

Economic Cost of End-Stage Renal Disease in Africa: A Systematic Review

Search Strategy

Database: Google Scholar

1. ("Chronic Kidney Disease" OR "CKD" OR "End-Stage Renal Disease" OR "ESRD") AND ("Economic burden" OR "Cost" OR "Healthcare expenditure") AND ("Dialysis" OR "Kidney transplantation") AND ("Africa" OR "Sub-Saharan Africa")

Results: 1,470

Database: Scopus

1. (TITLE-ABS-KEY("Chronic Kidney Disease" OR "CKD" OR "End-Stage Renal Disease" OR "ESRD") AND TITLE-ABS-KEY("Economic burden" OR "Cost" OR "Healthcare expenditure") AND TITLE-ABS-KEY("Dialysis" OR "Kidney transplantation") AND TITLE-ABS-KEY("Africa" OR "Sub-Saharan Africa")) AND (LIMIT-TO(DOCTYPE, "ar"))

Results: 65

Database: African Journals Online (AJOL)

1. ("Chronic Kidney Disease" OR "CKD" OR "End-Stage Renal Disease" OR "ESRD") AND ("Economic burden" OR "Cost" OR "Healthcare expenditure") AND ("Dialysis" OR "Kidney transplantation") AND ("Africa" OR "Sub-Saharan Africa")

Results: 20

Database: PubMed

1. (((("Chronic Kidney Disease"[Mesh] OR "CKD") OR "End-Stage Renal Disease"[Mesh] OR "ESRD"))) AND (("Economic burden" OR "Cost" OR "Healthcare expenditure")) AND (("Dialysis"[Mesh] OR "Kidney transplantation"[Mesh])) AND (("Africa"[Mesh] OR "Sub-Saharan Africa"))))

Results: 13

Database: Embase

1. ('chronic kidney disease'/exp OR 'CKD' OR 'end stage renal disease'/exp OR 'ESRD') AND ('economic burden'/exp OR 'cost' OR 'healthcare expenditure'/exp) AND ('dialysis'/exp OR 'kidney transplantation'/exp) AND ('Africa'/exp OR 'sub Saharan Africa')

Results: 25

JBI Critical Appraisal of the Included Studies.

Author/checklist /Total	1	2	3	4	5	6	7	8	9	10	11	
Makhele 2019	YES	YES	YES	NO	YES	YES	NO	NO	NO	YES	YES	63.6%

Njamnshi et al, 2023	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	100%
Malatji et al 2019	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	90.9%
Amira et al, 2017	YES	YES	YES	NO	YES	YES	YES	NO	NO	YES	YES	72.7%
Agada-Amade et al, 2023	YES	YES	YES	NO	YES	YES	YES	NO	NO	YES	YES	72.76%
Izeidi et al, 2020	YES	NO	YES	NO	YES	YES	NO	NO	NO	YES	YES	63.6%
Mushi et al, 2015	YES	NO	YES	NO	YES	YES	NO	NO	YES	NO	YES	54.5%
Kassa et al,2020	YES	YES	NO	NO	YES	YES	NO	NO	NO	YES	YES	54.5%
Elsharif et al, 2010	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	YES	63.6%
Akpan et al, 2020	YES	YES	NO	YES	YES	YES	NO	NO	NO	NO	YES	54.5%
Yousif et al, 2020	YES	NO	YES	NO	YES	YES	NO	NO	NO	YES	YES	54.5%
Maoujoud et al., 2016	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	100%
Toure et al., 2022	YES	NO	YES	NO	YES	YES	NO	NO	NO	YES	YES	54.5%
Baye et al., 2024	YES	NO	YES	YES	YES	YES	NO	NO	NO	YES	YES	63.6%
Bello et al., 2018	YES	YES	YES	NO	YES	YES	NO	YES	NO	YES	YES	72.7%

El Matri et al., 2007 (Africa)	YES	YES	YES	YES	YES	YES	NO	NO	NO	YES	UNC LEA R	63.66
Halle et al., 2017 (Cameroon)	YES	YES	NO	NO	YES	YES	NO	NO	NO	YES	YES	54.54
Lang et al., 2022 (Nigeria)	YES	YES	UN CLE AR	YES	YES	YES	NO	NO	NO	YES	UNC LEA R	54.54

JBI CRITICAL APPRAISAL CHECKLIST FOR ECONOMIC STUDIES

1. Is there a well-defined question?
2. Is there comprehensive description of alternatives?
3. Are all important and relevant costs and outcomes for each alternative identified?
4. Has clinical effectiveness been established?
5. Are costs and outcomes measured accurately?
6. Are costs and outcomes valued credibly?
7. Are costs and outcomes adjusted for differential timing?
8. Is there an incremental analysis of costs and consequences?
9. Were sensitivity analyses conducted to investigate uncertainty in estimates of cost or consequences?
10. Do study results include all issues of concern to users?
11. Are the results generalizable to the setting of interest in the review?

Citation	Medical Consumables	Staff Wages	Imaging	Laboratory Expenses	Procedural Expenses	Facility Services (Electricity, water, Laundry and Sterilization, security)	Capital Expenses	Maintenance and Repair	Hospitalization Costs (dialysis-related)	Outpatient Follow-up	Transportation	Medication	Accommodation	Meals	Caregiver costs	Indirect Costs
Makhele et al., 2019 (South Africa)	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	No	No	No	No
Njamnshi et al.,	Yes	Yes	No	Yes	No	Yes	Yes	No	No	No	No	Yes	No	No	No	No

2023																
Malatji et al. (2019)	Yes	Yes	No	Yes	No	Yes	Yes	No	No	No	Yes	Yes	No	No	No	No
Amira et al, 2017(Nigeria)	No	No	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No
Agada-Amade et al, 2023 (Nigeria)	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	No
Izeidi et al., 2019 (Democratic Republic of the Congo)	Yes	No	Yes	Yes	Yes	No	Yes	No	No	Yes	No	Yes	No	No	No	No
Mushi et	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No	No	No	No

al., 2015 (Tanzania)																
Kassa et al., 2020 (Ethiopia)	Yes	No	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Elsharif et al., 2010 (Sudan)	Yes	Yes	Yes	Yes	No	No	Yes	No	No	No	No	Yes	No	No	No	No
Akpan et al., 2020 (Nigeria)	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Yousif et al., 2020 (Sudan)	No	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	Yes	Yes	No	No
Toure et al., 2022 (Burkina Faso)	No	No	Yes	Yes	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No

Faso)																
Baye et al., 2024 (Ethiopia)	No	No	No	Yes	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
El Matri et al., 2007 (Africa)	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Halle et al., 2017(Cameroon)	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lang et al., 2022 (Nigeria)	No	No	No	Yes	No	No	No	No	Yes	Yes	No	Yes	No	No	No	No

Reported cost components in African renal replacement therapy studies