The COVID-19 illness, caused by the SARS-CoV-2 virus, is a so-called spike protein. These viruses penetrate host cells and cause infection resulting in the deadly pathogenic severe acute respiratory syndrome. The vaccines work in human bodies by triggering the immune system to protect the organ system from foreign invaders such as bacteria, viruses, fungi, and living organisms. One of the most important parts of the immune system are white blood cells and antibodies. These help fight illnesses and diseases by destroying the invaded substances (macrophages), producing antibodies (B lymphocytes) and directly killing infected host cells, activating other immune cells and regulating the immune response (T lymphocytes). Currently, there are three types of COVID-19 vaccines (Pfizer, Moderna, and Johnson & Johnson (J&J)) that are approved and provided at this time in the United States. This article will address how these vaccines differ from each other, how they work in the human body, and to affirm that the vaccines are SAFE and EFFECTIVE to use in protecting against severe disease and death from the virus that causes COVID-19.

**Pfizer and Moderna Vaccines** use the Messenger RNA (mRNA) technology that genetically engineer mRNA to give the cells instructions on how to make a harmless protein, triggering the immune system to build T-lymphocytes and B-lymphocytes that will remember how to fight the virus. By injecting cells with a synthetic mRNA that encodes a viral spike protein, an mRNA vaccine can direct human cells to make a viral spike protein and evoke an immune response without a person ever having been exposed to the viral material. At this time, there are 2 shots and a booster shot recommended for these vaccines.

The Janssen/Johnson & Johnson vaccine, and AstraZeneca vaccine are vector vaccines which produce the genetic material from the COVID-19 virus in a modified version of a different virus (viral vector) to help human bodies build T-lymphocytes and B-lymphocytes to fight the virus and remember if the person later becomes infected with the COVID-19 virus, the antibodies will fight the virus. This vaccine is recommended to have 1 shot and a booster shot.

Because the COVID-19 antibodies are expected to decrease or “wane” over time, the level of antibodies can diminish, providing less effective protection.

**Enter the booster shot**: The booster is recommended to trick the immune system into producing an increase in antibodies to fight the infection.

For the Pfizer vaccine, the Centers for Disease Control and Prevention (CDC) recommends 2 doses from the primary series and a booster five months after the last dose in the primary series. The recommended age group is above 5 years old for primary series and a booster for the 12 or older age group.

For the Moderna vaccine, the Centers for Disease Control and Prevention (CDC) recommends two doses from the primary series and a booster five months

*continued on page 2*
after the last dose in their primary series. The recommended age group is 18 years and older for primary series and the booster shot.

For the J&J vaccine, the Centers for Disease Control and Prevention (CDC) recommends one dose from the primary series and a booster dose of either Pfizer-BioNTech or Moderna (mRNA COVID-19 vaccines) at least two months after the first dose of J&J/Janssen COVID-19 vaccine. The recommended age group is 18 years and older for primary series and the booster shot.

Sources:
- CDC COVID-19
- Mayo Clinic
There has been some important activity of late in regards to Regulations. On everyone’s mind, first and foremost is the Vaccine Mandate for healthcare workers. QSO-22-09-ALL and the accompanying Attachment A, include the regulations and guidance for the Interim Final Rule – Medicare and Medicaid Programs; Omnibus COVID-19 Health Care Staff Vaccination.

QSO-22-09-ALL outlines what the requirements are for homes to be compliant with the Regulations and includes an important timeline in regards to enforcement action thresholds. There are 30-day, 60-day and 90-day thresholds that homes must ensure they have met in order to be in compliance and avoid enforcement actions.

