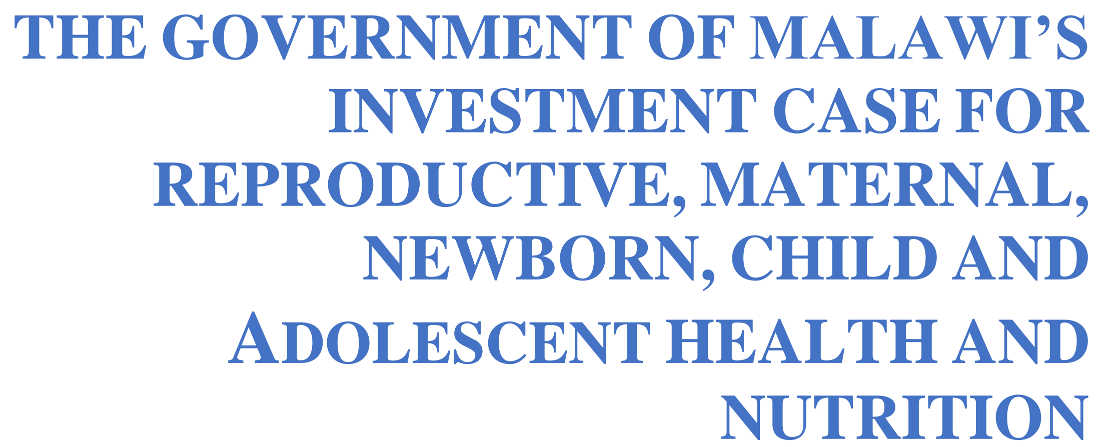

THE GOVERNMENT OF MALAWI'S INVESTMENT CASE FOR REPRODUCTIVE, MATERNAL, NEWBORN, CHILD AND ADOLESCENT HEALTH AND NUTRITION

ANNEXURES

MINISTRY OF HEALTH
GOVERNMENT OF MALAWI
2019 - 2022

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Annex 1: List of stakeholders

Annex 1.1: Participants of the costing workshop

Table I: List of participants - Costing Workshop

PARTICIPANT'S NAME	DESIGNATION	PLACE OF WORK
Dominic Nkhoma	Deputy Director	College of Medicine
Christina Chilimba	Youth Champion	Graca Machel Trust
Amos Bemeyani	M & E Specialist	MOHP-PIU
C. Chaphuka	Medical Physicist	MOHP-PAM
Chikhulupiliro Chimwaza	Pharmacist	MOHP-HTSS
Maryrose Kuni	Acting Director of Programmes	National Youth Council of Malawi
Atamandike Chingwanda	Consultant	GFF
Clarisse Uzamukunda	PBF Advisor	ONSE HEALTH
Elizabeth Chingaipe	CPHCO	MOHP-CHSS
Beverley Bhima	Project Officer	MHEN
Pius Nakoma	Country Liaison	GFF
Malangizo Mbewe	CQMO	QMO-SW
Precious Phiri	PPHCO	MOHP-CHSS
Macfarlane Magombo	HRM	MOHP-HR
Stephanie Heung	Senior Associate, Health Financing	CHAI
Sakshi Mohan	Economist	MOHP-DPPD
Nikhil Mandalia	Economist	MOHP-DPPD
Osman Kitta	Health Financing Advisor	OPTIONS
Mbongeni Chizonda	TA-HMIS	MOHP-CMED
Frehiwot Birhanu	Program Manager	CHAI
Ruth Mwale	CQMO	MOHP-QMD-CE
Ambonishe Mwalwimba	CPS (CRVS)	UNICEF
Ian Yoon	Associate	CHAI
Rhoda Banda	Deputy Manager	MOHP-PIU
Rodnch Mhango	Consultant	National Youth Council of Malawi

Annex 1.2: Participants for the Monitoring and Evaluation framework workshop

Table II: List of participants – M&E Workshop

PARTICIPANT'S NAME	DESIGNATION	PLACE OF WORK
Simeon Yosefe	CST	MOHP-CMED
Wathu Mpoola	RM&EO	NYCOM
Christina Chilimba	Youth Champion	Gracia Machel Trust
Blessings Kamanga	DHIS 2 Programmer	KUUNIKA
Ambonishe Mwalwimba	CPS (CRVS)	UNICEF
Austin Omiunum	SCMA - TA	MOHP-HTSS
Sakshi Mohan	Economist	MOHP-DPPD
Nikhil Mandalia	Economist	MOHP-DPPD
Macfarlane Magombo	HR	MOHP-HR
Maziko Matemba	CSO Focal/Director	CSO Coalition
Bongani Chinkwapulo	QMD	MOHP-QMD
Pius Nakoma	GFF Liaison Officer	GFF
Kirsten Gagnaire	Consultant	GFF

Annex 1.3: Participants for the bottleneck analysis

Table III: List of participants – Bottleneck Analysis

PARTICIPANT'S NAME	DESIGNATION	PLACE OF WORK
Dr. Samantha Musasa	District Medical Officer	Balaka
Mr. Chikondi Nyson	Hospital Matron	Balaka
Dr. Gift Kawalazira	Director of Health and Social Services	Blantyre DHO
Wezzie Mgungwe	District Nursing Officer	Blantyre DHO
Loncy Sajeni	EHO	Blantyre DHO
Stephanie Heung	Senior Associate, Health Financing	CHAI
Dr. Stalin Zinkanda	Director of Health and Social Services	Chikwawa
Sylivia Pelenje	District Nursing Officer	Chikwawa
Dr. Jameson Chausa	Director of Health and Social Services	Chiradzulu
Memory Bwanali	District Nursing Officer	Chiradzulu
Dr. Ted Bandawe	Director of Health and Social Services	Chitipa
Selemani Kondowe	District Nursing Officer	Chitipa
Dr. Regina Chimenya	Director of Health and Social Services	Dedza

PARTICIPANT'S NAME	DESIGNATION	PLACE OF WORK
Grace Magaleta	District Nursing Officer	Dedza
Heather Macey	Country Director	Dignitas International
Dr. Peter Makoza	Director of Health and Social Services	Dowa
Mayamiko Machika	Matron	Dowa
Chimwemwe Chunga	NISCO	EPI-MOHP
Svenja Schneider	TA	GIZ
Chikhulupiliro Chimwaza	Pharmacist	HTSS-P MOHP
Dr. Phinias Mfune	Director of Health and Social Services	Karonga
Mr. Joseph Kasililika	Senior Nursing Officer	Karonga
Dr. Emmanuel Golombe	Director of Health and Social Services	Kasungu
Peter Ndlovu	District Nursing Officer	Kasungu
Aubrey Banda	District Medical Officer	Kasungu
Lizzie Msooya	MMO	Kasungu DHO
Dr. David Sibale	Director of Health and Social Services	Likoma
Kumbukani Sakala	District Nursing Officer	Likoma DHO
Regina Mankhamba	TA-SW/CE QMO	Lilongwe
Dr. Gerald Manthalu	Deputy DPPD	MOH-DPPD
Sakshi Mohan	Economist	MOH-DPPD
Nikhil Mandalia	Economist	MOH-DPPD
Pius Nakoma	GFF Liaison Officer	GFF
Atamandike Chingwanda	GFF Consultant	GFF
James Mbewe	Senior Medical Officer	Lilongwe DHO
Esther Kapakule	SNO	Lilongwe DHO
Dr. Arnold Kapachika	Director of Health and Social Services	Machinga
Gertrude Ngwalo-Banda	District Nursing Officer	Machinga
Innocent Mhango	District Medical Officer	Machinga DHO
Dr. Henry Chibowa	Director of Health and Social Services	Mangochi
MacDonald Gondwe	District Nursing Officer	Mangochi
Dr. Henry Chibowa	Director of Health and Social Services	Mangochi DHO
Dr. Juliana Kanyengambeta	Director of Health and Social Services	Mchinji
Tinamwabi Msiska	District Nursing Officer	Mchinji DHO
Henry Mphwanthe	Senior Health Economist	MOHP -DPPD
Jean Nyondo	HPTSO	MOHP-DPPD

PARTICIPANT'S NAME	DESIGNATION	PLACE OF WORK
Pakwanja Twea	Economist	MOHP-DPPD
Newton Temani	Program Officer	MOHP-IMCI
Dr Malangizo Mbewe	CQMO	MOHP-SWZ
Dr. Alinafe Kalanga	Director of Health and Social Services	Mulanje
Gloria Chirombo	District Nursing Officer	Mulanje
Dr. Gilbert Chapweteka	District Medical Officer	Mwanza
Dawina Phiri	District Nursing Officer	Mwanza
Dr. Wiseman Phiri	District Medical Officer	Mzimba North
Leah Sinyiza	Senior Nursing Officer	Mzimba North
Dr. Lumbani Munthali	Director of Health and Social Services	Mzimba South
Daisy Simeza	District Nursing Officer	Mzimba South
Martha Kutsamba	District Nursing Officer	Neno
Dr. Lawrence Nazimera	Director of Health and Social Services	Neno
Martha Kusamba	District Nursing Officer	Neno
Dr. Mwatikonda Mbendera	Director of Health and Social Services	Nkhatabay
Mr. Bonifacio Ndovi	District Nursing Officer	Nkhatabay
Dr. Jacob Kafulafula	District Medical Officer	Nkhotakota
Icilly Medi	District Nursing Officer	Nkhotakota
Dr. Owen Musopole	Quality Management Officer	North Zone
Dr. Alexander Chijuwa	Director of Health and Social Services	Nsanje
Zione Maida	District Nursing Officer	Nsanje
Alfonsina Ndembera	District Medical Officer	Nsanje DHO
Dr. Gilbert Lodzeni	District Medical Officer	Ntcheu
Mrs Gloria Magombo	District Nursing Officer	Ntcheu
Dr. Zondwayo Ng'oma	Director of Health and Social Services	Ntchisi
Salome Mabvuka	District Nursing Officer	Ntchisi DHO
Hudson Nkunika	Director	ONSE HEALTH
Dr. Anne Phoya	Director	ONSE HEALTH
Dr. Memory Siwombo	District Medical Officer	Phalombe
Joseph Zulu	District Nursing Officer	Phalombe
Sophie Chimwenje	PRHO	RHD-MOHP
Nehn Mkandawire	Nursing Officer	Rumphi
Dr Steven Macheso	Director of Health and Social Services	Rumphi
Ivy Chilingulo	District Health Officer	Salima DHO

PARTICIPANT'S NAME	DESIGNATION	PLACE OF WORK
Victoria Mzungu	District Nursing Officer	Salima DHO
Alinafe Mangulenje	Quality Management Officer	South East
Dr. Arnold Jumbe	Director of Health and Social Services	Thyolo
Esmie Kamaliza	District Nursing Officer	Thyolo
Paula Beltran	Consultant	UNICEF
Shahrouh Sharif	Consultant	UNICEF
Bejoy Nambiar	Health Specialist	UNICEF
Modesta Banda	District Nursing Officer	Zomba
Dr Raphael Piringu	Director of Health and Social Services	Zomba DHO

Annex 1.4: GFF platform members and roles

Table IV: GFF platform members and roles

Constituency	Proposed Members	Roles and Responsibilities	Representative in Country Platform
Government	• Office of the President and Cabinet • Ministry of Health and Population • Ministry of Finance/Treasury • Ministry of Education, Science, and Technology • Ministry of Gender, Disability and Social Welfare • Ministry of Agriculture, Irrigation, and Water Development • Ministry of Local Government and Rural Development • Ministry of Youth • Ministry of Home Affairs and Internal Security • National Registration Bureau • National Youth Council • National Planning Commission	• Leadership and stewardship including convening all stakeholders to develop investment case and health financing strategies in support of RMNCAH and nutrition. • Ensures that progress on roadmap and investment case implementation aligns with guiding principles • Provide enabling environment for effective domestic and external resource mobilization	All members listed

Constituency	Proposed Members	Roles and Responsibilities	Representative in Country Platform
	● National Statistics Office (NSO) ● Parliamentary Representative and Councils ● Representatives of Districts Councils		
Development Partners	● UN Agencies: WHO, UNICEF, UNFPA, UN Women, UNDP, UNAIDS ● Multilaterals: World Bank, EU ● Bilaterals: USAID, DFID, GIZ/KfW, Irish Aid, SIDA, JICA, NORAD, Embassy of Iceland	● Global, regional and country-level coordinated policy, technical and financial assistance. ● Fosters cross-country sharing of knowledge, best practices and experience on what works ● Convenes multi-sectoral partners around RMNCAH, building on and reinforcing existing mechanisms for coordination	Health Donors Group Chair and Co-Chair; WHO, UNICEF, UNFPA, UN WOMEN, UNDP, UNAIDS, USAID, WORLD BANK, GIZ, KFW, EU, IRISH AID, SIDA, JICA, NORAD, EMBASSY IF ICELAND, BILL AND MELINDA GATES,
Funding Mechanism/ Foundations	● GAVI, the Vaccine Alliance ● The Global Fund ● Bill and Melinda Gates Foundation ● Health Sector Joint Fund	● Alignment of funding ● Complementary financing (increasingly over time through pooling or shared management) of an agreed investment case ● Aligning ongoing investments in broader technical assistance and service delivery programs with the agreed investment case ● Adherence to aid effectiveness principles such as transparency and predictability ● Sharing of global good practices	
INGOs/NGOs	● Health Policy Plus ● Clinton Health Access Initiative ● Management Sciences for Health	● Support country planning and implementation, including development of investment case and health financing strategies	Technical Assistance Partners – Health Policy Plus, CHAI, Options, MSH

Constituency	Proposed Members	Roles and Responsibilities	Representative in Country Platform
	• Baobab Health Trust • World Vision International • RTI International • Catholic Relief Services • Partners In Health • Care International • Options • Data for Health Initiative • Save the Children • JHPIEGO • Plan International • Chemonics International • FHI	• Service delivery and demand generation, • Advocacy for resource mobilization and policies • Independent monitoring and accountability to strengthen national and sub-national responses • Advocacy and social mobilization to ensure accountability and strengthen national and sub-national responses	
CSOs/FBOs/Media/Accountability Structures	• Malawi Health Equity Network • Universal Health Coverage Coalition • Civil Society Organization Nutrition Alliance • Family Planning Association of Malawi • Malawi Coalition of Basic Education • CISANET • Maikhanda Trust • National Youth Network • Health and Rights Education Programme • Malawi Interfaith AIDS Organization • Malawi Girl Guides Association • Malawi Human Rights Commission • Medical Council of Malawi • Nurses and Midwives Council of Malawi • Pharmacy, Medicine and Poisons Board • Malawi Economic Justice Network • Parent and Child Health Initiative • Office of the Ombudsman • DREAMS (20 organizations)	• Amplifying voices of local communities to identify needs, barriers, and bottlenecks; • Support country planning and implementation, including development of investment case and health financing strategies • Advocacy for resource mobilization and policies and social mobilization to ensure accountability and strengthen national and sub-national responses • Independent monitoring and accountability to strengthen national and sub-national responses; support for tracking and transparency of financial flows • Enhancing communication and transparency with large and diverse network of civil society and with communities	MANASO

Constituency	Proposed Members	Roles and Responsibilities	Representative in Country Platform
Private Sector	• Christian Health Association of Malawi • Private Hospitals/Practitioners • MASM • Malawi Chamber of Commerce and Industry • Pharmaceutical Companies	• Service delivery strengthening, manufacturing, commodity distribution, etc. including through public private partnerships • Providing human resource for health through private health training institutions • Leveraging new technologies to improve and strengthen RMNCAH services	Christian Health Association of Malawi
Health Professional Associations	• Medical Association of Malawi (Specialists, Clinical officers) • National Organization of Nurses and Midwives of Malawi • Association of Malawian Midwives • Pharmaceutical Society of Malawi • Laboratory Association of Malawi	• Adaptation and compliance with standards and guidelines • Voicing health workforce challenges and developing effective strategies to address them	Medical Association of Malawi (Specialists, Clinical officers) National Organization of Nurses and Midwives of Malawi
Academic and Research Institutions	• University of Malawi (College of Medicine, College of Nursing, School of Public Health, Centre for Social Research) • Malawi University of Science and Technology • Johns Hopkins University • Health Economic Unit Thanzi La ONSE-University of York • Liverpool School of Tropical Medicine • London School of Hygiene and Tropical Medicine • University of North Carolina • REACH Trust	• Producing and distilling evidence for policymaking and priority setting • Institutionalize knowledge management platform for the development and implementation of investment case	College of Medicine – University of Malawi

Annex 2.1: Interventions identified for the Investment Case by building blocks

Table V: Total list of interventions,

Prioritized Intervention	Non-Prioritized Intervention

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Drugs and Medical Commodities								
Address the inefficiencies of procurement and distribution of drugs, medical supplies and medical equipment in the supply chain system in Malawi	PSP 3.2	76,030	0	0	**76,030**	**Yes**	**76,030**	Intervention is comprised of an initial functional review of HTSS and the provision of temporary technical assistance. These activities will allow for greater clarity in HTSS's role in providing oversight for CMST and thus allow for greater accountability on both sides - leading to improvement in efficiency of operations.

