SKILLS FAIR GAME QUESTIONS FOR LICENSED NURSES

The questions contained in this document are intended to be used during a long-term care facility (LTCF) nursing education or skills fair for an audience of licensed nursing staff. Questions can be incorporated into interactive games, knowledge assessments, or other activities, based on the facility's needs. The questions are organized into seven different categories: 1)Virus vs. Bacteria; 2) Urinary Tract Infections (UTI) in LTCF; 3) *Clostridium difficile*; 4) Methicillin-resistant *Staphylococcus aureus* (MRSA); 5) Transmission-based Precautions/Infection Control; 6) Influenza; and 7) Antimicrobial Resistance. An accompanying set of questions for unlicensed nursing staff is also available.

VIRUS VS. BACTERIA

- True or False? Antibiotics are not effective against infections caused by viruses.
  - True. Antibiotics only work against bacteria, not viruses.

- Name the first antibiotic discovered for humans.
  - Penicillin. The first antibiotic was penicillin, discovered accidentally from a mold culture.

- True or False? If a resident has a positive influenza test, antibiotics will help this resident recover faster.
  - False. Influenza is caused by a virus. Antibiotics only treat conditions caused by bacteria. Antivirals are medications that can shorten the severity or duration of symptoms caused by viruses, such as influenza. These medications may be prescribed in some situations and if the viral illness is diagnosed early. See Viral Prescription Pad for steps you can take to help a resident recover more comfortably (available at: http://www.minnesotaarc.org/mat/viraladult.html).

- True or False? If a resident has a cough and nasal discharge, antibiotics will help this resident recover faster.
  - False. Viruses cause most coughs and nasal discharge (even the thick, yellow-green stuff!) See Viral Prescription Pad for things you *can* do to help the resident recover more comfortably (available at: http://www.minnesotaarc.org/mat/viraladult.html).

- True or False? Using antibiotics leads to fewer people getting influenza.
  - False. Influenza is caused by a virus; antibiotics are not effective against viruses. Getting a flu shot at the beginning of each flu season, covering your coughs/sneezes, and frequent hand hygiene are the best ways to prevent influenza. These are all things *you* can do!

- True or False? Taking antibiotics will shorten the time that a resident is sick – even if the infection is caused by a virus.
  - False. Antibiotics will not shorten the course of a viral illness. Viral infections almost always get better on their own – with comfort measures to ease the symptoms. Taking antibiotics when they're not necessary increases the chance that the resident may develop a resistant infection in the future.

- True or False? You can get influenza from the flu shot.
  - False. You cannot get influenza from the flu shot. Some people get mild flu-like symptoms shortly after being vaccinated; this can be for a couple reasons: 1) It is a sign that your body is responding to the vaccine and you are developing an immune response (protection against the flu), or 2) Many cold viruses circulate in the fall, when most people get the flu shot, and it is possible that a person could be infected with one of these viruses and become ill at the same time they receive the flu shot.

- True or False? Bacterial infections are generally more deadly and serious than viral infections.
  - False. The virulence of an organism depends on the particular agent and the host. For example, bacterial meningitis is a serious bacterial infection, and smallpox is a serious viral infection.

- True or False? Vaccines are only used to protect against viral infections, such as flu.
  - False. Vaccines are used for diseases caused by both viruses and bacteria.

- Which of the following infections is most commonly caused by bacteria?
  A. Influenza
  B. Gastrointestinal / "stomach flu"
  C. Acute bronchitis / "chest cold"
  D. Pneumonia
  E. Sore throat
    - (D) Pneumonia is most commonly caused by bacteria getting into the lungs and causing infection.

- True or False? Antibiotics will zap a nasty cold or a bad case of the flu – in short order.
    - False. Diseases can be caused by different kinds of germs. Some are caused by bacteria, others are caused by viruses. Anti-bacterial drugs, or antibiotics, will help fight diseases caused by bacteria, but they don't work with viruses. Because colds and flu are caused by viruses, antibiotics won't help with those diseases.

- True or False? Antibiotics are good for treating strep throat.
    - True. Most sore throats are caused by viruses, but strep throat is caused by bacteria. If the provider does a test, and a resident has strep throat, it will need to be treated with an antibiotic.

- True or False? Antibiotics won't help if a resident has a chest cold – but she'll need them if she has acute bronchitis.
    - False. "Acute bronchitis" and "chest cold" are two different names for the same illness. The illness is almost always caused by a virus, so in general, antibiotics won't help.

