



the

JOURNAL

of the Pennsylvania Osteopathic Medical Association
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COVID Pandemic Report Card



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FROM THE EDITOR'S DESK

Mark B. Abraham, DO, JD



Mark B. Abraham, DO, JD
Editor-in-Chief

When I thought of the theme for this issue, I knew exactly what I was going to write. The difficulty was going to be making sure I kept editorial length as opposed to *War and Peace*. However, I now offer a disclaimer. Everything in this editorial is my opinion and has been. Ask any number of friends and family with whom I have debated since March 2020. Why the disclaimer? My goal was to keep specific political points/sides/parties out of it. Lo and behold, we now have a candidate for US Senate here in Pennsylvania using some of the same language and examples in commercials and speeches.

An obvious problem was politics. It doesn't matter which person or side or party did what; the problem was that it played a role at all. This always should have been about public health. It wasn't. Some of the pieces you will read address specifics. If you don't agree with the specific authors, please write in.

Politics wasn't just party. It was much deeper than that. One issue dates back to the Affordable Care Act aka ObamaCare. The politics is not what you might think of, the issues publicly debated since the ACA was passed. I am referring to the politics of medical societies and specialty colleges.

After passage of the ACA, I received an email from an organization. The email read that while there were a lot of problems with the ACA, it was a start towards ensuring health care for all. The organization felt it important to get behind the ACA because, and I am paraphrasing, if the organization wanted a "seat at the table" (the quote stood out to me) in future discussions; they needed to back the ACA. What?! At the time I was not quiet as I read it. Backing something just to maintain a seat at the table does nothing more than let the government and politicians know that the medical societies will rubber stamp these issues in order to continue to maintain that seat at the table. Sadly, I received other emails from other organizations stating essentially the same thing.

Fast forward to 2020 and 2021. The idea that we need to "follow the science" crumbled. The CDC had the research, published their opinions/advice, then politics intervened and voila the CDC changed. Once that happened organizations and specialty colleges then voiced support for the CDC. Research didn't change.

Science didn't change, not in 48-72 hours. Politics intervened and the organizations went along. At that point the "expert talking heads" were interviewed on ALL channels/networks and parroted back the position a college or organization was taking — one designed to appease the political establishment. A glaring example, one important to me having a middle schooler, was with children, schools and transmission. What would have happened if the Chairperson of a pediatric hospital in the USA, who is also a leader in a pediatric professional organization stood up and said "NO. The position is WRONG." That Chairperson would likely lose the position within the hospital and organization. Everyone needed a seat at the table.

What else went wrong? When we treat patients, we have a plan. We diagnose, we have a treatment plan and we have a plan for recovery. Depending upon the illness or disease, it might be very simple — fluids, rest, antibiotics, symptom control. It might be complicated — radiation, surgery, chemotherapy, nutrition, psychologic, rehabilitation, etc.

For a pandemic, there was one a goal — people not dying in the streets, EDs and ICUs being overrun where patients couldn't receive treatment for anything and ultimately developing a vaccine. All very important. But also only one step. Where was the rest of the plan? In military parlance, what was the exit strategy? What came next? This is a virus. We are stuck with it.

Medical science has eradicated only one virus from the population, yet it survives in a few select labs — small pox. Polio — there are still cases every year across the globe. They are few, but there. HIV, still with us. Great therapeutics, but the virus continues. Measles, Mumps, Varicella, all continue. CDC, NIH, NIAID, etc., leaders in Washington or the states, didn't make the attempt to educate the people about the reality of the virus. In fact, the actual messaging led people to conclude that the virus would be eradicated. Leaders from both parties communicated that message.

There was no strategy for helping us move forward. We see that now. Hysteria over "Omicron" despite the data showing that the Omicron variant is not as dangerous, vaccinated or not, and even less dangerous, especially if

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Samuel J. Garloff, DO, WGRP

Counter-Point, Needlepoint, Endpoint

Dr. Abraham, I totally enjoyed your editorial. It reminded me of a conversation I had 45 years ago with my old friend Gary, now an emergency physician in Delaware. We were having dinner at Kimbrough Army Hospital, Ft. Meade, Maryland and I was ranting about the problems I encountered that day. His response brought me up short. "You know what your problem is? You expect the system to work."

I have elected to bypass the logorrhea of government agencies, choosing instead to focus on the CDC. Like you, I will start with 2020. Specifically, addressing SARS-COV-2 and the CDC. Since the pandemic straddles two administrations, I will divide my comments between the previous administration (PA) and the current administration (CA). Like you, I must add a disclaimer. I briefly worked with the former CDC director Dr. Robert Redfield at Walter Reed Army Medical Center, Washington, DC. I can accurately state, neither one of us impressed the other.

The PA Era...

Dr. Redfield was director of the CDC at the onset of the pandemic. Unlike me, he remained in the military and progressed in rank. He became prominent in HIV/AIDS research and spoke internationally. Until the early 90s. He was involved in a scandal over a purported HIV vaccine. He was alleged to have oversold data and cherry-picked results. The Army investigated. Ultimately, the Army did not charge him with scientific misconduct, but internal documents suggest knew he was misrepresenting data. Additionally, the Army found him to be in violation of Army code because of his relationship with an outside AIDS non-profit group. Details of these activities are well documented and easily accessible to anyone interested. Hundreds of millions of dollars later, the purported vaccine failed. He "stands by his work."

Of course, he was a logical choice to head the CDC. Under his leadership, the CDC refused COVID-19 test kits from European countries stating that the CDC would develop their own. The result? Humiliating failure. Did our fellow citizens die as a result? You decide.

Don't worry about our former director. He is now gainfully employed by Big Ass Fans. No, I did not make that up. For a mere \$9,450, they will sell you a fan that has ion-generating technology that kills the coronavirus. Don't believe it? Ask Dr. Redfield!

The CA Era...

Dr. Rochelle P. Walensky is the current CDC director. I was initially impressed since she addressed the public directly, frequently and without the presence of the president. My heart skipped beats!

Then came confusing, seemingly mixed messaging. Initially, I laughed off these remarks to myself saying, "consistency is the hobgoblin of small minds." Then I came across a publication of the CDC released earlier this year entitled, "Preferred Terms for Select Population Groups and Communities."

Fasten your seatbelts. Words we are now no longer to use are: elderly, prisoners, disabled, differently abled, alcoholic, etc... Instead we should say: elder, a person who is incarcerated or detained, people who are blind or have low vision, people who use a wheelchair, persons with alcohol use disorder, etc...

Mothers and Fathers are now collectively parents, avoiding gender assumptions. No more "his and hers". If you agree with your "gender assigned at birth", it makes no difference. We are to use the singular "they and their". Gone are the poor and homeless, we should say "people with lower incomes" and "people who are not securely housed".

