

Malnutrition

Challenges of the COVID-19 Pandemic and Strategies for Moving Forward

NUTRITION CONNECTION



New research details how the pandemic has affected malnutrition

Malnutrition has always been a concern in long-term care and has been exacerbated by issues surrounding the current pandemic. Studies estimate up to 60 percent of long-term care residents experience malnutrition, and this high prevalence can lead to an array of health complications and poor quality of life. Discover new research about how the pandemic has affected malnutrition, and creative strategies that you can implement today.

CONTRIBUTORS OF MALNUTRITION

Malnutrition is a multifaceted problem in long-term care, with many factors that contribute:

- Loss of appetite
- Difficulty chewing or swallowing
- Medication side effects
- Sarcopenia (age-related loss of muscle mass), leading to diminished functional movement
- Other loss of function—for example, residents are unable to open food packages or serve themselves
- Chronic or acute diseases, which may affect intake, metabolic requirements, digestion, and/or diet restrictions
- Constipation, leading to increased feelings of fullness
- Dementia and/or Alzheimer's disease, which can cause confusion at mealtimes
- Food quality or type doesn't align with residents' preferences



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In addition, individuals may arrive at the facility already malnourished. Poverty, food insecurity, social isolation from living alone, food access issues, and functional decline may all contribute to malnutrition upon arrival.

MALNUTRITION AND COVID

While many of the prior factors are well-known, the COVID-19 pandemic has led to additional contributors to malnutrition risk:

1. Social isolation.

During the height of the pandemic, many long-term care facilities temporarily switched from communal dining to in-room dining. Occasional spikes in case rates over the last two years led to intermittent interruptions in communal dining as well.

In addition, early in the pandemic, visitors were often prohibited or limited, which further exacerbated social isolation.

Unfortunately, recent research in *Nutrients* found that loneliness was an independent risk factor for poor nutritional status. Given the considerable social isolation linked to the pandemic, this is concerning.



NUTRITION AND MENTAL HEALTH ARE INTERTWINED.

Depression and anxiety may lead to reduced intake, contributing to malnutrition. Similarly, nutrition itself may play a role in the prevention or treatment of such conditions.

2. Depression and anxiety.

While the data is still forthcoming, the pandemic may have increased depression and/or anxiety among older adults through worries about contracting the virus, loss of family members or friends to the virus, and increased social isolation.

Early research supports this. For example, a 2021 study in *Acta médica portuguesa* surveyed older adults and found that 80 percent had higher self-reported levels of anxiety, and 73 percent felt more depressed compared to before the pandemic. Similarly, a mini-review of studies in Latin American countries found

connections between the pandemic and increased anxiety and depressive symptoms.

The diagnosis of COVID itself may also contribute to these conditions. One study found that soon after healing from COVID infection, individuals were found to have higher rates of anxiety and depression.

Why is this important for foodservice managers? Nutrition and mental health are intertwined. Depression and anxiety may lead to reduced intake, contributing to malnutrition. Similarly, nutrition itself may play a role in the prevention or treatment of such conditions. For example, several studies have linked overall healthy diet patterns (like those rich in fruits,

vegetables, fish, nuts, and whole grains) to reduced risks of depression and anxiety.

3. COVID infection.

The connection between COVID and nutrition is a multidirectional relationship.

First, we know that malnutrition may impact COVID-19 outcomes. For example, research in *Clinical Nutrition* linked malnutrition to an increased risk of in-hospital mortality for COVID-19. A study in the *Irish journal of medical science* found that malnutrition had a statistically significant relationship with dyspnea, cough, weakness, fever, and other

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symptoms during COVID-19 infection. Several studies have also linked Vitamin D deficiency to increased severity of COVID-19 infection.

But the infection itself may also contribute to malnutrition. Acute illness may preclude good nutritional intake and might simultaneously increase requirements due to inflammation and respiratory distress. The infection can also cause diminished smell and taste, leading to reduced intake.

For example, one study in *Endocrinology, diabetes and nutrition* estimated that up to 60 percent of hospitalized COVID patients suffer from malnutrition. Of note, this same study found that early nutritional intervention—specifically early assessment, a higher protein diet, and additional supplements as needed—was linked to shorter hospital stays for COVID.

Perhaps more surprising, though, are potential long-term impacts on malnutrition.

