ADVANCED MEDICAL & PUBLIC HEALTH INTERNSHIP ARI Toolkit & Community Workshop Manual



Leadership Initiatives Summer Internship Programs

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Introduction

Overview of Issue

- Acute Respiratory Infections (ARIs) are infections that can affect normal breathing. It can affect either your upper respiratory system or your lower respiratory system. ARI may cause inflammation of the respiratory tract anywhere from the nose to the alveoli.
- ARIs are global diseases. The prevalence is 20-30%.

Social, Economic, and Environmental Factors

In this section:

- Due to corruption, and lack of education on proper health practices and proper sanitation practices. There is also an issue because of fear of Western Medicine, and the mistrust of doctors due to religious beliefs.
- Because of the lack of education, the Bauchi People are just kept in the dark about how to protect themselves, so they are very susceptible to infection over and over again. With them just not knowing about Western Medicine they see it as dangerous and they fear it, when they fear it they don't seek out the help that could help them recover faster or ultimately save their lives.

Public Health Relevance

In this section:

• Public health is crucial for Bauchi and larger communities, preventing diseases, improving health, and fostering economic growth. It addresses disparities, enhances preparedness, and protects the environment, promoting a resilient society. By monitoring mental health and global health, it fosters social cohesion. Investing in public health saves lives and promotes a better quality of life for all.

Purpose of the Toolkit

Our toolbox's primary objective is to educate the people of Bauchi, Nigeria, about ARI prevention, symptoms, diagnosis, and treatment. By imparting this knowledge, we firmly believe that the rate of ARI infections in Bauchi will decrease significantly. Our comprehensive approach, focusing on community involvement, is vital for enhancing community health and safety. A well-informed and proactive community can effectively minimize the risk of ARI transmission. The manual will begin with the topic of "Transmission & Symptoms," where we will elaborate on the various ways ARI is spread and how to identify those who have already contracted it. Moving forward, we will dive into "Diagnosis and Treatment," guiding on accurately identifying ARI and distinguishing it from other illnesses. Moreover, we will offer essential information on how to manage ARI effectively after contraction. The final topic in our workshop will be "Prevention and Community Protection," aiming to equip the Bauchi community with the necessary skills and knowledge to safeguard themselves from ARI effectively.

Transmission & Symptoms







Causes and Transmission

Etiology and Risk Factors

In this section:

- Identify and discuss the primary causes or etiological factors contributing to the development of the issue. Age (mostly <5 years or elderly), ability for your body to defend against invaders, presence of other conditions and disorders affecting the respiratory tract, seasons (winter and fall), poor hygiene practice, bacterial and viral infections. These factors increase the risk of getting AURI & ALRI.
- Address the role of genetic, environmental, behavioral, or lifestyle factors in increasing the risk of the issue. Air pollution, a persons immune system (ability to fight against infections), drugs/smoking, lifestyle choices regarding diet and exercise also affect the immune system. Washing hands regularly also reduces the risk of ARI's.

Modes of Transmission

In this section:

- Describe the various modes of transmission through which the issue spreads.
 - physical contact
 - indirect contact
 - transmission through air
- Discuss the primary routes of transmission, such as person-to-person, vector-borne, airborne, waterborne, or foodborne.
 - -person to person contact through respiratory droplets
 - hand to hand contact ex. shaking hands, giving a high five, fist bump
 - sneezing/coughing without covering nose
 - touching parts of body without washing hands
 - poor immunization status
- Highlight any unique or less common modes of transmission that may be relevant to the issue.
 - travel through dirty unfiltered water
 - being in contact with a dirty/non-hygienic environment or living in it
 - smoking

Environmental and Ecological Factors

In this section:

- Explore the impact of environmental and ecological factors on the transmission of the issue.
 - dirty/ non-hygienic environment can cause quicker transmission of infection
 - use of tobacco can cause infection
- Discuss how factors such as climate, geography, or habitat influence the prevalence and spread of the issue.
 In more rural areas healthcare access is limited which means that a lot of people can't get treat the poor
- people . Poor air quality and limited healthcare resources/access lead to more prevalent ARI infections.
 - Address any environmental reservoirs, vectors, or ecological interactions that play a role in the transmission dynamics.
- Objects or furniture (environment)
- Animal to Human

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Links: Environmental and Ecological factors: https://www.ncbi.nlm.nih.gov/pmc/articles/
https://bio.libretexts.org/Courses/Prince_Georges_Community_College/PGCC_Microbiology/
Modes of transmission: https://www.nature.com/articles/s41579-021-00535-6
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Common Symptoms

