

## NONLINEAR DYNAMICAL PSYCHIATRY AND BLUE UNIVERSE THEORY

### Terrence Early, MD

Interventional Psychiatry Associates

This presentation will cover several developments that have occurred in Dr. Early's practice, based on ten years of ketamine psychedelic therapy for treatment resistant psychiatric illness.

Engineering Control Theory distinguishes two types of dynamical (changing over time) systems. The first is the linear dynamical system. Like a clock, it is precise, deterministic reliable, and mechanical. Most of our scientific thinking is based on linear dynamical models. Some nonlinear dynamical models are called complex adaptive systems. Nonlinear dynamic psychiatry is an approach that uses insights from the complexity of science to model and understand psychiatric disease and treatment. Examples of nonlinear models are the Amazon rainforest, the stock market, our minds, and Santa Barbara.

Blue Universe Theory is a perspective that begins with the recognition that the universe functions primarily as a nonlinear dynamical system. The physicist Seth Lloyd states in his book, *Programming the Universe*, the universe is a quantum computer. This leads to insights that may help patients come to terms with the spiritual aspects of ketamine psychedelic therapy. Blue Universe Theory is an attempt to provide a model for helping psychiatrists harness the spiritual aspects of ketamine therapy to foster recovery.

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#### Objectives:

1. Describe the two types of dynamical systems, linear and nonlinear.
  2. Recognize how Blue Universe Theory and ketamine treatment help to foster recovery.
  3. Explain how nonlinear dynamic psychiatry helps to understand psychiatric disease and treatment.
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Santa Barbara Cottage Hospital  
Psychiatry and Addiction Medicine  
Department invites you to attend  
its January 2020 presentation.

**Tuesday, January 28, 2020**

**Noon to 1:30 PM**

No meals or breaks provided.

**Santa Barbara Cottage Hospital  
Amphitheatre**

**Dr. Terrence Early** is a psychiatrist in private practice at the Interventional Psychiatry Associates in Santa Barbara, California. He was staff psychiatrist at Santa Barbara Cottage Hospital 2007-2012. He received his medical degree from Duke University School of Medicine and has been in practice for more than 20 years. Dr. Early was the first psychiatrist in the state of California to offer ketamine therapy as part of routine, integrated care in a private psychiatric practice. Dr. Early's research areas of interest include, dissemination of ketamine therapy, clinical research in mood disorders therapies, EEG burst suppression in refractory depression, neurobiology of dopaminergic systems, neurobiology of attention and the lateralization of cognitive function.

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## CONTINUING EDUCATION

**Physicians: Please note that Psychiatric Grand Rounds is no longer able to offer CMEs because of changes to the CME requirements.**

- Course meets the qualifications for 1 hour of continuing education (CE) credit for LMFTs, LCSWs, LPCCs, and LEPs as required by the California Board of Behavioral Sciences.
- Santa Barbara Cottage Hospital is approved by the California Association of Marriage and Family Therapists to sponsor continuing education for LMFTs, LCSWs, LPCCs, and LEPs (provider # 57341) and Santa Barbara Cottage Hospital maintains responsibility for the program/course and its content.
- Course approved by the California Board of Registered Nursing, Provider #00252 for 1 contact hour.
- No RSVP or advance registration is required. Registration for course attendees requesting continuing education credit will take place prior to the start of the course.
- **Continuing Education:** Attendance for the full hour is required to receive credit. CE credit is not offered for meals or breaks.

**Fees:** There is no charge to Cottage Health employees. There is a \$15 fee to Non-Cottage attendees who wish to receive continuing education credit.

**Certificates:** Cottage Health employees will complete evaluations in HealthStream. Non-Cottage attendees will receive certificates within 10 business days of returning the evaluation and paying the \$15 fee. Detailed instructions will be provided at registration.

- Grievances may be addressed directly to the Education Department.
- If you are in need of special accommodation please contact the Education Department at (805) 569-7325.

Learn more about our Psychiatry and Addiction Medicine services at:

[cottagehealth.org/mentalhealth](http://cottagehealth.org/mentalhealth)

## Program Coordinators

Cynthia Manigault, BSN, RN

Carole Reynolds Ingraham,  
LMFT

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## Education Consultant

Christine Block, MSN, RN, CNRN

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## Target Audience:

Counselors

Psychotherapists

Psychologists

Social Workers

Nurse Practitioners

Marriage & Family Therapists

Addiction Counselors

Nurses

Clinical Nurse Specialists

Pharmacists

Occupational Therapists &

Occupational Therapy Assistants

Other Mental Health

Professionals



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