- True or False? If a resident has green or yellow nasal drainage, his or her illness is caused by bacteria – not a virus.
    - False. Nasal drainage helps wash away the virus that's making the resident sick. At first it will be clear, but then it will get thicker, and the color will change to white, yellow, or green. But that doesn't mean the resident needs an antibiotic!

- True or False? It doesn't matter if a resident is sick with a virus or some kind of bacteria. You'll want an antibiotic, all the same.
    - False. An antibiotic won't help if the resident has a virus. Accurately assessing the resident for signs and symptoms of infection, and documenting and communicating that information will help the provider determine the correct diagnosis and treatment.

URINARY TRACT INFECTIONS (UTI) IN LONG-TERM CARE FACILITIES (LTCF)

- True or False? If a resident has a positive urine culture (bacteria in urine) without any other symptoms, that means he or she has a UTI.
    - False. A positive urine culture means that a resident has bacteria in his/her urine – a condition that, in the absence of other symptoms, does *not* require antibiotic treatment. The minimum criteria for antibiotic initiation in long-term care residents suggest that specific symptoms should be present, including acute dysuria (painful urination) or fever (Loeb et al., 2001). (Pocket reference card summarizing Loeb et al., 2001, available at: http://www.minnesotaarc.org/mat/card.html).

- True or False? Collecting a UA (urinalysis) when a resident demonstrates more confusion than normal or another change in behavior alone is important because increased confusion indicates a likely UTI.
    - False. Follow the appropriate facility policy/procedure for increased confusion in residents. Increased confusion in the absence of specific symptoms of a UTI (such as fever or dysuria) makes UTI an unlikely cause of confusion, though it may indicate another disease process that should be evaluated.

- True or False? Foul-smelling urine without other signs or symptoms is likely due to a UTI.
    - False. Foul-smelling urine can have many causes including dehydration, certain foods, bacterial colonization, or other diseases affecting the kidneys.

- Yes or No? Does foul-smelling urine need to be treated with antibiotics?
    - No. Foul-smelling urine without clinical symptoms of a UTI (such as fever or dysuria) does not need to be treated with antibiotics. Urine can be malodorous due to dehydration, diet, medication, or the presence of specific bacteria.

- True or False? A UA/UC urine sample from a Foley catheter should be collected the same way as one would empty a Foley – through the spout at the bottom of the bag.
    - False. Samples collected from Foley catheters should be collected through the sterile port near the top of the drainage tube to prevent contamination from the rest of the tube/bag as the urine travels down. The port allows for collection of urine soon after it drains from the bladder.

- True or False? A resident with a Foley catheter has bacteria and WBCs in his urine but no other symptoms. This resident has a UTI and should start antibiotic treatment.
    - False. See pocket reference card based on Loeb et al., 2001, available at: http://www.minnesotaarc.org/mat/card.html.
      For residents with an indwelling catheter, the minimum criteria to start antibiotics should include one of the following, based on Loeb et al., 2001:
        - Fever >100°F or a 2.4°F increase above baseline temperature
        - New costovertebral (flank) tenderness
        - Rigors
        - New onset of delirium

- True or False? History of UTI alone is enough to consider when assessing a resident for a current UTI.
    - False. Knowing a resident has a history of UTI may be helpful when making care decisions, such as teaching regarding perineal hygiene, wiping front-to-back, promoting/prompting regular urination, and adequate fluid intake if not contraindicated. However, a resident must currently meet clinical criteria for UTI to consider UTI.

- True or False? A patient that is frequently incontinent of urine should have a Foley catheter placed, because lying in wet clothes or on wet sheets puts him at higher risk of a UTI.
    - False. A Foley catheter puts a resident at a higher risk of developing a UTI. Incontinent patients can benefit from a number of nursing interventions, including the use of a toileting schedule.

- True or False? Catheter-associated urinary tract infections are the most common cause of bacteremia (blood stream infection) in long-term care facilities.
    - True. Residents with an indwelling urinary catheter are 30 times more likely to develop bacteremia than residents without a chronic indwelling catheter. Nearly 100% of LTCF residents with an indwelling catheter have bacteria in their urine.

- True or False? Bacteriuria (bacteria in the urine) always indicates that the resident needs to be treated with antibiotics.
    - False. Bacteriuria without clinical symptoms of UTI is very common and considered a benign condition among LTCF residents. With few exceptions, it does not need to be treated with antibiotics. 98% of residents with bacteriuria do not have clinical symptoms of a UTI, and therefore do not need antibiotics.

