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Cross-Border Health Care Seeking Among Somali Nationals: A Multi-Country Evidence Synthesis of Determinants, Outcome Domains, Economic Burden and Health-System Implications, 2014–2026

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ORIGINAL RESEARCH — ANALYTICAL REVIEW

Cross-Border Health Care Seeking Among Somali Nationals: A Multi-Country Evidence Synthesis of Determinants, Outcome Domains, Economic Burden and Health-System Implications, 2014–2026

Transnational health-care access, tertiary-care deficits and the financial consequences of international medical treatment

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Manuscript element	Detail
Article type	Analytical review — PRISMA-informed rapid evidence synthesis
Short running title	Somali cross-border health care seeking
Analytical time frame	2014–2026, with the most robust nationality-specific series for 2015–2024
Geographical scope	Somalia (origin); India, Türkiye, Ethiopia and Egypt (destinations)
Reporting standard	PRISMA 2020, adapted for rapid evidence synthesis
Tables / Figures	13 tables; 6 figures
Registration	Not prospectively registered; internal protocol applied

Central premise. The movement of Somali patients across international borders in pursuit of medical treatment should be interpreted primarily as an output of health-system failure and as a privately financed substitute for absent domestic tertiary care, rather than as elective medical tourism.

Abstract

Background.
Cross-border care seeking among Somali nationals reflects structural deficits in specialised service availability, diagnostic capacity, continuity of care and financial protection. Publicly accessible evidence is strongest for the India corridor and remains fragmentary for other destinations, which has constrained policy analysis and left the phenomenon largely undocumented in the peer-reviewed literature.

Objectives.
To synthesise the best available evidence on the scale of Somali outbound medical travel; its principal clinical drivers; the outcome domains that are measurable and those that are not; the household and national economic burden; and the barriers patients encounter across India, Türkiye, Ethiopia and Egypt.

Methods.
A PRISMA-informed rapid evidence synthesis was conducted and reported in an extended IMRaD structure. Five evidence pillars were interrogated: Indian parliamentary and ministerial annexures reporting nationality-specific series; peer-reviewed evidence from Türkiye; MedCOI and country-of-origin information on domestic service availability in Mogadishu; health-financing documentation from the World Bank, the WHO Global Health Expenditure Database and the Federal Government of Somalia; and consular guidance governing medical visas for Somali applicants. Because the evidence base is heterogeneous in design, denominator and definition, synthesis was narrative and comparative. Every analytical statement was assigned to one of three evidence tiers — directly measured, credibly inferred, or currently unquantifiable — and this distinction was retained throughout.

Results.
India is the only destination with a nationality-specific public series permitting decade-scale quantification: 3,072 medical-purpose arrivals in 2015, 5,549 in 2016 and 4,964 in 2017; and medical visas issued of 3,454 in 2019, 1,386 in 2020, 4,162 in 2021, 10,206 in 2022, 16,411 in 2023 and 12,261 in 2024 — a minimum captured volume of 61,465 episodes, excluding an unresolved 2018 gap. Türkiye provides a single verified anchor of 2,742 Somali patients in 2019 but no accessible annual series; Ethiopia and Egypt show strong demand signals without validated nationality-specific longitudinal data. Outbound demand concentrates in continuity-dependent and technology-intensive service lines, principally oncology, cardiovascular disease, renal replacement and transplantation, advanced diagnostics, reproductive medicine and orthopaedics. The mean direct household cost per outbound episode is estimated at US$8,543, against an environment in which out-of-pocket payments account for 44.9% of household health expenditure, insurance coverage stands at 3.5%, and 24% of households incur health spending exceeding 10% of income. The central four-corridor scenario places 2024 outbound expenditure at approximately US$219.3 million, equivalent to about 1.8% of gross domestic product. No defensible pooled morbidity, complication or mortality rate can be derived for Somali patients treated abroad, because no linkage exists between outbound episode, treatment received and outcome after return.

Conclusions.
Somali outbound medical travel functions as an unregulated, privately financed parallel tertiary-care system. It is substantial in scale, inequitable in access, economically consequential and largely

unmeasured in outcome. A proportionate policy response should combine a national outbound-referral registry with a defined minimum outcome dataset; catastrophic-illness financial protection delivered through pooled national arrangements; selective governance of unavoidable foreign referral, including licensing of facilitators and bilateral referral compacts; and sequenced domestic investment in the tertiary service platforms where leakage is greatest.

Keywords:
Somalia; cross-border health care; medical travel; tertiary care; catastrophic health expenditure; continuity of care; health financing; fragile and conflict-affected settings; universal health coverage.

1. Introduction

1.1 Background and problem statement

Over the past decade, outbound medical mobility has emerged as one of the most visible and least governed features of Somalia's health system. The movement of patients across international borders in search of essential and specialised treatment is not incidental. It is rooted in persistent structural deficits, historical disruption and sustained socio-economic fragility, which together have eroded domestic capacity to diagnose, treat and follow up complex disease [5,6,7].

Since the collapse of central government in 1991, Somalia has experienced prolonged conflict, chronic political instability and fiscal fragility. These conditions systematically weakened public health infrastructure and produced a fragmented, largely unregulated health sector in which advanced tertiary services — oncology, interventional and surgical cardiology, nephrology and transplantation, and complex surgery — are either wholly unavailable or accessible only to a narrow urban stratum able to pay [7,9,14,15]. Reconstruction of the sector has proceeded predominantly through private and diaspora investment. While this has multiplied the number of clinics, particularly in Mogadishu, regulatory oversight, accreditation and quality assurance have not advanced at a comparable pace, and access to advanced diagnostics remains constrained [9,67].

The epidemiological context compounds these structural constraints. Somalia carries a dual burden of communicable and non-communicable disease. Tuberculosis, cholera, measles and malaria persist alongside a rising prevalence of hypertension, diabetes, chronic kidney disease and malignancy [12,59]. Health outcomes remain among the least favourable globally: the maternal mortality ratio is estimated between 621 and 692 deaths per 100,000 live births and under-five mortality between 117 and 137 deaths per 1,000 live births [13,44,47]. Approximately 35% of the population has access to essential health services [21,45], and access deficits are most acute outside the principal urban centres [46]. These indicators describe deficits in primary as well as tertiary care, and they establish the conditions under which international medical travel becomes, for many households, a compensatory rather than a discretionary act.

The clinical rationale for travel is consistent across the available evidence. Patients present at advanced disease stages following diagnostic delay, limited specialist availability and insufficient imaging and laboratory infrastructure [18,19,20]. Somalia has no radiotherapy unit registered in the International Atomic Energy Agency directory of radiotherapy resources, and chemotherapy is delivered in a small number of private facilities [18,21,43]. Consequently, every patient with a radiotherapy indication requires referral outside the country. A household survey conducted in Puntland reported that 31% of respondents sought care abroad because the required service was unavailable locally, and 41% because of dissatisfaction with the quality of domestic care [16]. Patient-satisfaction research in Mogadishu's two largest public hospitals identifies provider-related determinants consistent with that assessment [65]. Access to foreign treatment is therefore driven substantially by necessity rather than preference.

The financing environment converts this clinical necessity into household financial risk. In the absence of meaningful prepayment or risk pooling, a national household survey of 2,000 households found that out-of-pocket payments accounted for 44.9% of total health expenditure, that only 3.5% of respondents held any form of health insurance, and that 24% of households incurred health spending exceeding 10% of income; borrowing, asset sales and reductions in essential consumption were the dominant coping

responses [10]. Under these conditions the threshold for travel is set less by clinical need than by liquidity, documentation and access to diaspora support. Somali families routinely liquidate productive assets, mobilise remittances or enter debt cycles to finance treatment abroad, exposing households to durable, intergenerational financial harm [10,34].

The consequences extend beyond expenditure. Somali patients admitted to foreign hospitals frequently present with advanced disease, which raises morbidity and mortality risk irrespective of destination capability. On return, the absence of structured continuity — discharge documentation, medication supply, laboratory monitoring, rehabilitation and named specialist follow-up — converts technically successful interventions into incomplete episodes of care [29]. Between 2014 and 2026, Somali medical travellers have concentrated in four corridors: India, Türkiye, Ethiopia and Egypt. Destination selection is shaped by comparative cost, geographical proximity, ease of obtaining a medical visa, cultural and religious congruence, perceived quality, and the availability of advanced technology and subspecialty expertise [22,28,31].

The measurable scale is considerable. In India, the best-documented corridor, official records show 3,072 medical-purpose arrivals in 2015, 5,549 in 2016 and 4,964 in 2017, and medical visas issued of 3,454 in 2019, 1,386 in 2020, 4,162 in 2021, 10,206 in 2022, 16,411 in 2023 and 12,261 in 2024 [23,24,25]. Even allowing for definitional differences between indicators and for repeat travel by the same patient, these figures establish a credible minimum and reveal a pronounced post-pandemic surge. What they do not capture is equally significant: no corresponding record exists of diagnosis, disease stage, treatment received, outcome or cost.

1.2 Conceptual framing: cross-border care as an indicator of health-system weakness

In resource-constrained and fragile settings, cross-border care seeking is frequently described as medical tourism. The term is analytically inadequate for the Somali context. Medical tourism, as conceptualised in the patient-mobility literature, denotes discretionary consumer choice exercised by patients who possess a functioning domestic alternative and elect to purchase care elsewhere on grounds of price, waiting time or amenity [1,2]. Somali outbound travel does not satisfy this description. Patients travel to obtain diagnostics, tertiary interventions and continuity-dependent treatments that are unavailable, unaffordable or perceived as unreliable at home. The phenomenon is therefore more accurately characterised as involuntary or compensatory patient mobility — an output of the health system rather than a market preference expressed within it [3,4,39,40].

This distinction is not semantic. It determines the policy instruments that follow. If outbound travel is treated as elective consumption, the appropriate response is restriction or taxation. If it is treated as a health-system output, the appropriate response is to address the deficits that generate it: tertiary capacity, referral governance, diagnostic infrastructure and financial protection. This paper adopts the second interpretation and uses the term outbound medical travel, or cross-border care seeking, throughout. The term medical tourism is retained only where it is being critically examined or where a cited source employs it.

The analysis is organised around a push–pull framework adapted to fragile-state conditions. Domestic push factors include service unavailability, constrained diagnostics, actual and perceived quality deficits, weak continuity for chronic and complex disease, and limited tertiary infrastructure. Destination pull factors include perceived higher quality, shorter waiting times, clearer navigation,

cultural and religious familiarity, established diaspora networks and facilitator-mediated access. In Somalia these forces are mediated by a third variable that the conventional framework under-specifies: the financing condition. Where prepayment is negligible and out-of-pocket payment dominates, household liquidity and social capital become the binding constraints, and they frequently override clinical priority in determining who travels and when [10,37]. Figure 1 presents the resulting conceptual model.

