

# POPULATION DATA DECISION GUIDE FOR MALAWI'S HEALTH SECTOR

Population and Development Unit (PDU) | March 2026



## PURPOSE:

This guide supports the use of demographic data for annual and multi-year planning, developing sector and programme budgets, and identifying policy priorities. **Uses include:** Medium-Term Expenditure Framework (METF) proposals, Public Sector Investment Programme (PSIP) submissions, Annual Work Plans (AWPs), District Development Plans (DDPs), Health Sector Strategic Plan (HSSP) reviews, Budget justification to MoFEPD, MW2063 monitoring, and demographic dividend policy briefs. It is a living document updated based on user feedback, new data sources, and evolving planning needs. Please share revision suggestions with the PDU.

## HOW TO USE THIS GUIDE:

Navigate through the planning questions to find those most relevant to you. Follow across the row to find the indicator to measure, how to analyse it, what it means, where to get data, and which tools to use for deeper analysis.

PLANNING QUESTION	DEMOGRAPHIC INDICATOR	REQUIRED ANALYSIS	INTERPRETATION	DATA	ANALYSIS TOOLS
What do I need to know?	What to measure?	How to analyse it?	What does it mean?	Where to get data	What to use
Are women having the number of children they desire?	<ul style="list-style-type: none"> <li>Planning status of births/pregnancies</li> <li>Wanted fertility rate (WFR)</li> <li>Total fertility rate (TFR)</li> </ul>	Compare TFR vs. WFR to calculate the unwanted fertility rate $Gap = TFR - WFR$	TFR above the wanted fertility rate indicates excess fertility and unmet need for family planning.	<ul style="list-style-type: none"> <li>DHS</li> </ul>	<ul style="list-style-type: none"> <li>Spectrum / FamPlan</li> </ul>
Are rates of adolescent pregnancy high?	<ul style="list-style-type: none"> <li>Age-specific fertility rate for women 15–19 (ASFR 15–19)</li> </ul>	No calculation required - compare directly to benchmarks.	ASFR 15–19 above ~60 births per 1,000 is high and above ~100 very high, indicating early childbearing and elevated maternal and neonatal risks.	<ul style="list-style-type: none"> <li>DHS</li> </ul>	
Is the unmet need for family planning high?	<ul style="list-style-type: none"> <li>Unmet need for family planning (% women wanting to avoid pregnancy not using contraception)</li> </ul>	No calculation required - compare to benchmark.	Unmet need above ~20% indicates substantial demand for contraception among women wishing to avoid pregnancy.	<ul style="list-style-type: none"> <li>DHS</li> <li>FP2030 / Track20</li> </ul>	
Are levels of infant and child mortality high?	<ul style="list-style-type: none"> <li>Infant mortality rate (IMR)</li> <li>Under-5 mortality rate (U5MR)</li> </ul>	Compare to WHO/SDG benchmarks and trend over time.	IMR above ~40 and U5MR above ~75 deaths per 1,000 live births indicate high preventable child mortality.	<ul style="list-style-type: none"> <li>DHS</li> <li>MICS</li> </ul>	<ul style="list-style-type: none"> <li>LiST (Spectrum)</li> </ul>




