

Practicum Part 1: Project Proposal

CCM1: A Genetic Risk Linked to New Mexican Spanish Ancestry

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Introduction

There are tens of thousands of people of New Mexican Spanish descent who have a dangerous genetic mutation and don't know it. It has been passed down the generations since a couple of the early Spanish colonists introduced it to the gene pool around 1600. It's called CCM1 "Common Hispanic Mutation," and causes the growth of fragile blood vessels in the brain, which can lead to symptoms like seizures, headaches, and stroke. Many people with the gene will never develop symptoms, but still have a 50/50 chance of passing the gene to their kids. For those who do develop symptoms, the condition is frequently misdiagnosed and underreported. Although there is no cure – yet – correct diagnoses can improve maintenance therapy and potentially save lives.

The University of New Mexico offers a virtual training for healthcare providers in the state to learn about CCM1, and UNM partners with an organization called Alliance to Cure in order to spread awareness among Spanish communities. Unfortunately, spreading awareness is an uphill battle. Barriers have included (1) New Mexico's difficulty in retaining healthcare providers, as newcomers are not familiar with CCM1; (2) rural New Mexicans' lack of access to healthcare; and (3) lack of trust and resistance to genetic testing.

I asked a friend, Sabrina Bent, who is a Physician Assistant in Albuquerque, if she thought I could contribute to the health outreach message or if CCM1 was already well known among NM providers and potentially affected families. She replied, "Wow, since I don't do neurosurgery (other than traumatic) I actually had no idea about that!! So clearly I'd benefit from the lesson" (S. Bent, personal communication, January 16, 2026). She immediately looked up CCM1 and then told me the neurologist who was mentioned in some of the UNM sources no longer works there and is "missed by none of us." I can only guess whether or not a leading neurologist's unpopularity would affect the department's outreach efforts. Sabrina added that she had a patient two weeks ago with "a radiology read suggesting this. Something about masses on the adrenal gland being linked to these cranial findings." While not really a subject matter expert, Sabrina does have authority as a P.A., and she offered to review my lesson for accuracy.

I then asked several friends who fit my target audience (New Mexicans with many generations of Spanish ancestry) if they had heard of CCM1. I've received seven replies so far. Five said no, they had not heard of it. The sixth had only heard about it in nursing school, but was fuzzy on the details. The seventh said that yes, she heard of it – only because her sister-in-law's grandson suffers from CCM1.

These communications are limited in scope but seem to suggest that there is still a knowledge gap worth addressing. Healthcare providers have scattered knowledge about CCM1, but ought to be fully aware of it for the sake of their patients. Ordinary New Mexicans of Spanish ancestry should be aware of CCM1, as their families are at significantly higher risk of cerebral cavernous malformations than the general population. The handful of people in the target audience I asked, however, seemed to be in the dark unless they had a direct connection.

My proposed instructional solution will offer an accessible gateway for New Mexicans to gain awareness of CCM1 and will advise next steps for those whose health may be affected. Next steps include reviewing genealogy for possible genetic inheritance and planning how to communicate concerns to a healthcare provider to request screening.

Identification of the Problem

The problem, as described in the introduction, is that people of New Mexican Spanish descent are at higher risk of developing cerebral cavernous malformations – a dangerous neurological condition – than the general population, due to their possible inheritance of a mutation of the KRIT1 gene called CCM1 “Common Hispanic Mutation” – and many potentially affected people have never heard of it.

My target audience should be able to:

- Explain what CCM1 is and how it could affect their family’s health;
- Locate additional sources if they wish to learn about CCM1 in more detail;
- Access resources for genealogy and genetic testing to determine their family’s risk; and
- Plan what to say to their healthcare providers if they have concerns about CCM1 and want to request screening.

Description of the Proposed Solution

I propose designing a short hook video (1-3 minutes) to introduce New Mexicans to CCM1 in a way that is attention-grabbing and relatable and that sparks their curiosity and concern without sounding alarmist. The video will then offer a link to a self-paced, interactive, web-based microlesson that learners can complete in under ten minutes. The lesson will expand on the points made in the hook video, explaining the situation with CCM1 more comprehensively, and then provide links for additional sources and

outline next steps for learners interested in pursuing their genealogy and potential screening for CCM1.

After completing the microlesson, learners will be able to:

- Explain what CCM1 is and how it could affect their family's health;
- Locate additional sources if they wish to learn about CCM1 in more detail;
- Access resources for genealogy and genetic testing to determine their family's risk; and
- Plan what to say to their healthcare providers if they have concerns about CCM1 and want to request screening.

The hook video will be publicly available on YouTube. For the microlesson, I am considering using *Adobe Captivate*, as it's a robust authoring platform that enables professional-grade interactive content, and the subscription is much more affordable than *Articulate Storyline*, the competing platform. However, I'm concerned that this means I would need to sustain my *Adobe Captivate* subscription for as many years as I want my learning product to remain available to the public. My microlesson would become unavailable if I canceled my subscription at some point – and then I would need to take down the hook video from YouTube or modify the video description to link available resources. I need to experiment more with *Adobe Captivate* before deciding whether its potential value for my future authoring goals will justify a commitment to a long term subscription. If I'm hoping my CCM1 message will circulate around New Mexico, I should plan to keep the microlesson available for at least the next 3-5 years.

Project Timeline

Activity	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7
Analysis						
Talk to stakeholders to confirm knowledge gap.	Jan. 18					
Review available sources of info about CCM1.	Jan. 18					
<i>Submit project proposal.</i>	Jan. 18					
Needs Assessment		Jan. 19				
Design						
Instructional Goal		Jan. 19				
Performance Objectives		Jan. 19				
Assessment of Learning Outcomes		Jan. 20				
Learner Characteristics		Jan. 20				
Learning Context		Jan. 20				

Decide Adobe Captivate vs. free platform		Jan. 21				
Training Module Outline		Jan. 22				
Instructional Resources		Jan. 22				
Training Module Blueprint		Jan. 24				
Formative Evaluation		Jan. 25				
Summary		Jan. 25				
<i>Review and submit Design Plan</i>		Jan. 25				
Development						
Create and publish the interactive microlesson.				Feb. 8		
Discuss hook video narration with Herby.			Feb. 1			
Create and publish the hook video.				Feb. 8		
<i>Submit the Instructional Solution.</i>				Feb. 8		
Evaluation						
Communicate with SMEs (Sabrina, Rhonda, Erin, maybe Glenn) in advance about the evaluation.				Feb. 8		
Communicate in advance with beta testers from target audience.					Feb. 15	
SME Reviews					Feb. 13	
Peer Evaluation					Feb. 13	
Make revisions based on SME and peer feedback and re-publish.					Feb. 15	
One-on-One Evaluation						Feb. 20
Small Group Evaluation						Feb. 20
Make revisions based on feedback and re-publish.						Feb. 22
<i>Submit the Evaluation and Revision.</i>						Feb. 22
Implementation						
Share module on social media.						Feb. 22
Ask known contacts to further disseminate the module.						March
Work towards establishing new contacts to push out the module.						March

Summary

To conclude, people of New Mexican Spanish descent are at an increased risk of health problems from a gene mutation that causes cerebral cavernous malformations, and to date there is insufficient public awareness of the condition. My proposed instructional solution will increase public awareness and help potentially affected people to access further resources and screening, in order to improve health outcomes and informed

decision-making. Next steps include designing and developing a short hook video and an interactive microlesson to address the instructional goal. After eliciting feedback from SMEs, peers, and evaluators representing my target audience, and making revisions based on that feedback, I will attempt to disseminate my instructional product as widely as possible in New Mexico.

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