

ZIMBABWE

Programme Support Rationale

2018-2021

The Programme Support Rationale (PSR) presents the rationale and high-level objectives for the programming of Gavi’s support for the upcoming period (and together with the Vaccine Support Rationale mentioned below), replaces the application forms previously used to request new support).

- The PSR is developed approximately once every five years based on and in alignment with the national health and immunisation strategic plan(s) and budgets.
- It incorporates the **joint appraisal** in the year of its review.
- **Stock levels and requests for renewals or product switches need to be reported on the Gavi Country Portal between late March and May 15th 2017**
- The PSR builds upon robust analysis of country data and evidence of progress made (or persistent challenges) on the coverage and equity situation.
- In parallel to the PSR, the operational work plan & budget and Gavi grant performance framework (GPF) are developed to complement the objectives presented in the PSR. The operational budget and work plan will be updated annually to align with country’s operational planning processes, and informed by the joint appraisal.
- The PSR will be reviewed by independent technical experts who will make a recommendation to Gavi on the full portfolio of support for the duration of the PSR, including any current support that needs to be renewed.
- **A complementary Vaccine Support Request will be developed to support requests and Gavi approval for New Vaccines Support nearer the time of their implementation (~12-18 months ahead of launch).**



For more information about the processes supporting the development, review and approval of the support requests consolidated in the PSR, please see **Guidance on Gavi’s country engagement framework** (available from the Gavi SCM). A list of mandatory country documents is provided there (Annex 4).

Signatures – Endorsement of the PSR

Please note that final approval of Gavi’s support will require signatures of both the Minister of Health and Minister of Finance or their delegated authority (and Minister of Education for HPV support).

Gavi also requires endorsement of the PSR and the grant performance framework by the relevant government-led Coordination Forum (Inter-Agency Coordinating Committee (ICC), Health Sector Coordinating Committee (HSCC) or equivalent body), through submission of Coordination Forum member signatures together with the minutes of the endorsing meeting.

Signatures and endorsement of the PSR are required before a recommendation for support can be issued by Gavi’s independent reviewers.

We, the undersigned, affirm that the objectives and activities in the Gavi PSR are fully aligned with the national health and immunisation strategic plans (or equivalent), and that funds for implementing all activities, including domestic funds and any needed vaccine co-financing will be included in the annual budget of the Ministry of Health.

Minister of Health (or delegated authority)	Minister of Finance (or delegated authority)
Name: Dr. Pagwesese David Parirenyatwa	Name: Mr. Patrick Chinamasa
Signature:	Signature:
Date: 30th August 2017	Date: 30th August 2017

Part A: Overview of portfolio of support

1. Vaccines: Country co-financing and Gavi support requested for current and new Gavi funded vaccines

1.1 Current vaccines supported by Gavi		Estimated projections ¹				
		2018	2019	2020	2021	2022
Pentavalent routine	Country co-financing (US\$)	219,000	265,300	264,900	264,800	264,800
	Gavi support (US\$)	678,000	726,317	725,222	724,948	724,948
Rotavirus routine	Country co-financing (US\$)	167,000	169,500	169,500	169,200	169,200
	Gavi support (US\$)	1,566,000	1,591,158	1,591,158	1,588,342	1,588,342
Pcv13 routine	Country co-financing (US\$)	272,000	265,280	264,920	264,760	264,800
	Gavi support (US\$)	4,324,000	4,302,593	4,296,754	4,294,159	4,294,808
HPV routine (approved, to be introduced in Q1 2018)	Country co-financing (US\$)	70,500	95,000	90,000		
	Gavi support (US\$)	1,579,500	2,130,500	2,008,000		
MR 2 nd dose routine (MSD)	Country co-funding (US\$)	77,326	234,378	245,514	245,932	248,402
	Gavi support (US\$)	73,500	212,500	223,000	223,000	225,500
IPV routine (approved, not yet launched)	Country co-financing (US\$)	N.a.	N.a.	N.a.		
	Gavi support (US\$)	802,500	1,091,000	1,029,000		
a) Total Country co-financing for current vaccines (US\$)		805,826	1,029,458	1,034,834	944,692	947,202
b) Total Gavi support for current vaccines (US\$)		9,023,500	10,054,068	9,873,134	6,830,449	6,833,598
c) Total cost of current vaccines (a+b) (US\$)		9,829,326	11,083,526	10,907,968	7,775,141	7,780,800
1.2 New vaccine support requested						
Measles Rubella follow-up campaign	Population in the target age cohort (#)		1,780,643			
	Target population (first or only dose) (#)		2,056,643 ²			
	Target population for last dose (#)		-			
	Estimated wastage rates ³		10%			
	Country co-financing (US\$)		29,238			
	Gavi support (US\$)		1,548,114			
d) Total Country co-financing for new vaccines requested (US\$)			1,577,352			
e) Total Gavi support for new vaccines requested (US\$)			1,568,745.95			

¹ These estimates provide visibility to the total funding needs that a country should plan to complement the Gavi financing. These estimates are projections and may differ from actual commitments, which are calculated year-by-year and reflected in Gavi decision letters. The source of these estimates are the latest input received from country, with adjustments performed by the Gavi Secretariat (eg price updates, supply constraints, etc).

²This includes buffer (25%) and wasted rates (10%)

³ For indicative wastage rates for preferred presentations (%), please refer to the detailed product profiles available here: <http://www.gavi.org/library/gavi-documents/supply-procurement/detailed-product-profiles/>

f) Total cost of new vaccines requested (d+e) (US\$)		3,146,097.95			
1.3 Total cost and co-financing summary					
g) Total Country co-financing for current and new vaccines requested (a+d) (US\$)	805,826	2,606,810	1,034,834	944,692	947,202
h) Total Gavi support for current and new vaccines requested (b+e) (US\$)	9,023,500	11,622,814	9,873,134	6,830,449	6,833,598
i) Total cost of current and new vaccines requested (g+h) (US\$)	9,829,326	14,229,624	10,907,968	7,775,141	7,780,800

- 1.4 Request for vaccine presentation switches for current support (if applicable)⁴. Please note that this requires further documents containing cold chain capacity, stock levels of the current product, and a costed activity plan (to submit via the Country Portal in the “Supporting Documents” section).

Gavi aims to meet country’s preferences on **vaccine presentation** to the extent possible. When there is not enough supply of a desired product to meet country demand, Gavi will consider the rationale for the switch in order to prioritise supply between countries.

Desired presentation	Desired introduction month	Rationale for the switch in presentation including any anticipated impact on coverage and equity
...

- 1.5 Vaccine presentation and implementation dates: Country to complete all columns for each new vaccine introduction and campaign planned over the duration of the PSR and for which the country seeks support.

Programme and type of support	Preferred presentation ⁵	Desired date for vaccines to arrive	Planned launch date	Support requested until
Measles/Rubella follow-up campaign	10 dose presentation	March 2019	June 2019	Only for 2019

⁴ For a detailed description of the vaccine product profiles, visit the Gavi website (click on 3rd tab): <http://www.gavi.org/about/gavis-business-model/vaccine-supply-and-procurement/>

⁵ For vaccine presentations, please refer to the detailed product profiles available here: <http://www.gavi.org/library/gavi-documents/supply-procurement/detailed-product-profiles/>

2. Financial support

2.1 Currently active/approved Gavi financial support (only amounts already approved but not yet completed) Entire table prefilled by Gavi Sec (PO)

Type of support	Amount approved	Amount disbursed	Amount remaining	Year(s) of support
HSS 1	\$6,546,827.00	\$6,546,827.00	\$0.00	2012-2017
IPV VIG	\$367,000.00	\$367,000.00	\$367,000.00	2015
Reprogramming of VIGs/Op Costs	\$540,959.00	\$540,959.00	\$540,959.00	2017
HPV Routine	\$ 510,137 VIG	Nil	\$ 510,137 VIG	2018
HPV Multi-Year Cohort	\$ 385,626 Operational Support		\$ 385,626 Operational Support	
PCV switch grant (separate approval process, reflected to provide a full picture of potentially available funds)	\$ 121,928	Nil	\$ 121,928	2018

2.2 New financial support requested Country to complete table below

Please note the country's total HSS ceiling for the coming 5 years ⁶ : (US\$ ceiling amount)	Indicative estimates ⁷					Total
	2018	2019	2020	2021	2022	
Health Systems Strengthening support (HSS)						
Objective 1: To strengthen the delivery of immunisation and improve coverage in low performing districts to more than 80%.	\$2,160,823.00	\$1,610,714.00	\$1,382,278.00	\$1,382,278.00	N/A	\$6,536,093.00
Objective 2: To strengthen the governance and coordination of the EPI program	\$216,978.25	\$240,482.25	\$268,066.25	\$268,016.25	N/A	\$993,543.00
Objective 3: To increase demand for immunisation services.	\$324,436.00	\$366,376.00	\$229,336.00	0.00	N/A	\$920,148.00
Objective 4a: To ensure availability and use of high quality data to inform timely and evidence-based interventions.	\$169,560.00	\$141,163.00	\$152,880.00	\$400,752.00	N/A	\$864,355.00
Objective 4b: To strengthen EPI disease Surveillance.	\$91,822.00	\$82,432.00	\$82,432.00	\$82,432.00	N/A	\$339,118.00
Objective 5: To strengthen cold chain and vaccine logistics management system in Zimbabwe.	\$1,448,881.00	\$223,256.00	\$142,800.00	\$138,640.00	N/A	\$1,953,577.00
	\$4,412,500.25	\$2,664,423.25	\$2,257,792.25	\$2,272,118.25	NA	\$11,606,834.00
12% UNICEF programme costs	\$529,500.03	\$319,730.79	\$270,935.07	\$272,654.19	NA	\$1,392,820.08
Total HSS (US\$)	\$4,942,000.28	\$2,984,154.04	\$2,528,727.32	\$2,544,772.44	N/A	\$12,999,654.08
Cold Chain Equipment Optimisation Platform (CCEOP)						
CCEOP Gavi joint investment ⁸	1,158,154	1,149,087	491,087	0.00	N/A	2,798,329

⁶If circumstances warrant, and the source of the CCEOP country joint-investment is Gavi HSS, this amount should be deducted from the HSS ceiling.

⁷To determine the ceiling (total) of these complementary allocations (VIGs and Ops) the country needs to specify their target population for the associated vaccine.

⁸ CCEOP Gavi joint investment = 50% or 80% of the total amount for CCEOP, depending on the World Bank GNI group (and Gavi co-financing status)

						CCEOP country joint investment ⁹	
• National funds						N/A	
• Gavi HSS (with this amount clearly budgeted for within the HSS ceiling to avoid double counting)	699,582 ¹⁰	0.00	0.00	0.00		N/A	699,582
• Other partners	-					N/A	
Total CCEOP¹¹ (US\$)	1,447,693	1,436,359	613,859	0.00		N/A	3,497,911
New vaccine support (vaccine introduction grants, or operational support for campaigns, or switch grants) (USD\$)							
Measles Rubella follow-up campaign Operation Support		1,568,745.95					1,568,745.95
Total HSIS support requested (US\$)							

2.3 Data verification options for calculating HSS/Performance Based Funding (PBF) payments [Country to complete entire table](#)

Use of country admin data (Yes/No):	Yes	Use of WHO/UNICEF estimates (Yes/No):	Yes	Use of surveys (Yes/No):	...
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⁹ CCEOP country joint investment = 20% or 50% of the total amount for CCEOP, depending on the World Bank GNI group

¹⁰ This amount has been added to objective 5 in the budget for the HSS for the CCEOP.

¹¹Total CCEOP = CCEOP country joint investment + CCEOP Gavi joint investment

Part B: Country immunisation system analysis

! The **Gavi Strategy 2016-2020** focuses on increasing **coverage and equity** of immunisation services to reach every child with vaccine support. The analysis presented in **Part B** is key to identifying those areas of low coverage and inequities that may need to be targeted with future Gavi support (described in **Part D**).

3. Country contextual information

Years of National Health Plan	2016-2020
Years of immunisation strategy (e.g. cMYP)	2016-2020
Start and end dates of fiscal period	January-December
Timing of annual national operational work-planning	January-December
Transition and co-financing status (list the status: initial self-financing, preparatory transition phase, accelerated)	Initial self-financing
Total annual immunisation budget for Government and partners (past yr)	US\$26,472,315.37 [18]
Total health expenditure/per capita (WB 2014)	US\$ 57
Total spending on routine immunisation per child (2015)	US\$ 28.16
Vaccines (not financed by Gavi) in the current immunization schedule (e.g. oPV)	BCG, OPV, TT, DTP & MR I & Rubella in MSD
Other status relevant within Gavi (e.g. PEF tier, Fragility, Ebola, Coverage & Equity)	Under Gavi Fragility Policy and PEF Tier 3


4. Status of country's performance against key immunisation indicators as per the Gavi Strategy (2016-2020), based on the country's updated **performance framework** (including source and year)

Penta 3 coverage at national level (Penta 3 ¹²)	89% (Admin 2016 JRF) 90% (Official 2016 JRF) 90% (WUENIC)
Measles containing vaccine (first dose) coverage at national level (MCV1)	92% (Admin 2016 JRF) 95% (Official 2016 JRF) 95% (WUENIC)
Drop-out rate between Penta 1 and Penta 3	5% (Admin 2016 JRF) 4% (Official 2016 JRF) 4% (Calculated from WUENIC)
Equity of vaccine coverage by geography: percentage of districts or equivalent administrative area with Penta 3 coverage greater than 80%	90% (2016 JRF)
Equity of vaccination coverage by poverty status: percentage point difference in penta3 coverage in highest vs. lowest wealth quintile)	7.5 (ZDHS, 2015)
Vaccination coverage by education status of mother/caretaker: percentage point difference in penta3 coverage among children whose mother/caretaker received no education vs. completed secondary education or higher	14.9 (ZDHS, 2015)

¹²See Annex 3 in CEF Guidance for the minimum requirements for eligibility

Data quality: percentage point difference between Penta 3 national administrative coverage and survey point estimate	-
Country composite score on last Effective Vaccine Management (EVM) (year and aggregate score)	2016, Score 74%

5. Coverage and equity situation

 Improving sustainable coverage and addressing inequities requires the ability to identify the populations that are not getting vaccinated, understand the bottlenecks or challenges that keep them from being vaccinated, and tailor interventions to address those specific bottlenecks. This section sets the context for targeting specific populations, communities or geographic areas for intensive support in an effort to improve equitable coverage among such groups.

- 5.1** Describe **national and sub-national evidence on the coverage and equity** of immunisation in the country and constraints to improvement. In particular, identify the areas and groups of low coverage or high inequity relative to geographic, socioeconomic, cultural or female literacy considerations, as well as systematically marginalised communities. Specify both the **areas and/or populations with low coverage (%)** and **those with the largest absolute numbers of un-/under-vaccinated children**. Among data sources, consider administrative data, coverage surveys, DHS/MCS, equity analyses, Knowledge-Attitude-Practice surveys, and patterns of diseases like measles.
- 5.2** Describe the **challenges underlying the performance of the immunisation system**, including in vaccine supply chain, demand generation/ community mobilisation, data quality/ availability/ use and leadership, management and coordination
- 5.3** Describe any issues related to the **financing of the immunisation programme** that impact the ability to increase coverage, including bottlenecks related to planning, budgeting, disbursement and execution of resources.
- 5.4** Describe **lessons learned and best practices** on effectiveness of implemented activities to improve coverage and equity; recommendations on changes or new interventions that might be required to accelerate progress (include data to support any findings, recommendations)

5.1 National and sub-national evidence on the coverage and equity of immunisation

5.1.1 Immunisation coverage in Zimbabwe

The coverage of DTP3 is normally used to assess the performance of the immunisation programme. According to routine administrative data, DTP3 coverage in 2005 was at 90% after which it declined and reached 66% in 2009. In 2010 DTP3 coverage picked up again until in 2012 after which it dropped again. However, between 2011 and 2014 Zimbabwe sustained a DTP3 coverage of above 90%. In 2015 and 2016 DTP3 coverage was at 88% and 89% which implies that Zimbabwe did not reach the GVAP target of 90% for this antigen [1&2] as can be seen in Table 1 below.

Table 1: Immunisation coverage in Zimbabwe 2005-2017¹³

Antigen	Year												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ¹⁴
BCG	101	94	93	77	79	103	108	109	104	99	95	94	96
OPV 3	90	85	70	64	60	84	94	99	96	91	88	89	88

¹³For 2017, coverage is for the period January-June 2017.

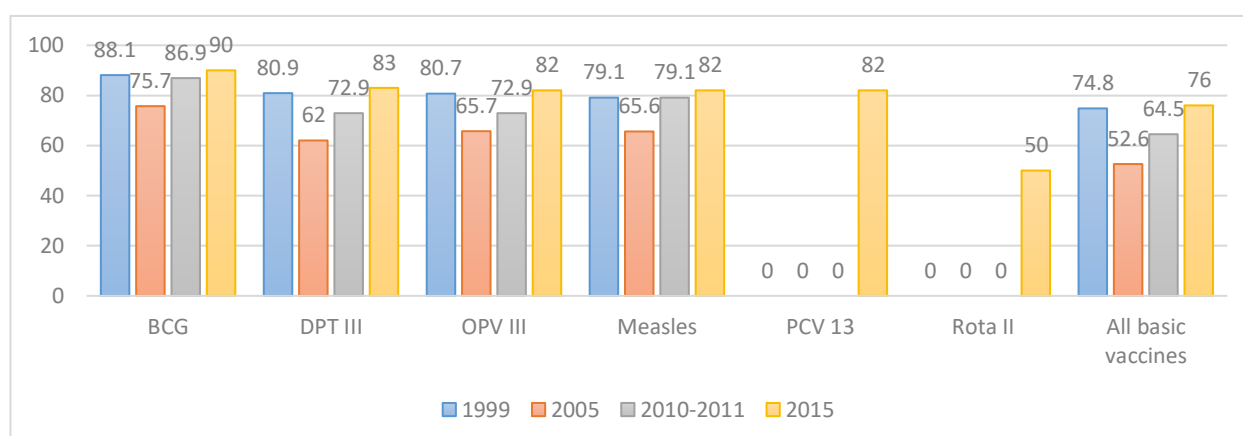
¹⁴For 2017, coverage is for the period January-June 2017.

DTP3	90	87	75	71	66	83	97	103	95	91	87	89	88
Measles	80	90	71	63	67	84	97	98	95	95	86	92	80
PCC											82	85	89

The 2016 WUENIC shows that the coverage for MR 1 was at 95% while that of MR 2 was at 63%. This shows that there is a huge dropout from MR 1 to MR 2. The MOHCC with support from GAVI (HSS 1) has purchased vehicles which are being used for outreaches and some of the funds are also being used to mobilise communities for immunisation. This proposal, among other things, also seeks resources for demand creation (for mothers to know that children need to be immunised at 18 months), the training of health workers including village health workers and the strengthening routine immunisation (Objective 1 of the HSS proposal). These are some of the ways through which the MoHCC plans to address the huge dropout rate between MR 1 and MR 2. The low coverage of MR 2 is also due to the fact that at the time the data collection tools had not been revised to incorporate MR2 hence a lot of data was lost. The Ministry will strengthen the monitoring of antigens including MR2 at 18 months.

