

# NSU Case Studies

## *Samples*

The following health-focused case studies were conducted at NSU and are available to all undergraduate students.

### Experiential Learning Credit

- Case competitions are eligible for one unit of Experiential Learning credit.
- Meet with your Career Advisor to learn more about this amazing opportunity and steps needed to receive ExEL credit.

### Public Health Case Study

An isolated developing nation in the tropical Western Atlantic was struck by a category five hurricane last month. The island continues to struggle with limited food supply, broken sewage lines, standing water, limited water supply, and significant electrical outages.

You are the medical director of a clinic that is overcome with patient surge in the aftermath of the hurricane. Given the demands of treating patients, you are in need of the following information.

- What public health issues are of greatest concern?
- Select the most pressing two public health issues and develop two interventions that will benefit the most citizens?
- How will you know if the interventions were successful?
- Develop a preparedness campaign to address preventing, mitigating, and responding to future disasters for this developing island.

### Prizes

- First Place: \$600 Visa Gift Card
- Second Place: \$200 Visa Gift Card

## **NSU Chronic Illness Case Competition**

Bethany is a 28-year-old Hispanic American woman of Colombian decent. She lives close to her family in Miami and works as an administrative clerk at the local library in her neighborhood. She is married to her husband of 8 years and has a 5-year-old son and 3-year-old daughter. Her husband has been chronically unemployed for over a year but works odd jobs whenever possible. Her mother and father used to help her with childcare, but have a number of chronic conditions including diabetes, hypertension, and asthma. Her mother had a stroke last year and Bethany now helps to provide care for both her parents.

Bethany has a BMI greater than 40 and is morbidly obese. She was recently diagnosed with Type 2 diabetes mellitus and has been prescribed Metformin, a drug for diabetes, which she is able to fill for free at her local pharmacy. She knows she needs to check her blood glucose regularly but does not have the money to buy test strips and insurance does not cover the expense. Despite having health insurance through her employer, her annual deductible is \$2500.00 and her maximum out of pocket for the year is \$5000.00--- this is a very expensive given the fact that she only makes \$26,000 annually.

Bethany is aware of the issues her obesity is posing to her health and wants to make positive changes for her and her family; her husband is also overweight and her children's pediatrician has cautioned her about their weight. She's been told to exercise but there are no fitness centers in her community that are accessible to her or that she could afford and since she lives in a high crime area, she's concerned about safety. She does not have time or energy to exercise regularly and going to the local park for a walk can be difficult for her.

She is accustomed to traditional Colombian food. Her traditional foods tend to be rich in fat, carbohydrates, sugar, and some of the most popular dishes are not always the healthiest options. She also has limited funds for nutritious meals and there are no grocery stores close to where she lives. The corner store does not have many fresh fruits or vegetables but it is close to home she does most of her grocery shopping there.

The prospect of making significant behavioral changes seems to be daunting for Bethany. She has limited finances, very few opportunities for leisure activities, and very little time on weekends.

**Develop a 6 page proposal focused on how to develop a wellness plan for Bethany (Include your 6 Scholarly articles to support your proposal). Which will include addressing the following areas:**

- What challenges does Bethany face regarding her current medical condition?
- Identify and describe barriers that may affect her health decisions?
- What behaviors need to change?
- What health promotion and nutrition services would help Bethany and her family?
- Develop a plan of action for Bethany and her family.
- Describe the prevalence of Diabetes in the U.S.
- What strategies are currently in place to combat the development of chronic diseases such as diabetes in the U.S.?
- What initiatives can or should be implemented within the community to combat the development of chronic diseases such as diabetes in the U.S.?
- What ideas do you have to decrease the prevalence of such chronic illnesses in South Florida?

## **HEALTH COMMUNICATION TOOLKIT CASE COMPETITION**

### Pre-Health Case Competition Notes for Consideration

- Students will create a Health Communication Tool Kit
  - They will need to select one food borne illness from the list
- Information Session September 10<sup>th</sup>
- Health Communication Tool Kit due and Video Proposal by November 12<sup>th</sup>
- Winner announcement will occur on *Friday, December 11<sup>th</sup>*
- **Potential prize is to have the winning team's information tool kit implemented across campus**

### **Case Competition Description**

The USDA (United States Department of Agriculture) has issued multiple teams to create a Health Communication Tool kit educating the South Florida Community on common food borne illnesses and antibiotic resistance associated with it. The goal of this Toolkit is to provide the public helpful suggestions and resources to guide best practices within the South Florida community before, during and after an outbreak. As a part of your communication toolkit you're expected to also assess and address the challenges in food safety as it relates to the antibiotic resistance of the foodborne illness.

