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978-1-107-60733-0 — Case Studies: Stahl's Essential Psychopharmacology

Stephen M. Stahl, Thomas L. Schwartz

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## CASE STUDIES

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**Stahl's Essential Psychopharmacology**

Volume 2

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**CASE STUDIES**

# **Stahl's Essential Psychopharmacology**

Volume 2

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## Introduction

Following on from the success of the launch volume of *Case Studies* in 2011, we are very pleased to present a second collection of new clinical cases. *Stahl's Essential Psychopharmacology* started in 1996 as a textbook (currently in its fourth edition) on how psychotropic drugs work. It expanded to a companion *Prescriber's Guide* in 2005 (currently in its fifth edition) on how to prescribe psychotropic drugs. In 2008, a website was added ([stahlonline.org](http://stahlonline.org)) with both of these books available online in combination with several more, including an *Illustrated* series of books covering specialty topics in psychopharmacology. The *Case Studies* shows how to apply the concepts presented in these previous books to real patients in a clinical practice setting.

Why a case book? For practitioners, it is necessary to know the science and application of psychopharmacology – namely, both the mechanism of action of psychotropic drugs and the evidence-based data on how to prescribe them – but this is not sufficient to become a master clinician. Many patients are beyond the data and are excluded from randomized controlled trials. Thus, a true clinical expert also needs to develop the art of psychopharmacology: namely, how to listen, educate, destigmatize, mix psychotherapy with medications, and use intuition to select and combine medications. The art of psychopharmacology is especially important when confronting the frequent situations where there is no evidence on which to base a clinical decision.

What do you do when there is no evidence? The short answer is to combine the science with the art of psychopharmacology. The best way to learn this is probably by seeing individual patients. Here we hope you will join us and peer over our shoulders to observe 30 complex cases from our own clinical practice. Each case is anonymized in identifying details, but incorporates real case outcomes that are not fictionalized. Sometimes more than one case is combined into a single case. Hopefully, you will recognize many of these patients as similar to those you have seen in your own practice (although they will not be exactly the same patient, as the identifying historical details are changed here to comply with disclosure standards, and many patients can look very much like many other patients you know, which is why you may find this teaching approach effective for your clinical practice).

We have presented cases from our clinical practice for many years online (e.g., in the master psychopharmacology program of the Neuroscience Education Institute (NEI) at [neiglobal.com](http://neiglobal.com)) and in live courses (especially at the annual NEI Psychopharmacology Congress). Over the years, we have been fortunate to have many young psychiatrists from our universities, and indeed from all over the

## Introduction

world, sit in on our practices to observe these cases, and now we attempt to bring this information to you in the form of a second case book.

The cases are presented in a novel written format in order to follow consultations over time, with different categories of information designated by different background colors and explanatory icons. For those of you familiar with *The Prescriber's Guide*, this layout will be recognizable. Included in the case book, however, are many unique sections as well; for example, presenting what was on the author's mind at various points during the management of the case, and also questions along the way for you to ask yourself in order to develop an action plan. There is a pretest, asked again at the end as a posttest, for those who wish to gain CME credits (go to [neiglobal.com](http://neiglobal.com) to answer these questions and obtain credits). Additionally, these cases incorporate ideas from the recent changes in maintenance of certification standards by the American Board of Psychiatry and Neurology for those of you interested in recertification in psychiatry. Thus, there is a section on Performance in Practice (called here "Confessions of a psychopharmacologist"). This is a short section at the end of every case, looking back and seeing what could have been done better in retrospect. Another section of most cases is a short psychopharmacology lesson or tutorial, called the "Two-minute tutorial," with background information, tables, and figures from literature relevant to the case in hand. Shorter cases of only a few pages do not contain the tutes, but get directly to the point, and are called "Lightning rounds." Drugs are listed by their generic and brand names for ease of learning. Indexes are included at the back of the book for your convenience. Lists of icons and abbreviations are provided in the front of the book. Finally, this second collection updates the reader on the newest psychotropic drugs and their uses, and adopts the language of *DSM-V*.

