

**Policymakers and institutional structures affecting health inequality in Ethiopia: a Qualitative Study**

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## 21 Abstract

22 **Background:** Ethiopia generally provides a story of progress in child health, but unevenly  
 23 distributed. The attitude, knowledge, political drives, interest groups and institutional  
 24 dynamics in health equity policy setting and execution has not been explored in Ethiopia.  
 25 Without addressing these issues, the right kind of policy choice and implementation  
 26 cannot be attained.

27 **Methods:** This study was conducted between 2015 and 2017 in Ethiopia. The study  
 28 utilized a qualitative framework, grounded in social determinants for health and health  
 29 policy. Semi-structured interviews; executed policy analysis; and reviewed the literature.  
 30 In-depth interviews were conducted among twenty-one policymakers and reviewed 23  
 31 policy documents and over 350 literatures, Transcribed data, policy extracts and articles  
 32 were synthesised and analysed by ATLAS.ti 7.1.4.

33 **Results:** Ethiopia is in an early state of recognizing and intervening against health  
 34 inequalities. The quality and level of knowledge is mixed and gets reduced as one goes  
 35 to the rural areas. Consensus is slowly developing on the major underlying causes of  
 36 inequality. The contents of health policy documents are neither comprehensive nor  
 37 strongly supported by evidence. There are multiple interest groups with varying level of  
 38 knowledge and power. Complex political and institutional relations affect policy making  
 39 process negatively. Participants demonstrated denialism; blaming of victims;  
 40 misconceptions; and one size fits all attitudes.

**Conclusions:** Any future work for improving health equity needs to be build more on evidence and embrace more participatory processes to address all types of interest groups.

## Key words

Child health, Ethiopia, Health inequality, health policy research, policy

## INTRODUCTION

Despite Ethiopia's achievement in meeting the Millennium Development Goals, some child health inequalities have worsened (1,2). According to the World Health Organisation (WHO), disparities in health are known as health inequalities (3). While, there is not a single best definition for health inequity, Whitehead and Dahlgren, proposed the most widely used definition of health inequity, as health inequalities that are not only avoidable, but also considered unfair and unjust (4,5). The Black Report from the UK, Whitehead (6) 2016 and others argued health disparities are linked with bigger inequalities and unfairness (5,7,8).

WHO through its Social Determinants for Health (SDH) review concluded, the situations under which people are born, live, work and age can cause unfair health disparities (9-11). Generally, health inequalities, including inequalities in child health are considered as inequity (12-14).

Ethiopia demonstrates a very high child health inequality at impact, outcome and input levels of indicators (15-17). In a retrospective review of surveys from 54 countries, Ethiopia demonstrated one of the highest levels of socio-economic inequalities of mortality and coverage of child health-related medical services (18).

Unpicking further, Tranvag and colleagues demonstrated two major dividing lines of inequality in child health for Ethiopia: place of residence and wealth status (10). Wealth inequality for instance, contributed 84.8% of inequalities in basic vaccinations, while it attributed 13.6% to neonatal deaths inequality (19). The gap between the rich and the

poor continued widening, McKinnon found that between 2000 and 2011, Ethiopia's pro-rich child mortality inequality increased by 1.5 for every 1,000 live births (16).

A strong geographic pro-central and urban inequality has been reported from multiple studies (20,21). Child Mortality Rate (CMR) reduction has deteriorated between 2000 and 2011 among the Ethiopia's "peripheral" states also known as 'Developing Regional States (DRS)' (16)

Persistent inequality in health can affect Ethiopia's progress towards Universal Health Coverage (UHC) and the attainment of the Sustainable Development Goals (22-25). Health inequality is being increasingly seen as a political matter, resulting in political consequences that affects security and stability (26,27). Unfair distribution of health and violation of the right to 'the highest attainable health in a country' are interrelated (28).

Despite the growing evidence of health inequality in Ethiopia, health policy documents and programmes do not directly recognize and address it with tailored interventions (17-19). The comprehensiveness and quality of these strategies has yet to be explored (29). Moreover, Ethiopia's policy intricates perception of policy makers, motivations, decision making process and the impact of the federal administrative arrangement have been unexplored.

This paper explores the complex relationships between policymakers' interest and institutional dynamics affecting health inequality in Ethiopia. The study was designed to identify the current state of policy makers' knowledge, the policy settings and implementation processes towards improving child health equity in Ethiopia. Due to the complexity of the subject, the study focused on child health.

## Methods

### *Study design and settings*

We designed a qualitative study. The study involved semi-structured interviews of health policy makers; policy analysis, and a review of the literature. Interviewing was preferred to focus group discussions to enable study participants to discuss politically sensitive

issues in private settings. The study was conducted in different phases between 2015 and 2017.