- A catheter alone increases a resident's risk of a catheter-associated UTI. What other factors can further increase the risk of a UTI?
    A. Duration of catheterization
    B. Quality of catheter care
    C. Resident factors like advanced age, debilitation, and immune status
    D. All of the above
        - (D) Avoid unnecessary urinary catheterization and limit indwelling urinary catheter use when possible. Clean hands immediately before and after touching the catheter or catheter site.

- Which of the following steps are necessary to prevent catheter-associated UTIs?
    A. Clean hands immediately before & after touching the catheter or catheter site
    B. Use as small a catheter as possible to promote good drainage & minimize urethral trauma
    C. Secure indwelling urinary catheter tubing after insertion to prevent movement
    D. All of the above
        - (D) All of the above are important steps to prevent catheter-associated UTIs.

- In addition to cleaning your hands, what is the most important way to prevent catheter-associated urinary tract infections?
    - Get the catheters out!

CLOSTRIDIUM DIFFICILE

- How is *Clostridium difficile* (or *C. diff)* spread?
  - *C. diff* is spread through the fecal-oral route. For example, the *C. diff* bacteria can spread from feces/stool from one resident to the mouth of another resident, often by the hands of healthcare workers. Hand hygiene and appropriate glove use and removal is essential anytime you might have contact with bodily fluids.

- True or False? *Clostridium difficile* (or *C. diff)* spores can live in the environment for several months.
  - True. *C. diff* spores are very difficult to remove from surfaces. In rooms of residents with active *C. diff* infections, the room surfaces should be cleaned with a bleach solution or an EPA-approved, spore-killing disinfectant.

- What is the single most important risk factor for the development of *Clostridium difficile* (or *C. diff)* infection?
  - Antibiotic use. It is estimated that up to 85% of patients with *C. diff* infection have been exposed to antibiotics in the 28 days before infection onset.

- What is the difference between *Clostridium difficile* (or *C. diff)* infection and *Clostridium difficile* colonization?
  - Colonization means that the organism is present, but the person has no signs or symptoms of infection.

- True or False? A resident can be colonized with *Clostridium difficile* (or *C. diff)* and have no symptoms of *Clostridium difficile* infection.
  - True. *C. diff* can be part of a resident's normal intestinal flora without causing infection.

- True or False? After a resident is treated for *Clostridium difficile* infection, the resident should have a stool test-of-cure.
  - False. Tests-of-cure are not recommended. Repeat *Clostridium difficile* testing is not recommended after treatment as residents can remain colonized. Testing should only take place if symptoms are present.

- Name at least 2 primary clinical symptoms of *Clostridium difficile* (or *C. diff)* infection.
  - Watery diarrhea, fever, loss of appetite, nausea, abdominal pain/tenderness.

- What steps should all healthcare personnel take to reduce the risk of spreading *Clostridium difficile* (or *C. diff)*?
  - Take steps to avoid getting *C. diff* on your hands and clothing in the first place. Wear gloves and gowns when caring for residents with *C. diff* infection, even during short visits. Once *C. diff* bacteria are on a healthcare worker's skin, they can be difficult to get off.

- True or False? If it is suspected that a resident has a *Clostridium difficile (or C. diff)* infection, a healthcare worker should collect a couple of stool samples for *C. diff* lab testing.
  - False. The CDC recommends that one stool specimen should be collected for *C. diff* lab testing. Additionally, the specimen must be unformed stool (stool that takes the shape of the collection container – a symptom of CDI).

METHICILLIN-RESISTANT *STAPHYLOCOCCUS AUREUS* (MRSA)

- What does MRSA stand for?
  - Methicillin-resistant *Staphylococcus aureus*.

- Is MRSA a viral or bacterial infection?
  - Bacterial infection.

- MRSA bacteria can be found in which places, even on healthy people?
  A. On the skin
  B. In the nose
  C. Both A. and B.
  - (C) On the skin and in the nose. All *Staphylococcus aureus (*or *Staph)*, including MRSA, prefer to live in moist areas.

- True or False? MRSA is often spread through the air.
    - False. MRSA most often enters the body through a cut or wound by direct contact – often times by contaminated hands. The key to preventing MRSA infections is for everyone to practice good hygiene:
        - Keep your hands clean by washing thoroughly with soap and water or using an alcohol-based hand rub
        - Keep cuts and scrapes clean and covered with a bandage until healed
        - Avoid contact with other people's wounds or bandages
        - Avoid sharing personal items such as towels or razors

- True or False? Intact skin and mucous membranes are one of the most effective barriers against MRSA infection.
    - True. The skin and mucous membranes are usually effective barriers against infection. However, if these barriers are breached (e.g., skin damage due to trauma or mucosal damage due to viral infection) MRSA may gain access to underlying tissues or the bloodstream and cause infection.
      Persons who are immunocompromised or who have invasive medical devices are particularly vulnerable to infection.

