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Supplying primary care in a fragile state: platform-level financing, idle capacity and the cost of the primary care tier in Somalia's essential package

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Abstract

Objective.

To quantify the supply-side economics of the primary care tier in Somalia's Essential Package of Health Services (EPHS): what it costs, how that cost is distributed across delivery platforms, how much of it is standing capacity rather than service delivery, and what this implies for expanding primary care under a severe financing contraction.

Methods.

We analysed the national EPHS costing (OneHealth Tool; 412 interventions; 2020–2030; three investment scenarios), which reports cost by delivery platform — community, primary health unit (PHU), health centre, referral health centre/district hospital, regional hospital and regional health office — and by input element. We computed the primary care tier's share of package cost and its per capita value, decomposed platform costs into quasi-fixed (workforce and infrastructure) and variable components, and compared platform workforce trajectories to 2029.

Findings.

The primary care tier — community, PHU and health centre platforms — accounts for 49.1% of package cost in 2020 and 51.3% in 2025, against 49.2% and 47.1% for the hospital tier. At 2026 volumes the tier costs approximately US$129 million, or US$7.68 per capita: roughly 1.3% of GDP per capita, and more than double its 2020 per capita value of US$3.63. Platform economics differ sharply. The community platform is 77–78% workforce cost throughout and its wage bill grows six-and-a-half-fold as the costed training programme delivers 2,000 community health workers annually. The PHU is the opposite case: its share of package cost falls from 8.0% to 6.6%, its wage base grows only 1.2-fold against 2.1-fold at health centres, and its quasi-fixed share collapses from 71% to 13% — the signature of a staffed, equipped network operating far below capacity, whose costs are already being incurred. Health centres carry the largest single share of package cost (38.5%) and the same utilisation dynamic in milder form.

Conclusion.

Somalia's essential package is nominally primary-care-oriented — just over half its cost sits in the primary tier — but the orientation is fragile, and it is achieved partly through a PHU network whose capacity is paid for and under-used. The cheapest available expansion of primary care is therefore utilisation of existing units rather than construction, and the most exposed line under contraction is the community platform, where cost is almost entirely wages. Platform-level costing should be a standard

output of essential-package costings: the aggregate primary care share conceals four different economies with four different policy implications.

1. Introduction

The case for reorienting health systems towards primary health care is settled in principle and unresolved in financing practice [1, 2]. Countries are urged to raise primary care's share of public health spending, and international guidance proposes benchmarks — an additional 1% of GDP for primary health care is the best known [3] — but the underlying question of what a primary care tier actually costs, and what the money is buying, is rarely answered with national data in the settings where the answer matters most.

The global evidence base sharpens the gap. The Lancet Global Health Commission on financing primary health care found public spending on PHC of roughly US$3 per capita in low-income countries — against US$16 in lower-middle-income countries — while its broader measure of total PHC spending, which includes out-of-pocket payment, averages US$24 per capita in low-income countries against US$1,312 in high-income countries [2, 15]. Yet these aggregates say nothing about the platform structure beneath them, and the fragile-states health financing literature, twice reviewed, identifies platform-level cost evidence as largely absent [4, 16].

Fragile and conflict-affected states face the question in its sharpest form. Their primary care networks are typically donor-built, thinly utilised, and financed through project modalities that expire; their hospital tiers absorb resources through unavoidable fixed staffing; and the trade-off between the two is made implicitly, through the accumulation of financing decisions, rather than deliberately [4]. Somalia's health sector is currently making that trade-off under a 61% single-year contraction in committed external financing [5].

Somalia's Essential Package of Health Services (EPHS 2020) permits a direct answer. Costed in the OneHealth Tool across 412 interventions for 2020–2030, it reports cost by delivery platform and by input element, and holds delivery standards fixed while coverage scales [6]. This paper extracts the supply-side economics of the primary care tier from that costing: its cost and per capita value, its distribution across platforms, the share of each platform's cost that is standing capacity rather than service delivery, and the implications for expanding primary care when money is scarce.

The analysis is deliberately confined to the supply side. What households face when they seek care at these platforms — price, distance and the financial consequences of using them — is the subject of a companion paper [7], and the two questions are joined in the discussion.

