

2012 Sector Performance Annual Review



Assessment of Sector Performance

2007 – 2011

National Report

March 2012

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FOREWORD

Monitoring & Evaluation is of paramount importance in any program activity. It is an activity that must be given the highest priority in terms of resource allocation so that an effective M&E system is developed, put in place and implemented. I am very grateful for the support given to us by all our health sector development partners, government agencies and expertise from the National Department of Health in putting together a very comprehensive monitoring & evaluation plan that will be used to track the performance of our National Health plan 2011-2020.

The Sector performance Annual report (SPAR) is a monitoring tool that measures progress of our health indicators on a yearly basis and also compares results for the last five years. It is very important that we can be able to know whether we are progressing against set targets. A proper and careful analysis of SPAR strictly adhering to the M&E plan should be able to give us a true picture of our health outcomes.

Measuring the performance of our health sector is quite a challenge and it would require those of us who are placed in this area of responsibilities to work in collaboration so that a better SPAR report is produced every year. Through this report we can be better informed on what would be the right thing to do. We must not continue to walk in the dark the SPAR report should be our light to direct our path.

I would also like to congratulate all who have spent time to develop and put in place this report. May we continue to further refine and do adjustments to our SPAR report so that all donor partners, stake holders and implementers of our health sector should be made aware of the many efforts that they have put in to see a better and healthier Papua New Guinea.

I am appealing to our national, provincial and district health sector service providers and implementers including non government organization and churches agencies to take ownership of this report. We all need to provide leadership and good governance and contribute to the best of what we can. Through this contributed effort we can see better results.

Finally I would like to endorse this SPAR report for references and program evaluation purposes and a document for public consumption. Let us be accountable for our actions and continue to be innovative in our endeavors to strengthen health service delivery for improved health outcomes.

Mr Pascoe Kase
Secretary for Health

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Indicator List Sector Performance Annual Review

	Ind #	Indicator	Source
Outcome	1	Case fatality rate (in HC and Hospitals) for pneumonia in children <5yrs	NHIS
Outcome	2	Proportion (%) of underweight children under five years	NHIS
Outcome	3	Underweight (<2500 gm) births as a proportion (%) of total births	NHIS
Outcome	4	Incidence (0/00) of malaria	NHIS
Outcome	5	Proportion (%) of pregnant 15 – 24 year old women who test HIV positive	HIV Program
Outcome	6	Incidence (0/00) of diarrhoeal disease in children under 5 years	NHIS
Outcome	7	Total injury discharges from health centres and hospitals for every 1000 popn	NHIS
Output	8	Ratio of rural outreach clinics held to children under 5 years	NHIS
Output	9a	Proportion (%) of children at one year of age who are immunised against measles	NHIS
Output	9b	Proportion (%) of children at one year of age who are immunised with 3 doses TA/Pentavalent vaccine	NHIS
Output	10	Proportion (%) of births attended by skilled personnel at health facilities	NHIS
Output	10b	Proportion (%) of total provincial hospital births that are referred from rural centres	unavailable
Output	11	Proportion (%) of pregnant women who attended at least one ANC visit	NHIS
Output	12	Family Planning: couple years protection per thousand women of reproductive age	NHIS
Output	13	Proportion (%) of children under 5 years with fever who are treated with appropriate anti-malarial drugs	PNGIMR
Output	14	Proportion (%) of children <5yrs sleeping under ITN	avail 2013
Output	15	Proportion (%) of HIV positive mothers who receive ART to reduce the risk of MTCT	HIV Program
Output	16	Case detection rate of all TB cases	TB Program
Output	17	TB treatment success rate	TB Program
Process	18	Proportion (%) of government (functional grants) and development partner contributions that are expended.	Program
process	19	Provincial health expenditure (government and development partner contributions) as a proportion (%) of estimated minimum health expenditure required.	NEFC
Process	20	Proportion (%) of health centres that have received at least one supervisory support visit from district or provincial management staff during year	NIHF
Process	21	Average number of outpatient visits to hospitals and health centres per person per year	NHIS
Process	22	Proportion (%) of Aid Posts open	NIHF
Process	23	receiving report of event	unavailable
Input	24	Total budget allocation (HSIP and GoPNG) per capita	PLLSMA
Input	25	Proportion (%) of health facilities that have running water to delivery room.	NIHF
Input	26	Proportion (%) of health centres/hospitals with functioning radio/telephone/mobile.	NIHF
Input	27	Percentage of months that facilities do not have stock-outs of all selected medical supplies for more than a week in the month.	NHIS
Input	28	Proportion (%) of general hospitals (PMGH and the provincial hospitals) which have at least 3 of the 5 key specialties	NHSS Program
Input	29	Number of health workers per 10,000 population (stratified by cadre)	unavailable

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Reporting Rates

National Health Information System/National Inventory of Health Facilities

Province	2007 NHIS rep. rate	2008 NHIS rep. rate	2009 NHIS rep. rate	2010 NHIS rep. rate	2011 NHIS rep. rate	2011 NIHF returns
Western	90%	90%	83%	73%	70%	98%
Gulf	95%	90%	84%	83%	95%	100%
Central	86%	86%	96%	97%	93%	100%
NCD	89%	83%	97%	95%	90%	56%
Milne Bay	100%	100%	100%	100%	100%	98%
Oro	95%	93%	89%	64%	91%	100%
S_Highlands	84%	83%	94%	91%	92%	64%
Enga	83%	81%	57%	66%	82%	66%
W_Highlands	76%	73%	77%	86%	96%	93%
Simbu	92%	67%	94%	96%	97%	97%
E_Highlands	92%	96%	97%	96%	99%	100%
Morobe	92%	93%	72%	77%	79%	91%
Madang	86%	93%	94%	91%	91%	88%
East_SEPIK	94%	91%	98%	98%	96%	100%
Sandaun	91%	76%	69%	73%	88%	95%
Manus	90%	99%	94%	96%	85%	100%
New Ireland	92%	90%	88%	93%	91%	82%
ENB	94%	87%	89%	92%	89%	81%
WNB	97%	97%	95%	89%	93%	100%
ARB	91%	96%	95%	64%	89%	100%
National	90%	87%	88%	86%	90%	90%
Southern	92%	91%	92%	87%	90%	93%
Highlands	84%	80%	85%	87%	93%	82%
Momase	91%	89%	84%	85%	88%	93%
NGI	94%	93%	92%	88%	89%	92%
National	90%	87%	88%	86%	90%	90%

Summary Comments

This report provides a **snapshot of the health sector performance** by province for 2011 and a comparison over the last 5 years. The indicators measured are inclusive of the Performance Monitoring Framework of the National Health Plan 2011-2020.

The **overall performance of the sector has not changed much** over the past five years although there are encouraging signs in 2011. There is noted improvement in inputs, however, we are not observing improved outputs or outcomes as a result of the additional inputs. There is a challenge in that provincial financial records are not readily available to us for analysis.

In general, supervisory support has declined, although there has been greater commitment to outreach services in the past year; however, this has not shown benefit in immunisation coverage; the proportion of births that are supervised have similarly declined despite increasing ANC coverage. Child and maternal health remains a mixed picture, with improved child nutrition, and fewer low birth weight babies last year; malaria continues to steadily decline; however, diarrhoeal disease remains a problem.

The most improved province in 2011 was WHP followed by NCD, ARB and Madang. SHP, NCD, WHP and EHP showed most improved outcomes, WHP, Madang, ENGA and ARB showed most improved outputs. Oro, Manus and Simbu showed most improved processes. ARB, Madang, Oro and Morobe showed most improved inputs.

The **best performing provinces** in 2011 are *ENBP, ARB, Milne Bay, Simbu and NIP*. However, after adjustments with the constraints index **WSP, Morobe, EHP and SHP** are now considered the best performing provinces in 2011. In order to assess overall performance, a revised index has been applied to the performance of each province. The purpose of using the constraint index is level the playing field when making comparisons between provinces. The index considers the level of disadvantage that each province encounters. These disadvantages include (a) mortality (Under 5 Mortality Rate and Life expectancy at birth), (b) social measures (income, gender, education, poverty) and (c) size (number of districts serviced). The detail of this "constraint index" is provided as an appendix to this report. It suggests that these provinces do comparatively well when one considers the relative hardships of the provinces.

- **Reporting year:** The data analysed in this report relates the period from October 2010-September 2011. Previous annual sector reviews have been conducted upon analysis of data for each calendar year. Unfortunately, this meant that the reports were available too late to influence the planning cycle for the subsequent year. There have, however, been difficulties encountered as a result of this change. Some programme indicators (for example, TB, HIV, expenditure) are still reported by calendar year; other indicators have previously relied on program or facility reports to compensate for delayed NHIS reports from large facilities (e.g. PMGH) – resulting in a mix of data – where, for example, NCD may have calendar year data on supervised births, yet the remaining provinces use a different reporting year. The populations are projected upon calendar years.

Data was not available for several indicators:

Referral rates for hospital delivery (indicator 10b): due to lack of consistent approach to recording data in NHIS;
Disease outbreak responsiveness (indicator 23): reporting system is yet to be developed;
Health workers per population (indicator 29): data collection systems needs to be developed;

Further actions

Performance monitoring requires information of program inputs, implementation and results. The ongoing commitment of many in the health sector to provide timely and quality information is greatly valued. While there is minimal analysis provided in this report, it is most important that each manager and health worker consider what the data mean, and how performance can be improved to better meet community need.

Any questions on the report should be directed to Performance Monitoring and Research Branch of National Department of Health:

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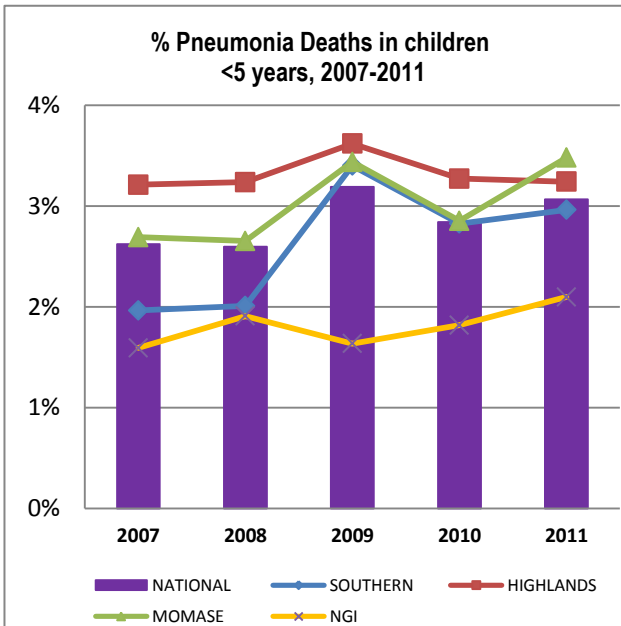
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Indicator 1: % Pneumonia Deaths in Children under 5yrs at Health Facilities

Definition: The percentage of children under five years of age that are admitted to the health centre with pneumonia and die during that admission

	2007	2008	2009	2010	2011
Enga	5.96%	6.46%	5.31%	5.33%	6.10%
Morobe	4.58%	4.04%	4.31%	5.66%	5.35%
Western	1.80%	3.79%	3.90%	2.58%	4.99%
Northern	3.40%	1.96%	4.58%	3.09%	4.32%
WHP	3.50%	3.30%	4.06%	3.27%	3.60%
East Sepik	2.28%	1.61%	2.56%	1.85%	3.45%
EHP	2.57%	2.40%	3.59%	6.07%	3.44%
Milne Bay	2.08%	1.15%	1.46%	2.17%	3.32%
Simbu	2.51%	1.74%	2.92%	2.55%	3.30%
Central	2.03%	2.98%	1.70%	2.89%	3.20%
NATIONAL	2.62%	2.60%	3.19%	2.84%	3.07%
ENB	1.61%	2.72%	0.99%	1.80%	2.79%
Madang	0.87%	1.25%	3.21%	1.38%	2.78%
ARB	1.83%	2.42%	0.78%	2.32%	2.71%
NCD	1.31%	1.49%	5.49%	4.04%	2.64%
Gulf	1.29%	3.10%	3.37%	2.61%	2.33%
Manus	4.44%	5.32%	8.24%	3.14%	2.17%
West Sepik	4.05%	5.95%	3.83%	3.55%	1.93%
WNB	1.49%	0.91%	2.25%	1.26%	1.67%
SHP	2.53%	2.90%	3.29%	2.19%	1.61%
New Ireland	1.15%	1.53%	1.23%	2.60%	0.55%
SOUTHERN	1.96%	2.01%	3.40%	2.83%	2.96%
HIGHLANDS	3.21%	3.24%	3.62%	3.27%	3.24%
MOMASE	2.69%	2.65%	3.44%	2.85%	3.48%
NGI	1.59%	1.91%	1.64%	1.82%	2.10%
NATIONAL	2.62%	2.60%	3.19%	2.84%	3.07%

Source: National Health Information System

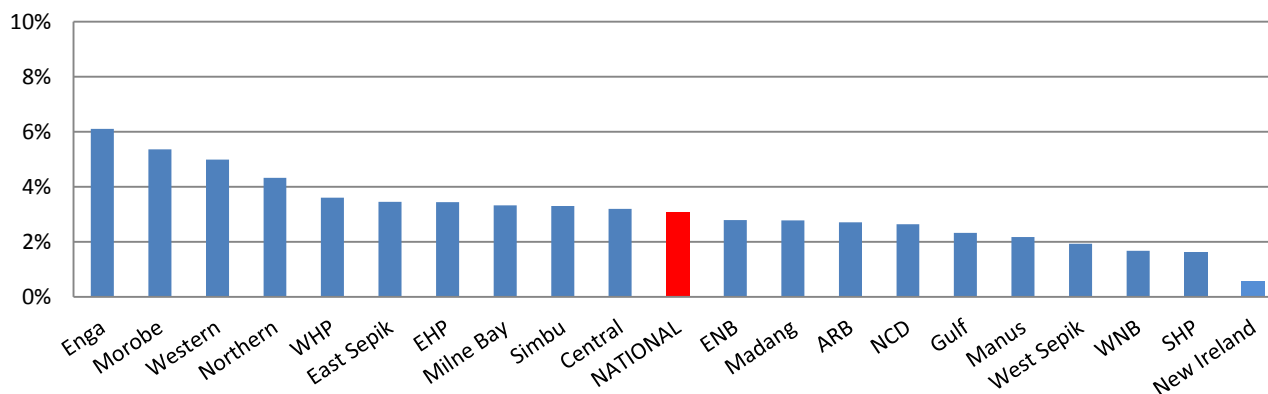


Indicator: Measures the number of children under 5 yrs who are admitted for treatment of pneumonia, yet die as a result of their condition. Good quality care (oxygen, early and effective use of antibiotics) would minimise these deaths.

Performance: Case fatality rate has increased since 2007. Rates in the Islands and Momase regions increased while those in the Highlands and Southern dropped over the 5 year period.

In 2011, more children under 5 years died from pneumonia at health facilities in Enga, Morobe, Western and Oro.

