## PHG Needs Assessment Calculator Malawi Teratogens

Welcome to the PHG Health Needs Assessment Calculator for Teratogens. The contents of this file are listed below.

Full name of the sheet	Short name
Country demographic, maternal health and socioeconomic indicators	Demography
Country health service data	HealthServices
Teratogenic risk factors for congenital disorders in women of reproductive age	TER-NA1.1
Epidemiology of birth defects caused by teratogens	TER-NA1.2
TER Interventions 1:Effect of preconception screening and treatment	TER-Interv1
TER Interventions 2:Effect of prenatal screening and pregnancy termination	TER-Interv2
TER Needs Assessment Calculator 3: Quantitative assessment of interventions	TER-NA3

(There is no sheet TER-NA2.)

**Shared Data** 

Demographic, maternal health and socio-economic indicators

Please read first! If you have already completed a needs assessment for a different topic in this country, you will be able to copy the Demography information from that Calculator into here. The information should be the same.

By default, the Toolkit contains information at the national level.

If you would like to use a different population, then replace country information with that of your specific population of interest.

Number of persons by age-group and sex		Estimates		Yo	ur estimat	es	Cho	sen estima	ates
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4 years	1019195	962243	1981438			0			0
5-9 years	916219	867034	1783253			0			0
10-14 years	1029401	979033	2008434			0			0
15-19 years	1263553	1209992	2473545			0			0
20-24 years	1479556	1424415	2903971			0			0
25-29 years	1666157	1617867	3284024			0			0
30-34 years	1548609	1509600	3058209			0			0
35-39 years	1355672	1327560	2683232			0			0
40-44 years	1177281	1163297	2340578			0			0
45-49 years	1235825	1250930	2486755			0			0
50-54 years	1438163	1515831	2953994			0			0
55-59 years	1340855	1491416	2832271			0			0
60-64 years	1019387	1205260	2224647			0			0
65+ years	1948979	3223530	5172509			0			0
Total	18438852	19748008	38186860	0	0	0	0	0	0
Female population aged 15-44 years		8252731			-			-	
Data year	2010 reported in 2011								
Source, Year		UN 2011							

Ethnicity. Please enter data for the main ethnic groups if you are working with a population that is different from that of the country.

Ethnic group	Number	% population

Fertility and mortality	Estimate	Source, Year	Your estimate	Source, Year	Chosen estimate	Source, Year
Crude birth rate: live births (LB) / year / 1000 population	44.41	Unicef, 2013				
Still birth rate: still births (SB) / year / 1000 total births	23.68	WHO, 2009				
Total births in 1000s (LB+SB) per year	686	Unicef, 2013				
Infant mortality rate: infant deaths / 1000 LB / year	52.9	Unicef, 2013				
Under-5 mortality rate: U5 deaths / 1000 LB / year	82.6	Unicef, 2013				
Percentage births in women >35 years						
Life expectancy at birth (yrs)	54.21	Unicef, 2013				
% of marriages consanguineous						

Maternal health	Estimate	Source, Year	Your estimate	Source, Year	Chosen estimate	Source, Year
	0.4 =	11 1 6 00 10	estimate	I Cai	estimate	I Cai
Prenatal visits – at least 1 visit (%)	94.7	Unicef, 2013				
Prenatal visits – at least 4 visits (%)	45.5	Unicef, 2013				
Births attended by skilled health personnel (%)	71.4	Unicef, 2013				
Contraception prevalence rate (%)	46.1	Unicef, 2013				
Unmet need for family planning (%)	27.6	WHO, 2004				
Total fertility rate	5.99	Unicef, 2013				
% home births						
% births at health care services	73.20	Unicef, 2013				
Newborn health	Estimate	Source, Year	Your estimate	Source, Year	Chosen estimate	Source, Year
Number of neonatal examinations by SBA / trained staff						
% neonatal examinations by SBA/ trained staff						

Socio-economic indicators	Estimate	Source, Year	1	Chosen estimate	
Gross national income per capita (PPP int. \$)	870	Unicef, 2013			
% population living on < US\$1 per day	73.9	Unicef, 2013			
Birth registration coverage (%)					
Death registration coverage (%)					

LB = live births

PPP = purchasing power parity

SBA = skilled birth attendant

Malawi Shared Data Health Services Data

Please read first! If you have already completed a needs assessment for a different topic in this country, you will be able to copy the Health Services information from that Calculator into here. The information should be the same.