A study in *Nutrients* looked at the prevalence of malnutrition of COVID hospitalized patients over six months post-discharge. This group included adults age 18 and up, with a mean age of approximately 60 years old. After one month, 33 percent of study participants experienced persistent malnutrition. After six months, 15 percent of the group still experienced malnutrition (despite receiving nutritional guidance during or after hospitalization).

A similar study in *Nutrition* found that malnutrition persisted in 41 percent of patients at one-month post-discharge. And in other research, patients with “long COVID” may suffer from skeletal muscle weakness and exercise intolerance months after diagnosis, reducing functional movement and potentially contributing to malnutrition.

COMBATting MALNUTRITION

Not surprisingly, malnutrition leads to numerous negative consequences in addition to those discussed above:

- Longer recovery times from illnesses
- Increased risk of medical complications
- Greater number of hospital readmissions
- Higher medical costs
- Loss of muscle mass and function
- Weakened immune system
- Increased risk of mortality

Clearly, one of the most important priorities as a CDM, CFPP is to provide foods that nourish older adults and prevent these risks. Here are 12 strategies to help you do so:

1. Offer energy-dense snacks between meals.

Many older adults experience decreased appetite and/or increased feelings of fullness. Smaller meals can be balanced with calorie- and protein-dense snacks in between.

For example, Katie Dodd, MS, RDN, CSG, FAND, Owner of The Geriatric Dietitian, often recommends high-calorie shakes: “I’ve found that even when an older adult can’t take another bite of food, they can still sip on a tasty shake. High-calorie shakes served in-between meals can increase the caloric intake of an older adult, preventing unintended weight loss.”

Your department could even host a weekly smoothie event where residents can gather in the afternoon and get made-to-order shakes.

2. Encourage community.

Social isolation increases the risk of malnutrition, so encouraging residents to eat together and/or with visiting family members can help increase intake. Clearly, spikes in infection rates during the pandemic have made this challenging, but providing group meals in a safe setting should be a priority whenever possible.

3. Act like a detective.

Residents that are at risk for malnutrition may exhibit unconventional signs. Channel your inner detective and ask questions. For example, if you frequently see a resident near the dining area outside of mealtimes, could they be hungry between their meals but are simply not verbalizing it? If a resident is sitting in the dining area but not eating, do they know how to use their utensils? Starting conversations can help identify problems.

4. Use a food-first approach when possible.

Supplements may certainly be helpful, but a food-first approach is often ideal—and one that a CDM, CFPP can truly help execute. You can create menus that are appealing, well-seasoned, and filled with nutrient-dense foods.

Lisa Andrews, MEd, RD, Owner of Sound Bites Nutrition, offered up advice: “Patients often experience taste burnout from oral supplements—but may be able to get nutrients in with

common foods like peanut butter sandwiches and milk, cottage cheese and fruit, or hard-boiled eggs and crackers.”

5. Create an appealing dining experience.

Take a look at your dining area. Is it comfortable? Is there adequate light for residents to see their food? Is there enough contrast between the plate and tablecloth to differentiate food? Does the menu have enough variety in color, flavor, and texture? All of these may be useful in setting residents up for a positive eating experience.

You could also consider a more unconventional experience, setting up the dining area similar to a restaurant where staff take and serve orders. While budgets may not allow for this at every meal, it could be done once a week at dinner for a special experience.

6. Consider feeding assistance.

Feeding assistance may be comprised of several different types of interventions:

- Provide finger foods. Conditions like Alzheimer’s disease can make it difficult for patients to remember how to use utensils. Finger foods allow these patients to self-feed while maintaining dignity.
- Consult with occupational therapy, who may be able to provide adaptive equipment to help residents maintain their ability to self-feed.
- Provide verbal cues to residents during mealtimes to remind and encourage them to eat.
- Have staff trained to provide “handfeeding” techniques for residents with dementia. This could include “direct hand,” where the caregiver is feeding them with the utensil and no involvement of the patient, or “under hand,” where the caregiver places their hand under the resident’s hand to help guide them. Research suggests both methods increase caloric intake.

According to Jennifer Makin, RD, LD, feeding assistance “allows those with advanced dementia to respond with action to cues such as, “let’s use this spoon,” or “doesn’t this ice cream look great?” The subtle assistance provided allows for preserved dignity.”

7. Ask about liberalized diets when needed.

Some long-term care residents are put on restrictive diets due to chronic health conditions like hypertension or diabetes.

However, when diets are less restrictive and provide more food choices, residents may be more likely to maintain nutritional intake.

