S105. VALIDATING THE PREDICTIVE ACCURACY OF THE NAPLS-2 PSYCHOSIS RISK CALCULATOR IN A CLINICAL HIGH-RISK SAMPLE FROM THE SHARP (SHANGHAI AT RISK FOR PSYCHOSIS) PROGRAM

research. The SCIP is a valid and reliable tool and was tested in an international multisite study in three countries (USA, Canada and Egypt) between 2000 and 2012 (Aboraya, El-Missiry et al. 2014, Aboraya 2015, Aboraya 2016, Aboraya, Nasrallah et al. 2016). A total of 700 patients were interviewed at William R. Sharpe Jr. Hospital in Weston, West Virginia (670 patients) and Chestnut Ridge Center in Morgantown, West Virginia (30 patients). Mean patient age was 34, 59% male, 95% White and 34% had less than 12 years of education. The SCIP includes 38 items covering subtypes of delusions, hallucinations and disorganization. The 38 items were shortened by removing items with low prevalence, low sensitivity or low item-rest correlation (< 0.4). The reliability and validity of the remaining items was recalculated with repetitive iterations. The final model was developed with input from experts. The result is the Core Schizophrenia Symptoms (CSS) Scale which has 18 items: 6 items measuring hallucinations, 8 items measuring delusions and 4 items measuring disorganization. The items were scored with binary and Likert-type scales ranging from 0 to 3. The reliability of the CSS scale was measured using the kappa coefficient for inter-rater reliability of the CSS individual items and Cronbach's alpha for internal consistency of the CSS dimension. The validity of the CSS scale was assessed using Receiver Operating Characteristic (ROC) curves to determine the best clinical cut-off point for the CSS scale that maximizes sensitivity and specificity of the scale against the SCIP diagnosis of schizophrenia (the reference standard).

Results: Table (1) shows stable kappa values and standard error of 15 CSS items. Nine items have good reliability (kappa > 0.7), three items have fair reliability (kappa values range from 0.5 to 0.7) and three items have poor reliability (kappa < 0.5). Table (2) shows the internal consistency of the CSS dimension using Cronbach's alpha and one-sided 95% confidence interval. The Cronbach's alpha is 0.8317, indicating excellent internal consistency. Table (3) shows the sensitivity and specificity of the Core Schizophrenia Symptoms (CSS) scale. At a cut-off of one or more positive items, sensitivity is 95.06% and specificity is 88.94%; at a cut-off of two or more positive items, sensitivity is 90.12% and specificity is 89.39%.

Discussion: The Core Schizophrenia Symptoms (CSS) Scale is reliable at the level of individual items and at the dimensional level. In addition, the CSS scale is a valid scale that differentiates between schizophrenia and non-schizophrenia cases in a clinical population.

S105. VALIDATING THE PREDICTIVE ACCURACY OF THE NAPLS-2 PSYCHOSIS RISK CALCULATOR IN A CLINICAL HIGH-RISK SAMPLE FROM THE SHARP (SHANGHAI AT RISK FOR PSYCHOSIS) PROGRAM

TianHong Zhang*[,1], HuiJun Li[2], LiHua Xu[1], YingYing Tang[1], HuiRu Cui[1], Junjie Wang[1], Chunbo Li[1], Kristen Woodberry[3], Daniel I. Shapiro[3], Margaret Niznikiewicz[3], Martha E. Shenton[4], Matcheri S. Keshavan[5], William S. Stone[3], JiJun Wang[1], Robert W. McCarley[6], Larry J. Seidman[7]

[1]Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine; [2]Florida A & M University; [3]Beth Israel Deaconess Medical Center, Harvard Medical Center; [4]Brigham and Women's Hospital, Harvard Medical School, Veterans Affairs Boston Healthcare System; [5]Massachusetts Mental Health Center, Beth Israel Deaconess Medical Center, Harvard Medical School; [6]Harvard Medical School, Veterans Affairs Boston Healthcare System; [7]Harvard Medical School

Background: The present study aims to validate the predictive accuracy of the NAPLS-2 psychosis risk calculator in a clinical high-risk (CHR) sample from the SHARP (ShangHai At Risk for Psychosis) program in Shanghai, China using comparable inclusion/exclusion criteria and assessments.