The study was grounded in a combination of Social Determinants of Health (30), the '3-i theory' and the 'Policy Triangle Framework' (31). The '3-i' theory argues that effective policy setting, and implementation requires: '*idea*'- the appropriate knowledge; the right set-up and capable '*institute*'; and '*interest*' groups that promote a policy (32). The Policy Triangle Frameworks (PTF) recommends analysis of *content*, *context* and *process* in policy researching (33).

### *Sampling technique*

Theoretical Open Sampling (TOS) approach was applied to guide the sampling for the interviews. TOS follows how new theory and concepts emerge to determine sample sizes, rather than predetermining them from the outset (34-36).

Participants were purposively selected, based on their role of policy making and implementation in relation to child health. Regional States and districts that displayed a very high and very low indicators in child health were selected purposively. Twenty-one interviews were conducted between April 2015 and June 2016, while collection and analysis of the policy documents and literature were continued until March 2017.

Articles and policy documents were searched through search engines, recommendations, and chain reference. The following databases were searched MEDLINE, ScienceDirect, SAGE, CINAHL, Cochran and WHO repository. Over 1,500 records were retrieved searching using key words like: health inequality, equity, child health, and health policy researching, Universal Health Care and health inequality reduction. A further refinement based on year of publication, geographic and thematic relevance the volume of records for in-depth review got reduced to 359. Further reduction was made by focusing on articles that directly focus policy researching and child health inequality on Ethiopia. Finally, twenty-one were used for further analysis during triangulation and Critical Interpretative Synthesis along with the interview and policy documents.

The list of policy documents reviewed included the Equity Plan of Action 2016; Five Health Sector Strategic Plans, annual performance reports, a draft Health Equity Strategy and Ethiopian Health Sector Vision towards Universal Coverage, 2030.

Two interviews were conducted over telephone calls, the others were held in offices and spaces identified the participants. Eleven interviews were conducted in English, while the others were conducted in Amharic and later translated into English. The data-collection tool for the in-depth interview was based on a semi-structured interview guide. Each session took 40 to 60 minutes.

### *Data management*

Interview and policy analysis data were processed and thematically analysed through ATLAS.ti 7.1.4. All interviews except one (based on the request of the interviewee) were recorded. The audio data was later transcribed and, Amharic transcripts were translated into English.

One ATLAS.ti hermeneutic unit was established to import interviews, selected articles and policy extracts together. The analysis adopted a deductive approach by starting with a wide range of detailed codes and through further coding to establish code families, networks, documents and document families. While the analysis of the interviews was ongoing, concept mapping and constant comparison techniques from Critical Interpretative Synthesis (CIS) were applied to develop a third construct by triangulating them with the literature and policy contents (34,36).

Ethical clearance was secured from the Research and Ethics Committee of the Department of Health Studies, University of South Africa (ethics approval no: HSHDC/304/2014), and the Ethiopian Science and Technology Ethics Board (ethical clearance no:310/2016).

## **Results**

Among the 21 interview participants, 2 were female. While 15 participants were from government, 6 participants were from development partners. Participants included Directors and Team Leaders in the Ministry of Health (MOH), United Nations, other

development partners, regional and districts government leaders from the Benishangul Regional State Health Bureau (RHB), Somali RHB, Tigray RHBs and Addis Ababa RHB, in Ethiopia. Three hundred fifty-nine articles and 25 policy documents were reviewed in-depth, out of which 46 were included in ATLAS for further analysis.

### **Mixed but improving level of knowledge**

The findings from the interviews, policy documents and government reports indicate that policy makers in Ethiopia have not reached at a level of consensus on the grade, dimension and cause of child health inequality. The participants also agreed while the awareness started from a low base, it is slowly improving in the chain of technical leadership. Table 1 below summarises the major theme emerged during second and third construct analysis.

There is a higher level of awareness of the severity and dimensions of child health inequality at the top leadership level of Federal Ministry. Policy makers' awareness of regional(geographic) inequality of child health is stronger than wealth and other inequalities. However, the middle and lower level leaders didn't demonstrate the same level of awareness. Despite the findings from literatures, a middle level leader from the MOH underplayed the effect of wealth inequality in health in peripheral regions by saying *"by the way, I don't think people in DRS[peripheries] are in a different economic challenge compared with other people in the country [in the context of health inequality]."*

Table1. summary of major knowledge and perception findings reflected by policy makers

Quotes, second and third construct findings	
Policy makers' knowledge on level,	<b>1. Mixed level of knowledge, but improving over a time</b>
	<i>"Sometimes they get confused in identifying performance and inequality issues. There was a wider confusion as a ministry office on the whole."</i> Senior leader in the MOH
	<i>"I think they are now understanding it and feeling the pain [from inequality] now."</i> Mid-level MOH
	<b>2. Conflicting interpretation and lack of consensus</b>
	<i>"That [the difference in interpretations] is the difficult part with the ministry, the gap among the higher management."</i> Key participant from development partners
	<i>"Sometimes they [lower and middle rank] get confused in identifying performance and inequality issues, there was a wider confusion inside the ministry office."</i>
	<b>3. Misconceptions and silence denialism</b>