<b>PLANNING QUESTION</b> What do I need to know?	<b>DEMOGRAPHIC INDICATOR</b> What to measure?	<b>REQUIRED ANALYSIS</b> How to analyse it?	<b>INTERPRETATION</b> What does it mean?	<b>DATA</b> Where to get data	<b>ANALYSIS TOOLS</b> What to use
<b>Are women accessing the antenatal care they need?</b>	<ul style="list-style-type: none"> <li>ANC4+ coverage (% women with ≥4 antenatal visits from skilled provider)</li> <li>ANC1 coverage for comparison</li> </ul>	Track ANC1→ANC4 dropout rate. Gap = ANC1 – ANC4+ coverage.	ANC4+ coverage below ~60–70% indicates inadequate continuity of maternal care; large ANC1–ANC4 gaps suggest access or quality barriers.	<ul style="list-style-type: none"> <li>DHS</li> <li>MICS</li> <li>DHIS2</li> </ul>	
<b>Are women accessing the delivery care they need?</b>	<ul style="list-style-type: none"> <li>Institutional delivery rate</li> <li>Skilled birth attendance (SBA) rate</li> </ul>	Compare to HSSP targets and SDG 3.1 benchmarks.	Institutional delivery or skilled birth attendance below ~80–90% indicates gaps in safe delivery care. Does not necessarily measure quality of care.	<ul style="list-style-type: none"> <li>DHS</li> <li>MICS</li> <li>DHIS2</li> </ul>	<ul style="list-style-type: none"> <li>LiST (Spectrum)</li> </ul>
<b>Are women accessing the postnatal care they need?</b>	<ul style="list-style-type: none"> <li>PNC coverage within 48 hours of delivery (PNC 48hr rate)</li> </ul>	Compare to the WHO benchmark. Track trends from DHS rounds.	PNC within 48 hours below ~70–80% indicates missed detection of early maternal and newborn complications.	<ul style="list-style-type: none"> <li>DHS</li> <li>DHIS2</li> <li>MICS</li> </ul>	
<b>Are immunisation coverage rates adequate to protect children?</b>	<ul style="list-style-type: none"> <li>DPT3 coverage rate</li> <li>Measles/MCV2 coverage rate</li> </ul>	Compare to WHO 95% herd immunity threshold. Map gaps by region.	Coverage below the ~95% herd immunity threshold indicates risk of vaccine-preventable disease outbreaks.	<ul style="list-style-type: none"> <li>DHS</li> <li>DHIS2</li> <li>MICS</li> </ul>	<ul style="list-style-type: none"> <li>DHIS2 dashboards</li> </ul>
<b>Is child malnutrition and stunting prevalence declining?</b>	<ul style="list-style-type: none"> <li>Stunting rate (HAZ &lt; -2 SD) for children under 5</li> <li>Wasting rate (WHZ &lt; -2 SD)</li> <li>MUAC for acute malnutrition screening</li> </ul>	Track trend across DHS/MICS rounds. Disaggregate by region, wealth, and age.	Stunting above ~30% (high) or ~40% (very high) indicates chronic undernutrition; wasting above ~5% indicates acute malnutrition (≥10% serious), while MUAC <125 mm indicates acute malnutrition requiring treatment.	<ul style="list-style-type: none"> <li>DHS</li> <li>MICS</li> <li>DHIS2</li> <li>SMART surveys</li> </ul>	
<b>Are current human resources for health per population ratios adequate?</b>	<ul style="list-style-type: none"> <li>Health worker density per 10,000 population – by cadre:                             <ol style="list-style-type: none"> <li>Clinical officers &amp; medical assistants</li> <li>Nurses &amp; midwives</li> <li>Health Surveillance Assistants (HSAs)</li> </ol> </li> </ul>	Compare current density to WHO minimum thresholds. Calculate shortfall per cadre.	Health worker density below ~44.5 doctors, nurses, and midwives per 10,000 population indicates insufficient workforce capacity.	<ul style="list-style-type: none"> <li>MoH HR data</li> <li>DHIS2</li> <li>HRH surveys</li> </ul>	<ul style="list-style-type: none"> <li>Workforce planning models</li> </ul>