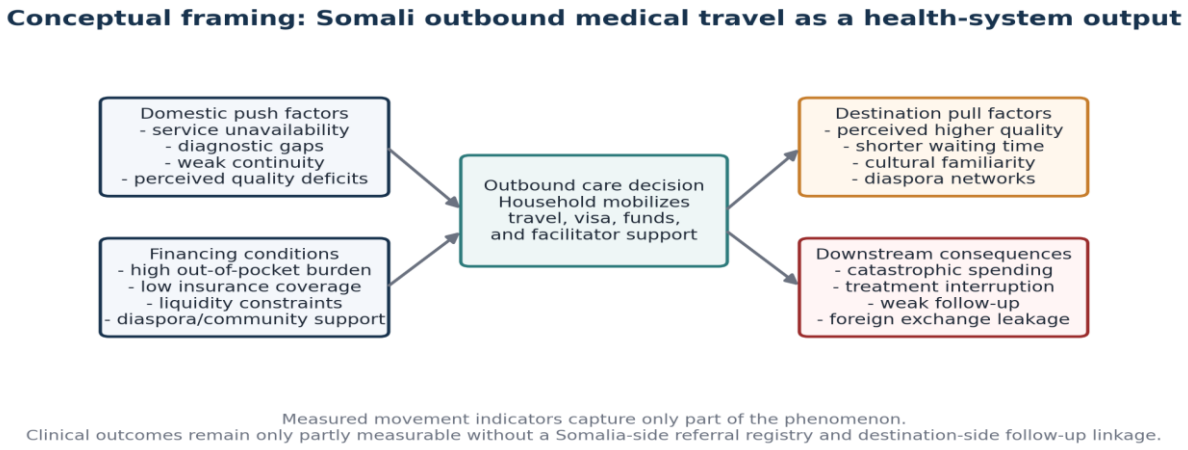


Figure 1. Conceptual framing of Somali outbound medical travel as a health-system output shaped by domestic push factors, financing conditions and destination pull factors. Measured movement indicators capture only part of the phenomenon; clinical outcomes remain largely unmeasurable in the absence of a Somalia-side referral registry and destination-side follow-up linkage.

1.3 Literature review and the conceptual gap

Four themes recur across the available literature on Somali outbound health care.

Structural deficits as the primary driver.
The dominant motivation for travel is the absence of defined domestic services rather than the existence of disease as such. The principal gaps concern oncology, advanced cardiovascular intervention, renal replacement therapy and transplantation, advanced imaging and histopathology, and selected reproductive and orthopaedic services [14,15,18,19,21].

Financial exposure and household coping.
Out-of-pocket expenditure remains high because risk-pooling mechanisms are minimal. Households rely on remittances, deplete savings, organise community fundraising or liquidate productive assets to meet the costs of international treatment [10,34].

Destination experience beyond clinical quality.
Patient trajectories are shaped by navigational support, the conduct of intermediaries, administrative burden and the availability of follow-up after return, not by the technical quality of the treating facility alone [22,49].

Asymmetric data across corridors.
Evidence is unevenly distributed. India provides quantifiable nationality-specific metrics; Türkiye offers partial measurement anchored to a single year; Ethiopia and Egypt are documented principally through qualitative and event-based reporting rather than annual series [22,23,24,25,30].

A substantive knowledge gap persists across all four themes. Somalia maintains no national registry of outbound medical referrals linking diagnosis, destination, financing mechanism, treatment received and subsequent outcome. Patient movement is therefore partially visible while patient outcome remains almost entirely invisible. Existing studies characterise corridor dynamics adequately and travel volumes moderately, but longitudinal data on morbidity, mortality, cost-effectiveness and malpractice exposure are absent. This paper addresses that gap by consolidating reliable movement indicators, clarifying destination service patterns, estimating household and national costs, and identifying the recurrent mechanisms through which cross-border episodes fail — while stating explicitly which of these can be measured and which cannot.

1.4 Aim, objectives and analytical questions

The aim of this paper is to provide a policy-relevant and academically structured synthesis of Somali cross-border health care seeking across four principal destinations — India, Türkiye, Ethiopia and Egypt — and to translate that synthesis into an implementable governance and financing agenda. Table 1 sets out the five objectives, the analytical question attached to each, and the corresponding output.

Table 1. Study objectives, analytical questions and corresponding analytical outputs.

Objective	Analytical question	Analytical output
1. Quantify scale	How many Somali nationals travel abroad for care, and which corridors are directly measured?	Destination volume synthesis with explicit evidence-tier classification
2. Identify clinical drivers	Which conditions and service gaps most strongly generate outbound care seeking?	Disease-profile and destination service mapping
3. Delimit outcome knowledge	What can and cannot be established regarding outcomes, morbidity, treatment failure and safety?	Outcome-domain matrix and mechanism-based interpretation
4. Estimate economic burden	What financial burden is borne by households and by the national economy?	Household cost profile, national expenditure envelope and macroeconomic leakage analysis
5. Characterise patient-level barriers	Which barriers, risks and patient-protection issues arise in destination countries?	Destination barrier matrix and derived policy implications

2. Methods

2.1 Study design and reporting standard

This study is a rapid evidence synthesis conducted in accordance with the principles of the PRISMA 2020 statement and reported in an extended IMRaD structure. A rapid synthesis design was selected because the relevant evidence base spans official movement statistics, peer-reviewed empirical studies, institutional and country-of-origin information reports, health-financing documentation and consular guidance, rather than a uniform body of clinical trials or registry datasets. Under these conditions, a formal systematic review with meta-analysis is not feasible: the constituent sources differ in design, denominator, case definition and outcome reporting to a degree that precludes statistical pooling.

The review was not prospectively registered. An internal protocol was nevertheless applied and adhered to throughout, specifying search domains, inclusion and exclusion boundaries, extraction fields, evidence-tier assignment rules, appraisal criteria and the logic governing figure construction. Narrative and comparative synthesis was adopted as the primary analytical method, with triangulation used to identify convergence and contradiction across sources.

2.2 Analytical framework and evidence tiering

The analysis applies the push–pull framework described in Section 1.2, extended by an explicit financing condition. To preserve analytical integrity and to prevent measured movement data from being conflated with modelled or interpretive material, every substantive statement in this paper was assigned to one of three evidence tiers.

1. Tier 1 — directly measured. Indicators reported in official nationality-specific series or in peer-reviewed primary studies. These are the most reliable available observations and are reported as such.
2. Tier 2 — credibly inferred. Estimates derived by triangulating measured movement data with published market or cost parameters. These are labelled as scenarios or envelopes and are never reported as observed values.
3. Tier 3 — currently unquantifiable. Outcome domains that cannot be estimated from public sources and require registry establishment and systematic follow-up before any numerical claim can be made.

This tiering is applied consistently in the Results and is the principal safeguard against the interpretive risk that characterises fragile-state evidence, namely the temptation to convert plausible mechanisms into spurious rates. Figure 2 presents the resulting evidence architecture and the validation logic connecting source pillars to tier assignment.

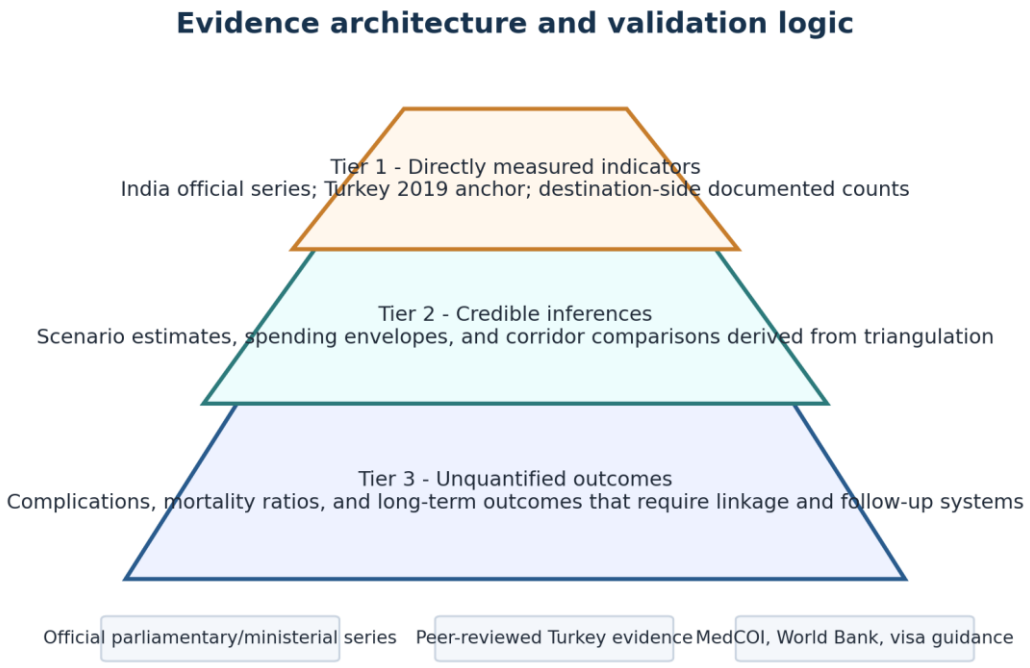


Figure 2. Evidence architecture and validation logic used to distinguish directly measured indicators, credible inferences and unquantifiable outcome domains.

2.3 Data sources and search strategy

Five source pillars anchored the review.

- Official Indian government series. Parliamentary and ministerial annexures of the Government of India provided nationality-specific Somali data for medical-purpose arrivals (2015–2017) and medical visas issued (2019–2024) [23,24,25,26,27].
- Peer-reviewed evidence from Türkiye. A cross-sectional study of Somali patients treated in Istanbul and Ankara supplied a verified 2019 patient anchor derived from Ministry of Health data, together with destination-specific service-use and satisfaction patterns [22].
- Country-of-origin and MedCOI documentation. Successive Danish Immigration Service reports described service availability, affordability and concrete care gaps in Mogadishu [14,15].
- Health-financing documentation. World Bank indicators drawn from the WHO Global Health Expenditure Database, national household survey evidence, and Federal Government of Somalia expenditure and strategy documents contextualised low per-capita health spending, sectoral fragmentation and out-of-pocket burden [5,6,10,11,33,54,55,60].
- Consular and visa guidance. Guidance issued by the Embassy of India in Addis Ababa for Somali applicants illuminated documentation requirements, prepayment conditions and administrative frictions along the treatment pathway [28].

Structured database searching was supplemented by citation chasing and by source-led retrieval from known official series. Search strings combined terms denoting origin, destination, service and outcome, including: "Somalia medical travel"; "Somali patients India"; "Somali patients Turkey"; "Somalia medical visa"; "Somalia cancer services"; "Somalia ICU mortality"; "Somalia health expenditure"; "outbound referral fragile states"; and "cross-border care seeking Horn of Africa". Reference lists of

included documents were screened, and official annexures and consular guidance documents were retrieved directly from issuing authorities. Searches covered the period 2014 to 2026 and were most recently updated in 2026.

2.4 Eligibility criteria and evidence pillars

Eligibility was defined prospectively in the internal protocol and applied at both screening stages. Criteria are presented in Table 2.

Table 2. Eligibility criteria applied at title/abstract and full-text screening.