While administrative data in Table 1 generally shows coverage of about 90% for most antigens, the coverage for various antigens based on the Zimbabwe Demographic and Health Survey (ZDHS)¹⁵ are a bit lower for the period 2010-2015 with only BCG reaching 90% in 2015 as can be seen in Figure 1 below.

Figure 1: Vaccination coverage for various antigens 1999-2015 (ZDHS Data) [3]



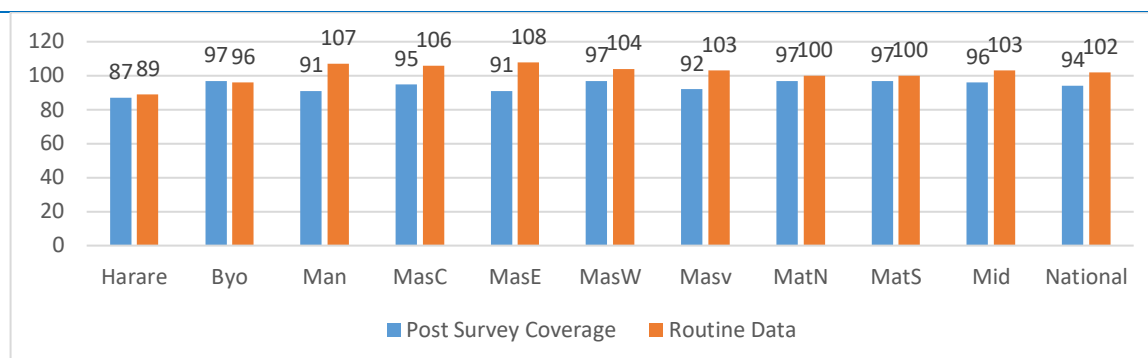
As far as the population based ZDHSs are concerned, Figure 1 shows that between 1999 and 2005 vaccination coverage in Zimbabwe declined sharply for all antigens and the proportion of children aged 12-23 months who received all the basic vaccinations by the time of the survey fell from 74.8% to 52.6%. Between 2005 and 2015 there has been a steady increase in the proportion of children aged 12-23 months being vaccinated [3].

In 2015 the primary course completion (PCC) was at 82% and this increased slightly to 85% in 2016 [4]. The Zimbabwe vaccination schedule requires that children receive various antigens at specific ages but most health workers do not adhere to the schedule hence this results into invalid doses [5]. While the PCC using administrative data is estimated at 82%, the proportion of children who are vaccinated at the right age is much less e.g. as shown by the ZDHS which found that only 42.1% of the children aged 12-23 months were fully vaccinated by the age of 12 months [3].

The HPV demonstration project was implemented in Beitbridge and Marondera Districts in 2014 and 2015 and it targeted girls aged 9-13 years and delivered using the school-based approach. A high coverage of 97.9% was achieved for Marondera and 98.96% for Beitbridge [6]. This demonstrates that the HPV vaccine was well received by communities. In 2015 there was an MR catch-up campaign nationwide: administrative data found that coverage was at 102% while the post-campaign survey found a coverage of 94% [7] and this difference is mainly due to wrong denominators. Figure 2 below shows MR coverage during the 2015 campaign using post campaign survey data by province.

Figure 2: MR coverage during the 2015 campaign by province (Source: Post-Campaign Survey)

¹⁵ The ZDHS is done once every 5 years and the last one was conducted in 2015.



The coverage target for MR is 95%: it is evident that for routine data all the provinces with an exception of Harare achieved the target. Coverage for MR using routine data is higher than post campaign survey in all the provinces. Figure 2 also shows that 6 out of 10 provinces reached the MR vaccine coverage target of 95% using the post campaign survey and these were Bulawayo, Mashonaland Central, Mashonaland West, Matabeleland North, Matabeleland South and Midlands Provinces. The other provinces namely Harare, Manicaland, Mashonaland East, Masvingo and Midlands did not reach the national target. There were, therefore, differences in coverage by province

5.1.2 Equity in immunisation coverage

There are a number of factors which contribute to differences in immunisation coverage in Zimbabwe and these are geographical location, gender and birth order of the child, religion and socio-economic status (rural/urban residence, household wealth status, educational level of the mother).

5.1.2.1 Geographical location

Zimbabwe is on course to achieve the targets of the GVAP 2011-2020. One of the GVAP targets is that all districts should have a DTP3 coverage of 80% and above. However, in June 2017 15.9% % of the districts in Zimbabwe had a DTP3 coverage of less than 80% and these districts were: Mbire (76%), Shurugwi (78%), Murewa (79%), Masvingo (79%), Mwenezi (75%), Bulilima (74%), UMP (59%), Centenary (78%), Marondera (79%), Chiredzi (69%) [8]. There are 18 districts which had poor coverage in 2015/16 and these are currently being supported by GAVI to improve coverage. Out of the districts which had poor coverage in 2016 there are only 3 districts namely Mbire, Masvingo and Mwenezi which also have poor coverage as of June 2017 and these are already being supported by the current GAVI HSS grant which expires in December 2017. The activities which are being supported by GAVI and being implemented in these districts include community mobilisation, the training of health workers, VHWs and CBOs and they have been given vehicles for outreach and supportive supervision activities. There are also some provinces which have large numbers of children who are under-vaccinated with DTP3 and not vaccinated with MRI in Zimbabwe as can be seen in Table 2 below.

Table 2: Under-vaccinated and unvaccinated children by province in 2016 [2]

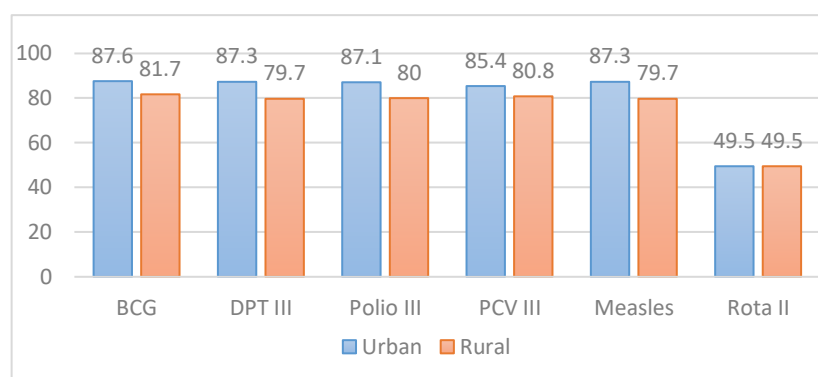
Province	DTP-Under-vaccinated	Unvaccinated with MR I
Harare	271	2063
Bulawayo	952	520
Chitungwiza	770	478
Manicaland	1559	1193
Mashonaland Central	1492	1599
Mashonaland East	2529	1629
Mashonaland West	1846	941
Masvingo	2135	716
Midlands	1853	1743
Matabeleland North	637	204
Matabeleland South	558	488

With an exception of Harare and Mashonaland Central where there were more children who never received MRI, for the rest of the provinces there were more children who were under-vaccinated with DTP3 than those who had not received MRI. Six (6) provinces have large numbers of children under-vaccinated with Penta and never received MR I and these are Manicaland, Mashonaland Central, Mashonaland East, Mashonaland West, Masvingo and Midlands. The 2015 ZDHS also identified 4 of these provinces (Manicaland, Mashonaland West, Masvingo and Midlands) as having less than 80% DTP3 coverage. In 2015 Bulawayo also had less than 80% DTP3 coverage. The MoHCC should mobilise resources in order to support all the districts with less than 80% DTP3 coverage in order to improve coverage.

5.1.2.2 Socio-economic status

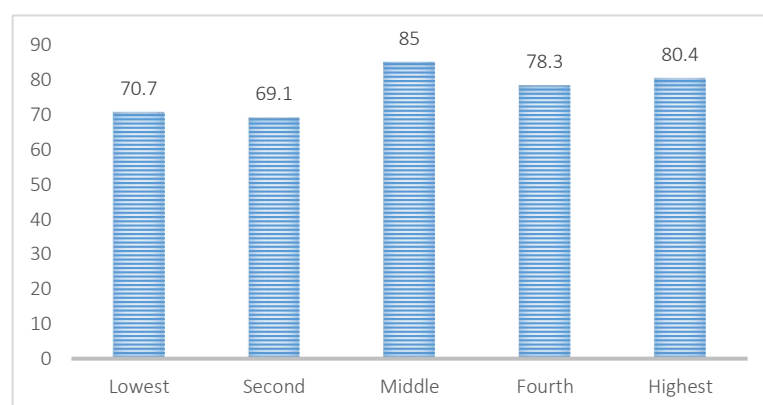
There are 3 dimensions which are discussed under socioeconomic status and these are rural urban differences, household wealth status and educational level of the mothers/caregiver. The ZDHS and the MICS have also consistently shown that immunisation coverage is higher in urban than in rural areas as shown in Figure 3.

Figure 3: Coverage for different antigens by rural/urban residence (2015 ZDHS)



In the 2015 ZDHS the proportion of children aged 12-23 who did not receive any vaccination at the time of the survey was 9.8% and this was higher in rural (11.6%) compared to urban areas (5.7%) [3]. The proximity of the health facilities to households in urban areas increases the likelihood of children being vaccinated compared to rural areas [11]. Among mothers/caregivers who never went to school 68.8% had their children vaccinated and this increased to 79.6% among those with primary level of education and then to 90.3% of the mothers/caregivers with secondary education had their children vaccinated [3]. Previous ZDHS have consistently shown that the level of education of the mother/caregivers is an important determinant of uptake of immunisation services. Other studies have also found that the higher the educational level of the mother/caregivers the more likely will the child be vaccinated [12]. Lastly, the ZDHS [3] has also shown that the likelihood of a child being vaccinated increases the higher the wealth quintile as can be seen in Figure 4.

Figure 4: Vaccination coverage by socio-economic status



Muzinda [12] and Mukungwa [11] have also shown that children from wealthier households are more likely to be vaccinated than those from poor families and these studies were not done at national level. Muzinda's study was conducted in Katanga Township in Norton while Mukungwa's study was a secondary analysis of the 2011/2012 ZDHS

data. While it showed variations at provincial level, the data is old and there is more recent administrative data shown above.

5.1.2.3 Gender and birth order of the child

The 2015 ZDHS found that there were slightly more female children (77.3%) aged 12-23 months who were vaccinated compared to their male counterparts (74.8%). The ZDHS also shows that the proportion of children who are unvaccinated increases the higher the birth order: among first born children only 7.7% are unvaccinated and this goes down slightly to 6.4% for second born children after this the proportion of unvaccinated children increases to 14.2% among 2nd/3rd borns and 24.8% among 4th-5th and 6th+ born children. These results demonstrate that mothers are generally more careful with their first-born children than those who are born later [3]. Table 3 below shows the total fertility rates (TFR) by province:

Table 3: TFR by province (Source: 2015 ZDHS)

Province	Total Fertility rate
Mashonaland West	4.3
Mashonaland Central	4.4
Mashonaland East	4.3
Harare	2.8
Matabeleland North	4.4
Bulawayo	2.7
Midlands	4.2
Manicaland	5.0
Masvingo	4.4
Matabeleland South	3.5
National	4.0

At 2.7 and 2.8 TFR, Bulawayo and Harare, respectively, have the lowest TFR in Zimbabwe. Matabeleland South has a TFR of 3.5. It can also be seen in Table 3 that the rest of the provinces have TFR of 4 or more and these provinces therefore need to be targeted with demand creation activities in order to bring down the TFR.

5.1.3 Religion

There are certain religious groups such as members of the Apostolic Faith which do not accept health services [13] including immunisation services. Immunisation coverage is, generally, lower among these faith groups compared to the general population [7]. Members of these faith groups have a strong belief in their religion where the use of holy water and prayer as a form of therapy is relied on. These faith groups also perceive the vaccines as dangerous and can cause death. Some of the members of these faith groups claim that they have never been told about the importance of immunisation hence they do not go for this service [14].

5.2 Challenges underlying the performance of the immunisation system

There are a number of barriers to the delivery and uptake of immunisation services in Zimbabwe and these need to be addressed in order to improve coverage and equity and ensure that all children in the country are vaccinated.

5.2.1 Shortage of human resources for health

The staffing levels in the MoHCC have generally improved but, at less than 10 health workers per 10,000 population, Zimbabwe still falls short of WHO's recommended human resource density of 23 health workers per 10,000 population [15]. Overall, the human resource vacancy rate in MoHCC in 2014 was at 17% [15]. The vacancy rates among some health cadres are much higher than the national average: e.g. among medical officers and nursing tutors 64% and 49%, respectively, of established posts are vacant. While existing staffing norms require that a clinic is supposed to have 2 nurses, in some cases there is only one and this impacts negatively on service delivery [7].

While the VHWs are playing an important role in the immunisation programme, in 2015 about 40% of the villages in Zimbabwe did not have access to VHWs [1]. In 2016 75.6% of the villages had trained VHWs. In absolute numbers Zimbabwe is supposed to have 22,000 VHWs but as of 2016 there were only 16,449 VHWs demonstrating that there is a huge shortage of this cadre in Zimbabwe [1]. The remuneration the VHWs receive is inadequate to motivate them to do their work [16]. The shortage of staff at various levels of the health system has implications: there is high

workload among existing health sector staff and this constrains the conduct of outreach clinics including mobile services.

There are several unestablished posts in the MoHCC which have since been filled with support from GAVI and these are the EPI Programme Assistant, the 1 cold chain technician at national level, 1 stores officer, 1 stores assistant and 4 security guards. The GAVI performance bonus amounting to US\$680,000 which MoHCC received in 2016 was used to recruit these members of staff [18]. The GoZ intends to take over the payment of salaries for these positions. There are certain positions which are critical for the EPI operations but these have not yet been established. For example, currently there are no posts for cold chain technicians at provincial level and this affects the effective maintenance of the cold chain [1]. The 2016 EPI annual report mentioned that immunisation is a specialised field and that there is a need for a person in the Unit who will be responsible for health promotion for immunisation. This person should work very closely with the Department of Health Promotion in the MoHCC. While the MoHCC has a Department responsible for M&E, there is a need for a specific person who will be responsible for data management within EPI [4]. In addition to this, currently there is no position for surveillance officer at national level; hence there is a need for this position to be created and filled. The MoHCC staff establishment was last reviewed in 1996 [15]. Currently, there is a workload indicators of staffing needs (WISN) exercise going in order to determine the number of health workers required to cope with the workload of a given health facility. The WISN will contribute towards the review of MoHCC staff establishment and most of these positions will be taken on board. While Zimbabwe has the capacity to produce sufficient health staff, the major challenge is the low absorption capacity of trained health workers. The low absorption of trained health workers is mainly due to the lack of financial resources.

5.2.2 Lack of EPI specific knowledge and skills

The existence of EPI specific knowledge gaps has been acknowledged by MoHCC and stakeholders and this has been attributed to the high attrition of staff which has necessitated the need for continued training of new health workers [7&20]. There are some knowledge gaps among health workers especially with regard to disease surveillance and data management [7]. In addition to disease surveillance and data management, during the in-country workshop and the meeting held in Harare to review the draft PSR on 2nd and 3rd June 2017 participants also mentioned that there will be a need to conduct RED/REC training as well as immunisation in practice in order to equip health workers including those newly recruited on these EPI specific skills. The need for training in RED/REC is that there are changes which have or are being introduced in the modules.

5.2.3 Lack of supervision

The conduct of supportive supervision is important activity to improve quality. However, supportive supervision is limited especially at district and lower levels of the health care system [7]. Where supervision occurs, very little time is spent on this activity [21]. The shortage of staff at district level is one of the factors contributing to the limited conduct of supervision [7]. The other issue about supportive supervision, as discussed during the meeting to review the draft PSR on 2nd and 3rd August 2017, is that provinces and districts do not generally have resources for supportive supervision. This activity is in some cases not prioritised and never even costed in most cases.

5.2.4 Inadequate funding of the health sector

WHO estimates that Zimbabwe needs to spend US\$86 per capita in order to implement a minimum health package. Currently, due to socio-economic crisis being experienced by Zimbabwe, the country is only spending US\$24 per capita [22]. The GoZ depends on development partners to implement some core health services including immunisation and any withdrawal of financial and other support affects service delivery including health outcomes [7]. The immunisation coverage targets for 2015 were not achieved because the MoHCC did not liquidate the funds timely hence the delayed release of funds from development partners [7]. While the GoZ prepares a comprehensive budget each year, the amount of money which the MoFEP disbursed to Ministries is always much less compared to budgets approved by Parliament [15]. Due to competing programmes within the MoHCC, in some cases, the ZEPI is not given priority and there is minimal contribution of funding from GoZ [20, 23, 21 & 12]. The ZEPI has also not been able to fully deliver immunisation services using the supermarket approach, has conducted limited outreach clinics, due to lack of funding [22, 12 & 24]. Outreach clinics are able to reach 30% of the population targeted for immunization [31]; hence there is a need to ensure that these are conducted as scheduled.

5.2.5 Lack of transport and fuel

The establishment of outreach clinics is one of the ways of ensuring that distance should not be the major reason why people in Zimbabwe fail to access health services including immunisation. In order to effectively run outreach

programmes, transport and fuel should be available. Due to inadequate funding, there have been shortages of fuel and transport in the MoHCC [20, 21 & 22]. The MoHCC has, using GAVI HSS I funds, procured the following vehicles:

- 10 vaccine delivery trucks.
- 24 Toyota Land Cruisers.

These have been distributed to districts which are not performing well [22 & 25]. During the in-country workshop at the end of June 2017 participants observed that there are currently 21 districts which do not have EPI specific vehicles for outreaches. As of now there are currently no plans for vehicle maintenance at all levels of the health system [4] and during an in-country workshop participant did acknowledge that a considerable number of vehicles have been grounded at district level and yet not much is needed in order to put them on the road.