<b>PLANNING QUESTION</b> What do I need to know?	<b>DEMOGRAPHIC INDICATOR</b> What to measure?	<b>REQUIRED ANALYSIS</b> How to analyse it?	<b>INTERPRETATION</b> What does it mean?	<b>DATA</b> Where to get data	<b>ANALYSIS TOOLS</b> What to use
<b>Are HIV prevalence and PMTCT coverage adequate?</b>	<ul style="list-style-type: none"> <li>HIV prevalence (adults 15–49)</li> <li>HIV incidence rate (15–49)</li> <li>PMTCT coverage (ART coverage among HIV+ pregnant women)</li> <li>95:95:95 cascade: diagnosed → on ART → virally suppressed</li> </ul>	Compare HIV prevalence against HSSP-III targets. Calculate gap to 95:95:95 targets. PMTCT gap = (HIV+ pregnant women) – (on ART for PMTCT)	Prevalence measures the share living with HIV, while incidence measures new infections; epidemic control requires declining incidence, ≥95% PMTCT coverage, and progress toward 95-95-95 targets.	<ul style="list-style-type: none"> <li>UNAIDS</li> <li>MoH HIV Programme</li> <li>DHS</li> <li>Spectrum</li> </ul>	<ul style="list-style-type: none"> <li>Spectrum / Goals Model</li> <li>AIM</li> </ul>
<b>Are malaria prevention and treatment services reaching all at-risk populations?</b>	<ul style="list-style-type: none"> <li>Malaria incidence rate (cases per 1,000 population at risk)</li> <li>ITN (insecticide-treated net) coverage &amp; use</li> <li>IPTp coverage (3+ doses in pregnancy)</li> <li>Malaria mortality rate per 100,000</li> </ul>	Compare incidence trend against HSSP-III targets. ITN gap = 91% target – current 76.8% (MDHS 2024) IPTp gap = eligible pregnant women receiving 3+ doses vs. 60% target	Incidence above ~100 cases per 1,000 indicates high transmission; ITN coverage/use below ~80–90% or IPTp below ~60–80% indicates prevention gaps.	<ul style="list-style-type: none"> <li>NMCP</li> <li>DHIS2</li> <li>DHS</li> <li>WHO World Malaria Report</li> </ul>	<ul style="list-style-type: none"> <li>DemProj</li> <li>Spectrum malaria module</li> </ul>
<b>Are health facilities meeting minimum quality standards?</b>	<ul style="list-style-type: none"> <li>% facilities meeting minimum quality standards (COHSASA or national framework)</li> <li>% facilities providing full EmONC signal functions</li> <li>Tracer medicine stock-out rates</li> <li>Client satisfaction rate (treatment, staff, medicines)</li> </ul>	Benchmark against HSSP-III quality scorecard. EmONC minimum: 5 BEmONC + 1 CEmONC per 500,000 population (WHO) Map quality scores to mortality outcomes to identify the highest-leverage facilities	Quality gaps exist when <80–90% of facilities meet standards, tracer medicine stock-outs exceed ~10%, or client satisfaction falls below ~80%.	<ul style="list-style-type: none"> <li>MoH Annual Reports</li> <li>DHIS2</li> <li>COHSASA</li> <li>EmONC assessments</li> </ul>	<ul style="list-style-type: none"> <li>SARA</li> <li>Quality improvement scorecards</li> </ul>
<b>Are women and communities able to access services without financial or geographic barriers?</b>	<ul style="list-style-type: none"> <li>% women citing distance as a barrier to care</li> <li>% women citing cost as a barrier to care</li> <li>Out-of-pocket expenditure as % of total health expenditure</li> <li>% population within 5km of a health facility</li> </ul>	Map geographic access gaps using facility location + population density data. OOP threshold: >10% of household consumption = catastrophic health expenditure Compare access barriers by wealth quintile and rural/urban	Access barriers are high when OOP spending exceeds ~10% of household consumption, large shares report cost/distance barriers, or populations live >5 km from facilities..	<ul style="list-style-type: none"> <li>DHS</li> <li>MoH facility mapping</li> <li>DHIS2</li> <li>National Health Accounts</li> </ul>	<ul style="list-style-type: none"> <li>GIS facility mapping tools</li> <li>HealthSites.io</li> </ul>

