Ministry of Health

Malawi's Health Benefit Package (HBP) Policy

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Ministry of Health

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Context – Malawi's health sector (I)

Health Status in Malawi

Indicator	2010	2016
Total fertility rate	5.7	4.4
Maternal Mortality Ratio	675/100,000 lb*	574/100,000 lb
Neonatal Mortality Ratio	31/1,000 lb*	27/1,000 lb
% HIV prevalence Rate (ages 15-49)	10.6	
% children fully vaccinated	80.9	75.7
% HH with at least one ITN	56.8	58.9

* = 2011

lb = live births

Health Financing in Malawi

Highly resource constrained

- THE = US$670m (2014/15)
- Per capita THE = $39.2 (2014/15)

Highly Donor dependent

- Gov. expenditure as % of THE = 28.6% (2014/15)

Lack of risk pooling

- HH expenditure as % of THE = 10.9% (8.5% OOP) (2014/15)
- No NHIS schemes

Under spending on prevention

- Prevention expenditures = 28%
- Curative expenditures = 47%

Service Provision in Malawi

Decentralized three tiered health system

- Primary (Health Centre, Dispensary, Maternity unit, Community Hospital)
- Secondary (District Hospitals)
- Tertiary (Central Hospitals)

Service providers: 9,498 facilities

- Public (60%)
- CHAM (37%)
- Other (3%)

Government policy to have all Malawians within 8km of a health facility

- 76% 2016 down from 81% 2011

Malawi's HBP Policy – Theory (I)

- First HBP (Essential Health Package (EHP)) developed in 1999 and revised in 2004 and 2011
- EHP provided free at the point of access at **all** public facilities and CHAM facilities with public-private service level agreements (SLAs) in operation
  - User fees paid for all non-EHP interventions
  - No legal policy on provision of EHP, only MoH policy
- Health system strengthening geared around the delivery of the EHP
- Funded from general tax revenue and donor funds

Malawi's HBP Policy – Theory (II)

EHP definition based firstly on Burden of Disease

1. HIV/AIDS
2. ARI
3. Malaria
4. Diarrhoeal diseases
5. Perinatal conditions
6. NCDs including trauma (added 2011)
7. Tuberculosis
8. Malnutrition
9. Cancers (added 2011)
10. Vaccine preventable diseases
11. Mental illness and epilepsy (added 2011)
12. Neglected Tropical Diseases (added 2011)
13. Eye, ear and skin infections

Conditions were clustered under:

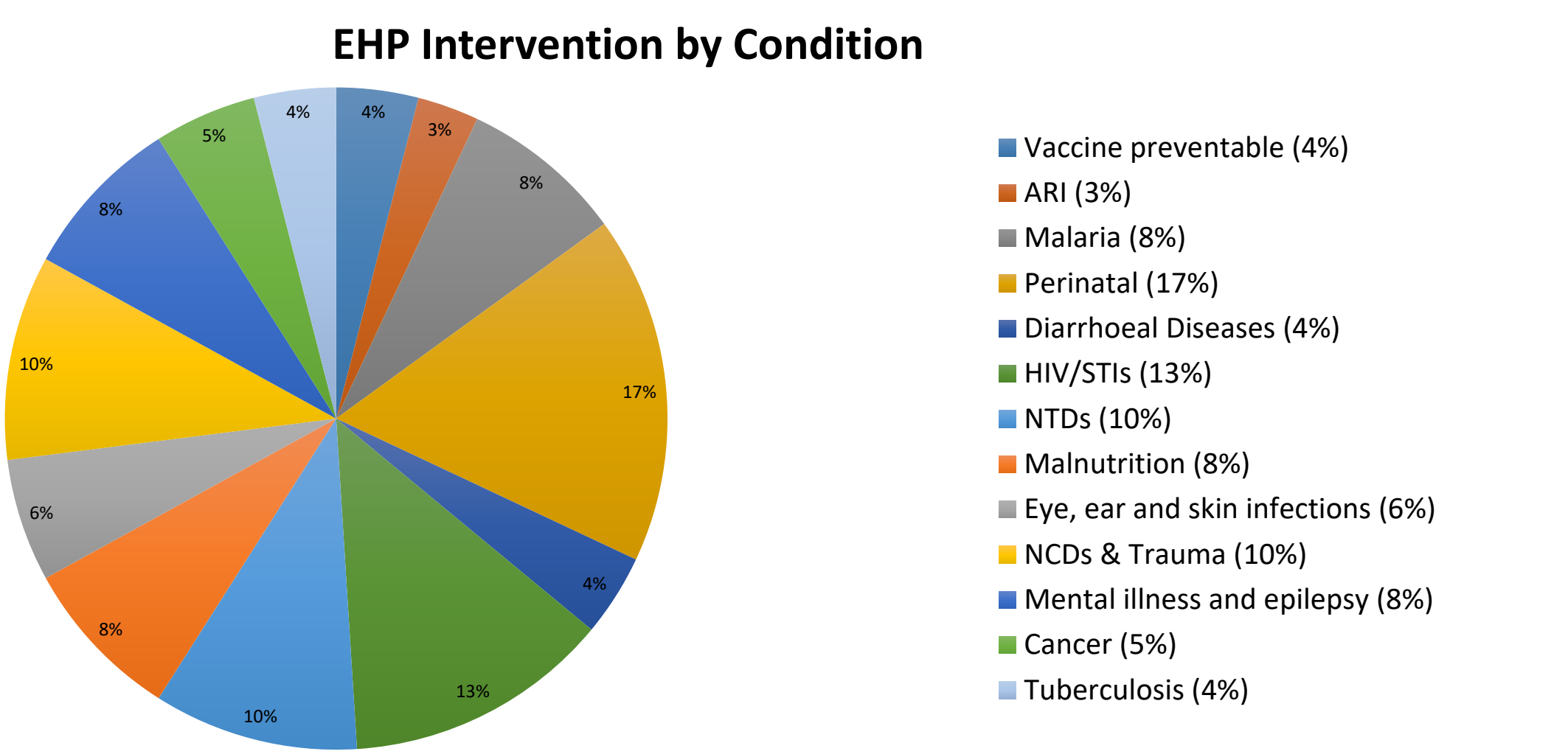
- Reproductive
- Maternal
- Neonatal and Child Health conditions
- Communicable Diseases
- Non Communicable Diseases