Common Symptoms

- Sore Throat
- Cough
- Fever
- Difficulty breathing

Variations in Symptoms

Bacterial (very common in Nigeria due to warmer weather):

- Cough (May be productive and will be a yellow or greenish color)
- Symptoms may last longer (10-14 days)
- Fever is usually higher than 100.4 deg.
- Temperature tends to have the staircase effect (continues to get worse instead of better)
- White pus-filled spots may occur on the tonsils

Viral (not common in Nigeria):

- Runny nose
- Cough (If productive will be a clear or white color)
- Low-grade fever
- Sore throat
- Difficulty sleeping
- Difficulty breathing
- Body aches

Severity and Progression of Symptoms

Bacterial infection progression:

• Fever will become progressively worse. (A stairwell effect)

Viral infection progression:

• Shorter lasting symptoms







High-Risk Areas

Socioeconomic and Demographic Factors

In this section:

- Areas that are more susceptible to infection are rural areas that are very crowded, and have limited access to healthcare and little education on proper health practices.
- Rural areas do not have proper resources or education to have advanced healthcare. Due to poverty, social inequalities, and lack of education, people do not know proper hygiene and sanitation practices affect them and their health.
- Cultural practices affect people's point of view In a lot of cultures Western Medicine is a scary thing, there is not much known about it so people are hesitant to put their trust into the unknown.

Vulnerable Populations

In this section:

• Children that are school age and pregnant women are the most vulnerable to ARI's.





Impact on Health and Society

Impact on Individual Health

Discuss the direct effects of the issue on individual health, including symptoms, complications, and morbidity rates.

- ARIs are an infection that affects the upper and lower respiratory system
 - It affects breathing and gas exchange which is when oxygen moves from the lungs to the bloodstream
- A study showed that ARIs caused emotional and physical decline while also slowing the intellectual development of young Children
 - ARIs are most dangerous in the initial years of a child's life
- It was estimated that there were approximately 33.7 million cases of LRTI in African children that were infected

Impact on Public Health

Discuss the burden on healthcare systems, including the strain on resources, facilities, and healthcare professionals.

- The reason that ARIs put such a burden on healthcare systems is the fact that the disease is so common
 - Young children and the elderly are most affected by this which forces healthcare facilities to dedicate more resources to them
- While fighting ARIs, they had to fight against a new disease COVID-19 which doubled the stress on the country's already limited resources

Address the implications for public health infrastructure, such as surveillance, prevention strategies, and healthcare policy.

- Africa has implemented new policies and systems to detect ARIs before a massive outbreak appears
 - They use disease reporting, lab testing, and data sharing to prevent the disease before an outbreak can occur
- Nigeria is focused on having accessible and affordable healthcare for its people
 - There are critical parts of the policy including the NHIS which specifically works on providing affordable and quality healthcare to everyone

Socioeconomic Impact

Evaluate the socioeconomic impact of the issue, including economic costs, productivity losses, and workforce implications.

- Due to a high volume of ARI cases, many adults are unable to go to work for fear of spreading the disease
 - Hospitals are severely affected since there is a lack of doctors and nurses
 - The economy will also sometimes take decline since there are many adults unable to work

Examine the social consequences, such as population decline, social inequality, and community disruption.

• Social consequences caused by ARIs can include disruption of education, community support and could cause psychological problems among patients and family members around them

Diagnosis & Treatment



Diagnostic Methods

Clinical Presentation and Symptoms

- ARI symptoms can be a high fever, sore throat, wet cough with sputum release, and difficulty breathing depending on how severe the patient's case is.
- Clinical manifestations can help the doctor diagnose the ARI this can help the doctors determine which test to run which will lead the doctor to finish the diagnosis of which ARI the patient has.

Laboratory-based Diagnostic Methods

- The most commonly used laboratory-based diagnostic method for bacterial or viral ARIs is a throat swab to collect a sputum specimen. Once tested in the lab, the presence of bacterial culture can confirm the diagnosis of a bacterial ARI.
- To further determine an upper or lower ARI, a chest x-ray can be done. An abnormal result in the X-ray is an indication of a lower ARI, while a normal X-ray is an indication of an upper ARI.
- After a throat culture is collected, chemicals are added to the sample to see if bacteria will grow, which will take around 2 days to develop.
- Throat swab cultures are effective tools for identifying bacterial ARIs and chest X-rays are very accurate in identifying lower ARIs.

