

Real-World Outcomes and Practice Patterns for Long-Acting Injectable vs Oral Antipsychotic Agents Among Hospitalized Patients With Schizophrenia in the United States

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Introduction

- Schizophrenia is a disabling, chronic mental health disorder affecting 1% of the United States (US) population. People with schizophrenia experience deficits in thought processes, perceptions, and emotional responsiveness, leading to a loss of function and autonomy¹
- Rates of mortality are high among people with schizophrenia, with suicide claiming the lives of 5% of the population, compared with 1.8% in the general population.² Among patients with first-episode psychosis, 30% of deaths were because of suicide²
- Rehospitalization rates are high among people with schizophrenia, at 22%.³ Long-acting injectable antipsychotics (LAIs) have been shown to delay the time to rehospitalization in these patients, and have historically performed better than oral antipsychotics (OAs)^{4,5}

Objective

- To assess differences in rehospitalization rates after schizophrenia-related hospitalization for patients prescribed LAIs, OAs, or a combination of LAIs+OAs at discharge

Methods

- Adults aged ≥18 years with a primary or admitting diagnosis of schizophrenia at hospitalization who were discharged taking OAs or LAIs were identified from the Premier Hospital Database, a large, US hospital-based, service-level, all-payer database
- Index date was defined as the date of first-episode psychosis between December 2019 and June 2021
- Prescribing patterns and rehospitalization risk were analyzed for patients with ≥3 months pre- and post-index data
- Demographics and comorbidities, payer type, admission source, discharge status, physician specialty, previous medication use, and hospital attributes were extracted from the database
- Risk of rehospitalization was calculated using Cox proportional models controlled for gender, age group, Charlson Comorbidity Index, length of index hospital stay, baseline mental disorder diagnoses, marital status, payer type, admission source, treating-physician specialty, discharge status, baseline OA use, baseline clozapine use, urban vs rural hospital, teaching vs nonteaching hospital, hospital size, and region

Results

- Of 41,450 patients with schizophrenia-related hospitalizations identified in the Premier Hospital Database, 27,629 were prescribed antipsychotic medications at discharge, had ≥3 months of pre- and post-index data, and were included in this analysis (**Table 1**)
- Most patients included in this analysis were male adults under the age of 45 years (**Table 2**)
- The majority of patients were under the care of a psychiatrist and used Medicare or Medicaid (**Table 3**)

Key Results

- At discharge, 23,336 (84%) patients were prescribed OAs and 4293 (16%) were prescribed LAIs±OAs (**Table 4**)
- The most commonly prescribed OAs were risperidone (26%) and olanzapine (23%)
- Of the patients prescribed LAIs±OAs at discharge, 1303 (30%) were prescribed second-generation (SG) LAIs±OAs and 2990 (70%) were prescribed first-generation (FG) LAIs±OAs
- The most commonly prescribed LAI was haloperidol (combined with haloperidol OA; 37%) (**Table 4**)

Table 4. Antipsychotics Prescribed at Discharge

| | n (%) |
|----------------------------------|-------------|
| OAs only | 23,336 (84) |
| Risperidone | 5990 (26) |
| Olanzapine | 5379 (23) |
| Aripiprazole | 2941 (13) |
| Haloperidol | 2615 (11) |
| Other | 6271 (27) |
| LAIs±OAs | 4293 (16) |
| Haloperidol LAI+haloperidol OA | 1607 (37) |
| Fluphenazine LAI+fluphenazine OA | 451 (10) |
| Haloperidol LAI | 298 (7) |
| Paliperidone LAI+risperidone OA | 244 (6) |
| Aripiprazole LAI+aripiprazole OA | 207 (5) |
| Paliperidone LAI+paliperidone OA | 206 (5) |
| Other | 1280 (30) |

- A significantly greater proportion of patients prescribed OAs at discharge were rehospitalized compared with those prescribed LAIs±OAs at discharge (**Figure 1**)
- Risk of rehospitalization was reduced in patients discharged taking LAIs±OAs compared with those taking OAs alone (**Figure 2**)
 - 18% reduced risk of rehospitalization within 30 days
 - 14% reduced risk of rehospitalization within 60 days
 - 10% reduced risk of rehospitalization within 90 days
- Of the patients discharged taking LAIs±OAs, a significant proportion of those prescribed FG LAIs±OAs were rehospitalized (**Figure 3**)