This section provides health-service-related information for your country.

By default, the Toolkit contains information at the national level.

If you would like to use a different population, then replace country information with that of your specific population of interest.

Health Expenditure	Estimate	Source, Year	Your estimate	Source, Year	Chosen estimate	Source, Year
Per capita total expenditure on health (PPP int. \$)	77	WHO 2011				
Total expenditure on health as percentage of GDP	8.4	WHO 2011				
Per capita government expenditure on health (PPP int. \$)	56.5	WHO 2011				
External resources for health as percentage of total expenditure on health	52.4	WHO 2011				
General government expenditure on health as percentage of total expenditure on health	73.4	WHO 2011				
Out-of-pocket expenditure as percentage of private expenditure on health	53.4	WHO 2011				
Private expenditure on health as percentage of total expenditure on health	26.6	WHO 2011				
General government expenditure on health as percentage of total government expenditure	18.5	WHO 2011				

		Source,	Your	Source,	Chosen	Source,
Health Workforce	Estimate	Year	estimate	Year	estimate	Year
Number of nursing and midwifery personnel	3896	WHO, 2008				
Nursing and midwifery personnel density (per 10,000 population)	2.8	WHO, 2008				
Number of physicians	257	WHO, 2008				
Physician density (per 10,000 population)	0.19	WHO, 2008				
Number of obstetricians						
Number of paediatricians						
Number of paediatric surgeons						
Number of paediatric cardiac surgeons						
Number of paediatric neurosurgeons						
Number of clinical geneticists						
Number of genetic counsellors						
Number of community health workers						
Number of skilled birth attendants (SBA)						
Density of SBA						
Number of lab staff providing cytogenetic testing						

Number of lab staff providing molecular genetics			
Number of lab staff providing biochemical tests for genetics			
Number of skilled health attendants			

		Source,	Your	Source,	Chosen	Source,
Infrastructure	Estimate	Year	estimate	Year	estimate	Year
Number of maternity units						
Number of services providing specialised care for people with CD						
Number of family planning services						
Number of preconception services						
Number of services providing prenatal care						
Number of services providing newborn care						
Number of facilities providing genetic services						
Number of laboratories providing cytogenetics						
Number of laboratories providing molecular genetics						
Number of laboratories providing biochemical tests for genetics						
Number of facillities for safe terminations of pregnancies for fetal defects						

PPP = purchasing power parity GDP = gross domestic product SBA = skilled birth attendant CD = congenital disorders

## Teratogens

Teratogenic risk factors for congenital disorders in women of reproductive age

Risk factors	Proportion of women with risk factor	Qualitative assessment*	Variation	Source
Teratogen exposure: environmental, agricultural and occupational				
Exposure to teratogenic prescribed and non-prescribed medicines				
Syphilis				
Rubella susceptibility				
Rubella infection				
Other infections (e.g. CMV or HIV)				
Alcohol consumption				
Tobacco use				
lodine deficiency				
Folate deficiency				
Other risk factors				
Obesity				
Diabetes				

<sup>\*</sup> Complete if numerical data are unavailable. Use numbers from 1 to 5, where 1 = low importance and 5 = high importance.

# Teratogens

## **Epidemiology teratogen associated congenital disorders**

Please enter data either for a specific teratogen or for congenital disorders caused by teratogens as a whole.

Table TER-NA1.2a Burden of disease in preg	nancy, at bir	th and at populati	on level		
	Chosen estimates				
Indicator	Number (n)	n/1000 TB	Range of prevalence (/1000 TB)		
Annual affected live births (LB)					
Annual affected stillbirths (SB)					
Annual affected births (LB+SB)					
Annual affected persons (all age groups)					
Table TER-NA1.2b Mortality indicators					
		Chosen 6	estimates		
Indicator	Number (n)	n/1000 LB	Range of prevalence (/1000 TB)		
Annual overall mortality					
Annual neonatal mortality					
Annual infant mortality					
Annual under-5 mortality					
Mean life expectancy at birth among affected people					

TB = total births (live births + stillbirths)