You're one of the USDA's teams (1- 4 members per team) selected for this initiative and have been tasked with selecting a food borne illness which will be the focus of your health communication tool kit. The goal of this health communication toolkit is to educate, prepare, and assess implications associated with this food borne illness and antibiotic resistance within the South Florida community. Your team will submit your Health Communication Toolkit and Video Proposal to be reviewed by the USDA Team (faculty judges).

List of food borne illnesses

Choose one food borne illness listed on the CDC's website.

Develop your Health Communication Toolkit, see full breakdown below:

### **Introduction/Abstract (2 pages in full)**

- Introduce the food borne illness (science behind the illness and how it affects the human body)
- Purpose of this health communication tool kit
- Target Population
- Collaborators
- Overview of strategies/action plan to educate the public on this food borne illness
  - Demonstrate key take-aways from trends and research

### **Components of a Health Communication Tool Kit (3 pages in full)**

- Action plan for preventative measures within the targeted community
- Create Social media/ Marketing Plan (*for one week*)

- Develop Public Awareness Campaigns and Graphics to support your action plan (I.e. poster board, digital graphic, YouTube video)

### **Antibiotic Resistance of Food Borne Illness (1 page in full)**

- Research the topic of “Antibiotic Resistance” as it relates to the food borne illness you have selected:
  - Provide an overview of the research on this topic to see how antibiotics/antibiotic resistance has or has not played a role in your selected food borne illness.
  - Explain how your healthcare toolkit or other strategies can prevent and control the spread of “Antibiotic Resistance” which can also involve:
    - Policy Making
    - Best Practices by Healthcare Professionals
    - Research & Development
    - Agriculture Sector Trends

### **Additional Considerations (1 – 2 pages in full)**

- Current Treatment Plans
- Evaluation of tool kit effectiveness
- Additional Resources and Community Engagement Avenues

### **Develop a video pitching to the judges your Health Communication Toolkit**

- Describe each component of your tool kit
- Explain your process and reasoning behind your choices (I.e. medium, methods, etc)

## RESOURCES

### **Rural Health Information- Health Communication**

<https://www.ruralhealthinfo.org/toolkits/health-promotion/2/strategies/health-communication>

### **Service-Learning Toolkit**

<https://www.learningtogive.org/resources/service-learning-toolkit-related-health>

# Immigration Policy & Election Campaign Case Competition

## **BACKGROUND**

The story of immigration is integral to the history of the United States. While people have been coming to these shores from all parts of the world since the inception of this country, there have been periods in U.S. history, such as the mid-nineteenth century or the early twentieth century, when immigration has inspired heated political debate and controversy. We are currently living through one such era. As we approach November in this presidential election year, immigration is certain to be one of the most contentious issues facing candidates at the state, local, and national level.

Key issues related to the topic of immigration include but are not limited to:

- DACA recipients- Merit Based Immigration
- Border Security
- Immigration and Customs Enforcement
- Asylum and refuge in the U.S.

## **THE TASK**

You are a candidate seeking a seat in the U.S. House of Representatives from a constituency in South Florida. You and your campaign team are charged with developing a bipartisan immigration policy to unite your constituents on this issue. This will be your signature issue and you hope that once in Washington you can lead a push for a major immigration reform bill that will attract support across the aisles.

Once you and your team (of up to 3 individuals) have established your policy, you are then tasked with presenting your campaign position to the audience in your constituency. You will also hope through national media exposure to present it to a wider audience.

Identify common myths or perceptions of voters in South Florida regarding immigration. Place immigration as a South Florida issue into the large national debate. **The goal is to gain the support of voters in your constituency while also appealing more broadly to the American people by creating an effective marketing plan and identifying key stakeholders that will be impacted by your policy.**

*Please ensure that the following questions or prompts are addressed within your proposal:*

- What marketing strategies will you utilize to ensure that the voters choose your bipartisan agenda over your competitors?
- How will your appeal serve to bridge the divide on the issue of immigration in this country while at the same time appealing to the particular demographic of South Florida?

**Develop a 5–10-minute video and an accompanying two-page immigration manifesto (proposal/essay) pitching your policy and campaign marketing idea to our judges.** The top three teams will then have the ability to present this information to a panel of NSU faculty and/or potential government officials.

