

"When I finished in 2008, they hired me to design and implement the program" at Miami, said Lokon, the founder and director of [Opening Minds Through Art \(OMA\)](#).

Through OMA, students and people with dementia work together to produce failure-free art. "Every piece is abstract," Lokon said. It's all about the discovery process of creating art rather than an expectation of what the final product should look like. Individuals with dementia determine the aesthetic and students assist by washing brushes or helping with various materials used during the program. "Students are taught how to give autonomy back to the elder," Lokon noted.

In a [study](#) that used the DAS to evaluate 156 Miami undergraduate students who participated in OMA, Lokon and her colleagues found that their attitudes toward and comfort level with people who have dementia improved significantly after a semester's worth of weekly meetings.

Not all the Miami students who participate in OMA are in health-related fields, but Lokon is launching pilot programs at 8

medical schools. While planning the pilots, Lokon searched the medical literature for articles about how medical schools teach students to have empathy and compassion for older adults.

"They focus on [healthy] older adults because they believe that exposing medical students to people who are frail and sick and have dementia will strengthen their stereotypes and they become more negative toward aging," Lokon said.

That notion, she added, flies in the face of what she has seen and documented with Miami students. "Our students actually learn a great deal and become more positive," she said.

Two of the pilot programs are up and running—one at the University of Toledo College of Medicine and Life Sciences and another at the Ohio University Heritage College of Osteopathic Medicine. Lokon has unpublished data showing that among 22 first- and second-year students at Toledo, the overall DAS score and scores on 10 of the 20 items improved significantly after 1 OMA session.

Afterward, the students wrote about their experiences. One student explained that while it's necessary to master the scientific concepts of neuronal loss, cortical atrophy, and ventricular changes, it's also important to understand how disease affects patients' daily lives. "I was grateful to have the chance to develop my clinical communication skills and learn how to best interact with a dementia patient," the student wrote.

Another student described working with a woman who was reluctant to participate in the session. Encouraging the woman to join in was "an opportunity to practice patience and compassion toward a patient," the student wrote. A conversation ensued, the woman began to open up, and together they laughed, painted, and chatted.

"I will always keep this experience close to my heart and will make sure to keep the values that I have learned with me as I continue on my path to becoming a physician," the student concluded. ■

Note: Source references are available through embedded hyperlinks in the article text online.

Wild Health

Dogs and Bats and Chickens, Oh My!

Rebecca Voelker, MSJ

Wild Health offers an occasional look at the animal kingdom's contributions to human health.

The comforting nudge of a wet nose, glow-in-the-dark bats, and chickens that lay eggs containing human proteins have made their mark in recent studies.

Canine Antidote for Anxiety

Emergency department (ED) patients with low-risk chest pain can be an anxious lot, but many ED physicians offer no anxiolytics. They're concerned that patients might feel they've been labeled as anxious and their ailments won't be taken seriously.

But now researchers have [reported](#) in *PLOS One* that they may have a solution to calm these patients: therapy dogs.

Investigators at the Indiana University School of Medicine and the Center for the Human-Animal Bond at Purdue University

compared therapy dog visits with usual care among 80 ED patients at downtown Indianapolis' Sydney & Lois Eskenazi Hospital, which has an animal therapy department.

More than half of patients in each of 2 study groups sought emergency care for chest pain, another type of pain, or a psychiatric condition but didn't require immediate attention. While patients in the therapy dog group met with the dogs and their handlers for about 15 minutes, those in the control group received usual care for the same duration. All patients were evaluated for anxiety, depression, and pain 3 times—before care, half an hour after a dog visit or usual care, and shortly before their discharge.

Compared with patients in the usual care group, those who saw a therapy dog had a 35% lower anxiety level 30 minutes after the encounter, and the lower level lasted through the third evaluation. Patients in the

therapy dog group also had significant decreases in pain and depression compared with patients who received usual care. In addition, 2.5% of patients in the therapy dog group compared with 17.5% of those in the usual care group received opioid pain medication after the interventions.

Glowing Bats Show Spread of Disease

Hibernating bats covered with brightly colored fluorescent dust have helped a team of researchers learn more about how epidemics spread. Their [study](#) in the journal *Nature* showed that it's not necessarily sick friends, family members, or others in close proximity who will give you the latest bug. Easily overlooked contacts, like a stranger sitting next to you on the bus, can be potent factors in fueling disease transmission.