Also defined by level of care each service delivered at:

- Dispensary, Health Centre, District Hospital, Central Hospital

78 interventions

Malawi's HBP Policy – Theory (III)



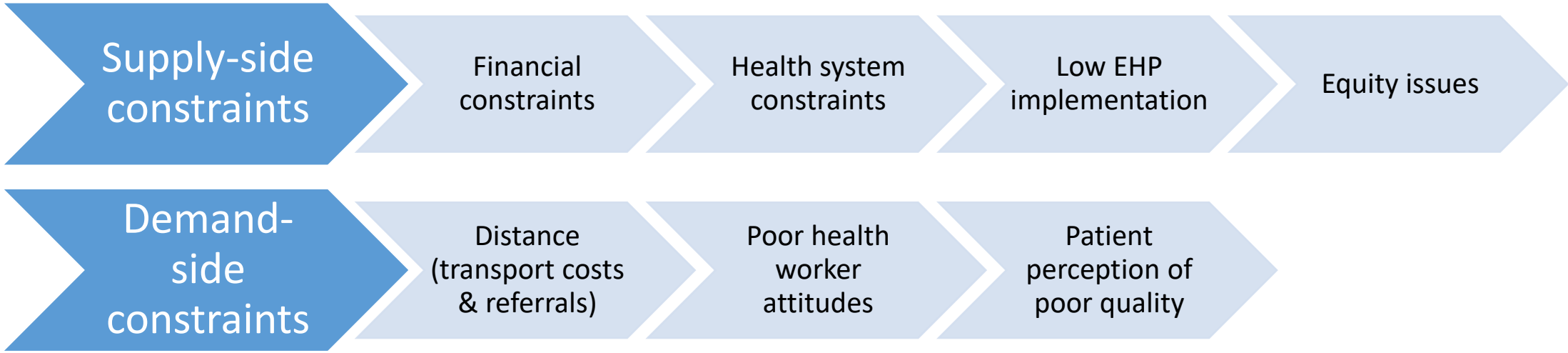
Malawi's HBP Policy – Theory (IV)

Following criteria used to define package within 13 conditions

1. Cost effectiveness
2. Access to the poor
3. MDG condition
4. Proven successful intervention – what is this
5. Discrete earmarked funding through bilateral agreements

Malawi's HBP Policy – Reality (I)

Both supply and demand issues with delivery



Malawi's HBP Policy – Reality (II) Supply-side constraints

1. Financial constraints:

- Cost of package > resources envelope
- Becoming more unachievable over time growth in costs has outstripped growth in resources

EHP	Year	EHP cost per capita (pc)	Total Health Expenditure (THE) pc	EHP cost pc as % of THE pc
1 (2004-2010)	2004	$17.53 (a)	$16.32	107%
1 (2004-2010)	2005	$17.53 (a)	$17.49	100%
1 (2004-2010)	2006	$17.53 (a)	$21.06	83%
1 (2004-2010)	2007	$17.53 (a)	$17.74	99%
1 (2004-2010)	2008	$28.56 (b)	$25.36	113%
1 (2004-2010)	2009		$28.73	
1 (2004-2010)	2010	$44.40 (b)	$33.57	132%
2 (2005-2011)	2011	$44.40 (b)	$38.80	114%
2 (2005-2011)	2012	$55.00 (c)	$35.00	157%
3 (2011-2016)	2013	$58.00 (c)	$35.00	165%
3 (2011-2016)	2014	$62.00 (c)	$34.00	182%
3 (2011-2016)	2015	$62.00 (c)	$35.00	177%