Realistically, when an agency engages in urgent work like this, who has time to focus on a pandemic?

Disheartened? Don't be. I spent years telling my fellow physicians not to believe that one political party favors us or will champion the cause of medicine. I don't try anymore. Perhaps the CDC will eventually describe us "physicians unable to learn from repeated history". They would be right.

Conclusion...

"Clowns to the left of me, jokers to the right..."

You know what your problem is Dr. A? You expect the system to work.



Samuel J. Garloff, DO

A STUDENT'S VOICE

Erica Redmann, PCOM OMS-II and Chelsey Hanson, PCOM OMS-IV

Viral Lessons: What the Pandemic Has Taught Us



*Erica Redmann,
PCOM OMS-II*



*Chelsey Hanson,
PCOM OMS-IV*

It has been nearly two years since the coronavirus has infiltrated the public and consumed the lives of many. Initially, there was little understanding about this novel virus, leading to confusion about how to proceed. Our communities experienced unprecedented upheaval at work, in schools, and in their personal lives. Healthcare workers, government officials, and the public did their best with limited resources and scant information. While we continue to battle COVID-19 and learn more about the virus, there is much we can reflect upon to improve our response to future pandemic situations. It is important to consider how inconsistent dissemination of information and policy formation limited our ability to effectively contain the virus. We must also assess populations of low socioeconomic status and minority groups, as they were disproportionately harmed by the effects of the pandemic.

As mentioned previously, knowledge surrounding the coronavirus was limited, making it difficult for public health officials to construct and enforce appropriate recommendations for the public. Eventually, research resulted with insight, and we reached a consensus regarding mask wearing and social distancing guidelines. However, such policies were heavily politicized. States and local governments created policies that directly clashed with federal recommendations made by experts. This made coping with the spread of COVID-19 more difficult for the public, as there was lack of solidarity in terms of which policies to adhere to. Presenting such mixed messaging sowed mistrust in government officials and health experts alike; this was one of several factors that fueled rampant misinformation about the virus. The lack of guideline uniformity was mirrored in how disease spread varied in different areas. Large cities with strict social distancing helped to contain the virus while other locations banned the use of masks and contributed to the increased incidence of disease. Moreover, in places with little to no restrictions we saw the coronavirus spread rapidly, overwhelming hospitals and healthcare workers.

The pandemic has undoubtedly been difficult for everyone in unique ways, but the

event has highlighted certain flaws within our healthcare system. Underserved areas and minority populations have been disproportionately affected by COVID-19. The pandemic has worsened both local and global inequities as well as highlighted existing disparities. Wealth inequality has been a significant factor in how people have been affected by the pandemic. Those with means to escape a crowded city, for example, could continue to work safely from their home.¹ In stark contrast, millions of working-class individuals lost their jobs or were considered “essential workers” and thus had to risk their lives to continue putting food on the shelves of grocery stores or taking care of the sick. Wealth inequities are apparent worldwide as well: in the US, adults are eligible for a booster dose of the COVID vaccine because the country can afford millions of doses, while many living in developing countries have not had the chance to receive any doses due to limited government resources.²

At home and abroad, many of the effects of the pandemic are heightened for racial and ethnic minorities. Within our own country, members of these minority groups are put at increased risk: they are more likely to work in jobs that are considered essential, forcing them to interact with potentially infected coworkers and customers. There is also a greater chance that they reside in more crowded living situations, making spread of the virus riskier at home. In addition, they are less likely to have adequate insurance, making it probable they will avoid or delay seeking medical care.⁴ Globally, countries with inadequate access to vaccines and underprepared healthcare systems are statistically non-white. While there are obvious humanitarian motivations to improve these inequities, there are self-serving ones too: as the virus spreads through the largely unvaccinated populations of the global poor, it can mutate and become more virulent and better able to evade the protection of the vaccine.

Centralizing future pandemic response would be an effective way to combat the issue of misinformation, most effectively curtail the spread of an infectious disease, and maximally equalize the economic and health effects of a pandemic. Having a centralized task force that

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Dr. Beck, Meet Epictetus

WGRP here. This is not the article I wanted to write to end the year. I know this is not the topic our editor selected. So many fertile events took place in 2021 that, in my mind, beg for psychiatric input I confess to feeling overwhelmed. However, recently we have been deluged with articles about CBT and Aaron T. Beck, MD. With humility and respect for Dr. Beck, I can stand no more. No more. No more...

A little background may shed light on my feelings concerning this topic. During my time of active service to our association, yearly at the inaugural banquet, I sat next to a trustee of the Beck Institute located in Bala Cynwyd, Pa. Each year I was asked questions concerning my views and understanding of CBT. Each year the questions were the same. Each year the answers were the same. At the conclusion of this ritual, my seat-mate would nod his head gravely and concede that my answers were appropriate.

He never asked my true feelings about CBT and I never volunteered them. Why? I liked my inquisitor.

CBT is currently touted as the go-to treatment for all mental health issues. The work initially done by the Beck Institute has been more or less replicated by w/e certification groups across the country, not to mention the internet. The value of these seminars is, to me, quite suspect. The appropriate utilization of CBT by their graduates, again only to me, even more so.

Am I saying that CBT doesn't work? No I am not. But I think it's appropriate to frame it correctly. Dr. Beck, as Dr. Ellis before him wished to debunk psychoanalysis, and Freud. Time and space prevent full review of their theories, but they can be easily accessed by those interested.

Dr. Beck in particular attacked Freud's concept of depression which was derived

by dream analysis. How was this debunking accomplished? By dream analysis! You see, dream analysis wasn't the issue, the accurate interpretation was. In fairness, I have not researched their statistical analysis. Maybe I should. Bluntly, I know I won't. I have no interest in besmirching the basis of CBT.

In short, CBT teaches that thought influences feelings and behavior. Ok. Ever hear of the Serenity Prayer? Reinhold Niebuhr 1892-1971 is the author. It was first published in 1951. It was written in 1932. Most people recite only the first lines:

"God, grant me the serenity to accept the things I cannot change, courage to change the things I can, and wisdom to know the difference."

Hmm, thought, feeling, behavior? Wow, did Niebuhr give rise to the concept of CBT?

Well, no. Let's go back a few thousand years. Zenoism. Zeno of Citium laid the foundation of what was to become known as Stoicism. (You may wish to read about Stoa Poikile. I'm kidding, it's not important).

Famous scholars of Stoicism include Marcus Aurelius, Seneca and Epictetus among others. Stoicism is based on logic. It's goal? Virtue. "Virtue is the only good". Stoics viewed the world logically. They tempered their feelings with logic and behaved in a way to be virtuous. Thoughts, feelings, behavior. Sound familiar? To quote the Stoics, "Virtue is Happiness".