5.2.6 Religion

There are some religious groups for example the Apostolic sects which do not believe in any form of health care, be it modern or traditional medicine. They believe in their religion for prevention and treatment of disease [20, 21, 28, 29 & 22]. The refusal of immunisation services by members of the Apostolic sects is a concern in Zimbabwe and this is mainly because this religion constitutes about a third of Zimbabwe's women and men aged 15-49 [30]. The 2015 ZDHS found that 42.8% and 32.1% of the women and men, respectively, aged 15-49 belong to the Apostolic Sect [3]. Maguranyanga and Feltoe [29] classify apostolic communities into two: the ultra-conservatives and the semi-conservatives. The ultra conservatives (Johane Marange, Madhidha and Johane Masowe) largely depend on their faith healing systems while the semi-conservatives (e.g. The African Apostolic Church of Paul Mwazha and Zviratidzove Vapostori) emphasise that their members seek spiritual counsel first before they use modern medicines. Between September 2009 and December 2010, a total of 10,544 cases of measles were notified and 529 people died. Forty seven percent (47%) of the people who contracted measles during this outbreak were children aged below 5 years of age [20]. The MoHCC argues that the Apostolic religious sects created a large group of susceptibles and it led to this outbreak of measles. The Parliamentary Portfolio on Health and the then Prime Minister's Office met religious leaders of sects in 2010 during the measles outbreak which object to immunisation and such an interface has contributed to some members of these sects being vaccinated [16].

Community Dialogue planned under this plan will also target Apostolic communities by engaging religious leaders of specific sects during the trainings and discussions. A KAP study planned in 2018 is intended to identify areas of intervention in specific target populations.

Most activities targeting Apostolic children have no budget altogether and some of these are;

- Recruitment of Village Health Workers who belong to Apostolic sects. The Ministry is making inroads in the use of Apostolic Village Health Workers in Mutare district in Manicaland Province. During dialogue with these communities, the Ministry found out that most mothers of the Apostolic sects are willing to participate in maternal & child health activities but are afraid of their husbands. The Community Dialogue which is set to continue will improve engagement with this community.
- Specific outreach work targeting Apostolic communities
- EPI outreach work targeting Apostolic sects is ongoing in specific districts. Outreach for these communities is still budgeted under the normal EPI outreach but health workers conduct specific sessions in selected populations.
- Garden Strategy – using vegetable gardens as vaccination sites
- Mothers of Apostolic sects are the ones who mostly do gardening work. These mothers, like any other, like to have their children vaccinated hence they organise with nurses so that children are vaccinated at the gardens. The strategy has proven successful at Zvipiripiri Clinic in Mutare district.

For more information on these strategies, please refer to *"Immunisation Rapid Assessment Report" 2016, Dr Maguranyanga B*

However, it has been realised that these activities are difficult to measure and may be difficult to implement in some communities hence the plan to continue improving Community Dialogue methods in identified priority communities.

5.2.7 Vaccine stock out at sub-district level

Zimbabwe does not usually experience the stock outs of vaccines at national and provincial levels. In 2016, however, the country experienced a shortage of the BCG vaccine for about 21 days [4]. The stock outs of vaccines are mostly experienced at sub-district level [7 & 22]. Fifty-five percent of the health facilities which were visited during the 2016 comprehensive EPI review reported that they experienced vaccine stock outs [22]. The 2015 SARA also found that there were quite a number of health facilities in Zimbabwe which did not have certain vaccines: for example, 11% of the health facilities did not have measles and rota vaccines while 9% did not have the pneumococcal vaccine. The SARA also found that only 12% of the 275 facilities surveyed had all the tracer items for immunisation. Health facilities are supposed to have in stock vaccines all the time but the SARA also reports that 20% of the facilities had stock outs of the vaccines in the 3 months preceding the survey [24]. In 2017 there has been an improvement in the availability of the vaccines in health facilities: in the first quarter of 2017 the Vaccines and Medicines Availability and Health Services Survey (VMAHS) shows availability of at least 70% of the vaccines tracked was at 96.9% and this was an increase from the 4th quarter in 2016 when availability was at 94.1% [27]. The stock outs of vaccines at district and lower levels have mainly been due to poor forecasting, the lack of transport and, in some cases, the late disbursement of funds by development partners [21 & 7]. Provinces have the responsibility of delivering vaccines to districts but in some cases, they do not have the fuel.

5.2.8 Shortage of gas

Shortages of LP gas for running refrigerators have recently been reported in Zimbabwe [4] and this results into cancellation of immunisation services as all vaccines are transferred to the nearest health facility which has a functional refrigerator. The cancellation or postponement of immunisation clinics generally reduces the confidence which mothers have in the health system [21]. The MoHCC is planning to replace all LP gas run refrigerators with solar direct drive (SDD) fridges [22]. There is a comprehensive cold chain replacement and expansion plan developed by the MoHCC and stakeholders. This plan aims at a phased replacement of LP gas run fridges in Zimbabwe. However, as of now there is lack of funding to effectively implement this cold chain replacement and expansion plan [2].

5.2.9 Challenges relating to the cold chain

The 2016 EVMA found that there is enough cold chain capacity in Zimbabwe at all levels of the health system [31] with an exception of Midlands Province which has no cold room store [4]. The 2016 EVMA found some challenges in the cold chain system as follows:

- The absence of continuous temperature monitoring devices at the central and provincial vaccine stores;
- The mapping of temperature was not being done in all cold rooms;
- The non-existence of standard operating procedures for vaccine management;
- The failure of health facilities to timely update records after vaccine stock transactions which has resulted into stock outs of vaccines in some cases [7&31].

The other challenge with regard to cold chain is that, currently, there are no established posts for cold chain technicians at provincial and this affects the effective maintenance of cold chain equipment [32]. Currently all districts in Zimbabwe do not even have a maintenance plan for cold chain [22]. Lastly, participants at the Kadoma in-country workshop in June 2017 reported that there is no dry stores for EPI in Zimbabwe. Currently the EPI uses NATPHARM premises: initially NATPHARM was part of the MoHCC but it was commercialised and it is very difficult to access the premises. It is also situated very far from the CVS; hence the suggestion that a national dry store for EPI be constructed. The construction of the dry store would help in cost savings as this store would be within the premises of the CVS.

5.2.10 Unreliable power sources for refrigerators

In Zimbabwe refrigerators are run using different sources of power: 49% of the health facilities had power sources either from the national grid, generators or solar energy, 26% in rural areas used generators as a secondary power source [16]. UNICEF and other stakeholders have purchased standby generators for the MoHCC to, among other things, provide power source for refrigerators. While there are some generators at national, provincial and some districts, most districts do not yet have generators [16]. The installation of solar energy would be a good investment for running refrigerators for vaccine storage [32] as electricity is a challenge in rural Zimbabwe.

5.2.11 Data and related challenges

Zimbabwe has a functional health management information system with data originating from health service delivery points nationwide and being aggregated at district level before it is transmitted to the province and national levels. There are, however, some challenges relating to data and these include:

- The ZEPI register and child health card are yet to be updated to capture new vaccines such as MR, MCV II, PCV and Rota [22].
- The data transmission system between communities and health facilities and then health facilities and districts remains paper-based [22].
- Data from communities is not included in the data which is sent to the districts for aggregation [22].
- The utilisation of data at points of source to inform programming is very low [15&7].
- The documentation of vaccines administered in EPI registers is in some cases inadequate or incomplete and the vaccines issued do not tally with vaccines administered [5&25].
- Data is not timely submitted to districts and national levels for example in 2016 the timeliness of reporting was at 74% [4].
- The recording of stock outs of vaccines was not being done consistently in most health facilities [33].
- The timeliness of submission of data reports especially at district level was not being monitored [33].
- The persistence problem of denominators [33].
- There was no evidence to show that EPI registers were being used to track defaulters of the service [33].

The implication of not using the right denominator is that the data may not reflect the actual immunisation coverage [20]. The use of wrong denominators can also result in over/under ordering of vaccines and site allocation problems, as well as mismatches in the allocation of immunisation teams. This was also highlighted during the 2016 comprehensive EPI review which found that immunisation target populations were not accurate in 60% of the districts which were visited during the review and this resulted in over or underestimations of coverage [22&34]. There is an urgent need, therefore, that the issue of denominator should be addressed.

5.2.12 Poor participation of the private sector

While the private sector is involved in the delivery of immunisation services, the challenge is that they do not regularly report the data to the MoHCC especially those which do not get vaccines from the MoHCC. In addition to this, the private clinics do not meaningfully participate in EPI disease surveillance. If the private sector reported regularly it would contribute to increase in national as well as district coverage rates [16]. During the meeting on 2nd and 3rd August 2017 to review the draft PSR participants reported that the challenge is that the private clinics for example in urban areas are not being supervised and these facilities do not even have the standard reporting forms. It will be necessary to support the private clinics with training as well as providing all the necessary data collection tools so that they also submit data to MoHCC. Once the refrigerators have been procured through this grant, they will also be distributed to the private sector as some are using fridges which are not recommended for storage of vaccines. The list of facilities where fridges will be distributed includes public, mission and private health facilities.

The country is engaging private schools, Medical Aid Societies to assist in publicity and persuasion of the elite population. In addition the Ministry has got a Facebook page which will be used for reaching out to all populations who use social media platforms in communicating.

5.2.13 Community engagement

It is important that there should be continued interaction between communities and the health workers at community level. However, there are challenges with regard to interpersonal communication:

- Some health workers have poor attitudes towards clients [22].
- Long waiting times [28].
- Children may also not be vaccinated due to negligence of the mother and lack of information (Muzinda, 2012). Lastly, communities have not been empowered to demand for immunisation services (MoHCC, 2017c). This is mainly due to the lack of routine community mobilisation activities due to the lack of funding. [12].

It is, therefore, the responsibility of health workers to ensure that mothers/caretakers of under-five children understand the importance of immunisation and they demand for this service. The poor attitudes of health workers and long waiting times at health facilities should be addressed in order to promote utilisation of immunisation and other health services.

5.2.14 Surveillance and related problems

As far as surveillance is concerned, there is improper management of surveillance specimens especially the stool specimens for AFP coupled with poor communication between central laboratory and provinces and districts [4]. The Central Laboratory in Harare will be provided with a vehicle in order to address the transport problems which are experienced. This is one of the vehicles which have been purchased with support from GAVI HSS I and it is expected that before the end of 2017 these vehicles will be in the country.

5.3 Describe any issues related to the financing of the immunisation programme that impact the ability to increase coverage, including bottlenecks related to planning, budgeting, disbursement and execution of resources.

Each year in October the MoHCC, just as is the case with other GoZ ministries and departments, submits its budget to the MoFED. These budgets are prepared with inputs from Departments, Units and Provinces (and districts) and are consolidated and discussed at MoHCC headquarters. The MoHCC defends its budget at the MoFED. MoFED then allocates funds to various Ministries and Departments and this is discussed and approved by Parliament in November of each year. The other source of funding for MoHCC is the Health Services Fund (HSF) which consists of user fees and this is also accommodated in the budget. Once the Zimbabwe Parliament has approved the national budget, the approved budget is uploaded onto the Public Finance Management System and Ministries can start accessing the funds allocated to them. While the budgets are prepared, the major challenge is that the amount of money which is finally disbursed by treasury to MoHCC including the ZEPI is significantly less than the approved budget which effects health services delivery [36].

The MoHCC also gets funding from development partners following the development, submission and approval of proposals. Once the budget has been agreed upon with development partners, an MoU is signed. Development partners fund the MoHCC either directly or through an external Principal Recipient. In order to access funding, the Ministry submits requests to the external Principal Recipient based on approved work plans. Initially GAVI HSS I fund went through the MoFED to fund the MoHCC. However, from January 2016 GAVI started funding the MoHCC through the HDF which is being managed by UNICEF country office. The other challenge was that there were some conditions of financial management which were unknown to people in Finance Department at MoHCC which created problems but these have since been clarified. There are currently plans within the MoHCC to create a virtual funding pool to allow the MoHCC to know the funds available in the health sector which will be instrumental in making decisions about allocation of resources. [36].

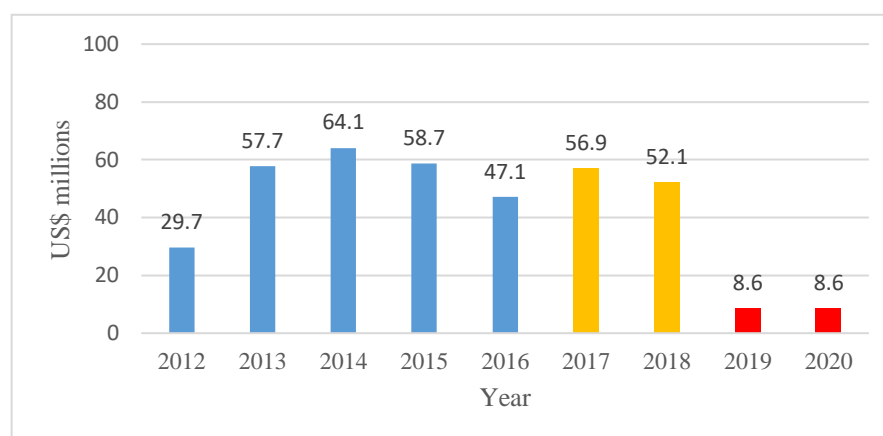
One of the major challenges in the financing of immunisation and other health services in Zimbabwe is that the delivery of services is largely donor dependent. The 2015 NHA found that the Total Health Expenditure for Zimbabwe was at US\$1.49 billion which represents 10.3% of the country's GDP. The sources of financing for the health sector as per the 2015 NHA were as follows:

- Public and private corporations (27.7%).
- Households (27%).
- Donors (24.3%).
- GoZ (20.8%).
- Non-profit institutions (0.22%).

This demonstrates that there is very high out of pocket expenditure, that the total government expenditure on health is quite low and that health services delivery in Zimbabwe is donor dependent [37]. The Abuja Declaration recommended that countries should spend 15% of the total government expenditure on health. However, Zimbabwe has never reached this target and in 2016 it was at 7.46% [37]. It is estimated that about 80% of the public expenditure or budget on health is spent on salaries of the employees of the MoHCC and the bulk of the remaining funds is spent on the delivery of curative services (61.1%) while only 10.9% is spent on preventive and public health programme such as immunisation. The other expenditures are on health administration (11.8%) and rest of the services (16.3%) [37].

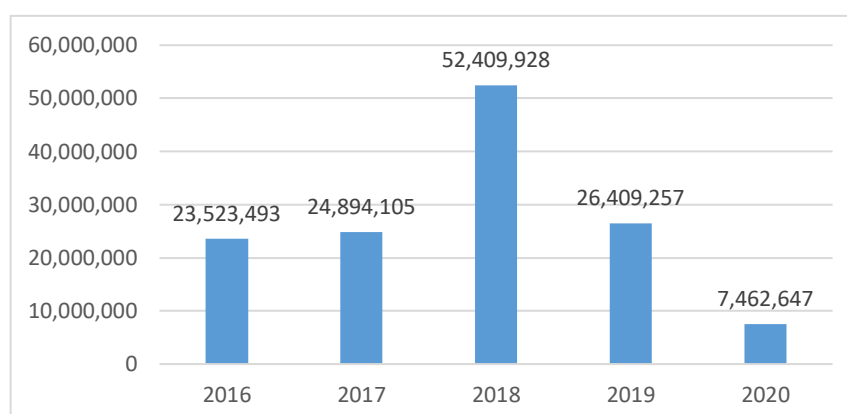
The ZEPI therefore largely depends on development partners for the funding of immunisation activities. The HDF and GAVI are the major funding agencies for the immunisation programme in Zimbabwe. The HDF is a multi-donor basket managed by UNICEF Zimbabwe and the following agencies/countries contribute to this pool: GAVI, the EU, the UK, Sweden and Ireland. The HDF has a 5-year budget amounting to US\$681.91 million for the period 2016-2020. Figure 5 below shows the expenditure/resource map for the HDF for the period 2012-2020.

Figure 5: Health expenditure/resource mapping



Between 2012 and 2016 the HDF has spent between US\$29.7 million and US\$64.1 million per annum. In 2017 and 2018 the HDF will spend approximately US\$56.9 million and US\$52.1 million, respectively. It is also evident that after 2014 there has been a decreasing expenditure on health from the HDF. The situation is, however, not all that good for 2019 and 2020 as only US\$8.6 million has been committed for each year [38]. In 2016 ZEPI spent US\$26,472,315.37 on EPI and related activities. The cMYP (2016-2020) provides estimated annual budgets for the EPI as can be seen in Figure 6a below.

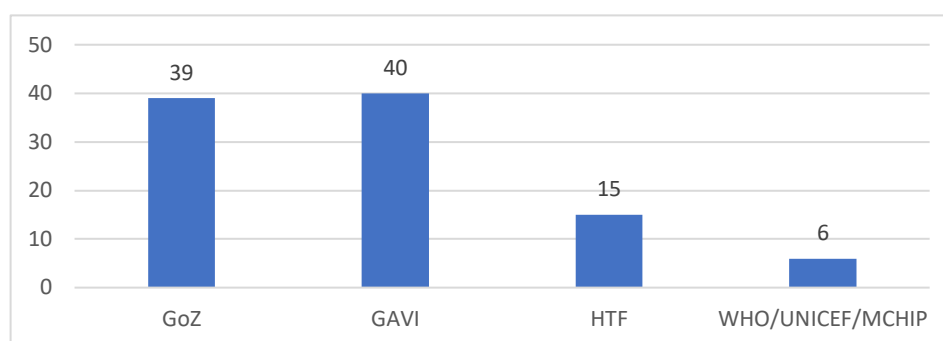
Figure 6a. Available funding (US\$) for the EPI between 2016 and 2019



In 2016 although the available resources amounted to US\$23.5 million what was spent by the EPI was more than this at US\$26.5 million. The available resources in 2018 are more than double what was spent in 2016 and 2017 and this is mainly because of the HPV introduction. The HPV vaccine is quite expensive and the co-financing is also high. The budget however comes down to what was available for 2016 and 2017. The available resources in 2020 is much lower. For 2019 and 2020 the projected resources for health are quite low even for effectively implementing EPI activities.

Due to resource constraints, in 2016 the retention scheme was also revised and the amount of money the health workers were getting was significantly reduced. Figure 6 below shows the funding sources for the EPI programme in 2013 which basically demonstrates that development partners fund up to 60% of the EPI requirements [16].

Figure 6: Funding sources for EPI programme requirements in 2013



As shown in Figure 6, the ZEPI has mostly been funded by the donors as the GoZ does not have enough financial resources to fund the program. Currently, GAVI purchases the new and under-utilised vaccines with co-funding from the GoZ. The HDF purchases traditional vaccines. As of 2016 the Government has met all its co-financing obligations of 20 cents per dose of new vaccines and this amounted to US\$579,000 in 2016 [6].

The funding which the GoZ receives from GAVI for the implementation of immunisation services is quite substantial: over the period between 2001 and 2021 GAVI has committed US\$108,550,400 to the immunisation programme and most of these funds, US\$91,098,306, have already been disbursed to Zimbabwe. Eighty six percent (86%) of the funds which have been disbursed already have been used for vaccine support while the rest (12%) is for non-vaccine support. The vaccine support grants which Zimbabwe has received have been used for the introduction of new vaccines and the purchase of new and underutilized vaccines [39].