Sources:
(a) A Joint Programme of Work for a Health Sector Wide Approach (SWAp) 2004-2010, Republic of Malawi
(b) Ministry of Health, Malawi
(c) WHO Global Health Expenditure database, downloaded 21 March 2016

2. Health system constraints:

- 74% facilities 'able' to deliver EHP services
  - Inadequate human resource capacity (high vacancy rate & uncoordinated in-service training, only 33% of health centre managers knew of the existence of the EHP)
  - Poorly distributed and dilapidated health infrastructure with inadequate equipment
  - Insufficient essential medicines and medical supplies (Frequent stock-outs e.g. Cotramoxanidazole only sufficiently stocks in 27% of health centres, ORT (18%), Quinine tablets (20%), Magnesium Sulphate (18%))

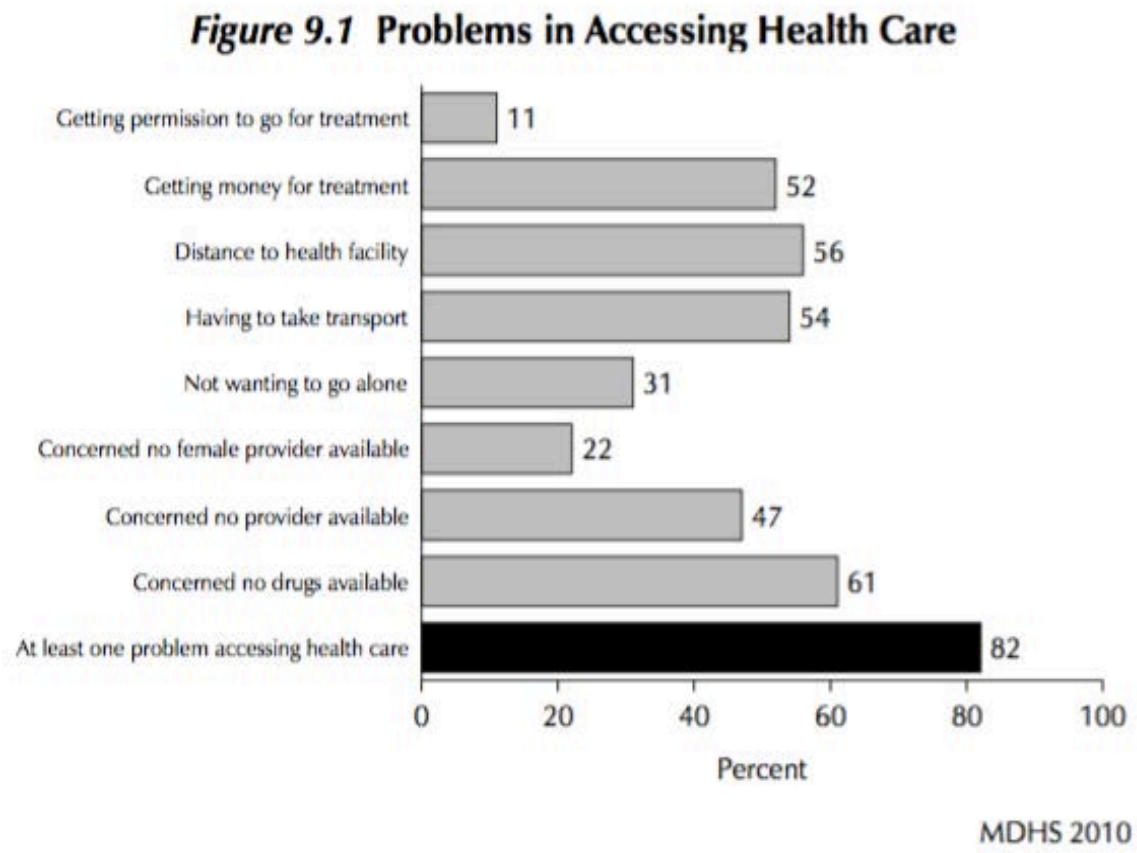
Malawi's HBP Policy – Reality (III) Supply-side constraints

3. Low EHP implementation:
   - EHP interventions not provided to 100% of the population in need
   - Result is PIN not covered Example intervention (from EHP tool?)

4. Equity issues
   - Huge geographical variations in access and care
   - Care seeking becomes a lottery - when and where you seek care can be the difference between receiving it or not
   - CHAM SLAs intended to increase access but nearly all SLAs only for maternal & newborn services (not full EHP)

Malawi's HBP Policy – Reality (V) Demand-side constraints

- Distance (transport costs, referrals)
- Concern no provider
- Concern no drugs
- Poor health worker attitudes
  - Unfairly setting them targets without means to achieve them
- Patient perceived poor quality of health services
  - "The government hospital can be overcrowded and without drugs, so if other people help you with money, you go to private hospital"
- All above can lead to forgoing or delaying care seeking or seeking at private facilities at a cost.