The case-based approach is how this book attempts to complement "evidence-based prescribing" from other books in the *Essential Psychopharmacology* series, plus the literature, with "prescribing-based evidence" derived from empiric experience. It is certainly important to know the data from randomized controlled trials, but after knowing all this information, case-based clinical experience supplements that data. The old saying that applies here is that wisdom is what you learn *after* you know it all; and so, too, for studying cases after seeing the data.

A note of caution: we are not so naïve as to think that there are not potential pitfalls to the centuries-old tradition of case-based teaching. Thus, we think it is a good idea to point some of them out here in order to try to avoid these traps. Do not ignore the "law of small numbers" by basing broad predictions on narrow samples or even a single case.

Do not ignore the fact that if something is easy to recall, particularly when associated with a significant emotional event, we tend to think it happens more often than it does.

Do not forget the recency effect, namely, the tendency to think that something that has just been observed happens more often than it does.

According to editorialists,<sup>1</sup> when moving away from evidence-based medicine to case-based medicine, it is also important to avoid:

- Eloquence or elegance-based medicine
- Vehemence-based medicine
- Providence-based medicine
- Diffidence-based medicine
- Nervousness-based medicine
- Confidence-based medicine

We have been counseled by colleagues and trainees that perhaps the most important pitfall for us to try to avoid in this book is “eminence-based medicine,” and to remember specifically that:

- Radiance of gray hair is not proportional to an understanding of the facts
- Eloquence, smoothness of the tongue, and sartorial elegance cannot change reality
- Qualifications and past accomplishments do not signify a privileged access to the truth
- Experts almost always have conflicts of interest
- Clinical acumen is not measured in frequent flier miles

Thus, it is with all humility as practicing psychiatrists that we invite you to walk a mile in our shoes; experience the fascination, the disappointments, the thrills, and the learnings that result from observing cases in the real world.

Dr. Schwartz would like to sincerely thank Stephen Stahl, Rich Davis, Steve Smith, Lou Achille, Richard Marley, and the Neuroscience Education Institute team for training, teaching, mentoring, and emphasizing that learning can be difficult and fun simultaneously.

Stephen M. Stahl, MD, PhD

Thomas L. Schwartz, MD

<sup>1</sup> Isacacs D and Fitzgerald D. Seven alternatives to evidence based medicine.  
*British Medical Journal* 1999; 319:7225.

## CME information

### Release/expiration dates

Print monograph released: April, 2016  
Electronic books released: May, 2016  
CME credit expires: September, 2018

### Overview

This book is a series of case studies in psychiatric disorders, all adapted from real practice, that provide a glimpse into what cases look like after the first consultation and over time, living through the treatments that work, the treatments that do not work, the mistakes, and the lessons to be learned.

### Target audience

This activity has been developed for prescribers specializing in psychiatry. All other healthcare providers interested in psychopharmacology are welcome for advanced study, especially primary care physicians, nurse practitioners, psychologists, and pharmacists.

### Need for this content

Mental disorders are highly prevalent and carry substantial burden that can be alleviated through treatment; unfortunately, many patients with mental disorders do not receive treatment or receive suboptimal treatment. There is a documented gap between evidence-based practice guidelines and actual care in clinical practice for patients with mental illnesses. This gap is due, at least in part, to lack of clinician confidence and knowledge in terms of appropriate usage of the diagnostic and treatment tools available to them. To help address clinician performance deficits with respect to diagnosis and treatment of mental disorders, this book provides education regarding: (1) diagnostic strategies that can aid in the identification and differential diagnosis of patients with psychiatric illness; (2) effective clinical strategies for monitoring and treating psychiatric patients; and (3) new scientific evidence that is most likely to affect clinical practice.

### Learning objectives

After completing this book, you should be better able to:

- Diagnose patients presenting with psychiatric symptoms according to best practice standards
- Implement evidence-based psychiatric treatment strategies designed to maximize adherence and patient outcomes
- Integrate novel treatment approaches into clinical practice according to best practice guidelines

## CME information

- Assess treatment effectiveness and make adjustments as needed to improve patient outcomes

### Accreditation and credit designation statements



The Neuroscience Education Institute (NEI) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Neuroscience Education Institute designates this enduring material for a maximum of 55.0 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.