Methods: Three hundred CHR individuals were identified by the Chinese version of the Structured Interview for Prodromal Symptoms. Of these, 228 (76.0%) completed neuro-cognitive assessments at baseline and 199 (66.3%) had at least a one-year follow-up assessment. The latter group was used in risk calculation. Six key predictors (baseline age, unusual thoughts and suspiciousness, symbol coding and verbal learning test performance, functional decline and family history of psychosis) were entered into the NAPLS-2 model to generate a psychosis risk estimate for each case. The area under the receiver operating characteristic curve (AUC) was used to test the effectiveness of this discrimination.

Results: The NAPLS risk calculator showed moderate discrimination of subsequent transition to psychosis in the SHARP sample with an AUC of 0.631 ($p = 0.007$). Whether discriminating either transition or poor treatment/clinical outcomes, the AUC of the model increased to 0.754 ($p < 0.001$). A risk estimate of 30% or higher had moderate sensitivity (53%) and excellent specificity (86%) for prediction of poor treatment/clinical outcome.

Discussion: The NAPLS-2 risk calculator largely generalizes to a Shanghai CHR sample but is meaningfully improved when predicting an individual's poor clinical outcome as well as conversion. Our findings provide a critical step in the implementation of CHR risk calculation in China.

S106. SUBMISSION WITHDRAWN

S107. HEALTHCARE UTILIZATION AND COST IN SCHIZOPHRENIA AND BIPOLAR DISORDER: REAL-WORLD EVIDENCE FROM US CLAIMS DATABASES

Mallik Greene[1], Tingjian Yan[2], Eunice Chang[2], Ann Hartry*[,3], Jennifer Munday[4], Michael S. Broder[4]

[1]Otsuka Pharmaceutical Development & Commercialization, Inc.; [2]Partnership for Health Analytic Research, LLC; [3]Lundbeck; [4]Phar, LLC

Background: Schizophrenia (SCZ) and bipolar disorder (BD) are distinct psychiatric disorders, but patients may be diagnosed with both. The objective of this study was to explore healthcare resource utilization (HCRU) and cost in patients with claims-based diagnoses of SCZ, type 1 BD (BD-I), and both in a real-world setting.

Methods: This retrospective study used (1/1/12–6/30/16) Truven MarketScan® Commercial, Medicaid, and Medicare Supplemental databases. SCZ was defined as 1 inpatient or 2 outpatient claims for SCZ; BD-I was defined analogously. Three mutually exclusive groups were included: 1) SCZ alone: new episode with SCZ (e.g., met the claims-based diagnostic criteria for SCZ, but not for BD-I), 2) BD-I alone: new episode with BD-I (e.g., met the claims-based diagnostic criteria for BD-I, but not for SCZ), and 3) a diagnosis of both SCZ and BD-I: new episodes with both SCZ and BD-I (e.g., met the claims-based diagnostic criteria for both SCZ and BD-I). Descriptive statistics were reported; costs were adjusted to 2016 US$.

Results: Of the 63,725 patients in the final sample, 11.5% had SCZ alone, 80.8% had BD-I alone, and 7.7% had a diagnosis of both SCZ and BD. In the year following diagnosis, the group having a diagnosis of both SCZ and BD-I had the highest all-cause hospitalization rates (67.4% versus 39.5% in SCZ alone and 33.7% in BD-I alone) and the highest mean (SD) number of emergency room visits [3.44 (7.1] versus 1.39 (3.5) in SCZ alone and 1.29 (3.2) in BD-I alone]. All-cause total healthcare costs were highest in the group having a diagnosis of both SCZ and BD-I [mean (SD): $51,085 (62,759)], followed by the SCZ alone group [$34,204 (52,995)], and the BD-I alone group [$26,393 (48,294)].