Point-of-Care and Rapid Diagnostic Tests

- Blood cultures, Throat swabs, Viral antibody tests, Chest X-rays, pulse oximetry
- Blood Cultures are laboratory tests that identify and search for germs and bacteria that are in a person's blood sample. Taking blood culture tests is beneficial because they can determine if you have an infection within your bloodstream which can affect your whole body.
- Throat swabs are cost-effective, and can easily identify germs and infections, They can also determine if a case of ARI is bacterial or viral after seeing growth from a throat culture.
- Chest X-rays are very beneficial for determining whether an ARI infection is upper or lower.
- Pulse oximetry tests measure the amount of oxygen in a person's blood. This is very helpful because it helps show how the lungs are functioning.
- Blood culture tests have limitations because they take 1-3 days to come back with results.
- Throat swabs can cause difficulties with young patients and are sometimes less accurate than other forms of diagnosis.
- Chest X-ray equipment can be very expensive and sometimes the results can come back distorted. They often cannot detect certain problems in the chest.
- Pulse oximetry tests can be misleading and have not been proven to be accurate by the FDA.

Challenges and Limitations

- The challenge that throat swabs present is the fact that the upper respiratory tract is contaminated with bacteria which can affect the sensitivity of the test. Chest X-rays also only inform whether the infection is in the upper or lower tract.
- Throat swab tests and Chest X-rays are limited because of a lack of resources. X-ray machines and microscopes are expensive, and would not be found in primary healthcare centers. Which can inconvenience local community members.
- If factors such as corruption, lack of resources, and inadequate funding improve, the machines and tests used to detect ARIs can become more accessible.









(b) Bacterial Pneumor





(c) Viral Pneumonia

(d) COVID-19 Pneumonia

Importance of Accurate Diagnosis



Understanding Accurate Diagnosis

An accurate diagnosis is an extremely important part when curing diseases and infections. While at a healthcare facility, it is important that the proper tools are used while being diagnosed. It is also important that you have a healthcare provider who has knowledge about ARIs and can accurately diagnose them. The tools and reasoning that the healthcare professional(s) use are extremely important since they help confirm an accurate diagnosis.

Patient-Centered Care

• An accurate diagnosis is an extreme part of the right care. An accurate diagnosis helps ensure that you are getting the right treatment. For example, if you get diagnosed with the wrong disease (or diseases), you would receive the wrong treatment. Receiving the wrong treatment won't help you get better from your specific disease.

ISSUE MANUAL

Seeking Healthcare



In this section:

- ARIs come in two different varieties. There are two types of respiratory infections: acute upper (AURI) and acute lower (ALRI). The symptoms of a lower respiratory infection will be more severe, therefore it is preferable to go to a hospital that is prepared to handle them. These symptoms may include breathing problems, an increase in heart rate, or even some degree of stridor. A main or secondary clinic can likely treat your condition if your symptoms include a cough, sore throat, runny nose, or a low-grade fever.
- Persistent temperature and/or breathing problems may be the ARI's main complaint or the impetus for seeking medical attention.
- If you have a high, ongoing fever or are suffering from breathing problems, you should go to the hospital.
- Many people are terrified of their potential test results, but also of their cultural values, financial situation, or accessibility.

Disease Treatment

- **Hydration:** Patients need to keep their bodies hydrated with proper fluids such as water to make sure the patient's body can recover from the disease.
- **Parenteral Fluids (IV):** If the patient is highly dehydrated with an Acute Respiratory Tract Infection they might require to be hydrated through Intravenous Therapy.
- **Antibiotics:** If the agent is bacteria, doctors can prescribe the patient antibiotics to help fight the disease bacteria. The antibiotic either kills the bacteria or limits its growth or spread in the human body.
- **Antipyretics:** This doctor should prescribe the patient with antipyretics if one of the patient's symptoms is a fever.
- Some cultural beliefs prevent people from taking antibiotics or antipyretic medications. This can be very harmful for patients who need these antibiotics to fight more severe versions of ARI.
- Medications such as antibiotics, parenteral fluids, antiviral medication, and antipyretics can be expensive. Patients might not be able to afford these necessary treatments and this could exacerbate their ARI.
- ARIs are highly contagious because they can be spread through human contact such as coughing or sneezing. Without participating in the proper treatment plan patients are susceptible to carrying these germs and spreading the virus even if they feel better individually.



Prevention & Community Protection



Personal Prevention Strategies

Through the use of personal prevention strategies, the inhabitants of Bauchi state are able to be equipped with the skills required to support themselves when they are faced with the challenges and detrimental effects of Acute Respiratory Infection.

