Emergency Department Medical Clearance of Patients with Psychiatric or Behavioral Emergencies, Part 1

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KEYWORDS

- Medical clearance • Medical screening • Medical stability
- Psychiatric and behavioral emergencies

KEY POINTS

- Up to 7% of all adult emergency department (ED) patients now present with a primary psychiatric complaint.
- Emergency physicians must stabilize and medically clear patients with behavioral and psychiatric emergencies before these patients are accepted for inpatient hospitalization.
- Emergency physicians, emergency psychiatrists, and inpatient psychiatry teams often disagree on the extent of ancillary testing necessary to medically clear patients for inpatient admission.
- In fact, at the time of this publication, there are still no interdisciplinary algorithms regarding the medical clearance and stability process.
- Moreover, the guidelines from the American College of Emergency Physicians and the American Psychiatric Association directly conflict, adding layers of frustration to an already overburdened system.

INTRODUCTION

I feel the need, the need for speed.

—Maverick, Top Gun

Disclosure Statement: The authors have nothing to disclose.
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Psychiatr Clin N Am 40 (2017) 411–423
http://dx.doi.org/10.1016/j.psc.2017.04.001
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Emergency physicians (EPs) are usually painted as the medical mavericks, the so-called cowboys whose egos write checks that their "bodies can't cash." In the same vein, inpatient psychiatrists are often cast in the role of Ice Man. Slow and deliberate, inpatient psychiatry is replete with men and women who look askance at their emergency colleagues, remarking "You're everyone's problem. That's because every time you go up in the air, you're unsafe. I don't like you because you're dangerous." Indeed, to the inpatient psychiatrist, the EP is often seen as rushing through the examination and assessment of the psychiatric patient with the sole goal of getting the patient out of their emergency department (ED). Little do they realize that the EP is protecting her and his wingman's flank, waiting for the next proverbial patient land mine to go off. Plagued by visions of the inferior wall myocardial infarction sitting in the waiting room, the EP watches her or his charts stack up while staring at the boarded psychiatric patient taking up yet another bed. Despite their frequent misgivings, the inpatient team still relies on these mavericks to diagnose, stabilize, and manage their patients. Perhaps straddling the line between these players are the emergency psychiatrists who embody the wisdom and spirit of Viper, and "rules of engagement are written for your safety and for that of your team. They are not flexible, nor am I. Either obey them or you are history." The 3 sides to the medical clearance triangle are emergency medicine, emergency psychiatry, and inpatient psychiatry. When they work in harmony, hard-fought battles are won and the patient's needs are served. On the other hand, when the sides fight among themselves, the war is lost before it begins and the patient is the one who loses the most, left to linger in the ED, an environment ill-suited to address their needs. Is it any wonder that their problems steadily worsen and even reach a tipping point, at which they may become a danger to ED staff or themselves? This article explores the more challenging aspects of the medical clearance process and offers strategies for interdisciplinary collaboration and addresses the unique challenges of special populations.

Primary psychiatric chief complaints currently account for roughly 6% of all adult ED visits and 7% of all pediatric ED visits.[1,2] In 2006, 4.7 million visits involved a primary psychiatric diagnosis, a rate of 20 visits per 100 adults.[3] According to the National Hospital Ambulatory Medical Care Survey (NHAMC), by 2012, 5.25 million visits were for a primary psychiatric diagnosis. Perhaps even more important, those 5.25 million visits did not account for patients who presented with issues such as self-inflicted traumas or poisonings. Indeed, known self-inflicted wounds accounts for another 419,000 visits.[4] Moreover, the NHAMC Survey does not take into account the occult suicidality of the ED patient population or those for whom mental illness was a secondary diagnosis that, nonetheless, still needed to be managed. Indeed, even in 2005, more than 8% of ED patients who presented to the ED with a medical complaint also had active suicidal ideation when asked.[5]

The data are clear: patients with psychiatric and behavioral issues are increasingly presenting to the ED to manage both their acute crises and chronic conditions. Despite being chronically overworked and understaffed, the ED functions as the safety net for society. EPs must begin the diagnostic and treatment process for this patient population. As previously noted, the ED setting is not therapeutic for most patients suffering the ravages of mental illness. Before these patients can be admitted to an inpatient ward, the EP must medically clear of these patients.