In the spirit of "everything old is new again", I will point out that Christianity killed Stoicism, branding it a cult. Then again we recite the Serenity Prayer. We also adhere to the teachings of CBT. Because, well, Dr. Beck invented it.

Me, I'm a fan of Epictetus. He was a Stoic. He was a scholar. He was a slave.

Rest In Peace Dr. Beck. Please.



Samuel J. Garloff, DO

Lake Erie College of Osteopathic Medicine

Unknown Unknowns — The COVID-19 Pandemic Has Been Instructive to the Medical Community



*Silvia M. Ferretti, DO
LECOM Provost,
Vice President and
Dean of Academic Affairs*

"If we knew what it was we were doing, it would not be called research, would it?"
—Albert Einstein

After former United States Secretary of Defense, Donald Rumsfeld explained his risk management assessment rubric, many savvy people in leadership positions took it to heart.

"There are known knowns, things we know that we know; and there are known unknowns, things that we know we don't know. But there are also unknown unknowns, things we do not know we don't know." These — the last of the three — Rumsfeld explained, are the "most dangerous."

The COVID-19 pandemic, the whole of it, from the earliest rumblings of the emergence of a highly transmissible virus — where it derived, how it was formed, intent or accident, and the like — has been swirling solidly in the unknown, unknown category.

From its origins to those affected, from the questions about masking, not masking, or what ages to mask, every aspect associated with all things COVID have been mired in murk.

From how to treat the early cases when ventilators abounded, to how to administer therapies to those afflicted with Long-COVID, from questions over the harm or benefit of drugs such as Hydroxychloroquine or Remdesivir, from the studies assessing COVID-19 death rate, infection spread, the harm or benefit of monoclonal antibody treatments — uncertainty and understandably complex research assessments have been the order of the day.

Enter the vaccines, multiple vaccines, each of which raise a host of more and deepening questions. How long are these new vaccines effective, how effective are they against the COVID-19 variants, are there side effects, why are people still contracting COVID after having been vaccinated, are the vaccines causing the virus to mutate more rapidly?

Indeed, the foregoing establishes a paltry list of the spiraling questions, each seemingly generating a new and more expansive line of query demanding of further research.

Undoubtedly, research appears as the watchword of the new age. As Neil Armstrong interestingly noted, "Research is creating new knowledge." It is in fact, formalizing curiosity.

The era of COVID — its variants, vaccines, treatments, and therapies — has presented to the medical community the challenge of a generation. The unknown unknowns remain, perhaps somewhat lessened now after almost two years of experience and research.

Looking back, there are several areas in which improvements could have been made or procedures could have functioned differently to better the healthcare options of communities clamoring for knowledge and understanding of the virus.

Because the nature of the healthcare crisis was so inextricably intertwined with government and government agencies, valuable communication was absent within the clinician setting. The sputtering dissemination of top down information caused physicians and healthcare providers to be garnering precious medical details from news sources and the media.

Perhaps as a result of the foregoing, doctors and medical societies were limited or faced hurdles in learning from one another and from sharing their experiences during the crisis.

Additionally, because the vaccine was experimental and because the government was exceedingly involved in its production, physicians and healthcare workers were not fully engaged in the process. This resultant lack of involvement by physicians and healthcare professionals has had a markedly deleterious effect upon the overall success of combating the pandemic.

Looking ahead, it is clear that the underlying importance of higher education, of science, of properly applied technology, of unyielding research, and of probative scholarship will improve quality of life, strengthen the economy, and will deliver societal betterment across many dimensions.

Research constitutes the culmination of medically based investigations and in-depth
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PCOM DEAN'S CORNER

Philadelphia College of Osteopathic Medicine

With any crisis, a key step in evaluating the success, or failure, of your response is to look back and take inventory. As we approach our third year of the global pandemic, it is hard not to reflect on the choices made and not made — travel restrictions enforced more broadly, mitigation efforts made sooner, public health guidance communicated more clearly — and wonder what could have been done better.

Physicians are probably more apt than most to look at a complex problem and consider a number of approaches to solving it. With a crisis on the scale and complexity of a worldwide pandemic, there is obviously no singular way to address all of the elements inherent in this situation. There are, however, certainly ways that we could have been much more prepared for a health challenge unlike any we have seen in a century.

To begin, as health professionals, we could have — and should have — recognized the risk for such a catastrophic global health crisis. Understanding, even at a basic level, how viruses of this nature move from person to person, it is perhaps surprising that it has been over 100 years since we've seen anything like this. Many, of course, did see this coming and sounded the alarm bells, but it was far too few and with too little noise. We have to be better prepared for the next pandemic and, more importantly, better prepare the public for this eventuality.

Clear communication from our elected political leaders, global, national and local public health officials, physicians and other experts must continue to be a priority. With the tenor of our current political discourse, the public is forced to filter through often conflicting and contradictory messaging and make critical, sometimes life-saving medical decisions with

inaccurate or downright false information. This isn't the way to achieve success against a virus that doesn't care on which side of the political spectrum you land.

Not only does our communication with the public need to improve, so, too, does our coordination. Over the course of the last three years, as new information has become available and new treatments developed, the trickle down of these breakthroughs to local communities has taken valuable time. We need to move faster than the virus if we're going to be successful, and it's critical vital resources are delivered quickly and efficiently.

Lastly, and arguably most importantly, we must continue to give our patients the tools to manage their health and well-being. Our role as physicians is not only to evaluate, diagnose and treat our patients, but also to work with them as partners in their care. In the tradition of the osteopathic philosophy, we have to educate our patients that to treat one infliction is to treat them all.

As a global community, we have faced enormous challenges over the last three years and we are certainly not yet out of the woods. As physicians, these challenges have tested us even more than most, but we have an important role to play in how the public responds when moments of challenge arise, particularly and especially when they are health-related. As I noted earlier, there was no right way to respond when the pandemic knocked us all to our feet in early 2020, but three years in, we have learned valuable lessons about how to move forward and how to prepare for the future. Let's continue to take those lessons into our work and come out on the other side of this moment better prepared — as physicians and as people.