As personal prevention strategies consist of measures aiming to inhibit the occurrence of any disease, they simultaneously protect the community and specifically create a healthy population in Bauchi who are protected from the impacts of the infection.

Examples of personal prevention methods against 'Acute Respiratory Infections' (ARI's) include:

1. Frequently washing hands with soap and air drying hands after, ensuring that the water is clean. This prevention strategy is very effective because it only requires two basic, yet fundamental features. Furthermore, individuals in Bauchi only have to air dry their hands, which means that no extra costs are involved in buying towels. This is effective because germs can easily be transferred between frequently used towels and freshly washed hands, further preventing the spread of the disease.

2.Promoting the ventilation of buildings, such as homes, shops, etc. Through ensuring proper ventilation, the concentration of airborne pathogens and bacteria is reduced, which reduces the likelihood of surface contamination as bacterial particles are removed from the enclosed space before they land on a surface that someone may touch and then touch their mouth: transmitting the virus. This is an effective preventative strategy because it is simple to implement and can be enacted by anyone.

The people of Bauchi State Nigeria have the power to learn how to prevent an illness or more specifically, an Acute Respiratory Infection. As individuals. citizens can protect themselves by changing their habits to stop the spread of infections. Change does not mean doing something once, the idea of change it to change your habits to keep yourself, family, and community safe from an Acute Respiratory Infection. Though learning about changes in ones behavior relating to diet and environmental management, the citizens of Bauchi State will have the knowledge and resources to stop the spread of infection and protect themselves from an Acute Respiratory Infection.

Examples of behavior changes relating to diet and environmental management to stop the spread of acute Respiratory Infections:

- 1. Hand washing one of the most effective ways to stop the spread of an disease, the CDC reports, by washing hands with soap every 1 out of 5 children can protect themselves from getting an Acute Respiratory infection. Washing your hands in general can be effective but changing an individual behavior to when they wash their hands it key. The people should change their habits to wash their hands: after going to the bathroom, before and after eating, when they return to the house, before preparing food. The steps to washing hands include clean water and a soap with antibacterial properties. Wet your hands with water and then lather them with soap and rub them for twenty seconds and rise them with clean water.
- 2. The second change that the citizens can make is covering their mouths and noise when they sneeze or cough. This will keep the germs is a confined area to stop the spread of disease. To do this, one should place the inside of their elbow up to their face and cough or sneeze. The inside of shirts and tissues are also very affective.



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Environmental Interventions





How can increasing infrastructure help with stopping the spread of "Acute respiratory infection" ?

Environmental Interventions

In this section: In this section you will learn easy practices.

- There are many easy practices that you can do daily some more common than other to keep yourself and your loved ones safe and today you will be seeing all the ways to stay clean.
- Wash hands before touching others, making or eating food, touching surfaces then touching your face or mouth.

Things to avoid contact with:

- Saliva
- Mucas
- Tears
- Avoid touchings others faces eyes or lips

Things that can put you at higher risk of getting Acute Respiratory Infections just incase you want to put your life and your family lives at risk to get them back from something they've done.

- Tobacco smoking
- Air pollution
- Allergens
- Cooking Solid foods

Those who live in Nigeria don't have the best infrastructure and when you don't have healthy and safe surroundings it can cause health issues, different bacterium's entering your bloodstream.

One major problem in bauchi is corruption. With this, the money that is intended to be used for healthcare may be mismanaged and allocated somewhere else. Implementing relevant governmental regulations will help this issue and result in more money being put in healthcare. This will result in better infrastructure and resources which will improve the treatment and facilities. Another problem with the lack of governmental regulations is that they will have a more difficult time with addressing public health issues in an effective way. For example, if there is a disease outbreak the government may struggle to contain and manage it in a good way which could lead to more outbreaks and potential epidemics. With a stronger government, it will be easier and more efficient when trying to combat a healthcare issue. Many parts of the healthcare system would improve with a stronger government with more government regulations and policies.

ISSUE MANUAL

Community-Based Interventions

Promoting Awareness

In this section:

- By providing intentional education and information more people will become aware of the risks and serious health complications of Acute Respiratory Diseases. Furthermore, informing the community of the simple daily safety measures that they can partake in can potentially make a large impact on their society
- Regarding prevention, media campaigns and public service announcements hold great value in ensuring the community is knowledgeable about this disease. Engaging posters, as well as religious leaders coming to speak, are some effective ways to influence citizens to take their health more seriously.
- Community engagement and social mobilization teach communities how to protect themselves from illness while simultaneously educating them on typical symptoms and "do's and don'ts." Engaging in events such as community workshops can help promote information and awareness, thereby minimizing the general spread of the disease.
- Our team's workshop will seek to reduce infection rates and teach others how to avoid contracting ARI. To accomplish this, we're going to inform our community on prevention strategies in addition to how to identify those who are already sick. This strategy to tackle disease spread difficulties is crucial for diminishing societal ignorance.