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Combined packaging of ORS and Zinc along with instructions on administration	PSP 3.4	24,893	0	0	**24,893**	**Yes**	**24,893**	Intervention can lead to significant health gains through improvements in efficiency
Conduct regular DPAT (District Product Availability Teams) and HPAT (Health Center Product Availability Teams) meetings	PSP 5.1	88,082	88,082	88,082	**264,247**	**Yes**	**264,247**	Intervention can make significant improvements to accountability at the District and Health Facility levels, leading to greater availability of medicines
Enhance district level capacity to use open LMIS data	PSP 4.1	49,296	3,503	0	**52,799**	**Yes**	**52,799**	Leads to improvements in drug quantification and forecasting, improving the availability of medicines.
Harmonize all supply chain systems	PSP 3.4	17,808	0	0	**17,808**	**Yes**	**17,808**	Reduced duplication of supply chain systems can ensure that resources are used efficiently, and focused on improvements to one rather than many parallel systems

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Improve inventory management at facility level to reduce wastage(expiration)	PSP 5.2	122,760	0	122,760	**245,520**	**Yes**	**245,520**	Reduced wastage can improve efficiency in resource use and reduce the number of stock-outs
Increase district drug budget	PSP 3.1	29,383,685	32,178,073	35,238,208	**96,799,967**	**Yes**	**16,191,879**	Gap for nutrition commodities, and commodities for common obstetric complications (hemorrhage, sepsis), diarrhea, pneumonia; 25% of the family planning commodities gap.
Mobilization of blood donors	PSP 3.2	128,219	0	0	**128,219**	**Yes**	**128,219**	Improved availability of blood units in more rural/peri-urban areas, will contribute to reduced mortality and morbidity from pregnancy related complications (i.e. PPH).
Provide Commodities to deliver the Community Health Package	NCHS 4.4	122,760	0	0	**122,760**	**Yes**	**122,760**	Improved availability of medicines and commodities
Set up a system for redistribution of drugs between facilities	PSP 3.4	298,287	0	0	**298,287**	**Yes**	**298,287**	Can reduce wastage and address problems of equity in existing

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
								distribution of medical commodities.
Strengthen LMIS data management at facility level including recording forms, transaction forms and reporting forms to improve drug stock reporting by facilities	PSP 4.1	145,890	0	0	**145,890**	**Yes**	**145,890**	Improved usage of LMIS can help to reduce the amount of wastage in facilities and can help to prevent stock-outs at facility level
Address the inefficiencies of procurement and distribution of drugs at CMST	PSP 3.2	81,935	81,935	81,935	**245,805**	**No**		
Assess available Family Planning methods in Malawi to ensure that most suitable methods are included in standard treatment guidelines (pharmacosurveillance)	PSP 3.2	5,955	0	0	**5,955**	**No**		
Assess the cost-effectiveness of single source procurement of drugs from CMST and accountability issues	PSP 3.2	26,866	0	0	**26,866**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Carry out a review of assessments done on the efficiency of centralized blood procurement and assess the quality of facility collected blood	PSP 3.2	31,781	0	0	**31,781**	**No**		
Explore mechanisms for improving access to blood for health facilities	PSP 3.4	31,825	0	0	**31,825**	**No**		
implement the updated drug procurement policy	PSP 3.2	17,864	0	17,864	**35,729**	**No**		
Improve engagement with CSOs on drug availability and reducing drug leakages	PSP 5.2	0	0	0	**0**	**No**		
Procure water ambulances for commodity delivery and emergency cases	QMS 6.7	0	0	0	**0**	**No**		
Recapitalize CMST to ensure timely procurement	PSP 3.1	3,503	0	0	**3,503**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Update Drug procurement policy to take into account recommendations from the cost-effectiveness assessment	PSP 3.2	0	11,087	0	**11,087**	**No**		
Health Financing								
Increase health facility autonomy in using their own budget	HSSP-II 5.7.13	214,266	178,474	178,474	**571,215**	**Yes**	**571,215**	Increased efficiency at the health facility level, leading to improved service delivery.
Improve absorption of donor funds in health sector	HSSP-II 5.8.5	29,716	0	0	**29,716**	**No**		
Provide guidelines to districts to allocate resources to health facilities based on need	HSSP-II 5.8.5	16,155	0	0	**16,155**	**No**		
Health Information Systems (HIS)								
Improve Health Facility Reporting forms to remove duplication of entries by health staff	MEHIS 1.1	236	17,921	70,683	**88,840**	**Yes**	**88,840**	Improved efficiency and more effective use of available human resources
Review standard zonal review guidelines to include both data assessments and quality (Develop a Zonal Action	MEHIS 2.8	32,519	0	0	**32,519**	**Yes**	**32,519**	Intervention is comprised of an initial assessment which will inform to the development of Zonal Tracker. This will

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Tracker to track progress with specific timelines and responsible person)								facilitate monitoring and accountability at the zonal level, and will allow for greater evidence informed decision-making.
Strenghten MDSR data quality	MEHIS 1.6	162,687	0	162,687	**325,374**	**Yes**	**325,374**	Improved service delivery through clinical audit functions
Assist MDAs in the adoption, integration and use of the Birth Certificate and unique ID in the provision of their services.	MEHIS 1.6	23,691	1,000,705	695,960	**1,720,355**	**No**		
Assist MOHP in the adoption, integration and use of the Birth Certificate and unique ID in the provision of their services.	MEHIS 1.6	30,905	0	0	**30,905**	**No**		
Conduct joint MOHP and NRB national monitoring exercise of CRVS activities (both birth and death registration) to all districts.	MEHIS 1.6	52,415	62,841	52,415	**167,671**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Increase data use capacity at facilities and districts	MEHIS 2.6	228,313	2,167,587	345,683	**2,741,583**	**No**		
Institutionalize the birth and death registration in the MOHP	MEHIS 1.6	26,254	19,388	19,388	**65,031**	**No**		
Introduce digital data collection tools at the health facility level	MEHIS 1.3	0	60,485	471,513	**531,998**	**No**		
Introduce Electronic Medical Records	MEHIS 1.5	3,721,671	4,900,502	3,037,271	**11,659,443**	**No**		
Link the CR electronic system and DHIS in health for determining proportion of births notified to the	MEHIS 1.2	11,123	0	0	**11,123**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
civil registration (CR) agency versus actual.								
Make HIS sub-systems interoperable	MEHIS 1.4	28,179	0	28,179	**56,358**	**No**		
Monitor and provide supportive supervision of CRVS activities by joint district team to all health facilities in the district	MEHIS 1.6	29,470	29,470	29,470	**88,411**	**No**		
Provide technical and financial support for national CRVS coordination in the MOHP	MEHIS 1.6	11,722	8,904	8,904	**29,530**	**No**		
Quarterly Zonal Review Meeting	MEHIS 2.8	259,208	259,208	259,208	**777,623**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Roll out community birth and death registration in all districts by December 2020.	MEHIS 1.6	16,437	87,672	0	**104,109**	**No**		
Roll out health facility based (24 districts) and community based (all districts) death registration by December 2020.	MEHIS 1.6	1,333,298	0	0	**1,333,298**	**No**		
Upgrade data server	MEHIS 1.3	0	10,274	0	**10,274**	**No**		
Human Resources for Health								
Develop clearly defined roles among each cadre at the national level	HRH 1.2	17,932	47,526	35,863	**101,321**	**Yes**	**101,321**	Increased accountability of workers to lead to improved service delivery.
Develop integrated in-service training curriculum for health clinical staff (clinicians and nurses)	HRH 3.3	837,140	820,805	820,805	**2,478,750**	**Yes**	**2,478,750**	Improved resource use through efficiency gains
Improve Human Resource Management Practices at the national and district level	HRH 2.1	52,542	215,419	0	**267,961**	**Yes**	**267,961**	Efficiency gains

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Increase pre-service production capacity and quality of prioritized health professional training programmes based on need	HRH 3.1	65,051	227,095	60,843	**352,990**	**Yes**	**352,990**	Improved efficiency and more effective use of available resources
Increased supportive supervision for RMNCH programs	HRH 2.3	65,537	65,537	65,537	**196,612**	**Yes**	**196,612**	Increased accountability of workers and capacity building to lead to improved service delivery.
Increased supportive supervision of HSAs by SHSAs	NCHS 1.3	35,840	52,702	69,565	**158,107**	**Yes**	**158,107**	Increased accountability of workers and capacity building to lead to improved service delivery.
Recruit and redistribute health workers based on the needs provided by the HRH Strategy	HRH 1.2	111,190,033	111,190,033	111,190,033	**333,570,099**	**Yes**	**7,045,868**	Increase availability of HSAs in Mangochi, Lilongwe, Blantyre, Mchinji, Phalombe, Thyolo, Mzimba South and Mwanza to fill a third of the current gap; Meet 30% of the health facility staffing gap for Mangochi, Lilongwe, Blantyre, Mchinji, Phalombe, Thyolo,

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
								Mzimba South and Mwanza
Strengthen accreditation systems, regulation of health workers, their training and practice	HRH 2.3	25,899	20,252	174,094	**220,244**	**Yes**	**220,244**	Increased accountability of workers and capacity building to lead to improved service delivery.
Strengthen coordination of relevant post-basic and in-service training to meet service delivery needs	HRH 3.3	41,239	275,479	467,981	**784,699**	**Yes**	**784,699**	Improvements in efficiency.
Strengthen district HRH governance	HSSP-II 5.7.1	1,003,782	993,174	6,738,759	**8,735,715**	**Yes**	**8,735,715**	Greater accountability and autonomy at the district level can ensure that staffing levels within the district are appropriately taken into account, and recruitments are based on need - so that targeted levels of EHP service coverage can be met

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Strengthen HRH information systems, capacity, and use for HRH policy, planning, management, and development at all levels	HRH 1.1	10,016	343,978	136,712	**490,707**	**Yes**	**490,707**	Increased ability to distribute HRH in an equitble manner, leading to improvements in health outcomes in areas with the greatest need.
Strengthen national and district level HR departments to enable effective workforce planning, deployment, recruitment, and management	HRH 2.1	310,642	1,250,509	543,585	**2,104,735**	**Yes**	**2,104,735**	Increased ability to distribute HRH in an equitble manner, leading to improvements in health outcomes in areas with the greatest need.
Develop and implement strategies to motivate and retain health workers in the health system, and in particular in hard-to-reach areas	HRH 2.4	46,036	52,103	34,298	**132,437**	**No**		
Implement integrated in-service training curriculum for existing HSAs and pre-service training curriculum for new HSAs	HRH 2.3	161,890	135,844	16,744,182	**17,041,916**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Improved tracking of catchment area covered by HSAs through supportive supervision and mobile technology	HRH 1.1	1,837,911	1,404,185	1,515,411	**4,757,507**	**No**		
Promote decent and safe working conditions for health workers	HRH 2.5	7,818	111,410	25,877	**145,105**	**No**		
Revise established posts for HRH staff to reflect optimal service delivery, and the establishment for HSAs to reflect ideal 1:1000 HSA to population ratio	HRH 1.2	151,771	0	1,986	**153,758**	**No**		
Infrastructure and Transport								
Construct, rehabilitate and upgrade health facilities and health posts as per the Capital Investment Plan	CIP (i)	81,343,765	75,098,978	104,403,487	**260,846,231**	**Yes**	**25,706,065**	Health Post construction costs for Mzimba South, Mwanza, Mchinji, Ntchisi, Nkhata Bay, Mangochi; Mzimba South Community Hospital; Mchinji Health Center

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Construction of 'HSA housing units in hard-to-reach catchment areas	CIP (i)	1,185,886	1,171,982	1,171,982	**3,529,851**	**Yes**	**3,529,851**	Improved availability of services in rural/hard-to-reach areas
Improve mobility of HSAs to improve coverage of catchment area	NCHS 4.3	8,909,014	3,838,197	2,572,430	**15,319,641**	**Yes**	**15,319,641**	Improved availability of services in rural/hard-to-reach areas
Advocate for improved road infrastructure through Ministry of Transport and Public Infrastructure (particularly to prioritize construction of roads in areas rendered inaccessible during rains) in collaboration with Ministry of Education and Agriculture, and the District Education Office and District Agriculture Office	HSSP-II 5.3.5	5,244	0	0	**5,244**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Assessment of construction costs (comprehensive efficiency assessment) to bring down standard cost guidelines for high quality, low cost facility construction	CIP (i)	27,808	0	0	**27,808**	**No**		
Construct adequate waiting spaces in health facilities to accommodate both males and females	CIP (ii)	13,214	0	0	**13,214**	**No**		
Construct waiting homes	CIP (i)	383,562	383,562	383,562	**1,150,685**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Disseminate Capital Investment Plan for resource mobilization and infrastructure guidelines	CIP (i)	205,854	0	0	**205,854**	**No**		
Ensure the provision of basic minimum utilities at all facilities based on the results from SARA	CIP (iii)	3,691,781	3,691,781	0	**7,383,562**	**No**		
Improve availability of outreach services	HSSP-II 5.3.5	4,930,137	0	0	**4,930,137**	**No**		
Leadership and Governance								
Enhance capacity of leadership and accountability structures at the community level	HSSP-II 5.7.1	9,565,903	3,783,464	5,953,684	**19,303,051**	**Yes**	**5,704,754**	Development of manuals, and training of CHAGs and HCMCs across the country, to ensure roles and responsibilities are adhered to within the governing structures.

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Improve engagement of partners in DIP developments and district review meetings	HSSP-II 5.7.5	271,024	117,501	121,055	**509,580**	**Yes**	**509,580**	Intervention to improve partner alignment with district priorities leading to better use of government and external resources.
Orient Directorates of Health and Social Services on their role	HSSP-II 5.7.1	14,626	20,313	0	**34,939**	**Yes**	**34,939**	Improved accountability
Strengthen partner harmonization forums at the district level	HSSP-II 5.7.5	422,306	430,838	422,306	**1,275,451**	**Yes**	**1,275,451**	Intervention to improve partner alignment with district priorities leading to better use of government and external resources.
Training of Hospital Ombudsman	HSSP-II 5.7.1	121,879	0	121,879	**243,759**	**Yes**	**243,759**	Improved accountability
Assess avenues for inter-sectoral collaboration (Ministry of Agriculture) in the implementation of nutrition activities	HSSP-II 5.7.5	20,792	3,884	3,884	**28,560**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Assess avenues for inter-sectoral collaboration (MoE, Ministry of Youth Development) in the implementation of SRHR policy	HSSP-II 5.7.5	9,520	3,884	3,884	**17,289**	**No**		
Assess the feasability of legalising abortions and develop a workplan	HSSP-II 5.7.11	1,066	1,942	0	**3,009**	**No**		
Collaborate with Ministry of Agriculture and Education on nutrition activities (including adolescent nutrition)	HSSP-II 5.7.5	31,673	40,452	0	**72,124**	**No**		
Conduct training needs assessment in operational research within QM structures	QMS 7.5	0	27,848	27,848	**55,696**	**No**		
Hold Community Health TWG on a quarterly basis	HSSP-II 5.7.5	18,671	18,671	18,671	**56,014**	**No**		
Orient Health and Environmental Committee on health issues in the district	HSSP-II 5.7.1	20,141	20,141	20,141	**60,423**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Quarterly Community Health Team meeting	HSSP-II 5.7.5	537,800	537,800	537,800	**1,613,401**	**No**		
Build HTSS-PAM capacity in equipment planning, monitoring and evaluation	CIP (iii)	253,716	41,114	41,114	**335,944**	**Yes**	**335,944**	Intervention can improve the ability of the central level to direct resources towards the areas with the greatest need, improving overall efficiency through appropriate equipment distribution
Establish a medical equipment inventory at national and district level(populate using SARA data)	CIP (iii)	414,681	0	0	**414,681**	**Yes**	**414,681**	Intervention can improve the ability of the central level to direct resources towards the areas with the greatest need, improving overall efficiency through appropriate equipment distribution
Improve availability of basic supplies to HSAs	NCHS 4.4	798,137	798,137	798,137	**2,394,410**	**Yes**	**2,394,410**	Increased availability of services in rural/hard-to-reach areas

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Improve the availability of ANC and EMoNC equipment at facilities - Blood pressure apparatus, stethoscope, adult weighing scale, fetal stethoscope, measuring tape, height board, examination bed/couch	CIP (iii)	37,627,963	37,418,561	18,709,280	**93,755,804**	**Yes**	**15,419,371**	15% of overall costs of procuring medical equipment, according to the national medical equipment gap analysis. ANC and EMoNC equipment to be prioritised.
Conduct QI collaborative learning sessions	QMS 7.7	0	82,715	82,715	**165,429**	**Yes**	**165,429**	Leads to improved quality of RMNCAH service delivery through sharing of best practices
Conduct regular clinical audits	QMS 3.3	67,641	28,795	28,795	**125,232**	**Yes**	**125,232**	The intervention can help induce increased quality of provision for EHP services
Disseminate the revised ISS tool	QMS 3.5	0	0	81,815	**81,815**	**Yes**	**81,815**	Leads to improved use of resources, through reduction of duplicative supervision visits
Dissemination of Standard Treatment Guidelines and Standard Operating Procedures to all service delivery points	QMS 3.1	67,635	0	0	**67,635**	**Yes**	**67,635**	The intervention can help induce increased quality of provision for EHP services

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Establish a non-monetary incentive scheme for health facilities to meet standard quality service provision targets (including proper waste management)	QMS 3.7	11,436	0	0	**11,436**	**Yes**	**11,436**	Intervention establises the framework for a PBF scheme, and informs follow-on activities designed to establish the operational mechanisms and funding required to initiate the PBF.
Improve central-level and district-level engagement with the Integrated Supportive Supervision (ISS) tool	QMS 3.5	46,070	43,513	43,513	**133,096**	**Yes**	**133,096**	Leads to improved use of resources, through reduction of duplicative supervision visits
Improve infection prevention and control measures at community/district hospital level	QMS 4.8	229,992	60,548	60,548	**351,088**	**Yes**	**351,088**	Includes initial assesment on hospital IP measures and informs further activities based on the assesment's recommendations
Improve knowledge and awareness of the Hospital Ombudsman	QMS 3.7	281,407	38,843	38,843	**359,094**	**Yes**	**359,094**	Greater accountability for health providers will help to stimulate the demand for health services.
Integrate provision of TTV to pregnant women during ANC visits	#N/A	41,261	0	0	**41,261**	**Yes**	**41,261**	Ensures that the demand for services is increased in an appropriate manner.