*Kenneth J. Veit, DO
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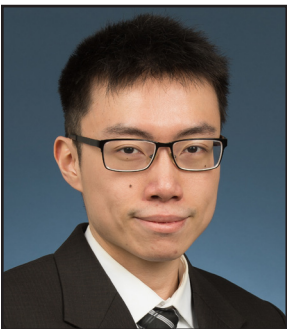
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Lucky Ly, DO



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Medical Update

Post-Lingual Hearing Loss and Depression in Younger Populations

Introduction

This literature review aims to synthesize the current information regarding post-lingual hearing loss and depression in younger populations. While many studies have highlighted the effects of hearing loss on the elderly, fewer studies have focused on younger populations. Around 466 million people worldwide have hearing loss with over 34 million being children. While hearing loss is more common in the elderly, younger populations with hearing loss often feel a sense of social exclusion over time due to their “invisible handicap”. This isolation could seemingly correlate with an increased risk of depression. Depression affects more than 264 million people worldwide. Both depression and hearing loss result in high numbers of years lost due to disability worldwide. A small percentage of studies have focused specifically on the correlation of adolescent and young adult hearing loss with depression. By highlighting the current gaps in research, future studies may be able to fulfill these voids. Studies chosen for this literature review include those with subjects whose hearing loss occurred after the onset of speech and are aged 3-50 years old.

Methods

A PubMed (<http://www.ncbi.nlm.nih.gov/pubmed/>) search was conducted using the following query on August 20, 2019: (“hearing loss” OR “hard of hearing”) AND (“depression” OR “depressive disorder”). Initially, 35 results were identified. Titles and abstracts were manually screened for studies involving populations aged under 50 and their relation with hearing loss and depression. Whole text versions were then screened for studies that fulfilled all criteria including performed in the last 20 years, evaluating depression and focusing on post-lingual hearing loss. Ten studies were ultimately chosen for this literature review.

Hearing Loss and Depression

Given the surplus of studies demonstrating the association between hearing loss and de-

pression in the elderly, it was only a matter of time until studies started to focus on younger populations. In recent years, multiple studies have focused on this once under studied area. In 2017, Kim et al. found that when comparing those with severe hearing-impairment to a control group that rates of depression were significantly higher (7.9% vs 5.7%). In subgroup analysis by age, those aged 0-29 years were at increased risk of depression despite gender. In a similar study by Li et al. (2013) found that the prevalence of depression in the hearing impaired was 9.0% in males and 14.7% in women, significantly higher than those with normal hearing. Hsu et al. (2016) also found similar results in subjects aged under 49 years of age with a significant relative risk of depression compared to their hearing counterparts.

While these studies helped illuminate the problem in younger populations, other studies have exclusively studied adolescents and young adults. In a 2018 study by Akram et al., subjects aged 18-35 were chosen from colleges and a deaf association. The study revealed a positive and significant relationship of suicidal ideation with hearing loss severity. When comparing how depression presents in hard of hearing youth compared to their hearing counterparts, Bozzay et al. (2017) found that hard of hearing youth were more likely to report a psychosomatic response and less likely to report an affective item when using the PHQ-9, one of the most commonly used screening tools for depression. The PHQ-9 is made up of nine questions which are used to assess for the nine affective, cognitive and somatic symptoms that characterize depression in the DSM-V. Despite these differences in reporting, PHQ-9 was found to be a valid tool when monitoring the hard of hearing youth.

Pre vs. Post Lingual

The timing of when hearing loss occurs is one of the most vital factors when looking at mental health. Hearing loss is divided into two separate categories of prelingual and post lingual with the age of three being the sepa-

by Mitchell
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ration line. Although two subjects may have the same degree of hearing loss, the timing is a much bigger prognostic factor for their mental health. In the 2002 study by de Graaf, subjects with prelingual hearing loss had a higher degree of employment, higher rated speechreading skills and higher frequency of interactions with other hearing impaired people. Those with postlingual hearing loss felt more handicapped by their hearing loss and reported more problems with their hearing impairment in daily life. This study used the commonly used and accepted General Health Questionnaire which is composed of 12 questions screening for depression. When using the standardized GHQ-12 scale of depression 29.2% of the prelingual and 46.9% of the postlingual category were scored as being in mental distress. Similar results were found by Ciesla et al. in regards to those with postlingual hearing scoring lower in the domains of social activity and social interaction, but not in regards to depression scores. These results reflected that despite similar degrees of hearing loss, those in the prelingual group subjectively perceived their hearing limitations as less debilitating and were less prone to social isolation.

Degree of Hearing Loss

While studies have demonstrated significant differences in regards to the impact of hearing loss on depression, there seems to be no difference based on the severity of hearing loss. In the 2011 study by Theunissen et al., when degree of hearing loss in children was broken down to moderate (40-60dB), severe (61-90dB) and profound (>90dB) there were no statistical differences in the correlation to depression. In the 2019 study by Idstad et al. actually found that women with slight hearing loss (16-25dB) experience higher degrees of depression than hearing women and women with more extensive hearing loss. The authors hypothesize these results could be due to the fact that “maybe it is more exhausting to have limited hearing and to always try to hear what people say than to be in the stable condition of hearing close to nothing”. In his 2004 study, Tambs found similar results that depression was correlated higher in those aged 20-44 in both males in females when hearing loss was somewhat impaired (20dB) compared to profoundly impaired (>80dB). He hypothesized that “the experience of a gradual hearing loss may well feel more painful than a more severe but steady hearing loss to which one has adapted.”

Low vs. High Frequency

Just as there is not a linear progression with degree of hearing loss, similar results have been found regarding frequency of hearing lost. When comparing Low-Frequency (0.25-0.5kHz), Middle-Frequency (1-2kHz) and High-Frequency (3-8kHz), it was found that only low-frequency hearing loss showed significant effects on mood. These results showed that although medium frequency hearing may be more important for understanding speech, the preservation of low frequency hearing was more vital for preventing “harmful events regarding communication.”

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Cochlear Implants and Hearing Aids

Another important factor when looking at hearing loss and depression is the use of cochlear implants and hearing aids. These differences were examined in the 2015 study by Theunissen et al, which showed despite participants with cochlear implants having more severe hearing loss they had lower levels of psychopathological symptoms than children with hearing aids. These results were attributed to the intensity of the rehabilitation program that is received with cochlear implants compared to conventional hearing aids. When Theunissen et al looked into depression and type of hearing device in 2019, they found no statistical significance when comparing the cochlear implant and hearing aid groups.

Conclusions

While there remains a lack of research regarding younger populations and hearing loss, the current literature shows that those with post lingual hearing loss present a higher risk of developing depression compared to those with prelingual hearing loss and their hearing counterparts. Those with postlingual hearing loss, despite severity of hearing loss,

are an at risk population that should be closely monitored for the emergence of depressive disorders. Given their high degree of social isolation, continued sense of loss regarding their hearing and lack of extensive rehabilitation such that is received during the process of receiving a cochlear implant, it is not unexpected that this population would be at risk for developing depression. Future studies are needed to examine time to first depressive episode after onset of hearing loss in addition to examining specific treatment modalities for this population. Such studies could help connect the fields of psychiatry and audiology and provide greater interprofessional treatment for this population.

