

Schizophrenia Patients Don't Take Medications Regularly Resulting In Higher Medical Costs, UCSD Researchers Find

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Sue Pondrom

Despite improved drugs for schizophrenia - a devastating mental illness that affects more than 2 million Americans and one percent of the world's population - a new study shows that only 41 percent of patients take their antipsychotic medication on a regular basis. Researchers also found that out-patient and hospital medical costs are significantly higher in the patients who are not regularly adherent to a prescribed drug regimen.

Twenty-four percent of the patients are non-adherent and 17 percent are only partially compliant to a prescribed drug schedule, according to the study published in the April 2004 issue of the *American Journal of Psychiatry*. A surprising finding was a high percentage of schizophrenia patients - 19 percent - identified as "excess fillers." This means that they filled their prescriptions more frequently than prescribed.

According to the researchers from the University of California, San Diego (UCSD) School of Medicine, the findings point to a need for improved management of schizophrenia patients by all members of the treatment team, including physicians, pharmacists, family members and case management workers in community health settings.

"Estimating the medical costs of non-adherence might also provide an incentive for insurers to allocate resources to improve adherence in patients with schizophrenia," said the study's senior author, Dilip Jeste, M.D., UCSD professor of psychiatry and neurosciences and the Estelle and Edgar Levi Chair in Aging. "Hospital expenditures, for example, are more than three times higher among those who are non-adherent than are expenditures for patients who take their medication on schedule."

Jeste, who is also director of the UCSD Stein Institute on Aging and a geriatric psychiatrist with the VA San Diego Healthcare System, noted that just as the partial- and non-adherent group experienced excessive medical costs, so did the excess fillers. A little more than half of the excess fillers were individuals who received prescriptions for multiple antipsychotic medications.

Additional findings in the study were:

- Both psychiatric and medical hospitalizations were strongly related to the degree of drug adherence;
- Older individuals were more likely to be adherent than younger patients;
- African-American and Latino patients were more likely to be partially or non-adherent than Caucasians;
- Non-adherence had a high association to living condition, with those living independently or homeless most likely to be non-adherent.

The study was conducted with Medi-Cal (California's Medicaid program) claims and eligibility data from 1998 to 2000 in 1,619 schizophrenia patients receiving services from San Diego County Adult Mental Health Services. Analyses were based on prescriptions filled for oral antipsychotic medications. The researchers considered a person partially adherent or non-adherent when a prescription was not refilled on schedule. Medi-Cal claims were used to determine hospitalization in a given year and the total amount paid by MediCal for inpatient care.

San Diego, with its size as the sixth largest county in the United States, and with its diverse ethnic composition "provides a suitable sample to investigate non-adherence. In our study, the ethnic diversity of our subjects approximated that of the County's general population," said the study's first author, Todd Gilmer, Ph.D., UCSD assistant professor of family and preventive medicine.

More Detailed Information on the Study's Findings:

Psychiatric hospitalization was strongly related to the degree of drug adherence, with those considered non-adherent two and one-half times more likely to be hospitalized than those who were adherent. Individuals who were partially adherent or excess filler were 80 percent more likely to be hospitalized. Similar increases were found in hospitalization for medical (non-psychiatric) conditions.

Unlike previous investigations of drug adherence in schizophrenia patients, the UCSD team found significant associations between treatment adherence, age and ethnicity. The likelihood of adhering to an antipsychotic medication generally increased with age. For example, adherence in those younger than 30 years was approximately 36 percent as compared to 48 percent in those age 60 years and above. African-Americans and Latinos had a lower probability of being adherent than Caucasians. While 43 percent of non-Latino whites adhered to their prescription regimen, the team said the adherence among African-Americans was 35 percent and 37 percent among Latinos.

"While previous studies have shown that African-Americans were significantly less likely to be adherent to their antipsychotic medication, the low rate among Latinos is a new finding," Gilmer said.

He noted that adherence of any particular ethnic group is likely to be affected by a unique combination of factors including cultural beliefs and expectations, as well as access to care and physiological differences in therapeutic response to treatment.

The researchers found that non-adherence had a high association to living situation. About one-half of the patients in the study lived independently, 25 percent resided in assisted living facilities, 19 percent lived with family members, and 5 percent were homeless. The highest compliance was among those living with family members or in an assisted living facility. Less adherent were individuals living independently, or those designated as homeless.

"Of course, those living independently or homeless are least likely to receive medication supervision, to have the support of family members, and to have access to outpatient care," Jeste said.

Taken together, all the findings indicate a need for increased interventions to help schizophrenia patients improve medication adherence, the researchers said.

"Our findings argue for new approaches to improve the effectiveness of health services delivered to the mentally ill through the existing network of agencies and providers. They also suggest targeting subgroups for specific improvement strategies to protect high-risk patients with schizophrenia," the investigators said in their study.

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Additional authors of the paper were Piedad Garcia, Ed.D., director, Psychosocial Services, San Diego County Mental Health System; Christian R. Dolder, Pharm.D., Wingate University, Durham, North Carolina; Jonathan P. Lacro, Pharm.D. and Laurie Lindamer, Ph.D., UCSD Department of Psychiatry; and David P. Folsom, M.D., UCSD Departments of Psychiatry and Family and Preventive Medicine.

Media Contacts: Sue Pondrom (619) 543-6163