American Society for the Advancement of Pharmacotherapy  
 Division 55, American Psychological Association

The American Society for the Advancement of Pharmacotherapy (ASAP), Division 55 of the American Psychological Association (APA), is approved by the American Psychological Association to sponsor continuing education for psychologists. The ASAP maintains responsibility for this program and its content.

The American Society for the Advancement of Pharmacotherapy designates this program for 55.0 CE credits for psychologists.

**Nurses:** for all of your continuing nursing education (CNE) requirements for recertification, the American Nurses Credentialing Center (ANCC) will accept *AMA PRA Category 1 Credits™* from organizations accredited by the ACCME. The content of this activity pertains to pharmacology and is worth 55.0 continuing education hours of pharmacotherapeutics.

**Physician assistants:** the National Commission on Certification of Physician Assistants (NCCPA) accepts *AMA PRA Category 1 Credits™* from organizations accredited by the American Medical Association (AMA) (providers accredited by the ACCME).

A certificate of participation for completing this activity is available.

*Note: the content of this print monograph activity also exists as an electronic book under the same title. If you received CME credit for the electronic book version, you will not be able to receive credit again for completing this print monograph version.*

### Optional posttest and CME credit instructions (see p. 441)

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outside interests reflect a possible bias in either the exposition or the conclusions presented.

Disclosed financial relationships with conflicts of interest have been reviewed by the NEI CME Advisory Board Chair and resolved.

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### Disclaimer

Participants have an implied responsibility to use the newly acquired information from this activity to enhance patient outcomes and their own professional development. The information presented in this educational activity is not meant to serve as a guideline for patient management. Any procedures, medications, or other courses of diagnosis or treatment discussed or suggested in this educational activity should not be used by clinicians without evaluation of their patients' conditions and possible contraindications or dangers in use, review of any applicable manufacturer's product information, and comparison with recommendations of other authorities. Primary references and full prescribing information should be consulted.

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CME information

**Cultural and linguistic competency**

A variety of resources addressing cultural and linguistic competency can be found at this link: **[nei.global/CMEregs](#)**









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List of icons

	Pre- and posttest self-assessment question; question
	Patient evaluation on intake; Patient evaluation on initial visit
	Psychiatric history
	Social and personal history
	Medical history
	Family history
	Medication history
	Current medications



List of icons

	Psychotherapy history; psychotherapy moment
	Mechanism of action moment
	Attending physician's mental notes
	Further investigation
	Case outcome; use of outcome measures
	Case debrief
	Take-home points
	Performance in practice: confessions of a psychopharmacologist
	Tips and pearls
	Two-minute tutorial

Abbreviations

5-HT	serotonin	CACNA1C	calcium channel, voltage-dependent, L-type, alpha 1c subunit
5-HT1A, -2A, -2C, -7, etc.	serotonin (receptors)		
AA	Alcoholics Anonymous	CAD	coronary artery disease
AAPA	American Academy of Physician Assistants	CAM	complementary alternative medicine
AAWG	antipsychotic-associated weight gain	CBT	cognitive behavioral therapy
ACC	anterior cingulate cortex	CIDP	chronic inflammatory demyelinating polyneuropathy
ADHD	attention deficit hyperactivity disorder	CIT	combination-initiation-treatment
AIMS	Abnormal Involuntary Movement Scale	CME	continuing medical education
AMA	American Medical Association	CNE	continuing nursing education
AN	anorexia nervosa	CNS	central nervous system
ANCC	American Nurses Credentialing Center	COMT	catechol-O-methyltransferase
APA	American Psychological/Psychiatric Association	COPD	chronic obstructive pulmonary disease
ASAP	American Society for the Advancement of Pharmacotherapy	CPAP	central positive airway pressure
ASD	autism spectrum disorder	CRSD	circadian rhythm sleep disorder
AUD	alcohol use disorder	CSF	cerebrospinal fluid
BMI	body mass index	CT	computerized tomography
BN	bulimia nervosa	D2	dopamine-2 receptor
BPDO	borderline personality disorder	D3	dopamine-3 receptor
BZ	benzodiazepine	DA	dopamine
BZRA	benzodiazepine receptor agonist	DAT	dopamine transporter
		DBS	deep brain stimulation