Malawi's HBP Policy – Reality (VI)

- The demand- & supply-side constraints prevent the EHP being fully implemented

- A number of other issues affecting both development & implementation of EHP:

- Donor dependency + primarily off-budget support:
  - Government doesn't always have decision making ability about where funds are spent. Donor objectives often supersede government priorities

- Payment:
  - EHP supposed to link to both planning and funding of health service delivery – no reimbursement mechanisms prioritizing provision of EHP interventions ➔ everything is delivered free
  - Essential medicines list linked to EHP which means health facilities can only order medicines within the package (is this true? Ask Gerry what the current reality is) - This is to ensure that essential drugs and supplies necessary for the delivery of EHP interventions are always available in adequate quantities. But this does not happen.
  - A district expenditure tracking study estimated that approximately 20% of resources are spent on non-EHP conditions.
  - CHAM SLAs for EHP provision paid on fee-for-service (supplier-induced demand)

Conclusion

- Both Design and Implementation challenges
  - ignoring the inherent trade-off between population covered and interventions included (subsequent consequences for access and financial risk protection)

- Interventions patients are ***entitled*** to ≠ Interventions patients receive in ***practice***
  - Currently the EHP is a notional package of basic services where the package listed on policy documents does not reflect the reality of what is actually provided?

- The EHP has created a universal sense of entitlements to free health care at the point of use

- Malawi currently in last stage of revision of it's EHP (2016)
  - While CEA again used as the primary methodology, used differently from previous revisions
  - Malawi's experience using CEA this time will be presented tomorrow

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Malawi's HBP Policy – Theory (III)

EHP Condition	Intervention
HIV/AIDS/STIs	Multi level BCC across all sectors Health promotion Screening (HIV testing and counselling through all entry points) Provision of home based care Procurement and provision of male and female condoms Provision of ART Provision of PMTCT services CPT Blood and needle safety STIs - Screening and treatment and promotion Treatment of opportunistic infections Peer and education Programs for high risk groups Condom promotion and distribution
ARIs	Health promotion on recognition of danger signs for ARIs Early treatment of ARIs using standard protocols Treatment of pneumonia
Malaria	Health promotion Early treatment of malaria at household, community and health centre level Promotion and use of LLITNs Promotion and use of IRS Vector control - Larvaciding and control of breeding sites IPT pregnancy

EHP Condition	Intervention
Diarrhoeal diseases	Health promotion Early care seeking – use of ORT Provision of zinc Construction of low cost excreta disposal Provision of home solutions Promotion of exclusive breastfeeding Surveillance of water and food quality
Adverse Maternal and Neonatal outcomes	Health promotion Promotion and provision of family planning methods Promotion of institutional deliveries Provision of services for complications of delivery (BEmONC and EmoNC) Screening for cervical cancer using VIA Repair of obstetric fistula
NCDs and trauma	Health promotion on awareness about health risks such as smoking and drinking of alcohol, safe driving and gender based violence Screening for risk factors and conditions (cardiovascular, diabetes) Promote physical activity Promote healthy diets Community and facility based rehabilitation, first aid
Tuberculosis	Community DOTS Health promotion Treatment of TB including MDR
Cancers	Health promotion Early screening (cervical and breast cancer, Kaposi's sarcoma) Treatment with cryotherapy and surgery (scaling up)

Malawi's HBP Policy – Theory (V)

EHP Condition	Intervention
Vaccine preventable diseases	Health promotion Pentavalent Polio Tuberculosis Measles Tetanus
Mental illness including epilepsy	Health promotion interventions to create awareness about mental health Mental health promotion in schools and workplaces Treatment of epilepsy Treatment of acute neuropsychiatric conditions – inpatient Rehabilitation
NTDs	Case finding and treatment of Trypanosomiasis LF mass drug administration Mass drug administration for onchocerciasis STH mass drug administration in school children Mass drug administration
Eye, ear and skin infections	Health promotion on prevention of eye, ear and skin infections Treatment of conjunctivitis, acute otitis media, scabies and trachoma

Ministry of Health

Malawi's Experience with Cost-Effectiveness Analysis (CEA)

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March 08, 2017

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Context for revising the EHP/BHP