% Pneumonia deaths in children under 5 yrs in Hospitals/Health Centres - 2011



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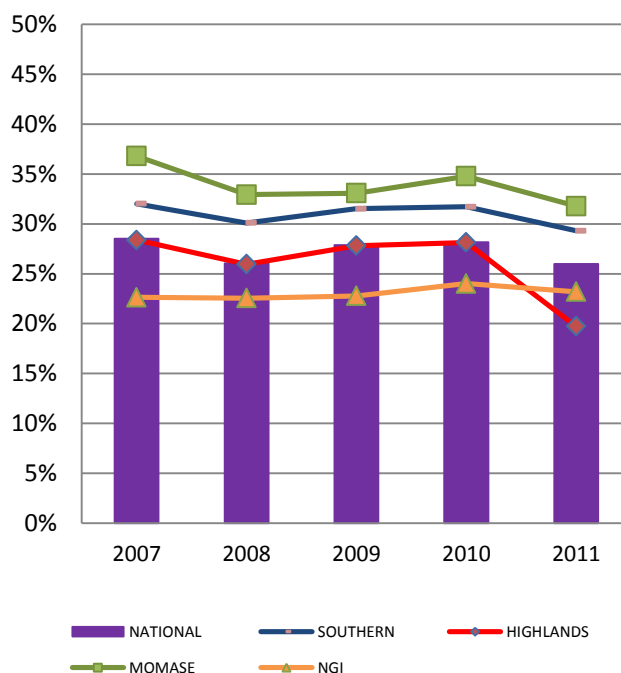
Indicator 2: % Children with moderate and severe weight for age malnutrition

Definition: Percentage of children under five years who attend Maternal and Child Health clinics that are moderately (60 – 80% Weight for Age) or severely (<60% weight for age).

Percentage of children weighed at clinics < 80% weight for age					
	2007	2008	2009	2010	2011
MILNE BAY	42%	41%	41%	42%	40.13%
WEST SEPIK	38%	38%	35%	43%	35.55%
MADANG	39%	34%	34%	34%	34.51%
MOROBE	34%	30%	31%	35%	32.23%
CENTRAL	30%	28%	30%	26%	30.00%
GULF	41%	36%	39%	37%	28.47%
NEW IRELANDS	24%	27%	26%	30%	27.00%
EAST SEPIK	37%	33%	33%	31%	26.79%
NATIONAL	29%	26%	28%	28%	25.99%
ORO	27%	23%	30%	33%	24.04%
WNB	23%	24%	21%	23%	23.93%
EHP	20%	21%	25%	27%	23.13%
WESTERN	25%	22%	25%	25%	22.56%
ENB	23%	22%	24%	23%	21.74%
SHP	29%	28%	30%	26%	21.23%
MANUS	24%	21%	20%	19%	21.15%
WHP	17%	15%	19%	22%	20.49%
ARB	20%	16%	20%	22%	20.16%
ENGA	19%	13%	14%	17%	15.61%
SIMBU	15%	15%	15%	14%	14.25%
NCD	12%	10%	11%	12%	9.06%
SOUTHERN	32%	30%	32%	32%	29.30%
HIGHLANDS	28%	26%	28%	28%	19.73%
MOMASE	37%	33%	33%	35%	31.78%
NGI	23%	23%	23%	24%	23.20%
NATIONAL	29%	26%	28%	28%	25.99%

Source: National Health Information System

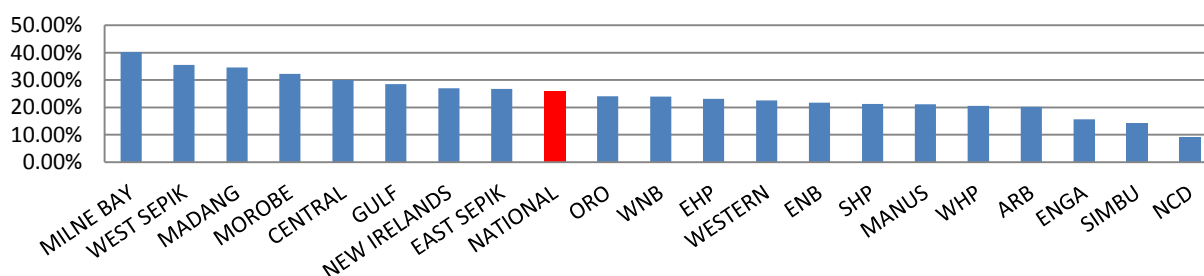
% Children under five yrs <80% expected weight for age, 2007-2011



Indicator: measures total number of children under 5 who have attended MCH clinic and weight less than 60% or 60% - 80% weight for age

Performance: Malnutrition rates have dropped since 2007. Momase and Southern regions' rates are higher than the other two regions'. However, large declines are seen in Highlands and Momase regions between 2007-2011..

% Children under 5yrs, <80% expected weight for age, 2011



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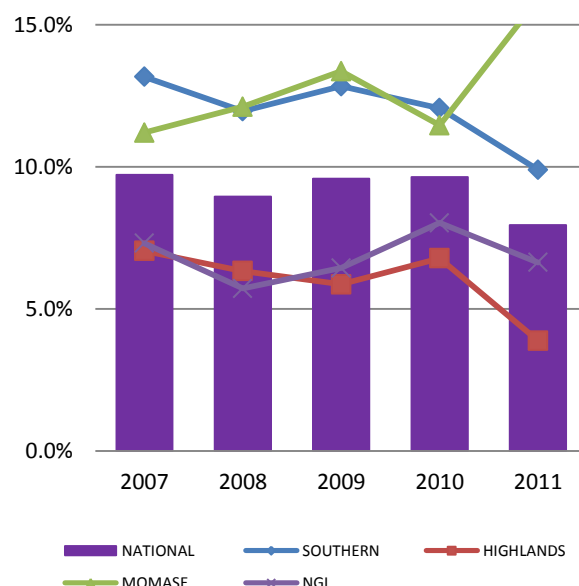
Indicator 3 - % Low Birth Weight

Definition: The percentage of live births in facilities that weigh less than 2,500 gm

Percentage of facility births less than 2500 gm, 2007-2011					
	2007	2008	2009	2010	2011
EAST SEPIK	16.9%	21.9%	12.1%	12.2%	20.71%
MADANG	12.9%	13.5%	18.3%	13.2%	15.94%
WEST SEPIK	18.5%	16.1%	15.0%	18.6%	15.94%
WESTERN	10.4%	13.7%	11.9%	10.6%	13.08%
MANUS	4.3%	4.6%	5.7%	12.7%	12.32%
NCD	12.0%	13.5%	12.9%	12.8%	11.28%
MILNE BAY	15.9%	13.7%	15.9%	14.0%	11.06%
GULF	11.5%	9.9%	7.7%	10.3%	10.37%
ORO	10.9%	13.9%	9.8%	10.6%	9.98%
WNB	5.6%	7.4%	11.7%	11.0%	9.71%
NATIONAL	9.0%	9.6%	9.6%	8.7%	7.95%
MOROBE	6.7%	7.0%	5.3%	4.7%	7.64%
NEW IRELAND	8.7%	8.3%	10.5%	6.7%	7.61%
SHP	6.5%	8.8%	9.9%	7.4%	5.96%
ARB	5.2%	5.7%	5.8%	6.9%	5.95%
SIMBU	5.3%	5.0%	10.0%	7.5%	4.73%
ENB	4.9%	5.6%	5.6%	4.5%	4.22%
CENTRAL	6.7%	5.6%	5.6%	5.3%	3.94%
EHP	6.3%	5.8%	5.7%	3.8%	3.72%
WHP	6.7%	4.7%	5.1%	3.9%	2.88%
ENGA	6.7%	4.7%	3.2%	3.6%	2.23%
SOUTHERN	13.2%	12.0%	12.8%	12.1%	9.90%
HIGHLANDS	7.0%	6.3%	5.9%	6.8%	3.88%
MOMASE	11.2%	12.1%	13.4%	11.5%	15.90%
NGI	7.3%	5.7%	6.4%	8.0%	6.64%
NATIONAL	9.7%	9.0%	9.6%	9.6%	7.95%

Source: National Health Information System

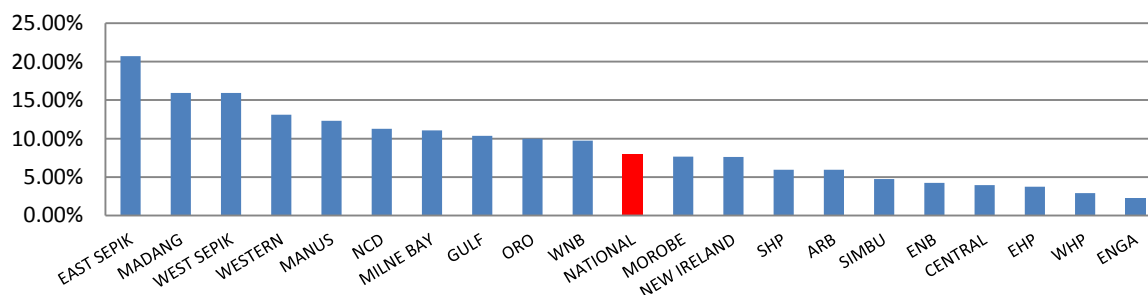
% Babies born at health facilities weighing less than 2500g, 2007-2011



Indicator: measures the proportion of those children that are born in health centres and hospitals and weigh less than 2500 gm

Performance: Generally, the proportion of low birth weight babies has declined in the last five years, except in Momase region. In 2011, 3 out of 4 Momase provinces (ESP, WSP and Madang) and Manus reported the highest rates. All three Momase provinces consistently had higher rates of LBW babies in the last 5 years.

% children born weighing <2,500 g, 2011



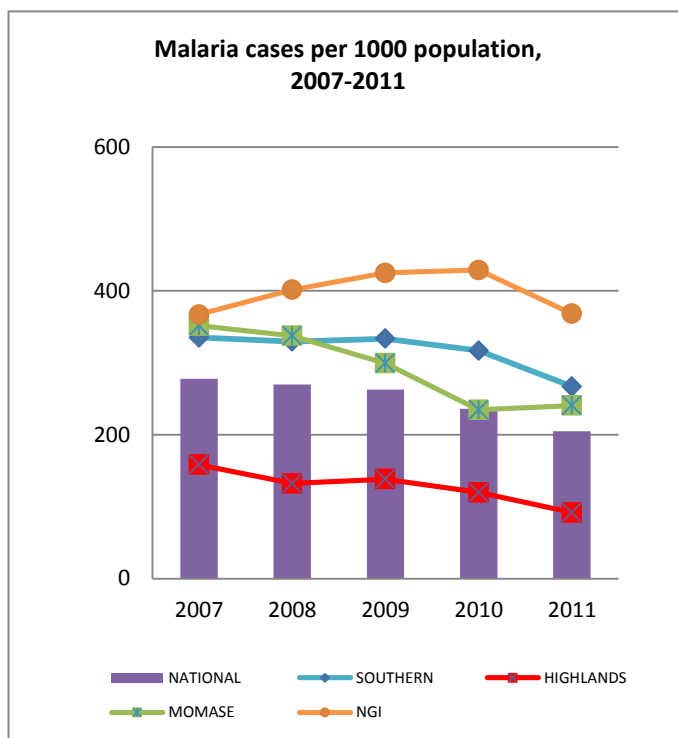
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Indicator 4: Malaria Incidence per 1000 population

Definition: The rate of confirmed cases of malaria (confirmed by slide or RDT) and probable (Unconfirmed) cases of malaria (cases that were not tested, but treated as malaria) per 1000 head of population

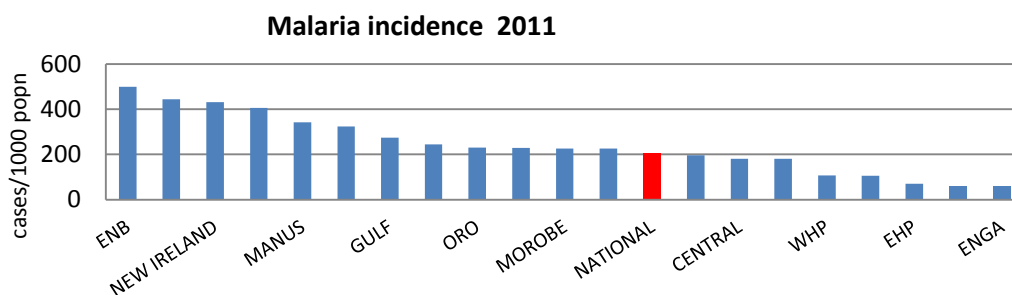
Malaria cases per 1000 population, 2007-2011					
	2007	2008	2009	2010	2011
ENB	439	485	494	495	500
WEST SEPIK	462	440	384	407	444
NEW IRELAND	470	599	639	569	432
MILNE BAY	342	364	441	470	405
MANUS	311	317	250	265	343
WNB	304	380	466	488	324
GULF	471	537	462	423	274
WESTERN	364	330	293	284	245
ORO	346	355	329	297	231
MADANG	356	332	308	217	229
MOROBE	323	294	307	228	226
NCD	260	239	271	237	226
NATIONAL	278	270	263	236	205
ARB	278	215	179	201	197
CENTRAL	341	307	264	221	181
EAST SEPIK	338	352	257	195	180
WHP	226	205	145	133	108
SIMBU	125	123	115	102	106
EHP	163	101	102	75	70
SHP	167	141	188	165	61
ENGA	69	67	75	82	59
SOUTHERN	335	330	333	317	267
HIGHLANDS	158	132	138	120	92
MOMASE	352	338	299	235	241
NGI	367	402	425	429	368
NATIONAL	278	270	263	236	205

Source: National Health Information System



Indicator: The indicator measures the total number of presentations to health centre/hospitals in the districts during the year, expressed as a ratio for every 1000 people in that district. The number is based upon clinical diagnosis, not RDT or microscopy.

Performance: Overall, the incidence of malaria has declined in the last 5 years. However, rates continue to increase in WSP, Manus and East New Britain provinces. In a number of districts where bed nets have been distributed - in ENB and Manus, there shows a rise in malaria incidence, against expectation and the national experience with bed net program. These trends must be further investigated within the malaria programme.



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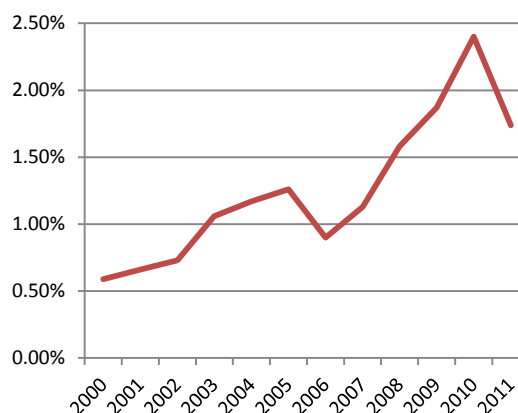
Indicator 5: HIV confirmed prevalence in pregnancy

Surveillance antenatal clinic PMGH 2000 - 2011

year	Total tests	confirm positive HIV		HIV conf +ve
2000				0.59%
2001				0.66%
2002				0.73%
2003	4579	46	1.00%	1.06%
2004	4142	54	1.30%	1.17%
2005	4048	54	1.33%	1.26%
2006	3439	35	1.02%	0.90%
2007	3907	44	1.13%	1.13%
2008	3960	62	1.57%	1.58%
2009	3930	62	1.58%	1.87%
2010	3664	88	2.40%	2.40%
2011	3511	61		1.74%

Data source: PMGH Division of O&G Annual Report, 2010

HIV confirmed positive PMGH antenatal clinic



Performance: Prevalence of HIV at PMGH increased between 2007 and 2010. In 2011, the rate dropped. Is this a sign of the epidemic levelling off? It is also interesting to note that prevalence among antenatal mothers at the labour ward is higher than those attending ANC clinic. Are those mothers accessing the labour ward more at risk than those at ANC clinics?