MEDICAL CLEARANCE DEFINITION AND BACKGROUND

Before a patient may be transferred to an inpatient psychiatric facility from an ED for treatment of their psychiatric or behavioral condition, the inpatient team generally

requires emergency providers to perform a medical assessment of the patient and identify and stabilize any medical conditions that may be contributing to the patient's psychiatric symptoms. The process is commonly referred to as medical clearance.

Although the intent of medical clearance may seem apparent, there is an ambiguity inherent in the process itself that leads to misdiagnoses, clinical delays, and provider frustration.[6–9] So why the ambiguity?

To some physicians, the term medical clearance entails a medical blessing wherein the patient is free from all medical problems or comorbid conditions. To others, it is acceptable to clear a patient if the patient's medical problems are not causing their psychiatric symptoms (eg, bronchitis in an otherwise healthy young adult). Finally, other providers would permit patients to be medically cleared even when a medical illness may have caused or contributed to the patients' symptoms but in which treatment is no longer needed (eg, history of hypertensive encephalopathy in a patient who is now normotensive).

These approaches are not specific to a specialty but rather are specific to the provider and institution. They are not evidence-based and often the result of anecdote and traditional practices. Consequently, some emergency psychiatrists willingly embrace the broadest categorization of clearance. Likewise, some EPs apply the narrowest definition and admit those patients in the gray area to the medical services for treatment before inpatient psychiatric evaluation. This provider variability, coupled with the lack of an interdisciplinary gold-standard definition of medical clearance, results in vastly different approaches to process, even within the same geographic region.[10]

Despite the ambiguity in defining medical clearance, the process itself is an essential step in the evaluation and treatment of patients with psychiatric and behavioral emergencies. Multiple studies reported that 34% to 50% of patients who present with psychiatric emergencies have coexisting medical diseases that can be causing or exacerbating their psychiatric illness.[11–15]

Individuals with new onset psychiatric symptoms should be assumed to have an underlying medical disorder causing the presentation unless proved otherwise. First, staff should exhaust all resources to determine whether the patient has had similar events in the past. The presence or absence of a past psychiatric history is among most important determinants of psychiatric versus medical illness. Most alert adult patients with new psychiatric symptoms who present to the ED have an organic cause.[16] Those patients will require an extensive medical work up to identify any medical emergencies that are causing the patient's psychotic picture before the patient is admitted to a psychiatric facility.

Medical illness is highly prevalent in patients with severe mental illness (SMI), such as schizophrenia, bipolar disorder, and schizoaffective disorder, with 50% to 90% of patients having at least 1 chronic medical condition.[17] Several reviews and studies have shown that people with SMI have an excess mortality, being 2 or 3 times as high as that in the general population.[18–21] This mortality gap, translates to a shortened life expectancy of 8 to 30 years and about 60% of this excess mortality is due to physical illness.[22]

This decrease in life expectancy is likely due to both patient (eg, poor insight, noncompliance) and provider (eg, countertransference and bias) factors.[23] Moreover, psychiatric patients have a higher incidence of medical conditions,[24–26] as well as a greater risk of injury.[27,28]

As part of the medical assessment, providers should identify any conditions that require ongoing or scheduled treatment or further attention (eg, hypertension, obstructive sleep apnea requiring continuous positive airway pressure, hemodialysis),

medication choice (eg, true allergies, pregnancy), or which may affect placement at a given inpatient facility or medication decisions (eg, the presence of indwelling catheters). Receiving facilities vary greatly in their staffing and ability to manage complex medical issues and often have separate requirements outside the medical clearance process, known as exclusionary criteria.[29,30] A discussion of exclusionary criteria is beyond the scope of this article.

CLINICAL EVALUATION

Approach to the Patient with Psychiatric Complaints

Overall, the approach to patient presenting with behavioral complaints should be the same as the approach to those with general medical conditions. The patient's clinical findings should guide further diagnostic testing, including laboratory tests, imaging, consultations, and interventions. The approach to the psychiatric patient in the ER begins with the ABCs, and addressing any life-threatening concerns. As previously discussed, mentally ill patients are at increased risk for traumatic injury and morbidity from underlying and untreated medical conditions. The authors recommend that EPs treat all psychiatric patients as occult trauma patients and perform an assessment similar to advanced trauma life support.