Key Issues

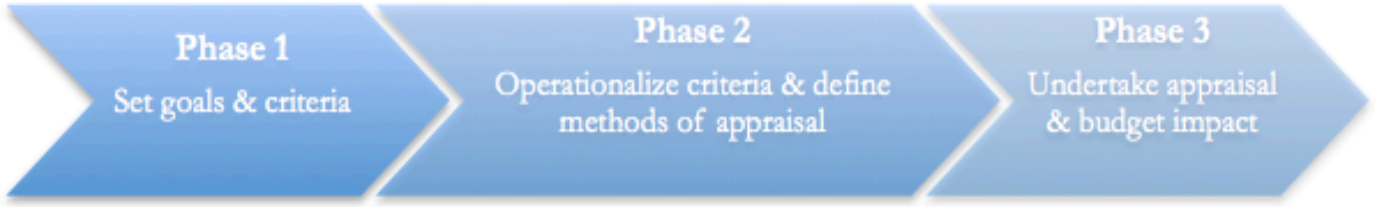
- No clear Objective
- No clear criteria or criteria misused for inclusion/exclusion of interventions
- Outdated: needs to be constantly revised to reflect budgetary and technology changes
- Financially unachievable
- Inequitable
- Ignores inherent trade-off between population covered & interventions included

Solution

- Clearly define objective
- Set clear intervention inclusion/exclusion criteria
- Update data
- Define a financially achievable package
- Ensure equity
- Ensure understanding of trade-offs and follow logic of objective defined in decision making

BHP Definition – Process (I)

- Names matter
  - Essential Health Package (EHP) ➔ Basic Health Package (BHP)
- Process equally as important as methodology used in assessments
  - Deliberative process rather than consultative



	Phase 1	Phase 2	Phase 3
Key Question	• What is the objective of the health benefits package? • What criteria should be used in defining the package? • Which stakeholders should have input on objective and criteria?	• What data exists to measure criteria? • How to collect & collate new and existing evidence? • How to ensure issues identified in review are addressed?	• How to compare evidence collected? • How to ensure package makes clinical sense?
Activities	• Review previous EHP & identify challenges • Engage Senior Management & EHP-TWG • Establish EHP Task Force	• Develop tool for data collection and analysis • Collect and quality check data • Appraise tool & data	• Undertake analysis using criteria • Validate clinical aspect with front line health worker input
Outputs	• Defined Objective & Criteria	• Cost-effectiveness tool developed & populated	• BHP & BHP+ defined

BHP Definition – Process (II)

Goal of the BHP	Inclusion criteria	Consequences of including other criteria
Goal is to *maximise population health* Consistent with the Mission of the Malawian Ministry of Health Where goal is to maximize health CEA typically used. Enables prioritization of interventions in way that maximizes population health under a constrained budget	• Health Maximisation (costs, effects, BoD, affordability, feasibility) • Equity (women, children, disadvantaged populations – not all DALYs are equal) • Continuum of Care • Complementarities • Extraordinary donor funding	Maximising (with budget constraint) means achieving efficiency Efficiency should always be tempered by considerations of equity (in both process & outcome) Multiple maximand requires trade-offs • Health loss for gains in other criteria

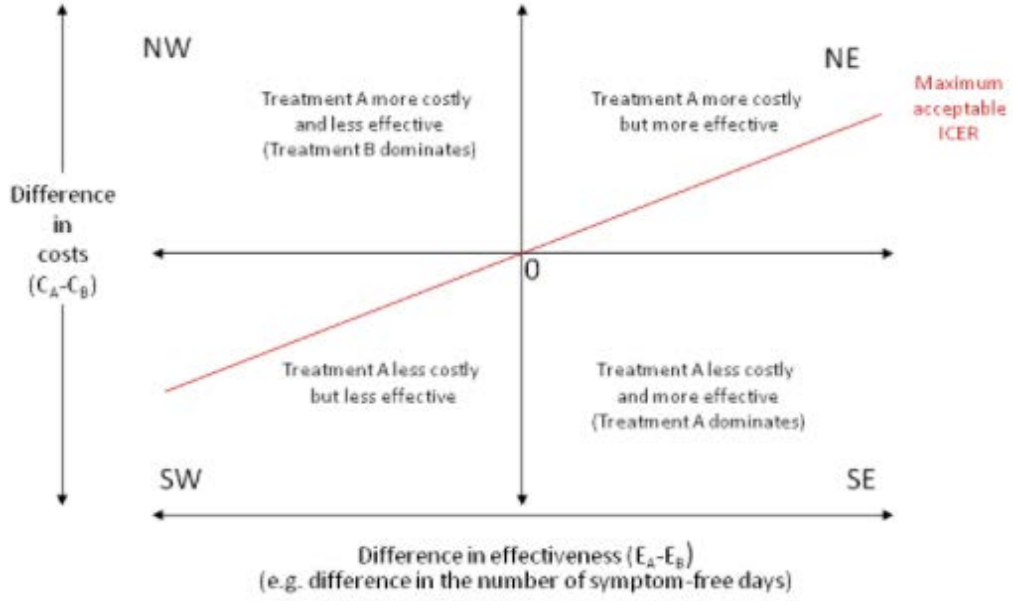
Quick CEA reminder

Data requirements:

- Estimate of health gain (Disability Adjusted Life Year (DALY))
- Estimate of cost
- Health expected to be lost because of the cost (cost-effectiveness threshold)

Intervention cost-effective if:

- ICER: $\Delta C/\Delta H < k$
- Net Health Benefit: $\Delta H - \Delta C/k > 0$



*k = cost-effectiveness threshold

BHP Definition– CEA(I)

Malawi used CEA in it's definition of the EHP

- Steps in defining EHP:
  1. Assess BoD
     - include conditions with >10,000 DALYs per year
  2. Include cost-effective interventions which treat these conditions (DCP2 used)
     - Interventions 'cost-effective' if cost/DALY averted < 3X GDP per capita ($1050/DALY averted (WHO-CHOICE cost-effectiveness threshold)

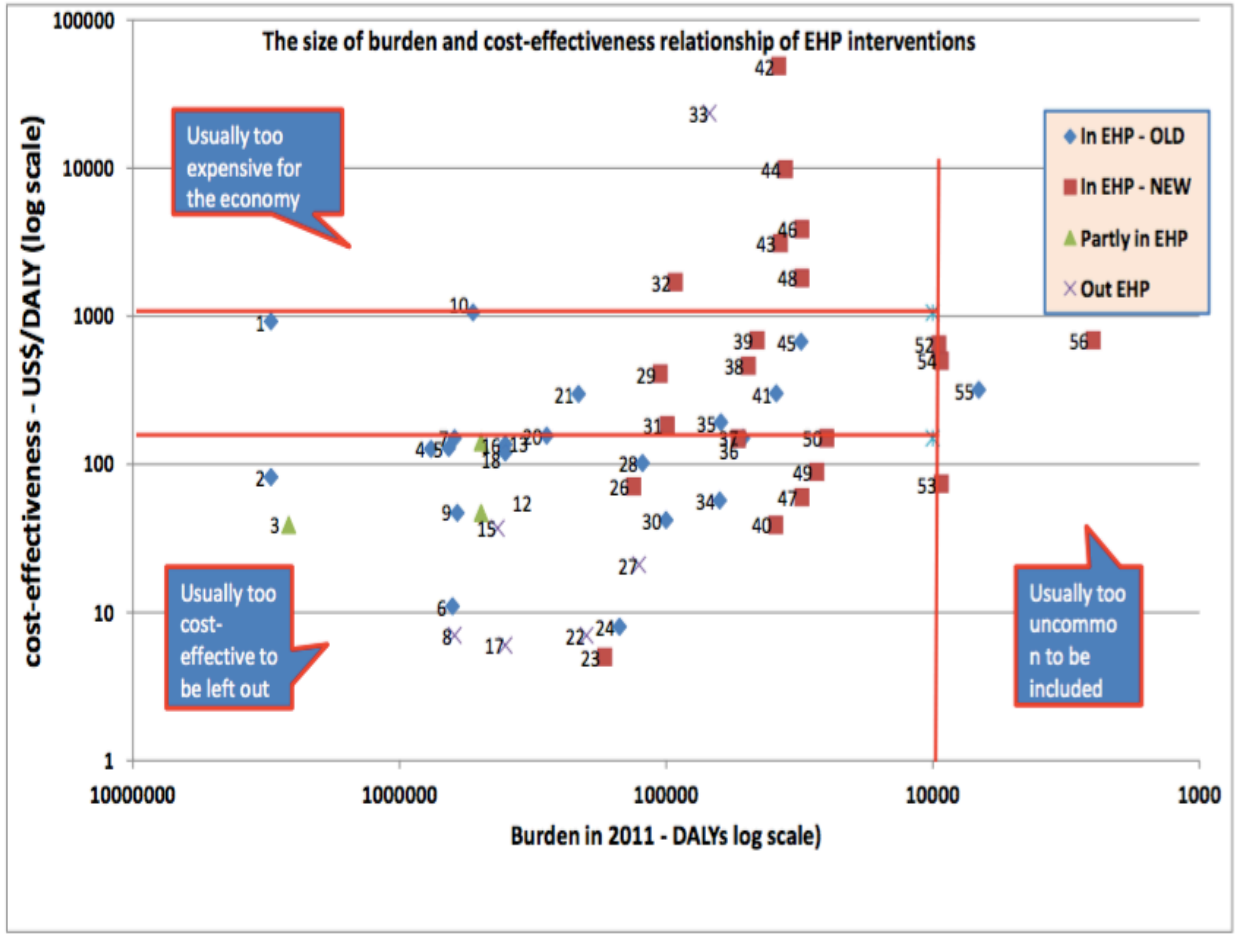


Figure 14 Burden of disease and cost effectiveness of interventions in Malawi

BHP Definition– CEA(II)

Previous methodological issues:

- Concept of cost-effectiveness threshold (CET) misused
- Assessing BoD first and cost-effectiveness of intervention second
- No prioritisation within EHP interventions
- Doesn’t reflect additional supply and demand constraints on implementation levels

