

## Psychiatric Education In American Medical Schools and Residencies: The Need for Change

*Sean was dressed haphazardly, with his underwear over his jeans and his shirt inside-out. He claimed the healthcare system had obliterated his identity and was chasing him. He was minimally interactive and spoke over my questions. Although Sean was articulate, his story was disorganized and difficult to follow.*

As a first-year medical student, I was curious. How do you communicate with patients with schizophrenia? The family physician I was working with did not have a good answer for me.

In most U.S. medical schools, psychiatric medicine exposure in third year clinical rotations involves working with inpatient patients who have the most severe forms of mental illness. These interactions are stressful, sometimes intimidating, and patients may be socially withdrawn, violent, addicted to substances, or forcibly treated with sedatives or antipsychotic medications to control outbursts or agitation. Students learn how to put an involuntary, 72-hour psychiatric hold on unstable patients, creating a stigmatizing view of psychiatric illnesses and what psychiatrists do, even though this can also be considered a compassionate act that can save a person's life if they are a danger to themselves, to others, or are considered gravely disabled.<sup>1</sup> Mental health issues are relevant in all disciplines of medicine, and many patients with serious mental illness have higher rates of medical co-morbidities.<sup>2</sup> The need for better psychiatric training for every physician is evident.



**Rachel Bigley,**  
UC Berkeley – UCSF Joint Medical Program

In the literature and in my own research I have come across many innovative ideas regarding psychiatric education. One educational intervention involves role play between students: one acts as a patient, showing signs of delusions and hallucinations, while other students try to interact. Another strategy pairs students with a controlled patient with schizophrenia who can participate in a discussion and embody a productive, normal life.

In more integrated training scenarios, some Family Medicine residency programs are combining primary care and psychiatric training. They include longitudinal exposure to psychiatry through a psychiatric consultation clinic<sup>3</sup> or through an integrated primary care model, where behavioral health and primary care are available to patients under one clinical roof.<sup>4</sup> Further, the Combined Family Medicine/ Psychiatry residency creates a truly integrated educational experience. These interventions allow new physicians to learn about complex medical and psychosocial needs and to see the progression, control, and rehabilitation of mental health over time.

My masters research project involves exploring how different levels of psychiatric training exposure affects physicians' approach to caring for patients with schizophrenia. By doing this study, I hope to learn specific approaches physicians use to communicate, create rapport, and foster lasting relationships with patients. I will advocate for better educational interventions to equip all new physicians who have completed any residency with the skills they need and an understanding of the realities of caring for those who have schizophrenia.

If you have questions about my study, or are interested in participating (currently only physicians who have graduated from a U.S. residency program in Family Medicine, Psychiatry, or both), please feel free to email me at [rbigley22@berkeley.edu](mailto:rbigley22@berkeley.edu).

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CureSZ  
Brain Facts

by Henry A. Nasrallah, MD  
CURESZ Scientific Director

- Around 10,000 genes are involved in brain development.
- Schizophrenia is a disorder of brain development.
- Brain development is influenced by both genetic & environmental factors.
- There are 4 genetic pathways that can lead to schizophrenia:
  1. Risk genes. 108 genetic loci and over 300 risk genes have been discovered for schizophrenia, distributed on all 23 chromosomes.
  2. Copy Number Variants (CNV): where certain genes have 1 or 3 alleles instead of the normal 2. These are deletions or duplications and can disrupt brain development.
  3. De Novo mutations, where the gene does not code for any protein and can be very disruptive to brain development. 1000% higher mutation rate in schizophrenia.
  4. Epigenetics, where some genes are under-expressed or over-expressed due to factors like childhood abuse or neglect in early childhood.
- Thus, schizophrenia is a very heterogeneous syndrome comprised of many diseases.
- The latest estimate: 79% of all cases of schizophrenia are due to genetic factors.

# SCHIZOPHRENIA SURVIVORS



The Story of

## Carlos A. Larrauri, MSN, ARNP



Carlos A. Larrauri, MSN, ARNP

Carlos A. Larrauri, MSN, ARNP had a happy childhood with a loving family in Miami, Florida. In high school, he excelled both in academics and in music, and was accepted early into the Ohio State University College of Medicine. However, the subtle early signs of mental illness cast a shadow over his life.

At age 18, Carlos remembers his thoughts were like a *"broken radio switching between channels."* He felt sad and alone, and began self-medicating with cannabis.

When Carlos began college, his symptoms surfaced. He struggled with depression, and gained thirty pounds. In hindsight, he believes he needed to see a counselor, but the stigma of mental illness prevented him from seeking help.

Carlos left Ohio State and transferred to the New College of Florida, near his family home, to finish his bachelor's degree. Thanks to the support of his community, he remembers his life getting *"back on track."* However, during his final year of college, he experienced his first full blown psychotic episode.

This time, Carlos and his mother met with his thesis advisor to discuss the decline in his grades and in his mental health. Carlos remembers that meeting as his first step to recovery. He was diagnosed with schizophrenia and prescribed medication six months later, at age 23.

Carlos would not describe his recovery as an *"on and off switch,"* but as a *"dimmer."* His symptoms gradually lessened. After two months on a low dose regimen of risperidone, his thoughts were clearer and his mood had improved. Carlos found that having a supportive community of family and friends, including membership with the National Alliance on Mental Illness, was key in his recovery. Exercise, diet and stress reduction techniques were also important.