Community Workshop



Workshop Schedule

	Topic/Activity	Duration	Notes	
Transmission & Symptoms	Playing Transmission Tag	15 Min		
	Playing Symptom Charades	15 Min		
	Topic/Activity	Duration	Notes	
Diagnosis & Treatment	Making pot of herbal tea to share	30-45 min		
	Distributing recipe books to healthcare workers and healers	5 min		
	Passing out coloring books to children while explainig the story	15 min		

Prevention & Community Protections	Topic/Activity	Duration	Notes
	A.R.I's Are Over - Song & Trivia	20 mins	
	Hand-making Soaps	40 mins	
	Vaccination Pamphlet	20 mins	

Session 1: Issue Transmission & Symptoms

Session Description:	[Three-sentence description of the session goes here.]	
Target Audience:	Young school children in Bauchi, Nigeria	
Learning Objectives:	 Identify the common symptoms and transmissions of common ARIs Recognize the importance of knowing when to seek help when symptoms occur 	
Time: Materials:	 [Estimated total time of session 1, in minutes] [Materials list] Chalk Flashcards • 	
Facilitator Preparation:	• [Here state what the facilitator should be knowledgeable about.]	
Activities:	Activity 1: [Transmission Tag] (Estimated time) Activity 2: [Symptoms Charades] (Estimated time)	

NOTE TO FACILITATOR:

It is important to be sensitive and non-judgmental during this session. It is important for the participants who have left work or home to feel motivated and supported by the other participants and the facilitator. If the participants feel supported, they may feel more encouraged to share this information or apply it in their own lives in ways they haven't previously.

Exercise 1.1: [Transmission Tag]

Time: 15mins

Materials: Chalk

The "infected person" has a piece of chalk that they use to tag (infect) other people with. When the other person is tagged that person goes back to a "home base" to grab their own piece of chalk from the basket and then go to tag (infect) other people, the game ends when everyone is "infected".



Exercise 1.2: [Charades]

Time: 15min

Materials: Symptom Cards

Have flashcards with a picture on one side and an explanation of common symptoms on the other. Use flashcards to teach students about the symptoms of ARIs. Have a student pick a card and act it out in front of the rest of the class.



Session 2: Issue Diagnosis & Treatment

Session Description:	In this session, we prepared a homemade herbal tea treatment recipe book, along with seeds for the herbs used in the recipe to distribute to the community, while educating people through a facilitator demonstration of the tea making process. We also prepared an engaging coloring/story book for school children to use to learn about the process of getting diagnosed with an ARI.
Target Audience:	Our target audiences are school children, parents, community healthcare workers, and natural healers. We chose healthcare workers and natural healers because they will be seeing patients with ARIs and they are more likely to be listened to when it comes to treatment options. Children are the next generation so informing them about how to detect and treat diseases is imperative for stopping the spread in the future. Parents should also know how to properly treat their child if they are diagnosed with an ARI, so teaching them about at-home remedies is helpful.
Learning Objectives:	 To teach children the basics about what to do and who to go to when they get an ARI Teach parents ways they can help treat their child from home Help doctors and healers give their patients treatment that they are open to taking
Time:	[1 hour 5 minutes]
Materials:	 lemongrass, and hibiscus (seeds) 20-quart pot crayons recipe books coloring books
Facilitator Preparation:	The facilitator should be knowledgeable about what goes in the herbal tea and the benefits based on our recipe book. They should also know how to practice proper drink-making, like boiling the water
Activities:	Activity 1: Homemade Herbal Tea & Recipe Book/Seed Distribution (30- 45 minutes) Activity 2: Diagnose Coloring Book for kids (15 minutes)

NOTE TO FACILITATOR:

It is important to be sensitive and non-judgmental during this session. It is important for the participants who have left work or home to feel motivated and supported by the other participants and the facilitator. If the participants feel supported, they may feel more encouraged to share this information or apply it in their own lives in ways they haven't previously.

Exercise 2.1: [Homemade Herbal Tea & Recipe Book/Seed Distribution]

Time: 30-45 minutes

Materials:20-quart pot, water, lemongrass, and hibiscus (seed packets
to pass out and actual herbs to use for the demonstration)

In this activity, the facilitator should be a respected individual in the community that people trust to give them advice on their health. This can also be an elder, as this treatment is made from natural ingredients. The goal of this activity is to educate parents on how to provide treatment after doctors diagnose their kids with a viral ARI. On top of this, passing out tea recipe books to healers and healthcare workers will help them provide treatment options to their patients that are sustainable.

