCO, Library, Cataloguing Sites, Checklist
Week 5	Present argument for the project and start first steps to student research.	Sep 18, Final Draft and Presentation Due	
Week 6	Create survey and interview information while reaching out to interview subjects.		Networks and contacts
Week 7	Get material approved and secure survey populations.		EN202 instructor and contacts
Week 8	Perform scheduled interviews and write up the findings and processes.		Comparative literature and collect data
Week 9	Perform more interviews and surveys, and write up data analysis.		Comparative literature and collected data
Week 10	Conclude data collection and compile data in an effective portion of the research project. Additionally, compare with and review checklist requirements.		Checklist

Week 11	Will write the conclusive portions of the paper.		Library, EBSCO
Week 12	Turn it into ELL for editing, edit, fill information gaps.		ELL
Week 13	Turn in the draft for feedback and continue editing and filling and information gaps or extra interviews that may need to be scheduled.		ELL
Week 14	Revision week.		
Week 15	Revision week.		
Week 16	Submissions.	The project is due.	

The main variables will include diet, cultural influences on diet, stress, physical activity, maintaining weight and blood pressure, blood sugar level checks, proper medication, cultural perspective on reporting/discussing pain/injury, patient education, and prevention services (Shojaiefard, Khorgami, & Larijani, 2008). These are all key variables associated--within current literature--with limb amputation prevention in diabetic patients. Furthermore, genetics will be included in the paper, but due to the lack of resources available to the primary researcher, the information will all be compiled from previous studies; such as those centered around aboriginal Australians. The inclusion of cultural factors is of key importance, as understanding the causes from a cultural perspective allows for improved follow up research and exploration. Comment sections will also hopefully give survey participants the opportunity to share additional insight.

Ultimately, the issue of diabetes and limb amputation is a serious concern, as research shows that the loss of a limb severely affects physical activity and eventually increases the likelihood of additional health concerns and conditions (Singh & Prasad, 2016; Paxton, Murray, Stevens-Lapsley, Sherk, & Christiansen, 2016). As leg amputation is not necessarily affected by age, this can also severely impact the quality of one's life from an early age (Dillon, Fortington, Akram, Erbas, & Kohler, 2017). Therefore, using existing literature and research that will be effectively gathered over the course of this project, data displaying the correlation between the selected variables and limb loss in diabetic patients will be presented. This project will provide a platform for causation identification and awareness outreach in the community.

References

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