- The most effective infection control measure for preventing MRSA infections is:
  A. Antibiotics
  B. Adequate hand hygiene
  C. Wearing gloves for all contact with people
    - (B) Adequate hand hygiene

- Approximately what percentage of the general population has *Staphylococcus aureus,* or *Staph* (not necessarily MRSA), on their skin – with or without causing infection?
  A. 50%
  B. 30%
  C. 5%
  D. 0%
    - (B) About 30% of people have *Staph* on their skin. *Staph* can be part of the normal flora on our bodies.

- MRSA outbreaks in the community have been linked to:
  A. Poor hygiene in jails and other correctional facilities
  B. Tattooing
  C. Sports teams
  D. All of the above
    - (D) MRSA outbreaks have occurred in jails and other correctional facilities, tattooing when contaminated items were shared, and within sports teams. These situations or settings all include persons with close contact, compromised skin (cuts, sores, breaks in the skin), and/or contact with contaminated items. These risk factors can result in opportunities to spread infections.

- List two key ways to prevent spreading MRSA bacteria.
    - The best way to prevent spreading MRSA infections is to practice good hand hygiene; keep your hands clean by washing thoroughly with soap and water or using an alcohol-based hand rub. Other key strategies include:
        - Keep cuts and scrapes clean and covered with a bandage until healed
        - Avoid contact with other people's wounds or bandages
        - Avoid sharing personal items such as towels or razors
        - Wash your hands after changing bandages or touching the infected skin. Throw used dressings away promptly.
        - Regularly clean your bathroom and personal items.
        - If you share personal items (e.g., towels, athletic equipment, etc.) with other people, clean them before you use them.

- True or False? Alcohol-based hand sanitizers (like Purell®) are effective at killing *Staphylococcus aureus,* or *Staph,* but not MRSA.
    - False. Alcohol-based hand sanitizers effectively kill *Staph* and MRSA.

- What is the most effective way to prevent spreading MRSA in healthcare facilities?
    - The single most effective means of reducing the potential for MRSA transmission is hand hygiene before and after contact with residents with MRSA, including after glove removal, if gloves have been worn.

- What is the difference between colonization and infection with bacteria, such as MRSA?
    - Colonization refers to the presence of microorganisms in or on a host with growth and multiplication, but without tissue invasion or damage. In the case of MRSA, the body site most commonly colonized is the anterior nares. Infection is the entry and multiplication of bacteria in the tissues of the host leading to local or systemic signs and symptoms of infection. MRSA can cause invasive and life-threatening infections, such as osteomyelitis, bacteremia, endocarditis, pneumonia, urinary tract infections, intra-abdominal or pelvic infections, vascular line sepsis, and wound and surgical infections.

- True or False? MRSA is a pretty new infection – it's only been found in healthcare facilities for the last 10 years.
    - False. Methicillin-resistant strains of *Staphylococcus aureus* (MRSA) were first recognized in 1961, soon after the introduction of the methicillin antibiotic.

- True or False? MRSA bacteria are only resistant to one antibiotic: methicillin.
    - False. MRSA is resistant to (unable to be killed by) all beta-lactam antibiotics. This includes all penicillins (e.g., amoxicillin) and cephalosporins (e.g., cephalexin).

- True or False? Once a person gets an MRSA infection, he/she will have it for the rest of his or her life because there is no cure.
    - False. Many people with MRSA infections are treated effectively with antibiotics that make the infection go away. Early treatment can help prevent the infection from getting worse. However, sometimes MRSA goes away after treatment and comes back several times. Hand hygiene between residents and between dirty-to-clean cares on the same resident can help prevent MRSA infections from coming back again and again.

- Name three types of infection that can be caused by MRSA.
    - MRSA can cause infections in wounds, urine, and blood. Other infections or conditions that can be caused by MRSA include certain types of pneumonia, cellulitis, meningitis, UTI, endocarditis, and toxic shock syndrome

- If a resident has a skin wound with MRSA-positive drainage that cannot be contained or covered, what type(s) of transmission-based precautions are needed when providing care? (Select all that apply):
    A. Standard Precautions
    B. Contact Precautions
    C. Droplet Precautions
    D. Airborne Precautions
    - (A) and (B) Standard Precautions are used for every resident, for every time cares are provided. Contact Precautions are always in addition to Standard Precautions. In this situation, Contact Precautions are also warranted because the resident has drainage that cannot be contained or covered, increasing the risk of MRSA transmission to other residents. Droplet Precautions would be indicated if the person had MRSA in respiratory secretions that contaminated the resident's environment.