2. Methods

Data. The FMoH EPHS costing [6]: total and per capita cost by year and investment scenario; cost by input element (human resources, infrastructure, medicines and supplies, logistics, programme support);

cost by delivery platform under the facility-expansion scenario; and annual intervention coverage trajectories from observed baselines to an 80% endline in 2030. Scenario 1 delivers the package through existing facilities; Scenarios 2 and 3 expand PHUs and health centres to population norms of one per 10,000 and one per 20,000 respectively. Financing comparators come from the Ministry's resource mapping [5]; macro-level health expenditure comparators are from the WHO Global Health Expenditure Database as reported for Somalia in the regional technical paper [8].

Definitions

The **primary care tier** comprises the community, PHU and health centre platforms; the **hospital tier** comprises referral health centres/district hospitals and regional hospitals. Regional health offices are reported separately as administration. **Quasi-fixed cost** is human resources plus infrastructure — inputs that in the costing scale with facility standards rather than with patient volume; **variable cost** is medicines and supplies, logistics and programme support.

Analysis. Four computations, stated explicitly for reproducibility. *(i) Tier shares.* The primary care tier's share of package cost is the sum of the community, PHU and health-centre shares of the whole-package cost distribution by delivery channel, as published in the costing for 2020 and 2025 (the two years for which the full distribution is reported): 3.7 + 8.0 + 37.4 = 49.1% (2020) and 6.2 + 6.6 + 38.5 = 51.3% (2025). *(ii) Tier cost and per capita value.* The 2026 tier cost applies the 2025 distribution — the nearest published year — to the 2026 Scenario 1 total: 51.3% × US$251.8m = US$129.2m, divided by the costing's 2026 population projection (16,816,010) to give US$7.68 per capita; the 2020 value (49.1% × US$104.5m ÷ 14,117,411 = US$3.63) is computed identically. *(iii) Quasi-fixed shares.* Platform input decomposition is published for Scenario 2 only, and all quasi-fixed shares (human resources plus infrastructure over platform total) therefore refer to that scenario; whole-package channel shares and Scenario 2 platform decomposition are treated as consistent, an assumption stated rather than tested. *(iv) Sensitivity of the quasi-fixed classification.* Some workforce cost is variable at the margin; reclassifying 25% of platform human-resource cost as variable moves the PHU quasi-fixed share from 71.3% to 57.5% (2020) and from 12.9% to 10.4% (2029) — levels shift, but the utilisation gradient and the platform ordering persist, and this holds for every platform. GDP per capita is derived from the reported ratio of current health expenditure to GDP (US$22 per capita at 3.7% of GDP, implying approximately US$595) and is used only for order-of-magnitude comparison against the 1%-of-GDP benchmark.

Ethics. Analysis of a government costing model and published aggregate expenditure data; no human participants; ethics review not required.

3. Results

3.1 The primary care tier costs just over half the package

The primary care tier accounts for 49.1% of EPHS cost in 2020 and 51.3% in 2025; the hospital tier accounts for 49.2% and 47.1% respectively, with regional health offices taking the remainder (Table 1). At

2026 package volumes the primary tier costs approximately **US$129 million, or US$7.68 per capita** — roughly 1.3% of GDP per capita, and more than double the 2020 per capita value of US$3.63. The international comparators frame the number: US$7.68 is more than double what low-income-country governments typically spend on primary health care (about US$3 per capita [2, 15]), yet less than a third of what low-income-country populations spend on PHC in total once out-of-pocket payment is included (about US$24 [2]) — definitions differ and are not strictly comparable, but the order of magnitude locates Somalia's requirement well inside what comparable populations already pay, a point completed by the demand-side companion paper [7]. The international comparators frame the number: US$7.68 is more than double what low-income-country governments typically spend on primary health care (about US$3 per capita [2, 15]) yet only a third of what low-income-country populations spend on PHC in total once out-of-pocket payment is included (about US$24 [2]) — definitions differ and are not strictly comparable, but the order of magnitude locates Somalia's requirement well inside what comparable populations already pay, a point taken up by the demand-side companion paper [7].

Table 1
Distribution of EPHS cost by delivery platform.

Platform	2020	2025	Direction
Community	3.7%	6.2%	▲
Primary health unit	8.0%	6.6%	▼
Health centre	37.4%	38.5%	▲
Primary care tier	**49.1%**	**51.3%**	▲
Referral HC / district hospital	26.7%	25.9%	▼
Regional hospital	22.5%	21.2%	▼
Hospital tier	**49.2%**	**47.1%**	▼
Regional health office	1.8%	1.5%	▼

The package is therefore nominally primary-care-oriented, and marginally more so over time. But a 51:47 split is a narrow margin, achieved by a 2.5-percentage-point shift over five years, and — as the platform economics below show — it is not the same thing as a primary care system operating at scale.