Homes need to ensure they have policies and procedures in place in order to be compliant with F888 (§483.80 (i)). We encourage providers to review QSO-22-09-ALL and the accompanying Attachment A thoroughly to ensure you are meeting the required elements. Implementation will be phased in, so February 14, 2022, (30-days) and March 14, 2022, (60-days) are important dates to be aware of. The QSO States:

CMS expects all facilities’ staff to have received the appropriate number of doses by the timeframes specified in the memorandum unless exempted as required by law. Facility staff vaccination rates under 100% constitute non-compliance under the rule. Non-compliance does not necessarily lead to termination, and facilities will generally be given opportunities to return to compliance. Within 30 days after the issuance of the memorandum, if a facility demonstrates:

* Policies and procedures are developed and implemented for ensuring all facility staff, regardless of clinical responsibility or resident contact are vaccinated for COVID-19, including all required components of the policies and procedures specified below (e.g., related to tracking staff vaccinations, documenting medical and religious exemptions, etc.); and

* 100% of staff have received at least one dose of COVID-19 vaccine or have a pending request for, or have been granted a qualifying exemption, or are identified as having a temporary delay as recommended by the CDC, the facility is compliant under the rule.

* Less than 100% of all staff have received at least one dose of COVID-19 vaccine, or have a pending request for, or have been granted a qualifying exemption, or are identified as having a temporary delay as recommended by the CDC, the facility is non-compliant under the rule. The facility will receive notice of their non-compliance with the 100% standard. A facility that is above 80% and has a plan to achieve a 100% staff vaccination rate within 60 days would not be subject to an enforcement action. States should work with their CMS location for cases that exceed these thresholds, yet pose a threat to patient health and safety. Facilities that do not meet these parameters could be subject to additional enforcement actions depending on the severity of the deficiency and the type of facility (e.g., plans of correction, civil monetary penalties, denial of payment, termination, etc.).

Within 60 days after the issuance of the memorandum, if a facility demonstrates:

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Want on our e-mail list? Send your e-mail, name, title, and facility information to musonqipmo@missouri.edu!
* Policies and procedures are developed and implemented for ensuring all facility staff, regardless of clinical responsibility or resident contact are vaccinated for COVID-19, including all required components of the policies and procedures specified below (e.g., related to tracking staff vaccinations, documenting medical and religious exemptions, etc.); and

* 100% of staff have received the necessary doses to complete the vaccine series (i.e., one dose of a single-dose vaccine or all doses of a multiple vaccine series) or have been granted a qualifying exemption, or are identified as having a temporary delay as recommended by the CDC, the facility is compliant under the rule.

* Less than 100% of all staff have received at least one dose of a single-dose vaccine, or all doses of a multiple vaccine series, or have been granted a qualifying exemption, or are identified as having a temporary delay as recommended by the CDC, the facility is non-compliant under the rule. The facility will receive notice of their non-compliance with the 100% standard. A facility that is above 90% and has a plan to achieve a 100% staff vaccination rate within 30 days would not be subject to an enforcement action. States should work with their CMS location for cases that exceed these thresholds, yet pose a threat to patient health and safety. Facilities that do not meet these parameters could be subject to additional enforcement actions depending on the severity of the deficiency and the type of facility (e.g., plans of correction, civil monetary penalties, denial of payment, termination, etc.).

Within 90 days and thereafter following issuance of the memorandum, facilities failing to maintain compliance with the 100% standard may be subject to enforcement action.

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**HOLD IT!**

Melody Schrock, BSN, RN, RAC-CT, IP  QIPMO Clinical Educator

With the increased use of insulin pens and more types of insulin being produced it is important to remember two important steps that are often missed.

1) An air bolus (needle prime)
2) An injection hold time

An insulin pen must be primed to remove any air that may be present that may affect the dosage being given. This is completed by following this process: Clean the septum of the pen, attach a needle, dial the dosage to two, then while pointing the pen needle up, pushing the plunger to expel any air. A droplet of solution should form on the needle. If not, this process should be repeated.

The injection hold time is the process completed with the administration of the medication. The area is cleansed, the needle is inserted into subcutaneous tissue, and the plunger is then depressed. The counter should return to “0” and then a “hold count” should be performed. This “hold count” allows the full dose of the medication to be administered.