First, the primary survey should be completed. All threats to airway, breathing, and circulation (ie, threats to life or limb) should be addressed. Next, the EP should establish a baseline mental status and neurologic function looking at disability. The EP should then expose the patient (if he or she is not already in a gown) and search for evidence of illness and injury and attend to the patient's environment, both from a medical and therapeutic perspective. After the ABCDE of the primary survey has been completed, the EP should obtain the history, review system, and perform a secondary survey with a head-to-toe physical examination looking for any conditions that might have been missed at first glance. A systematic approach ensures that the patient will receive a thorough evaluation.

History

Willie Sutton, among most famous bank robbers in American history was asked why he robbed banks. He answered because that's where the money is. The history is arguably the most important part of the medical clearance evaluation. Indeed, a study showed a sensitivity of 94% for picking up the medical conditions found to be present.[31] That is where the so-called money is.

Despite the importance of obtaining an adequate history, a study found that 80% of the patients who were medically clear had a medical disease that should have been identified.[11] In 1978, Hall and colleagues found that in 658 consecutive psychiatric outpatients, 9.1% of the patients had a medical disorder (eg, delirium, thyroid disease, diabetic complications) masquerading as a psychiatric condition.[32] Three years later, a Canadian study virtually replicated Hall and colleagues' findings and noted that 7% of the patient population had symptoms attributable to their medical problems (most commonly, alcoholism and chronic organic brain conditions).[12,33]

To prevent improper psychiatric diagnoses, EPs must elicit a detailed description of the patient's symptoms, including timing, provoking, and palliative features (ie, triggers), any previous episodes, and establish how the patient's current behavior has changed from baseline. Unfortunately, obtaining a psychiatric history can be difficult because, although many patients are forthcoming with the details, others are unable or unwilling to give history. Often, the physician must obtain additional history from collateral sources such as family, friends, police, or emergency medical services.

Acute changes or rapid deterioration in mental status suggests an underlying organic cause.[34]

MEDICAL PROBLEMS PRESENTING AS PSYCHIATRIC COMPLAINTS

There are a myriad of medical conditions that may present with psychiatric complaints or exacerbate symptoms of previously diagnosed psychiatric problems. A broad differential diagnosis must be entertained, particularly when confronted with new-onset psychosis and altered mental status (AMS). A prospective study found that 63% of 100 consecutive patients, ages 16 to 65 years, with new psychiatric symptoms, had an organic cause for their symptoms. The medical history was telling in 42% of the patients with medical causes of their symptoms. Likewise, this study showed that 11% of the patients had relevant physical examination findings.[16] Another report found 34% to 46% of inpatients on a psychiatric ward have medical disorders causing or exacerbating psychiatric illness.[14,15]

The patient's history and examination should guide the diagnostic evaluation and ordering of tests. All red flags, including symptoms of infection, thought disturbances, and fluctuations of consciousness, must be evaluated and delirium ruled out. Failure to properly diagnose delirium leads to high morbidity and mortality.[35]

Similarly, EPs should obtain the patient's medication history, including any recent medication changes and document compliance or adherence with their treatment regimen.

Medical comorbidities and medical complaints should also be evaluated thoroughly because these can both cause and/or exacerbate psychiatric symptoms. There may also be treatment implications for both acute and chronic medical disorders if the patient is admitted to an inpatient psychiatric facility. All acute medical conditions should be addressed and stabilized before patient transfer to an inpatient psychiatric facility. EPs should also schedule all chronic medications when possible (eg, antihypertensive regimen) and make recommendations for treating any other acute medical problems (eg, a course of clindamycin for purulent cellulitis).

Review of Systems

The review of systems is another way to uncover medical conditions, given the limited insight of some psychiatric patients. Risk factors should also be probed, including drug and alcohol use and sexual behaviors, as well as any recent trauma. As with the history of present illness, positive pertinent findings should guide ancillary testing.