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Medical Update

Designing a Study to Evaluate Effective Measures in Increasing Quality of Life in Nursing Home Residents

by Lucky Ly, DO

Abstract

This literature review serves as a basis for planning and designing a study to explore factors that influence quality of life in residents with dementia that reside in nursing homes. About 47.3% of residents in nursing homes are diagnosed with some form of dementia. Studies reviewed show connectedness with peers, family, friends, and the environment as one of the highly weighted factors in quality of life. Future studies looking into increasing unit activities and social interactions may show effective means by which to increase the quality of life for residents with dementia living in nursing homes.

Introduction

The number of Americans 65 and older are projected to increase and double by the year 2060 due to the aging of the baby boom generation and with it, a projected increase in the number of elderly requiring nursing home care. Currently, the 2010 census shows that slightly over 5 percent of the population 65 years and older reside in nursing homes. Therefore, it is important as healthcare providers to determine what influences quality of life (QoL) in nursing home individuals and what changes can be made to improve QoL.

Quality of life is a term that has been defined and studied in many different disciplines but is vague and overarching without a clear definition. Brazier defines it as a “broad construct reflecting subjective or objective judgement concerning all aspects of an individual’s existence, including health, economic, political, cultural, environmental, aesthetic, and spiritual aspects”¹ which shows its multidimensional depth but also makes it difficult to study given the many aspects that need to be considered when assessing quality

of life. Arnold states that “because there is no absolute theoretical model of what constitutes quality of life, measures must approximate our understanding of the elements of a very abstract concept.”² Therefore, it is important to begin by discussing assessments by which quality of life can be measured.

Assessing Quality of Life in Different Elderly Populations

There are many instruments created over the past decades that assess quality of life. The assessments are frequently geared towards a specific population and help set goals within these populations. Goals to treatment differ greatly based on factors such as prognosis, treatment risks, estimated life span, symptomatology, etc. The studies reviewed introduce readers to different measures, pro and cons of each assessment, and what populations these assessments apply to. These studies and their lists are by no means complete but offer insight into the availability and interrater reliability of the assessments.

In “Quality-of-Life Assessment in Palliative Care” by Karen J. Brasel³, the author reviews several assessments that are used in palliative care patients undergoing cancer treatment and their uses in directing planning. Below are summaries of the instruments and what they measure:

- Karnofsky Score: Scored from 0-100, a simple, quick, and objective measure in which the performance and function impairment are assessed but prognosis is not based on the underlying disease. The scale gives a general idea of how much time the patient has left and helps define goals in a time-based manner.
- Edmonton Symptom Assessment: Scored from 0-1000 total 0-100 on severity of 9 common symptoms and 1 of the patient’s choice

with 100 being most severe. Mostly used in the hospital setting to assess symptoms twice a day. Disadvantages of this are that it does not measure impact symptoms have on the patients. Can correlate to the Karnofsky score with 0-100 equating to 100 on the Karnofsky score. 100-200 correlating to 80-90, 300-400 correlating to 60-70, and more than 400 correlating to 50 or less on the score.

- Memorial Symptoms Assessment Scale: Scored from 4-point scale for how often a symptom occurred and 5-point scale for how much distress it caused. Measures severity of 32 symptoms as well as distress these symptoms cause the patients. A shorter form of the survey with 18 symptoms reviewed was made as the full version presented significant burden to the patient especially when administered repeatedly. The short form can be correlated to the Karnofsky scale as well but this assessment provides more information about individual symptoms.

- European Organization for Research and Treatment of Cancer Questionnaire: Has 5 functional scales, 3 symptoms scales, and 6 single item scales plus one question about global health status. It measures success of chemotherapy in providing palliation to patients with the following terminal diseases: ovarian, breast, prostate, non-small cell lung cancer where chemotherapy has been shown to improve quality of life in studies.

- Quality and Quantity of Life Short Questionnaire: 4 statements for length of life and 4 addressing quality of life. The assessment helps weigh benefits vs side effects of cancer treatment. Usually younger patients and those with children favor longer length over quality of life.

- Cambridge Palliative Assessment Schedule: 10 cm visual analog scale that is scored by mm. It is similar to the Memorial Symptoms Assessment Scale covering numerous symptoms while maintaining ease of response in the Edmonton Symptom Assessment.

The article endorses the various assessments as a means of setting goals for end of life care and directing the family conference. Ideally, the family conference is something that should be done before it is needed as but in most cases of a medical emergency, the patient may not have the same input, opportunities, or capacity to hold such meetings afterward. In those cases, assessments can help direct and guide care for those patients.

In another study, "Evaluating the Quality of Life of Long-term Care Residents with Dementia" by Philip Sloane, Sheryl Zimmerman,

et al.,⁴ they survey 421 residents in 456 facilities using different scales measuring quality of life in long term care patients with dementia to determine how accurately the assessments correlate to observable findings as well as assessment inter-rater reliability.

The study found that the completion rate of patient-completed assessments was 25-30% whereas provider versions were completed 100%. Inter-rater reliability for the instruments studied was found to be mostly in the good to excellent range but found that validity of the assessments still remain a challenge as quality of life is largely based on theory and values, not scientific inference. Due to variations on values and theory, assessments tend to focus on different domains and differ in scale. The issue of validity is also confounded as correlation in patient and caregiver responses for resident and caretaker versions of the assessments tend to be only mild to moderate. Observational studies tended to correlate more with care-provider report measures than resident reported measures. In conclusion, the study did not find any instrument to be superior in assessing quality of life for long-term care residents with dementia and further development is needed to correctly assess quality of life in patients with dementia.

Both studies introduce number of assessments, each with their own strengths and weaknesses, that can be used to measure quality of life. Each of the studies has a different focus, some placing greater importance to social factors while others depend solely on a patient's function. When attempting to build a study, it is important to consider the population that you are assessing and choose the study that fits best with the general goals of that population. Approximately 50 percent of residents living in nursing homes have some form of dementia and cognitive impairment⁵, it would be major population to study and determine what factors most affect their quality of life. After choosing the appropriate assessment, the next step would be to determine what factors are generally considered important to that population living in nursing homes.

Factors Influencing Quality of Life in Geriatric Populations in Nursing Homes

In "Quality of Life in People with Severe Dementia and Its Association with the Environment in Nursing Homes: An Observational Study" by Palm, Trutschel, Sorg, et al.⁶ they focus on the environment as a factor influenc-

ing quality of life in nursing home patients with dementia.