Sentinel Surveillance

Antenatal surveillance among 15-24 year olds provides an indication of the proportion of the sexually active population that are infected with HIV. The HIV prevalence amongst this group appears to have declined since 2009 and has been stable in the last 2 years..

PMGH 2011	Antenatal Clinic	PMGH labour ward
total tested	3511	2342
total conf. Positive	61 1.7%	51 2.18%

(b) HIV serosurveillance Antenatal clinics (nation-wide) 15 - 24 year olds

	15- 19 yr old			20 - 24 yr old			Total 15 - 24	
	screened	conf. Pos	% Pos	screened	conf. Pos	% pos	screened	% pos
2008	442	3	0.68%	1047	8	0.76%	1489	0.74%
2009	1004	8	0.80%	2533	20	0.79%	3537	0.79%
2010	1026	10	0.97%	2549	15	0.59%	3575	0.70%
2011	935	9	0.96%	2429	15	0.62%	3364	0.71%

Data source: NDoH HIV Surveillance reports

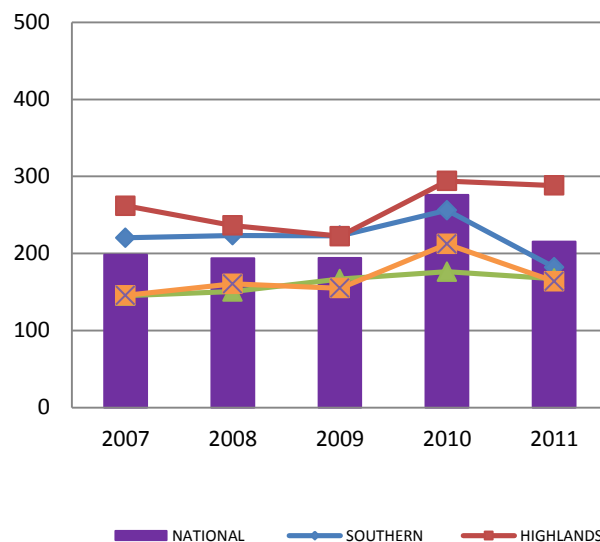
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Indicator 6 - Incidence of Diarrhoeal Diseases in children <5 years

Definition: The incidence of diarrhoeal disease in children under 5 years per 1000 children under 5 years

Diarrhoeal Diseases in < 5 years (cases/1000 children)					
	2007	2008	2009	2010	2011
ENGA	254	226	234	339	391
WHP	294	295	210	340	333
SHP	272	214	243	328	278
WESTERN	322	322	290	395	273
GULF	257	345	235	321	248
EHP	255	221	221	221	232
WEST SEPIK	173	168	235	288	227
SIMBU	192	186	169	225	225
WNB	155	222	241	282	216
NATIONAL	199	194	194	276	215
ORO	168	199	121	149	188
MOROBE	139	137	157	171	185
CENTRAL	170	160	188	213	184
NEW IRELAND	169	171	132	252	176
ENB	148	155	141	168	156
MADANG	114	122	143	155	149
EAST SEPIK	170	186	176	160	141
ARB	120	98	77	166	110
MILNE BAY	69	64	72	94	87
MANUS	99	99	153	136	76
SOUTHERN	220	223	223	256	182
HIGHLANDS	262	236	222	294	288
MOMASE	145	150	167	176	167
NGI	145	161	155	212	164
NATIONAL	199	194	194	276	215

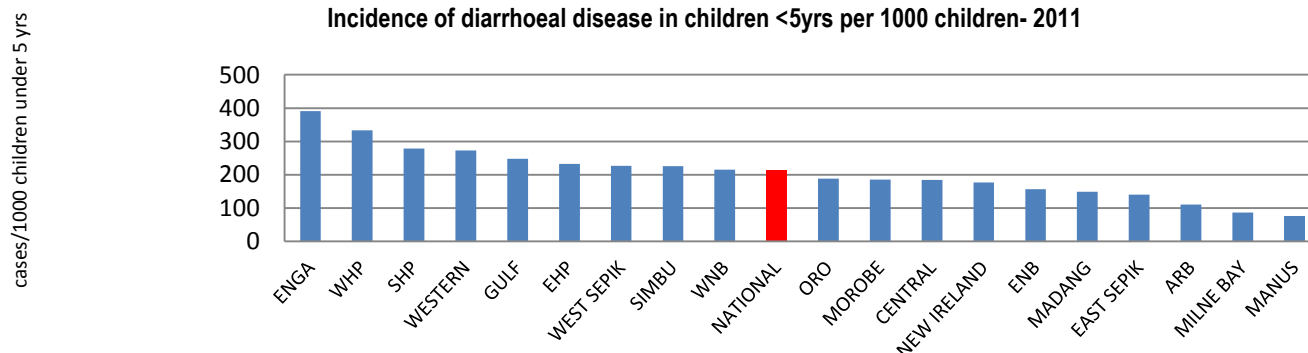
Incidence of diarrhoeal disease in children <5 years, 2007-2011



Indicator: This indicator measures the number of children under 5 yrs who seek care for diarrhoeal illness as a proportion of all children under five years. Diarrhoeal illness serves as an indicator of water quality, food hygiene and personal hygiene.

Performance: Diarrhoeal diseases in children under 5 years is on the rise. The Highlands provinces of WHP, SHP and Enga were the worst affected provinces in 2011, followed by Western and Gulf provinces.

Incidence of diarrhoeal disease in children <5yrs per 1000 children- 2011



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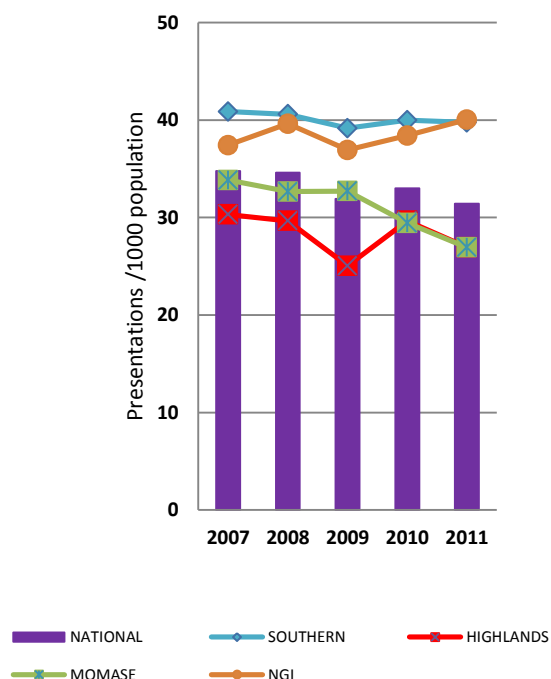
Indicator 7: Injury presentations

Definition: Total injury health centre and hospital outpatient presentations for every 1000 population

Injuries reported at outpatients/1000 person, 2007-2011					
	2007	2008	2009	2010	2011
NEW IRELAND	52	44	54	57	57
MILNE BAY	42	40	41	41	47
WESTERN	56	52	44	51	47
MANUS	65	57	43	33	45
NCD	47	47	55	51	44
ENB	46	51	49	41	44
WNB	27	39	31	44	39
ORO	30	34	24	29	36
WHP	41	42	27	43	36
GULF	43	50	34	38	33
WEST SEPIK	30	28	50	39	33
NATIONAL	35	35	32	33	31
ENGA	36	33	31	32	31
MOROBE	31	27	30	28	29
SIMBU	29	32	28	27	28
EAST SEPIK	46	44	36	29	25
MADANG	28	30	26	28	25
CENTRAL	27	28	24	23	24
SHP	25	25	21	24	22
EHP	26	25	27	25	22
ARB	19	19	15	14	21
SOUTHERN	41	41	39	40	40
HIGHLANDS	30	30	25	30	27
MOMASE	34	33	33	29	27
NGI	37	40	37	38	40
NATIONAL	35	35	32	33	31

Source: National Health Information System

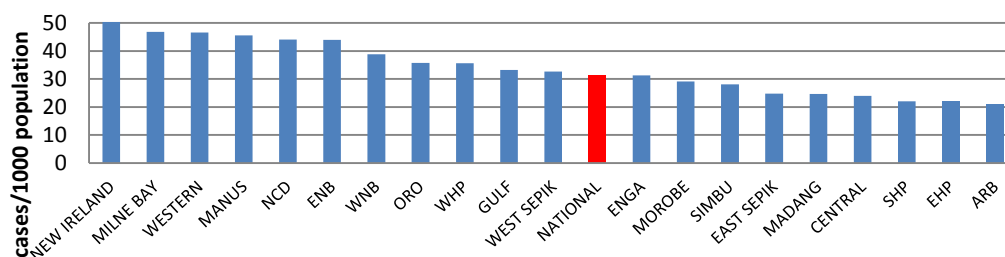
Outpatient injury presentations per 1000 population, 2007-2011



Performance: Injuries reported at outpatients has slightly declined across the country. New Ireland, Milne Bay, Western, Manus and NCD reported the highest number of injuries per 1000 population in 2011. What is contributing to the high rates in these non-violent coastal provinces?

All injury is consolidated into one category although particular aspects of injury may be of interest to analyze program intervention (e.g. transport related injury, domestic violence etc).

Outpatient presentation for injury 2011



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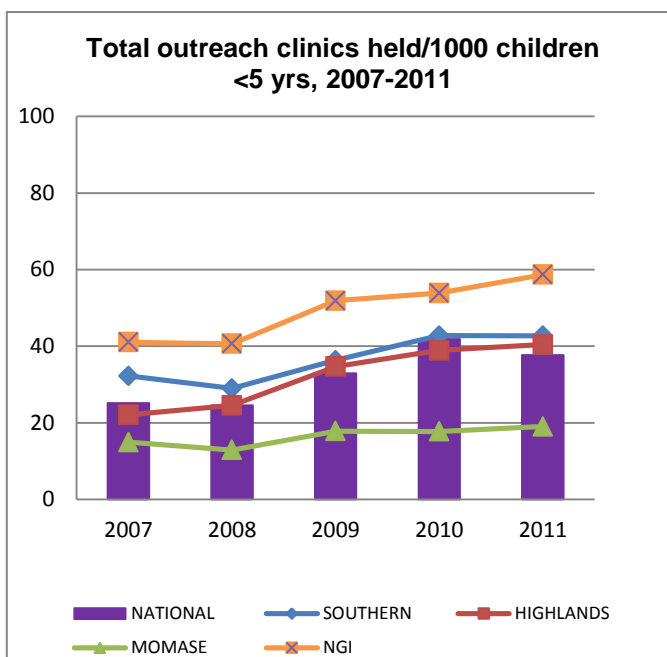
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Indicator 8 - Outreach Clinics per 1000 children <5 years

Definition: Ratio of rural outreach clinics to population under 5 years

Outreach clinics held for every 1,000 children < 5 yrs					
	2007	2008	2009	2010	2011
SIMBU	37	27	44	80	122
MILNE BAY	119	110	112	114	115
MANUS	100	108	131	94	108
NEW IRELAND	53	44	58	88	82
ARB	27	20	36	45	55
WNB	34	47	46	45	51
CENTRAL	9	8	30	38	46
ENB	40	35	52	42	46
ENGA	19	23	22	32	38
NATIONAL	25	25	33	42	38
ORO	15	13	21	30	33
EHP	13	19	32	38	30
WHP	22	31	33	25	29
SHP	24	23	37	34	26
WEST SEPIK	10	8	14	25	24
WESTERN	13	8	14	29	23
MADANG	15	14	22	20	21
EAST SEPIK	18	18	21	16	20
MOROBE	14	9	11	15	16
GULF	7	4	11	20	11
NCD	0	1	3	2	2
SOUTHERN	32	29	36	43	43
HIGHLANDS	22	25	35	39	40
MOMASE	15	13	18	18	19
NGI	41	41	52	54	59
NATIONAL	25	25	33	42	38

Source: National Health Information System

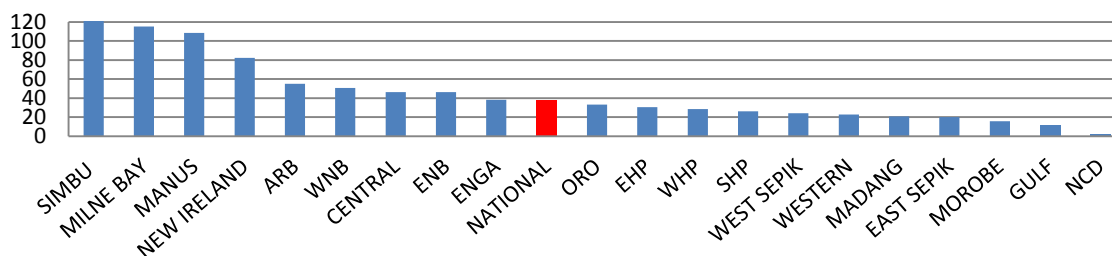


Indicator: Rural outreach provides the key platform for preventive child health programs, and an opportunity for individual community health education; previous assessments have demonstrated the correlation between rural outreach and immunisation coverage;

Rural outreach also provides an indication of the capacity of the health system to reach service provision obligations to the rural and remote populations – identifying planning, finance, supplies, and human resources

Performance: Generally, there has been an increase in rural outreach programmes since 2007. The rate increased between 2007-2010 and then dropped in 2011. Rates in Momase are the lowest in the country while Simbu, Milne Bay and Manus were the best performing provinces in 2011.

Outreach clinics held 2011



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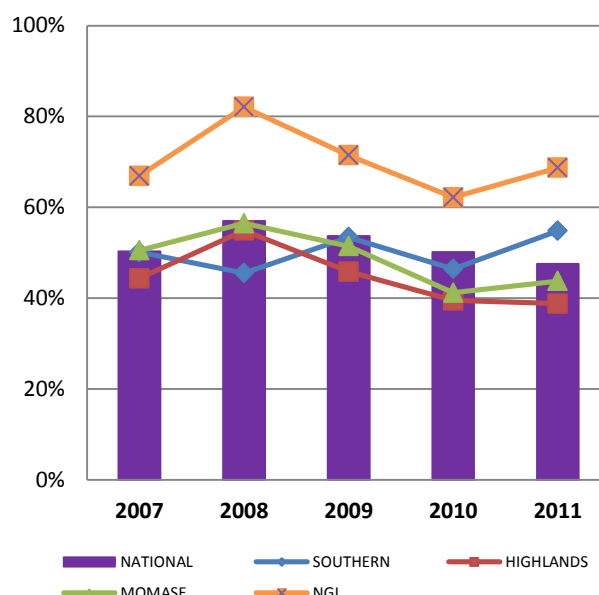
Indicator 9a - % Measles Vaccine Coverage for children under 1yr

Definition: Percentage of children under one year who have received the 9 – 11 month dose of measles vaccine.