## Pre-Health Case Competition

### Florida HIV Case Study

HIV and AIDS remain a persistent problem for the United States and countries around the world. While great progress has been made in preventing and treating HIV, there is still much to do.

Florida has become one of the leading hot spots for all HIV diagnoses (children, adolescent, and adults). As Florida's HIV/AIDS caseload keeps growing, more leaders are calling for change. The Center of Disease Control and Prevention (CDC) has decided to spearhead a new task force to combat this issue.

You are an Epidemiologist; the CDC sends you to Florida to select members for this task force and lead the initiative to investigate the increased incidence of HIV in the State and develop solutions. As the head of this CDC task force you must identify members that will add value to this effort; with whom would you collaborate (e.g., epidemiologist, scientist, community-based educator, social work, policy maker, politician, physician)?

### Goal of Taskforce and Case Study

1. Propose an intervention to reduce the incidence (see CDC for data) of HIV cases in Florida over the next 5 years?
  - Consider the following variables:
    - Population disparities
    - Health behavior theories – how will you use them
    - Anti-stigma campaigns
    - Use of social media in preventing HIV/AIDS
    - Comorbidities
    - Sexual risk reduction
    - Injection drug users
    - LGBT Community
2. Provide specifics on how you will assess the impact of your interventions. How will you know if your intervention was successful?
  1. Submit an Proposal/Summary of your planned solutions.
    - a. Abstract must define role of each person in the case (e.g., epidemiologist, scientist, community-based educator, social work, policy maker, politician, physician)
  2. Present your solution for the case competition to a panel of faculty judges
    - a. Students presenting on their own can speak on behalf of all the members listed in their plan for the task force. For teams of 2-4 members, each member of team must be assigned a role listed on the task force and speak from that professional's perspective during the presentation. (e.g., epidemiologist, scientist, community-based educator, social work, policy maker, politician, physician)?

### Prizes

- **First Place: \$500 Visa Gift Card**
- **Second Place: \$200 Visa Gift Card**

## **Medical & Psychological Clinical Case Competition**

In a live event hosted by the U.S. Army, NSU undergraduate students will have the opportunity to perform medical procedures and psychological assessments on patient actors. The US Army will be setting up a Drash (Large Medical Tent) on campus, which will house 4 patient beds for a live mock emergency event on March 25<sup>th</sup>. Leading into the live event, there will be a series of workshops aimed towards teaching students the skills needed to perform medical procedures and psychological assessments on actors.

Students will form teams of 3 – 6 people with at least 1 individual representing each of the following majors: Biology, Public Health, and Psychology. Students will be under the direct supervision of army medics during the live event who will act as their judges during the live competition. The goal is to evaluate how students performed in applying the skills learned through the workshops into a real-life mock scenario. The U.S. Army will be providing the medical supplies, the Drash and all the patient beds.

Students will also be tasked with writing a research paper on the psychology of PTSD and trauma to put their knowledge to the test.

### **Prior to the live event students will be required to attend the following workshops:**

- HABC/ Bleeds Management
- Airway/ Respiration Management
- Triage/ Evacuation Classes
- Psychology Assessment practices

They will also be tasked with writing a research paper on the psychology of PTSD and trauma to put their knowledge to the test.

## **Medical & Psychological Clinical Case Competition Time Line**

### **Student Research and Video Proposal**

**Part 1:** Research PTSD and psychological effects of dramatic events (i.e. school shootings)

**Part 2:** Develop a short presentation addressing the following questions and prompts:

- Based on your research on PTSD and psychological effects of dramatic events, what did you learn and what take-aways do you have on this topic within the community?
- What ideas or solutions did your team develop to combat this issue within the South Florida community?

**Part 3:** Develop a video (no more than 5 minutes) where you and your team (only one member needs to present) will answer the following prompt:

- How would this case competition assist you and your team members in reaching your career goals (remember to be specific as you will be evaluated on the details of your answer)?

## **Pre Health Case Competition**

### **Vaccinations & Measles Outbreak Case Competition**

Childhood vaccination has proven to be one of the most effective public health strategies to control and prevent disease. To reduce childhood morbidity and mortality, the Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP) issues annual recommendations and guidelines for childhood and adolescent immunizations.