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Review and Harmonize the Integrated Supportive Supervision	QMS 3.5	24,495	0	0	**24,495**	**Yes**	**24,495**	Can lead to substantial efficiency gains, through reducing duplicative supervision visits
To develop Malawi specific hospital standards that can be used at all levels	QMS 3.7	756,453	673,937	673,937	**2,104,327**	**Yes**	**2,104,327**	Can improve the quality of EHP services delivered at district and central hospitals
To establish a national health facility accreditation body responsible for local accreditation	QMS 3.7	33,815	22,543	0	**56,358**	**Yes**	**56,358**	Can provide an incentive and accountability scheme to ensure that health facilities are delivering EHP services to a high standard.
Training of Health Facility Quality Improvement Teams	QMS 4.1	166,849	0	0	**166,849**	**Yes**	**166,849**	Ensures greater mentorship for health facilities in meeting minimum quality levels
Community-based screening of malnutrition	NCHS 1.1	606,198	168,219	168,219	**942,636**	**No**		
Conduct cascade training on effective use of data for quality improvement	QMS 7.4	0	0	149,509	**149,509**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Conducting regular coaching visits to technically support Health Facility Quality Improvement teams	QMS 1.3	0	209,747	209,747	**419,493**	**No**		
Develop and Disseminate client safety standards and protocols	QMS 4.4	0	5,583	27,914	**33,497**	**No**		
Develop and disseminate protocols and management of medical errors and adverse events	QMS 4.4	0	51,924	0	**51,924**	**No**		
Develop guidelines for referrals at health facilities	QMS 6.6	7,520	0	0	**7,520**	**No**		
Enhance district level capacity for IMCI supportive supervision	QMS 3.5	419,162	419,162	419,162	**1,257,485**	**No**		
Identify and share best practices in QI experiences (through publications, media, national, regional, global platforms)	QMS 7.7	0	44,819	44,819	**89,638**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Institutionalise the use of client feedback mechanisms (suugestion box, exit surveys)	QMS 5.3	13,155	0	5,155	**18,311**	**No**		
Integrated National Community Health Supervisions to district	QMS 3.5	46,092	46,092	46,092	**138,275**	**No**		
Review and Dissemination of IPC, WASH and MR Standards	QMS 3.6	15,562	82,976	150,390	**248,928**	**No**		
Review, update and disseminate patient and provider charters	QMS 5.4	3,257	0	0	**3,257**	**No**		
To develop local capacity to train and assess international accreditation hospital standards	QMS 3.6	747,786	719,764	835,576	**2,303,126**	**No**		
To scale up international accredited hospital standards to all major hospitals including CHAM facilities	QMS 3.7	3,830,912	2,320,075	1,347,874	**7,498,861**	**No**		

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Community Sensitization on ANC requirements and PNC	HSSP-II 2.11	28,467	6,990	6,990	**42,447**	**Yes**	**42,447**	Intervention will stimulate demand for services, reducing morbidities associated with pregnancy
Community sensitization on FP methods targeting adolescents (through community meetings, health talks and IEC materials)	HSSP-II 2.11	144,021	0	108,215	**252,236**	**Yes**	**252,236**	Stimulate demand for services
Community sensitization on ITN use	HSSP-II 2.11	61,631	0	0	**61,631**	**Yes**	**61,631**	Stimulate demand for services
Community Sensitization on the Essential Vaccine Package	HSSP-II 2.11	662,592	0	546,194	**1,208,787**	**Yes**	**1,208,787**	Stimulate demand for services
Community sensitization on the importance of facility delivery and postnatal care	HSSP-II 2.11	58,128	0	0	**58,128**	**Yes**	**58,128**	Stimulate demand for services
Coordination of community sensitization activities	HSSP-II 2.11	51,402	0	0	**51,402**	**Yes**	**51,402**	Stimulate demand for services

Intervention	Strategy	Year 1 ($)	Year 2 ($)	Year 3 ($)	Total Activity Cost ($) Years 1-3	Included in Prioritized scenario?	Prioritized budget for scenario (USD)	Notes/Rationale for prioritization
Map and Monitor Community Sensitization activities at the district level	HSSP-II 2.11	247,136	0	0	**247,136**	**Yes**	**247,136**	Stimulate demand for services
Sensitize community leaders (chiefs and influential people) through meetings to encourage women in the community to start ANC on time	HSSP-II 2.11	139,896	0	108,215	**248,111**	**Yes**	**248,111**	Stimulate demand for services
Assess the feasibility of incorporating comprehensive sexuality education among youths in school curriculum	HSSP-II 2.11	304,206	0	0	**304,206**	**No**		
District-level Community Health Day for advocacy	HSSP-II 2.11	23,736	23,736	23,736	**71,209**	**No**		
Expand one-stop centers (for YFHS) to all health facilities	HSSP-II 2.3	1,501,338	1,467,123	1,467,123	**4,435,585**	**No**		
National Community Health Day (Integrated) for Advocacy	HSSP-II 2.11	12,818	12,818	12,818	**38,454**	**No**		
Grand Total		**314,225,019**	**292,351,137**	**321,533,278**	**928,109,434**		**118,270,428**	

Annex 2.2: Alignment and linkages to existing strategic plans

Table VI: Linkages to existing strategic plans

Strategy Code	Strategy
	Capital Investment Plan (CIP) 2017-2022
CIP (i)	i. To plan for and cost effectively manage capital investments for the purpose of facilitating delivery of quality EHP services at all levels of service delivery. [CIP]
CIP (ii)	ii. To ensure the development and maintenance of a network of functional, efficient and sustainable health infrastructure for effective health services delivery closer to the population. [CIP]
CIP (iii)	iii. To ensure efficient and equitable investment in the acquisition of essential medical equipment including major repair and replacement of existing medical equipment. [CIP]
	Human Resources for Health (HRH) Strategic Plan 2018-2022
HRH 1.1	1.1 Strengthen the capacity and use of HRH information systems, Information Technology, and HRH research for HRH policy, planning, management and development at all levels [HRH]
HRH 1.2	1.2 Effectively match the supply and skills-mix of health workforce to current and emerging service needs [HRH]
HRH 2.1	2.1 Strengthen national and district level HR departments to enable effective workforce management [HRH]
HRH 2.3	2.3 Strengthen regulation of health workers, their training and practice, based on professional standards and ethics [HRH]
HRH 2.4	2.4 Develop and implement strategies to motivate and retain health workers in the health system, in particular in hard-to-reach areas [HRH]
HRH 2.5	2.5 Promote decent and safe working conditions for health workers [HRH]
HRH 3.1	3.1 Implement interventions to increase pre-service production capacity of prioritized health professional training programmes [HRH]
HRH 3.3	3.3 Strengthen coordination of relevant post-basic training to meet service delivery needs [HRH]
	Health Sector Strategic Plan 2017-2022
HSSP-II 2.1	2.1 Promote healthy behaviors and lifestyles [HSSP-II]
HSSP-II 2.11	2.11 Strengthen partnership and collaboration with other sectors and key stakeholders [HSSP-II]
HSSP-II 2.3	2.3 Adopt and enforce protective health policies [HSSP-II]
HSSP-II 5.3.5	Strengthen transport system at all levels [HSSP]
HSSP-II 5.7.1	Strengthen leadership and management functions and structures at national, district and community levels [HSSP-II]
HSSP-II 5.7.11	Strengthen health sector policy, legal and regulatory frameworks [HSSP-II]

HSSP-II 5.7.13	Enhance implementation of hospital autonomy [HSSP-II]
HSSP-II 5.7.5	Strengthen the functionality of country-led joint HSSP planning and implementation at central and district levels [HSSP-II]
HSSP-II 5.8.5	Improving efficiency in resource allocation and utilization [HSSP-II]
Monitoring, Evaluation and Health Information Systems (MEHIS) Strategic Plan 2017-2022	
MEHIS 1.1	1.1. Rationalize and harmonize routine data collection and reporting systems [MEHIS]
MEHIS 1.2	1.2. Finalize configuration and expand functionality of DHIS2 (GIS, climate change, DHIS 2 tracker and CRVS) [MEHIS]
MEHIS 1.3	1.3. Expand DHIS 2 to cover additional systems [MEHIS]
MEHIS 1.4	1.4. Strengthen the interoperability of health information subsystems around a single country-led platform [MEHIS]
MEHIS 1.5	1.5. Strengthen facility information systems including the scale-up of electronic medical record (EMR) systems that cover all elements of the EHP to all high burden systems with a central master patient index (MPI) for the different EMRs [MEHIS]
MEHIS 1.6	1.6. Strengthen implementation of a national civil registration system and the generation of vital statistics [MEHIS]
MEHIS 2.6	2.6. Build capacity of actors across all levels on data analysis, interpretation, and use [MEHIS]
MEHIS 2.8	2.8. Strengthen process monitoring of HSSP2 implementation and annual Implementation Plans [MEHIS]
National Community Health Strategy (NCHS) 2017-2022	
NCHS 1.1	1.1 Fully integrate community health services at the point of care [NCHS]
NCHS 1.3	1.3 Prioritize and strengthen supervision [NCHS]
NCHS 4.3	4.3 Provide durable transport options to HSAs and SHSAs [NCHS]
NCHS 4.4	4.4 Integrate the community health supply chain with the broader supply chain [NCHS]
Pharmaceuticals Strategic Plan (PSP) 2016-2020	
PSP 3.1	Increase financial allocations for medicines and medical supplies [PSP]
PSP 3.2	Strengthen public sector procurement process for essential medicines and medical supplies [PSP]
PSP 3.4	Strengthen access to essential health supplies [PSP]
PSP 4.1	Strengthen LMIS data collection, analysis, and dissemination [PSP]
PSP 5.1	Improve transparency and accountability in medicines regulatory and supply management systems [PSP]
PSP 5.2	Strengthen the regulatory and auditing mechanisms for proper monitoring and management of medicines [PSP]
Quality Management Strategy (QMS)	
QMS 1.3	1.3 Institute systematic quality management processes at all levels [QMS]
QMS 3.1	3.1 Ensure clinical guidelines and SOPs are available at point of care [QMS]

QMS 3.3	3.3 Institute a systematic QI approach to ensure adherence to the clinical guidelines and SOPs at all levels [QMS]
QMS 3.5	3.5 Reinforce integrated supportive supervision and mentoring by qualified personnel [QMS]
QMS 3.6	3.6 Review and update norms and standards to improve quality of healthcare [QMS]
QMS 3.7	3.7 Strengthen recognition systems for health facilities achieving compliance with quality standards [QMS]
QMS 4.1	4.1 Ensure health staff are appropriately trained, registered, and regulated [QMS]
QMS 4.4	4.4 Develop, disseminate, and implement client safety standards [QMS]
QMS 4.8	4.8 Enforce adherence to infection prevention and control practices including healthcare waste management [QMS]
QMS 5.3	5.3 Strengthen communication and feedback mechanisms between clients and providers [QMS]
QMS 5.4	5.4 Enhance the use of provider, patient, and service charters [QMS]
QMS 6.6	6.6 Strengthen the referral system, including timely communication [QMS]
QMS 6.7	6.7 Ensure safe patient ambulatory transport [QMS]
QMS 7.4	7.4 Strengthen utilization of health information at the point of care [QMS]
QMS 7.5	7.5 Strengthen operational research and monitoring and evaluation at all levels [QMS]
QMS 7.7	7.7 Promote a culture of information sharing and learning at all levels [QMS]

Annex 2.3: Activities comprising each intervention

Table VII: Activities comprising each intervention

Intervention	Activity	Total Activity Cost ($) - Years 1-3
Drugs and Medical Commodities		
Address the inefficiencies of procurement and distribution of drugs at CMST		245,805
	Strengthen the capacity of HTSS Pharmaceuticals to provide oversight to CMST as the policy holder	245,805
Address the inefficiencies of procurement and distribution of drugs, medical supplies and medical equipment in the supply chain system in Malawi		76,030
	Assessment of studies done on CMST operational model and recommendations from those studies; commission additional studies to assess value for money from the CMST operational model	44,443
	Strengthen the capacity of HTSS Pharmaceuticals to provide oversight to CMST as the policy holder	31,586

Intervention	Activity	Total Activity Cost ($) - Years 1-3
Assess available Family Planning methods in Malawi to ensure that most suitable methods are included in standard treatment guidelines (pharmacosurveillance)		5,955
	Development of a policy paper; Workshop to identify user friendly FP methods and increase availability of these FP methods;	5,955
Assess the cost-effectiveness of single source procurement of drugs from CMST and accountability issues		26,866
	Host assessment workshops	14,352
	Review previous assessments and outcomes to identify gaps for further assessments (desk review); Commission further assessments (if needed) based on recommendations from previous studies;	12,514
Carry out a review of assessments done on the efficiency of centralised blood procurement and assess the quality of facility collected blood		31,781
	Literature review of studies done and recommendation made; commission additional studies based on recommendations	31,781
Combined packaging of ORS and Zinc along with instructions on administration		24,893
	Lobby with manufactures to produce combined formulations of Zinc and ORS	12,447
	Meet with international organisations (WHO, Unicef) to understand international norms and standards of combined packages	12,447
Conduct regular DPAT (District Product Availability Teams) and HPAT (Health Center Product Availability Teams) meetings		264,247
	Strengthen and build capacity of HCMC	258,904
	Support and supervise DPAT (DTCs) meetings at district level	5,342
Enhance district level capacity to use open LMIS data		52,799
	Biannual Supervision of health facility staff by district personnel	548
	Conduct situational analysis on use of logistics data at facility, district, central hospital and central level.	16,685
	Conduct validation workshops	17,514
	Training of District staff at Zonal Level	18,052
Explore mechanisms for improving access to blood for health facilities		31,825
	Cost-Benefit analysis of establishing more satellite blood collection and distribution depots	19,267
	Host assessment workshops	12,558
Harmonize all supply chain systems		17,808
	Conduct routine assessment of Product availability at facility level CMST supplier following integration of supply chain systems	17,808

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Develop roadmap on integration; engage firm to spearhead the harmonization of SCM systems	0
implement the updated drug procurement policy		35,729
	Training the implementors on the new policy and capacity building	35,729
Improve engagement with CSOs on drug availability and reducing drug leakages		0
	Engaging CSOs on key forums for the health sector	0
Improve inventory management at facility level to reduce wastage(expiration)		245,520
	Conduct refresher trainings for facility staff on inventory management and good storage practice	245,520
Increase district drug budget		96,799,967
	Ensure that funds are adequate for the provision of RMNCAH+N commodities	96,799,967
Mobilization of blood donors		128,219
	Awareness campaigns and blood donation drives for schools and other public places; establish blood donation clubs in schools (new-never been done before)	128,219
Provide Commodities to deliver the Community Health Package		122,760
	Re-introduce C-Stock information management system through sensitization of district/facility personnel to allow for community-level engagement of drug procurement and stock management processes	122,760
Recapitalize CMST to ensure timely procurement		3,503
	Lobby with Treasury for additional resources to recapitalize CMST	3,503
Set up a system for redistribution of drugs between facilities		298,287
	Procure dedicated vehicles for drug redistribution	273,973
	Recruit 5 full time zonal pharmacy personnel to coordinate assess drug usage in the districts and recommended redistribution	24,315
Strengthen LMIS data management at facility level including recording forms, transaction forms and reporting forms to improve drug stock reporting by facilities		145,890
	Conduct supportive supervision from central level to district pharmacies and central hospitals	5,342
	Conduct supportive supervision from district to health centers	101,091
	Procurement of computers to allow more sites in districts to be used as entry sites, in so doing improving reporting timeliness and reporting rate	39,457
Update Drug procurement policy to take into account recommendations from the cost-effectiveness assessment		11,087
	Consult stakeholders on recommendations from the studies;	4,212