Physical Examination

An appropriate physical examination should unearth medical pathologic conditions responsible for causing or worsening the patient's psychiatric presentation and guide the care the patient needs during inpatient hospitalization. When EPs have limited history or are confronted with an altered patient, she or he should conduct a thorough physical examination and assess the patient for evidence of infection, trauma, or other pathologic conditions, including toxidromes.[36] For patients with known psychiatric illnesses who are alert and cooperative with the EP, the examination should be focused and guided by the history and review of systems. Physical findings suggestive of organic disease are delineated in **Table 1**.

Differentiating primary psychosis from secondary organic psychosis (eg, medical or toxic causes) can be difficult. What could make it more complicated is that a positive finding on an examination or a positive laboratory test result alone (eg, a urine drug test

Table 1
Physical examination findings suggestive of organic conditions

Vital Sign abnormalities	Infection, toxidrome or withdrawal, Central nervous system (CNS) disease, hypertensive encephalopathy, endocrine abnormalities, autoimmune dysfunction
Oculomotor dysfunction	CNS disease, toxidromes or withdrawal
Cranial nerve abnormalities	Encephalitis, mass, stroke
Gait abnormality	Wernicke, syphilis, B12 deficiency
Lymphadenopathy	Human immunodeficiency virus, lymphoma, infection
Enlarged or nodular thyroid	Graves disease, thyroid storm
Rash	Meningitis
Battle sign or raccoon eyes	Intracranial hemorrhage
Stiff neck, Brudzinski and Kernig signs	Meningitis
Ascites	Hepatic dysfunction or encephalopathy
Jaundice	Hepatic dysfunction
Uremic frost	Kidney failure

positive for cannabis) does not establish causality. The MADFOCS scale is a useful mnemonic that can be used for differentiating organic from primary psychoses.[37,38]

At times, an observation period with attention to the psychotic symptoms and repeated cognitive testing might still be necessary to make an accurate diagnosis. The American College of Emergency Physicians (ACEP) suggests that clinicians consider using a period of observation to determine if psychiatric symptoms resolve as the episode of intoxication resolves (level C recommendation).

Providers should perform a mental status examination to help differentiate functional from organic pathologic conditions.[39] A detailed extensive mental status examination is not necessary in every patient with AMS. Indeed, this examination should be systematic, focused, brief, and practical in the ED setting. At a minimum, the 3 key elements of orientation, memory, and judgment should be addressed.[40]

The authors recommend that EPs adopt the Quick Confusion Scale (QCS) because it is as reliable as a full Mini-Mental Status Examination and much quicker to use.[40]

Deficiencies in the Initial Assessment

Unfortunately, multiple studies demonstrate that EPs do not obtain adequate histories or perform sufficient examinations. Not only does this lead to missed diagnoses, patient safety issues and inappropriate dispositions, it also results in an increased dependence on ancillary testing or imaging.

In 1981, the Journal of the American Medical Association published a paper on diagnostic errors in the evaluation of behavior disorders. They found that in 215 patients referred to a specialized medical-psychiatric inpatient unit, thorough neuropsychiatric evaluation resulted in a therapeutically important alteration of the referring diagnosis in 41%. Of patients referred for a tentative diagnosis of dementia, 63% were found to have treatable conditions. They found that these erroneous diagnoses were provided roughly equally by psychiatric and medical practitioners; they suggested that evaluation would ideally be done by neurologists or psychiatrists with specialty expertise in neuropsychiatric evaluation.[15]

In a study performed by Tintinalli and colleagues[8] more than a decade later, the investigators found multiple deficiencies in the physical examination of the emergency psychiatric patient. Once again, physicians failed to perform a mental status in more than 50% of patients.

In 2000, another study by Reeves and colleagues[7] performed a root cause analysis to determine why medical emergencies went unrecognized and patients were admitted to psychiatric units instead of the appropriate medical floor. Approximately one-third of missed cases involved severe alcohol or drug intoxication. One-eighth of the cases involved withdrawal or delirium tremens. Similarly, one-eighth of the incorrectly diagnosed patients involved prescription drug overdoses. According to the investigators, more than 40% of the patients had inadequate examinations and physicians failed to obtain an adequate history in more than one-third of the cases. Physicians also failed to address abnormal vital signs in almost 8% of patients.

