

Improving Evaluation of First-Episode Psychosis Through a Structured Order Set and Educational Intervention

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Background

- First-episode psychosis (FEP) requires a structured and systematic medical evaluation to exclude secondary causes, establish baseline health, and support early, evidence-based intervention.
- Variability in workup practices can lead to inconsistent care, unnecessary testing, or missed diagnoses.
- The medical evaluation of FEP remains variable, as there is no single universally agreed-upon standard workup.
- A key conceptual review by Freudenreich and colleagues highlights the absence of a standardized approach and proposes a clinically guided framework that combines broad medical screening, targeted exclusion of treatable secondary causes, and baseline safety monitoring prior to antipsychotic initiation.

Objective

To develop and implement a standardized, tiered electronic health record (EHR) order set for FEP and to provide targeted education to psychiatry residents to promote consistent, evidence-informed evaluation.

Methods

We designed a three-tier FEP medical workup order set based on guideline-informed and literature-supported practices.

- **Tier 1:** broad screening labs (CBC, CMP, TSH with reflex T4, B12, folate, urine toxicology including THC confirmation, HIV, syphilis testing) and brain imaging
- **Tier 2:** Targeted testing for red-flag presentations guided by clinical features (e.g., autoimmune panels, thyroid antibodies, Wilson's disease testing, EEG, lumbar puncture with CSF studies, infectious panels, heavy metal screen)
- **Tier 3:** Baseline metabolic and safety monitoring (HbA1c, lipid panel, EKG, pregnancy test) when initiating antipsychotic treatment.

An educational lecture for psychiatry residents will accompany rollout to reinforce clinical reasoning and appropriate test selection.

Order Set

PSY: FIRST EPISODE PSYCHOSIS (OUTPATIENT)

- ▼ Initial Work-up Labs
 - ▼ Initial work-up labs
 - CBC WITH DIFFERENTIAL
 - COMPREHENSIVE METABOLIC PANEL (CMP)
 - THYROID STIMULATING HORMONE (TSH), WITH REFLEX FREE T-4
 - VITAMIN B12
 - FOLATE
 - DRUGS OF ABUSE-URINE + CONFIRM (\$264)
 - THC-URINE SCREEN + REFLEXED CONFIRMATION (\$264)
 - HIV ANTIGEN/ANTIBODY COMBO (HIV-1 AND HIV-2)
 - SYPHILIS TOTAL WITH REFLEX CONFIRMATION
 - EXTERNAL CBC WITH DIFFERENTIAL
 - EXTERNAL COMPREHENSIVE METABOLIC PANEL
 - EXTERNAL THYROID STIMULATING HORMONE, REFLEX (TSH WITH REFLEX FREE T-4)
 - EXTERNAL VITAMIN B12
 - EXTERNAL FOLATE
 - EXTERNAL DRUGS OF ABUSE - URINE
 - EXTERNAL THC-URINE
 - EXTERNAL HIV ANTIGEN/ANTIBODY COMBO (HIV-1 & HIV-2)
 - ▼ Initial work-up imaging
 - MRI BRAIN W/WO CONTRAST (70553) (\$6,506)
 - CT BRAIN W/WO CONTRAST (70470) (\$3,186)
 - NON-UIHC MR IMAGING
Brain MRI w/w/o contrast for first episode psychosis
 - NON-UIHC CT IMAGING
Head CT w/w/o contrast for first episode psychosis

▼ Red-flag / Expanded work-up

Consider these work-up only if clinically indicated based on the patient's presentation. Red flag symptoms and laboratory findings are not exhaustive and are intended to serve only as a general guidance for further evaluation.

Red flags:

- Age <13 or >40 at onset
- Rapid or fluctuating course
- Delirium, catatonia, autonomic instability
- Focal neurologic signs or seizures
- Treatment resistance
- Prominent cognitive decline
- Autoimmune disease or malignancy history

▶ Expanded work-up labs [Click for more](#)

▶ Expanded work-up for Wilson's & Cushing's diseases [Click for more](#)

▶ Expanded work-up neurologic [Click for more](#)

▼ Baseline Monitoring Test

If you plan to initiate an antipsychotic medication, consider obtaining the following baseline studies.

▶ Baseline labs [Click for more](#)

Pending Results

Baseline data collection is currently underway to characterize existing variability in FEP medical workups and to quantify rates of incomplete screening prior to implementation. Post-implementation outcomes will include rates of completed FEP workups. Additionally, a retrospective pre-post intervention survey will be administered to residents following the order set rollout and psychiatry resident lecture to assess changes in resident-reported confidence and competence in conducting a comprehensive FEP medical evaluation.

Conclusion

Implementation of a standardized FEP order set combined with structured resident education aims to improve the consistency of FEP evaluation. Ongoing evaluation will assess its impact on practice patterns and trainee education.

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