% Measles vaccine coverage for children < 1 yr, 2007-2011					
	2007	2008	2009	2010	2011
WNB	69%	103%	92%	70%	81.89%
NEW IRELAND	79%	78%	57%	78%	68.30%
NCD	58%	63%	53%	67%	68.16%
MILNE BAY	83%	79%	78%	65%	67.88%
ARB	61%	58%	60%	63%	63.78%
MANUS	74%	82%	80%	62%	61.60%
ENB	61%	83%	66%	54%	60.21%
CENTRAL	46%	40%	61%	43%	53.44%
WEST SEPIK	40%	122%	46%	72%	50.91%
SIMBU	54%	42%	40%	44%	50.89%
EHP	46%	90%	45%	60%	48.74%
NATIONAL	50%	57%	54%	50%	47.57%
MADANG	52%	56%	50%	36%	44.46%
MOROBE	50%	42%	58%	41%	43.20%
ORO	47%	40%	56%	59%	42.91%
EAST SEPIK	56%	49%	49%	35%	42.15%
WESTERN	48%	47%	37%	42%	39.03%
WHP	50%	56%	63%	27%	37.81%
ENGA	36%	37%	39%	31%	33.76%
SHP	37%	35%	39%	34%	29.91%
GULF	53%	37%	55%	28%	20.78%
SOUTHERN	50%	46%	53%	46%	54.80%
HIGHLANDS	44%	55%	46%	39%	38.77%
MOMASE	51%	56%	51%	41%	43.74%
NGI	67%	82%	71%	62%	68.68%
NATIONAL	50%	57%	54%	50%	47.57%

Source: National Health Information System

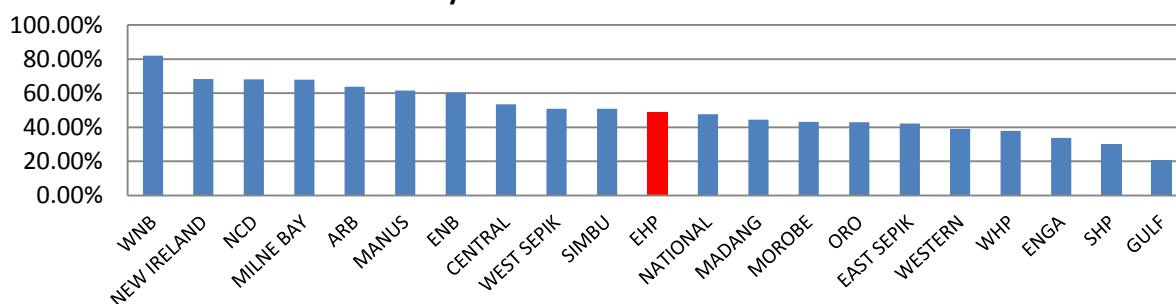
% Measles vaccine coverage, <1 year , 2007-2011



Indicator: Immunisation is an essential component for reducing under five mortality. Immunisation coverage estimates are used to monitor coverage and quality of child care services throughout the country. Measles is the leading cause of childhood mortality from vaccine preventable diseases. The indicator provides a good measure of health system performance. Note - NCD data has been sourced from specific district reports; Reporting rates are not factored.

Performance: Generally, immunization coverage has only slightly improved. Highlands and Momase regions rates are lower than the other two regions.

% Children under 1yr receive 9-11mth Measles vaccine - 2011



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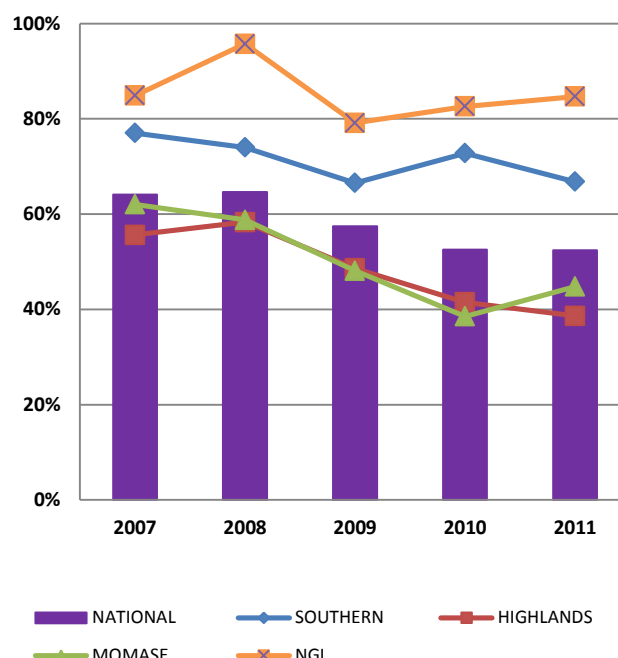
Indicator 9b - % 3rd Dose Pentavalent Coverage in Children under 1yr.

Definition: Percentage of children under one year who have received three doses of the DTP-HepB-Hib pentavalent vaccine

% 3rd dose Pentavalent coverage, < 1 yr, 2007-2011					
	2007	2008	2009	2010	2011
NCD	87%	75%	78%	89%	97%
NEW IRELAND	95%	99%	81%	82%	95%
WNB	82%	118%	94%	84%	88%
ARB	90%	74%	64%	63%	83%
ENB	80%	90%	74%	80%	79%
MILNE BAY	96%	89%	93%	73%	76%
MANUS	87%	97%	87%	71%	73%
ORO	74%	63%	56%	58%	55%
NATIONAL	64%	65%	57%	53%	52%
CENTRAL	59%	54%	47%	53%	52%
SIMBU	65%	54%	47%	55%	52%
MADANG	65%	66%	54%	41%	52%
WHP	64%	75%	53%	34%	49%
ENGA	45%	50%	45%	37%	48%
WESTERN	55%	58%	47%	57%	45%
WEST SEPIK	41%	55%	48%	51%	43%
EAST SEPIK	74%	65%	46%	45%	43%
MOROB	67%	55%	50%	31%	43%
EHP	60%	77%	55%	60%	34%
GULF	57%	42%	32%	37%	26%
SHP	49%	38%	45%	31%	25%
SOUTHERN	77%	74%	67%	73%	66.80%
HIGHLANDS	56%	58%	49%	41%	38.62%
MOMASE	62%	59%	48%	39%	44.79%
NGI	85%	96%	79%	83%	84.68%
NATIONAL	64%	65%	57%	53%	52.41%

Source: National Health Information System

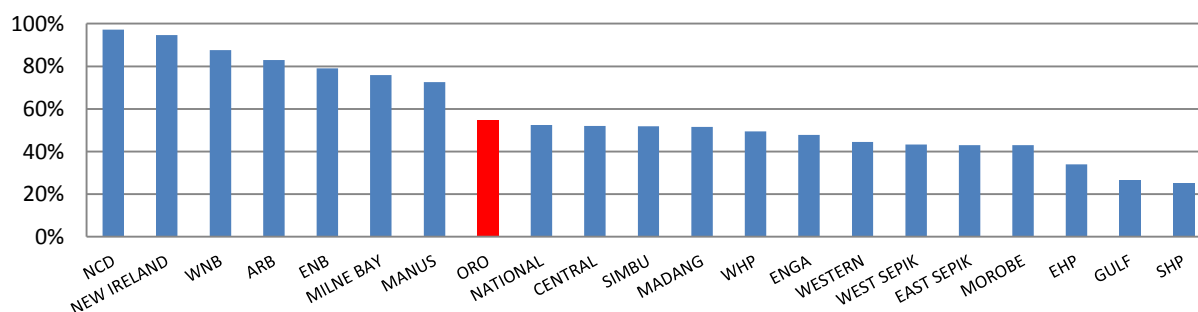
% Pentavalent vaccine 3rd dose coverage, <1 yr, 2007-2011



Indicator: measures the proportion of children under 1 year who have received three doses of DTP-Hib - HepB (Pentavalent) vaccine. Prior to 2009, TA (DTP) was provided rather than the pentavalent vaccine.

Performance: Overall, the national rate has increased in the last 3 years. However, the rate continues to decline in the Highlands and Southern regions. These rates have declined, in spite of increasing outreach which may suggest problems with supply of vaccine.

% Children < 1yr receiving 3rd dose pentavalent vaccine - 2011



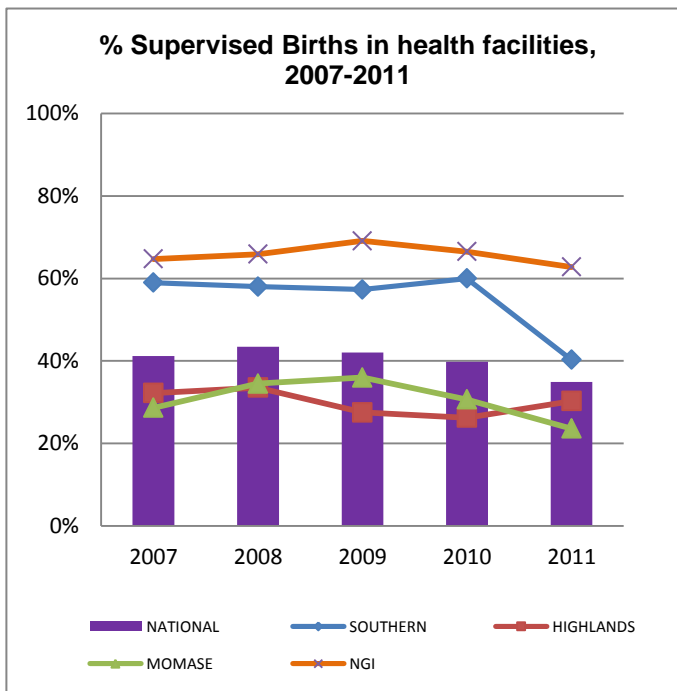
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Indicator 10a - % Supervised Births at Health Facilities

Definition: The percentage of births that occur in a hospital and health centres

% of Births in Health Facilities, 2007-2011					
	2007	2008	2009	2010	2011
NCD	104%	96%	94%	99%	95.76%
ENB	85%	85%	83%	85%	83.44%
ARB	63%	65%	61%	56%	61.85%
NEW IRELAND	71%	71%	57%	56%	55.26%
WESTERN	51%	53%	55%	58%	51.19%
MANUS	61%	52%	58%	46%	50.02%
WNB	41%	49%	71%	66%	48.83%
MILNE BAY	45%	45%	45%	42%	45.67%
SIMBU	38%	40%	34%	40%	39.99%
EHP	36%	38%	38%	26%	38.13%
WHP	43%	41%	32%	30%	37.73%
ORO	36%	38%	35%	34%	37.69%
NATIONAL	41%	43%	42%	40%	34.87%
MADANG	28%	40%	38%	31%	33.11%
CENTRAL	25%	25%	31%	25%	31.88%
GULF	36%	35%	33%	36%	29.94%
WEST SEPIK	27%	27%	32%	32%	29.91%
EAST SEPIK	27%	33%	25%	22%	27.56%
ENGA	27%	30%	25%	28%	26.60%
SHP	20%	22%	15%	17%	17.31%
MOROBE	30%	33%	46%	38%	11.84%
SOUTHERN	59%	58%	57%	60%	40.29%
HIGHLANDS	32%	34%	28%	26%	30.26%
MOMASE	29%	34%	36%	31%	23.58%
NGI	65%	66%	69%	67%	62.77%
NATIONAL	41%	43%	42%	40%	34.87%

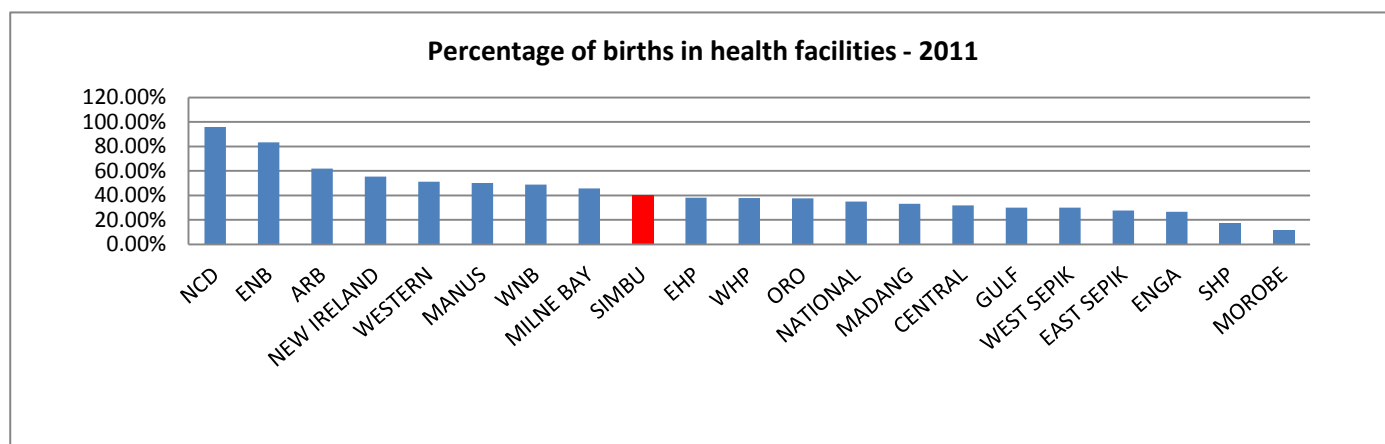


Indicator: This indicator looks at the Proportion of births at health facility attended by skilled health personnel [Supervised delivery].

Measuring maternal mortality is unusually difficult, and the current method (sisterhood method) cannot be used to provide short term trends. The supervision of delivery is hence used as a proxy for this purpose.

Performance: The rate of supervised deliveries at health facilities has not changed much in the last 5 years. There has been a decline in all regions, most notably in the Southern region. While rates are high in NCD and ENBP, less than 1 out of every 5 pregnant women delivered in a health facility between 2007-2011 in the Southern Highlands province.

Source: National Health Information System (NCD - from PMGH obstetric report)



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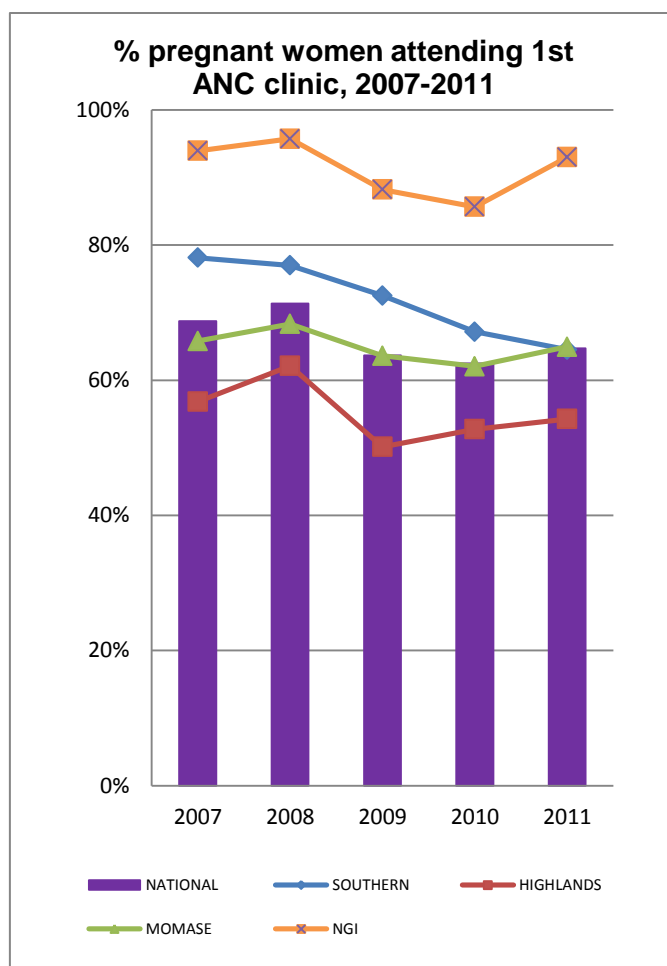
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Indicator 11 - Antenatal Coverage

Definition: The percentage of pregnant women that attended at least one antenatal visit at hospital, health centre or outreach clinic during the pregnancy.