*"We are providing trainings and presentations to help staff understand the difference between performance and inequality issues." Senior leader in the MOH*

*The new Health Equity Plan of Action is produced to "transform health status and health systems in the developing regional states and selected zones with suboptimal performance" policy excerpt (37)*

*No mention of inequality in Ethiopia's three Health Sector Strategies (2005 to 2015). The Health Sector Transformation Plan, despite its thematic focus of improving equity, it doesn't contain inequality reduction, targets, strategies and intervention. Policy analysis outcome*

#### **4. Lack of data visibility and reliability**

*"Districts (woredas), hospitals and facilities are not as such aware if they are below regional or national averages." Mid-level MOH*

*"To me it is very unfortunate that we are not doing proper studies to ascertain where we are." Development partner, 11*

Development Partners were generally aware of the situation, although they struggled to find reliable data source and work with policy makers that have mixed understanding on the subject.

### **Perception on the causes of child health inequality**

The participants and policy documents do not agree with the literature and globally established theories on the causes of child health disparity in Ethiopia. Without probing, the participants chose not to discuss about the impact of the political economy on health inequality. A smaller proportion of the policy makers mainly concentrated at the top was able to articulate a causal link between child health inequity and multiple broader socio-economic inequalities.

Most participants demonstrated a partial understanding of root causes, as summarised in Table 2. The most common misconception on the causes for child health inequality is 'it is as an outcome of a mere variation in the performance and commitment of health care workers and communities at local level than broader determinants.

Table2. summary of findings from policy makers on awareness and perception of causes of child health inequality

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#### **Quotes, second and third construct findings**

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Knowledge on the causes

**1. Mixed, the senior policy makers demonstrated broader knowledge**

*"we have seen it in Brazil... left a lot of people poor and unable to afford health care and education. There is no reason that we will not be in that situation". a senior leader linked health and wealth inequality in Ethiopia*

**2. Partial understanding of the cause**

*"According to our analysis, the root causes are attitude, skill, organisational structure, lack of support and supervision." Senior participant in the MOH4*

**3. unfair distribution of resources or inverse equity caused it**

*"We [in DRS] do not start new initiatives and programmes together with other regions. The programmes come to our regions after they are implemented, and results are produced in the other regions." Senior informant from DRS("peripheries")*

*"at first, I was punished with a low budget, then I couldn't perform well, and I was made to compete with... That is the system which makes life difficult"*

**4. First thing is first, need to fix the political power competition**

185

186 Regional leaders and development partners, however presented unfair distribution of  
187 resources and inverse equity as causes. This group argued that lifesaving child health  
188 care initiatives and supplies were first going towards the already richer and the better-off  
189 areas, widening the gap. A strong argument was made from DRS leaders that it is more  
190 about unfair distribution of health facilities, budget, medicines and staff than just bad  
191 performance by service providers at peripheries. *"Everything [budget and drug supply] is*  
192 *calculated based on just population size. Therefore, we are not even receiving the minimum*  
193 *support expected from the centre."* While the federal government doesn't agree, the  
194 outcome of literature review supports the DRS (21).

195 Political factors were also acknowledged as an important component of social  
196 determinant of health in Ethiopia. Some participants argued that health is of relatively a  
197 low priority in the Developing Regional States (*"peripheries"*), as leaders got urged to  
198 secure stability, safety, water scarcity and infrastructure first. Also, due to the complex  
199 relations between the governing party and the parties from these areas; regional health  
200 sector leaders reportedly spend a significant part of their time on political issues to get  
201 more visibility from / impact on the federal government.

**202 Interest groups, the motivations in the background**

203 The study showed that the policy drive, directions and technical guidance for reduction of  
204 inequality have come from an interest group of political leaders and technical elites.  
205 Recently a growing strong political interest to address the widening gap, *"The Minister*

himself made a personal ambition to achieve this.”. Three other interest groups also came out as summarized in Table 3. These groups are important factors in policy making and implementation process. Some participants argued, the latest push by the political elite is a show-off and technical views were not very well considered in the policy making process.

Table 3. Summary of interest groups that might affect equity policy making in Ethiopia

Powerful political elite, spearheading	Ready technocrats
<p>A small group comprised of ministers and a few directors, politically interested</p> <p><i>“By the way, we are a special sector as a ministry; we have received a directive from the Federal Affairs Ministry to increase equity.” a key participant</i></p> <p>The ministers from Federal Affairs and Health have been perusing the recent agenda to</p>	<p>Interested in reducing inequality but thinks the elites are motivated by politics</p> <p>Based in regional states and mid-level central leadership</p> <p><i>“The national commitment for the reduction of geographic gaps is good. The interventions do not match the level of what people talk about and what is written on the paper.” leader from DRS</i></p>
Less interested group	The country doesn’t have resources
<p>development partners with specific technical and thematic priorities; and others are based in rather advantaged regions</p>	<p>did not emerge clearly and strongly</p> <p>probably motivated in</p>

The interest group which did not emerge clearly and strongly is a group that believes the country does not have the budget and resources to significantly reduce inequality. This group maintains- regions and communities that have progressed well should not be penalised and made to stall in progress, while awaiting the others. Some of these ideas have been strongly reflected in the national strategic plan, that missed to address basic child health inequality but urged for expansion of advanced clinical care, cancer treatment and tertiary care in areas that have already made progress in Primary Health Care (38).