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Dissemination of the policy	5,955
	Printing of the policy	921
Health Financing		
Improve absorption of donor funds in health sector		29,716
	Commission consultant to carry-out aid absorption study in the health sector (1 consultant for 3 months)	27,808
	National dissemination of results workshop	1,908
Increase health facility autonomy in using their own budget		571,215
	Consultative workshop with MoLGRD, Ministry of Finance and DHMTs on feasibility of providing financial autonomy to districts	3,716
	Hire a consultant to carry out an assessment of financial management capacity of health facilities, potential mechanisms to induce transparency in financial management, potential for accountability mechanisms to be established through the HCMCs	16,685
	Open bank accounts for all health facilities	0
	Train Health Facility Staff on Financial Management	535,422
	Training of DHMTs to train HCMCs on accountability structures for health facility financial autonomy	15,391
Provide guidelines to districts to allocate resources to health facilities based on need		23,320
	Conduct 2 consultative workshops for the finalization of the formula	6,528
	Develop guidelines allocation of district health budget to health facilities	3,538
	Develop needs-based Resource Allocation Formula for allocation of the national budget to districts	3,628
	Disseminate results of facility-level resource allocation as guidelines to districts	9,627
	Extend the Resource Allocation Formula for allocation of district budget to health facilities	0
Health Information Systems (HIS)		
Assist MDAs in the adoption, integration and use of the Birth Certificate and unique ID in the provision of their services.		1,720,355
	Development of guidelines and training materials on use of the system and protection of confidentiality	16,685
	Hire a local consultant to install/upgrade the new software	69,521

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Hold 1 national level workshops with the consultant on validation of the guidelines on use of the system and protection of confidentiality for 2 days	7,006
	Training of health workers (or information officers) on the use of the new system	304,744
	Upgrading existing information system of national registration to allow use of unique ID for tracking, monitoring and surveillance of patients' access to health services and medical care.	1,322,400
Assist MOHP in the adoption, integration and use of the Birth Certificate and unique ID in the provision of their services.		30,905
	Assess the system readiness of the MOHP to use the unique national ID for tracking, monitoring and surveillance of patients' access to health services and medical care.	25,269
	Hold 2 national level workshops with the consultant on progress and validation of the assessment of the system readiness for one day each	5,636
Conduct joint MOHP and NRB national monitoring exercise of CRVS activities (both birth and death registration) to all districts.		167,671
	Conduct initiation workshop, at national level to decide the parameters of the monitoring exercise, revising the standard checklist and SOPs for conducting supervisions	10,426
	Monitoring exercise to examine implementation of CRVS activities in each district. Assessment carried out by central and district level staff. 3 day visit to each district.	118,852
	Workshop to consolidate results of CRVS monitoring exercise	38,393
Improve Health Facility Reporting forms to remove duplication of entries by health staff		88,840
	1. Preparatory meeting for Review of health facility reporting forms	9,711
	2. Review of health facility reporting forms and identification of duplicative indicators (Workshop at national level, include zonal and district staff) 2 days	4,774
	3. Integrate and streamline existing reporting forms (desk work by TWGs)	3,199
	4.Design and print new forms and registers	709
	5. Orientation and dissemination of revised reporting forms - Zonal level meeting inviting district level personnel (5 days)	70,447
Increase data use capacity at facilities and districts		2,741,583
	2. Zone HMIS reviews (Zone/district staff reviewing zone/district performance) Biannual	548,900

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	3. Procure motor cycles for HMIS officers to support facility-based staff	1,787,671
	4. Equip health facilities with internet connectivity	268,973
	Facility based reviews (Zonal/district level staff mentoring health facility staff on facility performance data and use) Quarterly - 3 zonal/district staff visit for 1 day per facility	136,040
Institutionalize the birth and death registration in the MOHP		65,031
	Annual Review Meeting at national level- Includes all districts and central and some CHAM hospitals	37,566
	Initial workshop to discuss MOU/agreement between MOHP and NRB - which states the roles and responsibilities of each MDA	3,433
	Quarterly TWG meeting - Assessing implementation of processes and district performance	20,598
	Validation workshop for MOU/Agreement	3,433
Introduce digital data collection tools at the health facility level		531,998
	1. Hire a consultant to conduct assessment on data requirement and capacity to use digital tools at selected health facilities	14,716
	2. Workshop to validate the results of the assessment conducted by the consultant	1,942
	3. Develop electronic platform for digital data collection	41,712
	4. Test new data collection platform	2,114
	5. Procure and deploy electronic devices for data entry	264,384
	6. Train health facility in digital data collection tools at district level	169,569
	7. Conduct regular data quality assessments at a subset of health facilities	37,561
Introduce Electronic Medical Records		11,659,443
	1.4.3. 4 Develop web based tool for the Shared Health Record (Patient level central data repository; Expanded Demographic Data Exchange)	227,360
	1.4.3.1 Develop Guidelines for the Terminology Registry	2,886
	1.4.3.2 Develop web-based tool for the Terminology Registry	228,474
	1.4.3.3 Develop Guidelines for the Shared Health Record (Patient level central data repository)	85,389
	1.5.1 .1 Gather information and requirements, develop recommended requirements	25,833

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	1.5.1 .2 Review current EMR, including the need and capacity of facilities to implement and manage EMRs, by conducting a gap analysis (needs assessment) in collaboration with partners implementing EMRs to identify facilities that merit basic ICT infrastructure: - Infrastructure required - Costs involved - Districts involved - Number of health facilities	25,378
	1.5.1.3 Alignment of existing EMR minimum standards	0
	1.5.1.3 Work with sponsoring partners to roll out EMR to 400 sites	6,518,311
	1.5.1.4 Train staff at facilities on EMR	508,602
	1.5.1.5 Maintenance and systems support of ICT infrastructure for EMRs	1,731,714
	1.5.3.1. Identify vendors/developers to develop/expand current EMRs	7,911
	1.5.3.2 Develop a comprehensive EMR for integrated services	1,902,728
	1.5.4.1 Procure hardware for comprehensive EMR	159,401
	1.5.4.2 Install hardware for comprehensive EMR	35,042
	1.5.4.3 Train staff on comprehensive EMR	200,414
Link the CR electronic system and DHIS in health for determining proportion of births notified to the civil registration (CR) agency versus actual.		11,123
	Contribute consultant time towards the development of common API for HIS - specifically for CR	5,562
	Hire consultant to assess the interoperability and functionality requirements of integrated system	5,562
Make HIS sub-systems interoperable		56,358
	Development of Common API	0
	Orientation of all personnel working with HIS on common API.	56,358
Monitor and provide supportive supervision of CRVS activities by joint district team to all health facilities in the district		88,411
	Annual Zonal level meeting involving national and district-level staff - for monitoring of implementation activities	0
	Biannual supportive supervision of CRVS activities by joint district team to all health facilities	88,411
Provide technical and financial support for national CRVS coordination in the MOHP		29,530

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Ad-hoc supportive supervision funding to respond to challenges at hospital/district-level	26,712
	Central level orientation session for MOHP staff	2,818
Quarterly Zonal Review Meeting		777,623
	Quarterly Zonal Review Meeting	777,623
Review standard zonal review guidelines to include both data assessments and quality (Develop a Zonal Action Tracker to track progress with specific timelines and responsible person)		32,519
	Conduct a workshop to review revised guidelines and the Zonal Action Tracker	5,724
	Conduct workshop to review current guidelines and confirm the possibility of developing a standardized tracker	2,462
	Hire a consultant to develop revised guidelines and a review tracker/dashboard	24,332
Roll out community birth and death registration in all districts by December 2020.		104,109
	Orient 4,700 GVHs on community birth and death registrations	87,672
	Print guidance materials for all districts	6,041
	Validation workshop for guidance materials and roll-out plan	2,818
	Writing workshops for the core writing group to formulate community birth and death registration guidelines	7,579
Roll out health facility based (24 districts) and community based (all districts) death registration by December 2020.		1,333,298
	Conduct workshop on guidance for scale-up of death registration to all districts, based on evidence from pilot. National level meeting involving all zones and districts particpating in pilot	1,935
	Each district to have a full council meeting - for the dissemination of death registration guidelines and procedures	42,308
	Printing of materials for dissemination of guidelines for each district	3,068
	Village based sensitisation and training for village heads and group village heads	1,266,099
	Zonal level orientation of all remaining 24 districts on death registration. 3 participants from each district to attend.	19,887
Strengthen MDSR data quality		325,374
	1. Conduct refresher training for district staff on audit and review of neonatal deaths	11,272
	2. Conduct refresher training for district staff on audit and review of neonatal and stillborn deaths	314,103

Intervention	Activity	Total Activity Cost ($) - Years 1-3
Upgrade data server		10,274
	Install two server racks (one for production, another for training and development)	10,274
Human Resources for Health		
Develop and implement strategies to motivate and retain health workers in the health system, and in particular in hard-to-reach areas		132,437
	Advocate and lobby for better working conditions of health workers, with key stakeholders	9,349
	Conduct assessment of existing retention strategies from other sectors and countries	11,123
	Decentralize recruitment and bonding of students through the use of targeted admission to enroll students with rural background in training programs as a strategy to increase likelihood of graduates choosing to practice in rural areas	25,104
	Develop costed, actionable incentive implementation framework that includes rural incentive packages to improve the recruitment and retention of health workers	44,805
	Enforce student bonds by benchmarking HESLB model	12,866
	Lobby for private sector involvement (eg. water, power, telecom, infrastructure, and other local investors) to improve health worker housing, network connectivity, water, and electricity	12,625
	Provide scholarships, bursaries and other education subsidies at district council level with enforceable agreements of return of service in rural or remote areas	10,929
	Review existing or develop incentive and retentions strategies, conduct an in-country problem analysis for health workforce	5,636
Develop clearly defined roles among each cadre at the national level		101,321
	Develop or update Scopes of Practice for all cadres in line with service needs	35,863
	Operationalize and customize job descriptions that take into account varying roles in a decentralized health system	11,663
	Review generic job descriptions at national level taking into account varying roles in a decentralized health system	53,795
Develop integrated in-service training curriculum for health clinical staff (clinicians and nurses)		2,478,750
	Conduct integrated training for clinicians and nurses	606,543
	Conduct monitoring and M&E activities	1,698,245

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Conduct preparatory workshop to define the integration	10,508
	Conduct training of trainers at QMSO (Quality Management Satellite Office)	157,626
	Development of integrated in-service training for RMNCAH	5,827
	Formation of a core team	0
	Review/develop integrated health facility level service delivery guidelines	0
Implement integrated in-service training curriculum for existing HSAs and pre-service training curriculum for new HSAs		17,041,916
	Build capacity of mentors for integrated mentorships of clinicians, nurses, and HSAs	12,035
	Conduct compliance monitoring and quality assurance visits by regulatory bodies	26,712
	Conduct curriculum delivery and curriculum review workshops	50,722
	Conduct in-service training of existing HSAs	6,708,227
	Conduct integrated mentorships of clinicians, nurses, and HSAs	169,825
	Conduct pre-service training of new HSAs	9,900,111
	Conduct supervision visits by training institutions and MOH	160,274
	Conduct training of trainers	14,011
Improve Human Resource Management Practices at the national and district level		267,961
	Build capacity of district based HR managers to understand and interpret key policies (MPSR, Decentralization, Financial Management)	90,259
	Develop standard operating procedures for HR managers in the districts	52,542
	Orient and disseminate the new SOPs to all district based HRH, including on performance management appraisals by district based HR managers	34,900
	Orient/train and disseminate the new SOPs (including performance management appraisals) to all district-based HR managers for 5 days at zonal level	90,259
Improved tracking of catchment area covered by HSAs through supportive supervision and mobile technology		4,757,507
	Install location tracking apps on HSAs and SHSAs mobile devices and procurement of monthly airtime so that the location tracking apps can be routinely used	2,180,548
	Orient the SHSAs on Integrated Community Health Information Systems (including location tracking)	118,911

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Procure mobile phones for all HSAs and SHSAs	2,458,048
Increase pre-service production capacity and quality of prioritized health professional training programmes based on need		352,990
	Build the capacity of existing teaching staff at training institutions based on needs (eg. improving clinical skills teaching)	34,558
	Conduct training institution assessment and implement recommendations such as infrastructure for teaching and learning to increase capacity of training institutions (increasing number of housing units for tutors; and constructing additional classrooms, skills laboratories, hostels)	155,493
	Develop teaching hospital quality standards and guidelines which outline education staffing, infrastructure, equipment, policy and management needs for clinical training	10,296
	Enforce educational standards including the recommended student tutor ratios by increasing the number of highly qualified tutors	24,921
	Improve coordination and collaboration between training colleges and clinical sites to avoid congestion during clinical rotations and ensure adequate learning.	37,562
	Improve working and living conditions (including benefit packages, promotions, secondment) of teaching staff	7,173
	Review and strengthen internship programmes for relevant cadres	66,155
	Review pre-service training curriculum for clinicians to ensure it reflects service delivery needs and gaps	10,508
	Scale up the training of specialists in HRH	3,586
	Strengthen peer-learning between training institutions, including the Councils	2,739
Increased supportive supervision for RMNCH programs		196,612
	Facility-level supportive supervision of clinical officer/specialists on obstetric complications	50,543
	Facility-level supportive supervision of medical assistants, nurse officers and nurse/midwife technicians on FP counseling	146,069
Increased supportive supervision of HSAs by SHSAs		158,107
	Conduct monthly mentorships of HSAs by SHAs on iCCM service delivery and reporting	0
	Quarterly supervision visits by SHSAs to HSAs	158,107
Promote decent and safe working conditions for health workers		145,105

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Conduct activities to empower women in leadership positions in the health sector	10,759
	Create modules on workplace issues (e.g.. gender, discrimination, safety, integrity and ethics, welfare and mental health) which should be part of compulsory CPD	94,510
	Develop and implement district trainings, including in training institutions and health facilities, on workplace safety and emergency preparedness, occupational health, safety, and wellness	11,663
	Review, customize and implement National Occupational Health and Safety Strategy for the health sector and develop associated guidelines	16,511
	Revise, implement and develop partnerships for improved HIV/AIDS interventions for health care workers	0
	Train district HR officers and councils on gender, sexual harassment and discrimination as per the Gender Act and Conditions of Service	11,663
Recruit and redistribute health workers based on the needs provided by the HRH Strategy		333,570,099
	Annually review and operationalize the staffing need projections in the HRH Strategic Plan based on workload analyses to inform health worker recruitment	0
	Annually review and operationalize the training projections in the HRH Strategic Plan based on workload analyses to inform student training enrolments	0
	Conduct advocacy for increased health workforce	7,549
	Pay for health worker pre-service training so that optimal health workforce targets can be met	127,138,411
	Pay salaries to all additional staff recruited according to the workforce optimization model	200,531,540
	Provide funding for necessary health worker in-service trainings	5,892,599
Revise established posts for HRH staff to reflect optimal service delivery, and the establishment for HSAs to reflect ideal 1:1000 HSA to population ratio		153,758
	Conduct functional review for districts	145,901
	Lobby DHRM&D to better incorporate evidence on service delivery needs and optimal workforce staffing as part of the functional review	3,884
	Review staffing establishment for the different types of health facilities based on workload analyses conducted in this HRH Strategic Plan and revised establishment targets defined in functional reviews completed at the district and central level.	3,973

Intervention	Activity	Total Activity Cost ($) - Years 1-3
Strengthen accreditation systems, regulation of health workers, their training and practice		220,244
	Advocate for the importance of licensure and CPD with the district councils, for districts to hold managers accountable for the licensure and CPD of their staff.	12,521
	Evaluate, and review the accreditation tools developed and implemented by the Medical Council, Nursing Council, and Pharmacy, Medicines, and Poisons Board	148,195
	Implement CPD for all staff in the district to monitor in-service training programmes and link to renewal of registration.	0
	Regulatory bodies to conduct regular supportive supervision visits together with the QMD	58,915
	Strengthen information systems within the councils to monitor licensure registration, and CPD (eg. through iHRIS Regulate; or pilot e-CPD system for registration, licensure, renewal, payments and monitoring CPD points)	614
Strengthen coordination of relevant post-basic and in-service training to meet service delivery needs		784,699
	Build capacity within the districts to conduct Training Needs Assessments and develop annual training plans in alignment with workforce training recommendations in the HRH Strategic Plan	68,874
	Develop and implement tools to document all in-service trainings, and assess the quality of in-service training programmes, and hold those responsible for the trainings accountable to ensure a high quality of these activities, non-duplication of trainings, and minimal absence of health workers from health facilities	10,759
	Develop and roll out an electronic record system to document all in-service and post-basic training of health workers in a district and link to personnel records, CPD, and performance management systems	203,168
	Encourage training committees to set and use clear criteria to determine the selection of health workers to attend trainings and ensure transparency throughout the process	0
	Enforce the teaching role of all qualified health workers in health facilities by including this into job descriptions, reviewing teaching during performance appraisals, and rewarding those who demonstrate to be exemplary teachers.	37,562
	Hold quarterly meetings at national level where partner harmonisation with MOHP training priorities is discussed	33,815
	Reconstitute and orient training committees at national and district levels	8,267