3.2 Four platforms, four economies

Disaggregating the tier reveals that its components behave in fundamentally different ways (Table 2, Fig. 1).

Table 2
Platform economics: workforce growth and quasi-fixed cost share.

Platform	Workforce cost 2020 (US m)| 2029(USm)	Growth	Quasi-fixed share 2020	2029	
Community	3.0	19.3	×6.5	77%	78%
Primary health unit	4.6	5.7	×1.2	71%	13%
Health centre	9.8	20.5	×2.1	39%	13%
Referral HC / district hospital	13.6	32.0	×2.3	57%	29%
Regional hospital	16.3	33.8	×2.1	72%	39%

Quasi-fixed = human resources plus infrastructure as a share of platform cost. Facility-expansion scenario.

Figure 1. **Platform cost shares and the growth of the platform wage bill.**

The community platform is a wage bill. It is 77–78% workforce cost at both ends of the period — community health work is labour with minimal commodity or infrastructure content — and its cost grows six-and-a-half-fold as the costed programme trains 2,000 community health workers annually. Its unit cost does not fall with utilisation, because there is no fixed platform to spread. Financing the community platform is, definitionally, financing its workers.

The PHU is pre-positioned, under-used capacity. It is the only platform whose share of package cost *falls*, from 8.0% to 6.6%. Its wage base grows just 1.2-fold, against 2.1-fold at health centres and 2.3-fold at district hospitals — the network is already staffed to standard. And its quasi-fixed share collapses from 71% to 13%: at baseline volumes, seven of every ten dollars spent at a PHU are the standing cost of having the unit open; by endline volumes, just over one in ten. That is the arithmetic signature of a facility network whose costs are being incurred and whose capacity is not being used.

Health centres carry the package and the same dynamic, less acutely. At 38.5% of cost they are the single largest platform in the system. Their quasi-fixed share falls from 39% to 13%, and their wage bill doubles — capacity growing alongside utilisation rather than waiting for it.

Hospitals retain high fixed costs throughout. Regional hospitals fall only from 72% to 39% quasi-fixed, consistent with specialist staffing that does not dilute with volume. Their costs are the least responsive to utilisation in either direction.

3.3 The implication: the cheapest primary care expansion is utilisation

These platform economics carry a direct financing implication. The marginal cost of additional primary care coverage differs by an order of magnitude depending on where it is delivered.

At PHUs, the standing cost is already being paid; additional patients require mainly the commodities they consume, which is why the quasi-fixed share falls so steeply as volume grows. At health centres the same holds in milder form. At the community platform, by contrast, additional coverage requires additional workers at close to proportional cost, and at hospitals it requires the most expensive capacity in the system.

The facility-expansion scenarios price the alternative to utilisation: expanding the PHU and health centre network to population norms costs an additional US$43.6 million in 2026, rising to US$154.2 million by 2030 — a 31% premium on the endline package [6, 9]. That premium buys proximity for populations the current network does not reach, and it is a real need in a country with Somalia's settlement geography. But it is a different intervention from filling the units that already exist, and the costing shows the second is far cheaper than the first.

3.4 What the contraction does to each platform

Under a financing contraction that halves the available envelope [5], the platform structure determines who absorbs the loss (Table 3).

Table 3
Platform exposure under financing contraction.

Platform	Cost structure	Exposure under contraction
Community	Almost pure wage bill	**Highest.** Cuts fall directly on workers; no fixed capacity to protect, no commodity line to trim first
Primary health unit	Standing capacity, low utilisation	**Waste risk.** Standing cost continues to be incurred while the utilisation that would justify it is forgone
Health centre	Mixed, largest absolute share	Moderate; commodity line absorbs first, then staffing
Hospital tier	High fixed specialist staffing	**Most protected in practice** — fixed costs are hardest to cut, so pro-rata reductions bite least here

The last row deserves emphasis, because it is counter-intuitive and consequential. A uniform proportional budget reduction does not fall uniformly. It falls hardest where costs are variable and least where they are fixed — which means an unmanaged contraction quietly *de-prioritises* primary care in favour of the hospital tier, reversing the sector's stated orientation without any decision being taken to that effect.