### Process and Institutional relations affecting equity policy

The study found that reducing inequality and introducing accountability through a centralized approach has proven to be a complex exercise in the federal state of Ethiopia. It was also found that lack of a quantified inequality reduction vision, lack of clear division

of role, and unproductive working relations affected the effectiveness of the response against equity in Ethiopia.

*“There is quite a lot of frustration at regional level about the FMOH, because of insufficient support ... and for not being heard.” Identity withheld*

The Parliamentary Committee, the Ministry of Internal Affairs and the Board of Ministers provide a high-level political leadership and monitoring for equity. The MOH provides reports to the Federal Affairs and the Board of Ministers; both parties provide guidance and supervision to the FMOH. However, the division of role and link between these structures were not clear to the participants.

The engagement of regional states and other stakeholders in the policy making process was perceived as limited. Some personnel from the DRS feel unheard and not engaged in major decision-making processes. The development partners also feel not engaged in a meaningful manner. *“There are still issues in the Health Extension Programme that need improvement and we do not talk about it.” Identity withheld*

Our analysis of policy documents suggest that the Equity Action Plan (EAP) is the only document that has a direct focus on health inequalities in Ethiopia(37). The major drawback of previous strategic plans and documents was the failure to present the “how” and the major strategies that could tackle inequality.

Document analysis and interviews suggested the EAP has paternalistic one-size-fits-all features and built on strong views from the central government. It was developed from limited consultations with the DRS and the global evidence base. *“All regions are not just the same, the situation in [ name] is not just the same as [name].. the problem in our region is quite different... the FMOH believe we all are the same.” Identity withheld*

Part of addressing regional inequalities requires contextualised use of local social, cultural base rather than transposing interventions from other cultures. A mid-level FMOH participant highlighted the importance of local structures as *“if you want to change in short time, we have to involve the clan structure”*. To narrow the gap, the central government intends to further scale up the Health Extension Program (HEP) in the form and shape that brought strong results in relatively advantaged geographic areas. The following

excerpt from the EAP confirms: *“This is one of the stark achievements in the bigger regions which have to be adapted to these developing regions.”*

Development partners challenge the rigid one-size-fits-all top-down model of expanding Health Extension/Women’s Development Army approach as a solution for equity.

*“We did not discuss its [HEP’s] failure in the emerging regions [DRS]. They are further away from the centre; it is difficult to motivate people to come to health centres.”*  
Development partner participant.

## Discussion

The right knowledge and perception are important in making sensitive policy decisions, and the case of Ethiopia will be no different (39). The policy makers’ knowledge and misconceptions appeared to be improving slowly from a low base in Ethiopia.

King and colleagues found that policy makers in LMICs, including in Ethiopia were less aware of health inequities (40). Policy makers preferred to improve the general status of health in their countries rather than addressing inequalities. Similar trends were found in a study that covered five counties, namely Uganda, Brazil, Cuba, Norway and Nepal in 2012 (41). Four of the five countries prioritised to improve efficiency factors than equity factors. This tendency was partially linked with the low level of awareness among policy makers. Unlike the LMICs, the awareness in developed countries is high, where equity interventions have progressed (42).

The level of knowledge and consensus on the definition of the construct of health inequality varied among the participants. Consistent to this, but from a study at the lower level of the health system, Bergen and colleagues found a wide range of definitions and perceptions on health equity in Western Ethiopia (29). Similar trends were observed when the policy-subject under consideration was a new or sensitive one. In 2014, Moore and colleagues reported that mixed quality of knowledge and widespread misconceptions were blocking the scale-up of safe abortion services policy in Uganda (43).

In the early 1980s, there was a mixed level of knowledge and limited cues for action in the UK, the US and Europe, which are now the most progressive regions (44). Consistent to the observation in this study, a historical lack of consensus on level and causes of

health inequality has also been found in other countries too (45). Exworthy reported that the iterative process took over a decade before the UK's policy makers agreed and started taking actions against inequity (46).

Producing the right information and making it visible to stakeholder is a key step in policy making. The quality of equity monitoring depends on the quality, frequency and timely use of the information (47). This study found inequality data was not always visible to all stakeholders in a fashion that is understandable and ready for making decisions. This situation could have led to the varying and mainly low awareness. A similar situation of low use of evidence for equity policy making was observed in the UK in the early 1980s. Exworthy, Blane and Marmot outlined the steps for how the use of data and its dissemination helped the UK to initiate and shape its equity programmes in health (48). The Black Report in the UK was rejected without action (44,46).

