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# PHG Needs Assessment Calculator Iran, Islamic Republic of Newborn screening

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# Iran, Islamic Republic of 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		Your estimates			Chosen estimates		
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4 years	2801568	2662410	5463978			0			0
5-9 years	2820524	2688533	5509057			0			0
10-14 years	3441245	3267349	6708594			0			0
15-19 years	4442901	4283860	8726761			0			0
20-24 years	4511851	4499571	9011422			0			0
25-29 years	3660167	3564785	7224952			0			0
30-34 years	2837969	2715562	5553531			0			0
35-39 years	2511545	2409579	4921124			0			0
40-44 years	2081679	2007479	4089158			0			0
45-49 years	1792481	1730280	3522761			0			0
50-54 years	1386063	1369357	2755420			0			0
55-59 years	923536	964445	1887981			0			0
60-64 years	726449	738003	1464452			0			0
65+ years	1928384	1728207	3656591			0			0
Total	0	0	70495782	0	0	0	0	0	0
Female population aged 15-44 years		0			0			0	
Data year		2006 report	ed in 2008						
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

	Estimate	Source, Year	Your	Source, Year	Chosen	Source,
Fertility and mortality			estimate		estimate	Year
Stilldarhirtateates bives hirtbattles by average a 1900 population	20	Unicef, 2007				
births	13	WHO, 2009				
Total births in 1000s (LB+SB) per year	1441.00	Unicef, 2007				
Infant mortality rate: infant deaths / 1000 LB / year	22.00	UNICEF				
Under-5 mortality rate: U5 deaths / 1000 LB / year	26.00	(3901台) F2010				
Percentage births in women >35 years		(2011), 2010				
Life expectancy at birth (yrs)	73	WHO, 2009				
% of marriages consanguineous						

Maternal health	Estimate	Source, Year	Your estimate	Source, Year	Chosen estimate	Source, Year
Prenatal visits – at least 1 visit (%)	99	WHO, 2005				
Prenatal visits – at least 4 visits (%)	94	WHO, 2005				
Births attended by skilled health personnel (%)	97	WHO, 2005				
Contraception prevalence rate (%)	73.3	WHO, 2002				
Unmet need for family planning (%)						
Total fertility rate	1.8	WHO, 2009				
% home births						
% births at health care services						
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	Your estimate	Source, Year	Chosen estimate	Source, Year
Gross national income per capita (PDP int \$)	10850	WHO 2007	commate		commate	Tear
	10000	VVIIIO, 2007				
% population living on < US\$1 per day	<2.0	WHO, 2005				
Birth registration coverage (%)	>90	WHO, 2007				
Death registration coverage (%)	50-74	WHO, 2006				

LB = live births

PPP = purchasing power parity

SBA = skilled birth attendant

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HealthServices

Iran, Islamic Republic of 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. \$)	685	WHO, 2009				
Total expenditure on health as percentage of GDP	5.5	WHO, 2009				
Per capita government expenditure on health (PPP int. \$)	267	WHO, 2009				
External resources for health as percentage of total expenditure on health	0	WHO, 2009				
General government expenditure on health as percentage of total expenditure on health	39.0	WHO, 2009				
Out-of-pocket expenditure as percentage of private expenditure on health	96.6	WHO, 2009				
Private expenditure on health as percentage of total expenditure on health	61.0	WHO, 2009				
General government expenditure on health as percentage of total government expenditure	8.7	WHO, 2009				

Health Workforce	Estimate	Source, Year	Your estimate	Source, Year	Chosen estimate	Source, Year
Number of nursing and midwifery personnel	98020	WHO, 2005				
Nursing and midwifery personnel density (per 10,000 population)	16	WHO, 2005				
Number of physicians	61870	WHO, 2005				
Physician density (per 10 000 population)	8.9	WHO, 2005				
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			

Infrastructure	Estimate	Source, Year	Your estimate	Source, Year	Chosen estimate	Source, 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

# Iran, Islamic Republic of Newborn screening Existing screening programmes for congenital disorders

Condition	Tick if NBS programme exists	Tick if included in physical examination	Indicate whether NBS is provided at national or sub- national level	Condition prevalence per 1000 newborns	Prevalence variation and high-risk populations
Eye problems					
Signs of heart disease					
Developmental dysplasia of hips					
Genital anomalies (e.g. un- descended testicles)					
Orofacial clefts					
Dysmorphologies					
Hearing loss					
Congenital hypothyroidism					
G6PD deficiency					
PKU					
Cystic fibrosis					
Thalassaemias					
Sickle cell disease					
MCADD					
САН					
Other					