4. Discussion

The primary care share is a weak indicator on its own. Somalia's package meets a superficial test of primary care orientation — just over half of cost in the primary tier — while containing a PHU network operating far below capacity and a community platform whose entire cost is wages. Two systems with identical primary care shares can face entirely different financing problems. Platform-level costing, which national costings usually compute but rarely publish, is what distinguishes them.

Idle capacity is the most actionable finding. A PHU quasi-fixed share of 71% at baseline volumes means the sector is already paying for units that are not being used. The binding constraint at these facilities is not supply-side capacity but the demand that would fill it — a constraint that lies substantially outside the costing model, in price, distance, quality perception and the household financial consequences of seeking care [7, 10]. The supply-side conclusion is therefore an argument for demand-side attention: the cheapest coverage gain available to Somalia is not a new facility but a used one.

Provider payment design follows from the platform economics. The Commission's central payment recommendation for PHC is a blended model with capitation at its core [2]. The platform findings refine that prescription for a fragile setting: capitation fits the PHU and health-centre platforms, but only with explicit volume re-basing, because their unit costs fall steeply as utilisation grows and rates set at today's averages will overpay at scale [14]; the community platform, being a wage, is better financed through salary-style contracts than through per-capita rates it cannot respond to; and hospital platforms, whose costs are fixed specialist staffing, fit global budgets with activity corridors. In substance this is a two-part tariff — finance the platform explicitly, pay for volume at marginal cost — differentiated by tier, and it is implementable only through a purchaser that contracts across platforms, which returns the argument to the pooled financing agenda.

The political economy of contraction cuts against primary care, and must be countered by rule rather than discretion. Fixed costs have constituencies: hospital payrolls are urban, visible and organised, while an under-used rural PHU and the utilisation it forgoes have none. Combined with the mechanical result that uniform cuts fall hardest on variable-cost platforms, the sector's stated primary-care orientation will not survive an unmanaged contraction on goodwill. Protection needs to be structural — a floor share for the primary tier written into the pooled mechanism's allocation formula, of the needs-based per-capita kind the Commission recommends [2] — so that the default under austerity is the plan, not the path of least resistance.

The community platform requires a financing decision, not a default. Its six-and-a-half-fold wage-bill growth, its pure-labour structure and its front-line role make its financing modality effectively its institutional design [11]. Twenty thousand community health workers trained over a decade will be either a government workforce or a projectised one, and international experience suggests the window for that choice closes early.

Contraction management should be explicit about platform incidence. Because uniform cuts fall hardest on variable-cost platforms, protecting the primary care orientation under contraction requires

deliberate protection — not neutrality. This connects to the broader finding that pro-rata austerity is the most expensive available response to a financing shock [9].

Research agenda. Three measurements would convert this analysis's strongest inference into observation. Routine facility-level utilisation data (HMIS/DHIS2) set against the staffing standards would measure, rather than infer from cost structure, how far below capacity the PHU network operates and where. A facility-sample unit-cost study would test the costing's platform standards against observed expenditure — the fragile-states literature identifies exactly this evidence as missing [4, 16]. And the demand-side agenda of the companion paper — a first National Health Accounts study and the out-of-pocket composition analysis — would establish what households currently pay at each platform, completing the two-sided account this pair of papers begins [7].

Limitations. Five. The costing is normative — it prices platform standards, not observed facility expenditure, and real utilisation and unit costs will differ. Platform decomposition is published for the expansion scenario only. The quasi-fixed/variable split follows the costing's own logic; some workforce cost is variable at the margin, which would flatten the utilisation gradients without eliminating them. Regional and security-related cost variation is not captured at platform level. And the GDP comparison is order-of-magnitude only, derived from a reported expenditure ratio rather than national accounts.

5. Conclusion

Somalia's essential package places just over half its cost in the primary care tier, at approximately US$7.68 per capita in 2026 — a doubling in per capita terms since 2020 and a plausible level for a package of its scope. Beneath that aggregate sit four different economies: a community platform that is almost entirely wages and growing sixfold; a PHU network staffed, equipped and substantially unused; health centres carrying the largest share of the system; and a hospital tier whose fixed costs make it the most protected under contraction. The policy consequences follow from the disaggregation, not the aggregate: fill the units before building more, decide the community workforce's financing modality deliberately, and recognise that an unmanaged contraction shifts resources towards hospitals whatever the sector's stated priorities.