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Reinforce the use of approved training guidelines for all in-service trainings and discourage the introduction of new trainings that overlap with existing guidelines.	3,779
	Set clear guidelines to encourage standardized step ladder training before staff can undertake further studies and implement mechanisms to control unauthorized upgrading training	12,138
	Strengthen cost-effective post-basic and in-service training through innovative approaches such as e-learning, distance learning, coaching, mentoring, applied and part-time learning	406,336
Strengthen district HRH governance		8,735,715
	Conduct quarterly district HRH technical working group meetings	91,595
	Develop health-specific ToRs (including HR management) for Area Development Committees	10,508
	Orient and train community structures, including VHCs, CHAGs, and HCACs, on revised roles and responsibilities based on updated TORs (e.g. HR management, drug monitoring, etc.) and build their capacity to deliver	8,633,612
Strengthen HRH information systems, capacity, and use for HRH policy, planning, management, and development at all levels		490,707
	Conduct regular analysis of HRH data in order to produce an annual HRH status report to inform the budgeting and planning cycle.	5,379
	Develop and maintain knowledge management platforms (e.g.. HRH observatory) to maximize the distribution and utilization of HRH information across the health sector	48,933
	Promote continuous use of HRH information systems for HRH planning and management.	15,321
	Strengthen and where possible integrate HRH information systems (including TRAINSMART, HRIS Manage, HRIS Train, DHIS, HMIS) providing easy access to accurate data and promoting interoperability of the systems	421,074
Strengthen national and district level HR departments to enable effective workforce planning, deployment, recruitment, and management		2,104,735
	Conduct meetings between relevant stakeholders to define career path for all health cadres, including flow chart with career progression pathways within health sector	19,918
	Conduct needs assessment of district HR planning and management (incl. skills, functions, roles and responsibilities, performance management, data analytics etc.	204,582
	Conduct payroll spot checks, and utilize attendance monitoring tools	439,795

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Conduct routine monitoring within the districts and target training and capacity development as needed to ensure timely recruitment and deployment	51,865
	Develop a tailor-made training program for HRH managers and planners at district level through mixed-method training modalities.	48,956
	Procure infrastructure to enable complete personnel records management systems at national and district levels	1,171,247
	Revise and disseminate SOPs on management of recruitment and deployment , including district level functions	10,040
	Strengthen performance management system and build capacity to conduct health HRH planning and implement performance management at districts and national level according to needs.	100,367
	Strengthen the HRH planning capacity of DHRM&D and the Ministry of Local Government and Rural Development according to needs in the new decentralized system.	5,149
	Support and mentor districts to develop HRH plans as part of the annual District Implementation Plan (DIP) and multi-year planning that are aligned to national strategies, policies, and plans, including the HRH Strategic Plan, including workforce and training requirements.	52,816
Infrastructure and Transport		
Advocate for improved road infrastructure through Ministry of Transport and Public Infrastructure (particularly to prioritize construction of roads in areas rendered inaccessible during rains) in collaboration with Ministry of Education and Agriculture, and the District Education Office and District Agriculture Office		5,244
	Central-level Planning Meeting to discuss Advocacy Strategy	2,622
	Wider stakeholder consultations with QMOs and representative districts to finalise strategy	2,622
Assessment of construction costs (comprehensive efficiency assessment) to bring down standard cost guidelines for high quality, low cost facility construction		27,808
	Commission consultant to prepare a cost efficiency analysis (1 consultant for 2 months)	27,808
Construct adequate waiting spaces in health facilities to accommodate both males and females		13,214
	1. Desk review of waiting spaces based on design of health facilities	11,123
	2. Validation workshop of assessment findings	2,091
	3. Construction/Expansion of health facility waiting spaces.	0

Intervention	Activity	Total Activity Cost ($) - Years 1-3
Construct waiting homes		1,150,685
	1. Construction of waiting homes (info. Included in the CIP)	1,150,685
Construct, rehabilitate and upgrade health facilities and health posts as per the Capital Investment Plan		260,846,231
	1. Hire consultant to review standard health facility designs (3 months)	16,685
	Construct new health facilities	93,368,067
	Rehabilitate existing health facilities	86,765,054
	Upgrade existing health facilities	80,696,425
Construction of 'HSA housing units in hard-to-reach catchment areas		3,529,851
	1. Carry-out assessment of Health posts without housing units for HSAs	13,904
	2. Construct housing based on prior assessment	3,515,947
Disseminate Capital Investment Plan for resource mobilization and infrastructure guidelines		205,854
	1. Zonal level meetings for dissemination of CIP and infrastructure guidelines to DHOs	9,364
	2. National level for resource mobilisation (includes partners and stakeholders) - 100 participants for one day	2,091
	3. Long-term orientation of district level staff for supervision of construction of health posts and health facilities (based on infrastructure guidelines)	18,214
	4. Recruit building planning staff at district level to support MOHP PIU and Director of Public Works	176,186
Ensure the provision of basic minimum utilities at all facilities based on the results from SARA		7,383,562
	Installation of utilities in lacking facilities	7,383,562
Improve availability of outreach services		4,930,137
	Procure 1 motorcycle for each health facility	3,341,096
	Procure utility vehicles at district level (1 per district)	1,589,041
Improve mobility of HSAs to improve coverage of catchment area		15,319,641
	Equip SHSAs with Motorcycles (1500) so that supportive supervision can be conducted	9,087,329
	Maintain motorcycles procured for SHSAs	823,562
	Maintain pushbikes procured for HSAs	2,405,899
	Procure fuel for motorcycles for SHSAs	1,778,893
	Procure push bikes to support HSAs to make follow ups of mothers	1,223,959

Intervention	Activity	Total Activity Cost ($) - Years 1-3
Leadership and Governance		
Assess avenues for inter-sectoral collaboration (Ministry of Agriculture) in the implementation of nutrition activities		28,560
	Central-level Planning Meeting to discuss Advocacy Strategy	11,653
	Wider stakeholder consultations with QMOs and representative districts to finalise strategy	16,907
Assess avenues for inter-sectoral collaboration (Ministry of Education, Ministry of Youth Development) in the implementation of SRHR policy		17,289
	Central-level Planning Meeting to discuss Advocacy Strategy	11,653
	Wider stakeholder consultations with QMOs and representative districts to finalise strategy	5,636
Assess the feasibility of legalising abortions and develop a workplan		3,009
	Conduct advocacy meeting with the Parliamentary Committee on Health to understand the political environment	1,066
	Workshop to create a roadmap to legalize abortions	1,942
Collaborate with Ministry of Agriculture and Education on nutrition activities (including adolescent nutrition)		72,124
	Develop materials for knowledge dissemination on nutrition-rich plant varieties and recipes for nutrition-rich food	31,673
	Information campaigns at the village-level led by local leaders	4,886
	ToT for local leaders on nutritional value of different plant varieties	17,514
	Training of implementers at community level on nutritional value of different plant varieties carried out by the ToT	18,052
Conduct training needs assessment in operational research within QM structures		55,696
	Conduct training needs assessment in operational research within QM structures	55,696
Enhance capacity of leadership and accountability structures at the community level		19,303,051
	Conduct review meeting to review CHAG, HCMC and VHC guidelines	26,557
	Conduct review meeting to review translations of the CHAG, HCMC and VHC guidelines	26,557
	Train CHAGs on revised TORs	4,600,330
	Train HCMCs on revised TORs	1,179,117
	Train VHCs on revised TORs	13,439,205
	Translation of HCMC, CHAG and VHC Manuals	31,284
Hold Community Health TWG on a quarterly basis		56,014
	Hold district-level community health TWG	56,014

Intervention	Activity	Total Activity Cost ($) - Years 1-3
Improve engagement of partners in DIP developments and district review meetings		509,580
	Appoint district-level partner engagement/aid coordination in-charge to lead on partner coordination activities	355,305
	Disseminate Aid Coordination Guidelines to DHMTs	7,120
	Disseminate Aid Coordination Guidelines to local partners at the district level	139,601
	Disseminate Aid Coordination Guidelines to partners at Health Donor Group meeting/Health Sector Working Group Meeting	0
	Print Aid Coordination Guidelines	548
	Workshop to finalise Aid Coordination Guidelines	7,006
Orient Directorates of Health and Social Services on their role		34,939
	Hire a consultant to draft SOP for DHSS	11,123
	Hold a dissemination meeting for the new SOPs	10,239
	Initial workshop to discuss scope of work in developing revised SOPs for DHSS (Ministry of Gender, Ministry of Health, Ministry of Local Government, DHRMD)	3,503
	Print the new DHSS SOPs- 1000 copies	3,068
	Workshop to validate draft SOPs for DHSS for two days	7,006
Orient Health and Environmental Committee on health issues in the district		60,423
	Orientation meeting for HECs on an annual basis	60,423
Quarterly Community Health Team meeting		1,613,401
	Quarterly Community Health Team meeting	1,613,401
Strengthen partner harmonization forums at the district level		1,275,451
	Conduct quarterly parnter harmonization meeting at the district-level	1,256,411
	Train DHMTs on using District Partner Coordination Tool (used by Blantyre and Phalombe)	12,035
	Train DHMTs on using District Partner Mapping Tool (used by Blantyre and Phalombe)	7,006
Training of Hospital Ombudsman		243,759
	Training of Hospital Ombudsman	243,759
Medical Equipment		
Build HTSS-PAM capacity in equipment planning, monitoring and evaluation		335,944
	Build capacity of PAM to appraise cost effectiveness of equipment. capacity of management of equipment.	3,199

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Conduct monthly equipment maintenance meetings at zonal level	69,918
	Conduct routine assessments of functionality of equipment to determine maintenance and replacement needs of existing equipment.	53,425
	Conduct trainings for equipment management at national, district and facility level	209,402
Establish a medical equipment inventory at national and district level (populate using SARA data)		414,681
	3. Procure motorcycles for District medical maintenance units (2 or 3 per district)	357,534
	4. Orientate health facility personnel and district maintenance personnel on use the medical equipment inventory system (small pilot to be scaled up)	34,900
	Asses interoperability of DHIS2 and medical equipment inventory/district level inventory	22,247
Improve availability of basic supplies to HSAs		2,394,410
	Equip all HSAs and SHSAs with basic equipment	2,394,410
Improve the availability of ANC and EMoNC equipment at facilities - Blood pressure apparatus, stethoscope, adult weighing scale, fetal stethoscope, measuring tape, height board, examination bed/couch		93,755,804
	Procure stated medical equipment (according to equipment gap from SARA)	93,546,402
	Refresher training on ANC and EMoNC equipment use, management and maintenance for health facility staff (1 member of staff per health facility) - district level training (2 days)	209,402
Quality of Services		
Community-based screening of malnutrition		942,636
	1. Train HSAs and growth monitoring volunteers in each district on screening for SAM - then add to standard training curriculum (4 volunteers per HSA)	437,979
	2. Integrate screening intervention with other community based routine child health days	0
	3. multi-intervention open days - community sensitisation (annual event)	504,656
	Add to HSAs training curriculum	0
Conduct cascade training on effective use of data for quality improvement		149,509
	Conduct cascade training on effective use of data for quality improvement	149,509

Intervention	Activity	Total Activity Cost ($) - Years 1-3
Conduct QI collaborative learning sessions		165,429
	Conduct QI collaborative learning sessions	165,429
Conduct regular clinical audits		125,232
	Annual review meeting at national level	28,039
	Disseminate the clinical audit guidelines	8,536
	Review/Develop guidelines for conducting clinical audits	30,310
	Train healthcare providers on the clinical audit guidelines	58,346
Conducting regular coaching visits to technically support Health Facility Quality Improvement teams		419,493
	Conducting regular coaching visits to technically support Health Facility Quality Improvement teams	419,493
Develop and Disseminate client safety standards and protocols		33,497
	Develop client safety standards and protocols	8,374
	Disseminate client safety standards and protocols	25,123
Develop and disseminate protocols and management of medical errors and adverse events		51,924
	Develop protocols and management of medical errors and adverse events	14,326
	Train health workers on protocols and management of medical errors and adverse events	37,598
Develop guidelines for referrals at health facilities		7,520
	Develop guidelines for referrals at health facilities	7,520
Disseminate the revised ISS tool		81,815
	Disseminate the revised ISS tool	81,815
Dissemination of Standard Treatment Guidelines and Standard Operating Procedures to all service delivery points		67,635
	Hold a national dissemination meeting of the standard treatment guidelines and family planning standard operating procedures	9,346
	Print copy for every health facility	58,289
Enhance district level capacity for IMCI supportive supervision		1,257,485
	1. Orientate DHOs on IMCI guidelines and procedures	47,143
	2. Monthly supportive supervision visits by district staff to health posts for IMCI	1,210,342
	3. Integrate IMCI indicators into ISS tool (If not already included)	0
Establish a non-monetary incentive scheme for health facilities to meet standard quality service provision targets (including proper waste management)		11,436
	Establish a fund for the RMNCAH-N PBF scheme	0

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Finalize the PBF guidelines	9,902
	Print 500 copies of the PBF guidelines for dissemination	1,534
Identify and share best practices in QI experiences (through publications, media, national, regional, global platforms)		89,638
	Identify and share best practices in QI experiences (through publications, media, national, regional, global platforms)	89,638
Improve central-level and district-level engagement with the Integrated Supportive Supervision (ISS) tool		133,096
	Annual workshop for discussion on ISS challenges	0
	Improve efficiency of programmatic supportive supervision based through selective targeting of facilities based on self-completed ISS results and regular DHMT results	2,557
	Provide quarterly airtime to each facility to self-complete the program-level ISS supervision tool and send to district health office	1,292
	Purchase ISS tablets for all health facilities with a focus on dispensaries and health centers for program-level supervision	129,247
Improve infection prevention and control measures at community/district hospital level		351,088
	1. Conduct assessment on infection prevention measures in community hospitals	33,370
	2. Conduct zonal level training of hospital staff	126,218
	4. Supervision and monitoring of poorest performing hospitals (bottom 40%) in sepsis	181,644
	Central level dissemination - inviting 2 participants from each district/hospital, 5 Zonal personnel, 10 central level staff	9,856
Improve knowledge and awareness of the Hospital Ombudsman		359,094
	Media and publication for increased awareness of the hospital ombudsman	35,123
	Quarterly review meetings at zonal level	116,530
	Sensitize health facility staff on the role of the hospital ombudsman	104,701
	Train Hospital Ombudsman Across Malawi	102,740
Institutionalise the use of client feedback mechanisms (suugestion box, exit surveys)		18,311
	Institutionalise the use of client feedback mechanisms (suugestion box, exit surveys)	18,311
Integrate provision of TTV to pregnant women		41,261
	Disseminate the new ANC guidelines at a national level stakeholders workshop	5,164

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Print the new ANC guidelines and distribute to each facility	29,145
	Revise policy guideline to allow for the provision of TTV at under-5 outreach clinics	6,952
Integrated National Community Health Supervisions to district		138,275
	Integrated National Community Health Supervisions to district	138,275
Review and Dissemination of IPC, WASH and MR Standards		248,928
	Review of IPC, WASH and MR Standards	23,342
	Training on revised IPC, WASH and MR Standards	225,586
Review and Harmonize the Integrated Supportive Supervision		24,495
	Review and Harmonize the Integrated Supportive Supervision	24,495
Review, update and disseminate patient and provider charters		3,257
	Disseminate updated patient and provider charters at the facility and community level	0
	Review and update patient and provider charters	3,257
To develop local capacity to train and assess international accreditation hospital standards		2,303,126
	Conduct baseline survey	2,021,810
	Conduct mentorship visits	24,261
	Conduct Self-Assesments	0
	Conduct supportive supervision vists by mentors	12,130
	Orientate Hospital Management Teams on Accreditation	14,011
	Orientation of health facility staff by QIST members	67,394
	Train 40 National Assessors in international Accreditation	156,515
	Train district level mentors in hospital accreditation	7,006
To develop Malawi specific hospital standards that can be used at all levels		2,104,327
	Conduct Baseline Surveys	2,021,810
	Conduct consultations meetings with key stakeholders Health facility staff, national level staff, MBS, profession associations, MCM, NMCM, academic institutions, development partners, QM TWG	14,011
	Conduct validation meeting with frontline staff, health facility managers, MOH&P and partners	14,011
	Identify and hire a consultant to develop hospital standards guidelines & develop electronic data collection tools	19,466
	Pilot the standards and assessment tools	0
	Training of QIST Members	35,028

Intervention	Activity	Total Activity Cost ($) - Years 1-3
To establish a national health facility accreditation body responsible for local accreditation		56,358
	Conduct national level consultation meetings.	28,179
	Conduct task team meetings	28,179
To scale up international accredited hospital standards to all major hospitals including CHAM facilities		7,498,861
	Conduct baseline survey	2,021,810
	Conduct mentorship visits	15,500
	Conduct progress survey	2,021,810
	Conduct Self-Assesments	0
	Orient Management teams on accreditation at zonal level	35,028
	Orientation of health facility staff by QIST members	3,369,684
	Train QIST District QIST members	35,028
Training of Health Facility Quality Improvement Teams		166,849
	Training of Health Facility Quality Improvement Teams	166,849
Socio-economic/Cultural factors		
Assess the feasibility of incorporating comprehensive sexuality education among youths in school curriculum		304,206
	Consultative meeting between Ministry of Health and Ministry of Education	932
	Follow-up meeting between Ministry of Health and Ministry of Education on revised curriculum proposals	932
	Training of teachers - 2 teachers per school to be trained by trainers	279,202
	Training of trainers for potential sensitisation of current teaching staff	23,141
Community Sensitization on ANC requirements and PNC		42,447
	Dissemination of radio message on ANC and PNC	20,970
	Hire a communication agency to develop the radio message	13,904
	Initial workshop to discuss the need for radio messaging for ANC and PNC visits	1,792
	Workshop to review radio message	5,781
Community sensitization on FP methods targeting adolescents (through community meetings, health talks and IEC materials)		252,236
	Hire a consultant to develop new IEC materials	6,952
	Initial workshop to discuss the need and elements to be updated in community sensitization materials for Family Planning	3,287