- If a resident just returned from a short hospital stay where MRSA colonization was found by a nares screening test but the resident has no signs or symptoms of infection, what type(s) of transmission-based precautions are needed when providing care?
    A. Standard Precautions
    B. Contact Precautions
    C. Droplet Precautions
    D. Airborne Precautions
    - (A) Standard Precautions. Standard Precautions are recommended for residents that may be colonized with (also known as being a carrier of) multi-drug resistant organisms, including MRSA.

TRANSMISSION-BASED PRECAUTIONS/INFECTION CONTROL

- True or False? Use of artificial nails by healthcare workers poses no risk to patients.
    - False. Even after careful hand hygiene, healthcare workers often harbor substantial numbers of potential pathogens in the spaces under fingernails. Healthcare workers who wear artificial nails are more likely to harbor gram-negative pathogens (like *E. coli*) on their fingertips than are those who have natural nails, both before and after hand hygiene. [CDC]

- What is the recommended length for fingernails of healthcare workers?
  A. 1/2 inch
  B. 1/4 inch
  C. 1 inch
    - (D) Natural nail tips should be kept to ¼ inch in length. [CDC]

- Which type of finger nails harbor the most bacteria?
  A. Natural nails with no nail polish
  B. Artificial nails
  C. Natural nails with nail polish
    - (A) Studies have shown that hospital personnel with artificial nails harbor more potential pathogens both before and after hand washing than personnel with natural nails. Artificial nails contribute to nail changes that can increase the risk of colonization and transmission of organisms from health care workers to patients. Freshly applied nail polish on natural nails does not increase the numbers of microbes from the skin surrounding fingernails if fingernails are short; however, chipped nail polish can harbor added bacteria. Natural nail tips should be kept to ¼ inch in length.

- True or False? I cannot pick up any germs from touching inanimate objects (items in the environment that are not living, such as tables, papers, sink faucets, keyboards, and pens)?
    - False. Germs can live on people and objects in the environment, including hard surfaces like tables, faucets, and pens, as well as soft surfaces like papers, clothing, blankets, etc. Touching any of these objects and then touching another surface, including a resident (or yourself) can transmit germs that cause infections. Wash your hands!

- True or False? If I only empty Foley bags, it's not necessary to change gloves in between residents.
    - False. Every time you empty urine (from a Foley or urinal or after helping a resident use the toilet), gloves should be removed immediately and hands should be cleaned. This is true even if you stay with the same resident and help him/her with other cares, and is also true if you leave the room and perform other duties elsewhere, even if you're going to empty another resident's Foley bag. Germs from one resident's urine can be spread elsewhere unless gloves are removed and hands are cleaned right away.

- True or False? Unless a resident is on Contact Precautions, I would have no reason to wear a gown when performing resident cares.
    - False. Standard Precautions state that anytime there is the potential for body fluids to come into contact with clothing/uniform, gowns should be worn. Gowns are part of Standard Precautions and they are *also* part of Contact Precautions.

- True or False? If a resident is on antibiotics, his/her wound drainage is not infectious.
    - False. All body fluids, regardless of antibiotic use, should be considered potentially infectious. Antibiotics might help to treat the bacteria causing the wound, but it doesn't mean that there aren't still bacteria in the wound drainage or the wound itself.

- True or False? If you are unable to insert a urethral catheter on the first try, it's okay to attempt insertion one more time.
    - False. Once the catheter has been in a non-sterile place, it should no longer be inserted into the bladder, as it may now cause a bladder infection.