The study included patients with a diagnosis of dementia, advanced severity of dementia, and that had completed a QoL assessment with at a minimum of one time point. The study excluded residents with missing data on care unit concept or size, those that lived in a residence that changed concepts after first measurement, residents who were moved to another unit, those that lived in a care unit less than 28 days. To assess the environment, they recorded the nursing home characteristics, care unit characteristics, resident characteristics via QoL assessments using the QUALIDEM questionnaire which is a proxy-rating instrument that assesses 18 items in 6 subscales: care relationship, positive affect, negative affect, restless tense behavior, social relations, and social isolation with scales varying from 2-4.

They studied 134 care units and 1,368 residents data over 3 years and failed to find significant differences in quality of life in residents of nursing homes based on care unit type, large and small units with integrated and segregated units were scored similarly using QUALIDEM questionnaire.

In "Quality of Life in Assisted Living Homes: A Multidimensional Analysis" by Mitchell and Kemp⁷, they looked at the impact of four domains on the quality of life of 201 residents living across 55 assisted living homes. Three quality of life measures were used in the study to measure quality of life: life satisfaction measured by the Life Satisfaction Index A, depression measured by the Older Adult Health and Mood Questionnaire, and the Facility Satisfaction questionnaire.

The four domains the surveyed were function and health status, family availability contact, social activities, and facility opportunities for resident autonomy. Function and health status showed a strong correlation between chronic health conditions and depression, lower life satisfaction, and low facility satisfaction. ADLs and IADLs was not significantly correlated with QoL measures apart from IADL dependency being associated with higher facility satisfaction. Social involvement showed family contact and social activity participation correlated with high life satisfaction but not depression or facility satisfaction. Participation in social activities negatively correlated with depression and positive correlated with life and facility satisfaction. Facility characteristics were positively correlated with facility satisfaction with the exception of those receiving SSI who were negatively correlated with life and

facility satisfaction. Social climate measures of cohesion and independence correlated positively with life and facility satisfaction and negatively with depression. Conflict correlated positively with depression and negatively with life and facility satisfaction.

Overall, they found that a cohesive environment, participation in social activities, and contact and visits from family contributed most to improved quality of life for residents in assisted living homes and concluded that a more homelike and warm environment with less conflict with family visits and social involvement were most important to improving quality of life.

In another study, "Factors that Affect Quality of Life from the Perspective of People with Dementia: A Metasynthesis" by O'Rourke, Duggleby, et al.⁸ they qualitatively studied the factors that affect quality of life in people who have mild, moderate, and severe dementia. They used a metasynthesis approach to gather data from other qualitative studies and screened 5,625 titles and 470 full text articles of which 11 studies were included. Exclusion criteria were due to research that was not primary, not with populations with dementia, where QoL according to person with dementia is not a study purpose, mixed perceptions, not qualitative, only asked people without dementia about QoL, not English, and those published before 1970. The study found that the studies reviewed had all included some form of the six critical concepts defined below:

- Connectedness: Being connected to the family, other residents, or other persons with dementia.
- Relationships: Interactions with family, friends, long term care staff, and other residents.
- Agency in life today (purposeful vs aimless): Ability to express one's sense of self and to experience autonomy and independence in day to day living.
- Wellness perspective (well vs ill): How one experienced health, aging, and chronic conditions.
- Sense of place (located vs unsettled): Meaningful attachment between persons with dementia and immediate and surrounding environments.
- Happiness and sadness: Emotions.

The authors felt that connectedness was one's perception of linkage between the one's sense of self and the experiences of the other four concepts, agency, wellness, place, and relationship. Likewise, the authors felt that all concepts that influenced QoL also affected the

emotions happiness and sadness. Limitations of the study mentioned were that the authors did not explore the relation between concepts of wellness and quality of life and how they changed in relation to the stages of dementia. They also felt that importance of happiness and sadness as outcomes of quality of life were overstated as they were frequently included in interview questions and it was rarely addressed how they managed their influence on the research process and results. In conclusion, the meta-synthesis found that how connected a person felt with the concepts of relationships, wellness, sense of place, and agency in life was a positive influence on quality of life and happiness. If a person felt disconnected from the concepts, alone, aimless, ill, or unsettled, it negatively influenced quality of life.

Most studies found that connectivity of the patient with family, friends, other residents, staff, and the environment seemed to have the greatest influence in a resident's quality of life and happiness. Other factors that contribute are overall wellbeing, independence, and attachment to immediate surroundings. After defining important factors determining QoL, reviewing older studies that have adjusted factors in the environment and surveyed changes to quality of life due to the adjustments can give a better understanding to how to design these studies.

Improving Quality of Life in Nursing Homes

In the study "Effects of Mindfulness-Based Stress Reduction on Quality of Life in Nursing Home Residents: A Feasibility Study" by Ernst, Welke, et al.,⁹ they discuss a method of stress reduction called Mindfulness-based Stress Reduction (MBSR) and examine the feasibility and effects that MBSR has on nursing home residents. MBSR is an eight week, cost-effective clinical group program introduced by Jon Kabat-Zinn that focuses on teaching mind and body awareness to reduce physiological effects of stress, pain, or illness, exploration of experiences of stress or distress to develop less emotional reactivity, and aids in developing a state of mind and stability that is undisturbed by change and loss. The workshop entails weekly group meetings, one-day retreats with seven hours of mindfulness practice, homework daily, and instruction on mindfulness meditation, body scanning, and simple yoga classes.

- Short-Form General Health survey, SF-12, consisting of 12 items that allow the calculation of mental and physical health.

- Geriatric Depression Scale (Residential), GDR-12R, consisting of 12 items used to assess mood of elderly residents of nursing and residential care settings.

- Mini-mental Status Test: Series of 11 questions totaling a possible 30 points to determine an individual's level of cognitive function.

- Barthel Index: 10 item instrument to assess activities of daily living

- Visual Analogue Scales, VAS: Scales to rate severity of physical pain and satisfaction with life.

The results showed while SF-12 scores showed improvement in the experimental group, they found no significant difference in SF-12 scores between the control and experimental groups. GDS-12R scores improved in the experimental group and were found to be significantly different from the responses of the control group. The Barthel Index, MMST scores were not significantly different between the two groups. The VAS score showed significant improvement in the experimental group but was not significantly different from those in the control group.

Limitations in the study were small study size, comparison group not receiving a comparable treatment makes it difficult to determine if it was the group interactions vs MBSR responsible for improvement experience by the experimental group some of the measures.

In conclusion, the study found that it may be feasible to conduct a MBSR course in a nursing home as they had a completion rate of 60%. Significant improvements in SF-12 and GDR-12R scores may indicate MBSR having a positive effect on quality of life. However, due to limitations of the study, the authors advise to draw conclusions cautiously.