Participants living in regional states and development partners highlighted inequalities got persisted due to inverse equities that followed in appropriate policies. The richer and more advantaged got more. Similar perceptions were observed among Primary Health Care workers and districts managers in Ethiopia (29). Inverse equity or inverse law of health care is a concept that argues populations with a lower health need tend to get higher access to care; it affects progress towards equity (49). Onarihem et al. also argued that the Ethiopian budget for health is distributed unfairly and recommended a revision of the budget distribution formula (21).

Participants of this study demonstrated a weak understanding of broader factors that led or sustained child health inequality, which might in turn affect their effective policy making capacity. Socio-economic inequality, like the wealth gap, urban and rural divide were not raised and discussed. The participants who mostly are affiliated with the leading party might have decided not to accept that their party which came to power vowing to cut inequality in Ethiopia has not been so successful. Ethiopia is not different from other countries. The Kuznet theory argued per-capita income of above \$26,000 was found to be the tipping point where widening social inequalities started being reduced. However, there are emerging counterarguments that Kuznet's theory does not always work and countries can achieve equity while growing fast (50).

There was an extensive use of “us versus them” language, ‘victim blaming’ and frustrations during the interviews. Some participants from the federal state tended to argue peripheral regional states are the main cause of the inequality, due to lack of responsiveness, accountability, lifestyles and cultural factors. Blaming the victims for health inequality was observed and criticised in the 1970s and 1980s in Europe. Governments wanted to make the poor and marginalised responsible for their state of life and health. This masked the need to address broader social, cultural, political and economic factors that are causes of the cause of health inequalities (51); (52).

Multiple interest groups that could facilitate or hinder equity were identified. Shearer describes the importance of an advocacy network or group that could drive the right policy setting for health inequality (53); however, this study could not find that kind of organised group for health equity in Ethiopia.

Some participants have spoken about the political arrangement as an underlying cause for some of the inequality. The Ethiopian People’s Revolutionary Democratic Front (EPRDF) has put mechanisms of controlling security, development and stability in DRS and other regions in place (54). Historically, political power has always come from the two major parties of the EPRDF, but other member parties and those from DRS are keen to have more roles in the central government. The regional health heads are part of the Cabinet that forms DRS governments, participants indicated that regional health heads spend limited resources on non-health priorities to impress or influence the central government.

Most African countries do not respond to their inequalities in a systematic and direct fashion. In 2016 42 out of 46 African countries had committed to UHC in their policy documents (55). The Ethiopian FMOH has increasingly become progressive and open on addressing inequality as a policy issue. However, most of the pressure and detailed instructions for equity interventions are coming from the top political leadership. Linked with the paternalistic approaches and shifting the blame to the DRS, there is increasing reaction from the DRS. Literature shows that top down political decisions taken at the highest level in Africa may not materialise, due lack of proper assessment; limited preparedness of the system, and availability of funds (56). The federal state in India



demonstrated the same tendency of imposing federal interest and institutional ideology on health equity policy agenda setting. The outcome was ineffective policy that miss to considered local ethnic lifestyles in regional states (57).

We included various data collection and analysis approaches which made us triangulate the findings. The study however should be interpreted in light of its limitations. This study might have been challenged by the “policeman” or other similar effects of the tendency to be politically correct by the informants. Inequality by place of residence, which is linked with ethnicity and religion in Ethiopia, is very delicate. The data collection and analysis used triangulation and coding at abstract level to mitigate this potential limitation

## Conclusion

The progress towards reduction of health inequality in Ethiopia is in an early stage. Lack of relevant health policy that acknowledge the effect of wider determinants; unfair distribution of resources; less productive institutional set-ups and relations, coupled with limited knowledge budget and monitoring tools have affected progress in the reduction of health inequality in Ethiopia.

While there is a politically driven motivation to reduce health inequalities, the how and technical approaches are not clear, incomplete and developed by top leaders. The dynamism of the federal state, the interest of different political and technical groups should be reconsidered in the development of policy and detailed guidelines. Further studies are required to deeply investigate the feasibility of policy options that might help narrow the gap in child health as the country progresses towards UHC.

## List of abbreviations

APRHC African Population Research Centre

CMR Child mortality rate

CSDH Commission for Social Determinants of Health

DRS Developing Regional States

369 HPR Health Policy Researching

370 MOH Ministry of Health

371 PTF Policy Triangle Frameworks

372 RHB Regional State Health Bureau

373 SDH Social Determinants of Health

374 WHO World Health Organisation

### 375 **Declarations**

### 376 **Ethics approval and consent to participate**

377 Ethical clearance was obtained from University of South Africa, Health Studies Higher  
378 Committee in 2014, and from the Ethiopian National Research Ethics Review Committee  
379 in 2016.