NBS = newborn screening

G6PD = glucose-6-phosphate dehydrogenase

PKU = phenylketonuria

CAH= congenital adrenal hyperplasia

MCADD = medium-chain acyl-CoA dehydrogenase deficiency

#### Iran, Islamic Republic of Newborn screening Details of newborn screening programmes

Condition	Age at screen	Coverage (%)	Coverage variation and high-risk populations	Estimated proportion of affected newborns detected	<sup>-</sup> Target coverage (%)
Newborn physical ex	aminatio	n			
Basic examination*					
Examination for gross abnormalities*					
Detailed physical examination					
Newborn hearing scr	reening				
Crude screening					
Equipment based screening					
Newborn bloodspot	screening	]	·	·	
Congenital hypothyroidism					
PKU					
Cystic fibrosis					
Sickle cell disease					
G6PD deficiency					
MCADD					
САН					
Other					

PKU = phenylketonuria

G6PD = glucose-6-phosphate dehydrogenase

MCADD = medium-chain acyl-CoA dehydrogenase deficiency

CAH= congenital adreanal hyperplasia

\* As defined in the Background document section titled Newborn Screening Tests

# Iran, Islamic Republic of Newborn screening Effects of NBS and treatment on congenital hypothyroidism

	Range: 0 to 1
	Range: 0 to 1
	Range: 0 to 1
0	
0	
	0

LB = live births

CHT = congenital hypothyroidism

NBS = newborn screening

\* If you don't have data on birth prevalence but do have data on screening, you can estimate birth prevalence by combining the proportion screened positive with the number of total births. (This assumes that screening is randomly distributed in the population).

<sup>1</sup>Coverage of newborn screening X Proportion of screen-positive cases receiving treatment X Effectiveness of treatment

<sup>2</sup>Baseline birth prevalence – (Proportional reduction of uncontrolled cases of CHT X Baseline birth prevalence)

#### Iran, Islamic Republic of Newborn screening Effects of NBS and treatment on G6PD deficiency

Baseline birth prevalence of G6PD deficiency, per 1000 LB		
Variables		
Coverage of newborn screening		Range: 0 to 1
Proportion of positive-screened patients receiving treatment		Range: 0 to 1
Effectiveness of treatment		Range: 0 to 1
Results		
Proportional reduction of uncontrolled cases through NBS and		
treatment <sup>1</sup>	0	
Prevalence of uncontrolled G6PD deficiency after newborn		
screening and treatment, per 1000 LB <sup>2</sup>	0	

LB = live births

NBS = newborn screening

G6PD = glucose-6-phosphate dehydrogenase

\* If you don't have data on birth prevalence but do have data on screening, you can estimate birth prevalence by combining the proportion screened positive with the number of total births. (This assumes that screening is randomly distributed in the population).

<sup>1</sup>Coverage of newborn screening X Proportion of screen-positive cases receiving treatment X Effectiveness of treatment

<sup>2</sup>Baseline birth prevalence – (Proportional reduction of uncontrolled cases of G6PD X Baseline birth prevalence)

#### Iran, Islamic Republic of Newborn screening Effects of NBS and treatment on RHD

Baseline birth prevalence of RHD, per 1000 LB		
Variables		
Coverage of newborn screening		Range: 0 to 1
Proportion of positive-screened patients receiving treatment		Range: 0 to 1
Effectiveness of treatment		Range: 0 to 1
Results		
Proportional reduction of uncontrolled cases through NBS and treatment <sup>1</sup>	0	
Prevalence of uncontrolled RHD deficiency after newborn screening and treatment, per 1000 LB <sup>2</sup>	0	
	0	

LB = live births

NBS = newborn screening

RHD = Rhesus Haemolytic Disease of Newborn

\* If you don't have data on birth prevalence but do have data on screening, you can estimate birth prevalence by combining the proportion screened positive with the number of total births. (This assumes that screening is randomly distributed in the population).

<sup>1</sup>Coverage of newborn screening X Proportion of screen-positive cases receiving treatment X Effectiveness of treatment

<sup>2</sup>Baseline birth prevalence – (Proportional reduction of uncontrolled cases of RHD X Baseline birth prevalence)

#### Iran, Islamic Republic of Newborn screening Effects of NBS and management on sickle cell disease

Baseline birth prevalence of sickle cell disease, per 1000 LB		
Variables		
Property of postations screening patients referred for		Range: 0 to 1
management		Range: 0 to 1
Effectiveness of management		Range: 0 to 1
Results		
Proportional reduction in unmanaged cases of SCD through NBS and treatment <sup>1</sup>	0	
Prevalence of unmanaged sickle cell disease after newborn screening and treatment, per 1000 LB <sup>2</sup>	0	

LB = live births

SCD = sickle cell disease

NBS = newborn screening

\* If you don't have data on birth prevalence but do have data on screening, you can estimate birth prevalence by combining the proportion screened positive with the number of total births. (This assumes that screening is randomly distributed in the population).