In "Environmental Determinants of Quality of Life in Nursing Home Residents with Severe Dementia" by Garre-Olmo, Lopez-Pousa, et al.,¹⁰ the authors attempt to determine the relation between quality of life and three environmental factors in nursing home residents with severe dementia. The environmental factors explored were temperature, noise, and lighting. Eligible participants were diagnosed with severe dementia as defined by the Global Deterioration Scale (GDS) with a score of 6 points or higher. Exclusion criteria included diagnoses of mental retardation and schizophrenia. Patients were assessed using the following assessments.

- Quality of Life in Late-Stage Dementia, QUADLID: 11 item, proxy informant based scale that includes positive and negative dimensions of concrete and observable mood

and performance items on a scale of 1-5 with a total of 11-55 points with 11 being the best quality of life and 55 which represents the worse quality of life.

- Barthel Index, BI: 10 item instrument to assess dimensions such as feeding, movement from wheelchair to bed, bathroom use, movement on and off of the toilet, bathing, walking on a level surface, ascending, and descending stairs, dressing, and bowel and bladder control. Scored 0-10 for each item with a total of 0-100 points with 100 being the best score.

- Neuropsychiatric Inventory-Nursing Home, NPI-NH: assesses 12 domains of psychiatric symptoms with a score of 0-12 for each domain and a total score 0-144, 0 representing normal behavior while 144 indicates severe behavioral and psychological symptoms.

- PAIN-AD: observational scale that assesses five items, breathing, negative vocalization, facial expression, body language, and consolability on a 3-point scale. Score ranges from 0-10 with 0 defining no pain and 10 defining severe pain.

Results indicate that high temperatures and many hours spent in the bedroom were associated with higher QUADLID scores meaning lower quality of life. High noise levels in the living room were associated with fewer social interactions and low light levels in the bedroom were associated with more signs of a negative affective mood.

Recommendations for improving quality of life were to decrease temperatures in the bedrooms as individuals spent most of their time in bed and may have an altered basal metabolism and were prone to requesting more attention and help when temperatures were higher in the daytime. Noise levels in the living space exceeding 50 dB was associated with negative outcomes and levels of 55 to 60 dB trigger increases in catecholamines and cortisol levels. The average noise level of a nursing home in the United States is around 55 to 70 dB. High intensity light exposure has been shown to have positive effects on circadian rhythmicity and sleep patterns where the current study indicates low light levels and increase hours spent in the bedroom increased signs of negative mood in the study participants.

After reviewing older studies, we can start the process to designing a new study. In order to design a study, the chosen assessments for the study should depend greatly on the population assessed. The proposed changes to improve quality of life show be based on the weighted importance of the factors most

influencing quality of life reported in prior research. Care should be taken to determine if the assessment is patient-based or observer-based as people with advanced dementia may have trouble completing self-assessments. In these cases, it is important to screen out those that cannot complete the instruments or rely on observer assessments. Assessments that place greater weight on social factors should be utilized as patients report higher quality of life scores with increased connectivity to social bonds with friends, family, staff, and other residents. Another factor to consider how comfortable the resident feels with the nursing home environment. After the appropriate assessment(s) is chosen, a time frame should be considered. With the elderly, a longer time frame may allow better quality data to be gathered but it also runs the risk of having the patient drop out due to numerous factors such as disability, mortality, or relocation. Thus, a brief timeframe of a couple of weeks may be more appropriate for assessment of this population. After all of these factors are considered and the studied designed, recruitment of the experimental and control groups and finally data gathering can begin.

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LETTER TO THE EDITOR

November 24, 2021

The amount of medical and social politics during the pandemic was overwhelming and damaging. In 51 years as a physician, I have never witnessed so much government interference. I do not have a solution, but know that physicians need more power and input in making policy. Our medical societies need a voting share.

I am particularly upset that the governor had so much discretionary power in mandates. I feel that our legislature did the right action when they changed the law, unfortunately, most of the serious harm was already done. The governor placed all smokers on an equal status to the highest risk elderly as concerns the priority list of vaccines. So many of our patients, family and friends suffered due to the delay of waiting behind young, fairly healthy smokers. My 78-year-old sister, was pushed back from 15,000 on the vaccine list to 100,000 in the 48 hours after the change in criteria, allowing all smokers priority.

I sent letters to the governor and public health department and stated that I would testify as a pulmonologist, expert witness as

to the need of treating the elderly first. I was ignored, but POMA and a state senator supported my concerns and tried to help.

I am disappointed in the power structure of the government health decision makers. For instance, I worked with Dr. Fauci in 1982-1983 in clinical research after I diagnosed the first patient with AIDS in PA. Forty years later, when in March of 2020, Dr. Fauci implied and indirectly said "that the ends justified the means", as concerns the reversal on advice over mask use, I was appalled and let him know. There needs to be a balance of expert thought and point/counterpoint of different specialties and economists and epidemiologists on these government panels. I am pleased to see that Dr. Makary from Johns Hopkins University is being heard by the public.

I read too many articles in *JAMA*, that tried to stifle, censor and cancel expert dissenters such as Dr. Scott Atlas rather than an open debate and point/counterpoint session.

I continue to lobby my legislators for more physician input and less politics in medical care.

Fraternally,
Donald J. Sesso, DO, FCCP

FROM THE EDITOR'S DESK *(continued from page 4)*

vaccinated or having natural immunity, than the Delta variant. To listen to some of these leaders now, Omicron is worse than when we first encountered SARS-COV-2 and had no vaccines, therapeutics or even understanding of the virus. That is a disgrace and disservice.

On the Macro, this was all like telling a COPD patient, you should have stopped smoking and use your inhaler and leave it at that. If any physician feels that is the only way to treat COPD, that physician will be headed to court in a malpractice case.

The purpose behind the Freedom of the Press is so that an independent press can ask questions and keep the leaders honest. Instead, the Fourth Estate — main stream, cable, print — became a method to communicate whichever agenda the specific news organization wanted to support. There was not enough asking of questions such as “what’s next” once we didn’t have people dying in the streets and vaccines were being developed.

The medical establishment didn’t step up and ask those questions either. Instead, they were more concerned with maintaining their seat at the table. That is not how you act if your focus is truly public health and the well-being of your citizens.

We cannot ever let this failure occur again. We, physicians, need to make sure that we are watching closely and not letting the organizations and specialty colleges shirk their responsibilities. We must stand up and demand more. It is our job. When we write research papers or give lectures, we complete attestations that the paper or talk is free from bias and must

disclose if we are being paid by a company (such as the pharmaceutical industry) so the reader or audience knows we are being “above board.” Why did we let the organizations and colleges act with complete bias and not challenge these things.