Dodd explains: “It’s important to liberalize diets of those in LTC to prevent the occurrence of malnutrition. Many older adults experience poor appetite, decrease in the ability to taste, and just don’t eat as much as they used to. Providing therapeutic diets that aren’t appealing to an older adult can lead to decreased intake and unintended weight loss. Taking an older adult off therapeutic diets can help ensure they get the nutrition they need to thrive.”

Andrews echoed these sentiments: “Advocate for the patient and talk to their doctor about a more liberal diet. It doesn’t make sense to restrict someone’s diet then have to add an oral supplement because they’re not eating.”

The position paper from the Academy of Nutrition and Dietetics on *Individualized Nutrition Approaches for Older Adults: Long-Term Care, Post-Acute Care, and Other Settings*, drives home this point in their summary: “Given that many older individuals are at risk for malnutrition and may have different therapeutic targets for blood pressure, blood glucose, and cholesterol than younger adults, a regular or liberalized diet that allows for resident choice is most often the preferred initial choice.”

As a CDM, CFPP, you can consult with the doctor or dietitian to voice any concerns. You are often on the front-line during mealtime, seeing the resident’s true intake and hearing their feedback about their diet. If you see or hear things that may put the resident at risk for malnutrition, it’s valuable information to communicate to the patient care team.

8. Try fortifying foods.

In a study of Canadian hospital foodservice directors, only 49 percent noted practices for fortifying foods and beverages. Yet this can be an impactful way of combatting malnutrition when planned with the dietitian.

Dodd explains: “When appetite is poor, it is helpful to maximize the amount of calories in the same volume of food. Adding high-calorie foods to what they are already eating can be a beneficial way to combat malnutrition. For example, you can add butter or olive oil to vegetables or grains, or add dry milk powder to milk, shakes, and soups.”

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Other ideas include peanut butter mixed into oatmeal, avocados added to smoothies, ricotta mixed into pasta, olive oil for dipping bread, and nuts or seeds used in baked goods.

9. Embrace culinary creativity.

A Food in Health Care Working Group of the Canadian Malnutrition Task Force (CMTF) developed guiding principles in food service to prevent malnutrition, one of which is “balancing clinical credibility with culinary quality.” As the aging population grows and becomes increasingly diverse in future years, the need for expanded culinary creativity from different regional and cultural cuisines will be of growing importance to encourage adequate intake.

10. Continuously reassess.

Just because a resident arrives without malnutrition, it unfortunately doesn’t mean they’ll remain that way. Changes in health (physical or mental) could trigger the pathway to malnutrition. Karolin Saweres, RDN, LD, emphasizes that “the nutrition care plan is a continuous process. Positive or negative outcomes are monitored and revised as needed.”

In addition to assessing patient outcomes, don’t forget to also address patient satisfaction. Research suggests this is underutilized in hospital and long-term care settings—but you can often get impactful information from simple satisfaction surveys or conversations with your residents.

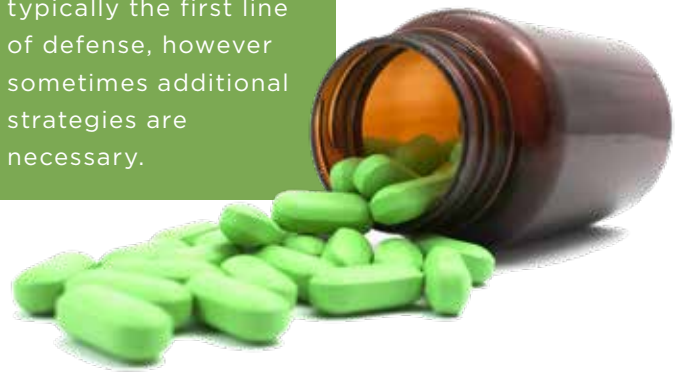
11. Understand the value of oral nutrition supplements.

Traditional food interventions are typically the first line of defense, however sometimes additional strategies are necessary (especially in the case of moderate to severe malnutrition). In these cases, the doctor or dietitian may order oral nutrition supplements.

Most research supports a positive impact of oral nutrition supplements. For example, a meta-analysis in *Clinical Nutrition ESPEN* found that oral (and enteral) nutrition support interventions led to a 30 percent reduction in mortality among malnourished non-critically ill patients compared to those not receiving such interventions. Similarly, a study in *Geriatric nursing* found that oral nutrition supplements improved intake and increased weight among people with dementia.