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	ToT Workshop to train district level stakeholders on new IEC materials	11,131
	Training of local leaders to dissemination information	216,430
	Translate, Print and disseminate Family Planning IEC materials	12,006
	Workshop to review new IEC materials	2,430
Community sensitization on ITN use		61,631
	Hire a consultant to develop new IEC materials	6,952
	Initial workshop to discuss the need and elements to be updated in community sensitization materials on ITN Use	1,792
	Print and disseminate ITN use IEC materials	39,027
	ToT Workshop to train district level stakeholders on new IEC materials	10,508
	Workshop to review new IEC materials	3,351
Community Sensitization on the Essential Vaccine Package		1,208,787
	All HSAs to be trained on IEC materials	875,959
	Hire a consultant to develop new IEC materials	13,904
	Initial workshop to discuss the need and elements to be updated in community sensitization materials for the Essential Vaccine Package	2,812
	ToT Workshop to train district level stakeholders on new IEC materials	17,246
	Training of local leaders to dissemination information	216,430
	Translate, Print and disseminate Essential vaccine package IEC materials	78,055
	Workshop to review new IEC materials	4,381
Community sensitization on the importance of facility delivery and postnatal care		58,128
	Hire a consultant to develop new IEC materials	6,952
	Initial workshop to discuss the need and elements to be updated in community sensitization materials on Facility Delivery and Postnatal care	1,792
	ToT Workshop to train district level stakeholders on new IEC materials	7,006
	Translate, print and disseminate IEC materials on Facility Delivery and Postnatal care	39,027
	Workshop to review new IEC materials	3,351
Coordination of community sensitization activities		51,402
	Hire a consultant to develop coordinated community sensitization work plan for all relevant programs	40,456

Intervention	Activity	Total Activity Cost ($) - Years 1-3
	Presentation to Ministry of Health and Population Senior Management Team	0
	Stakeholder consultation to determine avenues for coordination of community sensitization activities - schools, local leaders, social cash transfer cash points, media, etc.	3,940
	Validation workshop to finalise coordinated coomunity sensitization work plan	7,006
District-level Community Health Day for advocacy		71,209
	District-level Community Health Day for advocacy	71,209
Expand one-stop centers (for YFHS) to all health facilities		4,435,585
	Construct youth centers based on finalised standards and costs	4,401,370
	District level consultantions for the development/construction of youth centers	12,683
	Hire a consultant to conduct a mapping of all youth centers across the country - undertake assesment of challenges and successes in current youth centre formats/types	17,189
	Workshop to validate the mapping of youth centers and agree on minimum standards and costs of youth centers	4,343
Map and Monitor Community Sensitization activities at the district level		247,136
	Disseminate standard IEC materials to all DHMTs	57,875
	Disseminate standard IEC materials to all partners working on community sensitization activities	161,453
	Hire a consultant to map community sensitization activities led by partners at the district level (including drama groups)	27,808
National Community Health Day (Integrated) for Advocacy		38,454
	National Community Health Day (Integrated) for Advocacy	38,454
Sensitize community leaders (chiefs and influential people) through meetings to encourage women in the community to start ANC on time		248,111
	Hire a consultant to develop new IEC materials	6,952
	Initial workshop to discuss the need and elements to be updated in community sensitization materials for ANC and PNC	3,287
	ToT Workshop to train district level stakeholders on new IEC materials	7,006
	Training of local leaders to dissemination information	216,430
	Translate, Print and disseminate Family Planning IEC materials	12,006
	Workshop to review new IEC materials	2,430
Grand Total		**928,109,434**

Annex 3: Indicators for each building block

Table VIII: Indicators for M&E: baseline and targets in IC

Drugs and Medical Commodities	Baseline (2019 or prior)	Target (2022)
Proportion of village clinics reporting through C-STOCK (new)		
Total value of tracer medicines and medical supplies unaccounted for in DHOs (PSP)		
Funding gap as a % of total estimated budget need for medicines and medical supplies (GoM only) (PSP)		
Proportion of facilities reporting stockouts of selected essential tracer medicines (PSP)		
Proportion of facilities reporting through the LMIS (PSP)		
Enact revised procurement policies according to cost-effectiveness (new)		
Proportion of facilities flagged for drug audit queries (PSP)		
Health Financing	**Baseline (2019 or prior)**	**Target (2022)**
Percentage of health facilities with bank accounts (new)		
Number of districts using the Resource Allocation Formula for allocation of district budget to facilities (new)		
Health Information Systems	**Baseline (2019 or prior)**	**Target (2022)**
Percentage of facilities reporting data using revised reporting forms (new)		
Proportion increase in number of births in DHIS2 notified via CR system vs. Those reported outside the CR system (new)		
Percentage of facilities using digital tools for data collection according to national guidelines (new)		
Percentage of total sub-systems that are interoperable with DHIS2 (new)		

Percentage of facilities using EMRs (new)		
Percentage of people who access health services using a unique ID generated by the national CR system (new)		
Percentage of facilities with reliable internet connectivity (new)		
Proportion of districts and facilities exhibiting documents that depict the use of data (new)		
Percentage of zonal reviews that use the standardized review tracker (new)		
Human Resources for Health	**Baseline (2019 or prior)**	**Target (2022)**
Number of districts with a functional HRH information system (HRHSP)		
Percentage of health centres with the minimum staff required to offer EHP services (HRHSP)		
Percentage of HSAs who receive quarterly supervision visits by SHSAs (new)		
Number of health training institutions and regulatory bodies with updates to accreditation procedures annually (new)		
Health workforce attrition rate (segregated by CHAM and government facilities) (HRHSP)		
Percent of health staff (government/CHAM) who self-report as satisfied with their posting and their jobs compared with the total staffing. (HRHSP)		
Attrition rate among tutors at government or CHAM training institutions annually.		
Percentage of facility staff who receive short in-service training, by cadre and type of training. (HRHSP)		
Number of DHMT members trained in HRH leadership development (new)		
Infrastructure	**Baseline (2019 or prior)**	**Target (2022)**
Percentage of HSAs with quality, durable bicycles (NCHS)		
Percentage of SHSAs with motorcycles (NCHS output indicator)		
60% of health facilities have essential infrastructure, equipment, drugs and supplies at all times (QMSP)		
Percentage of population who live within an 8km radius of a static health facility		

(NHIH)		
Percentage of HSAs with housing in hard to reach catchment areas		
Percentage of waiting spaces which accommodate both male and female patients (new)		
Number of water ambulances procured (new)		
Percentage of health facilities that are accessible to receive commodities all year round (new)		
Leadership and Governance	**Baseline (2019 or prior)**	**Target (2022)**
Percentage of Community Health Action Groups (CHAGs) that are active (NCHS)		
Percentage of Health Center Management (HCMCs) that are active (NCHS)		
Percentage of Hospital Advisory Committees (HACs) that are active (NCHS)		
Percentage of health facilities with functioning Hospital Ombudsman (new)		
Percentage of Village Health Committees (VHCs) that meet monthly (NCHS)		
Percentage of Health Center Management (HCMCs) that hold quarterly community scorecards (new)		
Percentage of districts which held quarterly partner harmonization meetings (new)		
Percentage of districts which held quarterly Community Health TWG meetings (new)		
Percentage of villages in which nutrition campaigns were held (new)		
Number of inter-sectoral TWG on SRHS implementation meetings held annually (new)		
Medical equipment	**Baseline (2019 or prior)**	**Target (2022)**
Equipment available as a proportion of total equipment needed (new)		
Percentage of equipment faults which are addressed (new)		
Quality of service delivery	**Baseline (2019 or prior)**	**Target (2022)**

Percentage of HSAs delivering the majority of the community components of the EHP (NCHS)		
Percentage of health facilities who received at least 1 annual coaching visit for Quality Improvement Teams (new)		
Percentage of health facilities where clinical guidelines and SOPs are readily available at the point of care (new)		
Percentage of health facilities where clinical audits were implemented (new)		
Percentage of health facilities that were accredited (new)		
Percentage of health facilities that received an integrated supportive supervision in all four quarters (new)		
Percentage of health facilities flagged for mentorship (through ISS) visited for mentorship at least once (new)		
Percentage of clinical programs having updated clinical norms and standards according to international/national guidelines (new)		
Percentage of health facilities receiving accreditation		
Percentage of facilities with trained QIST (new)		
Percentage of health facilities which adhere to client safety standards as measured by the ISS (QMSP)		
Percentage of facilities who received IPC shield accreditation (new)		
Percentage of clients who are satisfied with the health services provided. (QMSP - refer to HSSP-II)		
Percentage of facilities displaying service charters in the local language (new)		
Percentage of ambulances which respond to referral in a timely manner (timely defined as a fixed period of time as per guidelines) (new)		
Percentage of health facilities who correctly complete their LMIS procurement forms (new)		
Percentage off health facilities who provide clinical practice according to accreditation standards. (QMSP) / Percentage of women with a live birth in a given time period that received antenatal care four or more times (NHIH & HSSP)		
Socio-economic/ cultural factors	**Baseline (2019 or prior)**	**Target (2022)**
Percentage of pregnant women who slept under a mosquito net last night (DHS)		

Percentage of HSAs trained on the integrated community sensitization plan (new)		
Percentage of women aged 15-19 who were exposed to a family planning message on any of the eight media sources (radio, tv, clothing, newspaper/magazine, mobile phone, drama, internet/website) (DHS)		
Percentage of pregnant women who attended their first ANC visit within the first trimester (DHIS2)		
Percentage of schools with comprehensive sexuality education curriculum (new)		
Percentage of facilities with youth corners (new)		

Annex 4: Methodology for specific activity costing

Annex 4.1: Drugs and Medical commodities

Methodology

Costing the current unfunded resource requirements for RMNCAH+N drugs and commodities required further analysis to determine the current gap in resources available. In line with the costing of the other interventions, only the unfunded part of the drug needs was considered with the assumption that the currently available resources would continue to be available during the subsequent years.

Health System Building Block	Intervention	Activity
Drugs and Medical Commodities	Increase district drug budget	Ensure that funds are adequate for the provision of RMNCAH+N commodities

This estimation can be challenging for several reasons. Firstly, several commodities under these programmatic areas (such as antibiotics) can be used under multiple programmes, which makes it hard to estimate the gap relevant only to RMNCAH + nutrition programmes. Secondly, there are a large number of external partners contributing to the procurement of commodities, and an extensive survey of all these donors was infeasible for the purposes of this analysis. To address these challenges, an attempt was made to analyze only those drugs which correspond primarily to the RMNCAH and Nutrition programmes, excluding cross-cutting or common drugs from the analysis. This reduces the likelihood of underestimating the supply as well as demand for the commodities included in the analysis.

Costs

Projected drug needs for 2019 were derived from the Quantification of Health Commodities in Malawi report (2018). Where information on particular drugs was not included in this report, estimates from the HSSP II costing through the OneHealth tool were used. For family planning commodities, an analysis conducted by the Reproductive Health Directorate (RHD) to estimate 2019 requirements was used. Unit costs were obtained from CMST's 2018 pricing of drugs. If the drug was not procured by CMST, the unit price was taken from the source used to estimate quantity needed.

For quantities of drugs projected to be procured, the following sources were used:

1. **Commodity Procurement Survey -** The largest external partners procuring Maternal, Newborn and Child Health (MNH) and nutrition commodities were identified through a review of Resource Mapping Round 5 data and surveyed to obtain estimates of the procurement plans for 2019, 2020 and 2021. The partners included in the survey were DFID, USAID's Global Health Supply Chain Program, UNICEF and World Food

Program. Only the figures submitted for 2019 were used due to the incompleteness of data for the subsequent years.

2. **CMST Sales Report 2018** – For estimates of procurement of commodities by the government, the sales report of the central procurement agency, CMST, was used. Since projections of procurements through CMST were not available, 2018 figures were used. In other words, it was assumed that government procurement would remain constant over 2018 and 2019.
3. **RHD's Family Planning Commodity Gap Analysis 2019** – For information on projected procurement of family planning commodities in 2019, the recent 2019 analysis conducted by the Reproductive Health Directorate (RHD) was used.

Since some partners such as UNICEF procure commodities directly through CMST, there was a possibility of double counting certain procurements. This potential double-counting was addressed retrospectively.

The total cost for RMNCAH+N drugs and commodities included in the analysis was estimated to be $57.2 million in 2019, including available resources estimated at $27.8 million and an unmet need of $29.4 million. By program, the unmet need (and hence additional resources required) was estimated to be $14.8 million for RMNCH commodities, $8.7 million for family planning commodities, and $5.8 million for nutrition commodities. A more detailed breakdown of gaps by program area is provided in below.

Table IX: Financial gap for RMNCAH & Nutrition in 2019

Programme	Area	Total Cost (2019, USD)	Resources Available (2019, USD)	Financial Gap (2019, USD)
RMNCH	Child Health	$9,057,219	$2,462,503	$6,594,716
	Obstetric complications	$3,745,877	$676,668	$3,069,209
	Child & Maternal Health	$3,852,269	$1,520,397	$2,331,873
	STIs	$2,278,803	$984,243	$1,294,560
	ANC	$926,782	$824,757	$102,025
	Maternal Health	$23,876	$19,946	$3,930
Family Planning		$18,430,736	$9,721,819	$8,708,917

Nutrition	$18,891,267	$13,046,792.44	$5,844,474.16
Grand Total	**$57,206,827**	**$29,257,122**	**$27,949,705**

It was assumed that this gap increases by 9.5% annually, using the average growth rate of drug costs estimated between 2018 and 2020 in the Quantification of Health Commodities in Malawi (2018). This provided the following total cost for the activity "Increase district drug budget" by year.

Annex 4.2: Infrastructure

Methodology
This intervention comprises buildings (both medical and non-medical) required for healthcare at different levels. The resource requirements for infrastructure were primarily based on the prioritized need for construction, rehabilitation and upgradation of facilities included in the Capital Investment Plan, subtracting the projects either completed or for which resources have already been committed.

Health System Building Block	Intervention	Activity
Infrastructure and Transport	Construct, rehabilitate and upgrade health facilities and health posts in locations which maximize coverage as per the Capital Investment Plan	Construct, rehabilitate and upgrade health facilities and health posts in locations which maximize coverage as per the Capital Investment Plan

Costs

The Capital Investment Plan estimates prioritized infrastructure costs, emphasizing on investments in primary care over secondary care and tertiary care. As a result, due to the large costs of constructing secondary and tertiary care hospitals and fully equipping them, only maintenance costs have been considered for district hospitals and central hospitals, apart from Lilongwe, Phalombe and Blantyre district hospitals which are the only new secondary care construction projects included. The total unprioritized cost, as submitted by District Health Management Teams (DHMTs), is estimated to be equal to USD1.1 billion over five years of implementation. After prioritization based on four variables – catchment population, straight line distance from the nearest facility, facility accessibility and the preferred year of work as indicated by the DHMT- the need reduces to USD346 million. Out of this prioritized need, it was estimated that USD92 million has already been invested or committed towards projects included in the Capital Investment Plan so these were excluded from the analysis.

The total need of infrastructure investment adds up to close to USD254 million. To stay aligned with the planned period for the implementation of the Capital Investment Plan (2017/18 –

2021/20), all CIP costs were included in the first three years of implementation of the IC. Any remaining unfunded needs from 2017/18 were added to the cost for 2019/20 and unfunded needs from 2018/19 were added to the cost for 2020/21. Table below presents the total cost for construction, rehabilitation and construction of health facilities. Further details on infrastructure investment needs by health facility and district are provided in the table below.

Table X: Total cost of rehabilitation, upgradation, and construction of health facilities and health posts

Year	Capital Investment Plan (Unfunded need, USD)			Investment Case (Total Cost based on CIP, USD)		
	Rehabilitation	Upgrades	New construction	Rehabilitation	Upgrades	New construction
2017/18	$3,692,614	$7,333,333	$12,642,598			
2018/19	$14,027,040	$1,500,000	$7,104,205			
2019/20	$7,265,820	$17,966,666	$30,257,327	$10,958,434	$25,299,999	$42,899,925
2020/21	$31,594,188	$9,483,333	$9,387,573	$45,621,228	$10,983,333	$16,491,778
2021/22	$27,871,657	$42,261,188	$31,486,549	$27,871,657	$42,261,188	$31,486,549
Total	**$84,451,319**	**$78,544,520**	**$90,878,252**	**$84,451,319**	**$78,544,520**	**$90,878,252**

Annex 4.3: Medical Equipment

Methodology

For the estimation of Medical Equipment resource requirements, a preliminary estimate has been prepared for health facilities within Malawi excluding the five tertiary (central and specialist treatment) hospitals. This serves as an interim estimate, as more detailed and appropriate source will soon be made available through the Service Availability and Readiness Assessment (SARA). For this particular estimation, a broader perspective was taken with the intention of quantifying the additional resources required for medical equipment that could be used for RMNCAH+N in public health facilities.