- Name 3 types of transmission-based precautions based on how the disease is transmitted.
    - Answer options include:
        - Standard Precautions (Indicated for all residents, regardless of infection/colonization status)
        - Contact Precautions (Indicated when residents have wounds, feces, urine, or respiratory secretions that cannot be contained by dressings, incontinence products, or by covering one's cough or when residents have been linked to infections in other residents)
        - Droplet Precautions (Masks, eye protection or face shields should be worn during resident care activities that are likely to generate splashes or sprays of blood, body fluids, secretions or excretions. Such activities include suctioning or working with a resident who is likely to expel droplet secretions (e.g., those with uncontained respiratory secretions when coughing, sneezing, or talking)
        - Airborne Precautions (Indicated when infection is able to spread by the airborne route, such as when tuberculosis, measles, chickenpox, or disseminated herpes zoster is suspected)

- Contact Precautions include Standard Precautions plus which of the following:
    A. Gown
    B. Gloves
    C. Dedicated equipment
    D. All of the above
        - (D) All of the above

INFLUENZA

- True or False? Influenza infection is a common, but potentially serious disease of the upper respiratory tract and lungs (not the GI tract).
    - True. Influenza (or "flu") is a contagious respiratory disease. It is not the same as the "stomach flu". Flu is caused by a virus that attacks the nose, throat, and lungs. Symptoms come on quickly in the form of fever, cough, sore throat, headache, extreme tiredness, stuffy nose, or body aches.

- True or False? It is important to get a flu vaccination (flu shot) every year.
    - True! Everyone 6 months of age and older should get a flu vaccine each year in the fall. Even if you got a flu vaccine last year, you should still get a flu vaccine again this year. We all have a responsibility to protect the vulnerable people around us by getting vaccinated.

- True or False? Influenza is a mild disease in older persons.
    - False. Influenza is a serious disease. 1 out of every 20 deaths in persons > 65 is related to influenza and influenza infection costs between $3 - 5 billion in the US every year.

- True or False? Influenza rarely results in death in older persons.
    - False. Influenza kills as many as, or more, people than breast cancer (40,000 per year) and 3 times as many as HIV/AIDS.

- True or False? Healthcare workers infected with influenza can transmit this deadly virus to their vulnerable residents.
    - True. Healthcare workers can spread influenza before flu symptoms even develop. Getting a flu shot protects vulnerable residents, improves resident safety, and can significantly decrease morbidity and mortality.

- True or False? Immunizing healthcare workers against influenza saves money for employees and employers and prevents workplace disruption.
    - True. Healthy working adults who receive influenza vaccination have fewer upper respiratory infections, fewer doctor visits, and take fewer sick days. It also saves in healthcare costs and loss of work.

- True or False? Influenza vaccination of healthcare workers was recently added as a Centers for Disease Control and Prevention (CDC) recommended standard of care.
    - False. The CDC has recommended influenza vaccination for healthcare workers since 1981.

- True or False? Healthcare workers have a duty to protect vulnerable residents from transmissible diseases.
    - True. First do no harm. Influenza vaccination protects you from getting sick and spreading flu to residents. The influenza vaccine is safe. Healthcare workers have a responsibility to their residents and themselves to get vaccinated against influenza.

ANTIMICROBIAL RESISTANCE

- True or False? I have a role to play in preventing the spread of antimicrobial resistance.
    - True. You prevent it every time you wash your hands between residents and between dirty-to-clean cares on the same resident.
    - True. Unnecessary antibiotics promote antimicrobial resistance. So, every time you accurately document symptoms/resident's condition, you ensure the provider has the best information with which to make a decision regarding the need for antibiotics.

- True or False? If a resident starts acting a little "off," an antibiotic is a good idea because it will probably take care of whatever is causing the problem.
    - False. Literature on best practices indicates that antibiotics should only be prescribed when residents meet very specific prescribing criteria (see pocket reference card based on Loeb et al., 2001, available at: http://www.minnesotaarc.org/mat/card.html).

- True or False? If a resident starts acting a little "off," an antibiotic is a good idea because at the very least, it won't make things worse.
    - False. When antibiotics are used when they aren't necessary, they can contribute to bacteria forming resistance (becoming superbugs), which can make antibiotics ineffective for the resident as well as other residents if the bacteria spreads.

- True or False? Other than an allergy to an antibiotic, there are no side effects to taking antibiotics.
    - False. Antibiotics can have serious negative consequences, including the promotion of drug-resistant bacteria.

- True or False? It never does any harm to take an antibiotic – even if an illness isn't caused by bacteria.
    - False. By misusing antibiotics, you could also be helping to breed "superbugs" – resistant bacteria that are not killed by antibiotics. Antibiotics are one of our most important weapons in the fight against disease. We can't afford to misuse them.

- True or False? It's no big deal if a few bacteria become resistant to some kinds of antibiotics – there's always something else residents can take.
    - False. Don't count on being able to use something else if a "superbug" makes a resident sick. We only have a limited number of antibiotics available. Often, "superbugs" have to be treated with stronger antibiotics. These stronger drugs may have more side effects – and residents may have to stay in the hospital, and have drugs given through a vein.

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