Domain	Inclusion criteria	Exclusion criteria
Population	Somali nationals, Somali patient populations, or Somalia-relevant cross-border referral evidence	Exclusively non-Somali populations; migration unrelated to health care
Destinations	India, Türkiye, Ethiopia and Egypt, together with Somalia-side sources required to characterise push factors	Other destinations, unless used strictly for contextual comparison
Time frame	Evidence informing 2014–2026, with the strongest quantified series for 2015–2024	Pre-2014 material, unless historically necessary to establish baseline conditions
Evidence type	Official statistics; peer-reviewed studies; MedCOI and country-of-origin reports; multilateral and government financing documents; institutional reports; consular guidance	Opinion pieces; promotional or marketing content, except where used solely and transparently as indicative price-list sources; unverifiable claims
Outcomes and costs	Any extractable data on volumes, drivers, costs, patient barriers, outcome proxies and pathway frictions	Claims lacking a denominator, source traceability or definitional clarity

2.5 Screening, selection and the PRISMA process

Records were screened in two sequential stages. At the first stage, titles, abstracts or executive summaries were assessed for relevance to Somali cross-border care seeking, to the four destination corridors and to the presence of extractable indicators. At the second stage, full texts were assessed against the eligibility criteria in Table 2. Evidence was retained where it contributed to the characterisation of drivers, pathways or barriers, even when it did not permit annual volume estimation.

Identification proceeded through database searching and targeted retrieval of official series and institutional documents. Following removal of duplicates, records advanced to screening. The most frequent grounds for exclusion at full-text assessment were: exclusively non-Somali study populations; mobility unrelated to health care; destinations outside the defined scope; cosmetic and elective-tourism content falling outside the compensatory-mobility construct; and documents lacking extractable or verifiable data. The final included set comprises the five evidence pillars together with additional peer-reviewed and institutional sources meeting the eligibility criteria. A PRISMA 2020 flow diagram with final counts accompanies the submission as a supplementary file.

2.6 Data extraction and management

Data were extracted using a standardised template capturing five domains:

- Volume indicators — year; destination; indicator type (arrivals versus visas issued); and unit of observation (episodes versus unique individuals).
- Clinical drivers and service gaps — oncology, renal, cardiac, diagnostic, reproductive and orthopaedic constraints.
- Outcome proxies — intensive-care mortality, cancer stage and survival, satisfaction indicators, and reported concerns regarding error and waiting time.
- Economic variables — procedure costs, household financing mechanisms, out-of-pocket expenditure, catastrophic-spending markers and macroeconomic outflows.
- Pathway frictions — documentation requirements, integrity controls, advance-payment protocols, reliance on intermediaries, and risks to continuity after return.

Extraction was performed against the source document in each case, and extracted values were retained in their original units and definitions before any harmonisation was applied.

2.7 Appraisal of source credibility

No single risk-of-bias instrument is applicable to an evidence base that combines official statistics, peer-reviewed literature, country-of-origin reporting and grey literature. Sources were therefore appraised against four explicit criteria, applied uniformly and reported transparently: provenance, distinguishing official, secondary and anecdotal sources; definitional clarity, differentiating arrivals from visas issued and examining how "medical traveller" was operationalised; temporal specificity, assessing year coverage and identifying missing periods; and replicability, establishing whether tables, annexures and citations are traceable by a third party. Sources meeting fewer of these criteria were retained only where they contributed contextual or indicative material, and their status is stated wherever they are used.

2.8 Synthesis, harmonisation and estimation

Five analytical mechanisms were applied to reconcile definitional discrepancies and variation in reporting across countries.

4. Indicator harmonisation. All movement metrics are standardised as episodes — entries or visas issued — rather than unique individuals, with definitional differences stated at every point of use.
5. Tiered labelling. Every analytical statement is designated measured, inferred or unquantified, in accordance with Section 2.2.
6. Gap treatment. Years and destinations lacking complete records are addressed through scenario-based extrapolation, with measured series given priority wherever available and scenario points identified as such.
7. Conservative cost estimation. Cost estimates use published lower-bound benchmarks, and uncertainty is expressed as ranges rather than point values.
8. Mechanism-based outcome interpretation. Where rates cannot be computed, interpretation proceeds through consistently evidenced failure mechanisms — late presentation, diagnostic imprecision, financing delay, intermediary dependence and post-return discontinuity — rather than through numerical inference.

National expenditure envelopes were constructed by applying published per-patient expenditure parameters for international patients to measured or scenario episode counts. These products are planning envelopes, not audited national accounts, and are reported with that qualification throughout.

2.9 Ethical considerations

This study used only publicly available documents and previously published materials. No patient-level identifiers were accessed, no interviews were conducted and no intervention was undertaken. Formal human-subjects ethics review was therefore not required.

Ethical caution was nevertheless exercised in interpretation. Evidence generated in fragile-state contexts is susceptible to overstatement, and the absence of registry data creates an incentive to assert rates that cannot be substantiated. This paper accordingly declines to construct morbidity ratios, complication rates or malpractice frequencies that the underlying evidence cannot support, and states explicitly where knowledge ends.

3. Results

The synthesis is organised in five analytical phases: measurement architecture and destination volumes; destination-specific service demand and disease profiles; outcome domains and failure mechanisms; economic burden at household and national level; and patient-level barriers in destination countries.

3.1 Measurement architecture across corridors

The central structural finding of this review concerns measurement asymmetry. Somali outbound medical travel does not behave like discretionary travel; it behaves like a privately financed parallel tertiary-care system. Yet only one of its four principal corridors is directly measurable. India is quantified through official nationality-specific series. Türkiye is partially measurable through a single validated annual anchor. Ethiopia and Egypt are substantively important, with clear and recurrent demand signals, but remain weakly quantified in publicly accessible nationality-specific time series. This asymmetry is not a peripheral technical limitation: it determines what can be purchased strategically, what can be negotiated bilaterally, and what can be audited. Table 3 summarises the measurement status of each corridor.

Table 3. Corridor measurement status and data gaps, 2014–2026.

Corridor	Directly measured evidence (Tier 1)	Principal data gaps
Somalia → India	Official nationality-specific series: medical-purpose arrivals 2015–2017; medical visas issued 2019–2024	2014 and 2018 absent from accessible official tables; 2025–2026 require scenario projection
Somalia → Türkiye	Single verified 2019 anchor: 2,742 Somali patients, representing 0.4% of total inbound medical-travel volume, derived from Ministry of Health data	No publicly accessible Somalia-specific annual series for 2014–2018 or 2020–2026
Somalia → Ethiopia	Documented presence and qualitative pathway evidence; regional referral role for oncology and stabilisation	No robust Somalia-specific annual public series
Somalia → Egypt	Documented presence, qualitative pathway evidence and strong event-based demand signals	No robust Somalia-specific annual public series

3.2 The India corridor: official series and post-pandemic dynamics

India constitutes the most systematically quantified destination for Somali medical travellers. Official data derived from parliamentary annexures and ministerial tables document medical-purpose foreign tourist arrivals for 2015–2017 and medical visas issued for 2019–2024 [23,24,25,26]. Both indicators represent discrete travel episodes rather than unique individuals. Table 4 presents the full series.

Table 4. India corridor: official nationality-specific indicators for Somali medical travel, 2015–2024.

Year	Somali count (episodes)	Indicator	Evidence tier
2015	3,072	Medical-purpose foreign tourist arrivals	Tier 1
2016	5,549	Medical-purpose foreign tourist arrivals	Tier 1
2017	4,964	Medical-purpose foreign tourist arrivals	Tier 1
2018	Not available	Gap in accessible official tables	—
2019	3,454	Medical visas issued	Tier 1

Year	Somali count (episodes)	Indicator	Evidence tier
2020	1,386	Medical visas issued	Tier 1
2021	4,162	Medical visas issued	Tier 1
2022	10,206	Medical visas issued	Tier 1
2023	16,411	Medical visas issued	Tier 1
2024	12,261	Medical visas issued	Tier 1
Total	61,465	Minimum captured volume, excluding 2018	Tier 1

Values denote movement episodes, not unique individuals. Arrivals and visas issued are distinct indicators and are not directly interoperable. Sources: [23,24,25,26].

Cumulatively, the minimum captured volume across 2015–2017 and 2019–2024 is 61,465 episodes, excluding the unresolved 2018 gap. The series reveals a pronounced post-pandemic surge concentrated in 2022–2024, with the 2023 peak of 16,411 visas representing a 3.9-fold increase over the 2019 baseline. Three explanations are consistent with the data and are not mutually exclusive: the release of demand suppressed during the pandemic closure period; intensifying domestic tertiary-care shortage; and the accumulation of unmet clinical need among patients with chronic and progressive conditions who deferred treatment. The subsequent contraction to 12,261 in 2024 is compatible with the exhaustion of deferred demand, with tightened integrity controls introduced from 2023 [28], or with both operating concurrently.

Two interpretive cautions govern the use of this series. First, medical-purpose arrivals and medical visas issued are not identical measures: a visa may be issued and not used, and an arrival may occur under a different visa category. The two segments of the series should therefore be read as adjacent but non-interchangeable. Second, the unit of observation is the episode. Repeat travel by the same patient — a recurring feature of oncology, dialysis and transplant follow-up — is counted more than once. The series consequently establishes a robust floor for corridor volume and an unreliable ceiling for patient numbers. Figure 3 presents the series graphically.

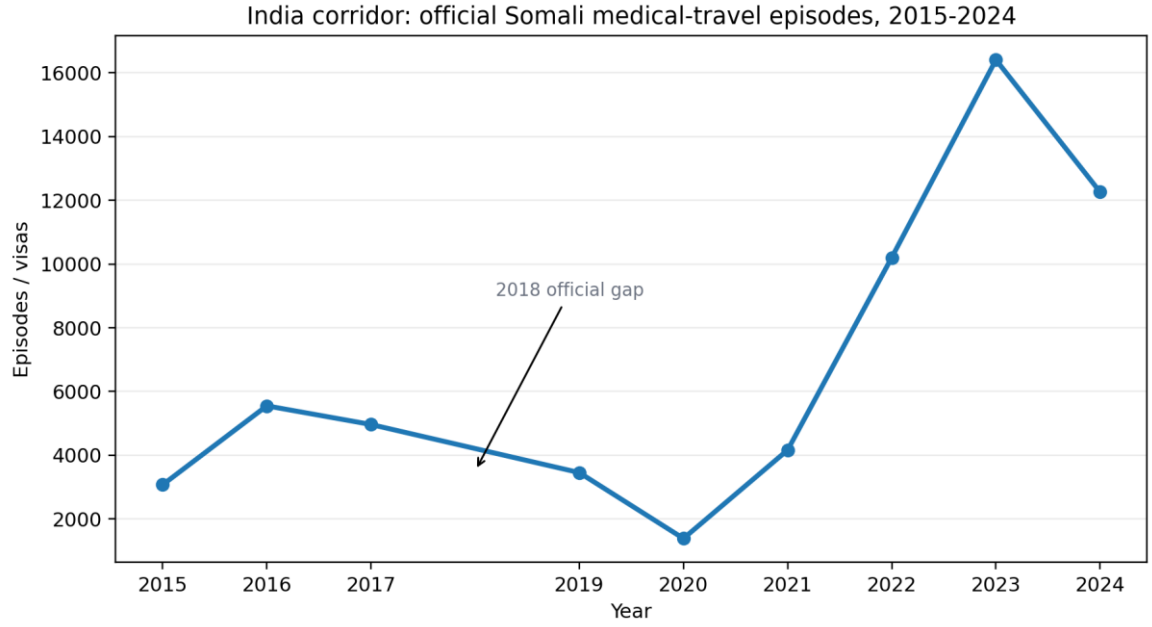


Figure 3. India corridor: official Somali medical-travel episodes, 2015–2024. The post-pandemic surge is a directly measured finding. The 2018 gap remains unresolved in the accessible official series; the connecting line across that interval is presentational and does not represent an estimated value.

