

Incorporating HTA and economic evidence into benefit package design and national essential medicines lists: The case of Zambia

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Health Priorities Ghana 2018

Zambia Overview

- e Health Reforms History and Health Benefit Package (HBP)
- Ill Health and Household Welfare in Zambia
- Health Technology Assessment in Social Protection Schemes
- Snapshot of Economic Research for HBP Design in Zambia.

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Zambia is located in central-southern Africa and has a population of 16 million people of which 45% are urban.



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- Medical care is delivered at 5 levels:
 - Health post
 - 2 Health center
 - First level hospital
 - Second Level hospital
 - 5 Third level (or tertiary) hospital.
- 80% of health facilities are government owned, 14% are private, and 6% are faith based organizations (MoH 2012, NHSP 2011–2015).
- Government medical facilities have the widest coverage, private facilities concentrated in urban while faith based are in rural areas.
- Zambia went through a period of structural adjustments beginning the early 1990s which focused on restricting social spending due to economic challenges

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- The structural reforms of the 1990s also included health sector reforms which led to the introduction of user fees.
- By 1996, the government had prepared an essential basic package of healthcare for Zambia. Possible interventions for each disease where prioritized based on "believed efficacy" [Luwabelwa et al., 2017]. This was not costed.
- In 2003, a full benefit package from community to third level hospital was developed and costed. The cost-effectiveness criterion is said to have been used in selecting interventions.
- In 2009, a consultant was appointed to review the HBP and advise on finalization and implementation modalities. A technical working group was also appointed to align interventions with government objectives and goals.

• Experienced high growth in the 2000s, now a lower middle income country.

Image: A matrix

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• Remains among the most unequal countries in the world.





 64% of the population lives in poverty.
 Informal sector accounts for more than 85% of labor-force.

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• Disease burden is high; the country has one of the highest HIV prevalence, the burden of non-communicable diseases and injuries is also on the rise.

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 In 2018, NHI enacted but yet to be implemented. Development of the BHP underway



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- Remains among the most unequal countries in the world.
- 64% of the population lives in poverty.
 Informal sector accounts for more than 85% of labor-force.
- Disease burden is high; the country has one of the highest HIV prevalence, the burden of non-communicable diseases and injuries is also on the rise.
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- Improvement in Health and Ensuring Financial Risk Protection (FRP) are two important goals of the health system. FRP is important because ill-health can disable households and push them into poverty.
- Studies show that ill-health is associated with increased health expenditure, selling assets, informal borrowing, reduced labor income, and ultimately reduced household consumption and economic welfare [Hangoma et al., 2017].
- For example, between 1996 and 2010, an injury in Zambia led to a 35% reduction in labor income, a doubling of medical spending, with household consumption falling by about 7% [Hangoma et al., 2017]. About 10% of household face catastrophic health spending.
- Yet still, the extent to which an intervention protects households from the impoverishing effects of ill-health has never been an explicit criteria for inclusion in the HBP in In Zambia.

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- Health Technology Assessment (HTA) can be defined as a systematic examination of both positive and negative effects of health technology in order to produce an ordered list of possible policy options or interventions.
- In Zambia, there are no defined structures and processes as well as legal frameworks for conducting HTA.
- The limited version of HTA in Zambia has taken place in the development of the HBP and has been confined to the Ministry appointing a few consultants, and more recently a technical working group. However, it has been found that this process lacks necessary stakeholder consultation and involvement [Luwabelwa et al., 2017].
- Importantly, with more than 25 years in development, the HBP has never been implemented and is currently being revised to fit with the requirements of the NHI.

- Moreover, the appraisal criteria for different technologies or intervention is not clear.
- Although criteria such as efficacy, costs, cost-effectiveness, and disease burden are stated criteria, it is not clear how they are applied. It appears though that disease burden is the overriding criteria.
- Other aspects of HTA have not been conducted, for example, Budget Impact and Fiscal space analyses.
- Therefore, the extent to which an intervention averts household catastrophic expenditure or impoverishment has so far not been a criteria for intervention selection.

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- However, in line with UHC, financial risk protection was one of the reasons for removing user fees for all primary services. However, no assessment was conducted to see whether providing the whole package of care would be affordable within the budget.
- As such studies following the removal of user fees have found that the public sectors may not have been able to provide the promised full packages of health services [Hadley, 2011] and it is not clear if removing user fees improved FRP [Hangoma et al., 2018].

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- There is a dearth of economic evidence in Zambia to inform HBP design.
- Although the economic literature that could be used for design of the HBP has been growing in Zambia, it still remains scanty and limited to a few areas, interventions, or disease.
- While a number of cost-effectiveness studies have been conducted, no study has assessed budget impact. It is noted that an intervention can be cost-effective yet unfordable [Bilinski et al., 2017].
- In addition, assessment of the fiscal space is important in determining how the HBP can grow. Studies on fiscal space have been limited to areas such as family planning and HIV.