Antenatal coverage (at least 1 visit during pregnancy), 2007-2011					
	2007	2008	2009	2010	2011
WNB	96%	97%	99%	96%	100.06%
ARB	95%	96%	80%	76%	99.08%
ENB	90%	100%	90%	85%	91.63%
NEW IRELAND	94%	90%	77%	83%	86.06%
NCD	94%	93%	89%	74%	77.11%
MADANG	67%	72%	68%	64%	70.54%
MILNE BAY	77%	76%	71%	68%	65.78%
MOROBE	67%	65%	67%	70%	65.69%
NATIONAL	69%	71%	64%	62%	64.70%
CHIMBU	65%	65%	55%	63%	64.55%
EAST SEPIK	71%	70%	59%	54%	64.55%
EHP	57%	63%	59%	61%	64.38%
WHP	74%	80%	59%	55%	63.62%
WESTERN	71%	74%	64%	62%	60.22%
NORTHERN	67%	62%	56%	57%	58.85%
WEST SEPIK	53%	63%	56%	55%	57.99%
MANUS	81%	73%	84%	62%	57.45%
GULF	64%	61%	79%	62%	56.87%
CENTRAL	58%	56%	53%	52%	51.39%
ENGA	47%	58%	45%	46%	47.24%
SHP	44%	46%	37%	42%	39.67%
SOUTHERN	78%	77%	73%	67%	64.50%
HIGHLANDS	57%	62%	50%	53%	54.27%
MOMASE	66%	68%	64%	62%	64.95%
NGI	94%	96%	88%	86%	92.98%
NATIONAL	69%	71%	64%	62%	64.70%

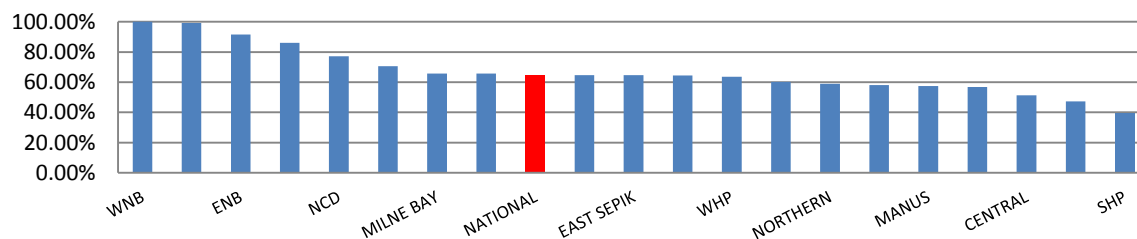
Source: National Health Information System



Indicator: Antenatal care is an indicator of access to and use of health care during pregnancy. The antenatal period presents opportunities for reaching pregnant women with interventions that may be vital to their health and well-being and that of their infants.

Performance: ANC coverage increased between 2007-2008 then declined over the next three years before rising in 2011. Rates are still low in the Highlands (particularly in SHP and Enga), while the Southern region has seen a consistently dropped since 2007.

% Antenatal Coverage - 2011



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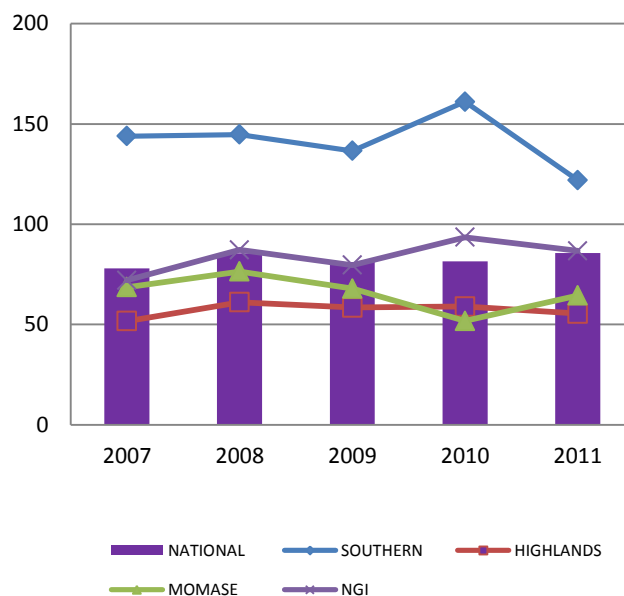
Indicator 12 - Family Planning Use

Definition: The amount of contraception necessary to protect one couple per year.

Couple years of protection (CYP) /1000 women 15-44					
	2007	2008	2009	2010	2011
NCD	253	281	242	232	280
WESTERN	167	126	115	328	126
MILNE BAY	148	141	137	128	111
ARB	20	21	85	107	107
MANUS	114	121	120	113	103
ENB	93	100	67	79	100
EHP	83	127	127	102	99
WEST SEPIK	1	71	60	70	90
SIMBU	59	41	53	64	87
MADANG	66	75	74	51	81
NATIONAL	78	86	81	81	86
WNB	53	129	122	121	70
ORO	54	61	58	86	66
WHP	67	70	57	58	64
GULF	69	72	67	71	58
CENTRAL	37	48	38	36	58
NEW IRELAND	102	58	33	60	56
MOROBE	63	1,798	59	43	55
E SEPIK	88	107	79	58	52
ENGA	29	28	27	24	27
SHP	27	26	26	41	21
SOUTHERN	144	145	137	161	122
HIGHLANDS	52	61	58	59	55
MOMASE	69	76	68	52	64
NGI	72	87	80	93	87
NATIONAL	78	86	81	81	86

Source: National Health Information System

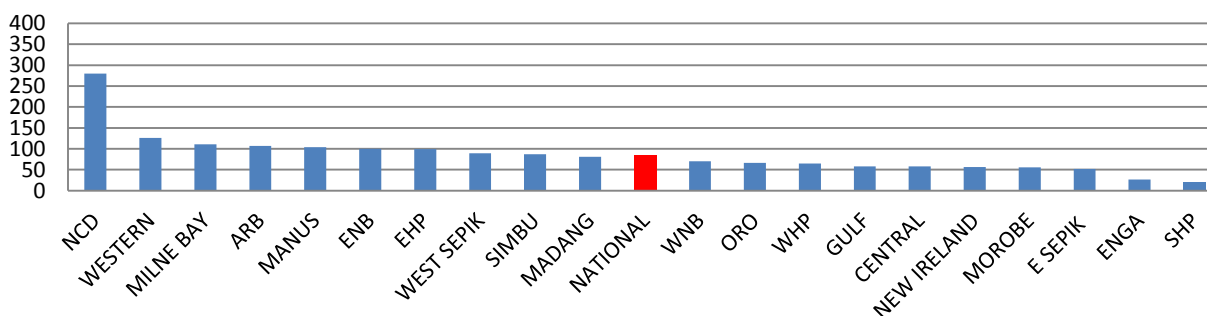
CYP per 1000 Women of Reproductive Age, 2007-2011



Indicator: The indicator identifies modern methods (female and male sterilisation, injectable Depo-Provera, Oral contraceptive Pill, and Intra-uterine devices); Traditional methods (most frequently ovulation method) are reported separately. Condom use, while a relatively common form of contraception, is not included, as availability is wide, and not fully measurable through the health sector data

Performance: Generally, family planning use in PNG decreased between 2007-2011. Rates are very low in SHP and Enga provinces. Regionally, there is very low family planning use in the most populous region (Highlands) of the country.

Family Planning CYP (per 1000 women of reproductive age) - 2011



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Indicator 15: HIV positive mothers who receive ART

Defintion:

Proportion of HIV Positive mothers who receive ART to reduce the risk of Maternal to Child Transmission

Numerator	2010	2011
Antiretroviral therapy for HIV-infected women eligible for treatment	225	
Maternal triple ARV prophylaxis	225	
<i>Number of HIV-infected pregnant women who received antiretroviral drugs during the past 12 months to reduce the risk of mother-to-child transmission</i>	450	222
Denominator		
<i>Estimated number of HIV-infected pregnant women</i>	1,970	1809
Percentage	23%	12%

Source: PNG Country Universal Access Report

Performance:

The proportion of mothers receiving ART dropped by 11% between 2010 and 2011. This raises concern for the HIV and PPTCT programmes to ensure as many eligible HIV positive mothers are put on ART.

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Indicator 16: Case Detection Rate for tuberculosis

Definition: Case detection rate of all TB cases: The percentage of new case notifications in a given year of the estimated number of new cases arising in that year.

Notifications of TB

Qtr	New SS+	Relapses	Failure	Defaulted	SN	NDNA	EP	Others	All Cases
2009Q1	642	49	14	40	381	430	1,057	184	2,797
2009Q2	581	58	25	66	402	459	1,068	271	2,930
2009Q3	485	57	15	31	480	617	1,099	242	3,026
2009Q4	568	59	9	37	441	636	1,342	272	3,364
2009 Total	2,276	223	63	174	1,704	2,142	4,566	969	12,117
2010Q1	609	67	21	42	525	886	1,278	405	3,833
2010Q2	574	64	9	50	461	948	1,403	323	3,832
2010Q3	499	31	15	24	340	825	1,223	259	3,216
2010Q4	434	45	7	21	406	856	1,370	267	3,406
2010 Total	2,116	207	52	137	1,732	3,515	5,274	1,254	14,287
2011 Total	2,530		43	348					

Source: NTB program reports

Annual incidence of all forms TB (/100,000 population)

Year	Ann Incidence	Est. Incidence	CDR All Forms
2009	182	250	73%
2010	209	250	84%
2011	219	250	88%

Indicator:

The Indicator looks at all forms of TB that are identified (this has previously been reported as sputum positive TB only). The capacity of the NTB program to support health services in diagnosis of TB has expanded in recent years. These data include all provinces/districts, although it is acknowledged that some districts have yet to be mobilised in the program.

Performance:

The estimated incidence is based upon WHO modelling. It is an estimate, and may not fully represent the extent of TB in the nation. However, it is observed that from 2009 to 2010, there was an improvement of 11% in case detection. Sputum positive cases have decreased during this time.

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Indicator 17: Treatment success rate for tuberculosis

Definition: The percentage of all new sputum smear TB cases in a given year who complete 6 months of short course anti-tuberculosis treatment (with or without bacteriological evidence of success).

Province	2009		2010		2011	
	NS+ Cure Rate	NS+ Success Rate	NS+ Cure Rate	NS+ Success Rate	NS+ Cure Rate	NS+ Success Rate
WESTERN	62%	70%	66%	75%	54%	63%
GULF	NA	NA	NA	NA	29%	71%
CENTRAL	89%	91%	73%	73%	28%	57%
NCD	69%	76%	74%	80%	62%	69%
MILNE BAY	77%	81%	68%	73%	60%	79%
ORO	NA	NA	NA	NA	58%	58%
SHP	NA	NA	45%	60%	25%	66%
ENGA	25%	50%	NA	NA	NA	NA
WHP	NA	NA	60%	86%	60%	87%
CHIMBU	0%	100%	40%	100%	69%	81%
EHP	74%	80%	80%	80%	64%	73%
MOROBE	70%	78%	76%	84%	75%	83%
MADANG	48%	63%	69%	80%	67%	75%
E_SEPIK	38%	85%	37%	62%	7%	51%
SANDAUN	NA	NA	NA	NA	50%	100%
MANUS	NA	NA	100%	100%	NA	NA
N_IRELAND	NA	NA	NA	NA	NA	NA
ENB	NA	NA	7%	36%	NA	NA
WNB	NA	NA	72%	72%	31%	34%
ARB	45%	62%	74%	89%	29%	71%
National	66%	75%	61%	73%	60%	73%

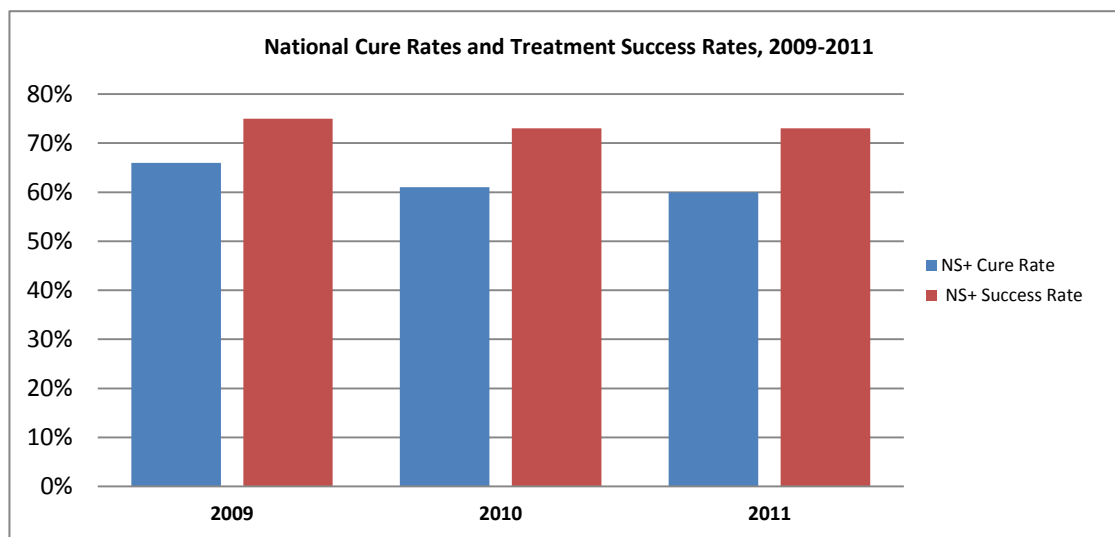
Indicator:

Treatment success is a measure of the performance of the national TB treatment programmes. The indicator assesses only those who are sputum positive at diagnosis. "Cure" refers to those who have converted to sputum negative status at the completion of treatment (for at least 2 sputum smears) and "success" includes those who are cured as well as those who have completed six months of anti-tuberculosis chemotherapy.

The program is still evolving to reach all provinces/districts - hence success rates for all provinces cannot yet be reported.

Performance:

There has been a decline in treatment success rates for East Sepik, NCD, Western and Central Ppovinces for the year - contributing to an overall decrease in cure and success rates between 2009-2011. Enga, Manus, and ENBP did not report in 2011, while there has been no reports from NIP in the last three years.



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Indicator 18: Proportion of allocated provincial-level health funds that are spent

Definition:

Proportion (%) of Provincial level funding - GoPNG (that is, Health Function Grant (HFG)) and Development Partners (DP) funds - that are expended.