380 All the study participants have signed a consent form. All of the study participants were  
381 debriefed on the study objectives, procedures, confidentiality, storage, use and  
382 dissemination of data before providing their consent. The researcher also requested  
383 permission to tape-record the interviews. Only one participant did not agree to be  
384 recorded or quoted.

### 385 **Consent for publication**

386 Not applicable

### 387 **Availability of data and material**



The datasets generated and/or analysed during the current study are not publicly available due sensitivity of the subject matter studied but are available from the corresponding author on a reasonable request.

### **Competing interest**

The authors declare that they have no competing interests.

### **Funding**

This research was partially funded by African Population Research Centre (APRHC). APRHC had no role in the design of the study, it provided technical and financial support for the write up of the reports. However, APRHC has neither reviewed nor approved the study report and this paper.

### **Authors' contributions**

Kassa M. Abbe conducted the research. Professor BL DOLAMO provided supervision and guidance to Kassa M. Abbe. Dr Alemayehu reviewed and edited the draft.

### **Acknowledgement**

Not applicable

## **References**

- (1) Ayele DG, Zewotir TT. Comparison of under-five mortality for 2000, 2005 and 2011 surveys in Ethiopia. BMC Public Health 2016 Sep 5;16:930-016-3601-0.
- (2) Li Z, Li M, Subramanian SV, Lu C. Assessing levels and trends of child health inequality in 88 developing countries: from 2000 to 2014. Global health action 2017;10(1):1408385-1408385.

- 410 (3) WHO D. Glossary of used items. 2017; Available at:  
411 <http://www.who.int/hia/about/glos/en/index1.html>. Accessed 02/18, 2014.
- 412 (4) Norheim OF, Asada Y. The ideal of equal health revisited: definitions and measures  
413 of inequity in health should be better integrated with theories of distributive justice. *Int J*  
414 *Equity Health* 2009 Nov 18;8:40-9276-8-40.
- 415 (5) Asada Y, Hurley J, Norheim OF, Johri M. Unexplained health inequality--is it unfair?  
416 *Int J Equity Health* 2015 Jan 31;14:11-015-0138-2.
- 417 (6) Whitehead M, Pennington A, Orton L, Nayak S, Petticrew M, Sowden A, et al. How  
418 could differences in 'control over destiny' lead to socio-economic inequalities in health?  
419 A synthesis of theories and pathways in the living environment. *Health Place* 2016  
420 5;39:51-61.
- 421 (7) Bambra C, Gibson M, Sowden A, Wright K, Whitehead M, Petticrew M. Tackling the  
422 wider social determinants of health and health inequalities: evidence from systematic  
423 reviews. *J Epidemiol Community Health* 2010;64.
- 424 (8) Whitehead M. A typology of actions to tackle social inequalities in health. *J*  
425 *Epidemiol Community Health* 2007 06;61(6):473-478.
- 426 (9) Maden M. Consideration of health inequalities in systematic reviews: a mapping  
427 review of guidance. *Syst Rev* 2016 Nov 28;5(1):202.
- 428 (10) Tranvag EJ, Ali M, Norheim OF. Health inequalities in Ethiopia: modeling  
429 inequalities in length of life within and between population groups. *Int J Equity Health*  
430 2013 Jul 11;12:52-9276-12-52.
- 431 (11) Marmot M, Friel S, Bell R, Houweling TA, Taylor S. Closing the gap in a generation:  
432 health equity through action on the social determinants of health. *The Lancet* 2008  
433 11/8-14;372(9650):1661-1669.
- 434 (12) Braveman P. What are health disparities and health equity? We need to be clear.  
435 *Public Health Rep* 2014 Jan-Feb;129 Suppl 2:5-8.
- 436 (13) Whitehead M. The Concepts and Principles of Equity and Health. *Int J Health Serv*  
437 1992 07/01; 2019/11;22(3):429-445.
- 438 (14) Stephens C. Urban inequities; urban rights: a conceptual analysis and review of  
439 impacts on children, and policies to address them. *Journal of urban health : bulletin of*  
440 *the New York Academy of Medicine* 2012 06;89:464-485.
- 441 (15) Alkenbrack S, Chaitkin M, Zeng W, Couture T, Sharma S. Did Equity of  
442 Reproductive and Maternal Health Service Coverage Increase during the MDG Era? An  
443 Analysis of Trends and Determinants across 74 Low- and Middle-Income Countries.  
444 *PLoS One* 2015 Sep 2;10(9):e0134905.
- 445 (16) McKinnon B, Harper S, Kaufman JS, Bergevin Y. Socioeconomic inequality in  
446 neonatal mortality in countries of low and middle income: a multicountry analysis.  
447 *Lancet Glob Health* 2014 Mar;2(3):e165-73.