 $^{1}\mbox{Coverage}$  of newborn screening X Proportion of screen-positive cases receiving treatment X Effectiveness of treatment

<sup>2</sup>Baseline birth prevalence – (Proportional reduction of unmanaged cases of SCD X Baseline birth prevalence)

# Iran, Islamic Republic of Newborn screening Effects of NBS and management on thalassaemias

Baseline birth prevalence of thalassaemias, per 1000 LB		
Variables		
Coverage of newborn screening		Range: 0 to 1
Proportion of screen-positive patients referred for treatment		Range: 0 to 1
Effectiveness of management		Range: 0 to 1
Results		
Proportional reduction of prevalence of unmanaged thalassaemias through NBS and treatment <sup>1</sup>	0	
Prevalence of unmanaged thalassaemias after newborn screening and treatment, per 1000 LB <sup>2</sup>	0	

LB = live births

NBS = newborn screening

\* If you don't have data on birth prevalence but do have data on screening, you can estimate birth prevalence by combining the proportion screened positive with the number of total births. (This assumes that screening is randomly distributed in the population).

<sup>1</sup>Coverage of newborn screening X Proportion of screen-positive cases receiving treatment X Effectiveness of treatment

<sup>2</sup>Baseline birth prevalence – (Proportional reduction of unmanaged cases of thalassaemia X Baseline birth prevalence)

# Iran, Islamic Republic of Newborn screening Effects of NBS and treatment on orofacial clefts

Baseline birth prevalence of orofacial clefts, per 1000 LB		
Variables		
Coverage of newborn screening		Range: 0 to 1
Proportion of screen-positive patients receiving treatment		Range: 0 to 1
Effectiveness of treatment		Range: 0 to 1
Results		
Proportional reduction of prevalence of untreated OFCs through NBS and treatment <sup>1</sup>	0	
Prevalence of untreated OFCs after newborn screening and treatment, per 1000 LB <sup>2</sup>	0	

LB = live births

OFCs = orofacial clefts

NBS = newborn screening

\* If you don't have data on birth prevalence but do have data on screening, you can estimate birth prevalence by combining the proportion screened positive with the number of total births. (This assumes that screening is randomly distributed in the population).

<sup>1</sup>Coverage of newborn screening X Proportion of screen-positive cases receiving treatment X Effectiveness of treatment

<sup>2</sup>Baseline birth prevalence – (Proportional reduction of untreated cases of OFC X Baseline birth prevalence)

#### Iran, Islamic Republic of Newborn screening Effects of NBS and treatment on phenylketonuria

Baseline birth prevalence of PKU, per 1000 LB		
Variables		
Coverage of newborn screening		Range: 0 to 1
Proportion of positive-screened patients receiving treatment		Range: 0 to 1
Effectiveness of treatment		Range: 0 to 1
Results		
Proportional reduction of prevalence of clinical cases of PKU		
through NBS and treatment <sup>1</sup>	0	
Prevalence of symptomatic PKU after newborn screening and		
treatment, per 1000 LB <sup>2</sup>	0	

LB = live births

PKU = phenylketonuria

NBS = newborn screening

\* If you don't have data on birth prevalence but do have data on screening, you can estimate birth prevalence by combining the proportion screened positive with the number of total births. (This assumes that screening is randomly distributed in the population).

<sup>1</sup>Coverage of newborn screening X Proportion of screen-positive cases receiving treatment X Effectiveness of treatment

<sup>2</sup>Baseline birth prevalence – (Proportional reduction of prevalence of clinical cases of PKU X Baseline birth prevalence)

# Iran, Islamic Republic of Newborn screening Effects of NBS and management on cystic fibrosis

		_
Baseline birth prevalence of cycstic fibrosis, per 1000 LB		
Variables		
FRYERER OF BOYSHAVE SCREENED patients referred for		Range: 0 to 1
management		Range: 0 to 1
Effectiveness of management		Range: 0 to 1
Results		
Proportional reduction of prevalence of unmanaged cystic fibrosis through NBS and treatment <sup>1</sup>	0	
Prevalence of unmanaged cystic fibrosis after newborn screening and treatment, per 1000 LB <sup>2</sup>	0	

LB = live births

NBS = newborn screening

\* If you don't have data on birth prevalence but do have data on screening, you can estimate birth prevalence by combining the proportion screened positive with the number of total births. (This assumes that screening is randomly distributed in the population).

<sup>1</sup>Coverage of newborn screening X Proportion of positive-screened patients referred for management X Effectiveness of management

<sup>2</sup>Baseline birth prevalence – (Proportional reduction of prevalence of unmanaged cases X Baseline birth prevalence)