5.4 Describe lessons learned and best practices on effectiveness of implemented activities to improve coverage and equity; recommendations on changes or new interventions that might be required to accelerate progress (include data to support any findings, recommendations)

There are a number of interventions which have been implemented in Zimbabwe aimed at improving immunisation coverage and equity. This section describes some of these interventions.

5.4.1 The conduct of outreach clinics

Immunisation services are delivered either at static or outreach clinics. Distance is one of the major challenges to accessing health services in Zimbabwe. It is estimated that 30% of the target population for the immunisation programme are reached by outreach immunisation services [31] which implies that if outreaches are not effectively conducted a lot of children will be missed. Some studies have demonstrated that the conduct of regular immunisation outreach clinics can improve full immunisation coverage [40].

5.4.2 Using the supermarket approach to immunisation services delivery

The immunisation policy for Zimbabwe says that all health facilities in Zimbabwe should deliver immunisation services on a daily basis regardless of what the client has come to the health facility for [41]. This policy, however, is not adhered to mainly because of resource constraints. In 2015 73% of the health facilities offered immunisation services on a daily basis while 25% offered child immunisations monthly [24]. The 2016 EPI review also found that only 42% of the health facilities visited implemented the supermarket approach [22]. The failure to provide immunisation services on a daily basis creates missed opportunities to vaccinate children. While challenges exist in the implementation of the supermarket approach, it can be seen that it reduces missed opportunities; hence has great potential to significantly improve immunisation coverage.

5.4.3 The implementation of the RBF interventions

The MoHCC has been implementing the **RBF programmes** with funding from the HDF and the World Bank at different levels of the health care system. Primary health care facilities receive a certain amount of money after achieving specific indicator targets e.g. the number of children who are fully immunised. An evaluation of the World Bank funded RBF interventions found that there was in general an improvement in coverage of health interventions including immunisation [42]. The health facilities also received a certain sum of money which they used to improve their capacity to deliver critical health services and at the same time provide motivation for staff. Some funds have been for procurement of medicines, improving water and sanitation infrastructure at health facilities, construction of

waiting mother shelters and paying for security [1]. Seventy five percent of the funds health facilities receive from the RBF is used for the implementation of work plans while 25% of the funds is given to staff members.

5.4.4 My Village My Home

Local health facilities have the responsibility of providing health services at both static and outreach clinics. The My Village My Home (MVMH) approach is a tool used by community health workers and it links communities/villages with the local health facilities. In countries such as India where the MVMH approach has been implemented, villages and their leadership have been able to monitor the immunisation coverage of all infants in their village. This tool has data on all children in the village aged less than 2 years. There are rows which contain the names of all the infants in the village and then columns which represent the different antigens which the child is supposed to receive and all this is under a roof of a house. Dates when the child receives specific antigens are written in the box after the names. This tool presents the immunisation status of each child in the form of properly laid “bricks” and it is an effective way of tracking beneficiaries for vaccination. Those not vaccinated can be followed up easily [43].

The MVMH approach has been used in Zimbabwe by USAID/MCHIP/JSI in Chipinge District and has proved quite useful in tracking children who have not been immunised. The tool is used and kept by village headpersons to monitor the vaccination status of all the children in their respective villages. The tool has contributed to ensuring that all children are vaccinated as defaulters are easily identified and parents are informed to take their children to the health facility for immunisation. The village headmen have appreciated the use of this tool and some of them have even introduced fines such as payment of a goat or a rooster if parents do not take their children for vaccination; hence parents will take their children for vaccination in order to avoid payment of a fine (Shearley, 2017). [44]. Plans are underway to evaluate this intervention and this will inform the scaling up.

5.4.5 Purchase of camping equipment for outreach clinics

It is important that health workers should work in a conducive environment. It is not only the money which can motivate health workers to work efficiently. The provision of materials which will ensure a conducive environment is also a key factor which can improve service delivery including immunisation services. For example, MCHIP has been working with the MoHCC in Beitbridge. In this programme MCHIP purchased camping equipment for the EPI outreach programmes in the district. The equipment purchased included pots, gas cylinders/cookers and folding chairs. The EPI team in Beitbridge appreciated the camping equipment and it has boosted their morale as they are working in comfortable and enabling environment and this contributed to high EPI performance and this was complimented by availability of fuel and transport for EPI outreach services without interruption [45]. From reports of implementers, there was a significant increase in immunisation coverage and motivation of service providers.

5.4.6 The creation of health posts

Distance is one of the major challenges in accessing health services in Zimbabwe; hence outreach clinics have been established in order to ensure that distance is not the reason for failure of people to access health services. There are challenges in conducting outreach clinics and this is mainly due to inadequate transport and associated fuel and allowances when health workers go for outreach immunisation services. The problem of transport and allowances for health workers when conducting outreach clinics has existed since independence in 1980. In order to address these challenges, the GoZ plans to establish health posts which will be manned by Primary Care Nurses with support from VHWs [15]. The Zimbabwe Cabinet has already approved the establishment of health posts. These health posts will serve a population of 1,500 [35]. The establishment of health posts will cut down the distance travelled by health workers to provide health services and it will significantly reduce costs of running outreach clinics. These health posts will provide health services in an integrated manner. The plan is to establish 200 health posts each year for the next 5 years. Districts which have poor key health indicators will be prioritised before spreading to other districts [46]. The Department of Planning reports that from 2018 the MoHCC budget will include a budget for health posts and this will be supplemented by mobilisation of local resources through sin taxes (tobacco and alcohol) and the airtime health levy. The establishment of the health posts is a GoZ priority [26] and the MoHCC will mobilise resources in order to ensure that health posts are established as planned.

5.4.7 Demand creation

While some members of apostolic sects do not accept modern health care including immunisation, there are others who actually accept and receive vaccines as what happened during the 2015 MR campaign. There are, however, some factors which make them accept vaccines and these include if they are provided in private or in situations where the police have been used in order to ensure that people who refuse vaccinations are vaccinated. Lastly, in some cases

members of the Apostolic sects will accept to be vaccinated if they perceive it as a government “directive” [14]. Some members of the apostolic sects do advocate for day to day campaigns for immunisation as well as the door to door delivery of vaccinations [25]. It seems that some women in the Apostolic sects understand the importance of vaccinations hence they do accept to have their children vaccinated [25]. There is a need to work with these sects in order to ensure that they start going for immunisation and other health services. Over the years there have been attempts to create awareness among members of the Apostolic Churches through the Union for the Development of Apostolic Churches in Zimbabwe (UDACIZA) and these efforts seem to be having impact [11] and there are reports of some members of the apostolic faith being VHWs. In the 2015 MR campaign nearly 90% of the mothers belonging to Apostolic sects had their children vaccinated as a result of massive social mobilisation activities (interaction with leaders and members of the apostolic sects and health education [17]. Some members of the apostolic sects have accepted immunisation because of experiencing deaths of children who have not been vaccinated [14].

In addition to targeting Apostolic sects, demand creation activities will also target the urban population resident in slums. WHO estimates that 32.5% of the population in Zimbabwe live in urban areas and that 25.1% or 1.2 million of the urban population live in slums¹⁶. A number of studies have demonstrated that while health outcome in urban areas are much better compared to rural areas, within urban areas there are huge differences between the urban poor and urban non-poor. For example, a child in a slum in Kenya will more likely die before reaching age of 5 years compared to his or her compatriot living in more affluent parts of the city, or even in rural Kenya [9]. This scenario obtains in most African countries and hence the. MOHCC should consider targeted interventions for this group. Resident in slums.

5.4.8 Involvement of the Ministry of Primary and Secondary Education (MoPSE) and discussions with the Association of Trust Schools

During the MR campaign in 2015 the participation of the MoPSE was quite critical and helped quite a lot in terms of ensuring that school children were reached with the MR vaccine. The participation of the MoPSE during the HPV demonstration project also proved crucial. During the last Measles /rubella campaign, discussions were held with the Association of Trust Schools (ATS) to help improve campaign awareness.

5.4.9 Reducing the number of invalid doses

According to the Zimbabwe immunisation schedule a child is supposed to complete a course of immunisation at the age of 9 months with the measles vaccine. As mentioned earlier very few children receive all the basic vaccines by the age of 9 months, hence they receive invalid doses. A valid dose is defined as that which is given at the correct age with proper spacing between doses as detailed in the immunisation schedule. In order to address this challenge, Zimbabwe MCHIP, supported by USAID, developed a vaccination calendar which is a job aid being used by vaccinators to determine the correct dates when a mother/caregiver is supposed to bring her child for subsequent doses and this is communicated to mothers/caregivers. According to Zimbabwe MCHIP this has since been institutionalised in Chipinge and Makoni Districts in Manicaland Province in Zimbabwe [10]. This is helping vaccinators eliminate invalid doses and there are plans to scale this intervention nationwide.

5.4.10 Lessons from the GAVI HSS grant

As explained above, there has been an improvement in vaccination coverage over the last few years. Partly this is as a result of the support from GAVI: the availability of vehicles to transport vaccines and other vaccine supplies at all levels, the availability of transport for outreaches and provision of allowances for vaccinators have significantly contributed to the increase in vaccination coverage. The support that GAVI has provided in supporting the payment of salaries for cold chain technician, security guards and programme assistant has helped to address the specific human resources problems which were being experienced by EPI. All challenges relating to the management of funds as found during the audit have since been rectified and this points out to the need for the training of finance personnel in the management of funds.

6. Programme, vaccine and financial management

Summarise the priority needs to be addressed in subsequent objectives (**Part D**) to strengthen programmatic, vaccine and financial management components to be strengthened, taking into account findings from the **Programme Capacity Assessment (PCA)**, **recent audits**, and **EVM assessment** (if applicable).

¹⁶ See http://www.who.int/kobe_centre/measuring/urban_health_observatory/zimbabwe.pdf?ua=1

- 6.1 Programme management:** leadership and management capacity and challenges of the national EPI team; effectiveness and challenges of the relevant Coordination Forum (ICC, HSCC or equivalent body); constraints to coverage and equity due to sub-national management capacity in priority areas.
- 6.2 Vaccine stock management:** Priority areas for improvement to manage risks to vaccine stocks, e.g. based upon recent audits or assessments.
- 6.3 Financial management:** Priority areas to address financial management gaps.

6.1 Programme management:

The priority needs which will be addressed under programme management are as follows: the strengthening of both routine (e.g. implementation of supermarket approach, use of MVMH approach and implementing RBF) and outreach services (making available transport, fuel and allowances) and the development and implementation of vehicle maintenance plans. In order to strengthen service delivery, the plan is to recruit (e.g. cold chain technicians and vaccine store keepers at provincial level) and maintain cadres (already being paid by GAVI using the performance bonus) key to delivery of immunisation services, capacity building of health workers including VHWs, provision of level of effort to key personnel in EPI, the improvement of transport systems and the strengthening of coordinating structures namely the ICC and ZIMNITAG through training and supporting their meetings. In this proposal, the focus is also on demand creation in order to improve knowledge about immunisation among communities including among apostolic sects so that they are able to demand for services. Lastly, under programme management the focus will also be to improve data collection including surveillance at all levels of the health system and ensure that service delivery points where data originates have requisite skills for analysing the data and using it for decision making.


6.2 Vaccine stock management:

The MoHCC has just developed the cold chain replacement plan; hence Zimbabwe is applying for the CCEOP which aims at procuring and installing refrigerators/freezers at various levels of the health system. In addition to this, there will be capacity building of staff in cold chain maintenance and EVM (including the stock management tool), procurement of computers and continuous temperature monitoring devices at district level and construction of dry stores at national level.

6.3 Financial management:

The priority needs in financial management include support for conducting both internal and external audits aimed at improving financial management, the recruitment of staff (Finance Officer) to manage the GAVI HSS grant and building the capacity of the Finance Department (e.g. training and purchase of computers and associated financial management software) including at provincial and district levels. The plan is also to advocate working closely with MoFEP so that they understand the budgeting requirements for the MoHCC.

Part C: Review of implementation progress (to replace the Joint Appraisal) (3-4 pages)

 **Part C** describes the progress achieved in the past year in the immunisation system. By complementing the data as reported via the country portal (e.g. the updated grant performance framework, financial reports, data quality assessment etc.), this section explains over and under achievement of goals and targets, associated implementation challenges and key lessons from the past reporting period (thus replacing the **Joint Appraisal** report for this year). Persistent challenges described here are to be considered in **Part D** for future programming.

7. Past grant performance, implementation challenges and lessons

Briefly comment on the performance of the vaccine support and health systems and immunisation strengthening support (HSS, Ops, VIGs, CCEOP) received from Gavi:

7.1 Performance of the immunisation system, in terms of

- Implementation of annual operational plan for immunisation
- Engagement of different stakeholders (including WHO, UNICEF, CSOs, donors) in the immunisation system

7.2 Performance of Gavi grants, in terms of

- Achievements against agreed targets
- Overall implementation progress, lessons learned and best practices
- Progress and achievements specifically obtained with Gavi's HSS and CCEOP support
- Usage and results achieved with performance based funding (PBF)

7.3 Financial management performance, in terms of

- Financial absorption and utilisation rates
- Compliance with financial reporting and progress in addressing audit requirements
- Major issues arising from cash programme audits or monitoring reviews
- Financial management systems, including any modifications from previous arrangements

7.4 Sustainability and (if applicable) transition planning

- Fulfilment of co-financing commitment
- For countries with a transition plan, implementation progress of planned activities

7.1 Performance of the immunisation system

This section describes the progress in the implementation of the immunisation programme in 2016. A number of activities were planned for 2016 and these included conducting the comprehensive EPI surveillance review and the PIE, the EVMA and the switch from tOPV to bOPV. This was, in addition to, the delivery of immunisation services as well as implementation of the GAVI HSS grant activities.

7.1.1 Performance of the annual operational plan for immunisation

(i) Immunisation services delivery and supervision: Despite the economic challenges being experienced in Zimbabwe, in 2016 the MoHCC continued providing immunisation services at static and outreach clinics with support from development partners. Many children in Zimbabwe continue being protected from VPDs and in 2016 DTP3/PENTA coverage was at 89%. The immunisation coverage for Rota2, PCV3II, PCV and OPV3/OPV were also at 89%. However, as discussed earlier, there are still large numbers of children who are partially vaccinated or unvaccinated due to a wide range of barriers as detailed above. In addition to delivering the routine antigens, in 2016 Zimbabwe implemented the HPV bridging programme in Marondera, Beitbridge and Kwekwe and in this programme girls aged 10-13 were immunised using the 21,000 doses of the vaccine which was due to expire at the end of 2016. The country will roll out HPV vaccine nationwide in 2018 as the proposal has already been approved by GAVI. As planned Zimbabwe successfully switched from tOPV to bOPV in 2016 with support from GAVI. The national EPI team including technical officers from UNICEF, WHO and MCHIP are supposed to

conduct supportive supervision to districts and provinces every quarter [4]. Supportive supervision in 2016 was, however, conducted under auspices of other activities such as vaccine switch, EVM assessment and the African Vaccination Week.

(ii) Vaccine Preventable Disease (VPD) surveillance: The ZEPI continues conducting case-based surveillance for diseases targeted for elimination namely polio, measles and CRS. There are also in Zimbabwe surveillance sites for rotavirus in Zimbabwe. While the disease surveillance activities are in place, one of the major problems is transportation which will be addressed as one of the vehicles which will be purchased will be allocated for surveillance. These surveillance activities show that there have been no outbreaks of measles since 2010, no polio cases since 2005, no cases of pertussis and diphtheria since 2005 and that Zimbabwe has maintained maternal and neonatal tetanus elimination status of 1/1,000 live births per district. In 2016 the Polio Reference Laboratory was assessed and accredited by WHO. A total of 17 adverse events following immunisation were reported in 2016: 14 deaths and 3 cases of fever. These deaths were investigated and it was found that all of them were coincidental and not related to immunisation [4].

(iii) Routine data collection: The MoHCC, as part of its annual operational plan, continues collecting data routinely through the Health Information Management System which, among other things, monitors the performance of the immunisation programme. Health facilities submit reports to districts and then districts to the national level but the major challenge is that timeliness is a challenge, and this was estimated at 74% in 2016. There are challenges affecting the completeness and timelines of data in Zimbabwe and these include the manual collection of data which affects quality, high workloads for staff, the lack of internet, power cuts and staff shortages [4]. As mentioned earlier, while health facilities originate data, the major problem is that facilities rarely utilise data for decision making at all levels of the health system in Zimbabwe.

(iv) Trainings: The following trainings were conducted in 2016 with support from UNICEF/HDF and GAVI. (i) The training of health workers at provincial and district level in EVM targeting provincial and district EPI officers, DNOs, Health Information Officers, Stores Officers and community health sisters; (ii) The training of Cold Chain Technicians on cold chain maintenance for provincial and district cold chain technicians; (iii) The training and induction of ZIMNITAG members; and (iv) The training in MLM and this targeted post basic students of nursing [4].

(v) Coordination meetings: There are various committees which have been established in order to ensure the smooth running of the EPI activities in Zimbabwe. In 2016 only 2 meetings of the ICC were conducted instead of 4 meetings as stipulated in the ToRs of the ICC. There were also 2 meetings held for the ZIMNITAG and this is a minimum number of meetings this committee can convene. The following committees met every quarter: The National Polio Expert Committee; the National Polio Certification Committee; and the National Task Force for the Containment of Laboratory Infectious Material. The ZEPI and stakeholders at national level also had quarterly meetings in all the provinces. There is a need to support the conduct of coordination meetings especially for the NITAG and ICC whose role in the immunisation programme is quite critical [4].

(vi) Recruitment of staff: There are a number of positions within the ZEPI which were filled in 2016 and these include the EPI Manger position, Programme Assistant, Stores Officer, Stores Assistant, CCT and Security Guards. The EPI position is being funded by the GoZ while the rest of the positions which were filled in 2016 were being funded by GAVI using the performance bonus which Zimbabwe received. The plan is that GoZ will take over the payment of salaries for these positions which are being paid for by GAVI [4].

(vii) Other activities: In 2016, the MoHCC and partners planned to conduct a comprehensive review of the EPI and the EVMA. All these activities were conducted as planned. The reports on these activities were reviewed as part of the development of this PSR and the results have been presented in Sections 3.1 to 3.5 above [4].

Despite the challenges that the MoHCC is currently experiencing, this section generally demonstrates that the country is able to carry out all the major activities as planned with support from development partners and other stakeholders at national level.

7.1.2 Engagement of different stakeholders in the immunisation programme:

There are a number of stakeholders who are involved in the immunisation programme in Zimbabwe. These include UNICEF, GAVI, WHO, World Vision, MCHIP and other CSOs who provide financial and technical support to the ZEPI. GAVI is a major funding agency for the immunisation programme in Zimbabwe. There are different committees which have been formed at national level and these are NTF, NCC, NPEC, ICC and the NITAG which draw membership from different organisations. The NITAG, established in 2011, is an important committee as it provides technical guidance including on issues relating to the introduction of new vaccines [16 & 20] and its members were trained in 2016 by SIVAC. There is also an EPI Technical Working Group (TWG) [22].