Steps:

- The facilitator should invite parents, healthcare workers, and natural healers to a session and ask them to bring a bit of crushed lemongrass leaves and ginger with them
- The facilitator should set up a large pot of water with a stove in the middle of the session with the audience watching in a circle
- The facilitator should start making the tea with the recipe book in their hand so the audience knows where the information is coming from and become familiarized with seeing the book
- The facilitator should start with boiling the water and adding in the ingredients
- As they are adding in the ingredients, they should explain the benefits of each ingredient in treating an ARI (these benefits can be read off of the first page of the recipe book)
- The facilitator should remind the audience that this tea is good for treating ARIs and that the parents should make this after their children are diagnosed at the doctors office
- After the tea is made, the facilitator should allow the audience to taste the tea, so they know what it should taste like
- The facilitator should pass out herbal seeds to the parents that they can use to make the tea and tell them to share some seeds with their neighbors so the concept of herbal tea spreads
- For the healers and healthcare workers, the facilitator should give them recipe books and tell them to give them to their patients after diagnosing them with a viral ARI (and tell the healers to make this treatment for their patients)

Exercise 2.2: [Diagnosis Coloring Book]

Time: 15-20 minutes

Materials: coloring books, crayons

In this activity, all the children participating in the workshop will listen to the story/comic in the coloring book read by the facilitator, while actively coloring one of the pages in the coloring book they have been given. By the end of the workshop, we hope the children understand what to do when they suspect they are sick with ARI and know what to expect when they go to the doctor.

Steps:

- Find an elementary/middle school that will allow you to talk to the students and conduct this activity.
- Give out one page to each student until all the students have a page to color from the book.
 - Hand out crayons to each student.
 - Read the full story aloud while the students color their pages.
- Once finished ask questions like, what did Amadi do when he thought he was sick? what tools did the doctor use? and have the kids answer back to ensure the understand what to do.
 - Hand out the full coloring book to each child so they have a copy to take with them.

Session 3: Prevention & Community Protection

Session Description:	In this session, we generated a fun and engaging method of learning about preventing A.R.I's through a catchy song aimed at younger children. Additionally, we constructed a way for adults to be involved in the prevention process through soap-making. Finally, we produced a take-home vaccination pamphlet for participants to continue to refer to.
Target Audience:	Our target audience is both children under 10 and their parents (adults over 30) We chose this audience because young children can easily spread illnesses and are vulnerable them, such as ARI's. Additionally, we targeted adults as they have the knowledge capacity to understand the importance of vaccinations.
Learning Objectives:	To understand the improtance and relevance of taking vaccinations.To implement hygiene practices through engaging activities.
Time:	80 minutes for all activities total
Materials:	 Ingredients to make soap (workshop handout link 1) (Detailed on page 32) Enough copies of the soap ingredient list and recipe for the adults to utilise. Enough copies of the lyrics of the song for the children to take home. Enough copies of the vaccination pamphlet for erveryone to take home.
Facilitator Preparation:	The facilitator, if possible should be a religious leader who the particpants trust in and would listen to. The faciliator should be knowledgeable about the benefits of vaccinations and be familiar with soap making.
Activities:	Activity 1: [A.R.I's Are Over] (20-30 mins)

Activity 2: [Hand Hygiene - Soap Making] (30 mins) Activity 3: [Vaccination Pamphlet] (20 mins)

NOTE TO FACILITATOR:

It is important to be sensitive and non-judgmental during this session. It is important for the participants who have left work or home to feel motivated and supported by the other participants and the facilitator. If the participants feel supported, they may feel more encouraged to share this information or apply it in their own lives in ways they haven't previously.

Exercise 3.1: [A.R.I's Are Over - Song]

Time: 20 minutes

Materials: 20 copies of the lyrics to the song in order for all participants to have their own.

First the facilitator should thank all the participants for coming and allow the group to settle down, then begin by introducing them-self and explaining why they chose to participate as a facilitator for this workshop.

