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Patient Education: Airway Viral Infections in Danbury CT

Aniruddha Bhattacharyya

University of Vermont

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Patient Education: Airway Viral Infections

By: Aniruddha Bhattacharyya, MS 3 UVM College of Medicine
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Mentors: Dr. Robert Mascia MD MBA, Ms. Betsy Clark RN BSN CHC
Danbury CT
Problem Identification

- Viruses are the most common cause of respiratory tract infections, and these are the most common illnesses affecting patients [1,2]
- Patients believe antibiotics are the best way to treat respiratory infections [3]
- Antibiotics are often requested by the patient, and receiving them gives the patient peace of mind [3,4]
- Most antibiotics are prescribed at the primary care level to treat respiratory infections [3, 4, 7]
- Physicians have attempted to explain to patients that viruses don’t respond to antibiotics, but patients often do not understand their physicians’ explanation [4]
- Lack of Patient awareness increases antibiotic resistance [7]
Inappropriate prescription of antibiotics promotes the growth of antibiotic resistant bacteria [4-6]

More costly drugs are required to treat patients when 1\textsuperscript{st} and 2\textsuperscript{nd} line antibiotics fail [4,5]

Antibiotic resistant bacteria are responsible for approximately 50 000 deaths per annum in America [5, 6]

Total economic burden of antibiotic resistant bacteria estimated to be $20 billion annually with cost projected to increase proportionally to level of resistance [6]
Community perspective

- “Patients can educate [themselves] about over use of antibiotics – they are not normally prescribed to treat viral infections”

- “[Creating a Pamphlet] is an important endeavor to educate the public relating to airway viral infections”
  - Betsy Clarke RN, BSN, CHC; Clinical Science Consultant for Boehringer-Ingelheim Pharmaceuticals Inc.

- “Providers would welcome patient education materials to help reinforce their message when they speak about [viral illnesses] treatments at office visits

- “Pamphlets can highlight the message and potentially be shared with family and friends”
  - Dr. Robert Mascia M.D. MBA; Medical Director of Brookfield Family Medicine
Intervention Method: Pamphlet Cover

- From Right to Left:
  - Cover
  - End page
  - 2nd page

- Cover explains symptoms at a glance
- Back page serves as advertising for health care provider and encourages patients to see a doctor
- Second Page explains ineffectiveness of antibiotics for viral infections, and recommends actions for symptomatic relief. Picture illustrate preventative and symptom relieving actions.
Intervention Method: Pamphlet Content

- From Left to Right:
  - 3rd page (back of cover)
  - 4th page (back of end page)
  - 5th page (back of 2nd page)

- 3rd page informs patient of how viruses differ from bacteria, and symptoms of viral illnesses. Picture shows size discrepancy between viruses and bacteria.

- 4th page informs patients when to see their healthcare provider. Pictures give patient a reference guide for throat changes in bacterial vs viral infections.

- 5th page explains potential asthma exacerbation caused by viruses, and goes in depth at preventing infections. Picture shows proper coughing/sneezing technique.

Virus Facts

Viruses are at least 10X smaller than bacteria (in above picture Blue = virus, Orange = bacteria)

Viruses are transmitted from person to person by coughing, sneezing, or touching contaminated surfaces.

Viruses can stay alive on human skin for up to 2 hours.

You may not feel symptoms for 2-3 days.

You can infect others during this "silent period."

Symptoms of Viral Illness

Symptoms are caused by your immune system’s response to the virus rather than the virus itself.

Viral symptoms could last for 7-10 days.

Common Symptoms:
- Runny nose with green, yellow, white, or clear mucus
- Nasal Congestion
- Sore throat
- Poor nasal drip
- Cough

Bacterial infection

When to Seek Medical Care

Sore throat, with fever + tender swollen lymph nodes but no cough, or if viral symptoms last more than 10 days.

White or green spots on tonsils (see picture below)

Use antibiotics only if prescribed by your health care provider.

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Viral infection

Asthma Exacerbation

Viral infections in the lower respiratory tract can cause wheezing and worsen asthma.

This is called an exacerbation.

Asthma is triggered by an immune response.

Asthma symptoms can persist days to weeks after viral infection clears.

Asthma may require treatment with an inhaled or oral medication.

How to prevent infection

Handwashing with soap and warm water is the single most effective way to prevent the spread of infection. Wash your hands before eating, after using the bathroom, and touching contaminated surfaces.

Cover your mouth when you cough and sneeze with a tissue or your elbow.

Stop smoking.

Ask your doctor if your vaccinations are up to date.
Results and Response

- Practice was impressed by pamphlet content and layout; plans to use it in the clinic to educate their patient population

- Clinical Science coordinator from Boehringer-Ingelheim Pharmaceuticals Inc approved of design layout and writing level of patient education tool

- Recommended submission of pamphlet for accreditation by National Committee for Quality Assurance (NCQA) for wider distribution

- “This will be an effective tool [to educate patients], with broad applicability in a primary care setting”

  - Dr. Robert Mascia M.D. M.B.A, Medical Director of Brookfield Family Medicine
Efficacy and Limitations of Intervention

- Pamphlet is written at a 6th-8th grade level and manages patient expectations about receiving antibiotics.
- Provides patients and physicians a common starting point in discussing treatment options for respiratory illnesses.
- Increases efficiency of conveying information to patients, thus saving time for the physician.

Limitations:
- The pamphlet is not an interactive document, so patients may not retain the information as effectively.
- Limited in scope regarding discussions of respiratory illnesses overall.
Future recommendations

- Receive NCQA recognition for the pamphlet, allowing greater oversight and maintenance of content.
- Distribute pamphlet in locations beyond physicians’ office such as schools, and nursing homes.
- Create online version of pamphlet to reach patients who are not regularly seen by primary care physicians.
- Solicit feedback from patients who are given the pamphlet to better evaluate the saliency, and helpfulness of information.
- Informal Survey across primary care clinics opinions about antibiotic use for airway infections before and after introducing pamphlet.


Works Cited: Pamphlet


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