PLANNING QUESTION	DEMOGRAPHIC INDICATOR	REQUIRED ANALYSIS	INTERPRETATION	DATA	ANALYSIS TOOLS
What do I need to know?	What to measure?	How to analyse it?	What does it mean?	Where to get data	What to use
<p><b>Is the health sector adequately and sustainably financed?</b></p>	<ul style="list-style-type: none"> <li>Government health expenditure as % of total government budget (Abuja target: 15%)</li> <li>Per capita government health expenditure (USD)</li> <li>Total health expenditure: government vs. donor vs. OOP shares</li> <li>HSSP-III annual funding gap</li> </ul>	<p>Calculate Abuja gap: 15% target – actual % of national budget allocated to health. HSSP-III funding gap = estimated annual need (USD 4B) – available resources (~USD 690M) Domestic resource mobilisation scenario: every 1% increase in health budget allocation = approx. USD X million additional</p>	<p>Health spending below the Abuja target of 15% of the national budget or low per-capita spending (&lt;~US\$86–100) indicates underinvestment.</p>	<ul style="list-style-type: none"> <li>MoH National Health Accounts</li> <li>World Bank</li> <li>Global Health Expenditure Database</li> </ul>	<ul style="list-style-type: none"> <li>OneHealth Tool</li> <li>National Health Accounts framework</li> </ul>
<p><b>Are TB detection and treatment rates adequate?</b></p>	<ul style="list-style-type: none"> <li>TB incidence rate (per 100,000 population)</li> <li>TB notification rate (case detection proxy)</li> <li>TB treatment success rate</li> <li>TB/HIV co-infection rate and co-treatment coverage</li> </ul>	<p>Detection gap = estimated incidence – notified cases Treatment success benchmark: WHO target ≥ 85% Compare against HSSP-III 2030 target: 36 per 100,000</p>	<p>Large gaps between TB incidence and notification indicate under-detection; treatment success below ≥85% signals programme weaknesses.</p>	<ul style="list-style-type: none"> <li>NTCP</li> <li>DHIS2</li> <li>WHO Global TB Report</li> <li>UNAIDS</li> </ul>	<ul style="list-style-type: none"> <li>Spectrum / AIM</li> <li>TB costing tools</li> </ul>
<p><b>How will service demand evolve in 5–10 years?</b></p>					
<p><b>What is the projected population growth rate over the next 5–10 years?</b></p>	<ul style="list-style-type: none"> <li>Total population projection</li> <li>Annual population growth rate</li> <li>Age-sex structure projections</li> </ul>	<p>5-year projection using DEMPROJ/Spectrum. Apply UN population growth model baseline.</p>	<p>Growth rates above ~2.5–3% annually indicate rapidly rising demand for health services, while large youth cohorts signal sustained pressure on maternal, child health, and education systems.</p>	<ul style="list-style-type: none"> <li>NSO projections</li> <li>DHS</li> </ul>	<ul style="list-style-type: none"> <li>Spectrum / DEMPROJ</li> </ul>
<p><b>How many births are projected nationally over the next 5–10 years?</b></p>	<ul style="list-style-type: none"> <li>Expected annual births</li> <li>Total fertility rate (TFR)</li> <li>Women aged 15–49 / Women of reproductive age (WRA)</li> </ul>	<p>5-year projection by region. Births = (Women 15–49) × (age-specific fertility rates) Model three scenarios: high, medium, low fertility</p>	<p>High fertility (TFR ≥4) and large populations of women aged 15–49 produce large birth cohorts and sustained maternal and child health demand.</p>	<ul style="list-style-type: none"> <li>NSO projections</li> <li>DHS</li> <li>MICS</li> <li>DHIS2</li> </ul>	<ul style="list-style-type: none"> <li>Spectrum / DEMPROJ</li> <li>Rapid SDG Model</li> </ul>
<p><b>How will maternal service demand change over the next 5–10 years?</b></p>	<ul style="list-style-type: none"> <li>Projected annual births</li> <li>Current ANC4+ coverage</li> <li>Current institutional delivery rate</li> <li>Current MMR</li> </ul>	<p>Project service contacts needed: births × coverage rate × visits per episode Calculate required facility capacity and skilled attendants under high/medium/low fertility scenarios</p>	<p>Large birth cohorts combined with moderate service coverage indicate rising demand for ANC, delivery, and emergency obstetric care.</p>	<ul style="list-style-type: none"> <li>NSO</li> <li>DHS</li> <li>DHIS2</li> <li>HSSP targets</li> </ul>	<ul style="list-style-type: none"> <li>LiST (Spectrum)</li> <li>Rapid SDG Model</li> </ul>