It is important to note different insulins have different “hold times” with administration. A few of the more common insulins are listed here:

<table>
<thead>
<tr>
<th>Insulin</th>
<th>Hold Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humalog</td>
<td>5 seconds</td>
</tr>
<tr>
<td>Nolalog</td>
<td>6 seconds</td>
</tr>
<tr>
<td>Levemir*</td>
<td>6 seconds</td>
</tr>
<tr>
<td>Lantus*</td>
<td>10 seconds</td>
</tr>
</tbody>
</table>

*These manufacturer’s education states: “Please note that if the needle is removed before the 6-second count is completed after the dose counter returns to “0,” then underdosing may occur by as much as 20% resulting in the need for increasing the frequency of checking blood sugar and possible additional insulin administration.”

Through education and diligent action, you can ensure appropriate insulin dosage is administered and assist residents to have better control of their blood sugars.
I remember thinking when I first heard about the COVID-19 public health emergency that “this will be over in about a month”. Little did I know that we are almost 2 years in and another surge is at hand.

A frequent question that I continue to get from MDS Coordinators is about coding of isolation on the MDS (Section O0100M). Despite the on-going regulatory changes in regards to the COVID-19 PHE, there has NOT been any changes to the Resident Assessment Instrument (RAI) Manual in regards to coding isolation. Isolation coded at O0100M2 is a 14 day observation period (while the resident is in the facility). Isolation does NOT need to be maintained during the entire 14 day period.

There are 4 main criteria for coding O0100M2 “Isolation or Quarantine for Active Infectious Disease (while a resident)” includes:

1) An Active Infection
A physician must document a diagnosis of an ACTIVE infection such as COVID-19. Must meet the criteria for highly transmissible or an epidemiologically significant pathogen so with COVID-19 it would need to be in a contagious stage of illness AND evidence of COVID-19 systems and/or a positive lab test.

Documentation should include a physician diagnosis of active infection, assessment of disease systems at least daily. You may want to consider every shift documentation due to our resident being high risk for quick changing COVID symptoms and conditions with their co-morbidities that may exacerbate or worsen during this time. Include any abnormal labs results with physician notification and their responses in the medical record. Address isolation type and care related to COVID-19 observation and treatments in the care plan.

2) Transmission-Based Precautions
The precautions taken for the active infection must be above and beyond the standard precautions.
Documentation should include what are the precautions that are taken place for that individual resident, and this should be included in the care plan.

3) No Roommate
The resident must be in a private room or in a room without a roommate. Even if the resident has a roommate with the same active infection and isolation precautions, this does not meet the criteria for no roommate. So even if both residents are in the same room with COVID-19 and have the same isolation precautions they do not meet this criteria.

Documentation should include in the care plan that they are in a private room or in a room without a roommate. May need to have access to daily census in your software or in census records supporting the private room or semiprivate room with no roommate.

4) Must Remain in Room
All services must be provided to resident in their room such as therapy, meals, activities, beautician services or family visits.

Documentation should include the isolation type and all the services being provided in the room as well as single room/or semiprivate with no roommate information. A very important aspect with isolation precautions is providing

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interventions to prevent social isolations such as person-centered activities or meaningful activities, and preventative measures for mood decline. These would need to be documented in a narrative note when they occur and on the care plan.

All four of the criteria have to be met in order for isolation to be coded on the MDS and documentation must be in the medical record to support the coding of isolation.

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**ICAR Corner**

**Hand Hygiene: To Wash or Not To Wash... That Is the Question!**

We've heard it since we were kids. "Wash your hand before dinner!" "Wash your hands before you touch that!" "Did you wash your hands?" But as workers in health care settings, we know there is more to hand hygiene than just washing hands.