Year	2006	2007	2008	2009	2010
Proportion of funds expended	71.3%	82.1%	83.7%	104.8%	121%

Source:

1. NDoH HSIP Secretariat annual expenditure report 2005-2009
2. NEFC Provincial Expenditure Review Report 2005-2009

Notes:

This does not include internal revenue spending on health. It only includes Health Function Grant (HFG) and DP funds or HSIP funds.

Analysis:

As can be seen in the table the proportion increased between 2006 and 2010. In 2009 and 2010 the increase went up to 104.8% and 121% respectively. This is because DP funds in 2009 and 2010 also included those funds that were channelled outside of the NDoH HSIP Trust Account. That is, DPs transacted their funds direct to the provinces.

From 2006-2008 as can be seen in the above table the DP funds here reflect only the HSIP funds that are transferred from the HSIP parent account to the provincial subsidiary HSIP accounts.

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Indicator 19: provincial health expenditure as a proportion of estimated need

Definition:

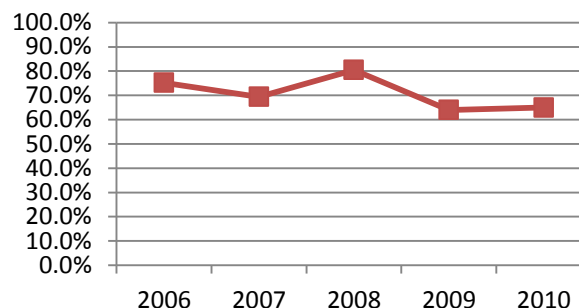
Provincial health expenditure (GoPNG/DPs) as a proportion (%) of estimated minimum health expenditure required.

Year	2006	2007	2008	2009	2010
expenditure as	75.2%	69.4%	80.5%	64.0%	65%

Source:

1. Volume 1 of the GoPNG annual Budget Estimates 2006-2010. Often known as the Economic & Development Policies
2. NDoH HSIP Secretariat Expenditure Report 2006-2010
3. NDoH annual public sector health expenditure report 2006-2010

Provincial Health Expenditure as a % of minimum requirement, 2006-2010



Analysis:

The estimated minimum health expenditure equates to the minimum cost of services for health in each province that was estimated by NEFC in its 2005 cost of services study. In the above table the provincial health expenditure from both the GoPNG and DPs is measured against the sum of estimated minimum health expenditure.

All provinces (*excluding NCD and Autonomous Region of Bougainville) have not met or were not able to meet the estimated minimum health expenditure or cost of services for health over the period 2005 - 2009.

It may be due to:

- i) Health is not accorded or given priority when it comes to allocation of resources by provincial governments.
- ii) Capacity to spend issue by provinces
- iii) Late release of funds by Department of Finance to provinces especially, during the first & second quarter of the year even though Treasury might have released the Warrants on time.

The above is the overall provincial health expenditure as a percentage of estimated total minimum health expenditure required each year over the period 2006-2010. On average each year each province spends only about 25% of what it is supposed to expend on health in terms of the estimated minimum health expenditure. This has been the trend as analysed by NEFC. This trend will not result in any significant impact in health outcomes if it remains the same.

*NCD and ARB are not included because both usually are not allocated HFG by the National Department of Treasury

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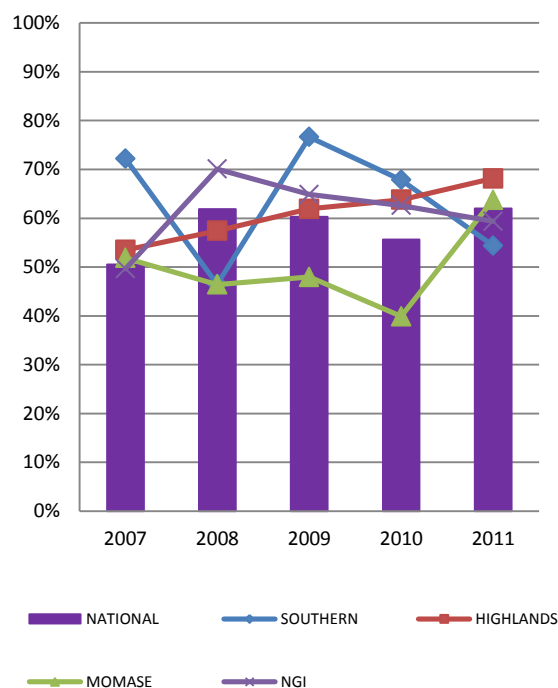
Indicator 20 - Supervisory Visits

Definition: Proportion of health centres that have received at least one supervisory visit by provincial or district program/management staff during the past year.

% of Health facilities supervised per yr, 2007-2011					
	2007	2008	2009	2010	2011
WEST SEPIK	49%	39%	14%	23%	100%
MANUS	92%	100%	100%	62%	88%
EHP	57%	64%	69%	56%	75%
WHP	52%	68%	58%	78%	72%
MILNE BAY	71%	61%	88%	78%	70%
ENB	68%	85%	61%	68%	70%
ENGA	67%	73%	63%	40%	69%
SIMBU	65%	52%	61%	55%	69%
WNB	31%	53%	55%	56%	67%
NCD	10%	19%	36%	46%	67%
CENTRAL	81%	61%	73%	61%	66%
MOROBE	59%	48%	77%	42%	65%
ARB	55%	91%	85%	79%	63%
EAST SEPIK	44%	40%	47%	32%	62%
NATIONAL	51%	62%	60%	56%	62%
MADANG	56%	57%	48%	61%	62%
SHP	43%	42%	60%	70%	61%
GULF	79%	43%	85%	58%	52%
NEW IRELAND	27%	43%	40%	44%	48%
ORO	53%	42%	68%	24%	39%
WESTERN	88%	35%	83%	95%	31%
SOUTHERN	72%	46%	77%	68%	54%
HIGHLANDS	54%	57%	62%	64%	68%
MOMASE	52%	46%	48%	40%	64%
NGI	50%	70%	65%	63%	59%
NATIONAL	51%	62%	60%	56%	62%

Source: National Inventory of Health Facilities

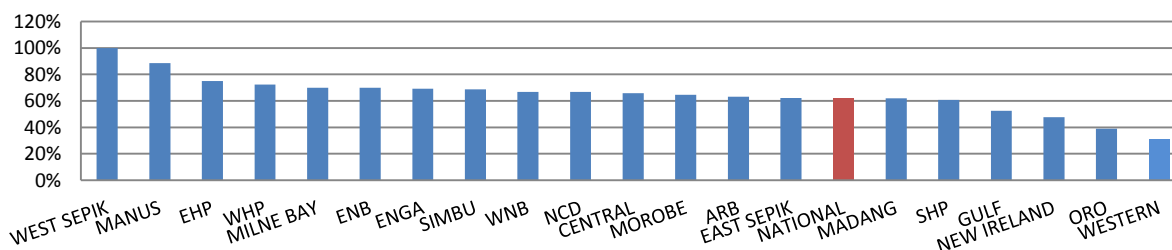
% of Health facilities supervised per year, 2007-2011



Indicator: This indicator looks at supervision of health staff at the facility level by provincial and district health officers. Regular supervision by provincial health office and/or district management staff provides the opportunity to identify and support health centre staff in meeting the needs of their respective communities.

Performance: Supervisory visit by provincial and district health staff has increased since 2007. Decline in rates are obvious in Momase region where rates have dropped by 30% over the last 5 years.

% of health centres receiving Supervisory Visit in 2011



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Indicator 21 - Outpatient visit per person per year

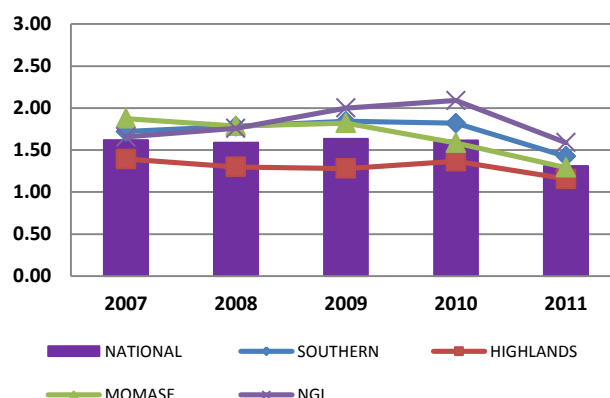
Definition: The average outpatient visit to health facility (health centre & hospital) per person per year

Average outpatient visits per person, 2007-2011

	2007	2008	2009	2010	2011
WESTERN	3.05	3.01	2.77	2.89	2.42
WEST SEPIK	2.86	2.78	2.77	2.82	2.32
NEW IRELAND	2.40	2.65	2.94	3.15	2.25
ENGA	1.69	1.74	1.73	2.24	1.86
WNB	1.63	1.92	2.43	2.73	1.67
MILNE BAY	1.51	1.56	2.07	2.20	1.63
EAST NEW BRITAIN	1.61	1.75	2.03	2.07	1.63
MANUS	1.84	1.80	1.72	1.55	1.63
GULF	2.37	2.80	2.35	2.65	1.59
MADANG	2.17	1.97	2.08	1.75	1.45
NATIONAL	1.62	1.59	1.63	1.62	1.31
SHP	1.58	1.34	1.47	1.51	1.20
WHP	1.42	1.42	1.16	1.41	1.16
NCD	1.39	1.39	1.53	1.44	1.09
ORO	1.33	1.51	1.37	0.98	1.09
EAST SEPIK	1.96	2.04	1.75	1.40	1.09
SIMBU	1.17	1.13	1.13	1.14	1.07
CENTRAL	1.32	1.33	1.38	1.33	1.07
MOROBE	1.30	1.17	1.38	1.23	0.99
ARB	1.11	0.95	0.83	0.62	0.86
EHP	1.02	0.86	0.98	0.79	0.71
SOUTHERN	1.72	1.78	1.84	1.82	1.43
HIGHLANDS	1.39	1.30	1.28	1.37	1.16
MOMASE	1.88	1.79	1.82	1.59	1.29
NGI	1.66	1.76	2.00	2.09	1.59
NATIONAL	1.62	1.59	1.63	1.62	1.31

Source: National Health information System

Average outpatient visits per person, 2007-2011

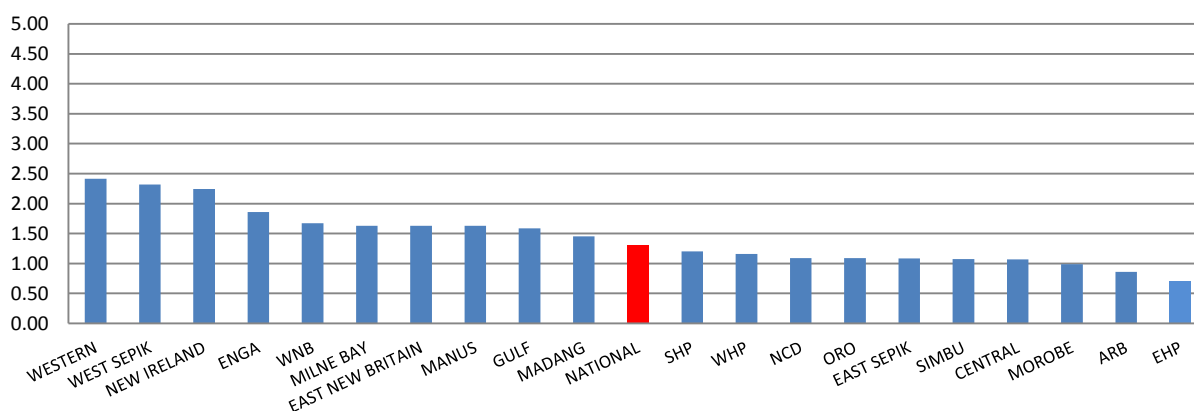


Indicator: This indicator measures the number of hospital and health centre outpatient visit per person per year.

It is assumed that the more accessible the health facility in terms of location staffing etc, the more likely people will seek to use it. However, this does not infer that by having more facilities you will increase accessibility. Accessibility may also be influenced by the perception of the quality of services that maybe available and therefore may influence their decision to seek services.

There were a total of over 8, 280,000 outpatient visits in 2011 which has a huge decreased in the number of outpatient visits compared to 2010. Although the visits per person has declined slightly, the overall attendance has increased by more than 540,000 visits over the past 5 years.

Outpatient Visits per person - 2011



Performance: Generally, the average number of outpatient visit per years has been stable between 2007 and 2010 before declining in 2011. Rates in NGI have risen, followed by Southern Region.

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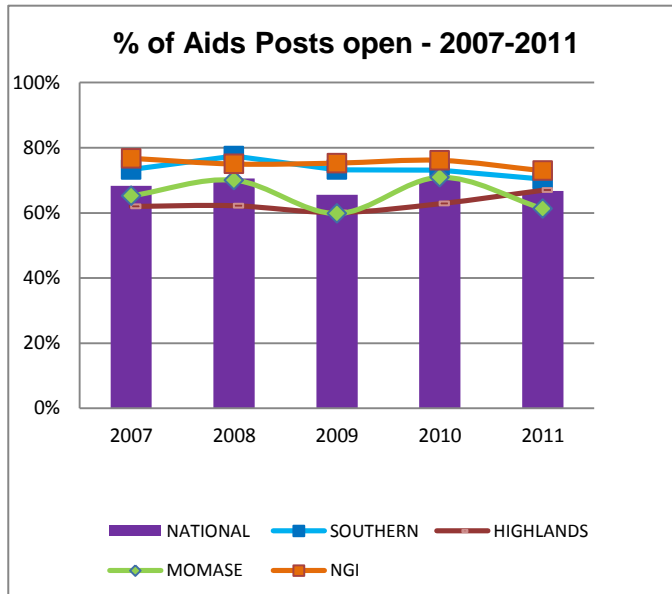
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Indicator 22 - Proportion of Aid Posts open

Definition: The percentage of aid posts open.