<b>PLANNING QUESTION</b> What do I need to know?	<b>DEMOGRAPHIC INDICATOR</b> What to measure?	<b>REQUIRED ANALYSIS</b> How to analyse it?	<b>INTERPRETATION</b> What does it mean?	<b>DATA</b> Where to get data	<b>ANALYSIS TOOLS</b> What to use
<b>How will family planning service demand change over the next 5–10 years?</b>	<ul style="list-style-type: none"> <li>Women aged 15–49 (WRA) projections</li> <li>Current CPR</li> <li>Unmet need for FP</li> </ul>	Project total demand: $WRA \times (CPR \text{ target} + \text{unmet need})$  Calculate commodity volumes and service delivery points needed to reach FP2030 targets	Low contraceptive prevalence (<30–40%) and unmet need above ~15–20% indicate substantial unmet demand for family planning.	<ul style="list-style-type: none"> <li>DHS</li> <li>FP2030 / Track20</li> <li>NSO projections</li> </ul>	<ul style="list-style-type: none"> <li>FamPlan (Spectrum)</li> <li>Track20 tools</li> </ul>
<b>How will immunisation service demand change over the next 5–10 years?</b>	<ul style="list-style-type: none"> <li>Projected births (= target cohort for EPI)</li> <li>Current DPT3/MCV2 coverage</li> <li>Dropout rates</li> </ul>	Immunisation demand $\approx$ projected births $\times$ target coverage rate  Add dropout correction factor  Map demand by district using DHIS2 + NSO projections	Growing birth cohorts increase demand for vaccines, cold chain capacity, and immunisation staff.	<ul style="list-style-type: none"> <li>NSO</li> <li>DHIS2</li> <li>DHS</li> </ul>	<ul style="list-style-type: none"> <li>Spectrum / DemProj</li> <li>DHIS2 dashboards</li> </ul>
<b>How will child nutrition and paediatric care needs change over the next 5–10 years?</b>	<ul style="list-style-type: none"> <li>Under-5 population projections</li> <li>Current stunting/wasting prevalence</li> <li>Child nutrition programme coverage</li> </ul>	Project total U5 population over 5–10 years  Apply current stunting/wasting rates to estimate caseloads  Model the impact of improved coverage on stunting reduction	Growth in the under-five population combined with high malnutrition prevalence indicates increasing paediatric and nutrition caseloads.	<ul style="list-style-type: none"> <li>NSO</li> <li>DHS</li> <li>MICS</li> <li>SMART surveys</li> </ul>	<ul style="list-style-type: none"> <li>LIST (Spectrum)</li> <li>Rapid SDG Model</li> </ul>
<b>How will the NCD burden and demand for chronic disease services change over the next 5–10 years?</b>	<ul style="list-style-type: none"> <li>NCD mortality rate (CV disease, diabetes, cancer, chronic respiratory)</li> <li>NCD prevalence trends by age group</li> <li>Current NCD service capacity (% facilities equipped for NCD care)</li> </ul>	Project NCD burden using the demographic transition model.  NCD incidence grows with population ageing, urbanisation, and rising obesity/hypertension - apply differential rates  Model required outpatient and inpatient NCD capacity under high/medium scenarios	NCD mortality above ~60–70% of total deaths indicates rising demand for chronic disease prevention and care.	<ul style="list-style-type: none"> <li>IHME GBD</li> <li>DHIS2</li> <li>MoH NCD Programme</li> <li>WHO STEPwise Survey 2017</li> </ul>	<ul style="list-style-type: none"> <li>DemProj</li> <li>GBD projections</li> <li>OneHealth Tool</li> </ul>
<b>How will urbanisation and geographic population shifts affect facility demand by location?</b>	<ul style="list-style-type: none"> <li>Urban population growth rate vs. rural</li> <li>Projected urban population by district in 2030</li> <li>Current health facility distribution by urban vs. peri-urban vs. rural</li> <li>Peri-urban facility utilisation rates and overcrowding indicators</li> </ul>	Apply differential growth rates: urban 4.2%/year vs. rural ~1.8%/year.  Map projected population density against facility catchment areas using GIS.  Identify the 10 districts with fastest urban growth for infrastructure prioritisation	Urban population growth above ~3–4% annually indicates increasing pressure on urban health facilities.	<ul style="list-style-type: none"> <li>NSO census</li> <li>World Bank urbanisation data</li> <li>MoH facility database</li> <li>HSSP-III CIP</li> </ul>	<ul style="list-style-type: none"> <li>GIS population projection tools</li> <li>DemProj (urban/rural split)</li> <li>HealthSites.io</li> </ul>