7.2 Performance of GAVI grants

7.2.1 Achievements against agreed targets

GAVI's support to immunisation programmes in the developing world is aimed at ensuring that vaccines are available, that children are vaccinated against VPDs regardless of where they are based and supporting health systems strengthening which will contribute to the improvement of immunisation outcomes. Overall GAVI's interventions contribute to the reduction of child morbidity and mortality due to VPDs. Figure 7 below shows trends in IMR and U5MR for the period 2000-2015 in Zimbabwe.

Figure 7: Trends in IMR and U5MR in Zimbabwe 2000-2015

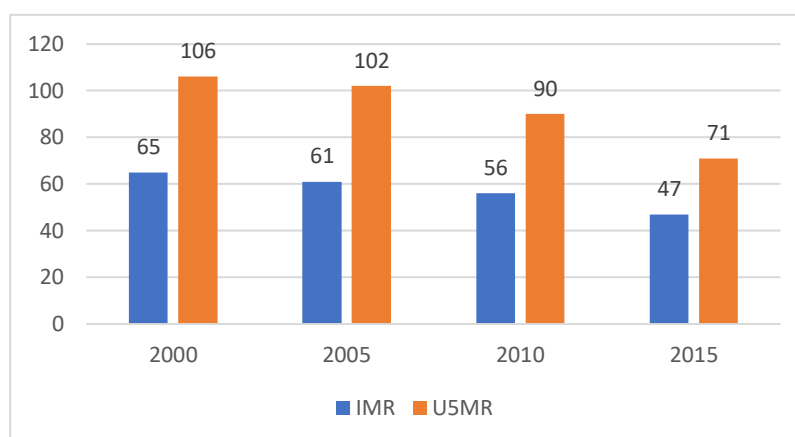


Figure 7 demonstrates the declining trends in IMR and U5MR for Zimbabwe over the period 2000-2015 [3]. One of the factors contributing to such a reduction in mortality is the high coverage of immunisation. The target for IMR as detailed in the NHS is that Zimbabwe should have an IMR of 50 deaths per 1,000 live births by 2020 [51]. However, this target has already been reached as in 2015 this was at 47 deaths per 1,000 live births.

The immunisation coverage for individual antigens is therefore used to determine progress in the implementation of immunisation programmes. As mentioned earlier, between 2011 and 2014, the coverage of DTP3 in Zimbabwe was above 90%. While in 2013 DTP3 coverage was at 95% this went down to 87% in 2015 and then 89% in 2016. The GVAP Goal is that at least 90% of the children under 12 months of age should receive 3 doses of DTP3 at national level and all the districts should have DTP3 coverage of at least 80%. The target of having DTP3Penta3 coverage of at least 90% was not achieved in 2016. However, only 8 districts (12.7%) had coverage of less than 80% implying that the target of having 80% of the districts having DTP3 coverage of 80%+ was achieved in 2016. In 2016 the coverage for OPV3 was at 89%. The target for 2016 was that 90% of the children at national level should receive OPV3 hence this was not achieved as well. The target was also that 90% of the districts in Zimbabwe should have an OPV coverage of 90% and this was also not achieved as 87% of the districts achieved this. For measles in 2016 the target was at 95% but Zimbabwe had a coverage of 92%. Only 22% of the districts in Zimbabwe managed to reach a coverage of more than 95% for measles. The post MR campaign survey showed a coverage of 94% against a target of 95%. In 2016 the coverage for Rota 2 and PCV 3 were both at 89% again falling short of the target. These results demonstrate that coverage targets were not achieved by a very small percentage. These figures, however, represent a slight increase from the 2015 figures [22].

As mentioned earlier the delivery of immunisation services has significantly reduced the prevalence of VPDs. There have been no cases of measles since 2010; no cases of pertussis and diphtheria since 2005; and cases of rotavirus and related diarrhoea have significantly gone down since the introduction of rotavirus vaccine in 2015. Rotavirus accounted for 41%-56% of acute diarrhoea hospitalisations in Zimbabwe in 2014 just before the rota vaccine was introduced. Data from the MoHCC rota sentinel surveillance has shown that there has been a reduction in the percentage of rotavirus positive visits by 40% and 43% among children aged 0-11 months and by 21% and 33% among children aged 12-23 months in 2015 and 2016, respectively. This data was from 2 surveillance hospitals in Zimbabwe.

7.2.2 Overall implementation progress, lessons learned and best practices

Over the years Zimbabwe has received quite a number of grants from GAVI. Recently these grants have included the following: (i) the 2015 MR campaign (US\$3,442,500); (ii) the MR VIG (US\$410,000), (iii) the MSD VIG (US\$410,000), (iv) the IPV VIG (US\$367,000) and (v) the HSS Grant. The MR campaign was introduced successfully and it targeted children aged 9 months to 14 years. The coverage of the catch-up campaign was at 102% from administration data while the post campaign survey found 94%. There were, however, some challenges which were experienced during the time the preparations for the campaign hence the MR campaign was shifted from June 2015 to September 2015. The delay in the campaign was mainly due to lack of resources including the delay in the disbursement of funds from GAVI. This shifting also delayed the implementation of other EPI activities which were supposed to be conducted in the second and third quarters of the year. The late disbursement of funds from GAVI made it difficult to update the data collection tools hence it was impossible to disaggregate the data.

While the funds for IPV were already disbursed by GAVI and that the vaccine was supposed to be introduced in 2015, this has been postponed as there is still a global shortage of the vaccine. One of the best practices was that the country planned to introduce IPV and MSD and conduct the MR at the same time and hence operational activities were integrated. However, IPV was not introduced due to global shortages. The successful conduct of the MR campaign and the introduction of the MSD can be attributed to demand creation activities which were implemented during the MR campaign. These activities were aimed at mobilising communities to accept immunisation activities. From the Grants stated above there was a balance of US\$540,959 which the GoZ wants to use by the end of 2017 for various activities. The best practices as far as GAVI grants are concerned are as follows: (i) multi-pronged demand creation activities (e.g. interpersonal communication with religious leaders for the apostolic sects; using a member of Apostolic sects as VHWs, educating mothers/caregivers on importance of vaccination and continue engagement of the leaders of the Apostolic sects) which resulted into successful introduction of the vaccines including among the vaccine rejecters, (ii) the integrated approach to introduction of new vaccines as operational costs can be combined, and (iii) the early and adequate preparation (training of health workers and implementation of demand creation activities) needed for the introduction of new vaccines.

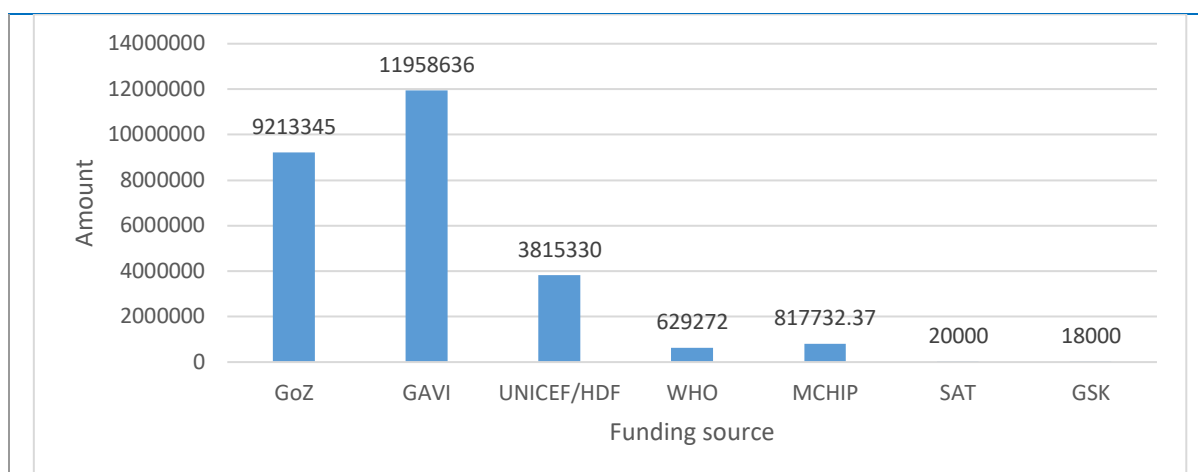
7.2.3 Progress and achievements specifically obtained with GAVI HSS

In 2016 10 vaccine delivery trucks, 24 land cruisers and 33 laptops were purchased by WHO and distributed to 18 poor performing districts in Zimbabwe. Thirteen more Laptops were procured for distribution to provincial EPI officers for EPI reporting. In addition, 12 more land cruisers and 104 SDD refrigerators were procured through UNICEF using the GAVI HSS funds [4]. The procurement of vehicles will address the major challenges the country was experiencing with regard to transportation of vaccines and other EPI supplies as well as the conduct of outreach clinics. Community dialogue equipment was also purchased and given to the MoHCC and provincial health promotion officers were trained for them to support the targeted districts in their respective provinces [4]. The CSOs in the 18 districts were trained in the last half of 2016 on how to create demand for immunisation services at community level.

7.3 Financial management performance

In 2016 a total of US\$26,472,315.37 was spent on various EPI activities. Figure 7 below shows the sources of funds which were used for EPI activities in 2016.

Figure 6: Sources of funds for EPI activities in 2016



It is evident that GAVI is the main funding agency for EPI activities in Zimbabwe and this is seconded by the GoZ then UNICEF/HDF and then MCHIP and WHO. For the GoZ the funds are mainly spent on staff salaries and allowances, maintenance of buildings and equipment including cold chain equipment and co-financing of new and under-utilised vaccines [4]. The MoHCC access the GAVI funds through UNICEF. As of 2016 GAVI had disbursed US\$87.2 million since 2002 and most of these funds (86%) were for vaccine support and only 14% was for non-vaccine support.

7.3.1 Financial absorption and utilisation rates

(i) GAVI HSS grant: Zimbabwe successfully applied for HSS funding from GAVI amounting to US\$6,799,512 and this was aimed at strengthening cold chain, data management and strengthening of outreaches. This budget was, however, reduced by 20% to US\$5,823,352 to reflect PBF. The first tranche amounting to US\$1,918,714 was disbursed to Zimbabwe in 2012 while the second tranche of US\$2,147,211 was due in 2015. There have been concerns about the low utilisation of GAVI HSS funds in Zimbabwe especially at the beginning of the Grant as these funds lay idle for more than a year at the MoFEP. This was because the funds were deposited in the MoFED and the MoHCC experienced huge difficulties to access these funds. The first tranche was supposed to be used for purchase of vehicles but this was delayed mainly because of the high prices of the vehicles on the local market. The funds for the purchase of vehicles were, therefore, transferred to WHO which procured the vehicles in 2016. The release of funds to WHO to procure vehicles and computers in 2015 put the utilisation rate at 92% from 28% in 2014. The second tranche was not released in 2015 as there were delays in the utilisation of funds. This delayed the implementation of a number of activities which were then rescheduled to 2016 and these activities included the procurement of training materials, vehicles, SDD refrigerators and computers. While there have been delays in the utilisation of resources, all the funds for the HSS were disbursed to Zimbabwe and by December 2017 all the funds on this grant would have been utilised.

The MR campaign: Zimbabwe conducted an MR campaign in 2015 with support from GAVI. There were operational costs for the MR campaign amounting to US\$3,422,500 and the MSD vaccine introduction grant of US\$410,000 and MR1 VIG. WHO raised US\$72,000 for operations and US\$30,000 for post NID survey consultancy. All these funds were utilised. Lions Clubs International put in US\$100,000 on the MR campaign for social mobilisation.

IPV VIG: Very little funds meant for the introduction was used as there was global shortage of the vaccine and this grant is still with the MoHCC.

7.3.2 Compliance with financial reporting and progress in addressing audit requirements

A decision was made in 2015 that all GAVI cash grants to Zimbabwe starting in 2016 should be disbursed through the pooled HDF which is being managed by UNICEF. The 2017 Audit Report found some inconsistencies in the way allowances were being paid. This has since been addressed by the MoHCC in that the allowances are only processed after sign in sheets and activity reports have been submitted to appropriate authorities.

7.3.3 Major issues arising from cash programme audits or monitoring reviews

In 2015 GAVI conducted an audit of GAVI grants to the GoZ. Among other issues, the audit report found that there were some gaps and inconsistencies relating to the payment of allowances for workshops and trainings. Promotional materials for IPV and MR were to be produced at the same time. The process to get these promotional materials was delayed and materials came later after the campaign itself. The financial statements

were not produced for 2015 and 2016. As mentioned above, these issues have since been addressed. Currently, UNICEF is responsible for the management of GAVI funds including auditing of these funds.


7.3.4 Financial management systems, including any modifications from previous arrangements

Initially GAVI funded the MoHCC through the MoFED. Once the funds reached the MoFED, the MoHCC was supposed to access this money by requesting for it. There were, however, some delays in the release of funds from MoFED. In terms of financial management, there are some changes: since 2016 GAVI funds the MoHCC through the HDF. The Ministry comes up with activities and submits a request for funds to implement the planned activities. This is a departure from the initial arrangement in which funds were with the Ministry itself. While currently the funds are being managed by the HDF, in its 2016 Joint Appraisal GAVI acknowledges that the MoHCC has the capacity to manage the HSS grant and this will further be strengthened by the HSS grant which has a budget item for capacity building of the persons in the Finance Department in the MoHCC.

7.4 Sustainability and (if applicable) transition planning

As mentioned earlier, all the traditional vaccines are purchased by UNICEF through the HDF. However, GAVI purchases all new and underutilised vaccines with co-funding from the GoZ. As of December 2016, the GoZ had met all its co-financing obligations of 20 cents per dose of new vaccines and for 2016 only this amounted to US\$579,000 (World Bank, MoHCC and ZIMREF, 2017) which was slightly less than what the Ministry spent in 2015 amounting to US\$667,000. As at the time of developing this proposal, the GoZ was already in the process of paying its co-financing obligation of about US\$682,000 to GAVI. This demonstrates the commitment of the GoZ to the co-financing arrangements agreed upon with GAVI. There have been calls for the GoZ to take over the purchase of traditional vaccines. However, a fiscal space analysis done for the health sector in 2016/2017 demonstrates that with the existing economic situation it will be difficult for the GoZ to generate more resources up to the point of taking over the funding of traditional vaccines. There are a number of ways in which the GoZ will try to explore the mobilisation of financial resources from local sources for example through sin taxes. In January 2017, as reported by the Department of Planning in the MoHCC, the GoZ introduced the airtime health levy which will generate around US\$40 million a year which might help to fund some of the activities being financed by GAVI and other development partners. It is hoped that in future the GoZ will be able to pay for all vaccines required for the programme when the economy recovers.

Part D: Objectives of requested Gavi support¹⁷

 Building on the country immunisation system analysis and context (**Part B**) and performance to date (**Part C**), this **Part D** presents a request for future Gavi support.

8. Planning for future support: coordination, transparency and coherence

8.1 What steps were taken to achieve **complementarity and coherence** of Gavi's support across government and stakeholders? How were various forums (ICCs, HSCCs, NITAGs) involved in the development of the PSR?

The development of the NHS 2016-2020 ensures that all major stakeholders were involved. The NHS details interventions which will be implemented over the period 2016-2020. The cMYP was also revised in January 2017 and this details interventions which will be implemented over the period up to 2020. The development of interventions as detailed in the cMYP involved all the major stakeholders in immunisation. The interventions which have been proposed for support from GAVI are contained within the NHS as well as in the cMYP. The need to apply for support from GAVI was identified and discussed within the ICC whose membership is drawn from various government ministries, CSOs and development partners such as WHO, UNICEF, DANIDA, EU and DFID. An in-country workshop was held in Kadoma from 26 June to 30th June 2017 and all major stakeholders including representatives from the health facilities, provinces, MoHCC headquarters (Planning, Finance, EPI, Environmental Health, Epidemiology etc) attended the workshop) and development partners attended the workshop. GAVI staff also attended this workshop. All the interventions, as contained in this proposal, were identified during this workshop. In addition to this, there was a presentation on the financial resources which are available through the HDF over the period up to 2020. The HDF is a major source of funding for the health sector in Zimbabwe and as presented earlier on the amount of resources committed to the HDF has been significantly going down.

8.2 To be eligible for new Gavi vaccine or financial support, countries need to demonstrate a basic functionality of **their coordination forum (ICC, HSCC or equivalent body)**. Requirements are described at <http://www.gavi.org/support/coordination/>.
To what extent does the **coordination forums meet the** Gavi requirements? What steps have been taken to address any gaps?

The ZICC was launched by the Minister of Health and Child Care in 1995. The ZICC has Terms of Reference (ToRs) which spell out the mandate of the ZICC. GAVI has specified the requirements for ZICC for countries to be able to obtain any new financial support. The ToRs for the ZICC are generally in line with the guidelines provided by GAVI for example in terms of: (i) the development and circulation of the meeting agenda; (ii) the ToRs or mandate of the ZICC; (iii) the membership and associated rules of the ZICC; (iv) the selection process for the members; (v) some meeting rules; (vi) the need to produce minutes; (vii) administrative activities including the need for various sub-committees of the ZICC (vi) decision making procedures are not clearly spelt out in the ToRs; and (viii) the ICC should review and approve GAVI grant application and that it should also ensure that a broad and participatory processes in grant application. The membership of the ICC has been mentioned above and the co-chair of this committee is from Rotary Club. This demonstrates that the ToRs are in line with the requirements of the ICC.

8.3 How does **Gavi** support fit within the context of national health and immunisation strategies?

Summarize how Gavi's support fits within and complements the overall context of the national health and immunization strategies, and efforts to achieve Universal Health Coverage priorities. Explicitly address how Gavi support will complement, both financially and programmatically, the achievement

¹⁷The duration of Gavi funding should be discussed in consultation with the Gavi Secretariat to align to the extent possible to a country's strategic period. Regarding measles/rubella, the duration of the planned/expected introductions or campaigns should be for 5 years regardless of the duration of the national strategy.


of these objectives. Discuss the extent to which the health financing strategy and policy incorporates vaccine and immunisation recurrent delivery costs and needs.

Zimbabwe has developed the National Health Strategy for the period 2016-2020 and this strategy details the various interventions which will be implemented in order to improve the health status of the people in country. Objective 12 of the NHS is to reduce under five mortality rate from 76 to 50 deaths per 1,000 live births and one of the specific objectives under this one is the scaling up of the high impact child survival interventions for under five children. Specific interventions have been spelt out in the NHS in order to reduce under five mortality rates in Zimbabwe and these include (i) the strengthening of EPI outreach activities, (ii) maintenance of the cold chain system, (iii) ensuring availability of transport, (iv) strengthening immunisations, and (v) the revising of preservice curricula to include IMNCI among other issues. The prevention of VPDs in under five children through the delivery of immunisation services is, therefore, a high priority for the GoZ as detailed in the NHS. The cMYP also covering the same period as the NHS further details the interventions which will be implemented in order to ensure that all children in Zimbabwe are protected against VPDs. The delivery of immunisation services in Zimbabwe is therefore a very high priority for the GoZ as detailed in the national strategic plans as well as policies such as the National Immunisation Policy.