% of Aid Posts Open, 2007-2011					
	2007	2008	2009	2010	2011
WHP	83%	77%	88%	93%	95%
MANUS	75%		88%	85%	86%
WNB	89%	80%	85%	85%	85%
WESTERN	76%	82%	77%	81%	79%
MILNE BAY	89%	78%	82%	79%	79%
WEST SEPIK	77%	63%	67%	79%	76%
E N BRITAIN	89%	88%	78%	81%	75%
SIMBU	75%	76%	78%	69%	75%
CENTRAL	84%	94%	88%	87%	72%
GULF	64%	70%	75%	71%	70%
NATIONAL	68%	71%	66%	70%	67%
NEW IRELAND	59%	62%	65%	67%	66%
MADANG	79%	80%	84%	85%	64%
SHP	75%	73%	64%	64%	63%
ARB	68%	69%	65%	67%	61%
MOROBE	60%	59%	57%	56%	57%
EAST SEPIK	41%	76%	38%	72%	55%
ORO	52%	57%	50%	51%	51%
EHP	45%	49%	49%	49%	50%
ENGA	46%	44%	43%	53%	N/A
SOUTHERN	73%	77%	73%	73%	70%
HIGHLANDS	62%	62%	60%	63%	67%
MOMASE	65%	70%	60%	71%	61%
NGI	77%	75%	75%	76%	73%
NATIONAL	68%	71%	66%	70%	67%

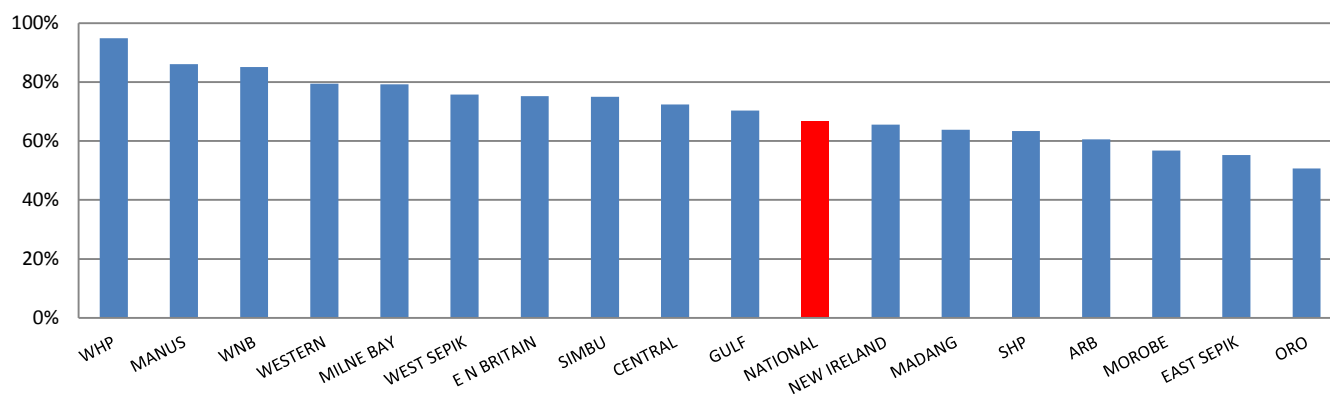
Source: Annual Aid Post Survey



Indicator: This indicator shows the percentage of aid posts opened. A functioning aid post brings accessibility of the health care services to local villages.

The closure of aid posts occurs as a result of system weaknesses, including personnel recruitment and support, supply, supportive management, and community stability.

% of aids posts open - 2011



Performance: The proportion of aid posts open has fluctuated between 66-71% in the last 5 years. Generally, the level has been stable in all regions since 2007. of concern are Oro, Enga and Morobe where only 1 in every 2 aidposts is open. WHP, Manus and WNB provinces are the best performing provinces with most of the aid posts open in 2011. Enga did not report this indicator in 2011.

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Indicator 24: Total Budget Allocation (HSIP and GoPNG) per capita

Definition:

Total budget allocation (government sources and development partner contribution)

Year	2007	2008	2009	2010	2011
Allocated Kina/person	79.21	77.89	92.02	100.15	145.25

Source:

1. NDoH or health sector MTEF 2006-2010
2. NDoH HSIP parent account records
3. Department of Treasury annual Recurrent & Development Budget Estimates 2006-2010

Notes:

The total budget allocation includes HSIP funding or DP funds and, GoPNG funding. GoPNG funding covers NDoH Division 240 Recurrent and PIP, Division 241 Hospital Management Services including Church Health Services Grant and, Provincial Health Function Grants (HFG).

Analysis:

As seen in the above table, the per capita budget allocation for health increased between 2005 & 2006, it declined in 2007 and it picked up between 2008 & 2010.

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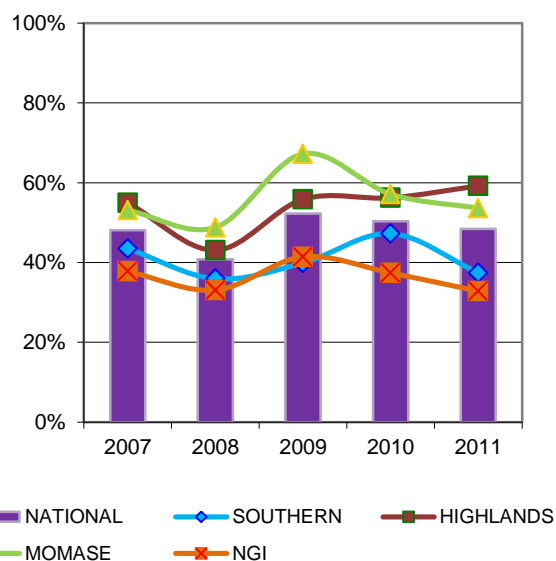
Indicator 25 - % of Health facilities with running water and sanitation facilities

Definition: The proportion of health facilities with running water provided to delivery room.

% HC and Hospitals with water to delivery room, 2007-2011					
	2007	2008	2009	2010	2011
SHP	53%	35%	64%	57%	74%
WEST SEPIK	51%	50%	89%	91%	67%
EAST SEPIK	51%	48%	60%	55%	62%
ENB	48%	55%	50%	52%	60%
SIMBU	55%	45%	46%	81%	59%
MILNE BAY	39%	40%	51%	50%	58%
EHP	60%	56%	61%	58%	56%
ORO	37%	47%	35%	33%	50%
WHP	52%	39%	44%	43%	50%
MADANG	53%	45%	52%	44%	50%
NATIONAL	48%	41%	52%	50%	48%
MOROBE	57%	52%	70%	46%	48%
ARB	34%	31%	38%	32%	47%
CENTRAL	33%	42%	26%	32%	42%
NCD	31%	29%	31%	43%	40%
MANUS	38%	23%	46%	38%	40%
WNB	22%	25%	38%	38%	33%
ENGA	58%	50%	53%	45%	31%
GULF	48%	35%	32%	52%	24%
NEW IRELAND	47%	33%	40%	30%	19%
WESTERN	63%	24%	50%	63%	13%
SOUTHERN	44%	36%	40%	47%	37%
HIGHLANDS	55%	43%	56%	56%	59%
MOMASE	53%	49%	67%	57%	54%
NGI	38%	33%	41%	37%	33%
NATIONAL	48%	41%	52%	50%	48%

Source: National Inventory of Health Facilities

% of health facilities with water to delivery room, 2007-2011

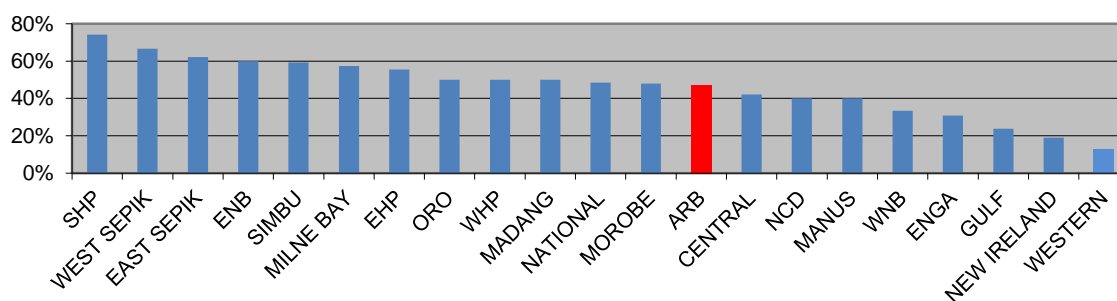


Indicator: The indicator provides a measure of the commitment of district management to the health facility, and the ability of the health sector to liaise with other departments to ensure safety of facilities.

Water and sanitation facilities are the basic building blocks of health. Access to health services can only increase if the place to attend. community perceive the local facility to be a safe and positive The data for this indicator to measure water to the facility is not available as yet , so instead, water to delivery room is presented.

Performance: The proportion of health facilities with running water and sanitation have dropped since 2009.

Percentage of health facilities with running water to delivery room, 2011



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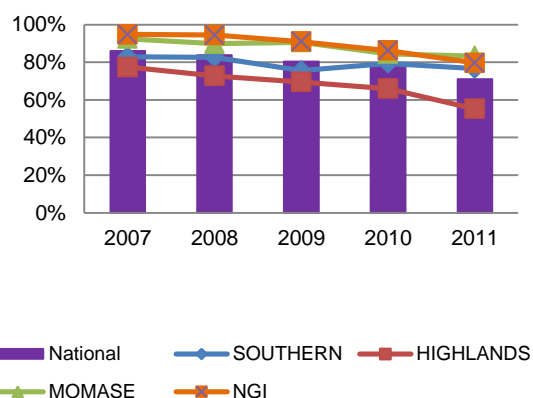
Indicator 26: Facilities with Telephone and/or Radio

Definition: Percentage of health facilities with functioning radio and/or telephone facilities.

Health facilities with functioning radios &/or telephone					
	2007	2008	2009	2010	2011
WEST SEPIK	97%	92%	86%	97%	100%
MANUS	100%	100%	100%	100%	100%
MOROBE	89%	85%	94%	90%	96%
ENB	94%	100%	94%	92%	95%
EHP	97%	92%	89%	94%	94%
ORO	100%	100%	94%	78%	89%
NEW IRELAND	97%	90%	96%	89%	86%
MILNE BAY	85%	85%	88%	85%	85%
WESTERN	93%	93%	78%	88%	85%
MADANG	94%	89%	91%	78%	81%
ARB	90%	91%	73%	71%	79%
WNB	97%	97%	97%	91%	75%
NCD	63%	57%	62%	71%	73%
GULF	86%	85%	74%	86%	71%
EAST SEPIK	91%	95%	91%	75%	71%
National	86%	84%	80%	78%	71%
SIMBU	90%	86%	89%	84%	69%
CENTRAL	67%	67%	58%	63%	58%
WHP	67%	63%	44%	51%	48%
ENGA	92%	77%	80%	65%	38%
SHP	63%	61%	60%	49%	36%
SOUTHERN	83%	83%	76%	79%	77%
HIGHLANDS	78%	73%	70%	66%	55%
MOMASE	93%	90%	91%	85%	83%
NGI	95%	94%	91%	86%	80%
National	86%	84%	80%	78%	71%

Source: National Inventory of Health Facilities

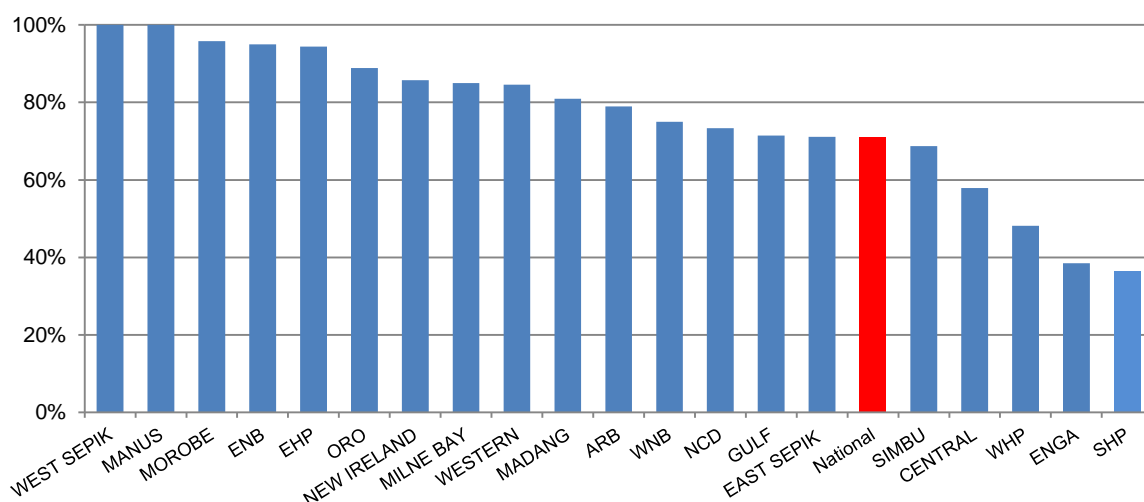
% health facilities with radios &/or telephone, 2007-2011



Indicator: The indicator provides one aspect of health system functionality, and underpins a key element of the maternal health program. Accuracy of the data is to be ascertained. The availability of communication chiefly addresses maintenance and/or new capital. The ongoing success of communication requires ongoing repair and maintenance.

Performance: There has been a gradual decline in the percentage of health facilities with functioning radio and telephone facilities since 2007. Southern Highlands, Enga and WHP provinces are the worst affected provinces. Most of the radios are constantly breaking down and we need to look for an alternative means of communication that is simple durable and cost effective

Facilities with functioning radio and/or telephone - 2011



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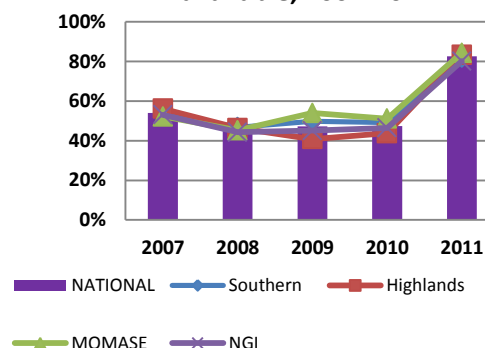
Indicator 27 - Availability of Medical Supplies

Definition: Percentage of months that facilities do not have shortage of any of selected supply list for more than one week in any month

% months with adequate medical supplies in PNG, 2007-2011					
	2007	2008	2009	2010	2011
NCD	75%	62%	59%	51%	90%
ENB	54%	48%	57%	47%	90%
Morobe	51%	52%	50%	55%	89%
East Sepik	62%	38%	60%	54%	88%
Manus	54%	52%	40%	52%	87%
Enga	53%	46%	44%	52%	86%
Western	62%	66%	67%	67%	86%
WHP	53%	49%	47%	47%	85%
Simbu	54%	47%	45%	50%	85%
Madang	55%	52%	57%	54%	84%
New Ireland	74%	58%	56%	57%	83%
NATIONAL	54%	46%	47%	47%	83%
Milne Bay	44%	31%	40%	44%	82%
EHP	60%	48%	37%	34%	82%
SHP	59%	44%	37%	41%	81%
Central	53%	42%	43%	47%	80%
ARB	51%	44%	42%	52%	78%
Gulf	52%	46%	53%	50%	77%
Oro	45%	40%	41%	34%	76%
West Sepik	38%	36%	45%	37%	75%
WNB	34%	25%	29%	28%	68%
Southern	54%	47%	50%	49%	82%
Highlands	56%	46%	41%	44%	83%
MOMASE	52%	45%	54%	51%	84%
NGI	53%	44%	45%	46%	80%
NATIONAL	54%	46%	47%	47%	83%

Source: National Health Information System

% months essential medical supplies available, 2007-2011



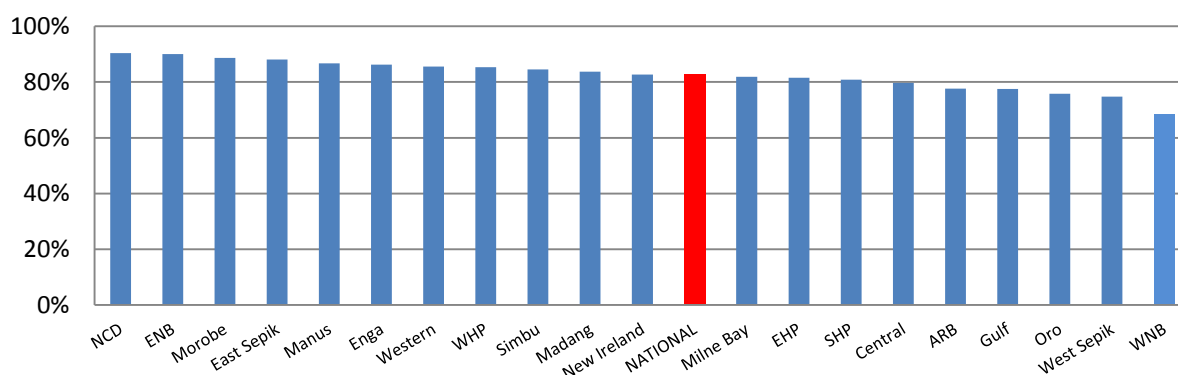
Indicator: This indicator monitors the proportion of months in a year that have nil stock out of 8 essential Medical supplies.

