BACKGROUND: aging is inevitably characterized by multimorbidity and comorbidity, and these conditions are near all the time attended by polypharmacy. Polypharmacy increases the possibility of inappropriate prescribing, drug-drug interactions (DDIs) and medication errors, leading to an increased risk for adverse drug reactions (ADRs). Medication reconciliation is a "complex process involving comparison of a patient’s current medication regimen against a physician’s admission, transfer, or discharge orders to identify discrepancies" and to optimize prescribing in hospitalized patients. The aim of the study is to evaluate the prevalence of intentional and unintentional discrepancies, potentially inappropriate medications (PIMs) and DDIs and their correlation with ADRs during the hospital stay and after 1-month follow-up.

METHODS: this is a prospective, observational study, conducted in two Internal Medicine Units at Niguarda Hospital. At interfaces of care, a best possible medication list is collected by two medical doctors under training and reviewed by an Internist and a Clinical Pharmacologist. Discrepancies, DDIs and PIMs are evaluated and reported as well as related ADRs.

RESULTS: data are collected from 122 patients (49.2% female, 50.8% male, with a median age of 77 years). The mean number of medications at the admission is 7.3 with 76.2% of patients in polypharmacy. On admission time 93% of patients have at least 1 UID (Undocumented Intentional Discrepancy) vs 79% on discharge time. Patients with UDs (Unintentional Discrepancies) are respectively 14% vs 4%, on admission and discharge time. The most frequent medications involved in UDs are atorvastatin calcium trihydrate, ferrous sulfate, and escitalopram. 70% of patients have at least 1 PIM at the admission vs 68% on discharge time. 20 patients experienced 1 ADR during the hospital stay.

CONCLUSIONS: data show a high prevalence of discrepancies in hospitalized patients which must be brought to the attention of the clinicians.