Finally, the facilitator should divide the group so that the children stay for this particular activity whereas the adults move into a separate place for their own activity **(Exercise 3.2)**

- 1. Sit the children down in a circle with the facilitator
- 2. Pass around and hand out the lyric sheets for each child in the circle
- 3. The facilitator shold then sing the song to the children for them to understand
- 4. The facilitator should have the children repeat the lyrics with him.
- 5. Then the facilitator should incorporate actions alongside the lyrics (as depicted in the song lyric pamphlet)
- 6. Both the facilitator and the children should repeat the song lyrics in a tune alongside the use of actions until the children learn the song.
- 7. Finally the facilitator should ask each child in the circle to sing the song and mime the actions until every child has.

Exercise 3.2: [Hand Hygiene - Soap Making]

Time: 30 minutes

Materials:

Any Large Bowl, Water, Strainer, Wooden Spoon, Palm leaves, Coconut or Palm oil, Any Size Pan, Wood ashes, Mint leaves

First the facilitator should thank all the participants for coming and allow the adults to settle down, then begin by explaining what the partcipants will be doing.

- 1. Collect wood ashes from hardwood fires (avoid softwood).
- 2. Place the ashes in a large container.
- 3. Add water to the ashes while stirring.
- 4. Let the mixture sit for several hours or overnight.
- 5. Strain the liquid through a strainer or cheesecloth.
- 6. Work in a well-ventilated preferably outdoor area for precaution.
- 7. Evaporate the lye solution slowly to form crystals.
- 8. Handle the lye crystals with extreme caution.
- 9. Store the lye crystals in a safe, dry place away from children and pets.
- 10. Once Lye is created, pour the crystals into a bowl of water while stirring with a wooden spoon
- 11. Once completely dissolved leave to cool.

12. Add either palm or coconut oil to the bowl while continuing to stir until the substance is a thick consistency

Optional: add mint leaves for a natural light scent or any desirable oil

- 13. Pour the solution into any size pan in order to create the mold
- 14. Lastly, let the solution sit until fully hardened, and then enjoy your fresh homemade creation!

Exercise 3.3: [Vaccination Pamphlet]

Time: 20-30 minutes

Materials: Pamphlet and questions

Preparation:

- Find a local religious leader in the community that supports vaccines and can help answer the citizens question and concerns.
- The active facilitator needs to have knowledge about vaccines in Nigeria besides the information we are providing.

First the facilitator should thank all the participants for coming and allow them to settle down. The facilitator should then highlight that any questions or comments can be made during this transition period to the final exercise. Finally, the facilitator should explain what the participants will be doing.

- 1. Gather all the participants to sit as the facilitator welcomes them and explains what they will be doing
- 2. The facilitator should pass each participant a copy of the 'Vaccination Pamphlet.'
- 3. The facilitator should them begin to read through the pamphlet, discussing the contents and giving the participants opportunities to ask questions and have their concerns clarified.
- 4. After the group has discussed the pamphlets information, the facilitator should allow any more questions or comments to be made during this time.
- 5. Finally, after all questions have been asked, the facilitator should then thank everyone for being actively engaged and willing to participate before allowing the adults to re-group with the children

Itemized Budget

	Material Name	Quantit y Total Cos	
Transmission	Chalk	288 \$25	
& Symptoms	Ziploc Bags	300 \$10	
	Scissors	12	\$18
	Material Name	Quantity	Total Cost
	Crayons	100	\$15
	Recipe Book	50	\$250
Diagnosis &	Coloring Book	50	\$100
Treatment	20 quart pot	1	\$30
	Lemongrass seeds	2000	\$10
	Hibuscus seeds	1 lb	\$17
	Ziploc Bags	400	\$7.50
	Material Name	Quantity	Total Cost
Prevention &	Medium-large sized bowls	10	\$50
Community Protections	Strainer	10	\$60
	Medium-large sized pans	10	\$190
	Paper	40	\$9
	Ball	1	\$5
	Marker	10	\$1