## Teratogens

# TER Interventions 1:Effect of preconception screening and treatment

Baseline prevalence of teratogen-induced congenital disordersper 1000 total births (live + still)		
Proportion of women reducing teral dialets to safe levels during		
pregnancy		Range: 0 to 1 Range: 0 to 1
Effectiveness of interventions on the outcome		Range: 0 to 1
Results		
% prevalence reduction due to intervention per 1000 total births	0%	
Final prevalence of teratogen-induced congenital disorders per 1000 births	0.000	

### **Teratogens**

### TER Interventions 1:Effects of prenatal screening and pregnancy termination

Assumption: prenatal services are equally used for cases which would lead to still births and live births.

This could overestimate the impact of ToP if in fact ToP is more likely for severe cases that would result in still birth.

Conversely, the impact of ToP could be underestimated if screening is only available to high-income women at lower risk. 100% specificity of prenatal diagnosis assumed.

Baseline prevalence, per 1000 TB (LB + SB)	See base prevalence, per 1000 TB (LB + SB)	
Variables		
Coverage of prenatal diagnosis		Range: 0 to 1
Choice of ToP in confirmed cases		Range: 0 to 1
Results		
% prevalence reduction due to PNS	0%	
Prevalence reduction due to PNS	0.000	
Final prevalence after PNS	0.000	

PNS = prenatal screening

ToP = termination of pregnancy

TB = total births (live births + still births)

# Teratogens

## TER Needs Assessment 3: Quantitative assessment of interventions

Table TER-NA3a	Estimated prevalence in the absence of interventions for TER		
Indicator	Number (n) Prevalence (n/1000)		
Women of childbearing age at increased teratogenic risk			
Potential live births			
Potential still births			

Table TER-NA3b	Current situation in relation to interventions before pregnancy			
Intervention	Coverage (%)	Cases averted (n)	Cases averted/1000 TB	
Effect of family planning, education				
Occupational health monitoring				
Environmental health monitoring				
Interventions to reduce risk				
Information on risks and exposures				
Overall effect				

Table TER-NA3c	Target situation in relation to interventions before pregnancy			
Intervention	Coverage (%)	Cases averted (n)	Cases averted/1000 TB	
Effect of family planning, education				
Occupational health monitoring				
Environmental health monitoring				
Interventions to reduce risk				
Information on risks and exposures				
Overall effect				

Table TER-NA3d	Current situation in relation to interventions during pregnancy			
Intervention	Coverage (%)	Cases managed (n)	Cases managed/1000 TB	
Education on risks				
Targeted prenatal screening based on exposure				
Prenatal diagnosis				
Termination of pregnancy				
Maternal protection legislation				
Information on risks and exposures				
Overall effect				

Table TER-NA3e	Target situation in relation to interventions during pregnancy			
Intervention	Coverage (%)	Cases managed (n)	Cases managed/1000 TB	
Education on risks				
Targeted prenatal screening based on exposure				
Prenatal diagnosis				
Termination of pregnancy				
Maternal protection legislation				
Information on risks and exposures				
Overall effect				

Table TER-NA3f	Current situation in relation to interventions after birth			
Intervention	Coverage (%)	Cases managed (n)	Cases managed/1000 LB	
Effect of newborn screening				
Effect of newborn diagnosis				
Effect of clinical and related interventions				
Effect of social care and support				
Effect of education interventions				
Compensation legislation				
Overall effect				

Table TER-NA3g	Target situation in relation to interventions after birth			
Intervention	Coverage (%)	Cases managed (n)	Cases managed/1000 LB	
Effect of newborn screening				
Effect of newborn diagnosis				
Effect of clinical and related interventions				
Effect of social care and support				
Effect of education interventions				
Compensation legislation				
Overall effect				

Table TER-NA3h	Current and desired outcomes				
	Current situation		Target situation		
Indicator	Annual number (n)	Incidence (n/1000)	Annual number (n)	Incidence (n/1000)	
Estimated affected pregnancies					
Live births (LB)					
Still births (SB)					
All births (LB+SB)					
Estimated population prevalence	Estimated population prevalence				
All age groups					
Estimated mortality / 1000 live births					
Neonatal deaths					
Infant deaths					
Under-5 deaths					

TB = total births (live births + still births)