Figure 1. Proportion of Patients With Rehospitalizations

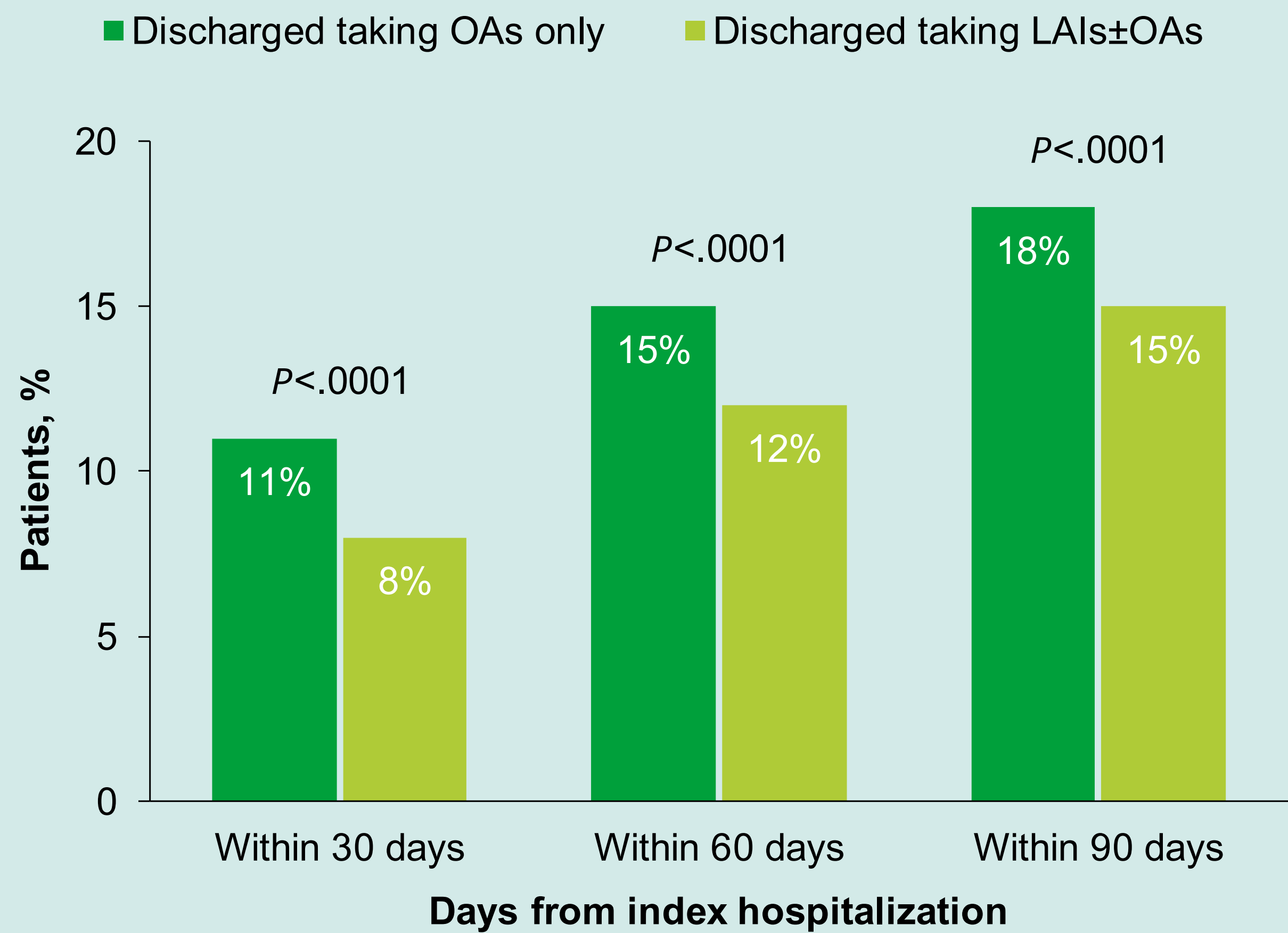


Figure 2. Risk of Rehospitalization (LAIs±OAs vs OAs Only)