3.3 The Türkiye corridor: a verified anchor without a series

For Türkiye, the principal quantitative anchor is a peer-reviewed cross-sectional study of Somali patients receiving treatment in Istanbul and Ankara, which reports 2,742 Somali medical travellers in 2019, equivalent to 0.4% of Türkiye's total inbound medical-travel volume, based on Ministry of Health data [22]. The same study, whose primary survey was administered between July 2021 and May 2022, characterises the Somali patient population as predominantly male, with a mean age of approximately 35 years and a mean reported monthly income of US$921; treatment concentrated in in-vitro fertilisation, urology and orthopaedics; the majority held no health insurance; and intermediary organisations were used extensively to arrange travel and admission.

No year-by-year Somali series is publicly accessible for this corridor. The absence is consequential, because Türkiye is plausibly the second-largest destination by volume and is the corridor in which intermediary dependence is best documented. In the absence of a nationality-specific series, the national inbound health-travel series can be used only as a contextual denominator, indicating whether Somali flows are likely to have risen or fallen with the wider market. Table 5 presents that denominator. It must not be treated as a basis for imputing Somali volumes, since the Somali share is observed in a single year and its stability over time is unknown.

Table 5. Türkiye: total inbound health-travel volumes, 2014–2025, used solely as a contextual denominator.

Year	Total inbound health travellers	Year	Total inbound health travellers
2014	414,658	2020	435,691
2015	360,180	2021	729,592
2016	377,384	2022	1,381,807
2017	433,292	2023	1,538,643
2018	551,748	2024	1,506,442
2019	756,926	2025	1,398,580

Figures denote all nationalities. The single observed Somali share (0.4%, 2019) cannot be assumed constant across the series. Figures for 2026 are not yet published. Sources: [41,42]. Evidence tier: Tier 1 for the denominator; Tier 3 for any Somali-specific annual inference.

3.4 The Ethiopia and Egypt corridors: demand without measurement

Ethiopia and Egypt present the inverse evidential profile: recurrent and credible demand signals in the absence of systematic nationality-specific annual data. This quantification gap materially constrains comparative analysis and is itself a finding of policy significance.

Ethiopia functions as a regional proximity and stabilisation corridor, particularly where overland access or shorter travel distance is decisive, and it absorbs a substantial share of oncology referrals from Somalia given the absence of domestic radiotherapy [18,43,58]. Ethiopia has concurrently pursued deliberate expansion of its own health-tourism capacity, which is likely to consolidate this corridor further [57]. Egypt combines geographical proximity with demand for cardiology, oncology and other specialist services. The scale of unmet need is illustrated by a documented Egyptian medical convoy to

Mogadishu in September 2024, which examined 1,674 Somali patients and performed 436 surgical procedures over the course of a single mission [30]. An episode of that magnitude, delivered by a visiting team within a compressed period, is a direct measure of latent demand for services that the domestic system does not supply.

Neither corridor can currently be quantified longitudinally. Any figure presented for Ethiopia or Egypt in this paper is therefore explicitly a Tier 2 scenario value, constructed for planning visualisation, and is reported as such.

3.5 Destination-specific service demand and disease profiles

Across the evidence base, outbound demand concentrates in continuity-dependent and technology-intensive service lines. Non-communicable disease dominates the complex-care burden. Reported prevalence ranges include hypertension at 26–33%, diabetes at 11–20%, elevated cardiovascular risk at 24–38%, chronic kidney disease at 29.4% and acute kidney injury at 14.8% [12,59,66].

Oncology emerges as the single strongest driver. Oesophageal cancer accounts for 32.3% of recorded malignancies in earlier hospital-based series and 37.2% in a subsequent multicentre retrospective study spanning Mogadishu and Hargeisa [19,20]. Domestic limitations are categorical rather than incremental: there is no radiotherapy unit registered in the national inventory; chemotherapy is available in only a small number of private facilities; advanced imaging, including positron emission tomography, is absent; histopathology and specialist oncology staffing are severely constrained; and no mature population-based cancer registry exists [18,19,21,43,50]. A multicentre observational study of oesophageal cancer in Mogadishu documents late-stage presentation, severe staging and treatment gaps, and poor survival, with high onward referral to neighbouring countries [18]. Every patient requiring radiotherapy must, by definition, be referred abroad.

Cardiovascular and renal conditions generate travel through a related mechanism. Both depend on diagnostic precision, procedural infrastructure and longitudinal management, and all three remain unreliable or incomplete domestically. Hospital-based echocardiographic series from Mogadishu report hypertensive heart disease, valvular heart disease and heart failure with reduced ejection fraction as the predominant findings, together with a substantial burden of rheumatic and congenital heart disease concentrated in younger age groups [66] — conditions for which valve surgery, bypass grafting and device implantation are indicated and domestically unavailable. In nephrology, dialysis capacity exists but operates at or near saturation, while transplantation is not performed in country. Surgical subspecialty capacity has expanded since the re-establishment of postgraduate surgical training in Mogadishu, but the resulting cadre remains small relative to need and is not matched by the procedural infrastructure required to retain it [48].

Destination profiles are differentiated rather than interchangeable, and the differentiation is clinically coherent. India is consistently associated with high-acuity tertiary intervention: oncology, cardiac surgery, renal care, complex diagnostics and transplant pathways. Türkiye shows a distinct service mix in which in-vitro fertilisation, urology and orthopaedics predominate [22]. Ethiopia functions as a regional stabilisation and oncology-referral corridor where proximity is decisive. Egypt combines proximity with demand for cardiology, oncology and other specialist services. Table 6 synthesises these patterns.

Table 6. Destination-specific service demand and disease profiles.

Condition / service line	Indicative domestic burden or signal	Principal destination(s)	Core reason for travel
Oncology and malignant disease	Oesophageal cancer 32.3–37.2% of recorded malignancies; no radiotherapy capacity; chemotherapy limited to a small number of private centres	India, Ethiopia, Egypt	Advanced imaging, staging, chemotherapy, radiotherapy and oncological surgery
Cardiovascular disease	Hypertension 26–33%; hypertensive, valvular and rheumatic heart disease predominant in hospital series	India, Egypt	Coronary artery bypass grafting, valve replacement, device implantation, higher-level diagnostics
Renal disease and transplantation	Chronic kidney disease 29.4%; renal failure a major medical admission category; dialysis capacity saturated; no domestic transplantation	India, Türkiye	Dialysis capacity constraint, transplant access, specialist nephrology
Reproductive medicine	Strong and sustained demand signal in the Türkiye evidence base	Türkiye	In-vitro fertilisation and culturally congruent fertility services
Orthopaedics and urology	Prominent among Somali patients treated in Türkiye; trauma burden compounded by limited domestic trauma infrastructure	Türkiye, India	Arthroplasty, minimally invasive surgery, prosthetics and structured rehabilitation
Complex communicable disease	Multidrug-resistant tuberculosis and HIV co-infection requiring specialist regimens	Ethiopia, regional programmes	Specialist regimens, laboratory capacity and programme-linked care

3.6 Outcome domains, evidence status and failure mechanisms

Outcomes must be interpreted across the entire cross-border pathway rather than at the point of treatment alone. The available evidence does not permit calculation of a pooled mortality, complication, readmission or treatment-success rate for Somali patients treated abroad. This limitation is structural, not incidental. Visa and arrival statistics are movement indicators, not clinical records, and Somalia maintains no linked outbound-referral dataset capturing diagnosis, disease stage, procedure, destination facility, discharge status or follow-up after return. This review therefore distinguishes directly observed outcomes from plausible pathway mechanisms, and declines to attribute domestic mortality estimates to patients treated internationally.

Four outcome domains are nevertheless policy-relevant and should be specified now, so that the instruments capable of measuring them can be designed correctly.

9. Access and timeliness outcomes concern whether clinically eligible patients reach appropriate treatment before disease progression. Fundraising delay, visa processing, repeat diagnostics and fragmented referral decisions each lengthen the interval from indication to definitive care.
10. Clinical outcomes include peri-procedural survival, complications, symptom control, functional recovery and disease-specific response. These remain unmeasured at population level.
11. Continuity outcomes concern medication access, wound review, rehabilitation, laboratory monitoring, pathology review and specialist follow-up after return. A systematic review of patient-

reported continuity found an association with at least one favourable health outcome in the majority of included studies, although the evidence base was heterogeneous [29].

12. Patient-reported outcomes include quality of life, functional status, comprehension of the treatment plan, confidence in follow-up arrangements and financial distress.

The principal risk identified across the evidence is the discontinuous episode of care. A technically successful intervention may deliver limited long-term benefit where the patient returns without a complete discharge summary, operative report, pathology record, medication plan, implant specification, rehabilitation protocol or named clinician accountable for follow-up. The risk is concentrated in precisely those conditions that generate the largest outbound volumes — oncology, renal transplantation, cardiac surgery and arthroplasty — because each requires repeated monitoring over months or years. Language barriers and dependence on intermediaries further weaken informed consent, expectation management and the transfer of clinical information [22,49].

Domestic severity data explain why travel is so frequently perceived as the last viable option, without themselves describing outbound outcomes. Reported intensive-care mortality proxies include 38.6% in general intensive care, 35.9% in emergency intensive care and 25.5% for internal-medicine admissions. A national assessment of emergency and critical-care services documents substantial capability gaps across the hospital network [17,56], and qualitative evidence describes intensive care being understood by families as a place of death, generating decision delay driven by mistrust and financial constraint rather than clinical reasoning [64]. These are domestic figures and are reported here strictly as context for the decision to travel.

Where rates cannot be computed, interpretation proceeds through mechanism. Five failure mechanisms recur consistently across the evidence base: terminal-stage referral following prolonged diagnostic delay; avoidable referral generated by diagnostic uncertainty or institutional mistrust; financial exhaustion producing treatment interruption mid-episode; coordination risk arising from intermediary-mediated arrangements; and continuity failure after return. Figure 4 locates these mechanisms along the pathway; Table 7 states the evidence status and recommended indicator for each outcome domain.

