

Healthcare Resource Utilization in Refractory MACLD: Comparison of an Amikacin Liposome Inhalation Suspension (ALIS) Cohort with a Non-ALIS Cohort

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Supplementary Table 1. List of comorbidities and symptoms *ICD-9-CM* and *ICD-10-CM* codes

	<i>ICD-9-CM</i> code(s)	<i>ICD-10-CM</i> code(s)
Pulmonary comorbidities and symptoms		
Aspergillosis	117, 484, 518	B44
Asthma	493	J45
Bronchiectasis	494	J47
COPD	491, 492, 496	J41–J44
Cough	786	R05
Cystic fibrosis with pulmonary manifestations	277	E84
Dyspnea	786	R06
Emphysema	492	J43
Hemoptysis	786	R04
Idiopathic interstitial lung disease	515–516	J84
Idiopathic pulmonary fibrosis	516	J84
Lung transplant	V42	Z94
Malignant neoplasm of bronchus and lung	162	C34
Pneumonia	480–486	J12–J18
Pulmonary tuberculosis	011	A15
Nonpulmonary comorbidities		
Cancer without lung	140-165, 170-176, 179-195, 200-209	C00-C26, C30-C33, C37-C41, C43, C45-C58, C60-C76, C81-C85, C88, C90-C96
Cardiovascular disease	390-398, 401-405, 410-417, 420-438, 440-449, 451-459	I00-I02, I05-I13, I15-I16, I20-I28, I30-I52, I60-I63, I65-I83, I85-I89, I95-I97, I99

Chronic kidney disease	585	N18
Crohn's disease	555	K50
Diabetes mellitus	250	E10–E11
Dementia	290-294, 331, 334	F01-F03, F05, G20, G21, G23-G26, G30, G31
GERD	530	K21
HIV	042	B20
Hypertension	401-405	I10–I13, I15
Kidney or liver transplant	V42	Z94
Malnutrition	260-269	E40-E46
Multiple sclerosis	340	G35
Myocardial infarction	410	I21, I22
Obesity	278	E66
Osteoarthritis	715	M16- M19
Rheumatoid arthritis	714	M05
Stroke	430-438	I60-I63, I65-I69
Systemic lupus	710	M32
Underweight	783	R63
Viral hepatitis	070	B18

Abbreviations: COPD, chronic obstructive pulmonary disease; GERD, gastroesophageal reflux disease; HIV, human immunodeficiency virus; *ICD-9/10-CM, International Classification of Diseases, Ninth/Tenth Revision, Clinical Modification.*

Supplementary Table 2. Mean (SD) number of all-cause, respiratory-related, and NTM-related hospitalizations, ER visits, and mean (SD) length of hospital stay during baseline^a, 0–6 months, and 7–12 months post-index in ALIS and non-ALIS cohorts

	ALIS (N=116)	Non-ALIS (N=63)
Number of all-cause hospitalizations per patient, mean (SD)		
Baseline	0.31 (0.70)	0.32 (0.71)
0-6 months post-index period	0.24 (0.60)	0.19 (0.40)
7-12 months post-index period	0.15 (0.44) ^b	0.29 (0.58)
Number of respiratory-related hospitalizations per patient, mean (SD)		
Baseline	0.27 (0.61)	0.25 (0.54)
0-6 months post-index period	0.18 (0.54)	0.16 (0.37)
7-12 months post-index period	0.11 (0.41) ^c	0.19 (0.43)
Number of NTM-related hospitalizations per patient, mean (SD)		
Baseline	0.27 (0.62)	0.19 (0.43)
0-6 months post-index period	0.22 (0.57)	0.17 (0.38)
7-12 months post-index period	0.12 (0.42) ^d	0.19 (0.53)
Number of ER visits per patient, mean (SD)		
Baseline	0.26 (0.58)	0.21 (0.48)
0-6 months post-index period	0.23 (0.70)	0.22 (0.46)
7-12 months post-index period	0.21 (0.58)	0.14 (0.35)
Length of hospital stay, mean (SD), days		
Baseline	4.6 (2.7)	7.4 (6.9)
0-6 months post-index period	5.3 (3.9)	5.2 (4.0)
7-12 months post-index period	5.9 (3.9)	5.9 (7.5)