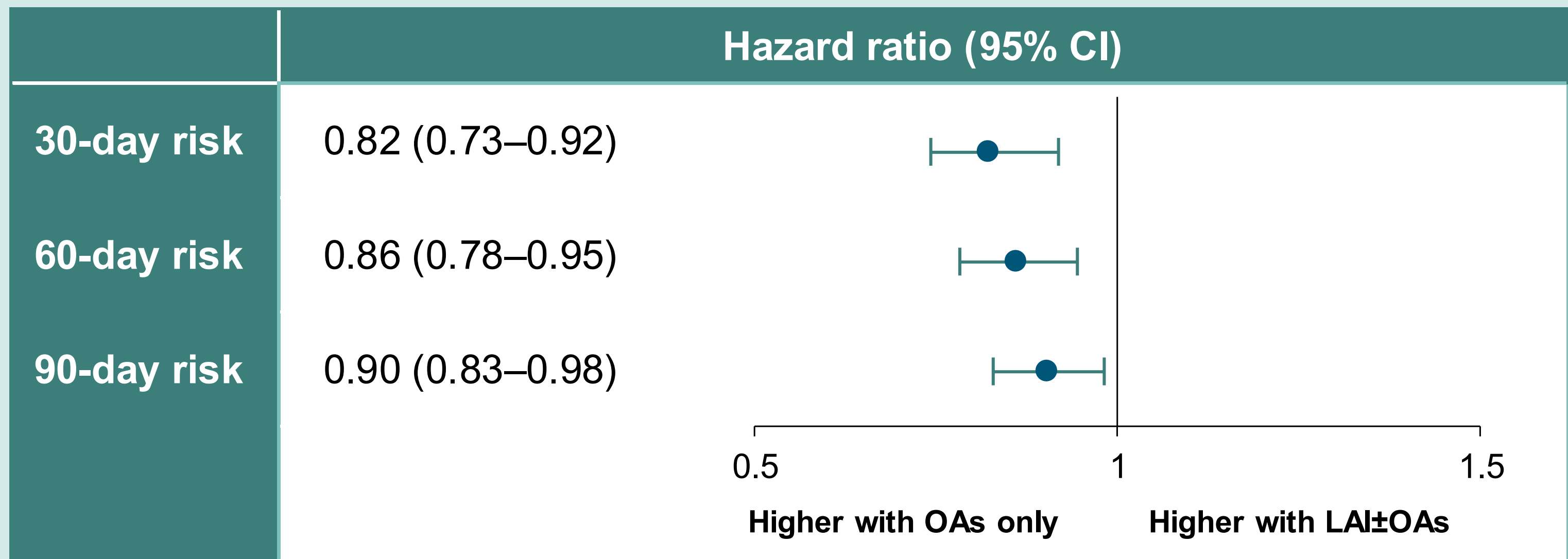


Figure 3. Proportion of Patients With Rehospitalizations

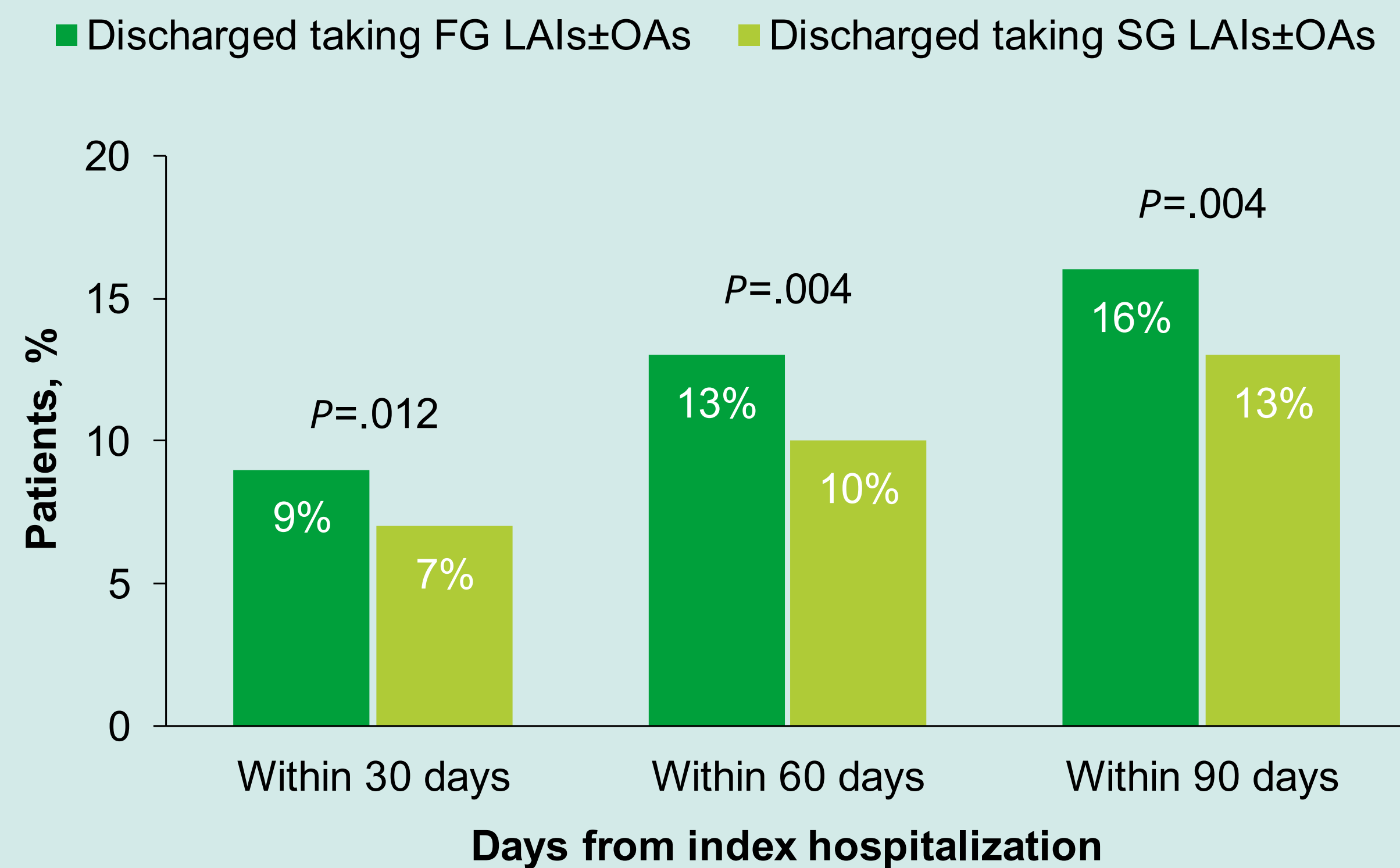


Table 1. Sample Attrition

| Criteria | Total, n |
|--|----------|
| Patients with a hospitalization with a primary or admitting diagnosis of schizophrenia between September 2019 and September 2021 | 41,450 |
| Patients with index hospitalization with a primary or admitting diagnosis of schizophrenia between December 2019 and June 2021 (to allow a 3-month minimum baseline and follow-up) | 32,692 |
| Patients aged ≥18 years | 32,317 |
| Patients discharged on antipsychotics | 27,629 |

Table 2. Demographic Characteristics at Index Date

| | OAs only | All LAIs±OAs | FG LAIs±OAs | SG LAIs±OAs |
|------------------|-------------|--------------|-------------|-------------|
| Male, n (%) | 15,565 (67) | 2915 (68) | 2027 (68) | 888 (68) |
| Age group, n (%) | | | | |
| 18–34 years | 9761 (42) | 1819 (42) | 1185 (40) | 634 (49) |
| 35–44 years | 4699 (20) | 906 (21) | 612 (20) | 294 (23) |
| 45–54 years | 3438 (15) | 658 (15) | 498 (17) | 160 (12) |
| 55–64 years | 3523 (15) | 626 (15) | 474 (16) | 152 (12) |
| 65–74 years | 1547 (7) | 246 (6) | 188 (6) | 58 (4) |
| >75 years | 368 (2) | 38 (1) | 33 (1) | 5 (<1) |

Table 3. Payer Type and Physician Specialty for Index Hospitalizations

| | OAs only | All LAIs±OAs | FG LAIs±OAs | SG LAIs±OAs |
|-------------------------------------|-------------|--------------|-------------|-------------|