The researchers refer to these seemingly unimportant casual contacts that nevertheless spread infections as "cryptic



connections.” To study how they drive an epidemic, the researchers dusted 3 species of bats hibernating in 8 abandoned mines in Michigan and Wisconsin. Over 5 winters they documented how the bats mingled within and outside of their own species as well as groups that hibernated together. By tracking their dust marks, which served as surrogate pathogens, the researchers analyzed how the bats’ interactions might transmit white-nose syndrome, a fungal infection that has killed 6.7 million bats in North America since 2006.

Dust-spot patterns observed before any bats were infected suggested that the

fungus would spread rapidly in some species but not others. When the fungus arrived, that’s what happened. In the first year that infections occurred, the mean prevalence was 84% in 2 species but below 25% in another. Analysis of the dust spots showed that transmission rates were better explained by the total number of contacts among bats, especially their extensive cryptic connections, than by contacts within species or hibernating groups.

“Cryptic connections not only link social groups within species but also create bridges among species, resulting in highly connected communities and explosive epidemics,” such as the 2014 Ebola epidemic in West Africa and Nipah virus transmission in Bangladesh in 2004, the authors wrote.

Birds as a Bioreactor

Researchers in the United Kingdom reported in *BMC Biotechnology* that they’ve genetically modified chickens to produce eggs containing human proteins that could aid in developing cost-effective therapeutic antibodies.

The investigators focused on 2 proteins: human interferon- α 2a, a cytokine used to treat hepatitis and various cancers, and colony-stimulating factor 1 (CSF1), a cytokine involved in macrophage

differentiation, proliferation, and function that’s considered a therapeutic candidate in regenerative medicine. They used lentivirus vectors to create lines of transgenic hens that produced eggs containing human interferon- α 2a as well as human and pig versions of CSF1.

The egg-derived proteins exhibited purity and bioactivity equal to or better than those generated by traditional cell culture or *Escherichia coli* systems. The hens experienced no ill effects.

Traditional therapeutic protein production methods—including those in milk from transgenic sheep, goats, and cows—are often expensive, complex, or can cause adverse effects in the animals involved, according to the investigators.

However, chickens’ upkeep is relatively inexpensive, they reproduce quickly, and their eggs’ protein yield is high—an average-size egg contains almost 3.5 g of protein per egg white. Given the demand for protein-based therapeutics and their significant cost, the investigators wrote that their research “could lead to more affordable treatments and wider markets, including in developing countries and for animal health applications.” ■

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The JAMA Forum

Democrats Ponder Options: Medicare for All, Medicare for More, or Strengthening the ACA

Gail Wilensky, PhD

How far the country—or at least the Democratic Party—has shifted “left” over the past decade is reflected in the increasing attention being given to proposals for “Medicare for all.” Although the specifics vary with individual proponents, Medicare for all is a single-payer system that would have been unimaginable as the mantra for Democrats running for president a decade ago. All of the 20 or so Democrats who are potentially seeking their party’s nomination in 2020 have embraced some form of a Medicare-for-all or other type of universal coverage program—although sometimes it depends on which of their positions is being considered.

Where Do Candidates Stand?

The difficulty of knowing where some of the Democratic candidates actually stand is illustrated by the varied stances taken by [Beto O’Rourke](#). In a [2017 Facebook post](#), he wrote that the country needs a single-payer health system but backed off that position during his Senate race against Sen Ted Cruz (R, Texas), when he called for [achieving universal coverage](#) but without any specifics about how to get there. In mid-March, he indicated he supports letting people buy into Medicare and likes a [Medicare for America bill](#) introduced by Reps Jan Schakowsky (D, Illinois) and Rosa DeLauro (D, Connecticut) which leans

toward the “Medicare for more” camp as opposed to Medicare for all.

This legislation would expand government-funded insurance, while keeping employer-sponsored insurance plans. It would also repeal the federal tax cut from 2017, reinstating deductions for state and local tax deduction and reducing the standard deduction. It has a key twist in it: it would enroll newborns in a government health plan, which would eventually result in a Medicare-for-all world. But because the bill would retain private insurance, at least for the near-term, it is shunned by the Democratic party’s progressive wing.