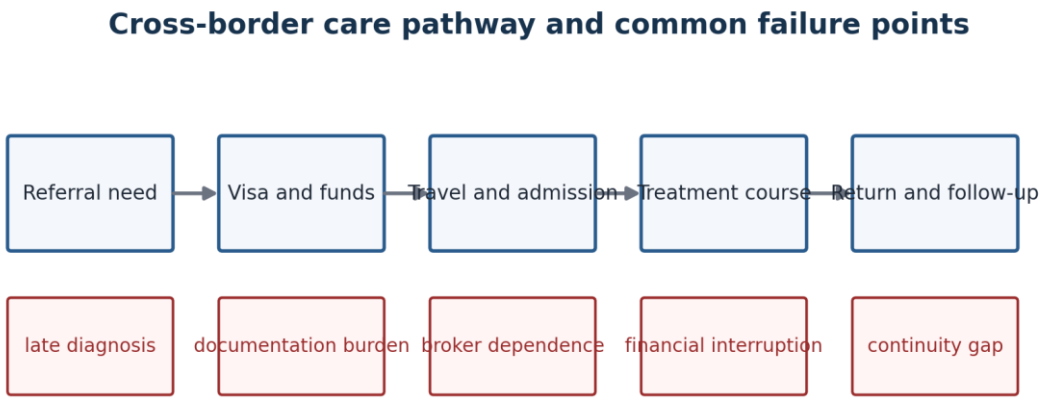


Figure 4. Cross-border care pathway and common failure points. The sequence identifies the stages at which clinical need is converted into avoidable harm — through diagnostic delay, documentation burden, intermediary dependence, financial interruption or weak follow-up after return.

Table 7. Outcome domains, recommended indicators, current evidence status and policy application.

Outcome domain	Recommended indicator	Current evidence status	Policy application
Access and timeliness	Referral-to-treatment interval; disease stage at arrival; visa or financing delay	Not systematically measured (Tier 3)	Identify avoidable delay and inequitable exclusion
Immediate clinical outcome	Procedure completion; discharge status; major complication; in-hospital death	Destination-side records exist but are not linked nationally (Tier 3)	Assess provider safety and referral appropriateness
Post-return continuity	Medication access; laboratory monitoring; rehabilitation; 30-, 90- and 180-day follow-up	Largely unmeasured (Tier 3)	Prevent avoidable deterioration following technically successful treatment
Patient-reported outcome	Quality of life; functional recovery; comprehension of care plan; satisfaction	Partial evidence from single-destination surveys (Tier 1, limited)	Measure benefit from the patient perspective
Financial outcome	Catastrophic expenditure; debt; asset sale; treatment interruption	Emerging household-survey evidence (Tier 1, indirect)	Link clinical benefit to financial protection
Pooled morbidity and mortality	Aggregate complication and mortality rates for outbound patients	Not derivable from public sources (Tier 3)	Requires registry linkage before any rate is asserted
Malpractice exposure	Complaint rate; adverse-event reporting; records-release compliance	Suggested by recurrent error and diagnostic concerns; not quantifiable (Tier 3)	Requires bilateral reporting arrangements and a domestic complaints mechanism

3.7 Household economic burden

The economic burden of an outbound episode extends well beyond the hospital invoice. A complete episode-cost framework comprises: pre-departure consultation and repeat diagnostics; passport, visa and administrative processing; treatment deposits; air or overland transport for the patient and an accompanying caregiver; accommodation and subsistence; interpreter and facilitator charges; medicines, consumables and rehabilitation; income forgone by patient and caregiver; post-return monitoring; and, in unsuccessful cases, emergency extension of stay or repatriation of remains. Table 8 sets out this framework alongside the measured household cost profile.

A household survey conducted in Puntland reports a mean direct cost per outbound episode of US$8,543, comprising US$5,983 for medical procedures, US$1,995 for accommodation, US$1,291 for travel and US$398 for visa and administrative costs [16]. These are averages, not ceilings. The same evidence base documents financial extremes approaching US$80,000 for complex cases, with accommodation alone reaching US$30,000 during prolonged stays. The mean figure should therefore be read as a partial direct-cost estimate, not a comprehensive societal cost, since it excludes indirect costs, post-return costs and the opportunity cost of depleted productive assets.

Financing is socialised downward onto households and kinship networks rather than pooled at national level. Insurance coverage stands at approximately 3.5%. Of reported financing, 43% derives from family, diaspora or community support; 20% from current income; 17% from life savings; and 5% from asset liquidation [10,16]. The distributional implication is direct: tertiary care is rationed not by clinical

triage but by a household's capacity to mobilise cash quickly. Patients with the greatest clinical urgency and the least liquidity are systematically disadvantaged.

Table 8. Household economic burden of an outbound episode: cost architecture, measured values and financing profile.

Economic layer / financing channel	Component or value	Measurement approach or interpretation
Direct medical	US$5,983 (mean procedure cost)	Hospital invoices and patient receipts; largest single household cost component
Direct non-medical — accommodation	US$1,995 (mean); up to US$30,000 in prolonged stays	Prospective patient cost survey; long stays render non-medical costs decisive for completion
Direct non-medical — travel	US$1,291 (mean)	Cross-border mobility cost incurred before treatment commences
Direct non-medical — visa and administration	US$398 (mean)	Understates the broader documentation and transaction burden
Mean total direct cost per episode	US$8,543	Partial direct-cost estimate; already catastrophic for the majority of households
Indirect costs	Not quantified	Lost earnings, business interruption, caregiver time and school absence; human-capital and time-use methods required
Post-treatment costs	Not quantified	Monitoring, complications, readmission, repeat travel and long-term medicines; requires registry linkage at 30, 90 and 180 days
Financing — family, diaspora, community	43%	Social capital functioning as informal insurance
Financing — current income	20%	Liquidity drawn from wages or active business income
Financing — life savings	17%	Depletion of accumulated household reserves
Financing — asset liquidation	5%	Distress financing through sale of productive assets, including breeding livestock and land
Financing — insurance	3.5%	Negligible formal risk pooling

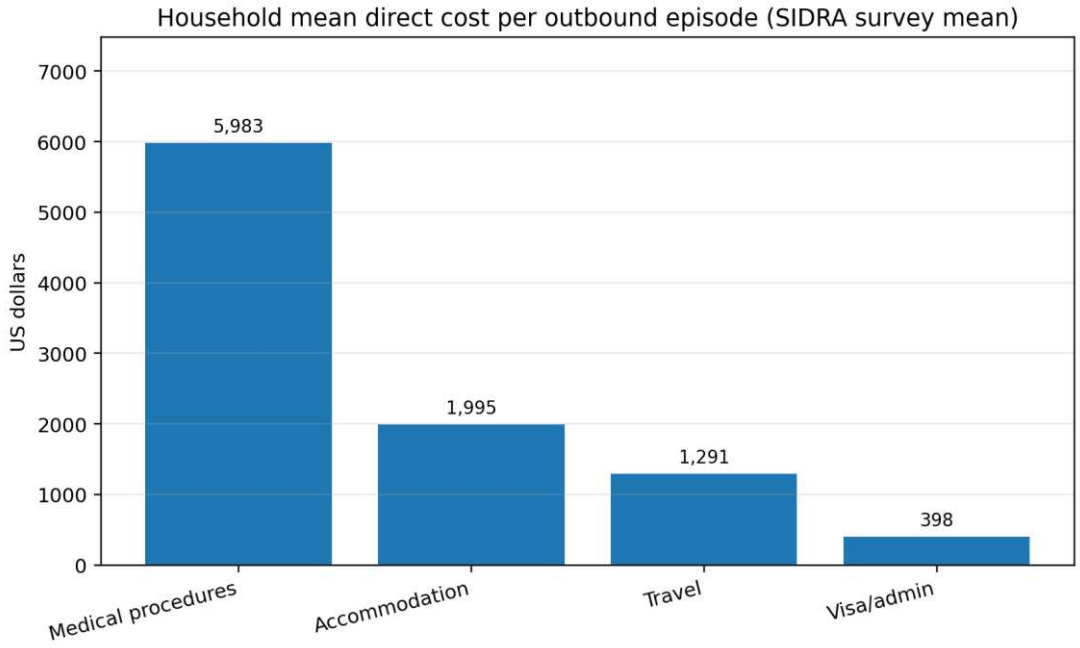


Figure 5. Household mean direct cost per outbound episode. Procedure fees dominate, but accommodation and travel together remain large enough to destabilise treatment completion, particularly in prolonged oncology and post-surgical courses.

3.8 Procedure-level cost comparison across destinations

Destination selection is, in part, an economic calculation performed under catastrophic-risk conditions. Table 9 presents indicative procedure cost ranges across the three corridors for which price information is publicly available, with a high-income reference point where one exists.

Table 9. Illustrative procedure cost ranges by destination (US$).

Procedure	India	Türkiye	Egypt	High-income reference
Coronary artery bypass grafting	5,200–8,000	9,000–15,000+	7,500–26,000	~123,000 (United States)
Kidney transplantation	12,000–15,000	18,000–22,000	~16,000	Not comparable
Hip arthroplasty	~7,000	12,000+	~11,300	Not comparable
In-vitro fertilisation (per cycle)	~3,250	6,000+	~5,000	Not comparable
Dental implant	~1,000	Not reported	Not reported	Not comparable
Comprehensive medical assessment	~350	500+	~250	Not comparable

Evidence tier: Tier 3. Values are indicative ranges drawn from commercial price-list and market-intelligence sources [61,62] and are presented solely to illustrate relative magnitude. They are not audited prices, do not include travel, accommodation or indirect costs, and should not be used for procurement or contracting without independent verification.

The relative differentials are informative even under this evidential caveat. Coronary artery bypass grafting in India is priced at roughly one-third of the upper Egyptian range and at approximately 5% of the high-income reference. This differential explains the dominance of the India corridor despite its materially higher administrative and logistical burden, and it explains why cost, rather than proximity, is the principal determinant of destination selection for high-acuity surgical intervention.

3.9 National expenditure envelope and macroeconomic leakage

Somalia's health-financing baseline establishes the significance of any outbound expenditure figure. Table 10 presents the principal indicators.

Table 10. Somalia health-financing indicators.

Indicator	Value	Source basis and interpretation
Out-of-pocket share of household health expenditure	44.9%	National household survey, 2,000 households [10]; far above the Sub-Saharan African average of 35.7% and the global average of 18.6%
Out-of-pocket share of current health expenditure (national accounts)	30.78% (2023)	WHO Global Health Expenditure Database via World Bank [11]; distinct source, method and reference period — not interchangeable with the household-survey estimate
Health insurance coverage	3.5%	National household survey [10]; minimal financial protection
Households with health spending above 10% of income	24%	National household survey [10]; standard catastrophic-expenditure threshold [35,37]
Government health allocation as share of public expenditure	~2% (2020), 8.5% (2023), 5% (2024), 7% (2025)	Sustained shortfall against the 15% Abuja Declaration target [10,33]
Population with access to essential health services	~35%	Ministry of Health and Human Services [21]
External financing dependence	~40%	Sectoral resource mapping and expenditure tracking [55]

Two estimates of out-of-pocket burden circulate in the literature and are frequently conflated. The household-survey estimate of 44.9% and the national-accounts estimate of 30.78% for 2023 are not contradictory and are not substitutable. They differ in source, method, scope and reference period: the first measures the share of household health spending met directly by households in a surveyed sample; the second measures the share of aggregate current health expenditure met out of pocket across all financing sources, including external assistance. Both are reported here with their definitions attached, and neither is presented as superseding the other. Analysts should select according to the question being asked, and should state which measure they are using.