BHP Definition– CEA(III)

New cost-effectiveness framework developed addressing these issues

- CET should represent the opportunity cost of health care spending
  - Health forgone by spending on an intervention as this could have been spent elsewhere
  - A supply-side concept about what the health system can provide given resource constraints
  - **NOT** a demand side concept as this is not based on the reality of the resource constraint (WHO-CHOICE)

Table 2 Estimates of health opportunity costs for Malawi

	Lower estimate		Upper estimate	
	$ per DALY	% GDP pc	$ per DALY	% GDP pc
Woods et al. (2015)	$3	1%	$116	51%
Ochalek et al. (2015)	$24	11%	$37	16%

BHP Definition– CEA(IV)

2 Step process

1. Define which interventions are cost-effective for EHP by ranking interventions according to ICERs. Interventions with ICERs below threshold are cost-effective

2. ICERs cannot prioritise between interventions. Prioritization done by ranking cost-effective interventions by population health effect

BHP Definition– CEA(V)

Table 5 Prioritising interventions in terms of impact on overall population health (net DALYs averted)

#	Intervention	ICER [$]	Population DALYs averted per 1,000	Cases per annum	Total cost	Cumulative cost	Total DALYs averted	Net DALYs averted (full implementation)
38	Male circumcision	22	45	4,073,429	$146,729,553	$146,729,553	39,634,464	25,423,008
30	Management of obstructed labour	12	86	91,844	$1,099,805	$147,829,358	2,497,118	2,025,734
4	Isoniazid Preventive Therapy for HIV+ no TB	1	887	55,132	$79,518	$147,908,876	1,118,463	1,097,909
5	First line treatment for new TB cases for adults	3	393	14,465	$178,018	$148,086,894	1,045,196	1,001,800
7	First line treatment for new TB cases for children	3	393	12,285	$116,948	$148,203,842	887,697	850,840
23	Management of pre-eclampsia (Magnesium sulphate)	6	168	20,022	$45,439	$148,249,281	534,719	482,789
9	Clean practices and immediate essential newborn care (home)	3	368	671,464	$415,687	$148,664,968	237,281	226,760
33	Households owning at least one ITN/LLIN	13	77	6,751,618	$13,736,789	$162,401,757	228,063	179,981
43	Caesarean section	32	31	33,982	$671,704	$163,073,461	327,465	156,536

BHP Definition– CEA(VI)

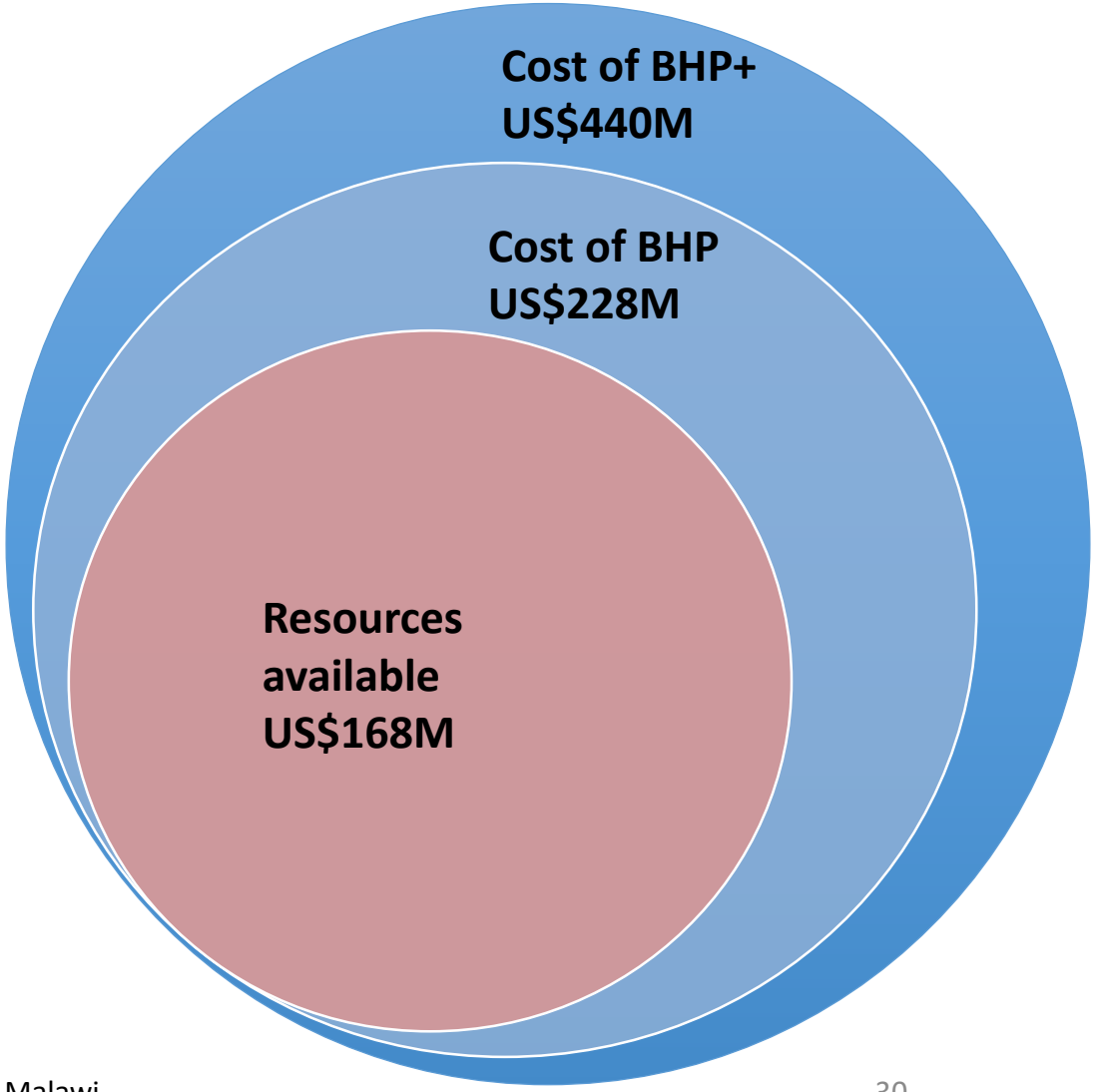
- Budget not only constraint, also non-financial (health-system) constraints
  - Results in < 100% implementation