- 448 (17) Memirie ST, Verguet S, Norheim OF, Levin C, Johansson KA. Inequalities in  
449 utilization of maternal and child health services in Ethiopia: the role of primary health  
450 care. BMC Health Serv Res 2016 Feb 12;16:51-016-1296-7.
- 451 (18) Barros AJ, Ronsmans C, Axelson H, Loaiza E, Bertoldi AD, Franca GV, et al.  
452 Equity in maternal, newborn, and child health interventions in Countdown to 2015: a  
453 retrospective review of survey data from 54 countries. Lancet 2012 Mar  
454 31;379(9822):1225-1233.
- 455 (19) Skaftun EK, Ali M, Norheim OF. Understanding inequalities in child health in  
456 Ethiopia: health achievements are improving in the period 2000-2011. PLoS One 2014  
457 Aug 28;9(8):e106460.
- 458 (20) Woldemichael A, Takian A, Akbari Sari A, Olyaeemanesh A. Availability and  
459 inequality in accessibility of health centre-based primary healthcare in Ethiopia. PLoS  
460 one 2019 03/29;14(3):e0213896-e0213896.
- 461 (21) Onarheim KH, Tadesse M, Norheim OF, Abdullah M, Miljeteig I. Towards  
462 universal health coverage for reproductive health services in Ethiopia: two policy  
463 recommendations. Int J Equity Health 2015 Sep 30;14:86-015-0218-3.
- 464 (22) Hosseinpour AR, Bergen N, Schlottheuber A, Grove J. Measuring health  
465 inequalities in the context of sustainable development goals. Bull World Health Organ  
466 2018 09/01;96:654-659.
- 467 (23) Asaria M, Ali S, Doran T, Ferguson B, Fleetcroft R, Goddard M, et al. How a  
468 universal health system reduces inequalities: lessons from England. J Epidemiol  
469 Community Health 2016 07;70(7):637-643.
- 470 (24) Tangcharoensathien V, Mills A, Palu T. Accelerating health equity: the key role of  
471 universal health coverage in the Sustainable Development Goals. BMC Med 2015 Apr  
472 29;13:101-015-0342-3.
- 473 (25) Rodney AM, Hill PS. Achieving equity within universal health coverage: a narrative  
474 review of progress and resources for measuring success. Int J Equity Health 2014 Oct  
475 10;13(1):72-014-0072-8.
- 476 (26) Lynch J. Reframing inequality? The health inequalities turn as a dangerous frame  
477 shift. Journal of public health (Oxford, England) 2017 01/09;39.
- 478 (27) Johnston R, Jen M, Jones K. On inequality, health, scientific progress and political  
479 argument: A response to Dorling and Barford. Health Place 2009 12;15(4):1163-1165.
- 480 (28) Braveman P. Social conditions, health equity, and human rights. Health Hum  
481 Rights 2010;12(2):31-48.
- 482 (29) Bergen N, Ruckert A, Kulkarni MA, Abebe L, Morankar S, Labontē R. Subnational  
483 health management and the advancement of health equity: a case study of Ethiopia.  
484 Global Health Research and Policy 2019 05/17;4(1):12.
- 485 (30) Braveman P, Gottlieb L. The social determinants of health: it's time to consider the  
486 causes of the causes. Public Health Rep 2014 Jan-Feb;129 Suppl 2:19-31.