At macroeconomic level, the India corridor provides the strongest lower-bound evidence because it alone has nationality-specific movement counts. Applying India's published medical-value-travel benchmark of approximately US$7,143–8,571 per international patient [62,63] to the measured Somali series yields indicative expenditure envelopes of roughly US$73–87 million in 2022, US$117–141 million in 2023 and US$88–105 million in 2024. Cumulative implied expenditure to India across 2015–2017 and 2019–2024, excluding 2018, is approximately US$439–527 million.

Extending the estimate to all four corridors necessarily increases uncertainty, because longitudinal Somali-specific volumes are unavailable for Türkiye, Ethiopia and Egypt. The central four-corridor scenario places 2024 total outbound expenditure at approximately US$219.3 million, equivalent to roughly 1.8% of a gross domestic product projected at US$12.11 billion [33]. This figure is a central planning scenario, not observed expenditure, and is reported here with that designation. Table 11 presents the selected-year envelope.

Table 11. Scenario-based national outbound expenditure envelope, selected years.

Year	Total outbound episodes (scenario)	Estimated expenditure (US$ millions)	Evidence basis
2014	6,305	54.6	Tier 2 — fully scenario-derived
2016	8,830	76.1	Tier 2 — India component measured
2019	10,035	87.1	Tier 2 — India and Türkiye components measured
2020	5,173	45.0	Tier 2 — India component measured
2023	29,788	257.2	Tier 2 — India component measured
2024	25,358	219.3	Tier 2 — India component measured; central planning scenario
2026	25,607	221.4	Tier 2 — projection only

India-measured points are embedded where available. Türkiye, Ethiopia and Egypt components remain scenario-based owing to the absence of nationality-specific annual series. Values illustrate order of magnitude and policy relevance; they are not audited expenditure and should not be cited as observed national accounts.

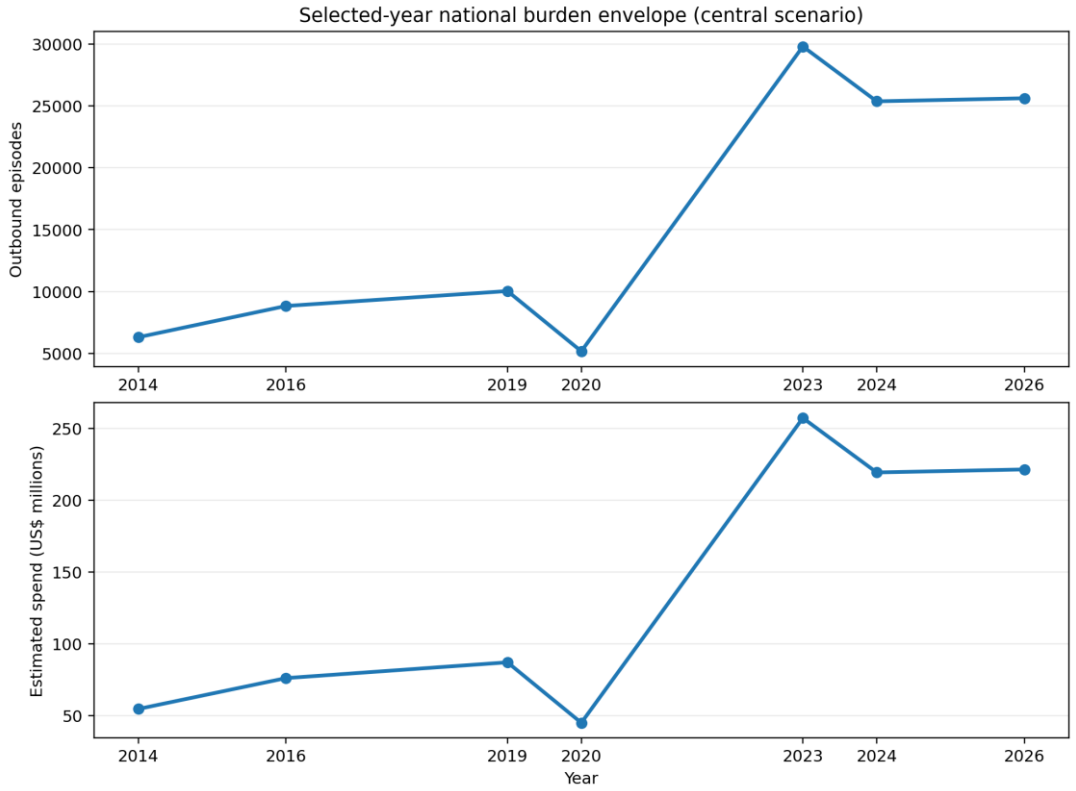


Figure 6. Selected-year national outbound expenditure envelope (central scenario). Values illustrate scale and policy relevance rather than audited expenditure.

Whichever estimate is adopted, the order of magnitude is consistent and consequential. Annual outbound health expenditure exceeds US$100 million on every specification examined. Set against government health allocations that have remained below the Abuja target throughout the period, and against per-capita health spending among the lowest recorded globally, this outflow represents a

material share of total national health expenditure that is currently capitalising foreign provider systems rather than domestic capacity.

3.10 Patient-level barriers in destination countries

Patient barriers are destination-specific in form but structurally related in origin: each arises where an unregulated pathway meets a household with limited liquidity, limited documentation and limited recourse.

India.

The Indian pathway presents the most demanding administrative requirements. Following the closure of the Indian mission in Somalia, visa services are processed through Nairobi or Addis Ababa, obliging applicants to undertake additional cross-border transit merely to lodge an application. Documentation requirements are extensive and include bank statements demonstrating sufficient funds to cover medical and subsistence costs, police clearance certificates and referral letters. Integrity controls introduced from 2023 further constrain patient flexibility by prescribing specific treatment locations and requiring advance token payments reported at approximately 25% of estimated treatment cost prior to visa consideration [28]. These controls may reduce misuse of the medical-visa category, but they simultaneously magnify inequity and delay, and they differentially exclude lower-income households whose clinical need may be identical.

Türkiye.

The Türkiye pathway is characterised by cultural proximity alongside pronounced intermediary dependence: more than half of Somali patients arrange care through facilitator organisations [22]. Reported satisfaction is generally favourable, averaging 3.30 on a five-point scale, and most respondents indicated they would use Turkish services again. The same dataset, however, records substantial negative experience: recurring errors reported by 32.6%, extended waiting times by 16%, elevated cost by 15.4%, insufficient equipment by 10.7% and diagnostic concerns by 8%. Only 42% reported that language was not a barrier. These findings indicate an environment that is preferable to domestic scarcity for many patients but is not uniformly safe, and in which the quality of coordination across language and system boundaries materially shapes outcome.

Egypt.

Available evidence emphasises financial and social vulnerability during prolonged treatment courses. Somali patients are frequently integrated into public programmes rather than high-cost private facilities, which moderates direct cost but exposes them to housing instability, income insecurity and the social consequences of prolonged foreign residence. Qualitative work with non-national tuberculosis patients in Cairo documents the financial and social costs of sustaining treatment adherence under precisely these conditions [31].

Ethiopia.

Somali-specific quantified evidence is sparse. Proximity preserves access for urgent and stabilisation cases and reduces travel cost, but the corridor carries its own capacity constraints, and patients contend with accommodation cost, secondary infection risk and social marginalisation during extended stays. The measurement gap itself limits analytical precision and constitutes a priority for future data collection.

Four barriers recur across all destinations and are therefore structural rather than country-specific: exploitation by intermediaries, including steering toward facilities that generate commission, redundant diagnostic testing and inflated invoicing; language and cultural barriers that undermine informed consent and comprehension of post-operative requirements; the practical absence of legal recourse in cases of alleged negligence, compounded by the cost and complexity of foreign litigation and by inconsistent release of medical records [49]; and socio-economic marginalisation during prolonged treatment. A fifth burden arises where treatment fails and death occurs abroad: repatriation of remains requires specialised embalming, sealed caskets, regulatory clearance and air freight, and the great majority of Somali patients hold no insurance covering it. Families are consequently obliged to mount a second fundraising effort, in an unfamiliar jurisdiction, to settle outstanding hospital accounts and transport costs. Table 12 summarises the destination-specific barrier profile.

Table 12. Destination-specific patient barriers, consequences and evidence strength.

Destination	Principal barrier	Consequence for the patient	Evidence strength
India	Visa logistics; extensive documentation; advance token payment; external processing sites in third countries	Delay; exclusion of lower-income households; administrative friction accumulating before treatment begins	Strong
Türkiye	Extensive intermediary dependence; waiting time; recurring errors; cost and diagnostic concerns; language barrier	Variable care navigation; incomplete trust; coordination failure across language and system boundaries	Moderate
Egypt	Social and financial vulnerability during prolonged treatment; housing and income insecurity	Adherence risk; psychosocial strain; prolonged household burden	Moderate
Ethiopia	Sparse Somali-specific quantified evidence; navigation and financing constraints; destination capacity limits	Measurement gap constrains precision; proximity nevertheless preserves access for urgent cases	Weak to moderate
All destinations	Absence of legal recourse; inconsistent records release; no repatriation cover; no post-return handover	Unremedied adverse events; continuity failure; secondary financial shock following death abroad	Moderate

"Evidence strength" denotes the clarity and traceability of the underlying evidence base, not the severity of patient burden.

4. Discussion

4.1 Principal interpretation of findings

The synthesis supports a single organising conclusion: Somali outbound medical travel functions as an unofficial parallel tertiary-care system. It is privately financed, minimally regulated, unmeasured outside the India corridor, and generated principally by domestic deficits in diagnostics, specialised treatment and continuity of care. Three findings sustain this interpretation.

First, the phenomenon is substantial and, in one corridor, precisely measurable. The India series alone documents a minimum of 61,465 episodes across nine reported years. The post-pandemic trajectory indicates not merely a return to prior volumes but the discharge of accumulated unmet need, with 2023 volumes approaching four times the 2019 baseline. Any policy framework that treats outbound travel as a marginal phenomenon is therefore working from a false premise about its scale.

Second, the clinical profile conforms closely to the logic of tertiary-care failure. Patients travel disproportionately for the services that fail first in systems lacking oncology infrastructure, reliable dialysis, advanced imaging, transplant readiness, subspecialty staffing and functioning referral. The correspondence between what is absent domestically and what is sought abroad is near-exact, and it is strongest in oncology, where the absence of radiotherapy capacity renders foreign referral not a preference but a clinical necessity for an entire category of patients. This alignment is itself evidence that the phenomenon is supply-determined rather than demand-driven.

Third, outcome problems persist irrespective of whether they are measured. Late presentation, financial interruption, intermediary-mediated coordination risk and post-return discontinuity recur across every source examined, in every corridor, and for every major service line. The absence of a registry does not make these mechanisms speculative; it makes them unquantified. The distinction matters, because the policy response to an unquantified but consistently evidenced mechanism is to build the measurement instrument, not to await evidence that the current architecture cannot produce.

From a systems perspective, the measurement asymmetry documented in Section 3.1 is more than a technical limitation. Accurate quantification of outbound referral is a precondition for strategic purchasing, for credible bilateral negotiation and for targeted domestic investment in the service lines where leakage is greatest. A government that cannot count its outbound referrals cannot price them, cannot negotiate them and cannot decide rationally between purchasing them abroad and producing them at home.