Following his recovery on risperidone, Carlos enrolled in classes at the University of Miami to become a nurse practitioner. He graduated with his masters degree in 2017. Today, he teaches at the University of Miami and hopes to pursue further graduate education.

Carlos is also an active performer as a vocalist and guitarist with his band *"FogDog."* Carlos joined with Matthew Racher who is also recovering from mental illness to found FogDog in 2013. Carlos and Matthew found they shared a vision for a band that *"represents a voice inside of every individual struggling with their own mental health or substance abuse issues."*

Learn more about fog dog  
here: [fogdogmusic.net](http://fogdogmusic.net)

Today, through his music and work, his goal is to reach young people who are at risk for mental health disorders with early intervention.

Carlos is currently on the Board of Directors of the National Alliance on Mental Illness and NAMI-Miami Dade County.



# EXPERT INTERVIEWS

An Interview with

## Erik Messamore, MD, PhD

Part 4 of 4

### **Q** What severe side effects have you seen in patients who take clozapine?

Most people fear the possibility of suppressing the white blood cell count with clozapine. Because white blood cells are a first line of defense against infection, a drastic reduction in their numbers can lead to very serious infections. Though having small dips in white blood cell count is relatively common, most are temporary and insignificant. Having a medically serious white blood cell suppression from clozapine is actually rare (less than 1%). Getting an infection from such suppression is even more rare because the white blood cell count is measured frequently.

The most common medically serious complication from clozapine is related to constipation. In its more severe forms, constipation can lead to a medical emergency. It's important to pay attention to the frequency of bowel movements and to take medications if necessary to ensure regular bowel movements.

I have worked as a consulting psychiatrist for most of my career. The patients I see have only partially benefited from many prior treatment attempts. I have probably seen every possible side effect from clozapine during my career, but this is because I have worked primarily with patients with the most complex forms of illness. Many of clozapine's side effects can be prevented by not using high doses, and by taking care to de-prescribe medications that won't be needed once clozapine reaches therapeutic levels. Weight gain is a risk with clozapine, but can be minimized or prevented by diet and exercise, possibly combined with medications like metformin or liraglutide that promote weight loss. There are similar work-arounds for several other of clozapine's possible side effects. Knowing what to look for allows early detection of potentially serious side effects and early intervention to prevent harm.

### **Q** What is the most important thing you share with doctors who are learning to use clozapine?

Don't delay. The research is clear: the longer someone experiences psychosis, the lower their prospects for long-term recovery. So, getting someone into remission as soon as possible is one of the most important goals in the care of individuals suffering from acute psychosis. Patients with recent-onset schizophrenia should go into remission (or be well on their way to remission) within no more than 8 months of treatment with antipsychotic medication (up to four months with medication #1, and up to four months with medication #2 if medication #1 failed to work). If delusions or hallucinations are not controlled by two different antipsychotic medications, the likelihood that the patient will respond to a third medication is minuscule, unless that medication is clozapine – where the response rate is more than 50%. Delaying the initiation of clozapine is equivalent to prolonging the duration of psychosis. And prolonged duration of psychosis has been shown to reduce quality of life in both the short-term and long-term.

### **Q** What advice would you like to offer to other doctors who prescribe clozapine?

A lot of people hate having their blood drawn often and may refuse to consider clozapine because of this. Topical anesthetic cream, to numb the skin at the blood draw site, can be really helpful to someone who might not consider clozapine because of the white blood cell testing requirements.



**Erik Messamore** is a psychiatrist and associate professor of psychiatry at Northeast Ohio Medical University. He serves as the medical director of the University's Best Practices in Schizophrenia Treatment (BeST) Center. He holds both an MD and a PhD in pharmacology. Dr. Messamore serves on the CURESZ Clozapine in Schizophrenia Experts Panel (CLOSZE).





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## VIDEO HIGHLIGHT

# RECOMMENDATIONS FOR BRAIN HEALTH

Oxidative stress is evident in every brain disease, as well as other medical conditions. Frequently, patients with schizophrenia do not eat a healthy diet, particularly if they are on a medication that affects their metabolism and may make them crave carbohydrates. Eating fruits and vegetables increases the level of antioxidants in your body, and puts you ahead of the average American. Eating well is also important for blood sugar levels and to prevent metabolic problems.

In this video, **Dr. Louis Cady** (CEO, Cady Wellness Institute) and **Bethany Yeiser** discuss brain health. Dr. Cady discusses *"integrating mind and body for peak performance,"* focusing on the mind, body, and behavior. Dr. Cady also highlights the importance of fish oil (omega three fatty acids) and other supplements. Vitamin D is highly recommended in schizophrenia.

It is important to avoid marijuana, which is very dangerous in terms of brain health, especially in teenagers. Early use of marijuana can lead to a first break psychosis and the onset of schizophrenia. Synthetic cannabinoids (including some bath salts) are more dangerous than the natural form. Sparing use of alcohol, or abstaining from alcohol completely, is also recommended.



## Please consider sending a donation to the CureSZ Foundation using the enclosed card.

Your contribution will help provide education and referrals to patients and their families, those who work with the seriously mentally ill. CURESZ informs the general public to better understand this serious brain illness, and to provide scientific advances showing that there is hope for recovery, and a return to a fulfilling and normal life. The CURESZ Foundation is a 501(c)(3) nonprofit organization. All contributions are tax deductible.

***"We are committed to helping patients to cope with and recover from schizophrenia."***