A 2008 study by Szpakowicz and Herd[41] revealed that physicians were still performing inadequate physical examinations. Specifically, providers failed to record a complete set of vital signs in almost half of the cases.

In 2015, Tucci and colleagues[42] performed a retrospective chart review of 50 consecutive psychiatric patients that focused on the neurologic and psychiatric examinations of the emergency psychiatric patient. Despite working at a county hospital that sees more than 9500 psychiatric patients each year (representing almost 10% of the census), providers still performed (or at least documented) abysmally lacking examinations. Mood and affect were documented in less than 50% of cases. Suicidality was documented in less than one-third of the patients who presented with a chief complaint of suicidal ideation. Only 1 out of the 50 patients had any kind of mental status examination documented. Sixteen percent of patients did not have their orientation status documented (even when AMS and behavioral conditions are commonly included for psychiatric referral). More than half did not have a cranial nerve examination. Less than 25% had their gait or reflexes tested. Twenty eight percent of patients had their strength tested and 12% had a sensory examination performed.

The authors cannot find a single study that supports the contention that EPs perform adequate histories and physical examinations on patients who present with psychiatric or behavioral emergencies.

LABORATORY AND ANCILLARY TESTING

Importance and Utility

Many studies demonstrate that broad ordering of tests is low yield and that the appropriate standard is to tailor such testing to the patient's history and physical examination findings.

In a retrospective study by Korn and colleagues,[43] the investigators concluded that EPs could skip ancillary testing in patients with primary psychiatric complaints who denied current medical problems, had a documented psychiatric history, stable vital signs, and normal physical examinations and refer immediately to psychiatry.

Another observational analysis of 345 psychiatric patients noted that almost all medical problems and substance abuse in ED psychiatric patients could be identified by vital signs, and history and physical examination and did not require confirmatory testing.

In 2004, Gregory and colleagues[44] found that routine laboratory studies were generally low yield except in higher risk categories: the elderly, substance users, patients with no prior psychiatric history, and patients with preexisting medical disorders or concurrent medical complaints.

So then, why are there still inpatient facilities requiring extensive workups for patients with known psychiatric history who present with a primary psychiatric problem?

This dilemma is memorialized in the conflicting guidelines issued by the ACEP and the American Psychiatric Association (APA). In 2006, ACEP published a clinical policy on the medical clearance of the psychiatric patient. This policy declares that routine laboratory testing of all patients is unnecessary and that the history and physical examination findings should guide the ordering of ancillary testing. Moreover, ACEP noted that urine drug screen tests do not affect patient management, are not required, and if they are performed, should not delay transfer to inpatient psychiatric facilities. Similarly, EPs were counseled that the patient's cognitive ability or clinical sobriety that should determine when an appropriate psychiatric interview may be conducted and not the patient's blood alcohol level. ACEP did allow for a reasonable observation period to determine if the patient's mood disorder and psychiatric symptoms were secondary to intoxication.[45]

The APA guidelines include a much broader list of requirements for medical clearance and include assessments of comorbid drug and alcohol use.[46]

Psychiatrists cannot diagnose patients with a new psychiatric condition while the patient is acutely intoxicated or under the influence of mind-altering substances. Additionally, intoxication and withdrawal syndromes can mimic mental illness even in patients with primary psychiatric diagnoses who have otherwise been well-controlled in an outpatient setting (eg, suicidal ideation only present during acute intoxication in a patient with a documented history of major depressive disorder). Concomitant drug and alcohol may also affect the patient's placement in a facility equipped to handle rehabilitation and withdrawal. Consequently, the APA places more importance on drug and alcohol testing.

As can be seen from the previous summaries, ACEP and the APA have issued guidelines that directly conflict with each other in the setting of patients with known psychiatric history who present with a primary psychiatric complaint.

In general, there tends to be less disagreement between specialties when faced with new onset AMS or psychosis for which an extensive work up is required. A thorough evaluation and laboratory tests are necessary for (1) broad screening, (2) exclusion of specific diseases informed by treatability and epidemiology, and (3) medical baseline measures to allow monitor for iatrogenic morbidity such as obesity and metabolic disorders.[47] **Box 1** shows recommended workup for individuals with first-episode psychosis. All of the recommended tests may be started but do not need to be completed in the ED. The authors recommend that such patients be admitted to the general medical floor with a presumptive diagnosis of delirium or altered mental state.