^aBaseline: 6-month period prior to first ALIS/non-ALIS antibiotic prescription; index date: date of first prescription with ALIS (ALIS cohort) or date of first prescription with non-ALIS antibiotic used in refractory MACLD (non-ALIS cohort)

^bP=0.007 compared with baseline

^cP=0.002 compared with baseline

^d $P=0.007$ compared with baseline

ALIS, amikacin liposome inhalation suspension; ER, emergency room; MACLD, *Mycobacterium avium* complex lung disease; NTM, nontuberculous mycobacteria

Supplementary Table 3. Sensitivity analysis of HCRU excluding patients whose index date was during the 2020 COVID-19 pandemic period.

	ALIS (N=92)	Non-ALIS (N=55)
All-cause hospitalizations, n (%)		
Baseline ^a	25 (27.2)	12 (21.8)
0-6 months post-index period	18 (19.6)	11 (20.0)
7-12 months post-index period	11 (12.0) ^b	13 (23.6)
Respiratory-related hospitalizations, n (%)		
Baseline ^a	23 (25.0)	11 (20.0)
0-6 months post-index period	14 (15.2)	10 (18.2)
7-12 months post-index period	8 (8.7) ^c	11 (20.0)
NTM-related hospitalizations, n (%)		
Baseline ^a	22 (23.9)	10 (18.2)
0-6 months post-index period	17 (18.5)	10 (18.2)
7-12 months post-index period	8 (8.7) ^d	9 (16.4)
ER visits, n (%)		
Baseline	21 (22.8)	8 (14.6)
0-6 months post-index period	16 (17.4)	13 (23.6)
7-12 months post-index period	13 (14.1)	8 (14.6)

^aBaseline: 6-month period prior to first ALIS/non-ALIS antibiotic prescription; index date: date of first prescription with ALIS (ALIS cohort) or date of first prescription with non-ALIS antibiotic used in refractory MACLD (non-ALIS cohort)

^b $P=0.01$ compared with baseline

^c $P=0.002$ compared with baseline

^d $P=0.006$ compared with baseline

ALIS, amikacin liposome inhalation suspension; ER, emergency room; HCRU, healthcare resource utilization; MACLD, *Mycobacterium avium* complex lung disease; NTM, nontuberculous mycobacteria

Supplementary Table 4. Additional analysis of HCRU excluding patients in the non-ALIS cohort who initiated treatment with ciprofloxacin and levofloxacin.

	ALIS cohort (N=116)	Non-ALIS cohort excluding ciprofloxacin and levofloxacin (N=50)^e
All-cause hospitalizations, n (%)		
Baseline ^a	26 (22.4)	12 (24.0)
0-6 months post-index period	21 (18.1)	8 (16.0)
7-12 months post-index period	14 (12.1) ^b	12 (24.0)
Respiratory-related hospitalizations, n (%)		
Baseline ^a	24 (20.7)	11 (22.0)
0-6 months post-index period	16 (13.8)	8 (16.0)
7-12 months post-index period	10 (8.6) ^c	9 (18.0)
NTM-related hospitalizations, n (%)		
Baseline ^a	23 (19.8)	10 (20.0)
0-6 months post-index period	19 (16.4)	7 (14.0)
7-12 months post-index period	11 (9.5) ^d	8 (16.0)
ER visits, n (%)		
Baseline	23 (19.8)	9 (18.0)
0-6 months post-index period	17 (14.7)	12 (24.0)
7-12 months post-index period	17 (14.7)	7 (14.0)

^aBaseline: 6-month period prior to first ALIS/non-ALIS antibiotic prescription; index date: date of first prescription with ALIS (ALIS cohort) or date of first prescription with non-ALIS antibiotic used in refractory MACLD (non-ALIS cohort)

^b $P=0.04$ compared with baseline

^c $P=0.008$ compared with baseline

^d $P=0.03$ compared with baseline

^eNo changes from baseline in the non-ALIS cohort excluding ciprofloxacin and levofloxacin were statistically significant

ALIS, amikacin liposome inhalation suspension; ER, emergency room; HCRU, healthcare resource utilization; MACLD, *Mycobacterium avium* complex lung disease; NTM, nontuberculous mycobacteria