High protein strategies and long-term interventions are thought to be most beneficial. In addition, oral nutrition supplements are

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typically best served between meals (rather than a replacement for a meal itself).

These supplements include drinks, bars, or even ice creams. In fact, ice cream supplements were widely accepted and increased caloric intake in a recent study. They may be particularly useful among those suffering from a loss of taste and smell, as the cold smooth texture and sweetness are welcomed.

12. Work collaboratively with other departments.

Many healthcare providers play a role in reducing the risk of malnutrition:

- Nursing can report on feeding difficulties for patients eating in their rooms.
- Dentists help with tooth issues or dentures, which affect the ability to eat.
- Speech-language pathologists are useful for residents who are having issues swallowing.
- Recreation directors encourage physical activity, which preserves muscle mass and functional ability, and increases appetite.
- Psychologists or therapists can help residents work through depression or anxiety.

When it comes to malnutrition, a village is needed.

THE BOTTOM LINE

Malnutrition is a widespread problem in long-term care, perhaps now more than ever because of the COVID-19 pandemic. As a CDM, CFPP, you are in a unique role to creatively and collaboratively reduce malnutrition risk. Don’t be afraid to try new strategies, like incorporating new nutrient-dense menu items, working with the dietitian on fortified food strategies, or voicing concerns about restrictive diets. ■

REFERENCES: This Level III article contains a lengthy list of References. If reading the digital Edge, click the following link for these References. For print readers, type the following in your browser: www.ANFPonline.org/docs/default-source/edge/nc032022-references.pdf

CE Questions | NUTRITION CONNECTION



This Level III article assumes that the reader has a thorough knowledge of the topic and the ability to apply the concepts. The desired outcome is to evaluate application and create continuous quality improvement into best practice.

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Reading *Malnutrition: Challenges of the COVID-19 Pandemic and Strategies for Moving Forward* and successfully completing these questions online has been approved for 1 hour of continuing education for CDM, CFPPs. CE credit is available ONLINE ONLY. To earn 1 GEN CE hour, access the online CE quiz in the ANFP Marketplace. Visit www.ANFPonline.org/market and select “**Edge CE Articles**” within the Publications Section. If you don’t see your article title on the first page, then search the title, “*Malnutrition: Challenges of the COVID-19 Pandemic and Strategies for Moving Forward*.” Once on the article title page, purchase the article and complete the CE quiz.

- Which term refers to age-related loss of muscle mass which may decrease functional abilities?
 - Dementia
 - Sarcopenia
 - Dyspnea
- Which of the following is *false* regarding malnutrition and COVID-19 infection outcomes?
 - Research has linked malnutrition to increased in-hospital mortality
 - Some studies have linked Vitamin D deficiency to increased severity of infection
 - Malnutrition results in fewer COVID symptoms compared to those without malnutrition
- Based on the research in the article, at one month after COVID-19 infection, approximately what percentage of adults still experience malnutrition?
 - 5 to 10 percent
 - 30 to 40 percent
 - 70 to 80 percent
- Which term describes strategies like holding a utensil and feeding a resident or guiding their hand with yours?
 - Handfeeding techniques
 - Fortification
 - Oral nutrition supplementation
- One of your residents has mild malnutrition. Recently, you notice that they’ve been coughing a bit during meals and complaining that it feels like something is stuck in their throat. They seem to be eating less because of this. What would be the *best next step* to take?
 - Provide them with oral nutrition supplements for an easy way to get more calories
 - Talk to the doctor to recommend a referral to a speech-language pathologist for a swallow study
 - Add higher calorie snacks between meals
- One of your residents is on a low sodium diet for hypertension. They complain that the food “has no taste” and you’ve noticed they are eating less and less each week. Which would be the *best next step* to take?
 - Switch them to a liberalized diet yourself
 - Ignore the issue—the doctor will notice if their weight drops
 - Consult with the doctor or dietitian to explain your concerns
- One of your residents has mild malnutrition. They are on a regular diet with no dementia and no dentition issues. They enjoy pasta dishes and soup. They receive oral nutrition supplements but tell you they “hate drinking them.” Which of the following would likely be the *best* nutrition strategy to try next (as recommended by the dietitian)?
 - Place the resident on tube feeding
 - Fortify their pasta and soup with olive oil/dried milk powder and provide additional snacks
 - Double the oral nutrition supplements

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