However, there are various barriers to the delivery and uptake of immunisation services in Zimbabwe. One of the major challenges being experienced, as explained earlier on, is the critical shortage of funding, not only for the implementation of immunisation activities, but also for the wider health sector as well. GAVI has been supporting lower income countries with VIGs, ISS, HSS and purchase of new and underutilised vaccines because of the financial constraints that these countries experiencing in ensuring that vaccines are available all the time and delivered to all children regardless of where they are including socio-economic status. Overall GAVI's mission is to save children's lives by increasing equitable use of vaccines in low income countries¹⁸. The NHS and the cMYP provide guidance on priority interventions which should be implemented over the period up to 2020. The interventions in the NHS and the cMYP as far as immunisation is concerned are in line with the mission and objectives of GAVI.

In order to achieve Universal Health Coverage, there are a number of interventions which have been included in the NHS. As mentioned earlier, the GoZ intends to introduce health posts which will not only be used for immunisation services but also for other disease programmes as well including disease prevention. These health posts are aimed at contributing towards achievement of Universal Health Coverage in Zimbabwe. In addition to this communities need to understand the importance of disease prevention (e.g. through immunisation) and why timely accessing of health services during illness episodes is important. The NHS and cMYP both emphasise the implementation of demand creation/social mobilisation activities which will result into people demanding services. Unfortunately, routine demand creation activities are not implemented as planned due to lack of financial resources. This proposal includes demand creation activities; hence will contribute towards the achievement of universal health coverage.

9. Planned vaccine introductions over the duration of the national immunisation strategy (e.g. cMYP)

 This section presents information on future vaccine routine introductions and/or campaigns under consideration for Gavi support (including support for which the country may not be eligible yet). This does not represent a commitment from the country to introduce the vaccines listed below. High level information critical to advance planning and preparation should be outlined here.

Approximately 18 months ahead of the actual introduction in the routine programme or the campaign, additional vaccine-specific information will be required to obtain Gavi approval. This **Vaccine Support Request** will include: evidence to confirm eligibility, operational plan, budget, and essential information to support grant implementation (e.g. procurement and co-financing terms, target population data).

¹⁸www.gavi.org

Strategic considerations supporting the requests for new vaccines (routine or campaigns)

9.1 Describe the **rationale** for requesting these new programme(s), including the burden of disease. If already included in detail in the Introduction Plan or Plan of Action, please cite the section only.

9.1 Rationale for the MR campaign in 2019

Measles and rubella remain public health threats in Zimbabwe but the most important thing is that the vaccine for protection of children against these diseases is available. In 2009-2010 there was an outbreak of measles with 10,544 cases of this disease notified and 529 deaths [20]. Since 2010 there has never been any cases of measles and Zimbabwe is on track to achieve elimination status for measles [22]. The last MR campaign in Zimbabwe was conducted in 2015 with support from GAVI. The MoHCC is planning to conduct another follow-up campaign in 2019. National immunisation days (NIDs) especially for measles are conducted once every 4 to 5 years and these have been conducted in Zimbabwe since 1996. These NIDs target children who have not been reached by the routine immunisation programme and they are also conducted in order to boost overall immunisation coverage (Muzinda, 2012). The coverage for measles is still less than a threshold of 95% for the 2 doses and this implies that the numbers of children not vaccinated accumulates. The increase in the number of susceptibles presents risks of measles outbreaks. In order to prevent these measles outbreaks, it is therefore important that the periodic MR campaigns should be conducted. The next MR campaign is therefore in 2019. Table 1 below shows the trends in the number of suspected cases of measles in Zimbabwe.

Table 1: Number of suspected cases of measles 2014-2017

Year	Age groups					Total
	Missing age	0-4	5-10	11-15	15+	
2014	25	621	1072	298	80	2071
2015	2	208	98	15	4	327
2016	1	251	156	16	258	431
2017	0	208	189	10	0	407
Total	28	1288	1515	339	342	3236

In total, there have been 3,236 cases of suspected measles between 2014 and 2017. In 2014 and 2015 there were no suspected cases of measles which were 1gM positive. However, in 2016 and 2017 there were 2 and 1, respectively, suspected cases of measles which were 1gM positive.

Rubella used to be quite prevalent in Zimbabwe: in 2014, there were 1025 cases of Rubella and this decreased to 20 cases in 2015, 2 cases in 2016 and 4 cases in 2017 (as of March). It can be seen that between 2014 and 2015 there was a significant reduction in the number of cases of rubella in Zimbabwe and this coincided with the MR campaign. This demonstrates the effectiveness of the MR vaccine. Table 2 below summarises the suspected cases of measles and cases of rubella between 2014 and 2017.

Table 1: Trends in cases of rubella in Zimbabwe 2014-2017

Year	Age groups					Total
	Missing age	0-4	5-10	11-15	15+	
2014	12	252	565	165	43	1025
2015	0	9	8	3	0	20
2016	2	0	0	0	0	2

2017	0	0	4	0	0	4
Cases of Rubella	14	261	577	168	43	1051

As mentioned above the number of cases of rubella in 2014 was at 1025 but this significantly went down between 2015 and 2017. Zimbabwe's priority is to eliminate measles and rubella by 2020 in line with Africa Regional Measles-Rubella Strategic Plan. The MR follow up campaign in Zimbabwe will be conducted in June 2019 and it will target 9-59 months old children. The expectation is that the MR vaccine should be in Zimbabwe by June 2019 and that the planning and the demand creation activities will start by January 2019. Zimbabwe will submit the populated Vaccine Support Request template by January 2018.

Annex 1 shows the vaccination coverage for MR 1 and MR2 and the number of children not vaccinated with these two. Harare and Gweru in 2016 had the highest number of children with suspected cases of measles at 30 and 31, respectively. While these two districts had very good coverage (Harare: MR1 114% and MR 2 at 87%; Gweru: MR 1 at 89% & MR2 at 67%). As can be seen in Annex 1 there are other districts which had large numbers of suspected cases of measles and their MR 1 and MR 2 coverage was low but they had low numbers of cases of suspected measles. Annex 2 shows the cases of Rubella in Zimbabwe. The low incidence of measles and rubella in Zimbabwe can be linked to the high routine coverage of MR1 and the 2015 MR campaign.

9.2 Please discuss the financing-related implications of the new vaccine programs requested, particularly how the government intends to fund the additional co-financing obligations. Please mention if any defaults occurred in the last three years and, if so, describe any mitigation measures that have been implemented to avoid future defaults.

As mentioned earlier, the traditional vaccines in Zimbabwe are purchased by UNICEF while the new and underutilised vaccines are being purchased by GAVI with co-financing arrangements from the GoZ. As at the end of December 2016, the GoZ has paid all its obligations as far as co-financing is concerned. For 2017, arrangements were underway to make the 2017 co-financing obligations. The GoZ is committed to co-financing of new and under-utilised vaccines. As far as the 2019 MR campaign is concerned, the GoZ is committed to co-financing the 2019 MR campaign as per GAVI guidelines. The total cost of this MR campaign is estimated at just over US\$1.5 million dollars as can be seen in Part A section 1.2.

9.3 Please give details of the lessons learned from previous campaigns and routine introductions, specifically for: storage capacity, protection from additional freezing, staff training, cold chain, logistics, coverage, wastage rate, coverage and drop-out rates, and suggest action points to address them in future introductions or campaigns.

9.3 Lessons learnt from previous campaigns

In general, during the measles campaigns there is a large turnout of children and coverage in the 2015 campaign was at 102% using administrative data and 94% from the post-campaign survey. This high coverage is as a result of good preparation including demand creation activities which were implemented prior as well as during the campaign. There are some key lessons which can be learnt from previous campaigns as follows:

1. In order to protect vaccines from additional freezing, the MoHCC uses coolant packs instead of ice packs which can freeze vaccines. Coolant packs keep vaccines with a range of 2-8 degrees.
2. In terms of training, all health workers are trained during every campaign and this is necessary in order to ensure that they are aware of what they are supposed to do during the campaign.
3. The cold chain is assessed during the campaign in order to assess storage capacity. For example, during the introduction of the Rota Vaccine, the exercise had to be delayed because Zimbabwe did not have adequate storage space.
4. Logistics issues are looked into before the introduction of vaccines. While the MoHCC orders enough vaccines, in some cases the districts order more than what they want as they do not have trust in denominators and in some cases, they have ended up with a lot of vaccines not being used. Some monitoring tools (e.g. T5 and T6, child health cards and the ZEPI registers) have not been updated accordingly. These data collection tools will be updated to take care of the new vaccines which will be introduced and the issue of denominators is part of the support that Zimbabwe is applying for to GAVI.

The RED/REC and EVM training will help to address the problem of ordering more vaccines than required. Supportive supervision will be provided to strengthen use of the stock management tool.

5. Wastage rates: This is where the systems have been weak as this has not been adequately documented.
6. Coverage and dropout rates: For MR in 2015 coverage and dropout rates were not recorded because the tools were not available and health workers misunderstood about the giving out of MR as they thought that the second dose was only supposed to be given to children who had not received MR 1.
7. The involvement of the private sector in all aspects of the programme.

The following recommendations are made based on previous experience:

1. There is a need to engage the parliamentary committee on health which has played a critical role in mobilisation of immunisation objectors previously.
2. Continued engagement of religious leaders and members of their religious sects is key to successful measles campaigns as evidenced from the 2015 measles rubella campaign when coverage of immunisation among apostolic sects was quite high.
3. There is a need for a standardised training of health workers to ensure consistency in the delivery of services.
4. Supervision of the provision of services at all levels is required.
5. Having a command centre at national level which receives daily reports from the districts is important. Such a command centre also guides the campaign.
6. It is important that lessons should be shared among the districts about the progress of the campaign.
7. A comprehensive social mobilisation communication strategy should be developed and implemented which should aim at letting communities know about the campaign, why children should be immunised and when and where services will be provided.
8. There is a need to explore the use of modern communication strategies including social media for sending messages to clients. Schools should be used so that pupils can take home the messages about the campaign.

It is important to make sure that there is adequate cold chain equipment and other logistics before the campaign. As of now there is adequate cold chain equipment in Zimbabwe with an exception of dry vaccine stores.

9.4 Explain how the proposed NVS support will be used to improve coverage and equity of routine immunisation, by detailing how the proposed activities and budget will also contribute to overcoming the key barriers cited in your coverage and equity analysis.

The implementation of the MR campaign in 2019 and the planned HPV nationwide introduction will contribute significantly to the improvement of coverage and equity of routine immunisation. Before and during the campaign a lot of demand creation activities will be conducted and there will be opportunities for health workers to interact with clients of immunisation services. The HPV vaccine will target school children hence will ensure that coverage and equity are improved. These interactions will not only focus on the MR but on immunisation in general and once these clients understand the value of immunisation, routine coverage will improve. During the campaigns resources are available and all parts of the country including hard to reach areas are effectively reached and children who have never been reached with immunisation will be provided this service. In addition to this, during the campaign various forms of media are used including TV and radio and the messages in addition to covering MR will also cover other aspects of immunisation; hence will contribute to creating demand for services. It is important that funds for demand creation activities should be advanced much earlier to avoid for example promotional materials being procured and delivered after the campaign as happened earlier. All health workers are trained about the MR and in addition to this they are reminded of other aspects of EPI. Even the equipment for immunisation is assessed to ensure that everything is ready for the campaign. Where there are shortfalls, they are addressed before the campaign. Lastly, during campaigns cold chain, logistics and surveillance activities are strengthened and these do not end with the campaign and will continue with routine immunisations.

9.5 Summarise **programmatic challenges** that need to be addressed to successfully implement the requested vaccines support, and describe plans for addressing those. Examples of key barriers to consider include:

- **Health work force:** availability and distribution;
- **Supply chain** readiness;
- **Demand generation** / demand for immunisation services, immunisation schedules, etc.;
- **Leadership, management and coordination:** Leveraging the outcomes of the Programme Capacity Assessment and/or other assessments, please describe the key bottlenecks associated with management of the immunisation programme. This includes the performance of the national/ regional EPI teams (e.g. challenges related to structure, staffing and capabilities), management and supervision of immunisation services, or broader sectoral governance issues.
- **Other critical aspects** based on country plans or reports (e.g., the cMYP, EPI review, PIE, EVM) or key findings from available independent evaluations reports.

9.6 Programmatic challenges which need to be addressed to successfully implement the MR campaign in 2019

WHO has developed an MR readiness assessment tool which guides countries on what they should do in order to assess their readiness to implement the campaign. The MoHCC will use this tool in order to ensure that the MR campaign is implemented successfully.

9.5.1 Health workforce: The shortage of health workers has been a major challenge for a long time in Zimbabwe. Despite such a scenario, Zimbabwe managed to implement a very successful measles rubella campaign. It is envisaged that human resource levels in the MoHCC will improve by 2017. Even if the staffing levels remain the same as the 2015 levels the MoHCC will still implement a successful campaign so long as preparations start in good time and that all logistical issues are sorted out. In addition to this, all the health workers will need orientation as some of them do not normally conduct immunisation services on a daily basis. During these orientations will cover among other issues adverse events following immunisations.

9.5.2 Supply chain: There is adequate cold chain equipment in Zimbabwe. A cold chain replacement and expansion plan has been developed and the expectation is that with support from GAVI this will be fully implemented. In addition to this, the vaccines will be ordered earlier and will be available in Zimbabwe by March 2019 in readiness for the campaign in June 2019.


9.5.3 Demand creation: One of the major challenges being experienced in Zimbabwe is the shortage of funding for routine immunisation activities. During the MR campaigns resources are generally available for demand creation. The use of CSOs and CBOs to interact with objectors of immunisation services will be key in this campaign. The use of modern communication strategies including social media will be explored in more detail in the 2019 MR campaign. The implementation of demand creation activities will start 9 months before the campaign and will be intensified a month before the campaign.

9.5.4 Leadership, management and coordination As mentioned earlier there are a number of challenges related to leadership, management and coordination of immunisation services in Zimbabwe: supervision of the delivery of immunisation services is limited at all levels due to staffing and inadequate funding; the ICC meets irregularly and while high ranking officials are supposed to attend such meetings, in most cases junior staff attend such meetings; the delivery of immunisation and other health services in Zimbabwe is donor dependent; and there is shortage of health workers at all levels. These challenges have been described earlier and the HSS grant will help to address these issues. Command centres at all levels have proved quite useful in the management of the MR and other campaigns and it is imperative that people involved are properly remunerated as they are involved for longer periods.

9.7 Describe **potential synergies** across planned introductions or campaigns (e.g. if two introductions are planned in the same year, there should be synergies at least in training and social mobilisation events). If relevant, comment on capacity and appropriate systems to introduce multiple vaccines in a year. Also describe how the country will mitigate any programmatic and financial risks associated with multiple introductions.

In 2019 there is no any other vaccine introduction which is being planned by the MoHCC; hence no potential synergies as was the case in 2015 when MSD and IPV were being introduced. However, the ZEPI will work very closely with the Department of Nutrition in the MoHCC as normally the MR campaign is also done together with the delivery of Vitamin A to under five children. There is also potential that IPV might be introduced in 2019 hence a synergy might be explored.

10. Description of requested support for each new vaccine programme

 More specific planning needs particular to each vaccine programme listed in Table 1.2 are described here. Greater details on activities needed to prepare for the vaccine introduction and/or campaign (addressing the programmatic challenges and bottlenecks outlined above) should be reflected in the country's annual work plan. In describing the Technical Assistance (TA) needs, no need to mention provider or budget needs as this will be discussed and agreed upon at a subsequent stage.

Additionally, a vaccine-specific request will be required 12-18 months before the actual introduction in the programme or the start of the campaign.

Exclude here vaccines that have already been approved by Gavi, even if they have not yet been introduced.

Measles / Measles Rubella <i>(routine and campaign/s with introduction date, e.g. Dec 2020)</i>	<p>To encourage a comprehensive and longer-term approach to Measles/Rubella control/elimination, the multi-year national plan attached to this PSR should include an analysis and description of the activities outlined below¹⁹:</p> <p>Immunisation coverage trends and dropout rates for MCV1 and MCV2 in routine (national and sub-national); coverage results from M or MR campaigns, including post campaign coverage surveys; lessons learned from implementation of routine and campaigns, and efforts to cover hard to reach areas and other populations (e.g. women of child bearing age, health workers)</p> <ul style="list-style-type: none"> • Surveillance (case-based and sentinel) performance for at least 5 years, at national and subnational levels, and any plans for improving it through the use of HSIS funds (if not covered in above sections already) • Epidemiological trends and patterns (distribution by age, geography, etc.) for measles, rubella and congenital rubella syndrome (CRS) including outbreaks; population susceptibility and measles outbreak risk profile • Priority activities for 1) routine (MCV1 and MCV2) immunisation strengthening, including efforts to improve coverage in hard-to-reach and/or MR in routine immunisation and any campaigns in the next 5 years (catch up or follow-up); 3) strengthening of measles, rubella and CRS surveillance and lab confirmation (including through the use of HSIS funds); 4) outbreak preparedness plans <p>Provide a technical justification for each type of support requested for Measles / Measles Rubella in the next 5 years</p> <p>10.1 Immunisation coverage trends: Figure 8 below shows the coverage for measles over the period 2010-2017 (first quarter).</p>
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¹⁹If the multi-year national immunisation plan (cMYP) does not include this information, it may be submitted as an addendum to the plan.