| Payer type, n (%) | | | | |
| Medicare | 7771 (33) | 1468 (34) | 1110 (37) | 358 (27) |
| Medicaid | 10,477 (45) | 2038 (47) | 1349 (45) | 689 (53) |
| Commercial | 2592 (11) | 429 (10) | 262 (9) | 167 (13) |
| Self/other/unknown | 2496 (11) | 358 (8) | 269 (9) | 89 (7) |
| Treating-physician specialty, n (%) | | | | |
| Psychiatry | 20,912 (90) | 4106 (96) | 2862 (96) | 1244 (95) |
| Internal medicine | 706 (3) | 49 (1) | 28 (1) | 21 (2) |
| Hospitalist | 527 (2) | 32 (1) | 26 (1) | 6 (<1) |
| Other | 1191 (5) | 106 (2) | 74 (2) | 32 (2) |

Conclusions

- In this study, most patients with schizophrenia-related hospitalizations were prescribed OAs at discharge
- Compared with those treated with LAIs±OAs, a significantly greater proportion of patients prescribed OAs only at discharge were rehospitalized
- Patients prescribed SG LAIs±OAs at discharge had the lowest risk of rehospitalization at 30, 60, and 90 days
- These data suggest that prescribing SG LAIs±OAs at discharge may result in a lower risk of rehospitalization (a proxy for relapse) in patients with a history of schizophrenia-related hospitalization

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Disclosures
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Abbreviations
FG = first generation, LAI = long-acting injectable antipsychotic, OA = oral antipsychotic, SG = second generation, US = United States.

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