- New framework quantifies the population health impact of intervention-specific and system-level constraints (taking current implementation levels)
  - Net DALYs averted decrease and (in some cases) there is budget underspend as less patients receive intervention
  - Provides policy makers with a $ value of intervention specific HSS (but does not provide indication beyond this)

- Another constraint: earmarked funding causes budget silos (adaptation of methodology needed)
  - Ideally want to disaggregate exercise to each budget silo e.g. budget allocated to nutrition, TB, HIV etc.
  - Prevents health maximisation – different marginal rates of substitution

BHP Definition– CEA(VII)

- Decision to define two packages:
  - BHP - primary function is purchasing and provision
  - BHP+ - concerned with resource mobilization
- BHP financially unaffordable but cost 42% less than EHP
- BHP DALYs averted = 23 million
- EHP DALYs averted = 20 million
- Criteria not strictly stuck to in process



Where are we now?

- Haven't achieved anything yet in terms of implementation
- **MUST** link payment mechanism to package or clinicians have final say at delivery (outcome = ad hoc rationing)
- Number of programmatic NSPs which ignore BHP
  - Malaria – IRS, Lavaciding & HIV – VMC
  - Need for alignment
- Rationing on paper is hard but even harder to translate into actual resource allocation

Lessons - Methodology

- The analytical framework has huge data requirements (only had 87/250+ interventions with full data)
- Disagreements with cost-effectiveness estimates
- Issues with classifying interventions
  - Defining lists and costing interventions are two very different processes
  - Want interventions to be disaggregated as much as possible while maintaining clinical acceptability
  - Using interventions split by costing method not clinically acceptable
  - EHP suffered from the opposite problem (e.g. 'mass treatment of neglected tropical diseases')

- Organizations (unnamed) recommend using CEA but their actual methodology is unclear
  - Their recommendations are often wrong – 1-3 times GDP per capita as threshold…..$150-$1050 / DALY averted
  - Risks lowering population health

- CET for Malawi likely much lower
  - Ultimately, 'within' country analyses likely to be necessary to get fully informative CETs.

Lessons - Process

- Generating consensus is harder when structures are vertical
- Multiple constraints (budget, health system, earmarked funding/budget silos) - very difficult to account for all of them in decision making
- Information is not all powerful - preconceptions can be more persuasive than data
- While agreeing theoretically to a set of criteria is straight forward, sticking to their logic in decisions isn't
- While 'essential lists' might be useful for guiding health systems in a general sense or for resource mobilization. They can be damaging for planning purposes
- While the agreed stated objective was to provide the BHP to all in need the decisions taken don't reflect this (stronger competing objective?)
- There is a 'minimum package' within which people are unwilling to ration
  - Doesn't matter that inclusion in the package doesn't mean delivery on the ground (the unwillingness to remove remains)
  - A saturation point is reached
  - Unfortunately this 'minimum package' costs more than the resources we have available in Malawi

Conclusion

- Resource allocation and rationing in a **HIGHLY** resource constrained setting is challenging
- Can use CEA but if used inappropriately it won't achieve desired objective (maximise health)
- Further, even using correct CEA methodology does not guarantee achieving objectives
- Process is equally important
- Starting point is to ensure correct & defensible methodology and ensure process is consistent, transparent and accountable

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