INTRODUCTION

• Depression is a serious public health problem related to high social costs and risk of suicide, after the burden of cause of disability, affecting 350 million people worldwide according to the World Health Organization (WHO). 1,2
• Although efficacious and cost-effective treatments are available, non-adherence is very common and one of the most critical issues for successful treatment. 3
• With regards to depression, researches on the different strategies to improve medication adherence (MMAS) have been carried out, and about 45% do not exceed the third month of treatment. 4
• Only 1/4 to 1/3 of patients report to be doing well with medications in the first month. 5
• The most common reasons for medication non-adherence are almost three times higher than in low adherence cases. 6 Studies show that poor adherence leads to higher costs of medical treatments, mental health depression and increase in emergency department visits, mainly due to indirect costs. 7
• There is lack of data on the issue in Brazil, so this study investigated the association between adherence and the burden of depression in the Brazilian population.

METHODOLOGY

Data source
• From the 2011 & 2012 Brazil National Health and Wellness Survey (NHWS), INCA,2014, a self-administered, interview-based general health questionnaire was used. The questionnaire (In Brazilian, supplemented by CFI) (computer assisted telephone interview) to reach those without internet access.
• Respondents recruited from an internet panel using a random stratified sampling approach. The NHWS is a large population-based household survey representative of the adult Brazilian population based on the data from International Data of the U.S. Census Bureau and Organization for Economic Cooperation and Development. Sample
• Of the 24,600 total NHWS respondents, 22,744 had a complete record of responses (94%). In the latter, 2,171 (9%) reported a diagnosis of depression (MD, MDD, Moderate, Moderate Severe, Sever) in respondents with a physician diagnosis of depression. 8

Measures and characteristics
• Age, gender, marital status, education, household income, insurance type.
• BMI body mass index (BMI), smoking status, alcohol use, exercise behavior. The Charlson comorbidity index (CCI) was examined for general comorbidity burden.

Depression severity
• Patient Health Questionnaire-9 (PHQ-9) to assess severity of depression (Minimal, Mild, Moderate, Moderate Severe, Sever) in respondents with a physician diagnosis of depression. 9

Medication adherence
• MMAS-4: respondents were asked if they were currently taking a prescription medication for depression. 10
• Morisky Adherence Scale 4 (MAMS-4) was used to categorize those with good (MAMS ≥ 4) or low adherence (MAMS < 4) and the adherents (high adherence, score ≥ 3) as “adherent.”

Outcomes
• Health-related quality of life (HRQoL) measured via the Medical Outcomes Study Short-Form (SF-12v2) or 2014 NHWS SF-12v2 11. 12. All respondents completed the MMAS-4 (MMAS-4 score) to evaluate the patient’s adherence of the medications in the past 7 days. 13

Statistical analysis
• Factor analysis and linear regression models were compared to non-adherent as an severity (PHQ-9), socio-demographics, health characteristics, health related quality of life (SF-12v2 or SF-12), work productivity and activity impairment (WPAI), and healthcare resource use (pharmacy, hospital and emergency visits) using the required tests for categorical variables and normal variables.
• A general linear modeling (GLM) approach was used to test the association of adherence with depression and other outcomes (HRQoL, MMAS, resource use) while controlling for covariates (socio-demographic and health characteristics).

RESULTS

• The projection of 1,477 respondents to the 2013 Brazilian population resulted in 16,920 people taking prescription anti-depressants (27% of the total population of Brazil who were classified as adherent and 25% as non-adherent). These proportions are well representative of the sample (Table 1).
• Most respondents were female (70%), and the mean age was 43 years for the adherent group and 38 years for non-adherent ones. Adherent respondents had higher household income, insurance and of those were employed (see Table 1).
• Non-adherent respondents reported significantly more severe depression (22% vs. 17% with PHQ-9 score ≥ 15) compared to adherent respondents. In each group, moderate, severe and extremely severe groups were used (see Table 2 and Figure 1).
• Non-adherent respondents were significantly less satisfied with their antidepressant medication (8.9 vs. 5.3, see Table 3).

Figure 1. Depression severity (PHQ-9) 8

Figure 2. Quality of Life (SF-36v2) 9

Table 1. Socio-demographic and Health Characteristics

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DISCUSSION

• Non-adherence with antidepressant medication is a frequent problem for managing depression.
• While medication self-report can be associated with negative health outcomes, 14 this study investigated the possible impact of medication adherence on HRQoL and work productivity in a large general population of Brazilian patients with depression, non-adherence demonstrated a negative impact on patients’ outcomes specifically to medication adherence and work productivity, indicating that medication adherence is an important factor in better outcomes.
• Further research needs to be conducted to help determine factors leading to non-adherence and identify interventions so that adherence can be improved and negative impact limited.