At the time of this publication, the breadth of laboratory testing for the purpose of medical clearance still remains controversial. Unfortunately, however, there is no interdisciplinary consensus regarding the number and types of ancillary testing required for medical clearance.

The authors hail from emergency medicine and psychiatry, and recognize that the controversy of ancillary testing is rooted in that, although individual physicians may perform proper histories and physical examinations, currently, the specialty of emergency medicine as a whole is not. Psychiatrists believe they need to rely on more objective measures to ascertain whether the patient has a medical problem causing his or her psychiatric symptoms. Borrowing from the trauma literature, the authors recommend EPs adopt a more regimented or check-list approach to the history and physical examination of the emergency psychiatric patient. Once regimented histories and physical examinations become the norm instead of the exception, the authors expect our psychiatric colleagues will be more sanguine in accepting tailored testing

Box 1
Recommended work up for first episode of psychosis

Medical work-up in first-episode psychosis

Complete blood count

Full chemistry, liver function test

Syphilis serology venereal disease research laboratory (the rapid plasma regain)

Human immunodeficiency virus test

Vitamin B12

Electrocardiogram (if cardiac risk)

Urine drug screen

Ethanol level

Drug levels if indicated

Considered if indicated by clinical picture

Brain imaging with computed tomography or MRI

Electroencephalogram

Chest radiograph

Lumbar puncture

to address specific patient complaints or elements in their medical histories, instead of the current, seemingly required, shot-gun approach.

Common Pitfalls in the Medical Clearance Process

The failure to properly diagnose medical pathologic conditions as the root cause of (or exacerbating feature of) psychiatric illness leads to increased morbidity and mortality. As previously discussed, a thorough history and physical, including mental status examination, is extremely important to identify these causes and guide further testing. However, studies show that many providers skip these crucial steps. Moreover, as

Box 2
Common errors in the medical clearance process

Poor history taking

Failure to obtain collateral information from family, emergency medical services, police, and so forth.

Failure to perform a thorough physical examination

Failure to address vital sign abnormalities (eg, sustained tachycardia, hypoxemia)

Failure to develop a differential diagnosis based on the totality of the patient's history and physical examination

Anchoring early on a primary psychiatric diagnosis

Inadequate laboratory and radiographic testing

Shotgun laboratory and radiographic testing

discussed in our separate article on Moreover, as discussed in this issue of Al Alam and colleagues' article, "Emergency department medical clearance of patients with psychiatric or behavioral emergencies: part 2: special psychiatric populations and considerations," special populations, a higher portion of geriatric, pediatric, and pregnant patients may have symptoms caused by medical conditions and providers should entertain a broad differential when approaching these patients. special populations, a higher portion of geriatric, pediatric, and pregnant patients may have symptoms caused by medical conditions and providers should entertain a broad differential when approaching these patients.

Common pitfalls are summarized in **Box 2**.

SUMMARY

EPs must diligently investigate whether a patient's psychiatric symptoms are caused or worsened by an organic condition. Moreover, if a condition is identified, the EP must stabilize it before the patient can be transferred to an inpatient facility for longer term treatment and management. To rule out medical causes, the EP must perform a thorough physical examination and take an adequate history and/or obtain collateral information. Laboratory and ancillary testing should be guided by what is indicated based on clinical assessment.

The sheer complexity of the medical stability, clearance, and admission process sometimes lead EPs to ask, like Maverick, "So you think I should quit?" Viper, "I didn't say that….Now I'm not gonna sit here and blow sunshine up your ass, Lieutenant. A good pilot is compelled to evaluate what's happened, so he can apply what he's learned. Up there, we gotta push it. That's our job. It's your option Lieutenant. All yours." Like fighter pilots in high-stress situations, it is time to apply what has been learned and advocate for a uniform, interdisciplinary standard of medical clearance from the professional societies ACEP, APA, and AAEP (The American Association for Emergency Psychiatry).

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