In most situations, using *alcohol-based hand sanitizer* (ABHS) is the recommended practice if hands are not visibly soiled. Why? ABHS is:

- More effective at killing germs on hands than soap
- More easily accessible, especially during care delivery
- Less irritating to skin and causes less dryness than soap and water

Placing ABHS throughout the facility will increase access for staff, residents, and visitors and therefore increase use and reduce potential of spreading infectious pathogens. Placing ABHS dispensers in each resident room provides the highest level of accessibility. If this is not feasible, have several dispensers in resident hallways. Placing ABHS in common areas, dining areas, breakrooms, and at facility entrances will also improve accessibility. Some facilities provide staff and even residents with pocket size ABHS as well. ABHS is recommended to be used: before touching a resident, after touching resident or their environment, after contact with bodily fluids or contaminated surfaces, before moving from soiled area of resident to a clean body site, and after glove removal.

So, when should you wash your hands? The CDC recommends the following:

<table>
<thead>
<tr>
<th>When hands are visibly soiled</th>
<th>Before eating</th>
<th>After using bathroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>After caring for a person with</td>
<td>After exposure to spores such as C. difficile</td>
<td></td>
</tr>
</tbody>
</table>

Demonstrating competency in proper hand hygiene is an important practice but so is ensuring there is a process with which to audit these competencies. Performing observational audits can help confirm staff compliance or identify a need for re-education. Here are a couple of audit **resources** to reference: [www.ahrq.gov/nursing-home/materials/prevention/observational-audits.html](http://www.ahrq.gov/nursing-home/materials/prevention/observational-audits.html) and [www.ahrq.gov/sites/default/files/wysiwyg/nursing-home/materials/observational-audits.pdf](http://www.ahrq.gov/sites/default/files/wysiwyg/nursing-home/materials/observational-audits.pdf).

Proper hand hygiene is important for staff, visitors, and residents. Posting reminders and having ABHS dispensers located throughout the facility will help increase compliance. For more information on hand hygiene guidance and education courses, visit [www.cdc.gov/handhygiene/providers/index.html](http://www.cdc.gov/handhygiene/providers/index.html).

Hand hygiene is one of the areas included in an Infection Control Assessment and Response (ICAR) evaluation. For more information on the ICAR initiative visit [nursinghomehelp.org/icar-project/](http://nursinghomehelp.org/icar-project/). To schedule a no-charge non-regulatory ICAR visit contact [msonicarproject@missouri.edu](mailto:msonicarproject@missouri.edu) or (573) 882-0241.
Anyone who lives in the Midwest knows that 💥 winter 💥 means head colds and Kleenex. We feel stuffy and tired, we sneeze, and maybe it even turns into a bronchial or sinus infection. The docs roll out the Z-packs and the nebulizers. It stays respiratory and we’re all good. But there’s a lot going on behind the scenes that we are never aware of... even with a head cold.

On our cells are ACE 2 (angiotensin-converting enzymes) receptors that are found on multiple types of cells within the body. They can be found in the lungs, smooth muscle cells of organs, in our blood vessels, intestines, and even in our brain. Thus, when something like SARS-CoV-2 binds directly to those ACE receptors, it’s no wonder our body goes haywire.

When either viral or bacterial infection is localized, our white blood cells rush to the rescue, the inflammation process kicks in, and various hemodynamic and lymphatic processes kick into battle the foreign body and whisk it from the area. However, COVID goes for an all-in approach, attaching its happy self to several cells in several areas so that the body is thrown into an inflammatory war. And as we’ve seen since the first variant arose, it’s a fierce fighter that just keeps on going. If you think about it, that’s why this disease, unlike a head cold, or even pneumonia, attacks multiple systems causing brain fog, achy muscles, pseudo-diabetes, respiratory issues, and of, course, vascular issues.

Over the past 2 years, you have reported to us that you’re seeing a rise in residents with clotting issues post-COVID. You’ve reported more DVTs, pulmonary embolisms, COVID pneumonia, and GI bleeds. As the body continues to adapt and build antibodies toward the COVID proteins, the normal reaction is a hyperinflammatory response. The “hyper” part of this is overdoing the number of clotting materials and fibrin needed to handle the job, thus resulting in a build of fibrin in the form of blood clots. Early on in the pandemic physicians attempted to mitigate these risks with heparin therapy with mixed results. Because the body is constantly working to achieve homeostasis, there’s a fine line of knowing how much blood thinner to introduce to reduce a clot versus expediting natural thinning components and causing internal bleeding. In short, COVID makes clotting a mess!