Health System Building Block	Intervention	Activity
Medical Equipment	Improve the availability of ANC and EMoNC equipment at facilities - Blood pressure apparatus, stethoscope, adult weighing scale, fetal stethoscope, measuring tape, height board, examination bed/couch	Procure stated medical equipment (according to equipment gap from SARA)

The estimation itself was based on a medical equipment survey conducted in 2016 in which 94 health facilities were sampled (including district hospitals, community/rural hospitals, health facilities, and urban health centres). The survey recorded the difference between the amount of

equipment which should be in each facility according to the Standard Equipment List (SEL) and the quantity which was actually found in the facility. The additional equipment resources required for each of the surveyed facilities was then estimated by multiplying the quantity of missing equipment by its unit price, and accounting for maintenance costs. Using this information, the average equipment needs for each facility type were estimated. The average equipment gap for a health post in Malawi was calculated by taking an itemized list of equipment which would typically be needed for a health post, and finding the total cost for this equipment according to estimated/indicative unit prices. Data related to equipment needs in Health Dispensaries was not available and so not included in the analysis.

For each health facility in Malawi (excluding central and specialist hospitals) the cost of the equipment needs was recorded according to information from the medical equipment survey, or the average cost for the facility type if the specific facility was not included in the survey. The sum of these costs gives an estimate of the medical equipment needs for facilities in Malawi. However, in the time since the medical survey was conducted equipment donations have been made, from the African Development Bank to a number of the sampled facilities. The cost of the donated equipment was estimated for each of the targeted facilities, and these costs were subtracted from the estimated equipment needs. Similarly, the Health Services Joint Fund in currently in the concluding stages of procuring medical equipment to be donated to other health facilities. These equipment costs have also been subtracted from the estimated equipment needs at facility level.

A number of assumptions have been made in the preparation of this analysis, and so numerous caveats must be acknowledged. Firstly, it is presumed that the 2016 medical equipment survey still reflects the medical equipment needs of the health facilities in Malawi; however it may well be the case that medical equipment has been retired in the intervening period without replacement, thus creating a larger medical equipment need than has been recorded. Conversely, there exist cases where donors provide district-specific support and equipment donations are made, but not recorded at central level. Therefore, the results of this analysis may present an underestimation of the total amount of equipment donated, and hence an overestimation of the equipment resource gap. Additionally, data is not readily available on central and specialist hospital equipment, for which needs are assessed on an ad-hoc, rather than routine basis.

A Service Availability and Readiness Assessment (SARA) is currently being carried out in Malawi. This is a census of all health facilities which assesses each over a number of different modules, including basic medical equipment. When this data becomes available it will be used to more accurately represent which particular facilities are able to meet the basic medical equipment needs for the provision of health services. The updated analysis will follow the same methodology as described above; the facility's equipment availability will be assessed against the Standard Equipment List, with the shortage for each piece of equipment quantified and multiplied by its unit cost. However, the data gathered from the SARA survey does not assess for each facility for every item on the SEL, and so whilst it will be able to provide a more accurate representation of health facility equipment deficiencies, it will likely underestimate the full medical equipment needs for all Malawian health facilities.

Costs

The total value of the equipment deficit was estimated to be $102 million, with the equipment donations from the HSJF and the ADB, the deficit is reduced to **$93.6 million**. However, it

should be noted that medical equipment depreciation and retirement will likely occur during this period, and so it is likely that the actual resource requirements may be larger than what has been included.

Table XI: Estimation of costs for equipment

Facility Type	Equipment Deficit (US$)	Equipment Donations from HSJF (US$)	Equipment Donations from ADB (US$)	Total Equipment Resource Requirements (US$)
Health Centre	49,003,816	1,150,115	2,485,977	**45,367,725**
District Hospital	33,494,358	733,392	872,746	**31,888,221**
Community Hospital	13,884,952	1,911,037	1,850,263	**10,123,653**
Health Post	6,214,693	0	47,889	**6,166,804**
Total	**102,597,820**	**3,794,544**	**5,256,874**	**93,546,402**

Annex 4.4: Human Resources for Health

There are the following parts to estimating financial gap: salaries, pre-service training and in-service training.

4.4.1 Salaries

Methodology

The salary requirements for the additional HRH recruits was estimated as follows: (1) updating the HRH Strategic Plan workforce optimization model to estimate optimal workforce to deliver the EHP by cadre and by district, (2) comparing the current vs. optimal health workforce and identifying gaps by cadre and by district, and (3) using salary band data to translate the staffing gaps into financial gaps by cadre and by district.

Health System Building Block	Intervention	Activity
Human Resources for Health	Recruit and redistribute health workers based on the needs provided by the HRH Strategy	Pay salaries to all additional staff recruited according to the workforce optimization model

First, we updated the workforce optimization model, which had originally been used to inform the HRH Strategic Plan 2018-2022. The workforce optimization model is a demand-based model which estimates optimal workforce levels by district and by cadre based on target service delivery levels, taking into account factors such as the quantity of services to be provided, the time required to deliver each health service by cadre, and patient-facing time per health worker.

The logic of the workforce optimization model is shown below:

$$\frac{\textit{Number of EHP services provided} \times \textit{Time required from each cadre per service}}{\textit{Time available for patient-facing activities per health worker per year}} = \textit{Immediate health worker requirement}$$

Under the original model used to inform the HRH Strategic Plan, "number of EHP services provided" was based on current utilization and demand for health services, using data from the DHIS2, LMIS, Integrated HIV Programme data, and laboratory databases to estimate current EHP service delivery volumes by facility.

This model was subsequently updated for the purposes of this investment case such that "number of EHP services provided" were based on 2022 EHP service delivery targets on the HSSP II. The model results thus estimate the optimal workforce to deliver a scaled-up EHP according to the service delivery targets defined in the HSSP II, disaggregated by district and by cadre.

Second, a staffing gap analysis was conducted by comparing the current vs. optimal health workforce and identifying gaps by cadre and by district. Current health workforce was estimated using MOHP and CHAM staff return data that was collected in September-October 2017 as part of the HRH Strategic Plan process.

Third, salary band data obtained from the Directorate of Human Resources Management & Development enabled us to translate staffing gaps into financial gaps. The results are staffing and financial gaps by district and by cadre.

The above analysis is primarily for facility-based cadres, e.g. clinicians, nurses, laboratory/pharmacy staff, etc. Community-based cadres such as Health Surveillance Assistants were not included in the workforce optimization model, as the model is based on time spent delivering EHP services and is designed for a facility-based context; it is much more difficult to develop standardized time estimates for HSAs since much of their time is spent in the communities.

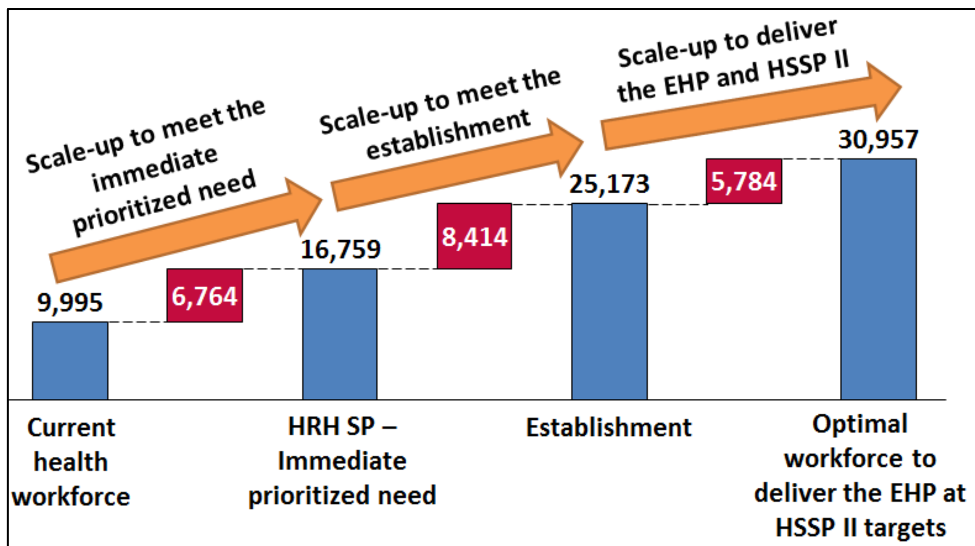
Furthermore, the MOH Community Health Services Section has developed its own staffing gap analysis for HSAs and Senior HSAs based on normative targets in the National Community Health Strategy 2017-2022, which are 1 HSA for every 1,000 population and 1 Senior HSA for every 10 HSAs. In consultation with the MOH Community Health Services Section, we used this normative guidance to develop staffing gap analyses by district for HSAs and Senior HSAs, and translated this into a financial gap using the average annual salary for those cadres.

Costs

The annual cost of increasing the health workforce in order to optimally deliver the EHP is estimated at **$65 million**, including $62 million annually for facility-based cadres (excluding dental and mental health cadres) and $3 million annually for community-based cadres.

For facility-based cadres, the optimal workforce to deliver the EHP represents an ambitious, long-term goal that goes above and beyond the existing establishment, as shown in the below. For prioritized cadres that were included in the HRH Strategic Plan, and excluding HSAs, the optimal workforce to deliver the EHP was estimated at 30,957. The represents a three-time increase over current staffing levels of 9,995 within those cadres, and is significantly higher than the "immediate prioritized need" as modeled by the HRH Strategic Plan using current EHP utilization as well as the establishment.

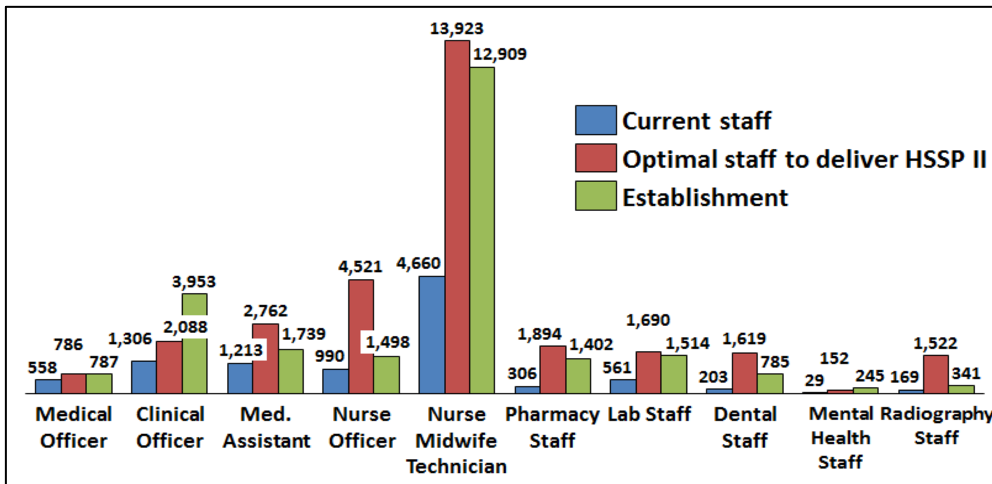
Figure i: Projected increase in workforce



Only prioritized cadres from the HRH SP are included here. All figures also exclude HSAs, which are discussed in further detail later in the context of the National Community Health Strategy targets.

A breakdown of staffing gaps by cadre is shown in the figure below. In absolute numbers, the largest staffing gaps are in nurse midwife technicians and nurse officers, but as a percentage, the largest gaps are in radiography, dental, and pharmacy staff.

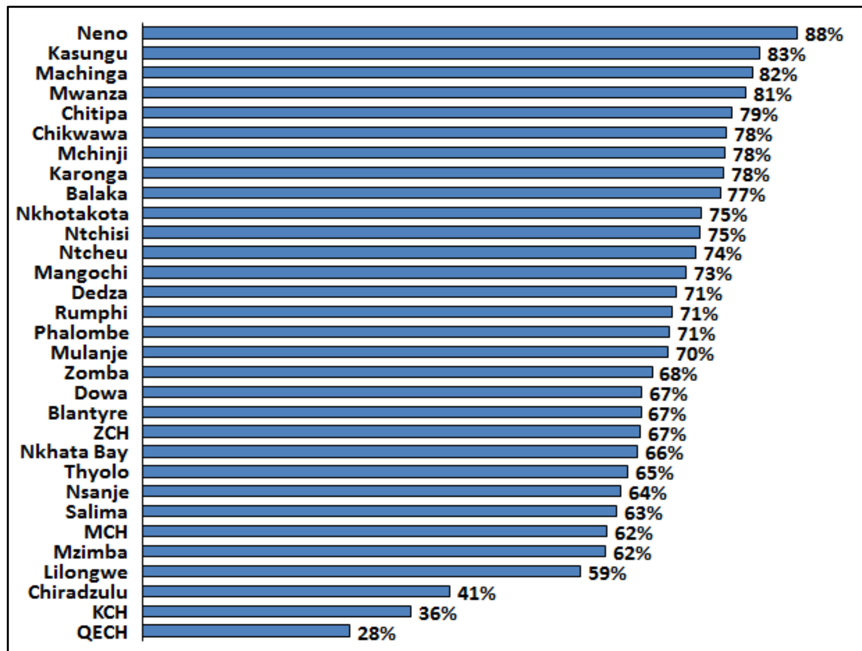
Figure ii: Current health workforce compared to workforce targets - by cadre



Only prioritized cadres from the HRH SP are included here. All figures also exclude HSAs, which are discussed in further detail later in the context of the National Community Health Strategy targets. Pharmacy, lab, dental, and radiography staff can be further disaggregated into sub-cadres.

Staffing gaps by cadre are shown in the figure below. Over half of all districts have staffing gaps over 70% compared to the optimal workforce, with staffing gaps most acute in Neno, Kasungu, and Machinga. Though staffing gaps appear to be less acute in central hospitals, the workforce optimization model only includes EHP services for primary and secondary health care, so relatively smaller staffing gaps at central hospitals do not account for the wide variety of specialized tertiary services which they deliver but are not included in the EHP.

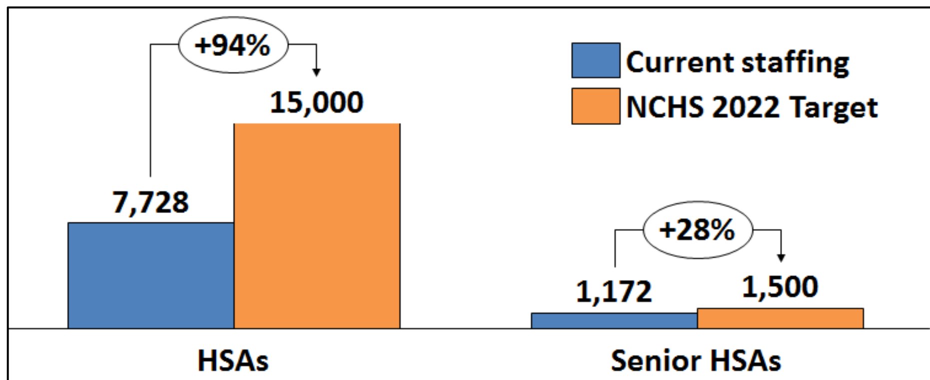
Figure iii: Staffing gaps by district and central hospital (compared to optimal workforce to deliver the HSSP II)



Only prioritized cadres from the HRH SP are included here. All figures also exclude HSAs, which are discussed in further detail later in the context of the National Community Health Strategy targets.

For community-based cadres such as Health Surveillance Assistants and Senior Health Surveillance Assistants, the staffing gap analysis against the National Community Health Strategy scale-up targets are shown below.

Figure iv: NCHS scale-up targets for HSAs and Senior HSAs



Additional data on the staffing gaps can be obtained upon request to the MOHP Department of Planning and Policy Development or the MOHP Directorate of Human Resources Management & Development.

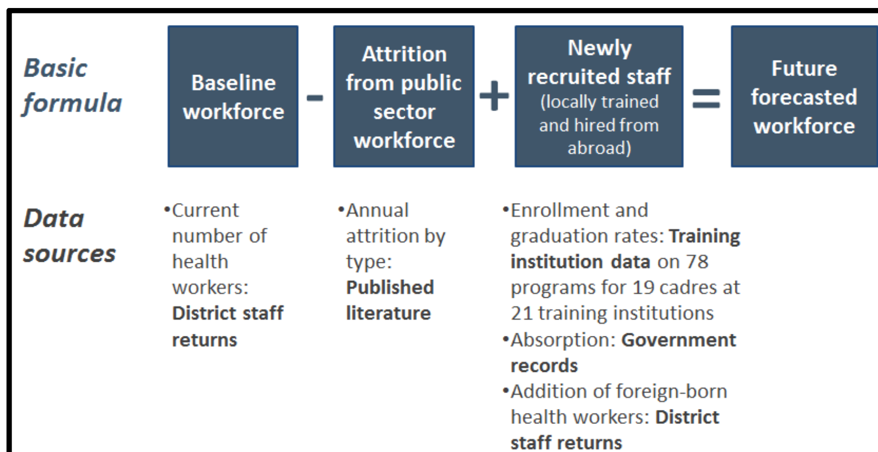
4.4.2 Pre-service training

Methodology
Resource needs for pre-service training were estimated as follows: (1) identify optimal health workforce targets by cadre based on the workforce optimization model described in the previous section, (2) use the training pipeline model used to inform the HRH Strategic Plan to estimate additional students that need to be trained for each cadre in order to have sufficient health workers to meet the optimal health workforce targets by 2022, and (3) translate this into the total resource requirements for pre-service training, using the school fee structure for each training program.