A new study shows that numerous states and large metropolitan centers have seen an increase in the number of nonmedical exemptions (NMEs) from childhood vaccinations granted (<https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002578>). In the past decade, the number of philosophical exemptions to vaccination has increased in two-thirds of the states that allow such exemptions. As a result, researchers suggest that these areas are becoming increasingly vulnerable to vaccine-preventable disease outbreaks.

Although school immunization laws in every state grant vaccination exemptions to children for medical reasons, states may also grant NMEs for other reasons. According to the National Conference of State Legislatures, 47 states have provisions that allow parents to exempt their children from receiving a vaccine if it contradicts their religious beliefs, and 18 states permit philosophical exemptions based on moral, personal or other beliefs.

There are a variety of reasons that parents refuse, delay, or are hesitant to vaccinate their child. These reasons vary widely between parents, but they can be encompassed in 4 overarching categories. The 4 categories are religious reasons, personal beliefs or philosophical reasons, safety concerns, and a desire for more information from healthcare providers.

Unvaccinated groups of people can generate local outbreaks of diseases that can later spread across the country, affecting anyone who was unable to get vaccinated for any reason. For example, in 2000, measles was declared to be eliminated in the United States, when no sustained transmission of the virus was seen in this country for more than 12 months. However, since 2010, measles outbreaks (defined as 3 or more cases in a geographic area) have increased. In 2019 there were more than 1000 reported cases of measles across more than 20 states. Most of these cases occurred in unvaccinated people.

Contracting measles can be largely avoided through vaccination with the MMR vaccine. Though considered safe and effective, the MMR vaccine can have side effects. Most people who get the MMR vaccine do not have any serious problems with it. Common side effects of the MMR vaccine include sore arm from the shot, fever, mild rash, temporary pain and stiffness in the joints. The MMR vaccine has been linked with a very small risk of febrile seizures (seizures or jerking caused by fever). Febrile seizures following MMR are rare and are not associated with any long-term effects. Because the risk of febrile seizures increases as infants get older, it is recommended to follow the immunization schedule recommended by the American Academy of Pediatrics.

### **CDC Implementation TASK Force**

The Center of Disease Control and Prevention (CDC) is spearheading a new task force to combat measles outbreaks. You have been selected by the CDC as a member of a three-person task force in Florida, which will focus on how to increase the immunization rate in Florida, **specifically addressing the number of nonmedical exemptions (NMEs) from the**



**MMR vaccine.** The CDC has asked that you address the issue from a Public Health, Psychological and Scientific perspective. Your task force will develop and submit a program proposal, which will be reviewed by the Florida Department of Health for approval of funding. The maximum request for funding would be \$10,000. This proposal will aim to create a new program that will assist in combating the issue within Florida.

### **Implementation Plan Proposal Breakdown**

1. *Background and significance – maximum 500 words*
  - a. Describe the background and significance of measles and measles vaccination
  - b. Describe the overall problem to be addressed in the context of biology, public health and psychology
  - c. This section must include a **clearly defined project goal**
  - d. Include minimum of 2 peer-reviewed articles, plus other credible sources

2. *Define target population – maximum 300 words*
  - a. Describe specific population you are targeting in Florida
  - b. Explain why you selected this target population
3. *Program Summary/Approach – maximum 300 words*
  - a. Describe your program model and approach
    - i. Describe the overall program strategy, methodology, and analyses to be used to accomplish the specific goals of your program. Discuss potential problems, alternative strategies, and benchmarks for success anticipated to complete the program.
    - ii. Address any corresponding policy that will need to be addressed for your program to be effectively implemented
4. *Innovation – maximum 75 words*
  - a. Describe how your approach is different from other approaches/models that have been used to improve vaccination rates
5. *Proposed collaborations and partnerships – maximum 200 words*
  - a. Describe partners and collaborators you will need to engage to meet your desired outcomes
6. *Evaluation methodology – maximum 300 words*
  - a. Describe how you will evaluate if your program works, including the specific indicators you will use to assess program effectiveness (process evaluation) and program outcomes (outcome evaluation).
  - b. Describe how you will collect data and how often you will evaluate the progress of the program
7. *Project timeline*
  - a. Present a program timeline: include critical milestones and mid-term and end of project deliverables
8. *Budget*
  - a. Present a program budget: the purpose of the budget and justification section is to present and justify all expenses required to achieve project aims and objectives. (Ex: personnel, community resources, supplies, marketing, recurrent costs, logistics, state policy programs, awareness campaigns, monitoring costs etc.)