4.2 Interpretation in relation to the wider literature

These findings both draw on and qualify the established patient-mobility literature. That literature was constructed largely around discretionary flows from high-income to middle-income markets, in which price, waiting time and amenity are the operative variables and the patient retains a functioning domestic alternative [1,2]. The Somali case belongs to a different category, examined more directly in the work on South–South medical travel and on the equity implications of patient mobility for lower- and middle-income countries [4,39,40]. In that category, travel is compensatory, the domestic alternative is absent rather than inferior, and the binding constraint is household liquidity rather than consumer preference.

This distinction has an important corollary that the literature on medical tourism does not fully capture. Where mobility is discretionary, outbound flows represent a transfer of consumption. Where mobility is compensatory, outbound flows represent a transfer of the tertiary-care function itself — including its financing, its clinical governance and its accountability — to jurisdictions in which the origin state has no regulatory standing. The Somali patient abroad is not a consumer exercising choice in a market; the patient is a citizen receiving an essential health service outside any system that can be held responsible for its quality, its cost or its continuation.

The findings also align with the broader evidence on health financing in fragile and conflict-affected settings, which documents the same configuration: minimal prepayment, dominant out-of-pocket payment, high external dependence, fragmented governance and weak stewardship of private provision [38]. Somalia's trajectory toward universal health coverage has been analysed in these terms [7,8,9,67], and outbound medical travel should be incorporated into that analysis as a measurable manifestation of coverage failure rather than treated as a separate phenomenon. Catastrophic health expenditure, as conventionally defined and measured [35,36,37], is not an incidental risk of cross-border care in this setting; for a mean episode cost of US$8,543 against prevailing household incomes, it is the expected outcome.

4.3 Clinical implications: referral quality as a determinant of outcome

The findings demonstrate that the quality of the referral is nearly as consequential as the quality of the destination facility. Excellent international care cannot compensate for inadequate initial staging, incomplete pre-referral assessment or absent follow-up. In oncology, nephrology and advanced cardiology, the care continuum is only as strong as its weakest transition, and the Somali pathway currently contains three weak transitions in sequence: referral decision, cross-border transfer and post-return handover.

Three clinical consequences follow. First, referral appropriateness is unassessed. Without pre-referral staging standards, some patients travel who cannot benefit, expending household resources on interventions that were never clinically indicated, while others who would benefit do not travel at all. Second, the returning patient re-enters a system with no record of what was done. Absent discharge summaries, operative notes, pathology reports, implant specifications and medication plans, domestic clinicians are placed in the position of managing complications from procedures they cannot reconstruct — a circumstance that reasonably produces clinical hesitancy and demonstrably produces avoidable harm. Third, the commercial dynamics of high-volume destination markets, including accelerated discharge pathways and the cost pressure exerted on patients by extended accommodation, encourage premature return against medical advice, elevating the risk of thromboembolic and wound complications precisely at the point where domestic capacity to intervene is weakest.

These are addressable problems, and they are addressable at modest cost relative to infrastructure investment. Standardised pre-referral staging protocols, a mandatory structured discharge dataset as a condition of any publicly facilitated referral, tele-specialist review before referral is authorised, and a named domestic clinician accountable for each returning patient would together close the greater part of this gap without requiring a single new hospital.

4.4 Economic and financing implications

The financial evidence supports a conclusion that is counter-intuitive but consequential for policy: Somalia already pays for tertiary care. It pays substantially — in the order of US$100 million or more annually on every specification examined, and approximately US$219 million in the 2024 central scenario. What it does not do is pay efficiently. Expenditure is disaggregated across thousands of individual foreign invoices, mobilised through emergency fundraising and informal social support, and settled without price negotiation, quality assurance, outcome verification or any mechanism for capturing value. The question facing policymakers is therefore not whether to finance tertiary care, but whether to continue financing it in the least efficient and most inequitable manner available.

Three implications follow. First, the appropriate policy objective is not the elimination of all outbound referral. Some rare and highly complex services will remain more efficiently purchased from accredited foreign providers than produced domestically, particularly where domestic volumes would be too low to sustain safe practice. The objective is to reduce avoidable referral, to govern unavoidable referral, and to repatriate the service lines where volume and cost jointly justify domestic production.

Second, that judgement requires appraisal discipline that does not currently exist. Comparing external purchase with domestic production requires capital cost, workforce requirements, maintenance and consumables, quality assurance, projected referral volume, unit cost at that volume, expected health outcomes and equity effects to be assessed together. Oncology diagnostics, chemotherapy day care, dialysis quality networks, advanced imaging and histopathology are the strongest candidates on current evidence, because they combine high leakage, high volume, relatively contained capital requirements and a clear multiplier effect on domestic diagnostic capability.

Third, financial protection must be designed for the specific risk profile that outbound care presents. A conventional benefit package that excludes foreign treatment leaves the catastrophic exposure entirely with the household. A package that covers it without referral governance transfers an unmanaged cost to the public purse. The defensible intermediate position is a catastrophic-illness protection mechanism covering defined high-leakage conditions, accessed only through an authorised referral pathway, with negotiated package pricing and mandatory outcome reporting as conditions of payment. This positions financial protection and referral governance as a single instrument rather than two competing ones, and it is the arrangement most compatible with Somalia's emerging social health insurance architecture.

4.5 Political economy: capital leakage, human-capital flight and policy incentives

Sustained outbound expenditure of this magnitude carries consequences beyond the health sector. Foreign-exchange outflow of US$100–250 million annually constitutes a material constraint on fiscal capacity and on the balance of payments, and it displaces domestic investment in health, education and social protection [51,52]. It compounds a sector already characterised by high external dependence and constrained domestic ownership of financing decisions [32,53]. Somalia's participation in the global medical-travel market is structurally asymmetric: capital flows outward to capitalise the health sectors of destination states while domestic capacity remains static.

The most damaging effect, however, may be on the incentives facing domestic policy itself. Where those with the greatest political and economic influence can exit the domestic system, the constituency demanding its improvement is correspondingly weakened. Outbound travel therefore operates as a pressure-release valve that suppresses precisely the political demand that would otherwise drive

investment in radiotherapy capacity, transplant programmes and tertiary staffing. This dynamic is self-reinforcing: the absence of domestic capacity generates outbound travel, and outbound travel reduces the pressure to build domestic capacity.

A parallel mechanism operates on human capital. Somali clinicians trained to subspecialty level encounter a domestic environment lacking the infrastructure in which to practise, and emigrate accordingly. The resulting void is filled, at substantial cost, by foreign providers treating the same patients. Capital flight and human-capital flight are therefore not independent problems but two expressions of a single equilibrium, and neither will be resolved in isolation. Notably, the sequencing implication runs against intuition: training must be accompanied by infrastructure, or it accelerates the loss it was intended to reverse.

Countervailing conditions have, however, emerged. Somalia's attainment of the Heavily Indebted Poor Countries Completion Point and the associated reduction in sovereign debt have created fiscal space that did not previously exist. Projected growth in domestic demand and continued diaspora remittance inflows provide a financing environment more favourable to sustained sectoral investment than at any point since 1991 [33]. The policy question is whether that space is applied to the tertiary platforms where leakage is concentrated, or absorbed elsewhere.

4.6 Policy implications and recommended actions

The evidence supports a sequenced programme of six interventions, ordered so that governance and measurement precede capital investment. This sequencing is deliberate: investing in infrastructure before establishing referral governance risks building capacity that referral patterns will bypass, while establishing governance first generates the data required to direct investment. Table 13 sets out the recommended actions, responsible institutions and expected gains.

Table 13. Policy recommendations, institutional responsibility and expected gains.

Policy domain	Recommended action	Lead institution	Expected gain
Referral governance	Establish a National Cross-Border Care and Referral Programme incorporating standardised pre-referral staging, clinical triage rules, authorisation criteria and a compulsory structured discharge handover	Ministry of Health and Human Services, with the national health insurance authority	Fewer avoidable referrals; safer and better-documented unavoidable travel
Data systems	Establish a national outbound-referral registry recording diagnosis, disease stage, destination facility, financing mechanism, procedure and outcome at 30, 90 and 180 days after return	Ministry of Health and Human Services; national statistical authority	Measurable morbidity, mortality, continuity and financial-protection outcomes; an auditable basis for purchasing
Financial protection	Develop catastrophic-illness protection for defined high-leakage conditions through pooled national financing, accessed only via the authorised referral pathway	National health insurance authority; Ministry of Finance	Reduced distress financing and asset depletion; equity in access to tertiary care
Domestic capacity	Invest sequentially in oncology diagnostics, chemotherapy day care, dialysis quality networks, advanced imaging, histopathology and selected cardiac diagnostics, appraised against	Ministry of Health and Human Services; development partners	Progressive, evidence-directed reduction of external dependency

Policy domain	Recommended action	Lead institution	Expected gain
	full-cost comparison with external purchase		
Regulation of intermediaries	License medical facilitators; require disclosure of fees and of any financial relationship with destination facilities; establish a patient complaints and redress mechanism	Ministry of Health and Human Services; regulatory authority	Reduced exploitation; price transparency; a route to redress where none currently exists
Bilateral health diplomacy	Negotiate referral compacts with India, Türkiye, Ethiopia and Egypt covering package pricing, navigation and interpretation support, records release and minimum outcome-data sharing	Ministry of Foreign Affairs; Ministry of Health and Human Services	Accountability, predictable pricing and verifiable outcome reporting

Three implementation observations follow from the evidence. The registry should be designed to serve purchasing as well as surveillance, because a dataset built only for epidemiological monitoring will not support contract negotiation. Facilitator licensing should be introduced concurrently with the referral programme rather than after it, since an authorised pathway that competes with an unregulated one will be bypassed. And bilateral compacts should prioritise records release and outcome reporting over price alone, because price concessions without documentation transfer savings to the payer while leaving the continuity problem unaddressed.

4.7 A minimum outbound-referral dataset

Converting the current debate from anecdote into auditable measurement requires a defined minimum dataset, collected at three points: referral, discharge, and follow-up at 30, 90 and 180 days after return. The specification below is deliberately parsimonious, comprising variables that can be captured by a district-level clinician without specialist informatics support, and it is proposed as the operational core of the registry recommended in Table 13.

- At referral: patient identifier; age and sex; region of residence; primary diagnosis and disease stage; indication for referral; domestic services already attempted; date of referral decision; intended destination and facility; and declared financing mechanism.
- At discharge from the destination facility: date of admission and discharge; procedure or regimen delivered; completion status; major complication; unplanned intensive-care admission; in-hospital death; total invoiced cost; and confirmation that a structured discharge summary, pathology report and medication plan have been issued to the patient.
- At 30, 90 and 180 days after return: survival status; treatment interruption; medication continuity; readmission; reoperation; functional status; patient-reported experience; and household financial consequences, including borrowing, asset sale and reduction in essential consumption.

Even partial implementation would transform the evidence base. A registry capturing referral and discharge alone would permit the first defensible estimate of referral appropriateness and immediate clinical outcome; adding the 90-day follow-up point would permit the first measurement of continuity failure, which this review identifies as the dominant unmeasured risk.