Abbreviations

DBT	dialectical behavior therapy	HTN	hypertension
DDP	dynamic deconstructive psychotherapy	IBS	irritable bowel syndrome
DED	depression–executive dysfunction syndrome	IDS	Inventory of Depressive Symptomatology
DID	dissociative identity disorder	IOR	ideas of reference
DLPFC	dorsolateral prefrontal cortex	IPT	interpersonal psychotherapy
DM2	diabetes type II	LAT	lateral hypothalamus
DR	dorsal raphe	LC	locus coeruleus
DRD2	D2 receptor gene	MAOI	monoamine oxidase inhibitor
DRI	dopamine reuptake inhibitor	MDD	major depressive disorder
ECT	electroconvulsive therapy	MDE	major depressive episode
EEG	electroencephalogram	MDQ	Mood Disorder Questionnaire
EKG	electrocardiogram	M-PPPT	Manualized psychopharmacopsychotherapy
EMR	electronic medical record	MRI	magnetic resonance imaging
EpCS	epidural prefrontal cortical stimulation	MST	magnetic seizure therapy
EPS	extrapyramidal syndrome	MT1	melatonin-1 receptor
ERP	exposure and response prevention therapy	MT2	melatonin-2 receptor
FDA	Food and Drug Administration	MT3	melatonin-3 receptor
FM	fibromyalgia	MTHFR	methylene tetrahydrofolate reductase
fMRI	functional magnetic resonance imaging	NA	Narcotics Anonymous
GABA	gamma-aminobutyric acid	NAC	N-acetyl cysteine
GAD	generalized anxiety disorder	NaSSA	noradrenergic and specific serotonergic antidepressant
GERD	gastroesophageal reflux disease	NCCPA	National Commission on Certification of Physician Assistants
GI	gastrointestinal	NDRI	norepinephrine–dopamine reuptake inhibitor
GIT	gastrointestinal tract	NE	norepinephrine
HA	histamine	NEI	Neuroscience Education Institute
H1	histamine-1 receptor		

Abbreviations

NET	norepinephrine transporter	RAS	reticular activating syndrome
NMS	neuroleptic malignant syndrome	RLS	restless legs syndrome
NRI	norepinephrine reuptake inhibitor	SAD	social anxiety disorder
OCD	obsessive compulsive disorder	SAMe	S-adenosyl methionine
ODD	oppositional defiant disorder	SARI	serotonin antagonist reuptake inhibitor
OFC	orbitofrontal cortex	SCN	suprachiasmatic nucleus
OROS	osmotically controlled-release oral delivery system	SDA	serotonin–dopamine antagonist
OSA	obstructive sleep apnea	SERT	serotonin transporter
PAM	positive allosteric modulators	SGRI	selective GABA reuptake inhibitor
PCP	primary care physician	SJS	Stevens–Johnson syndrome
PD	panic disorder	SNRI	serotonin–norepinephrine reuptake inhibitor
PDP	psychodynamic psychotherapy	SODAS	spheroidal oral drug absorption system
PDSQ	Psychiatric Diagnostic Screening Questionnaire	SPARI	serotonin partial agonist reuptake inhibitor
PET	positron emission tomography	SPMI	severe and persistent mental illness
PHQ-9	Patient Health Questionnaire	SRI	serotonin reuptake inhibitor
PMDD	premenstrual dysphoric disorder	SSRI	selective serotonin reuptake inhibitor
PME	premenstrual exacerbation	SUD	substance use disorder
PMS	premenstrual syndrome	TBI	traumatic brain injury
PPPT	psychopharmaco-psychotherapy	TCA	tricyclic antidepressant
PTSD	post-traumatic stress disorder	TD	tardive dyskinesia
QIDS	quick inventory of depressive symptomatology	TEN	toxic epidermal necrolysis
		TMJ	temporomandibular joint
		TMN	tuberomammillary nucleus
		TMS	transcranial magnetic stimulation
		TRA	treatment-resistant anxiety

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Abbreviations

TRD	treatment-resistant depression	VMPFC	ventromedial prefrontal cortex
URI	upper respiratory tract infection	VNS	vagus nerve stimulation
VLPO	ventrolateral preoptic area	VTA	ventral tegmental area