Workshop Handout Links

	Title		Link Qua		
Transmission &	Charades	https://www.canva.com/design/DA Fp4F0NMm8/yuonrDeB8Ssa2 S7aWHynBQ/edit		50	
Symptoms					
	Title		Link	Quantity	
Diagnosis & Treatment	Homemade Herbal Tea Recipe Book	A <u>https://www.canva.com/design/DAFpyae88</u> <u>/pT3NvOqAEav94z8KT4Glkg/edit?</u> utm_content=DAFpyae8NAY&utm_campa =designshare&utm_medium=link2&utm_se <u>ce=sharebutton</u>		uay ign 50 our	
	Diagnosis Coloring Book	https://www.canva.com/design/DAFpyRdw/ Gv-P3gXmmaO4Fh9G4FManw/edit2 utm_content=DAFpyRdwZig&utm_campaig designshare&utm_medium=link2&utm_son e=sharebutton		zig/ gn= 50 urc	
	Title		Link	Quantity	
Prevention & Community Protections	A.R.I's Are Over - Song	https://www.canva.com/design/DAFpy7UPozs/p eCEa876wEEKrPywedk5Pw/edit? utm_content=DAFpy7UPozs&utm_campaign=de signshare&utm_medium=link2&utm_source=sh arebutton		25	
	Hand Hygiene - Soap Making	https://www.canva.com/design/DAFpzBlnzVU/61 dRIVcJJQcKi5jl5-pmTw/edit? utm_content=DAFpzBlnzVU&utm_campaign=de signshare&utm_medium=link2&utm_source=sh arebutton		25	
	Vaccination Pamphlet	https://www.canva.com/design/DAFpyeTV5_c/y7vB_gFF Ob3r3eNRFw-PMw/edit? utm_content=DAFpyeTV5_c&utm_campaign=designshar e&utm_medium=link2&utm_source=sharebutton		25	
	Hand Washing Poster	https://www.canva.com/design/DAFp0I7L_fQ/yMbfMQ8R vA_rNizyi6Dong/edit? utm_content=DAFp0I7L_fQ&utm_campaign=designshar e&utm_medium=link2&utm_source=sharebutton		25	
	Ball Game Answers	http utm esiį	bs://www.canva.com/design/DAFp4SvpvDU/K ja-e7qZoQb-pHI_3oXggQ/edit? n_content=DAFp4SvpvDU&utm_campaign=d gnshare&utm_medium=link2&utm_source=s harebutton	1	

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Transmission & Symptoms Team

Our team talks about how ARI is transmitted and the importance of knowing all of the symptoms. We will use this information to help the citizens of the Bauchi State especially young children and the elderly. Knowing how this disease is transmitted will stop the spread of the disease before it starts. Controlling the steps that lead up to the outbreak is the perfect solution to prevent it while recognizing the symptoms will stop the disease from infecting more people. Having the knowledge provides the opportunity to protect the community.

Team Members



Starrkeisha Matthews Chicago Bulls College Prep Class of 2025



Brooke Farfone Charleston Collegiate Class of 2025



Lorraine Kissinger Lincoln High School Class of 2025



Michael Lin Bullis School Class of 2025



Ryan Malekzadeh Bullis School Class of 2025



Aditya Tyagi Chaparral High School Class of 2026



Rachel Lumor Georgetown Visitation Preparatory School Class of 2024

Diagnosis & Treatment Team

Our role as the Diagnosis & Treatment Team is to educate the people of Bauchi state on the diagnosing process and treatment options of ARIs. By informing the people of the diagnosing process through our interactive activities, we hope to achieve the goal of having more of the Bauchi people going to the hospital, as they are well educated on how they will be diagnosed with ARIs and are comfortable with the entire process. By providing possible treatments of this disease, especially ones that are able to be made at home, we hope to have more people treating themselves, which in turn will prevent the illness from becoming more severe. Overall, we are aiming to properly inform the people of Bauchi so that they can be better protected against acute respiratory illnesses, so that the entire community can live healthier, safer lives.

Team Members



Krisha Patel Lemont High School Class of 2025



Alexandria Langston Mckenzie High School Class of 2025



Talia Brodsky St. Andrew's Episcopal School Class of 2025



Mackenzie Stokes-Lopez Valparaiso High School Class of 2026



Amaya Spalviero Charleston Collegiate Class of 2025



Tatum Lynn Bullis School Class of 2025



Full Name High School Class of 20XX

Prevention & Community Protection Team

Our role as the Prevention and Community Protection Team is to create sustainable activities and initiatives which are longterm and continue to empower the Bauchi state community to take control of their own health and well being, improve their lifestyles and promote the importance of protecting themselves against Acute Respiratory Infections.

Our duty is to re-iterate the importance of community effort in reducing the impacts of Acute Respiratory Infections. Through creating activities which require community involvement, our role as educators is fulfilled because it is more likely that our goal of protecting Bauchi from the impacts of ARI's and preventing the spread and transmission of the infection in the first place, can be achieved with a large number of people involved in maintaining our hygiene and social distancing initiatives.

Team Members



Emma Marish New London High School Class of 2026



Zoe Brooks The Bullis School Class of 2025



Ramona Igbeta Bishop's Hatfield Girls' School Class of 2025



Jenna Bseiso Westlake Highschool Class of 2025



Khalil Shariff High School Class of 20XX



AJ O'Gilvie Dematha Catholic High School Class of 2025

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