	<table border="1"> <thead> <tr> <th>Year</th> <th>Coverage (%)</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>84</td> </tr> <tr> <td>2011</td> <td>97</td> </tr> <tr> <td>2012</td> <td>98</td> </tr> <tr> <td>2013</td> <td>95</td> </tr> <tr> <td>2014</td> <td>95</td> </tr> <tr> <td>2015</td> <td>86</td> </tr> <tr> <td>2016</td> <td>92</td> </tr> <tr> <td>2017</td> <td>93</td> </tr> </tbody> </table>	Year	Coverage (%)	2010	84	2011	97	2012	98	2013	95	2014	95	2015	86	2016	92	2017	93
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	<p>The expected national coverage for measles in 2016 for example was more than 95% and it can be seen that in both 2016 and 2017 this has not been achieved. Measles Rubella Vaccine was introduced in 2015 and in 2016 the MoHCC started monitoring the dropout rate between MRI and MR II. In 2016 the coverage for MR II was very low at 63% giving a dropout rate of 29%. This dropout rate is very high hence the need to reduce it.</p> <p>10.2: Epidemiological trends: (see Section 9).</p>																		
	<p>Describe the target population for each type of support in the next 5 years</p>																		
	<p>The target for the 2019 campaign will be children aged 9 months to 59 months.</p>																		
	<p>With reference to any particular bottlenecks/challenges noted above, what TA will be needed to support this introduction or campaign, and when?</p>																		
	<p>A TA will be required to support the measles rubella campaign in 2019 including the post campaign survey.</p>																		

11. Programmatic: description of priority HSIS investments from Gavi

11.1 Gavi grant-related information

Based on the above, target date for submission of annual operational workplan and budget for Gavi's contribution	November 2017
Target date for first year funds arriving in country	Q1-Q2 2018
Next PSR portfolio review (final year of immunisation strategy)	2020

11.2 Objectives and priority activities for Gavi financial support

 This section describes the 3 to 5 objectives and priority activities that have been identified for Gavi financial support. The description indicates how each objective intends to address the issues and bottlenecks identified in **Part C** and contribute to sustainable improvements in coverage and equity. It is recommended to consider specific objectives related to the under-immunised populations identified in **Part B**, and to explore investments in critical areas such as vaccine supply chain, demand promotion and community engagement, leadership management and coordination and data quality/availability/use).

 Please see the **Programming Guidance** for targeting interventions in each of Gavi's strategic focus areas (i) leadership, management and coordination, (ii) supply chain, (iii) data and (iv) demand promotion: [Programming Guidance Documents](#)



For each objective:

- Provide an **estimated timeframe** for completing the objective
- Describe how the objective(s) target specific **populations/ geographies** as identified in Part B. If applicable, briefly outline which populations and/or geographies have been prioritised for support, how they have been selected, what has been done so far for those populations/geographies and what is being proposed for future Gavi support.
- Describe how the proposed objectives and activities tackle the **immunisation challenges and bottlenecks** identified in Part C (including on topics such as supply chain, demand generation/ community mobilisation, leadership management and coordination, and data quality/ availability/ use) and further the achievement of the goals and objectives of the multiyear national strategic plans.

To apply for CCEOP support, please include CCEOP as one of the activities under a supply chain objective.

- For each objective, indicate approximately **5 activities** which will contribute to achieving the objective; Explain how those activities will address specific coverage and equity challenges, and how implementation of the activities will be prioritised (e.g. over time, any geographic or population focus/targeting, etc.).
- **Sustainability considerations:**

- **Financing:** Justify requests for Gavi to support major recurrent costs (e.g. human resources) regardless of transition stage. Countries in the preparatory and accelerated transition phase are restricted from using Gavi funds for recurrent costs. In addition, describe the steps being taken to ensure the necessary financial resources are available domestically to fully fund the recurrent and non-recurrent investments needed to sustain the results achieved once Gavi supports is phased out.
- **Integration:** Describe the extent to which the activities envisaged will be implemented through routine systems and processes. If outside, please justify and describe steps being taken to integrate them into routine systems and processes.
- **Institutional capacities:** This refers to whether the country has the staff, structures, capabilities and systems to sustain its immunisation programme without relying significantly on external partners and service providers. To what extent are Gavi investments contributing to strengthening these national institutional capacities? In addition to the four strategic focus areas covered in the [Programming Guidance Documents](#), attention should be paid as well, particularly in countries in or about to enter the accelerated transition phase, to non-service delivery dimensions of institutional capacity in areas such as: procurement, technical capacity to advise the government on new vaccine introductions, and vaccine regulation and safety.

For countries in the accelerated transition stage, please dedicate one objective to those activities specific to appropriate transition planning.

- **Provide tailored indicators** that will be included in your grant performance framework **to monitor** each objective. These tailored indicators should provide an assessment of achievement of intermediate results and activity implementation. Further information on supply chain indicators is included in programming guidance documents and/or below.
- List **up to 3 priorities technical assistance needs** anticipated per objective for the upcoming year. Please indicate if this TA will be funded through the HSIS support or whether this will require investment from Gavi through the Partners Engagement Framework (PEF).
- For each objective, provide an **indicative total budget in US\$** for the duration of Gavi's support.

Objective 1	To strengthen the delivery of immunisation and improve coverage in low performing districts to more than 80%.
Timeframe:	<u>2018-2021</u>
Priority population/ geography or constraint(s) to coverage and/or equity to be addressed by the objective:	Hard to reach populations including vaccine objectors due to religion, the urban poor, hard to reach population by distance, vendors and artisanal miners.
Immunisation system bottleneck(s) to be targeted:	<ol style="list-style-type: none"> 1. Transport: shortage/non-availability and breakdowns; lack of fuel and lack of maintenance. 2. Shortage of vaccines at district and lower levels. 3. Shortage of human resources (HCWs and VHWs) - shortage, demotivation, negative attitudes, overworked, burnout, knowledge gap. 4. Poor access due to distance. 5. Lack of attention to the urban poor.
Prioritised activities (approximately 5):	<ol style="list-style-type: none"> 1. Conduct outreach clinics (fuel, allowances and purchase of vehicles). 2. Strengthen routine immunisation including in urban and hard to reach areas (such as Gokwe North, Gokwe South, Chiredzi & UMP & Mbire). <ul style="list-style-type: none"> • Implement supermarket approach • Conduct RED/REC and MLM training. • Conduct EPI competitions: clinic of the year, best immunised village. • Implement RBF interventions. • Evaluate and scale up the MVMH intervention. • Procurement of camping equipment • Use social media to remind mothers of due date for a child to be immunised. • Conduct village days to screen for immunisation status and local outreach. • Conduct monitoring, supportive supervision and quarterly reviews at national, provincial and district. 3. Review of curricula for basic trainings to incorporate EPI specific topics.
Rationale:	<ol style="list-style-type: none"> 1. Cancellation of some outreach session due to lack of fuel, vehicles, allowances and shortage of staff. There are fewer or no static facilities in certain geographical locations; hence the need for outreaches. 2. The 2016 EPI review found that there is a lack of EPI skills among health workers; hence the need for capacity building. 3. There are many vaccine objectors in Zimbabwe; hence the need to strengthen routine immunisation activities. 4. Studies (ZDHS) as well as administrative data have generally shown that many children complete their Primary Vaccination after 1 year. Gokwe North has a high access problem and poor staff retention due to remoteness

	5. There are many vehicles at all levels of the health system in Zimbabwe which are lying idle mainly because of maintenance.
Sustainability considerations:	<ol style="list-style-type: none"> 1. Government has approved the establishment of health posts. Treasury currently reviewing the document to see how best it can be funded. Eventually the establishment of these health posts will significantly reduce the number of outreaches conducted. The problem of fuel and allowances have been around since the 1980s and the establishment of health posts will help to address these problems. 2. The incorporation of EPI specific issues (RED/REC) in basic and post basic training for nurses will help to reduce the funds required to train health workers in EPI. 3. Government economy is recovering slowly and the MoHCC will continue to advocate for more funding from government and other partners. 4. There are some interventions which do not require funding for example the My Village My Home intervention. Government is proposing to upgrade VHWs to civil servants and they will be on salary. 5. The maintenance of vehicles is manageable than repairs and procurement of new vehicles. 6. Disseminate ADI Road Map Implementation and monitoring document.
Indicators to monitor progress toward objective included in the Grant Performance Framework:	<ol style="list-style-type: none"> 1. Proportion of children aged 12-23 months who are fully vaccinated by age 12 months (Primary Course Completed). 2. DTP3 coverage at national level. 3. Proportion of districts with DTP3 coverage of $\geq 80\%$. 4. Maintain DTP1-DTP3 Dropout rate at 4.5%. 5. Proportion of planned outreach clinics conducted. 6. Proportion of vehicles maintained according to schedule. 7. Proportion of planned supportive supervision conducted.
TA needs for the coming year, and a description of how this is complementary to planned TA through PEF	<ol style="list-style-type: none"> 1. TA for MLM/ RED/ REC. 2. TA for My Village my Home. 3. TA for revision of basic and post basic training curricula for nurses (2018).
Indicative HSS budget:	Years 1-2 US\$4,025,472.00
	Years 3-4 US\$2,850,716.00

Objective 2:	To strengthen the governance and coordination of the EPI program
Timeframe:	2018-2021
Priority population/ geography or constraint(s) to coverage and/or equity to be addressed by the objective:	At all levels of the health care system namely national, provincial and district levels.
Immunisation system bottleneck(s) to be targeted:	<ol style="list-style-type: none"> 1. Shortage of human Resources due to lack of “adequate” motivation, lack of resources and freezing of posts. The current staff establishment was last revised in 1996; hence there is high workload. There is also lack of management skills among managers. 2. Lack of skills among EPI and finance staff. 3. Shortage of vehicles. 4. Build the capacity of finance staff (purchase of computers and accounting software and training, supporting internal and external audits). 5. Weak coordination among various structures including the ICC.
Prioritised activities (approximately 5):	<ol style="list-style-type: none"> 1. Recruit and maintain various cadres to strengthen the delivery of EPI services. <ul style="list-style-type: none"> • M& E Officer • Health Promotion Officer • Surveillance Officer • Provincial Cold Chain Technician x 8 • Provincial Stores Officer x 8 • Maintain the existing staff on GAVI support with current grant. • Recruit 1 finance officer to manage the Grant as well as perform other finance functions in MoHCC. 2. Capacity building targeting VHWs and EPI staff (RED/REC). 3. Provide level of effort to key personnel in EPI. 4. Strengthen audit and grant performance. <ul style="list-style-type: none"> • End term review of the current grant. • Mid-term and end term review of the upcoming grant. • Annual internal audit. • External audit. • Procure computers (X2) for financial management. • Asset verification at all levels. 5. Improve transport systems. <ul style="list-style-type: none"> • Review of the transport policy • Strengthen transport management and improve vehicle maintenance • Monitor and manage EPI vehicles 6. Improve coordination between EPI and governing mechanisms.

	<ul style="list-style-type: none"> Support the conduct of meetings for ICC and other coordination structures at national, provincial and district level. Advocate for ICC representation in HDF steering committee and HDF representation in the ICC steering committee <p>7. Work with MoFED including on budgeting to ensure they appreciate budget items.</p>	
Rationale:	<ol style="list-style-type: none"> Inadequate human resources to carry out EPI activities due to the current freeze on vacant posts, lack of motivation and inadequate funding. Critical posts, as mentioned above, need to be created and filled at different levels in order to ensure effective implementation of the EPI activities. As mentioned earlier, work is in progress to review MoHCC establishment and these positions will be created eventually. There is in general lack of financial resources for the MoHCC to conduct regular audits of the finances it manages. The audit of the current GAVI HSS grant was not done timeously due to limited funds. The conduct of these audits would help create donor confidence including strengthening financial management system. There is also high workload for finance staff; hence the need for additional bodies. With regard to transport there is no standardised management systems for transport and cold chain and there is limited or no funding for vehicle maintenance. There is limited coordination between programmes and in some cases coordination structures do not meet due to funding. 	
Sustainability considerations:	<ol style="list-style-type: none"> Most of the support being requested is aimed at supporting government and not parallel systems. Government is committed to absorb the posts requested under the GAVI grant. Government will continue advocating for more funding from Treasury. Reviewing the establishment of the MoHCC 	
Indicators to monitor progress toward objective included in the Grant Performance Framework:	<ol style="list-style-type: none"> 1. Number of staff recruited versus planned Timely production of financial reports. Timeous internal audit reports. Number of ICC meetings Proportion of EPI staff trained on RED/REC. 	
TA needs for the coming year, and a description of how this is complementary to planned TA through PEF	<ul style="list-style-type: none"> TA for Financial Management (2018) 	
Indicative HSS budget:	Years 1-2	US\$342,240.50
	Years 3-4	US\$420,882.50

Objective 3:	To increase demand for immunisation services by 2021.
Timeframe:	2018-2021
Priority population/ geography or constraint(s) to coverage and/or equity to be addressed by the objective:	<ol style="list-style-type: none"> 1. Primary population: Vaccine objectors/resistors/non-adopters due to various reasons including religious and traditional factors. 2. Secondary population: 90% who have already adopted good immunisation behaviours so that they maintain such behaviours 3. Geographical location: people in rural, peri-urban, resettlement/new settlement areas e.g. Hopley, Caledonia etc, hard to reach areas due to terrain/physical barriers etc. 4. Need to improve interpersonal communication skills of service providers. 5. Reticence because of negative stories about the risks of immunisation on social media
Immunisation system bottleneck(s) to be targeted:	<ol style="list-style-type: none"> 1. Individual/family/Community barriers <ul style="list-style-type: none"> • Vaccine objectors due to religion and culture/tradition among other reasons. • Fear e.g. caregivers who relapse due to fear of poor service providers' attitudes. • Knowledge gaps among most caregivers e.g. they cannot state 3 benefits of immunisation. • Attitudes will also influence what the caregiver will prioritise: vaccination of the child over other needs. • Family barriers: the influence of the wider family members (aunts, grandmothers, mothers in law) who are quite powerful and respected in the family. • Wider Groups/Networks' influence on caregivers' behaviour to get the child immunised 2. System bottlenecks <ul style="list-style-type: none"> • Lack of interpersonal communication skills among health workers. • Health worker negative attitudes towards clients. • Inadequate funding for demand promotion activities • Weak/no M&E systems in the area of demand promotion. • Inadequate research on preferred high impact interventions for demand promotion. • A demand promotion strategy and plan for EPI is expiring in 2017.
Prioritised activities (approximately 5):	<ol style="list-style-type: none"> 1. Conduct baseline to inform development of demand creation materials. 2. Develop and distribute print and electronic media IEC materials based on baseline study. 3. Develop and cost an EPI demand promotion strategy and plan. 4. Conduct community dialogues to inform the development of key messages on immunisation which can be disseminated through various media: radio, TV and sms. 5. Conduct social mobilisation campaigns (developed from the results of the baseline) at community level through the use of (i) community events as platforms

	for mobilisation, (ii) sending of SMS health promotion messages and as a reminder to prevent dropouts, (iii) the use of interpersonal counselling and involvement of CSOs/CBOs in demand creation; school health promotion, (iv) home visits, and (v) entertainment.	
Rationale:	1. To increase demand for immunisation services among population groups with low immunisation coverage in order to ensure that there is equity in coverage.	
Sustainability considerations:	<ol style="list-style-type: none"> 1. Existence of infrastructure and qualified human resources for communication right up to community level including the VHWs and the Health Centre Committees. 2. Leadership commitment on immunisation up to village level. 3. Existence of policies which promote health. 4. High literacy levels amongst the people of Zimbabwe who also appreciate ICT and they also use social media/digital communication. 	
Indicators to monitor progress toward objective included in the Grant Performance Framework:	<ol style="list-style-type: none"> 1. % of caregivers who state at least 3 benefits of immunisation. 2. % of caregivers who know the number of times child needs to go for immunisation. 3. DTP1-DTP3 Dropout rate. 	
TA needs for the coming year, and a description of how this is complementary to planned TA through PEF	<ol style="list-style-type: none"> 1. TA for the development of a costed EPI demand creation strategy. 2. TA for baseline study. 	
Indicative HSS budget:	Years 1-2	US\$666,062.00
	Years 3-4	US\$217,411.00

Objective 4a:	To ensure availability and use of high quality data to inform timely and evidence-based interventions.
Timeframe:	2018-2021
Priority population/ geography or constraint(s) to coverage and/or equity to be addressed by the objective:	Health Workers in Zimbabwe
Immunisation system bottleneck(s) to be targeted:	<ol style="list-style-type: none"> 1. Inadequate capacity for data management and use <ul style="list-style-type: none"> • Weak analytical capacity/culture across program levels. • Poor data sharing and dissemination of reports. • No data review meetings at subnational levels. • Inadequate use of data in timely decision making. • No real capacity to track clients across service delivery points in view of patient mobility. • Weak data collection arrangements from the private sector 2. Weak institutional capacity for M & E <ul style="list-style-type: none"> • Lack of a dedicated M&E Officer for EPI. • Lack of emphasis on program M&E related issues at the provincial and district level. 3. inadequate capacity for data collection <ul style="list-style-type: none"> • Need to revise, reproduce/replace and distribute data collection tools and equipment. • Staff: inadequate skills and high turnover • Paper based data collection is a challenge especially from service delivery points to districts. 4. Poor quality of data <ul style="list-style-type: none"> • Unreliable denominators. • Weak and irregular supervision mechanisms.
Prioritised activities (approximately 5):	<ol style="list-style-type: none"> 1. Support EPI performance reviews at subnational levels. 2. Continuous revision, production and distribution of harmonised data collection tools and register/child health cards. 3. Contribute towards the development, training and roll out of Electronic Health Record for enhanced, disaggregated and accurate real time reporting and longitudinal tracking functionality. 4. Conduct regular operations research. 5. Conduct EPI review, cold chain assessment, EVMA and data quality review. 6. Conduct a district specific EPI coverage survey. 7. Conduct baseline, midterm and final evaluation of the GAVI grant. 8. Extend data collection tools and support to the private sector'
Rationale:	These interventions are aimed will ensure the availability of accurate data which can inform policy and programming at all levels.
Sustainability considerations:	The established position of M&E at EPI will be sustained by GoZ once the support from GAVI is over. There is also a need

	to advocate for more resources from Government as well as local partners to ensure that data is collected routinely.	
Indicators to monitor progress toward objective included in the Grant Performance Framework:	<ol style="list-style-type: none"> 1. Data completeness. 2. Data verification factors 3. Data timeliness 	
TA needs for the coming year, and a description of how this is complementary to planned TA through PEF	<ol style="list-style-type: none"> 1. ZEPI manual needs to be revised and we require a TA. 2. TA will be required to support the development and roll out of the ZEPI module, mobile EPI outreach application and EPI indicators in the Electronic Health Record for enhanced, disaggregated and accurate real time reporting and longitudinal tracking functionality. 3. TA will also be required (i) Comprehensive EPI and surveillance review; (ii) operational research, (iii) district specific coverage survey (iv) data quality review, (v) Evaluation of the HSS grant at baseline, midterm and end term, (vi) Evaluation of the 2012-2017 GAVI HSS grant. 	
Indicative HSS budget:	Years 1-2	US\$91,603.00
	Years 3-4	US\$334,512.00