Declarations

Contributors. KMM conceived and designed the study, conducted the analysis, and wrote and revised the manuscript. KMM is the guarantor.

Competing interests.

The author serves as Health Financing Specialist at the Ministry of Health and Human Services, Federal Government of Somalia, leading the Health Economics and Financing Office.

Ethics approval.

Not required: analysis of a government costing model and published aggregate expenditure data; no human participants.

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Author Contribution

KMM conceived and designed the study, conducted the analysis, and wrote and revised the manuscript. KMM is the guarantor.

Data availability.

Extracted platform cost series are available in the series supplementary files; the underlying costing workbooks are held by the Ministry and available on reasonable request.

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Figures

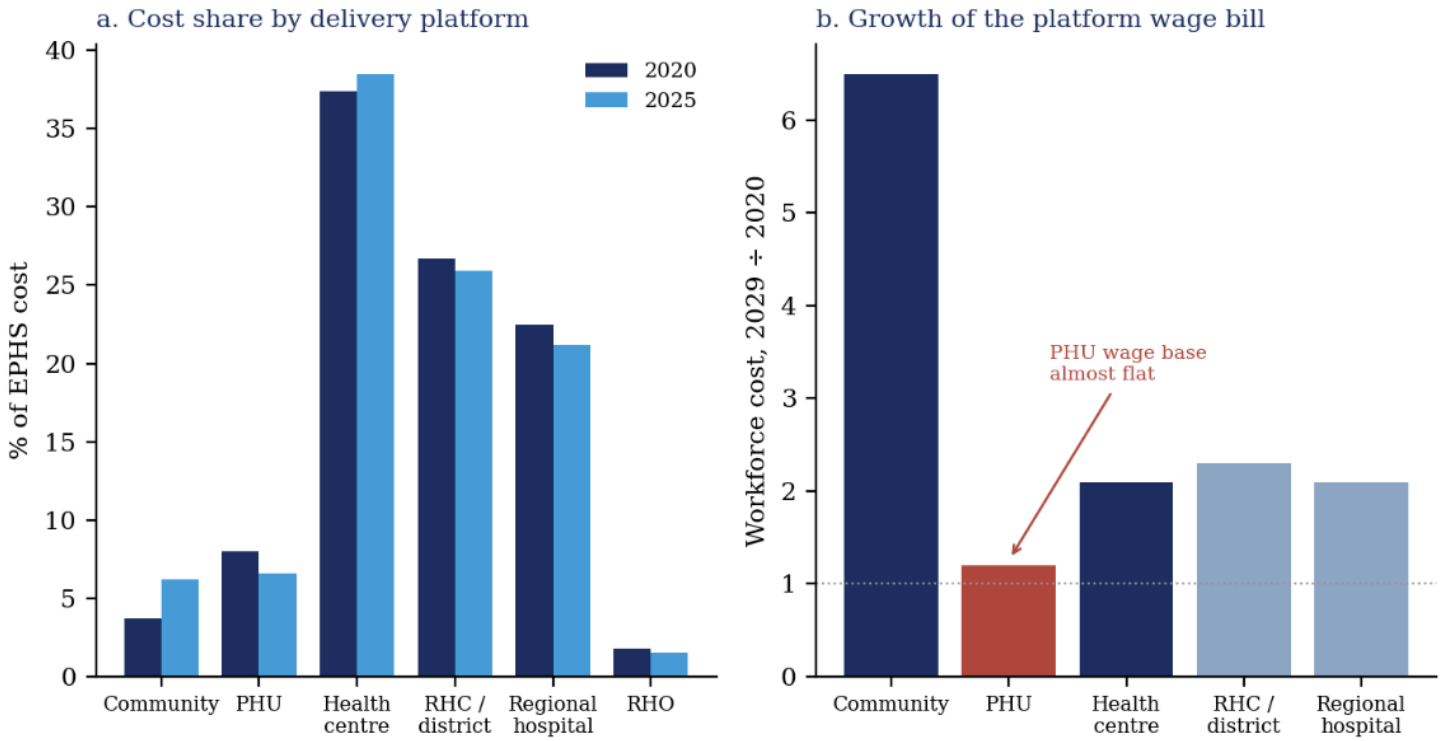


Figure 1

Platform cost shares and the growth of the platform wage bill.