Health System Building Block	Intervention	Activity
Human Resources for Health	Recruit and redistribute health workers based on the needs provided by the HRH Strategy	Pay for health worker pre-service training, so that optimal health workforce targets can be met

First, optimal health workforce targets by 2022 were estimated based on the workforce optimization model described in the previous section. Second, we fed the results into a training pipeline model that had been used to inform the HRH Strategic Plan, and estimates future forecasted workforce based on enrollment, graduation, absorption, hiring, and attrition data. The model logic is shown below in Figure v.

Figure v: HRH pipeline model



Working backwards in this model, we entered the optimal workforce as estimated by the workforce optimization model as the "future forecasted workforce" in order to estimate the extent to which enrollments would need to be scaled up in order to meet the optimal workforce targets in 2022. To do so, we held assumptions on graduation rates, attrition rates, and addition of foreign-born workers rates constant to the baseline, and set absorption of newly graduated health workers into the health workforce at 100% assuming that the resource requirements in the HRH salary needs analysis described earlier would be met. We then progressively adjusted enrollment rates upwards to find the required scale-up rate of enrollments for each cadre in order to meet the optimal workforce targets by 2022.

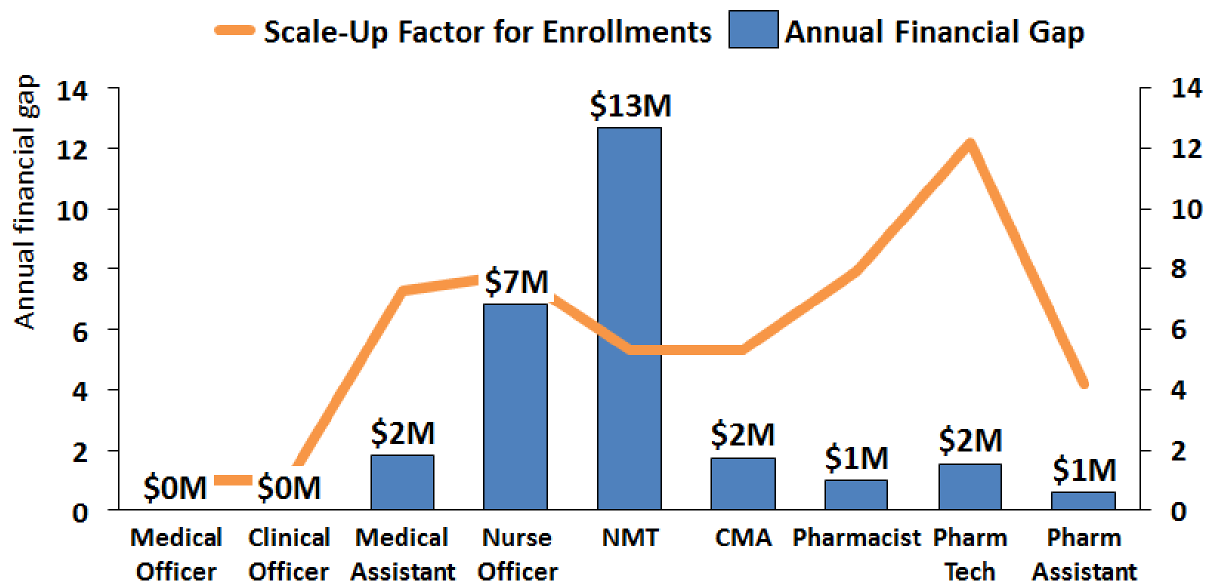
Once we estimated the enrollment scale-up needed to meet the optimal workforce targets, we then translated this into an estimate of need using data on school fee structure for individual pre-service training programs, which was obtained from the MOH Directorate of Human Resources Management & Development.

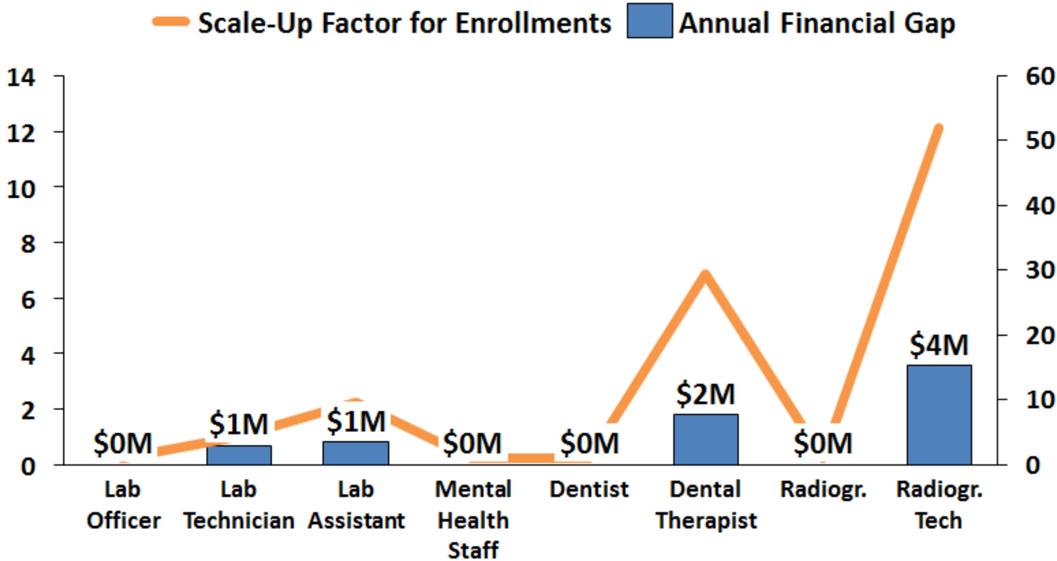
The above analysis only accounts for facility-based cadres. For community-based cadres, the MOHP Community Health Services Section costed pre-service training for Health Surveillance Assistants and Senior Health Surveillance Assistants in the National Community Health Strategy 2017-2022, which have been included below.

Costs

The analysis found that in order to meet the optimal health workforce to deliver the EHP by 2022, an additional $41.2 million would need to be invested annually in pre-service training. This includes $31.2 million annually for facility-based cadres (excluding dental, mental health, optometry and physiotherapy) as well as $10 million annually for Health Surveillance Assistants and Senior Health Surveillance Assistants as costed in the National Community Health Strategy 2017-2022. Detailed results by cadre are shown in the figure below.

Figure vi: Financial gaps for pre-service training by cadre





** Radiogr. = Radiographer, Radiogr. Tech = Radiography Technician*

Of note are certain cadres with no financial gap for pre-service training, including medical officers, clinical officers, and lab officers. Here, the model indicates that scale-up of pre-service training is not necessary, but rather improving absorption of new graduates into the health workforce will on its own enable those cadres to meet the optimal health workforce targets by 2022.

Other cadres shown with no financial gap, including mental health staff and radiographers, do not have pre-service training programs in Malawi in the pipeline model as staff are typically trained abroad. Though scale-up of pre-service training for these cadres is needed to meet the optimal health workforce, because the training costs are borne outside of Malawi, they have not been included in the analysis here.

There are several important limitations to this analysis. Enrollment scale-up rates for many cadres are extremely ambitious, even unrealistic, given constrained infrastructure and HR capacity at many pre-service training institutions. For example, enrollment scale-up targets for some cadres such as Radiography Technicians and Dental Therapists are as high as 52X and 29X scale-up of enrollments, respectively. With existing capacity of training institutions, it is unlikely that these goals can be met by 2022 even if additional financial resources were made available.

This suggests that a capacity assessment of training institutions is needed to inform and nuance these proposed scale-up targets. This will enable better differentiated targeting of pre-service training scale-up to the training institutions with available capacity, as well as inform future costed priorities for scaling up infrastructure and HR at training institutions that currently lack capacity to meet these ambitious goals. Work must also be done to expand the pipeline of secondary school students who are interested in health as a career and sufficiently prepared and motivated to undergo health worker training. Ultimately, further prioritization of these targets is needed to inform short-term, medium-term, and long-term planning to meet the ambitious targets for scaled-up training.

4.4.3 In-service training

Methodology

Estimating the currently unfunded need for in-service training was conducted by extracting data from two sources; (1) the MOHP consolidated workplan and budget for fiscal year 2019/2020 and (2) the costed list of interventions developed for the Investment Case.

Health System Building Block	Intervention	Activity
Human Resources for Health	Recruit and redistribute health workers based on the needs provided by the HRH Strategy	Provide funding for necessary health worker in-service trainings

On the first component, as part of the annual MOHP planning and budgeting process, MOHP directorates, central hospitals, and zonal health offices developed activity-based workplans that were costed and prioritized. Based on the prioritization exercise, these activities were then categorized as Treasury-Funded, Partner-Funded, or Funding Not Secured. The financial gap analysis focused on the latter category, which includes activities that MOHP directorates, central hospitals, and zonal health offices would ideally like to implement in the upcoming financial year as part of their workplans, but for which they currently lack confirmed funding from Treasury or partners.

To identify financial gaps for in-service training, we extracted Funding Not Secured activities which had the phrase "train" within their activity descriptions. We subsequently excluded all activities that were considered to be linked to pre-service training rather than in-service training.

In addition to the MOHP consolidated workplan and budget, we also extracted in-service training activities from the costed GFF activity list, which was based on the bottleneck analysis conducted for this investment case and validated with national and district-level stakeholders. Training activities were identified through the phrase "train" in their activity descriptions. We subsequently excluded activities that fell under the "Quality of Services", "Socio-Economic and Cultural Factors", and "Leadership and Governance" building blocks in order to any potential duplicative reporting. activities that were linked to pre-service training rather than in-service training were excluded, as well as HR management activities that overlapped with the Program Management gap analysis. The resulting list of activities is mainly focused on the actual delivery of in-service trainings.

Though this methodology does not necessarily provide an exhaustive list of all in-service training gaps in the health sector, it was designed to identify specific, actionable activities and gaps that had been prioritized by MOHP directorates, central hospitals, and zonal health offices.

Costs

Based on this analysis, the financial gap for in-service training was estimated at $4.2 million for fiscal year 2019/2020, including $2.3 million from the MOHP FY 2019/2020 workplan and budget and $1.9 million from the costed GFF activity list. The detailed list of activities can be found in Annex 5.

An important note is that while a financial gap has been identified, there may be opportunities to unlock additional fiscal space and fill this gap through improved streamlining and coordination of existing funding. Data from Round 5 of the annual MOHP Resource Mapping exercise indicates that there is significant fragmentation in the funding landscape for in-service training, with $9.9 million in annual funding spread across 258 in-service training activities each year, funded by 40 different partners and implemented by 63 organizations.

Furthermore, in-service trainings are a major cause of health worker absenteeism, reducing valuable patient-facing time to deliver essential health services. One study found that 33% of health worker absences can be attributed to in-service trainings, and the average hospital worker has missed 16 workdays over the previous 3 months due to in-service trainings. It is therefore important to address these inefficiencies by streamlining and harmonize trainings, ideally against a consolidated in-service training master plan, including better integration across disease areas.

Annex 5: Geographical prioritization of interventions - indicators

Table XII: Indicators used to analyze relative performance of districts by building block

Building Block	Indicator used
Drugs and Medical Commodities	Average % of days when the drug was available (Albendazole400mg)
	Average % of days when the drug was available (Ceftriaxone 1g, PFR)
	Average % of days when the drug was available (Ferrous sulphate 200mg / folic acid 250 micrograms)
	Average % of days when the drug was available (Jadelle(implant))
	Average % of days when the drug was available (Long Lasting Insecticidal Net(LLIN))
	Average % of days when the drug was available (Lumefantrine 120mg/Artemether 20mg,6x1)
	Average % of days when the drug was available (Magnesium sulphate 50%, 2ml ampoule)
	Average % of days when the drug was available (Malaria Rapid Diagnostic Test (MRDT) Kits)

Building Block		Indicator used
		Average % of days when the drug was available (Medroxyprogesterone Acetate Injection, 150mg/ml - Depo-Provera)
		Average % of days when the drug was available (Misoprostol 200 mcg, tablets)
		Average % of days when the drug was available (Oral rehydration salt, satchet (WHO formula) for 1L solution)
		Average % of days when the drug was available (Ready-to-use Therapeutic Food (RUTF) spread)
		Average % of days when the drug was available (Sulphadoxine 500mg / pyrimethamine 25mg (SP), tablets)
		Average % of days when the drug was available (Tenofovir (TDF) + Lamivudine (3TC) + Efavirenz (EFV), 300+300+600, 30"s (5A))
		Average % of days when the drug was available (Vitamin A 100,000 IU)
		Average % of days when the drug was available (Zinc sulphate 20mg)
Human Resources for Health	**HR Availability**	% of Required Posts Filled (Clinical Officer / Technician)
		% of Required Posts Filled (Medical Officer / Specialist)
		% of Required Posts Filled (Nurse midwife technician)
		% requirement of HSAs met (compared to 1:1000 ratio)
	HR Training	% of HSAs trained on U-5 iCCM (Village Clinic)
		% of HSAs trained on Family Planning
		% of HSAs trained on Immunizations
		% of HSAs trained on Malaria Prevention

Building Block	Indicator used
	% of HSAs trained on Vitamin A and Nutrition screening
Infrastructure	Population with access to facilities within 5 kilometers from residence (%, Best case)
	Population with access to facilities within 5 kilometers from residence (%, Worst case)
Medical Equipment	% of Health facilities with functional Cold Chain equipment
Quality	% of children under 1 fully immunized (2018)
	% of children with diarrhea who were given ORS and Zinc
	% of pregnant women for whom ARV was dispensed
	% of pregnant women given IPT (6+ doses)
	% of pregnant women treated for deworming
	% of pregnant women who receive 120+ FeFo tablets
	% of Pregnant women with 2+ TTV Doses (2018)
	Severe and Acute Malnutrition Cure Rate (as a % of total # admitted)
Socio-economic/Cultural factors	% of births which occurred in facility (out of total expected number of births in the district)
	Percentage of children under age 5 with fever for whom advice or treatment was sought
	Percentage of pregnant women (15-49 years) who slept under any mosquito net last night
	Percentage of women age 15-49 who heard a family planning message on any of the eight media sources (radio, TV, clothing, newspaper/magazine, mobile phone, poster, drama, internet/website)

Building Block	Indicator used
	Total demand for family planning (Percentage of currently married women age 15-49)
Health Information Systems	% of facilities which submitted HMIS15 reports
	% of facilities which submitted HMIS15 reports on time
Leadership and Governance	% of Group Village Heads (GVHs) with a functional Community Health Action Group (CHAG)
	% of health centers with a functional Health Center Management Committee (HCMC)

Annex 6: Estimation of the impact of investment case

In order to appropriately conduct bottleneck and root-cause analysis, a number of adjustments needed to be made to the EQUIST determinant indicators as outlined below:

ANC package	Deworming (pregnant women)	Scale up of deworming coverage unable to provide impact as unavailable intervention on Lives Saved Tool, (LiST).
ANC package	**Geographical accessibility**	Demographic Health Survey (DHS) quality indicator representing distance listed as a problem for accessing health service by women.
HIV prevention	**PMTCT**	ANC1 to include PMTCT package such as HIV testing, better fit to PMTCT AC.
Modern Family Planning	**Inject/Implant**	Used "Contraceptive Use" to encompass both of these interventions.
Delivery Package	**Treatment of postpartum hemorrhage**	Labour and Delivery with access to BemONC facilities and Labour and Delivery with access to CemONC encompassed PPH intervention treatment most closely according to LiST tool.

ANC package	**Deworming (pregnant women)**	Scale up of deworming coverage unable to provide impact as unavailable intervention on Lives Saved Tool, (LiST).
First line uncomplicated Malaria treatment and Malaria Diagnosis	**Uncomplicated (children, <15 kg)/RDTs**	Antimalarials-artemisinin compounds for malaria selected as most appropriate proxy intervention as proposed interventions not available on LiST.
First line uncomplicated Malaria treatment and Malaria Diagnosis	**Percent of children treated within 48 hours of the onset of fever in malaria endemic areas with an artemisinin containing compound.**	Available indicator better suited to capture timely quality treatment appropriate to malaria management.
Essential Vaccines Package	**Proportion of children age 12-23 months who received DPT1/Penta 1**	Available indicator better suited to represent initially accessing immunization interventions.
Essential Vaccines Package	**Proportion of children age 12-23 months who received DTP3/Penta 3**	Available indicator better suited to represent continuity to access to immunization interventions.