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AB1142

TREATMENT COSTS OF SELECTED RHEUMATIC DISEASES IN SUB-SAHARAN AFRICA: A CASE FOR IMPROVED INSURANCE COVERAGE FOR AFRICAN PATIENTS

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Background: Rheumatic diseases lead to substantial economic costs¹ especially in resource-poor settings like sub-Saharan Africa (SSA).² Annual direct cost of lupus treatment ranges from \$13,735–20,926 /patient in the US to £3231(\$4232)/patient in the UK.^{1,3}

Data is rare for SSA and Nigeria in particular where the minimum wage is N30,000 (\$83/mth) with only 5% of citizens covered by health insurance.^{4,5} The scheme excludes some medications and certain procedures are grossly underfunded. Cost-of-illness studies are invaluable in planning and policy development. They typically include: direct, indirect and intangible costs.⁶

Objectives: To compare total costs of some rheumatic diseases, highlight underfunded therapies and push for wider insurance coverage of rheumatic diseases.

Methods: A cross-sectional study from the University of Uyo Teaching Hospital - Nigeria using data of 252 clinic patients (20 lupus, 27 rheumatoid arthritis, 25 gout and 180 osteoarthritis). Direct costs were estimated using the hospital pricelist while indirect costs were estimated using the human capital method. Statistical analysis was done with $p < 0.05$.

Results: Females were the majority except for gout patients (44%). Most lupus patients were unemployed (75%) and had the highest annual total cost (N472,800–2,240,400) compared with the others. Key medications excluded from insurance are shown in table 2.

TABLE 1. COST-OF-ILLNESS COMPARISON OF SELECTED RHEUMATIC DISEASES

	Lupus (n=20)	RA(n=27)	Gout(n=25)	OA(n=180)
Age (years)	33.9 ± 11.4	43.4 ± 14.3	57.4 ± 9.6	59.7 ± 9.1
Female n (%)	24(95)	25(92)	11(44)	157(87)
Average Duration of illness (years)	4(1-11)	3.5(2-10)	3 (0.2-8)	4(0.1-20)
Unemployed n (%)	15(75.0)	19(70.3)	12(48.0)	62(34.4)
Workdays missed/mth	7	5	2	3
Direct costs (N'000)				
Total /mth (stable)	32.4	27	19.75	18
Total /yr (stable)	388.8	324	237	216
Total /mth (severe)	179.7	155.6	32.5	23
Total /yr (severe)	2,156.4	1,867.2	390	276
Indirect costs				
Productivity loss/mth	7	5	2	3
Productivity loss/yr	84	60	24	36
Total costs/mth	39.4 – 186.7	32 – 160.6	21.75 – 34.5	21 – 26
Total costs/yr	472.8 – 2,240.4	384 – 1,927.2	261 – 414	252 – 312

1\$ = 360 Nigerian Naira (NGN), 1€ = NGN 402 as at 31/1/2020. Costs quoted in thousands of Naira.

Table 2. Uninsured treatments.

MMF
Methotrexate
Sulphasalazine
Azathioprine
HCC
Febuxostat
Colchicine
Rituximab
Arthroplasty (N100,000*)
Dialysis (6 sessions)
Renal transplant

Conclusion: Total annual cost of lupus treatment in Nigeria is quite high ranging from (NGN 472,800–2,242,400) [\$1313– 6228] for mild to severe disease. This contrasts with a mean annual national income of \$1,000 given that 75% of lupus

patients are unemployed. Expanded insurance coverage for rheumatic drugs will further reduce the enormous treatment burden and improve outcomes.

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AB1143

BURDEN OF GLUCOCORTICOID AMONG RHEUMATOID ARTHRITIS PATIENTS AT DIFFERENT STAGES OF DISEASE-MODIFYING ANTIRHEUMATIC DRUG MANAGEMENT

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Background: EULAR and ACR guidelines recommend a treat-to-target approach for patients with RA including regular assessments of disease activity. Glucocorticoids are commonly used to control inflammation associated with uncontrolled disease. However, patients using glucocorticoids may develop short- and long-term side effects.

Objectives: To examine the real-world use of glucocorticoids among patients with RA who are disease-modifying antirheumatic drug (DMARD)-naïve or failing their first conventional synthetic DMARD (csDMARD) or biologic DMARD (bDMARD).

Methods: From a large US health claims database, this study included adults with ≥2 RA claims ≥30 days apart who started (index date [ID], 1/1/2012–3/31/2017) a first DMARD (DMARD-naïve) or patients who newly initiated a csDMARD and then switched to or added another DMARD (csDMARD switchers), and patients who initiated a first bDMARD and then switched to another bDMARD or Janus kinase inhibitor (JAKi; bDMARD switchers). All patients had continuous enrollment 1-year before and ≥1 year after ID and were evaluated for pre- and post-ID use of glucocorticoids (oral or injectable), prednisone equivalent dose (PED), and duration of exposure ≥30 days.

Results: The study included 28,201 patients in the DMARD-naïve cohort, 7,816 csDMARD switchers, and 4,656 bDMARD switchers (median age 54 years for all, 73%–78% female).

Among DMARD-naïve patients, 66.5% used glucocorticoids during the pre-ID period (Figure 1) and 61.2% had >7.5mg/day PED, 21.2% had >30mg/day PED, and 21.2% had ≥30 days of exposure to glucocorticoids (Figure 2). Post-ID, 69.4% of patients used glucocorticoids, while 54.7% had >7.5mg/day PED, 13.5% had >30mg/day PED, and 44.9% had ≥30 days of exposure to glucocorticoids.

Among csDMARD switchers, 84.5% of patients used glucocorticoids during the pre-ID period (Figure 1), and 73.4% had >7.5mg/day PED, 16.0% had >30mg/day PED, and 56.4% had ≥30 days of exposure to glucocorticoids (Figure 2). During the post-ID treatment, 74.1% of patients used glucocorticoids, 56.2% had >7.5mg/day PED, 14.4% had >30mg/day PED, and 45.8% had ≥30 days of exposure to glucocorticoids.

Among bDMARD switchers, 85.1% of patients used glucocorticoids in the pre-ID period (Figure 1), and 70.2% had >7.5mg/day PED, 17.4% had >30mg/day PED, and 55.2% had ≥30 days of exposure to glucocorticoids (Figure 2). During post-ID treatment, 75.4% of patients used glucocorticoids and 59.7% of patients had >7.5mg/day PED, 16.7% had >30mg/day PED, and 45.6% had ≥30 days of exposure to glucocorticoids.