So, what can we do to protect our residents? ➤ Lots of things!

Be aware of the risk factors for developing a post-COVID clot.

Having a diagnosis of COVID,

* Being sedentary, and
* Having pre-existing circulatory and vascular issues.

1) Understand the signs and symptoms of possible deep vein thrombosis (DVT) and pulmonary embolism. (See chart.)

2) Assess, Assess, Assess! Look at those legs, listen to those lungs, feel those toes, and check for those pulses. Get a baseline. If someone is complaining of pain in their leg, particularly in the calf or behind the knee, measure the width of their leg and keep a record.

3) Talk to their doc! We’ve lost several residents because we waited too long to recognize they needed help. Clots can generally be dispersed either emergently with tPA or over time with a low molecular weight heparin.

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4) Get them up! Get people on their feet, stretch, move, wiggle, and hydrate! The best way to prevent blood clots for anyone is movement and water.

COVID clotting issues can go on long after residents are no longer visibly symptomatic on the outside. Watch for bleeding issues, lumps, and bumps, and always be sure to check out those acute symptoms right away. Pulmonary embolisms, heart attacks, and DVTs are deadly....

... they don't give second chances.

Resources:
* National Blood Clot Alliance (stoptheclot.org)

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MEETING UNIVERSAL NEEDS

Mark Francis, MS, LNHA, IP ⭕ QIPMO Clinical Educator

In the August 2021 newsletter we discussed the first of three universal needs that we all hope to have met in our work. Those three needs are AUTONOMY, COMPETENCE and PURPOSE. As those needs are met, we become more engaged in our work and less likely to change jobs or employers. We defined AUTONOMY as “a feeling of choice that engenders willingness. It encourages people to fully endorse what they are doing.” (Lederman 2018.)

This time I want to talk a little more about the other two needs: COMPETENCE and PURPOSE. COMPETENCE is having some level of skill at what you do. Maybe you haven’t mastered every aspect of your job, but you hope to do most of it pretty well. Achieving COMPETENCE takes time and a healthy response to mistakes. We all make errors and how we react determines if our mistakes lift us up or pull us down. The legendary coach Paul “Bear” Bryant is credited with the quote:

“When you make a mistake, there are only three things you should ever do about it—admit it, learn from it, and don’t repeat it.”

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I would take his wisdom and add a fourth implied step to come up with a practical process for gaining all the benefit we can from any mistake.

* **OWN** your mistake
* **Be KIND** to yourself
* **DISCOVER** what happened
* **Make a PLAN** to do it differently next time

This process of benefitting from our mistakes begins with being honest: with yourself and those around you. This can be painful, but nothing good happens without this essential first step. While brutal honesty is the starting point, it is important to follow that with some grace and forgiveness toward yourself (and others). It is easy to “beat yourself up” after committing a blunder. However, wallowing in the mistake only keeps you from moving past it and growing. The third step in this process involves some thought and analysis. Ask yourself exactly what happened. Where did the process go wrong? What would you do differently if you had the situation to do over again? Then take what you learned from the third step and put together a specific plan for what you will do the next time. Even if you never encounter the **exactly** situation again, you will still benefit from what you have learned through these steps. Following these steps every time you make a mistake will provide an enormous boost to your level of **competence** (and confidence) in work and in life.

The third universal need we all seek to have fulfilled in our work is the desire to find **purpose** in what we do. At the end of the day, it is our hope that what we did today will make someone else’s life better in some way. To me, this third need is met very easily in the field of long-term care.

I can’t think of many jobs that provide more meaning than caring for those who can’t care for themselves.

It is my hope that you will find these three things in your work: **autonomy**, **competence** and **purpose**. I also hope that you can help provide these same motivators for all the people you work with.

For more information and a practical program for building employee engagement in your facility, contact your QIPMO coach:

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