5. Limitations

This review is subject to six limitations, which are stated here in the order of their analytical significance.

13. Imperfect proxies for care episodes. The principal quantitative series relies on official arrival and visa indicators rather than linked clinical utilisation data. Arrivals and visas issued are not interchangeable; visas may be issued and not used; and counts represent episodes rather than distinct individuals, which is consequential for chronic conditions requiring repeated travel.
14. Gaps and definitional discontinuity. The Indian official tables omit 2018, and the two Indian series — arrivals for 2015–2017 and visas issued for 2019–2024 — are not fully interoperable owing to definitional differences. The series should be read as adjacent rather than continuous.
15. Destination asymmetry. Türkiye provides a validated single-year estimate but no decade series; Ethiopia and Egypt lack comprehensive, publicly reported nationality-specific series for the entire period. This asymmetry precludes robust comparative trend analysis across corridors and means that all four-corridor estimates carry materially greater uncertainty than the India-only estimates.
16. Outcome measurement constraints. Aggregate morbidity, complication and mortality ratios for Somali outbound patients cannot be derived from public sources without a Somalia-side referral registry and destination-side outcome linkage. Outcomes are therefore interpreted through proxies and mechanisms rather than pooled rates, and no rate should be inferred from this paper that it does not explicitly state.
17. Heterogeneity precluding meta-analysis. The evidence base combines government statistics, country-of-origin syntheses, peer-reviewed studies and grey literature. Synthesis is narrative, and source credibility was appraised by provenance and definitional clarity rather than through a single formal instrument. Cost estimates should be regarded as plausible approximations rather than audited financial accounts.
18. End-period incompleteness and reporting bias. Complete annual statistics for 2025 and 2026 are not consistently available, and conclusions for those years are interpretive and scenario-based. Evidence is additionally more likely to be published and accessible where medical-travel sectors are commercially developed or where English-language reporting predominates, which may underrepresent non-English local reporting and informal corridor dynamics.

One further caveat applies to the household cost evidence. The mean direct cost of US$8,543 derives from a single regional survey and may not be nationally representative; it excludes indirect and post-return costs; and it should be replaced by a nationally representative prospective patient cost survey at the earliest opportunity.

6. Conclusion

Somali cross-border health care seeking is not elective medical tourism. It is a privately financed, minimally governed and largely unmeasured substitute for absent domestic tertiary care, and it should be read as a diagnostic indicator of health-system performance rather than as a pattern of consumer behaviour.

The evidence assembled here establishes four propositions. The phenomenon is substantial: the India corridor alone documents a minimum of 61,465 episodes across nine reported years, with post-

pandemic volumes approaching four times the 2019 baseline. It is clinically coherent: patients travel for precisely those services — oncology, advanced cardiology, renal replacement and transplantation, advanced diagnostics — that fail first where tertiary infrastructure is absent, and for which, in the case of radiotherapy, no domestic alternative exists at all. It is economically consequential: mean household direct cost of US$8,543 per episode, incurred in a financing environment with 3.5% insurance coverage, produces catastrophic expenditure as the expected rather than the exceptional outcome, while aggregate outflows in the order of US$219 million in 2024 represent approximately 1.8% of gross domestic product. And it is inequitable: access is rationed by household liquidity and documentation rather than by clinical priority.

The most significant finding, however, is what cannot be established. No defensible statement can be made about whether Somali patients treated abroad survive, recover, sustain treatment or experience avoidable harm, because no instrument exists to record it. A state that finances tertiary care at this scale, through its citizens, without knowing what that expenditure purchases, is not exercising stewardship over its health system in any meaningful sense.

The corresponding policy agenda is therefore sequenced rather than simultaneous. Measurement and governance come first: a national outbound-referral registry with a defined minimum outcome dataset, an authorised referral pathway with standardised staging and compulsory discharge handover, and licensing of medical facilitators. Financial protection follows, targeted at defined high-leakage catastrophic conditions and delivered through pooled national arrangements linked to that authorised pathway. Bilateral referral compacts convert unavoidable foreign referral from an unregulated private transaction into a governed public one. Domestic capacity investment proceeds last in sequence but first in importance, directed by registry evidence toward the service lines where volume, cost and clinical need jointly justify domestic production — beginning with oncology diagnostics, chemotherapy, dialysis quality and advanced imaging.

Somalia's improved fiscal position following the Heavily Indebted Poor Countries Completion Point, together with sustained remittance inflows and projected growth, creates a window in which this sequence is financially feasible. Whether that window is used will determine not only the trajectory of tertiary care, but whether the pursuit of universal health coverage in Somalia addresses the full spectrum of need or continues to exclude precisely those conditions that impoverish households most reliably. The measurement instruments recommended here are inexpensive, technically undemanding and immediately implementable. Their absence, not their cost, is the binding constraint.

Declarations

Ethics approval and consent to participate

Not applicable. This study analysed only publicly available documents and previously published materials. No human participants were recruited, no patient-level identifiers were accessed and no intervention was undertaken.

Consent for publication

Not applicable.

Availability of data and materials

All data analysed in this study are contained within the cited publicly accessible sources listed in the References. The extraction template and the tier-assignment log are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

AYA conceived the study, designed the analytical framework and evidence-tiering protocol, led data extraction and synthesis, and drafted the manuscript. AHM contributed to source identification, data extraction, verification of the destination-corridor evidence and critical revision of the Results and Discussion. MHM contributed clinical interpretation of the disease-profile and outcome-domain analysis and critically revised the manuscript for intellectual content. All authors read and approved the final manuscript and accept accountability for all aspects of the work.

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Use of artificial intelligence

The authors used artificial-intelligence-assisted tools for language editing and structural organisation of the manuscript. All source identification, data extraction, analytical judgements, interpretations and conclusions are the authors' own, and the authors have verified all content and take full responsibility for the integrity and accuracy of the published work.

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Reference style: Vancouver (numbered, in order of first citation), as applied by BMC, BMJ and Lancet-family journals. Where a target journal requires Harvard author–date or APA, the list converts directly without loss of content.

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Editorial notes for the author team

This section is provided for internal use during finalisation and should be deleted before submission.

E1. References requiring completion before submission

The following entries require the authors to supply or confirm full bibliographic details. Each is substantively verified as an existing source, but the complete author list or journal citation could not be confirmed from the material available:

- Ref. 16 — SIDRA Institute survey (Puntland). The 31%/41% driver figures, the US$8,543 mean episode cost and the financing-mix percentages all rest on this source. Full title, year, report number and access link are required.
- Ref. 19 — BMC Cancer (2026), six-year retrospective cancer study. Author list required.
- Ref. 59 — Cardiovascular disease burden in Somalia. Author list and volume/page details require confirmation.
- Ref. 64 — Intensive-care decision delay study (PMID 42164104). Author list and journal details required.
- Ref. 65 — Patient satisfaction, two Mogadishu public hospitals (PMCID PMC12271107). Author list and journal details required.
- Ref. 66 — Echocardiographic study, Mogadishu (PMCID PMC8680378). Author list and journal details require confirmation.
- Ref. 67 — Somalia’s policy paradox, Public Health Challenges (2026). Author list required.

E2. Substantive changes made to the source manuscript

- Author line and affiliations updated to the three-author structure supplied, with RIYAADA Institute and Benadir University as the corresponding author’s affiliations. The previous NHIA affiliation and the "About the Author" biography have been removed, as author biographies are not accepted in research-article submissions.
- Structural duplication removed. The Türkiye corridor section, the India indicator table, the household cost table, the procedure cost table, the scenario burden table, the morbidity discussion and the repatriation-of-remains discussion each appeared twice in the source document.
- Section order corrected. Substantial discussion-type material (political economy, capital flight, destination challenges, policy outlook) appeared within the Results in the source document and has been relocated to the Discussion. The Limitations section, which appeared both in Methods and as Section 5, is now consolidated in Section 5.
- Figure numbering corrected. The pathway figure, previously labelled Figure 6 but appearing before Figures 4 and 5, is now Figure 4, with subsequent figures renumbered accordingly.
- Methods rewritten. The statement that the manuscript was "constructed by harmonizing the user’s uploaded materials" has been replaced with a conventional methods account. That phrasing would have prompted immediate desk rejection.
- Terminology standardised. "Outbound medical travel" and "cross-border care seeking" are now used consistently; "medical tourism" is retained only where critically examined or where a cited source uses it. "Türkiye" is used throughout. British English spelling is applied consistently.

- Out-of-pocket expenditure discrepancy resolved. The 44.9% household-survey figure and the 30.78% national-accounts figure are now presented together with their definitions, and the incorrect attribution of the 44.9% figure to a "circa 2014–2016" period has been removed.
- Procedure cost data reconciled. Three inconsistent versions of the cost table (differing on Türkiye bypass pricing and on whether the Egyptian figure was a point or a range) have been consolidated into one table, with an explicit Tier 3 evidence caveat.
- Promotional sources removed from the reference list. Approximately eighteen commercial, marketing and testimonial sources were excluded, as the manuscript's own eligibility criteria exclude promotional content. Two market-intelligence sources are retained solely for indicative pricing and are explicitly labelled as such.
- Fifteen new peer-reviewed and institutional references added, including current Somali oncology, critical-care, health-financing and universal-health-coverage literature, and the conceptual patient-mobility literature that situates the paper's central argument.
- In-text citations inserted throughout. The source manuscript carried a 65-item reference list with almost no in-text citation, which is not publishable.
- Two new analytical sections added: the minimum outbound-referral dataset (Section 4.7) and interpretation against the wider patient-mobility literature (Section 4.2).

E3. Matters for the authors to verify

- The intensive-care mortality proxies (38.6%, 35.9%, 25.5%) and the odds ratio of 10.4 cited in Section 3.6 require a traceable primary source. They are currently unattributed in the source manuscript and should either be cited or removed.
- The non-communicable disease prevalence ranges (hypertension 26–33%, diabetes 11–20%, cardiovascular risk 24–38%, CKD 29.4%, AKI 14.8%) should each be attributed to their originating study.
- The Türkiye 2019 anchor of 2,742 Somali patients is attributed to Ministry of Health data as reported in Ref. 22. The authors may wish to obtain the primary statistical release to strengthen this Tier 1 claim.
- The scenario episode counts in Table 11 for 2014, 2016, 2019, 2020, 2023, 2024 and 2026 require the underlying assumptions to be documented in a supplementary methods file, so that reviewers can reproduce the envelope.
- A PRISMA 2020 flow diagram with final numeric counts should accompany the submission as a supplementary file.
- Consider whether the corresponding author's current position should be disclosed in the competing-interests statement, given the paper's recommendations concerning national health insurance arrangements.

E4. Suggested target journals

- Health Policy and Planning — strong fit for health-systems framing and fragile-state financing analysis; requires Harvard author–date conversion.
- International Journal for Equity in Health — strong fit for the equity and catastrophic-expenditure argument; Vancouver style as used here.
- BMJ Global Health — strong fit for the governance and policy recommendations; open access.

- Conflict and Health — strong fit for the fragile-state and health-system-failure framing.
- Globalization and Health — strong fit for the cross-border mobility and capital-leakage analysis.