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Area in economics necessary for HBP Design	Domain	Relevant Research
Cost-effectiveness	Child Health and Immunization	 Johns, B; Hangoma, P et al, Forthcoming (Child Health) Schutte, C and Chansa, C, 2015 (Immunization)
	Maternal Health	 Johns, B; Hangoma, P et al, Forthcoming (Child Health) Fernandes, S, Sicuri E 2015
	Communicable Diseases (Malaría, cholera, dysentery, diarrhoea, STI/HIV/AIDS, TB, ARI, and meningitis.)	 Terris-Prestholt, Fern and Vickerman, Peteret al 2015 (Syphilis) Law 2014 (Tuberculosis)
	Non-Communicable diseases (hypertension, Diabetes, cardio-vascular diseases, cancer, etc)	No studies found
	Epidemic Preparedness	
	Information Education and Communication (IEC)	Within Disease Area
Fiscal Space Analysis	Child Health and Immunization	 Griffiths, U, Bozzani F, et al 2016 (Immunization) GAVI full country Evaluation
	Communicable Diseases (Malaria, cholera, dysentery, diarrhoea, STI/HIV/AIDS, TB, ARI, and meningitis.)	Palladium study
Budget Impact Analysis		No studies found
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References I

- Mubita Luwabelwa, Patrick Banda, M Palale, and C Chama-Chiliba. A case study of the role of an essential health benefit in the delivery of integrated health services in zambia. Technical report, EQUINET discussion paper 111, Zambia Ministry of Health, EQUINET: Lusaka., 2017.
- Peter Hangoma, Arild Aakvik, and Bjarne Robberstad. Health shocks and household welfare in zambia: An assessment of changing risk. *Journal of International Development*, 30(5), 2017.

Mary Hadley. Does increase in utilisation rates alone indicate the success of a user fee removal policy? a qualitative case study from Zambia. *Health Policy*, 103(2-3):244-254, 2011. ISSN 0168-8510. doi: http://dx.doi.org/10.1016/j.healthpol.2011.08.009. URL http://www.sciencedirect.com/science/article/pii/ S0168851011001801.

References II

- Peter Hangoma, Bjarne Robberstad, and Arild Aakvik. Does free public health care increase utilization and reduce spending? heterogeneity and long-term effects. World Development, 101:334 - 350, 2018. ISSN 0305-750X. doi: https://doi.org/10.1016/j.worlddev.2017.05.040. URL http://www.sciencedirect.com/science/article/pii/ S0305750X17302140.
- Stephanie Law, Andrea Benedetti, Olivia Oxlade, Kevin Schwartzman, and Dick Menzies. Comparing cost-effectiveness of standardised tuberculosis treatments given varying drug resistance. *European Respiratory Journal*, 43(2):566–581, 2014. ISSN 0903-1936. doi: 10.1183/09031936.00005613. URL http://erj.ersjournals.com/content/43/2/566.

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References III

- Ulla Kou Griffiths, Fiammetta Maria Bozzani, Collins Chansa, Anthony Kinghorn, Penelope Kalesha-Masumbu, Cheryl Rudd, Roma Chilengi, Logan Brenzel, and Carl Schutte. Costs of introducing pneumococcal, rotavirus and a second dose of measles vaccine into the zambian immunisation programme: Are expansions sustainable? *Vaccine*, 34(35): 4213 – 4220, 2016. ISSN 0264-410X. doi:
 - https://doi.org/10.1016/j.vaccine.2016.06.050. URL http://www.sciencedirect.com/science/article/pii/S0264410X16304741.
- Silke Fernandes, Elisa Sicuri, Kassoum Kayentao, Anne Maria van Eijk, Jenny Hill, Jayne Webster, Vincent Were, James Akazili, Mwayi Madanitsa, Feiko O ter Kuile, and Kara Hanson. Cost-effectiveness of two versus three or more doses of intermittent preventive treatment for malaria during pregnancy in sub-saharan africa: a modelling study of meta-analysis and cost data. *The Lancet Global Health*, 3(3):e143 – e153, 2015. ISSN 2214-109X. doi:

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References IV

https://doi.org/10.1016/S2214-109X(14)70385-7. URL http://www.sciencedirect.com/science/article/pii/S2214109X14703857.

Fern Terris-Prestholt, Peter Vickerman, Sergio Torres-Rueda, Nancy Santesso, Sedona Sweeney, Patricia Mallma, Katharine D. Shelley, Patricia J. Garcia, Rachel Bronzan, Michelle M. Gill, Nathalie Broutet, Teodora Wi, Charlotte Watts, David Mabey, Rosanna W. Peeling, and Lori Newman. The cost-effectiveness of 10 antenatal syphilis screening and treatment approaches in peru, tanzania, and zambia. *International Journal of Gynecology & Obstetrics*, 130(S1):S73–S80. doi: 10.1016/j.ijgo.2015.04.007. URL https://obgyn.onlinelibrary. wiley.com/doi/abs/10.1016/j.ijgo.2015.04.007.

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References V

- Carl Schutte, Collins Chansa, Edmore Marinda, Teresa A. Guthrie, Stanley Banda, Zipozihle Nombewu, Katlego Motlogelwa, Marita Lervik, Logan Brenzel, and Anthony Kinghorn. Cost analysis of routine immunisation in zambia. Vaccine, 33:A47 – A52, 2015. ISSN 0264-410X. doi: https://doi.org/10.1016/j.vaccine.2014.12.040. URL http://www. sciencedirect.com/science/article/pii/S0264410X14016934.
- Alyssa Bilinski, Peter Neumann, Joshua Cohen, Teja Thorat, Katherine McDaniel, and Joshua A. Salomon. When cost-effective interventions are unaffordable: Integrating cost-effectiveness and budget impact in priority setting for global health programs. *PLOS Medicine*, 14(10): 1–10, 10 2017. doi: 10.1371/journal.pmed.1002397. URL https://doi.org/10.1371/journal.pmed.1002397.

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