improved by $>1 \text{ kg/m}^2$, 4 (9%) deteriorated by $>1 \text{ kg/m}^2$. Psychological distress was low with 7 (15.6%) having anxiety and 3 (6.7%) depression; 84.4% used 'optimistic acceptance' as their main way of coping, 8.8% used 'avoidance' 2.2% 'distraction', and 2.2% 'hopefulness'.

Conclusion Young people with CF still face daunting problems but are functioning well. There is a need for close monitoring during transition to provide treatment and support to those showing clinical deterioration.

REFERENCE

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P183 BURDEN OF ILLNESS IN SCHOOL-AGED PATIENTS WITH CYSTIC FIBROSIS (CF) IN THE UNITED STATES

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Background and objectives The CF disease burden among school-aged children is not well understood. We sought to describe this burden in patients with CF aged 6–17 years in the United States by comparing their healthcare resource utilisation (HCRU) to that of demographically similar controls without CF.

Methods This retrospective study used administrative claims from the Truven MarketScan Medicaid Multi-State (CAID) and Commercial (COMM) databases. Patients with CF aged 6–17 years were identified as having ≥ 1 inpatient (IP) or ≥ 2 outpatient (OP) medical claims ≥ 30 days apart with primary diagnosis of CF (ICD-9-CM: 277.0x) between 2010 and 2014. Other inclusion criteria were ≥ 12 months of continuous medical and pharmacy coverage and ≥ 1 CF-related healthcare encounter during the most recent year of data. Patients were matched 1:3 to non-CF controls by age, gender, race (CAID cohort), geographic region (COMM cohort), insurance plan type and enrollment (calendar year). IP admissions, OP visits and medication use from the most recent year of data (2010–2014) were compared between patients and controls, overall and by age group (6–11 and 12–17

years), using bivariate statistics; chi-square tests were used for categorical variables and *t* tests and ANOVA for continuous variables.

Results The CAID cohort included 1264 patients with CF and the COMM cohort 2400; all were matched 1:3 to controls (mean [SD] age of patients and controls: CAID, 11.4 [3.5]; COMM, 11.9 [3.5]). Annual hospitalisation rates were 22-fold (CAID) to 32-fold (COMM) higher in the CF cohorts, with lengths of stay nearly twice that of matched controls (Table). Annual OP visit rates were 3.1-fold (CAID) and 3.5-fold (COMM) higher in the CF cohorts, and patients filled 5 times as many unique medications and 10 times as many total prescriptions per year as controls. While patients with CF aged 12–17 years generally had higher HCRU than those aged 6–11, trends and magnitude difference vs controls within each age group were similar.

Conclusion HCRU was higher in patients with CF aged 6–17 years than in demographically similar children without CF, illustrating significant disease burden and a need for better treatment options for this population.

Sponsored by Vertex Pharmaceuticals Incorporated

Please refer to page A272 for declarations of interest in relation to abstract P183.

P184 CALCULATION OF CONDUCTIVE INHOMOGENEITY IN CHILDREN WITH SEVERE CF LUNG DISEASE: WHICH METHOD WORKS?

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Introduction Convection Dependent Inhomogeneity (CDI, a measure of ventilation inequality among larger lung units) quantified by Scnd cannot be assessed in subjects with severe

Abstract P183 Table 1

	Total Cases	Total Controls	Age 6–11 y Case	Age 6–11 y Control	Age 12–17 y Case	Age 12–17 y Control
Medicaid (CAID), n	1264	3792	642	1926	622	1866
Proportion with at least 1 IP admission, n (%)	521 (41.2)	107 (2.8)	202 (31.5)	32 (1.7)	319 (51.3)	75 (4.0)
Annual IP admissions, mean (SD)	0.87 (1.49)	0.04 (0.25)	0.55 (1.10) ^a	0.02 (0.17) ^a	1.20 (1.76)	0.06 (0.30)
LOS per admission, mean (SD), days	10.1 (9.0)	6.8 (8.3)	9.5 (6.2) ^b	6.4 (7.7) ^b	10.5 (10.3) ^a	6.9 (8.6) ^a
Annual OP office visits, mean (SD)	9.9 (8.0)	3.2 (3.9)	9.6 (7.6)	3.3 (4.1)	10.2 (8.4)	3.0 (3.7)
Annual total prescriptions filled, mean (SD)	67.3 (52.6)	7.2 (13.4)	65.5 (54.0)	6.6 (11.3)	69.1 (51.1)	7.8 (15.1)
Annual unique prescriptions filled, mean (SD)	15.8 (8.5)	3.2 (4.1)	14.5 (7.3)	3.0 (3.8)	17.1 (9.4)	3.4 (4.3)
Commercial (COMM), n	2400	7200	1075	3225	1325	3975
Proportion with at least 1 IP admission, n (%)	816 (34.0)	107 (1.5)	270 (25.1)	32 (1.0)	546 (41.2)	75 (1.9)
Annual IP admissions, mean (SD)	0.64 (1.21)	0.02 (0.20)	0.40 (0.88) ^b	0.01 (0.10) ^b	0.85 (1.39)	0.03 (0.26)
LOS per admission, mean (SD), days	8.4 (6.3)	4.5 (5.9)	7.5 (4.8)	3.6 (4.2)	8.8 (6.9)	4.9 (6.5)
Annual OP office visits, mean (SD)	9.9 (6.6)	2.8 (3.5)	9.4 (6.0)	2.7 (2.9)	10.3 (7.0)	2.8 (3.8)
Annual total prescriptions filled, mean (SD)	39.8 (31.4)	3.6 (7.0)	37.5 (29.0)	2.9 (5.6)	41.7 (33.1)	4.1 (7.9)
Annual unique prescriptions filled, mean (SD)	11.6 (7.0)	2.0 (2.8)	10.5 (6.1)	1.7 (2.3)	12.5 (7.5)	2.2 (3.0)

P value <0.001 for all comparisons (case vs control), unless otherwise noted. ^a*P* <0.01 ; ^b*P* <0.02 . LOS =length of stay.