PLANNING QUESTION	DEMOGRAPHIC INDICATOR	REQUIRED ANALYSIS	INTERPRETATION	DATA	ANALYSIS TOOLS
What do I need to know?	What to measure?	How to analyse it?	What does it mean?	Where to get data	What to use
<p><b>How will demand for HIV treatment and care services evolve over the next 5–10 years?</b></p>	<ul style="list-style-type: none"> <li>• Number of PLHIV currently on ART</li> <li>• Annual new HIV infections (incidence trend)</li> <li>• ART attrition rate (loss to follow-up)</li> <li>• Projected PLHIV requiring ART by 2030</li> </ul>	<p>Use Spectrum/AIM to project PLHIV cohort.</p> <p>ART demand = current PLHIV on ART + new cases – deaths on ART – loss to follow-up</p> <p>Model three scenarios: current trajectory, accelerated prevention; and donor financing reduction</p>	<p>High HIV prevalence (&gt;5% in adults 15–49) or stable numbers of people living with HIV imply sustained long-term demand for ART services even if incidence declines.</p>	<ul style="list-style-type: none"> <li>• UNAIDS</li> <li>• Spectrum / AIM</li> <li>• MoH HIV Programme</li> <li>• PEPFAR data</li> </ul>	<ul style="list-style-type: none"> <li>• Spectrum / AIM</li> <li>• Goals Model</li> <li>• PEPFAR planning tools</li> </ul>
<p><b>How many health workers will we need?</b></p>					
<p><b>What national workforce is needed to maintain adequate health worker-to-population ratios?</b></p>	<ul style="list-style-type: none"> <li>• Total pop projection</li> <li>• Pop growth rate</li> <li>• Current health worker density by cadre:                             <ol style="list-style-type: none"> <li>1) Clinical officers &amp; medical assistants</li> <li>2) Nurses &amp; midwives</li> <li>3) HSAs / community health workers</li> </ol> </li> </ul>	<p>Project population over 10 years.</p> <p>Apply WHO norms (23/10,000 minimum).</p> <p>Gap = (required staff) – (current staff) – (projected attrition)</p>	<p>Health worker densities below the SDG benchmark of ~44.5 doctors, nurses, and midwives per 10,000 population indicate major workforce shortages relative to population service needs.</p>	<ul style="list-style-type: none"> <li>• NSO projections</li> <li>• MoH HR data</li> <li>• DHIS2</li> </ul>	<ul style="list-style-type: none"> <li>• DEMPROJ</li> <li>• Workforce planning models</li> </ul>
<p><b>How many additional primary health facilities will be needed to serve projected population growth?</b></p>	<ul style="list-style-type: none"> <li>• Total population projection by district</li> <li>• Current facility-to-population ratio</li> <li>• Current catchment population per facility</li> </ul>	<p>Apply Malawi standard: 1 health centre per ~10,000 population.</p> <p>Gap = (projected pop ÷ standard ratio) – existing facilities</p> <p>Prioritise districts with highest projected growth</p>	<p>Catchment populations above ~10,000 per primary health facility typically indicate overcrowded services and reduced geographic access, suggesting the need for additional facilities.</p>	<ul style="list-style-type: none"> <li>• NSO projections</li> <li>• DHIS2</li> <li>• MoH infrastructure data</li> </ul>	<ul style="list-style-type: none"> <li>• GIS mapping tools (QGIS / ArcGIS)</li> </ul>
<p><b>Is the health worker training pipeline sufficient to meet projected demand?</b></p>	<ul style="list-style-type: none"> <li>• Annual graduates by cadre (nurses, COs, HSAs, etc.)</li> <li>• Training institution capacity and intake</li> <li>• Time-to-deployment lag</li> <li>• Attrition rate by cadre</li> </ul>	<p>Pipeline gap = projected workforce need – (current workforce + graduates – attrition)</p> <p>Model training lead times: nursing = 3 years, CO = 4 years - workforce shortfalls identified today require training investments now</p> <p>Apply HSSP-III workforce optimisation model projections</p>	<p>Training output below projected workforce demand or attrition rates above ~5–10% annually indicate future staffing shortages due to long training lead times.</p>	<ul style="list-style-type: none"> <li>• MoH HRH Directorate</li> <li>• HRMIS</li> <li>• Training institution data</li> <li>• Graduate mapping exercise</li> </ul>	<ul style="list-style-type: none"> <li>• WISN (Workload Indicators of Staffing Need)</li> <li>• HRHAP (HRH Action Framework)</li> </ul>