Objective 4b:	To strengthen EPI disease Surveillance	
Timeframe:	2018-2021	
Priority population/ geography or constraint(s) to coverage and/or equity to be addressed by the objective:	Health Workers in Zimbabwe	
Immunisation system bottleneck(s) to be targeted:	<ol style="list-style-type: none"> 1. Under-reporting of AEFIs 2. Erratic supply of laboratory equipment and kits used in surveillance <ul style="list-style-type: none"> • Lack of transport for surveillance activities. • Inadequate knowledge about surveillance among health workers 	
Prioritised activities (approximately 5):	<ol style="list-style-type: none"> 1. Equip sites with enhanced laboratory and epidemiology capacity to be able to detect and respond to outbreaks of VPDs <ol style="list-style-type: none"> a. Ensure regular supplies of reagents, equipment and other supplies for the lab 2. Surveillance training: training on AEFI, polio, NNT and measles and sentinel surveillance for new vaccines. 3. Supporting meetings of the various polio committees namely National Polio Expert Committee, the National Polio Certification Committee and the National Task Force for the Containment of Laboratory Infectious Material. 	
Rationale:	To meet the minimum requirements for certification free status for measles rubella, rota virus and polio and ensure that accreditation is maintained.	
Sustainability considerations:	A national polio transition plan and this will guide the sustainability of activities which were benefiting from polio funds.	
Indicators to monitor progress toward objective included in the Grant Performance Framework:	<ol style="list-style-type: none"> 1. Non-polio AFP case detection rate 2. % AFP stool adequacy. 3. Non-measles febrile rash illness detection rate. 4. The proportion of neonatal tetanus suspected cases that have been investigated. 5. AEFI reporting ratio per 100,000 surviving infants per year. 	
TA needs for the coming year, and a description of how this is complementary to planned TA through PEF	<ol style="list-style-type: none"> 1. TA for Laboratory accreditation/proficiency testing. 2. TA for surveillance training, polio/measles risk assessments. 	
Indicative HSS budget:	Years 1-2	US\$174,254.00
	Years 3-5	US\$164,864.00

Objective 5:	To strengthen cold chain and vaccine logistics management system in Zimbabwe.
Timeframe:	2018- 2020
Priority population/ geography or constraint(s) to coverage and/or equity to be addressed by the objective:	<ol style="list-style-type: none"> 1. Children under 5 2. Adolescence girls and women of child bearing age nationwide.
Immunisation system bottleneck(s) to be targeted:	<ol style="list-style-type: none"> 1. Obsolete and old cold chain equipment. 2. Unreliable power supply. 3. Knowledge gaps about cold chain and logistics management among health workers. 4. Inadequate personnel. 5. Inadequate transport. 6. Lack of continuous temperature monitoring devices at district level. 7. Lack of dry stores.
Prioritised activities (approximately 5):	<ol style="list-style-type: none"> 1. Procurement and installation of refrigerators for vaccines. 2. Capacity building of staff in cold chain maintenance and EVM. 3. Conduct EVMA and the cold chain assessment. 4. Procurement of continuous temperature monitoring devices and computers²⁰. 5. Construction of dry stores.
Rationale:	<ol style="list-style-type: none"> 1. Zimbabwe has many absorption refrigerators within the health system. As reported in the 2015 Cold Chain Assessment, absorption refrigerators are no longer compliant with WHO standards. Some of these refrigerators have outlived their life span i.e. they are more than 10 years old. 2. There are new health centres which have been established in Zimbabwe over the last 1 year or so and they do not have refrigerators for EPI. 3. Based on the previous assessments (2016 EVMA and 2015 Cold Chain Assessment) it has been observed that there are knowledge gaps in vaccine management at sub-national and service delivery points. These assessments also noted that there is need for cold chain technicians and vaccine store keepers at Provincial level 4. Continuous temperature monitoring devices are lacking and the EVMA recommended that these should be purchased. 5. Replacement of computers which were bought in 2012.
Sustainability considerations:	With a constrained fiscal space in Zimbabwe, it will be difficult for the country to take over the purchase of cold chain equipment without support from development partners. However, with regard to staff, the MoHCC will

²⁰Supplier will install.

	take over the payment of staff salaries once GAVI support comes to an end in 2021.	
Indicators to monitor progress toward objective included in the Grant Performance Framework:	<ol style="list-style-type: none"> 1. The proportion of health facilities with functional refrigerators. 2. (a)Proportion of health workers trained in EVM and(b) cold chain management vs planned 3. Proportion of vaccine stores that have received new computers. 	
TA needs for the coming year, and a description of how this is complementary to planned TA through PEF	TA for conducting the EVMA (2020). TA for Cold Chain Assessment (2020). TA for Training in EVMA (2018).	
Indicative HSS budget:	Years 1-2	US\$1,674,783.00 (Out of this amount there is a provision of US\$700,00 for the CCEOP)
	Years 3-4	US\$287,200.00

Template for Supply Chain (Applicable even if countries are not applying for CCEOP)	
Objective: To strengthen cold chain and vaccine logistics management system in Zimbabwe.	
Timeframe:	As above.
Priority population/ geography or constraint(s) to coverage and/or equity to be addressed by the objective:	As above.
Immunisation system bottleneck(s) to be targeted:	As above.
Prioritised activities on each of the five supply chain fundamentals: <i>Describe planned or ongoing activities related to supply chain fundamentals. Responses in this section should be linked to the latest EVM Improvement Plan.</i>	
1. Continuous Improvement	<ol style="list-style-type: none"> 1. EVMA assessment 2020. 2. Supervision. 3. Capacity building, mentoring and training. 4. Logistics management.
2. Management/Leadership	<ol style="list-style-type: none"> 1. Establish posts for logistics and vaccine management (vaccine store keepers and cold chain technicians). 2. Sending national level vaccine logistics team to regional trainings. 3. Support staff to take executive training in immunisation and health supply chain management (Rwanda, India)
4. Data for Management	<ol style="list-style-type: none"> 1. Real time stock management system to overcome limitations of SMT (LMIS) up to District level. 2. Quarterly review of vaccine and supply stock data at national and Provincial level
5. Cold Chain Equipment	
5.1 Cold chain equipment replacement plan for Zimbabwe <p>Table 3 shows the number of fridges which will be purchased over the period 2018-2020. Additional space will be required at the central (1 freezer room), provincial (5 AC freezers and district (43 AC refrigerators) levels. This will address the current space constraints being experienced at different levels. All absorption refrigerators will be replaced and new health facilities (117) which are being constructed will need new SDD refrigerators. Currently there are AC refrigerators which are more than 10 years old or they will be more than 10 years old during the implementation of the HSS grant hence they will need to be replaced. Lastly, there are new health facilities which have just been opened on farms²¹ and in this proposal the MoHCC is requesting for support for the purchase of 54 refrigerators and the rest will be sourced from elsewhere. This is being done because of budgetary</p>	

²¹ There are quite a number of large farms on which people have been resettled. Some of these farms have more than 2,000 people and they are very far from any health facility. GoZ through the MoHCC has refurbished some farm houses and these are now health facilities serving the resettled populations.

constraints. It should also be mentioned that under HSS the plan is to purchase temperature monitoring devices for the district level as well as construction of dry stores. Table 2, however, only looks at the equipment which will be purchased through CCEOP and within the budgetary limit of \$3.5 million. Other refrigerators which need to be bought are as detailed in the Cold Chain Replacement and Expansion Plan²².

Table 2: CCEOP future projections and costs

Description	Unit Cost	2018		2019		2020		Total Cost USD
		Quantity	Estimated Cost USD	Quantity	Estimated Cost USD	Quantity	Estimated Cost USD	
AC Refrigerator for District Store	\$4,440	43	\$190,920	13	\$57,720	0	\$0	\$248,640
AC Freezer for Provincial Store	\$1,103	5	\$5,515	0	\$0	22	\$24,266	\$29,781
SDD for Service delivery	\$4,099	253	\$1,037,047	227	\$930,473	90	\$368,910	\$2,336,430
AC Refrigerator for Service Delivery (Rural)	\$1,248	86	\$107,328	274	\$341,952	133	\$165,984	\$615,264
AC Refrigerator for Service Delivery (Urban)	\$1,248	20	\$24,960	20	\$24,960	16	\$19,968	\$69,888
6% Buffer			\$81,946.20		\$81,306		\$34,748	\$198,000.18
Total		407	\$1,447,716	534	\$1,436,411	261	\$613,876	\$3,498,003

(including CCEOP and Maintenance- see below for additional questions)

- 5.2 How will the country ensure that aspects of maintaining the cold chain are addressed (e.g. preventive and corrective maintenance, monitoring functionality, technicians, financing for maintenance, spare part procurement etc.)?
- 5.3 What is the frequency of preventative and corrective maintenance that the country commits to (supported by partners)?
- 5.4 How will the country monitor the completion of preventive and corrective maintenance?
- 5.5 Indicate the sources of funding for planned maintenance activities
- 5.6 How will the country dispose of obsolete and irreparable equipment have replaced by new equipment?

5.2 The MoHCC experiences huge challenges in conducting preventive and corrective maintenance for cold chain equipment. This is due to lack of cold chain technicians and vaccine store keepers especially at provincial level. Once the cold chain improvement plan has been implemented, it will constitute a huge investment; hence there is a need for some investment in cold chain technicians who will be responsible for the maintenance of the equipment. This request to GAVI will ensure that there are adequate personnel who will be responsible for ensuring that preventive and corrective maintenance is conducted as and when scheduled. The HDP has provided some resources for cold chain preventive maintenance but there aren't adequate resources for this in the foreseeable future; hence this proposal also has a component on financing preventive and corrective maintenance.

5.3 The plan is that preventive and corrective maintenance should be done every 6 months by trained and qualified cold chain technicians.

²² A more comprehensive plan will be submitted shortly but the details as contained in Table 2 will not change.

	<p>5.4 In order to monitor the completion of preventive and corrective maintenance, cold chain technicians will be required to produce reports which will be submitted to the Provincial Medical Director with a copy to the District Medical Director and these will be sent to MoHCC headquarters.</p> <p>5.5 As of now, a request is being made as part of this HSIS proposal for GAVI to consider funding the planned maintenance activities for cold chain equipment.</p> <p>5.6 The Government of Zimbabwe has procedures for the disposal of obsolete equipment. The MoHCC has a list of all equipment which will be replaced over the period 2018-2020 as detailed in the cold chain replacement plan. The PS for Health will write to provinces and districts informing them that such pieces of equipment should be boarded off. When districts, provinces and EPI headquarters are ready they will seek permission from the PS to board off obsolete and irreparable equipment. Once approval is given, a board of survey will be constituted at each level to board off equipment through tendering, auctioning or buying/crushing of the equipment.</p>	
<p>6 System design (all countries should answer)</p> <p><i>If the country is applying for CCEOP, also indicate how system design considerations impacted the choice of CCE for which the CCEOP support is requested.</i></p>	<p>The following factors guided the choice of equipment for the CCEOP:</p> <ol style="list-style-type: none"> 1. It was based on target population per facility and also taking into consideration the introduction of new vaccines and SIAs. 2. A push system is preferred when stock control system is web based 3. Vehicle and stand by generators maintenance are already being out sourced. 4. Out sourcing has quality systemic issues. 5. Out sourcing of LMAS 	
<p>Rationale (e.g. per EVM and other supporting documents, Audit, PCA findings, EPI review etc.)</p>	<p>The 2015 cold chain assessment, 2016 EVMA, the 2016 EPI review and the 2017 cold chain replacement plan are attached.</p>	
<p>Indicators to monitor progress toward objective included in the Grant Performance Framework:</p>	<p><i>See Programming Guide and CCEOP guidelines</i></p> <p>If requesting CCEOP support, include mandatory indicators: <i>(see programming guide)</i></p>	
<p>TA needs for the coming year, and a description of how this is complementary to planned TA through PEF</p>	<p>A TA will be required to conduct the 2020 EVMA.</p>	
<p>Indicative budget with HSS and CCEOP support (see table 2.2):</p>	<p>Years 1-2</p>	<p>US\$2,884,127.00</p>
	<p>Years 3-4</p>	<p>US\$613,876.00</p>

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Annex 1: MR 1 and MR 2 coverage, number of children not vaccinated with MR 1 and MR 2 by district

2016						Coverage		Unvaccinated		Suspected cases of measles
Province	District	Under 1 Pop	MR1	MR2		MR1	MR2	MR1	MR2	
Bulawayo	Bulawayo	19627	17491	14660		89	75	2136	4967	18
Chitungwiza	Chitungwiza	13154	12554	6564		95	50	600	6590	22
Harare	Harare	54019	61455	46877		114	87	-7436	7142	30
Manicaland	Buhera	8459	7743	4433		92	52	716	4026	5
Manicaland	Chimanimani	4599	4587	1820		100	40	12	2779	5
Manicaland	Chipinge	11764	11522	6071		98	52	242	5693	10
Manicaland	Makoni	10220	8354	6368		82	62	1866	3852	6
Manicaland	Mutare	16281	12756	8124		78	50	3525	8157	13
Manicaland	Mutasa	5815	5393	3779		93	65	422	2036	21
Manicaland	Nyanga	4222	4094	2956		97	70	128	1266	1
Mashonaland Central	Bindura	6401	5685	3882		89	61	716	2519	5
Mashonaland Central	Centenary	4876	3601	2109		74	43	1275	2767	-3
Mashonaland Central	Guruve	4254	3381	2658		79	62	873	1596	3
Mashonaland Central	Mazowe	9220	7379	5855		80	64	1841	3365	14
Mashonaland Central	Mbire	2990	2519	1710		84	57	471	1280	3
Mashonaland Central	Mount Darwin	7680	6616	4982		86	65	1064	2698	3
Mashonaland Central	Rushinga	2585	2338	1822		90	70	247	763	2
Mashonaland Central	Shamva	4946	3887	2593		79	52	1059	2353	0
Mashonaland East	Chikomba	3495	6256	2867		179	82	-2761	628	4
Mashonaland East	Goromonzi	10329	8220	5920		80	57	2109	4409	3
Mashonaland East	Hwedza	2039	1971	1576		97	77	68	463	4
Mashonaland East	Marondera	6131	5054	3397		82	55	1077	2734	5
Mashonaland East	Mudzi	4684	4194	3462		90	74	490	1222	7
Mashonaland East	Murewa	6508	5666	4009		87	62	842	2499	9

Mashonaland East	Mutoko	4987	4203	3182		84	64	784	1805	6
Mashonaland East	Seke	10902	14021	6546		129	60	-3119	4356	5
Mashonaland East	UMP	4232	2724	1867		64	44	1508	2365	1
Mashonaland West	Chegututu	9282	8821	4014		95	43	461	5268	8
Mashonaland West	Hurungwe	12810	12134	8893		95	69	676	3917	9
Mashonaland West	Kariba	2339	2057	1728		88	74	282	611	2
Mashonaland West	Makonde	8389	7703	4588		92	55	686	3801	5
Mashonaland West	Mhondoro	3662	3215	2752		88	75	447	910	0
Mashonaland West	Sanyati	7595	6615	4114		87	54	980	3481	1
Mashonaland West	Zvimba	9411	8752	6415		93	68	659	2996	14
Matabeleland North	Binga	4759	4219	4349		89	91	540	410	5
Matabeleland North	Bubi	1908	1868	1487		98	78	40	421	3
Matabeleland North	Hwange	4052	3671	2778		91	69	381	1274	9
Matabeleland North	Lupane	3001	2813	2384		94	79	188	617	2
Matabeleland North	Nkayi	3457	3051	2962		88	86	406	495	4
Matabeleland North	Tsholotsho	3505	3017	3086		86	88	488	419	9
Matabeleland North	Umguza	2397	1990	2053		83	86	407	344	6
Matabeleland South	Beitbridge	4338	3899	2654		90	61	439	1684	10
Matabeleland South	Bulilima	2425	2131	1877		88	77	294	548	3
Matabeleland South	Gwanda	3892	3422	2375		88	61	470	1517	7
Matabeleland South	Insiza	3072	2591	1738		84	57	481	1334	2
Matabeleland South	Mangwe	2305	2031	1808		88	78	274	497	6
Matabeleland South	Matobo	2656	2373	1985		89	75	283	671	3
Matabeleland South	Umzingwane	1745	1502	1112		86	64	243	633	17
Masvingo	Bikita	5101	5407	1635		106	32	-306	3466	1
Masvingo	Chiredzi	11217	8675	3948		77	35	2542	7269	1
Masvingo	Chivi	5247	5291	2593		101	49	-44	2654	3
Masvingo	Gutu	6101	5182	3004		85	49	919	3097	4
Masvingo	Masvingo	9902	8387	3950		85	40	1515	5952	3

Masvingo	Mwenezi	6223	4642	3173		75	51	1581	3050	12
Masvingo	Zaka	5790	6637	5744		115	99	-847	46	2
Midlands	Chirumhanzu	2527	2287	1685		91	67	240	842	3
Midlands	Gokwe North	9194	6489	4424		71	48	2705	4770	4
Midlands	Gokwe South	11795	8130	5790		69	49	3665	6005	6
Midlands	Gweru	7556	6739	5093		89	67	817	2463	31
Midlands	Kwekwe	10719	7676	4395		72	41	3043	6324	3
Midlands	Mberengwa	6213	5478	2816		88	45	735	3397	2
Midlands	Shurugwi	3291	2748	1683		83	51	543	1608	5
Midlands	Zvishavane	3719	3425	2751		92	74	294	968	20
National		446013	408732	277925		92	62	37281	-130807	

Annex 2: Cases of Rubella

2014		2015	
District of residence	Cases of Rubella	District of residence	Cases of Rubella
Bikita	5	Bikita	1
Bindura	27	Binga	3
Binga	9	Bulawayo	1
Buhera	21	Bulilima	1
Bulawayo	29	Chirumhanzu	1
Bulilima	15	Chitungwiza	1
Centenary	3	Gwanda	1
Chegutu	4	Gweru	1
Chikomba	6	Harare	1
Chimanimani	11	Lupane	2
Chipinge	21	Makoni	1
Chiredzi	6	Mazowe	2
Chirumhanzu	13	Mt Darwin	1
Chitungwiza	45	Mudzi	1
Chivi	6	Mutoko	1

2016	
District of residence	Cases of Rubella
Bubi	1
Insiza	1
Total	2

2017	
District of residence	Cases of Rubella
Lupane	2
Rushinga	1
Zvimba	1
Total	4

Gokwe North	3		Tsholotsho	1
Gokwe South	19		Total	20
Goromonzi	12			
Guruve	3			
Gutu	15			
Gweru	30			
Harare	119			
Hurungwe	69			
Hwange	23			
Hwedza	6			
Insiza	1			
Kariba	14			
Kwekwe	15			
Lupane	12			
Makonde	18			
Makoni	34			
Mangwe	2			
Marondera	33			
Masvingo	4			
Matobo	4			
Mazowe	29			
Mberengwa	5			
Mbire	2			
Mhondoro-Ngezi	10			
Mt Darwin	9			

Murewa	20
Mutare	10
Mutasa	27
Mutoko	19
Mwenezi	16
Nkayi	13
Nyanga	11
Rushinga	16
Sanyati	7
Seke	6
Shamva	2
Shurugwi	26
Tsholotsho	10
Umguzo	17
UMP	5
Umzingwane	15
Wedza	3
Zaka	11
Zvimba	62
Zvishavane	14
Total	1022