For those of you who are pediatricians, I was not picking on you. I used it above as one example. Plenty of other organizations — Family Medicine, Internal Medicine, Infectious Disease, to name a few specialties also failed to speak up and against what has been flawed management of a pandemic.

On a lighter note, after two heavier topics, the next issue will be themed “The Joy in Medicine.” This can be anything from a humorous patient encounter or vignette, to something that keeps you going and why you love being a physician or in the case of students and residents, why you are staying on this path. You all have been accepted into medical school so “helping people” is not the answer. It’s a given. What else is there? Do you love knowing that when you go to work “all bets are off” because you have no idea what stories you will have to tell at your next dinner party. Or, do you love getting holiday cookies and pies from your patients? You pick. Tell us. Maybe you would prefer to do it as a short story or poem. Great. All contributions are welcome and wanted.

When this comes out, the holidays will have passed. I hope you all had a wonderful holiday season and wish you, your family and patients the best for a happy, healthy and safe 2022.

Collegially,

Mark B. Abraham, JD, DO, FAAFP

LECOM DEAN'S CORNER *(continued from page 8)*

studies that seek to greatly advance and enhance the abilities and capabilities of those in the medical community.

Perhaps the most illustrative lesson learned from the COVID-19 pandemic and from its

many vicissitudes has been the critical importance of being attuned to that which is unknown and to recognizing the importance of unencumbered and fully-developed research.

can disseminate the latest knowledge and create public health safety recommendations that all can follow or that can be easily modified to best suit a particular location, would help to prevent the doubt created by mixed messaging. In turn, this would make the public less susceptible to misinformation. Uniform social distancing, as determined by experts, would be the most effective way to contain the virus and minimize the strain on hospitals systems. This type of task force would also be able to determine how to keep the public safe at work and at home. Finally, a unified group dedicated to managing a future pandemic would have the means to determine the best way to distribute resources, such as vaccines, equitably.

The outbreak of COVID-19 was unexpected and invoked both fear and uncertainty in the lives of many. As the disease has unfolded, we have experienced an array of policies, political tactics, and injustice. Although we continue to live in a period of apprehension and deal with the painful realities of the pandemic, it is important to realize that there is much to gain from what has happened. The pandemic has illuminated issues such as the dangerous consequences of sharing conflicting information with the public as well as wealth and racial inequality. These topics, and more, have shown us how complex managing a health ca-

tastrophe truly is. Our future depends on our ability as a nation to address these complexities. If we can agree on what is most important, we can ensure a safer future for ourselves and the generations to follow.

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LEGAL AND COMPENSATION ANALYSIS OF PHYSICIAN EMPLOYMENT AGREEMENTS

Looking at a new position, or to renegotiate your current employment agreement? Physician Agreements Health Law is a law firm that focuses on physician employment agreements in all 50 states. Get our comprehensive, fixed fee legal review and compensation analysis so you can get a fair deal and peace of mind. <https://pahealthlaw.com/>

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ENTER YOUR RESEARCH PAPER INTO POMA's 48th ANNUAL CLINICAL WRITING CONTEST

All Pennsylvania osteopathic students and interns/residents training in Pennsylvania are invited to submit their research paper into the 2022 POMA Clinical Writing Contest!

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All winning entries will be published in the *The Journal of the POMA*.

THE DEADLINE FOR SUBMITTING ENTRIES IS MARCH 1, 2022

Submit entries to Mark B. Abraham, DO, JD

Publications Committee Chair

E-mail: bdill@poma.org

Online form: <https://poma.memberclicks.net/POMAWritingContest22>

Contest Rules & Regulations

- Contest open to all osteopathic students attending a Pennsylvania COM and all osteopathic interns/residents training in Pennsylvania.
- Eligible entries **must** be research based, **NOT** case reports.
- Length of entries: 2,000 to 4,000 words. Entries under 2,000 words will not be eligible.
- Residents must have their DME and/or residency program director sign off on their paper for appropriateness of submission. Students may have the Dean or his/her designee (including a mentor) sign off on their submission.
- Each entrant must supply a photograph, CV or short biography, and three multiple choice/true-false questions with answers relating to their paper with their entry.
- Articles previously published in other journals are not eligible.



CME Quiz

Name _____ AOA # _____

1. Those with post-lingual hearing loss have higher rates of depression than those with pre-lingual hearing loss.
a. True b. False
2. Rates of depression in those with post-lingual hearing loss are higher in males.
a. True b. False
3. Those with lower degrees of hearing loss experience higher rates of depression.
a. True b. False
4. Which of the following factors was found in most studies to have the greatest effect on a resident's quality of life?
a. Overall well-being
b. Connectedness
c. Independence
d. Attachment to immediate surroundings
e. Agency in life
5. Higher temperatures in nursing homes were found to be associated with fewer complaints.
a. True b. False
6. In studies, noise levels in nursing homes in the range of 55-60 dB cause:
a. An improvement in mood and activity
b. Increased hours spent in the bedroom
c. An altered basal metabolism with increased need for assistance
d. Increases in catecholamines and cortisol levels
e. Positive effects on circadian rhythmicity and sleep patterns

To apply for CME credit, answer the questions in this issue and return the completed page to the POMA Central Office, 1330 Eisenhower Boulevard, Harrisburg, PA 17111; fax (717) 939-7255; e-mail cme@poma.org. Upon receipt and a passing score of the quiz, we will process 0.5 Category 2-B AOA CME credits and record them in the POMA CME portal and forward them to the AOA.

Complete the CME quiz for this issue of the JPOMA online — <http://bit.ly/jpoma2021-4>

Answers to Last Issue's CME Quiz

1. c
2. d
3. b
4. False
5. False
6. True

(Questions appeared in the Fall 2021 Journal.)

Share with us your Joys of Medicine!

WE WANT TO HEAR FROM YOU!

The Spring 2022 issue will focus on *The Joy of Medicine*. Share humorous patient encounters and vignettes, to something that keeps you going to why you love being a physician. Do you enjoy having endless stories to tell at your next dinner party, or the holiday cookies and pies from your patients? You pick. Just share with us!

We value your input and respect your privacy. If you wish to remain anonymous, we are happy to remove any identifiers from your piece. Please, write us today!

Submit entries or questions to Mark Abraham, DO, JD, JPOMA Editor via email to bdill@poma.org or mail to POMA, 1330 Eisenhower Blvd., Harrisburg, PA 17111. Submission deadline is **February 1, 2022**.



Now more than ever – we're in this together.

As a physician-led insurer, ISMIE recognizes the continuing challenges healthcare professionals face with COVID-19 — from new variants to vaccination distribution, it seems there's a battle at every turn. Our Wellness Center includes resources to help you navigate personal and professional challenges. Learn more by visiting ismie.com/wellness.

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