PLANNING QUESTION	DEMOGRAPHIC INDICATOR	REQUIRED ANALYSIS	INTERPRETATION	DATA	ANALYSIS TOOLS
What do I need to know?	What to measure? 	How to analyse it? 	What does it mean? 	Where to get data 	What to use 
<b>Are community-level health workers (HSAs) deployed at sufficient density to reach all communities?</b>	<ul style="list-style-type: none"> <li>Number of Health Surveillance Assistants (HSAs) per 1,000 population</li> <li>HSA geographic coverage vs. village catchment maps</li> <li>HSA workload: number of households per HSA</li> <li>% of HSA posts vacant or unfilled</li> </ul>	<p>WHO recommended community health worker ratio: 1 per 1,000 population.</p> <p>Calculate HSA gap: (target population ÷ 1,000) – deployed HSAs by district</p> <p>Map underserved catchment areas using village population data</p>	<p>Community health worker densities below ~1 per 1,000 population or large household caseloads (&gt;150–200 households per worker) indicate insufficient community-level coverage.</p>	<ul style="list-style-type: none"> <li>MoH Community Health Strategy</li> <li>HRMIS</li> <li>HSA programme data</li> <li>DHIS2</li> </ul>	<ul style="list-style-type: none"> <li>WISN</li> <li>Community health worker planning tools</li> </ul>
<b>How many additional secondary health facilities will be needed to serve projected population growth?</b>	<ul style="list-style-type: none"> <li>District hospital catchment population projections</li> <li>Current inpatient bed-to-population ratios</li> <li>Referral patterns and case loads</li> </ul>	<p>Apply WHO benchmark: 1–3 beds per 1,000 population.</p> <p>Gap = (projected pop × benchmark) – current beds</p> <p>Model referral demand from primary facility expansion</p>	<p>Hospital bed-to-population ratios below ~1–3 beds per 1,000 population signal limited inpatient capacity and rising referral pressure on district hospitals.</p>	<ul style="list-style-type: none"> <li>NSO projections</li> <li>MoH facility data</li> <li>DHIS2</li> </ul>	<ul style="list-style-type: none"> <li>GIS mapping tools</li> </ul>
<b>How much will this cost?</b>					
<b>What investment is required to reach FP2030 contraceptive prevalence targets?</b>	<ul style="list-style-type: none"> <li>Women 15–49 (WRA)</li> <li>Current CPR</li> <li>Unmet need for FP</li> <li>Modern method mix</li> </ul>	<p>Project WRA over 5 years.</p> <p>Gap = (FP2030 target CPR) – (current CPR)</p> <p>Calculate commodity volumes by method mix.</p> <p>Apply unit costs: commodity + service delivery + programme costs</p>	<p>Large gaps between current CPR and FP2030 targets (often ≥10–20 percentage points) indicate major scale-up costs for commodities and services.</p>	<ul style="list-style-type: none"> <li>DHS</li> <li>MICS</li> <li>FP2030 / Track20</li> <li>NSO projections</li> </ul>	<ul style="list-style-type: none"> <li>FamPlan (Spectrum) Rapid SDG Model</li> <li>Track20 tools</li> </ul>
<b>What budget is needed to achieve maternal mortality reduction targets?</b>	<ul style="list-style-type: none"> <li>Expected births</li> <li>Maternal mortality ratio (MMR)</li> <li>Skilled birth attendance rate</li> <li>Current service coverage rates</li> </ul>	<p>Cost per safe delivery × projected births = baseline cost.</p> <p>Gap analysis: current coverage vs. HSSP target.</p> <p>Scenario modelling: budget required for 10%, 25%, 50% MMR reduction</p> <p>Apply LiST to estimate lives saved per investment level</p>	<p>MMR above ~300 deaths per 100,000 births combined with SBA below ~80–90% indicates significant investment needs in obstetric care.</p>	<ul style="list-style-type: none"> <li>DHS</li> <li>MICS</li> <li>DHIS2</li> <li>HSSP targets</li> </ul>	<ul style="list-style-type: none"> <li>LiST (Spectrum) Rapid SDG Model</li> </ul>

PLANNING QUESTION	DEMOGRAPHIC INDICATOR	REQUIRED ANALYSIS	INTERPRETATION	DATA	ANALYSIS TOOLS
What do I need to know?	What to measure?	How to analyse it?	What does it mean?	Where to get data	What to use
<b>What is the total HSSP-III funding gap, and what is Malawi's domestic resource mobilisation potential?</b>	<ul style="list-style-type: none"> <li>Total HSSP-III estimated cost (2023–2030)</li> <li>Available government + donor resources</li> <li>Funding gap by programme area</li> <li>Domestic revenue as % of GDP; health budget as % of national budget</li> </ul>	<p>Funding gap = HSSP-III total cost – (projected government spending + donor commitments)</p> <p>Calculate Abuja target gap: 15% of national budget to health – current allocation</p> <p>Model domestic resource mobilisation scenarios: 1%, 2%, 3% GDP growth in health allocation</p>	<p>Large differences between projected health costs and available financing indicate reliance on donor funding and need for domestic resource mobilisation.</p>	<ul style="list-style-type: none"> <li>HSSP-III costing documents</li> <li>MoH National Health Accounts</li> <li>World Bank</li> <li>IMF fiscal data</li> </ul>	<ul style="list-style-type: none"> <li>OneHealth Tool</li> <li>National Health Accounts</li> <li>Health Financing Simulation Models</li> </ul>
<b>What is the return on investment of increased contraceptive prevalence for economic growth?</b>	<ul style="list-style-type: none"> <li>TFR trajectory</li> <li>Contraceptive prevalence rate (CPR)</li> <li>Dependency ratio</li> <li>GDP per capita</li> </ul>	<p>Scenario comparison: model economic impacts of achieving vs. not achieving FP2030 targets.</p> <p>Calculate cost-benefit ratio: investment vs. reduced downstream health, education, and social protection expenditure</p> <p>Estimate the demographic dividend window and magnitude</p>	<p>Higher contraceptive use lowers fertility and dependency ratios (typically below ~60 dependents per 100 workers), supporting demographic dividend and economic growth.</p>	<ul style="list-style-type: none"> <li>DHS</li> <li>FP2030 data</li> <li>NSO economic data</li> <li>World Bank</li> </ul>	<ul style="list-style-type: none"> <li>Demographic Dividend Model</li> <li>Rapid SDG Model</li> <li>FamPlan (Spectrum)</li> </ul>

