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Long Acting Injectable Medications in Mental Health

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Long Acting Injectable Antipsychotics

- **Paliperidone palmitate (two formulations)**
 - Invega Sustenna every 4 weeks
 - Invega Trinza every 3 months
- **Aripiprazole**
 - Aripiprazole monohydrate (Abilify Maintena) every 4 weeks
 - Aripiprazole lauroxil (Aristada) every 4-6 weeks
- **Risperidone (Risperdal Consta) every 2 weeks**
- **Haloperidol decanoate and Fluphenazine decanoate**
 - Both every 4 weeks

■ LAIs vs. Oral antipsychotics

- Meta analysis of 21 RCTs (N=5176) found similar rates of relapse and all-cause discontinuation for patients treated with LAIs vs oral antipsychotics¹
- Meta analysis of 25 mirror-image studies (N=4066) found LAIs were superior to oral antipsychotics for preventing psychiatric hospitalization²

LAI in Early Phase Psychosis



■ LAIs vs. Oral antipsychotics

- In a 12-month study of 86 first-episode patients, relapse and/or **exacerbation of psychosis was noted for 5% of patients randomized to an LAI antipsychotic versus 33% with oral risperidone** (relative risk reduction, 84.7%; $P < .001$).³
- In another study, recently diagnosed (≥ 1 -5 years) patients with schizophrenia were randomized to up to 2 years of open-label, rater-blinded treatment with paliperidone palmitate ($n = 352$) versus investigator's choice of oral antipsychotic ($n = 363$).⁴
 - **Time to relapse was significantly longer for patients randomized to paliperidone palmitate than to oral antipsychotics** ($P = .0191$); relapse rates were also lower (14.8% vs 20.9%; $P = .032$)
- In a prospective, nationwide cohort study conducted in Finland ($N = 2,588$), depot antipsychotics were associated with a **significantly reduced risk of rehospitalization** compared with the same antipsychotics in oral form (hazard ratio, 0.36; $P = .007$)⁵

Adverse Events



- Meta-analysis of 16 RCTs (n = 4,902) showed that of 119 reported adverse events, LAIs and oral antipsychotics **did not differ significantly**, aside from akinesia, low-density lipoprotein cholesterol change, anxiety (higher with LAIs), and prolactin change (lower with LAIs).⁶

Adherence



- Studies have demonstrated that **approximately one-third of patients** with schizophrenia are poorly adherent to oral medications at any time.⁷⁻¹⁰

Cost Savings



- One study compared treatment costs for patients with schizophrenia or schizoaffective disorder who were randomized to either risperidone LAI (n = 187) or the physician's choice of an oral antipsychotic (n = 182).¹¹
 - Overall, mean quarterly outpatient medication costs were higher for patients randomized to LAI (\$3,028) than oral medication (\$1,913; $P = .003$).
 - Total treatment costs did not differ significantly between the two treatments (\$14,916 vs \$13,980; $P = .73$).

Cost Savings



- Health care utilization and costs have also been compared among adults with schizophrenia in the Veterans Health Administration system who initiated use of either LAI or oral antipsychotics.¹²
- During the 12-month follow-up period, patients treated with LAI compared to oral antipsychotics had **significantly lower average inpatient costs**, higher average pharmacy costs, and similar total health care costs.

Cost Savings

- A recent Medicaid health care utilization study in the United States compared health care utilization and treatment costs for hospitalized patients with schizophrenia who had been on short-duration LAI treatment (defined as 30-79 days; n = 2,856) versus longer-term LAI treatment (≥ 180 days; n = 2,838).¹³
- The longer-term LAI patients **had significantly lower levels** of some health care utilization measures, **including mean number of hospitalizations and mean length of hospital stay.**
- Mean total hospital payments were **26% lower** for patients in the long-term LAI group than those in the short-term LAI group, suggesting that the economic benefit of LAI therapy may increase over time.

Cost Savings



- Lin and colleagues compared real-world health care costs and medication adherence between patients with schizophrenia who initiated LAI (n = 394) versus oral antipsychotics (n = 2,610) using medical claims data from commercially insured patients.¹⁴
 - Schizophrenia-related hospital **costs decreased by a mean of \$5,981** in the LAI group and **increased by a mean of \$758** for patients who received oral antipsychotics ($P < .001$).
 - Mean outpatient **cost increased by \$134 versus \$568 for the LAI and oral antipsychotic groups, respectively** ($P = .023$).
 - The mean drug cost was \$4,132 with LAIs versus \$2,562 with oral agents ($P < .001$).
 - Similar outcomes were observed in patients with Medicare coverage.

Barriers to LAI Use¹⁵⁻¹⁷



- Some psychiatrists will only use if they can be clearly shown to be superior to oral agents
- Lack of knowledge about practical issues regarding LAI use
- Overestimation of the treatment adherence of their own patients
- Service barriers
- Financial barriers
- Access to LAIs

Cost as a barrier to LAI use



- LAI products are associated with higher drug acquisition costs
 - May save money across the entire continuum of care due to reduced relapses or hospitalizations.
- A review of 28 studies that examined health care costs associated with LAIs or oral antipsychotics found that most studies demonstrated lower overall treatment costs with LAIs despite higher drug acquisition costs¹⁸
- Potential cost savings were shown on a system-wide basis in Canada and Sweden^{19,20}

Assertive Community Treatment



- Started in 1960s-70s in Madison, WI to address high rate of readmission to inpatient psychiatric units among recently discharged patients²¹
- Mobile teams meet patients in community
- Individualized treatment plans
- Comprised of representatives from psychiatry, nursing, psychiatric rehabilitation, social work, and other community resources with 24/7 crisis coverage

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