- 487 (31) Exworthy M. Policy to tackle the social determinants of health: using conceptual  
488 models to understand the policy process. *Health Policy Plan* 2008 Sep;23(5):318-327.
- 489 (32) Wilson MG, Ellen ME, Lavis JN, Grimshaw JM, Moat KA, Shemer J, et al.  
490 Processes, contexts, and rationale for disinvestment: a protocol for a critical interpretive  
491 synthesis. *Syst Rev* 2014 Dec 11;3:143-4053-3-143.
- 492 (33) Shawar Y. Ingredients for good health policy-making: incorporating power and  
493 politics into the mix. *International Journal of Health Policy and Management* 2014  
494 05/09;2(4):203-204.
- 495 (34) Entwistle V, Firnigl D, Ryan M, Francis J, Kinghorn P. Which experiences of health  
496 care delivery matter to service users and why? A critical interpretive synthesis and  
497 conceptual map. *J Health Serv Res Policy* 2012 Apr;17(2):70-78.
- 498 (35) Strauss J, Corbin A. *Basics of Qualitative Research: Techniques and Procedures*  
499 *for Developing Grounded Theory*. Second ed.: Thousand Oaks, CA: Sage; 1998.
- 500 (36) Dixon-Woods M, Cavers D, Agarwal S, Annandale E, Arthur A, Harvey J, et al.  
501 Conducting a critical interpretive synthesis of the literature on access to healthcare by  
502 vulnerable groups. *BMC Medical Research Methodology* 2006 07/26;6(1):35.
- 503 (37) Ministry of Health. *Equity Action Plan 2016-2020*. 2016.
- 504 (38) FMOH H. *Health Sector Transformation Plan*. 2015;2.
- 505 (39) Clarke B, Swinburn B, Sacks G. The application of theories of the policy process to  
506 obesity prevention: a systematic review and meta-synthesis. *BMC Public Health* 2016  
507 10/13;16:1084.
- 508 (40) King NB, Harper S, Young ME. Who cares about health inequalities? Cross-country  
509 evidence from the World Health Survey. *Health Policy Plan* 2013 Aug;28(5):558-571.
- 510 (41) Mirelman A, Mentzakis E, Kinter E, Paolucci F, Fordham R, Ozawa S, et al.  
511 Decision-Making Criteria among National Policymakers in Five Countries: A Discrete  
512 Choice Experiment Eliciting Relative Preferences for Equity and Efficiency. *Value in*  
513 *Health* 2017/03;15(3):534-539.
- 514 (42) European portal for action on health inequality. Project Database. Available at:  
515 <http://www.health-inequalities.eu/projects/project-database>. Accessed January/15,  
516 2017.
- 517 (43) Moore AM, Kibombo R, Cats-Baril D. Ugandan opinion-leaders's™ knowledge and  
518 perceptions of unsafe abortion. *Health Policy Plan* 2014 10/01;29(7):893-901.
- 519 (44) Bleich SN, Jarlenski MP, Bell CN, LaVeist TA. Health Inequalities: Trends,  
520 Progress, and Policy. *Annu Rev Public Health* 2012 01/06;33:7-40.
- 521 (45) Droomers M. Tackling health inequalities in the Netherlands. *Eurohealth*  
522 2007;15(03):16.
- 523 (46) Exworthy M, Bindman A, Davies H, Washington AE. Evidence into Policy and  
524 Practice? Measuring the Progress of U.S. and U.K. Policies to Tackle Disparities and

- 525 Inequalities in U.S. and U.K. Health and Health Care. *Milbank Q* 2006 03;84(1):75-109.
- 526 (47) Kjellsson G, Gerdtham U, Petrie D. Lies, Damned Lies, and Health Inequality
- 527 Measurements: Understanding the Value Judgments. *Epidemiology* 2015 09;26(5):673-
- 528 680.
- 529 (48) Exworthy M, Blane D, Marmot M. Tackling Health Inequalities in the United
- 530 Kingdom: The Progress and Pitfalls of Policy. *Health Serv Res* 2003 12;38(6):1905-
- 531 1922.
- 532 (49) Pedersen AF, Vedsted P. Understanding the inverse care law: a register and
- 533 survey-based study of patient deprivation and burnout in general practice. *Int J Equity*
- 534 *Health* 2014 Dec 12;13(1):121-014-0121-3.
- 535 (50) Costa-Font J, Hernandez-Quevedo C, Sato A. A Health  $\sim$ Kuznets $\hat{c}$ <sup>TM</sup>
- 536 Curve $\hat{c}$ <sup>TM</sup>? Cross-Sectional and Longitudinal Evidence on Concentration Indices $\hat{c}$ <sup>TM</sup>.
- 537 *Social Indicators Research* 2017:1-14.
- 538 (51) Uphoff EP, Pickett KE, Cabieses B, Small N, Wright J. A systematic review of the
- 539 relationships between social capital and socioeconomic inequalities in health: a
- 540 contribution to understanding the psychosocial pathway of health inequalities. *Int J*
- 541 *Equity Health* 2013 Jul 19;12:54-9276-12-54.
- 542 (52) Watt RG. From victim blaming to upstream action: tackling the social determinants
- 543 of oral health inequalities. *Community Dent Oral Epidemiol* 2007;35(1):1-11.
- 544 (53) Shearer JC, Abelson J, KouyatÃ© B, Lavis JN, Walt G. Why do policies change?
- 545 Institutions, interests, ideas and networks in three cases of policy reform. *Health Policy*
- 546 *Plan* 2016 11/01;31:1200-1211.
- 547 (54) Bekele WY, Kjosavik JD, Shanmugaratnam N. State-Society Relations in Ethiopia:
- 548 A Political-Economy Perspective of the Post-1991 Order. *Social Sciences* 2016;5(3).
- 549 (55) Cotlear D. Policies to mitigate health inequity: a comparison of Israel and 24
- 550 developing countries. *Israel Journal of Health Policy Research* 2016 09/01;5:56.
- 551 (56) Ridde V, Morestin F. A scoping review of the literature on the abolition of user fees
- 552 in health care services in Africa. *heapol* 2010 06/14; 11/24;26(1):1-11.
- 553 (57) Gopalan SS, Mohanty S, Das A. Challenges and opportunities for policy decisions
- 554 to address health equity in developing health systems: case study of the policy
- 555 processes in the Indian state of Orissa. *International Journal for Equity in Health*
- 556 2011;10(1):55.

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