## For Technical Assistance and Support

Organisation	Contract & Role
Population and Development Unit	Ministry of Finance, Economic Planning and Development   [Contact: PDU email/phone]   Primary contact for all demographic data integration support
National Planning Commission (NPC)	[Contact: NPC focal point]   MW2063 implementation, sector coordination, long-term planning
National Statistical Office (NSO)	www.nsomalawi.mw   info@nsomalawi.mw   Official population projections, census data, surveys
WISH Dividend Policy & Systems Programme	[Contact: WISH P&S team]   Training, capacity building, technical assistance for demographic dividend

## Data sources directory

Data Source	What it provides	How to Access
National Statistical Office (NSO)	Census data, population projections, vital statistics, district profiles, official demographic baseline	<a href="http://www.nsomalawi.mw">www.nsomalawi.mw</a>   <a href="mailto:info@nsomalawi.mw">info@nsomalawi.mw</a>   PDU coordination
Demographic & Health Survey (DHS)	Fertility, mortality, FP, maternal/child health, nutrition, education, wealth indicators	<a href="http://www.dhsprogram.com">www.dhsprogram.com</a>   NSO
Multiple Indicator Cluster Survey (MICS)	Child health, education, WASH, social protection, disability, early childhood development	<a href="http://www.mics.unicef.org">www.mics.unicef.org</a>   UNICEF Malawi
FP2030 / Track20	Family planning indicators, contraceptive prevalence, unmet need, method mix, FP2030 commitments	<a href="http://www.fp2030.org">www.fp2030.org</a>   <a href="http://www.track20.org">www.track20.org</a>
DHIS2 (Health Management Information System)	Routine health facility data: service utilisation, coverage, commodity stock, workforce data	Ministry of Health HMIS Unit   DHIS2 Malawi portal
Integrated Household Survey (IHS)	Household characteristics, poverty, livelihoods, consumption, labour force, agriculture	NSO   <a href="http://microdata.worldbank.org">microdata.worldbank.org</a>
World Bank WDI	Development indicators, poverty, economic statistics, urbanisation, international comparisons	<a href="http://data.worldbank.org">data.worldbank.org</a>
UNFPA	Population data, demographic dividend studies, SRHR indicators, policy support	<a href="http://www.unfpa.org">www.unfpa.org</a>   UNFPA Malawi
Ministry Administrative Data	Sector-specific data: DHIS2 (health), HR records (MoH), infrastructure surveys, facility registers	Contact Ministry of Health planning unit   PDU coordination

## Demographic Models and Tools Reference

Data Source	What it provides	How to Access
DemProj (SpectrumM)	Population projections by age and sex; fertility/mortality impact modelling; multiple scenario analysis. Core tool for all demographic projections. PDU support available.	<a href="http://www.avenirhealth.org">www.avenirhealth.org</a>   PDU
FamPlan (Spectrum)	Family planning impact modelling; contraceptive commodity forecasting; FP2030 scenario testing; ROI analysis. Part of the Spectrum suite.	<a href="http://www.avenirhealth.org">www.avenirhealth.org</a>   PDU
LIST - Lives Saved Tool (Spectrum)	Health intervention impact modelling; maternal and child health outcomes; mortality reduction scenarios; budget-to-impact analysis.	<a href="http://www.avenirhealth.org">www.avenirhealth.org</a>   UNICEF
The SDG RAPID Model	Integrated population-development modelling; assess macro impacts of health, education, jobs investments; test policy scenarios for SDG/MW2063 outcomes. Excel-based, accessible for planners.	Pre-configured with Malawi baseline   PDU
Demographic Dividend Model	Economic impacts of demographic change; dividend window timing and magnitude; investment scenarios for capturing DD. Essential for MW2063 economic planning.	UNFPA Malawi   PDU
GIS Mapping Tools (QGIS / ArcGIS)	Spatial analysis of population distribution; district prioritisation; infrastructure planning; service coverage analysis.	NSO   MoH   Open-source (QGIS)