The list of key medical supplies has been developed in conjunction with the program managers. and include: Depo-Provera injection (Family planning), Ergometrine (Maternal Health), Measles vaccines (Vaccination), Oral Rehydration Solution (Diarrhoeal Disease), oxygen, Amoxicillin tablets, Artemisia combination, baby books.

Performance: There was a general decline in availability of essential drug supplies in PNG. However, this trend reversed in 2011 largely due to the 40% and 60% distribution kits to health facilities.

In 2011, there were stock out of essential drugs for less than 20% of the year, almost a double in the time drugs were available in 2010.

% of months that facilities are adequately supplied - 2011



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Indicator 28 - Specialist Medical Services

January 24th 2012

Hospital	Int Med	Surgery	O&G	Paeds	Anaesthesia	Number of core specialties covered	Dental	Path	Skin	ENT	Eye	Emerge	Cancer	Imaging	Psychiatry	Total	%
PMGH	4	9	4	5	4	5	2	4	2	3	3	3	0	2	3	48	36%
Angau	2	2	1	3	1	5	0	2	0	1	1	1	1	0	0	15	11%
Modilon	1	2	1	1	0	4	0	0	0	0	1	1	0	1	0	8	6%
Mt Hagen	1	2	0	1	1	4	0	0	0	2	1	1	0	0	0	9	7%
Nonga	1	2	1	2	1	5	0	0	0	1	1	0	0	0	0	9	7%
Central	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Alotau	1	2	1	1	2	5	0	0	0	0	0	0	0	0	0	7	5%
Boram	1	2	1	0	0	3	0	0	0	0	0	0	0	0	0	4	3%
Goroka	1	1	1	1	0	4	0	0	0	0	0	0	0	0	0	4	3%
Kimbe	0	2	1	1	0	4	0	0	0	0	0	0	0	0	0	4	3%
Mendi	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	2	2%
Buka	0	1	1	1	0	3	0	0	0	1	0	0	0	0	0	4	3%
Daru	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Kavieng	0	1	1	1	0	3	0	0	0	0	0	0	0	0	0	3	2%
Kerema	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	2	2%
Kundiawa	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1%
Lorengau	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Popondetta	1	1	1	1	0	4	0	0	0	0	0	0	0	0	0	4	3%
Vanimo	1	1	0	1	0	3	0	0	0	0	0	0	0	0	0	3	2%
Wabag	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	2	2%
Hela	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Jiwaka	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
NCDHS	1	1	1	0	0	3	0	0	0	0	0	0	0	0	0	3	2%
Away					0	0										0	0%
Admin																	0%
TOTAL	15	34	15	19	11		2	6	8	8	7	15	1	3	4	132	100%
%	11%	26%	11%	14%	8%		2%	5%	6%	6%	5%	11%	1%	2%	3%	100%	

At least 3 specialists = 68%

PMGH Alotau Vanimo
Angau Boram
Modilon Goroka

Less than 3 specialists = 32%

Mendi Kundiawa
Daru Lorengau
Kerema Wabag

There was a 10% increase in the proportion of hospitals with at least 3 specialist from 58% in 2010 to 68% in 2011
Kavieng and Vanimo provincial hospitals recruited well in 2011

Mt Hagen Kimbe
Nonga Buka
Popondetta Kavieng

There were no specialists in Daru and Lorengau hospitals, while Mendi, Kundiawa and Wabag had one each.

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Overall Sector Performance - annual and 5 year change

Ind #	Indicator	2007	2008		2009		2010		2011		2007 - 2011
		Perform ance	Perform ance	% annual Change	Perform ance	% annual Change	Perform ance	% annual Change	Performa nce	% annual Change	Overall 5 year change
Outcome 1	Case fatality rate (in HC and Hospitals) for pneumonia in children <5yrs	2.62%	2.60%	0.94%	3.19%	-22.77%	2.84%	10.97%	3.07%	-8.02%	-16.97%
Outcome 2	Proportion (%) of underweight children under five years	29%	26%	8.67%	28%	-7.03%	28%	-1.00%	25.99%	7.69%	8.86%
Outcome 3	Underweight (<2500 gm) births as a proportion (%) of total births	9.0%	9.6%	-6.67%	9.6%	0.00%	8.7%	9.38%	7.95%	8.57%	11.62%
Outcome 4	Incidence (0/00) of malaria	278	270	2.91%	263	2.56%	236	10.22%	205	13.11%	26.20%
Outcome 5	Proportion (%) of pregnant 15 – 24 year old women who test HIV positive	1.13%	1.58%	-39.82%	1.87%	-18.35%	2.40%	-28.34%	1.74%	27.61%	-53.75%
Outcome 6	Incidence (0/00) of diarrhoeal disease in children under 5 years	199	194	2.26%	194	-0.15%	276	-42.02%	215	21.92%	-8.55%
Outcome 7	Total injury discharges from health centres and hospitals for every 1000 popn	348	346	0.45%	319	7.78%	330	-3.41%	314	4.86%	9.68%
Output 8	Ratio of rural outreach clinics held to children under 5 years;	25	25	-2.20%	33	34.04%	42	27.07%	38	-10.02%	49.90%
Output 9a	Proportion (%) of children< 1yr who are immunised against measles	50%	57%	13.28%	54%	-5.77%	50%	-6.60%	48.74%	-2.75%	-3.04%
Output 9b	Proportion (%) of children < 1yr who are immunised with 3 doses TA/Pentaval	64%	65%	1.56%	57%	-12.31%	53%	-7.02%	55%	3.12%	-14.60%
Output 10	Proportion (%) of births attended by skilled personnel at health facilities;	41%	43%	5.43%	42%	-3.19%	40%	-5.38%	39.99%	0.45%	-2.99%
Output 11	Proportion (%) of pregnant women who attended at least one ANC visit.	69%	71%	3.83%	64%	-10.78%	62%	-1.84%	64.70%	3.54%	-5.85%
Output 12	Family Planning: couple years protection per thousand WRA	78	86	9.74%	81	-5.02%	81	0.34%	86	4.99%	9.81%
Output 16	Case detection rate of all TB cases				73%		84%	14.70%	87.60%		4.68%
Output 17	TB treatment success rate				75%		73%	-2.67%	73%		0.00%
Process 18	Proportion (%) of funds that are expended.	71.3%	82.1%	15.15%	83.7%	1.95%	104.8%	25.21%	121%	15.46%	69.71%
process 19	Provincial health expenditure as a % of required minimum health expenditure	75.2%	69.4%	-7.71%	80.5%	15.99%	64.0%	-20.50%	65%	1.56%	-13.56%
Process 20	Proportion (%) of health centres that have received at least one supervisory vi	51%	62%	22.51%	60%	-2.62%	56%	-7.72%	62%	11.50%	22.75%
Process 21	Average number of outpatient visits to hospitals and health centres per person	1.62	1.59	-1.89%	1.63	2.87%	1.62	-1.17%	1.31	-18.92%	-19.12%
Process 22	Proportion (%) of Aid Posts open	68%	71%	3.37%	66%	-7.14%	70%	7.10%	70%	0.23%	3.05%
Input 24	Total budget allocation (HSIP and GoPNG) per capita	79.21	77.89	1.67%	92.02	-18.14%	100.15	8.84%	145.25	45.03%	83.37%
Input 25	Proportion (%) of health facilities that have running water to delivery room.	48%	41%	-15.18%	52%	28.00%	50%	-3.55%	47%	-5.99%	-1.56%
Input 26	Proportion (%) of health centres/hospitals with functioning radio/telephone/n	86%	84%	-2.65%	80%	-4.02%	78%	-2.61%	71%	-9.19%	-17.36%
Input 27	% of months that facilities do not have stock-outs of selected supplies.	54%	46%	-15.15%	47%	3.03%	47%	0.54%	83%	74.18%	53.09%
Input 28	Proportion (%) of general hospitals (PMGH and the provincial hospitals) which have at least 3 of the 5 key specialties						58%		68%	17.24%	
Overall averages: annual and 5 year performance								-0.81%	8.67%		
Average change in outcomes: annual and 5 year performance								-6.31%	-3.27%		
Average change in outputs: annual and 5 year performance								2.33%	5.54%		
Average change in process: annual and 5 year performance								0.58%	12.56%		
Average change in input: annual and 5 year performance								0.80%	29.39%		

Overall average 5 year change if HIV in antenates is excluded 11.64%
Average 5 year change in outcomes if HIV in antenates is excluded 5.14%

No weighting applied to indicators

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Most improved provinces in 2011																			
Province	Ind 1	Ind 2	Ind 3	Ind 4	Ind 6	Ind 7	Ind 8	Ind 9a	Ind 9b	Ind 10	Ind 11	Ind 12	Ind 20	Ind 21	Ind 22	Ind 25	Ind 26	Ind 27	overall improv ement
WHP	-9.1%	6.72%	25.59%	19.03%	1.93%	17.34%	13.25%	41.71%	44.30%	26.21%	14.74%	10.40%	-7.92%	-17.92%	2.19%	15.91%	-5.56%	81.38%	10
NCD	34.6%	22.75%	12.14%	5.00%	N/A	13.52%	7.80%	1.73%	9.74%	-3.27%	4.20%	20.76%	44.44%	-24.32%	N/A	-6.67%	2.67%	77.29%	9
ARB	-16.8%	9.64%	13.93%	2.41%	33.43%	-46.72%	23.26%	0.89%	30.88%	9.96%	29.92%	0.14%	-20.47%	39.77%	-9.19%	46.41%	11.84%	49.94%	8
Madang	-50.3%	-1.66%	-21.03%	-5.39%	3.94%	12.34%	3.53%	24.29%	26.30%	6.92%	10.14%	58.75%	1.52%	-16.70%	-24.60%	13.89%	3.72%	55.61%	6
Oro	-39.8%	26.71%	6.22%	22.40%	-25.99%	-22.49%	11.50%	-26.76%	-6.55%	10.15%	3.03%	-23.18%	65.28%	11.65%	-1.47%	50.00%	14.29%	122.21%	5
Enga	-14.5%	7.91%	37.29%	28.15%	-15.44%	3.32%	20.45%	9.51%	28.98%	-3.88%	2.61%	11.65%	73.08%	-17.19%	N/A	-31.62%	-40.83%	67.04%	5
Morobe	5.3%	8.88%	-61.09%	0.75%	-8.23%	-2.80%	4.81%	4.38%	37.76%	-68.96%	-6.21%	29.49%	55.00%	-19.75%	1.56%	4.55%	6.98%	60.97%	4
East Sepik	-86.2%	13.14%	-69.36%	7.48%	12.15%	13.89%	25.11%	21.33%	-5.50%	27.29%	18.57%	-11.54%	95.56%	-22.38%	-23.68%	14.07%	-5.19%	62.52%	4
ENBP	-55.1%	6.41%	6.21%	-1.05%	7.26%	-7.02%	9.66%	12.01%	-0.70%	-1.95%	8.19%	27.21%	2.94%	-21.45%	-6.82%	-15.38%	-3.26%	89.64%	4
Central	-9.7%	-13.88%	24.99%	17.90%	13.70%	-4.47%	21.42%	23.16%	-2.52%	25.73%	-0.31%	59.63%	8.70%	-19.28%	-17.11%	33.33%	-8.33%	69.85%	3
Milne Bay	-34.6%	4.88%	21.12%	13.78%	7.92%	-13.55%	0.65%	3.67%	4.61%	9.13%	-3.72%	-13.24%	-10.31%	-25.99%	0.18%	15.00%	0.00%	86.62%	3
EHP	76.7%	13.84%	2.89%	7.11%	-5.16%	11.80%	-20.92%	-18.31%	-42.94%	47.46%	4.99%	-3.03%	35.00%	-9.95%	1.68%	-4.76%	0.00%	140.04%	3
Manus	30.9%	-10.89%	3.03%	-29.10%	44.48%	-38.49%	14.97%	-0.95%	2.25%	8.31%	-7.11%	-8.75%	43.75%	4.78%	0.91%	-4.00%	0.00%	66.90%	3
WNBP	-24.8%	-5.86%	11.36%	33.61%	23.51%	12.19%	13.19%	16.89%	4.37%	-25.94%	4.29%	-41.99%	18.52%	-38.61%	-0.38%	-11.11%	-17.24%	144.95%	3
West Sepik	83.9%	17.97%	14.22%	-9.08%	21.15%	16.92%	-5.61%	-29.54%	-14.91%	-5.17%	5.26%	28.24%	337.50%	-17.88%	-4.29%	-27.08%	2.94%	104.25%	2
Simbu	-29.7%	-0.57%	36.61%	-4.26%	-0.35%	-2.21%	51.39%	15.42%	-5.66%	0.35%	2.35%	36.49%	25.37%	-6.16%	8.17%	-26.38%	-18.03%	69.07%	1
SHP	36.2%	18.30%	18.98%	63.17%	15.13%	8.17%	-22.20%	-12.44%	-17.74%	0.96%	-5.36%	-47.52%	-13.68%	-20.54%	-0.53%	29.24%	-25.69%	98.01%	0
NIP	374.4%	10.33%	-12.89%	24.07%	29.96%	0.88%	-7.11%	-12.49%	15.67%	-1.57%	3.10%	-7.15%	7.14%	-28.72%	-2.44%	-35.71%	-3.57%	45.29%	0
Gulf	10.8%	23.51%	-0.70%	35.29%	22.94%	12.73%	-43.39%	-25.49%	-28.26%	-16.59%	-8.28%	-18.32%	-9.52%	-40.00%	-0.51%	-54.55%	-16.67%	55.70%	-6
Western	-48.2%	10.34%	-23.94%	13.88%	30.77%	9.43%	-20.75%	-7.27%	-22.46%	-11.74%	-2.51%	-61.67%	-67.61%	-16.37%	-1.47%	-79.78%	-3.63%	28.18%	-7

Method

The performance of each province in 2011 against the selected indicators is assessed against the performance in 2010. If there is improvement (of more than 2% from year to year), the province is assigned a score of one for that indicator. If there is no change, a score of zero is applied, and if performance has decreased (by more than 2%) a score of -1 is applied. These scores are accumulated to provide the basis for ranking the provinces according to improvement across the provinces.

The performance has been sub-analysed according to the type of indicator - outcome, output, process or input. If a province has improved inputs or processes, but has not improved its outputs or outcomes, then there is a need to consider the management

Results:

The most improved province in 2011 was **WHP**, followed closely by NCD.

- SHP, NCD, WHP and EHP Provinces showed most improved **outcomes**;
- WHP, Madang, ENGA and ARB Provinces showed most improved **outputs**;
- Oro, Manus and Simbu Provinces showed most improved **processes**;
- ARB, Madang, Oro and Morobe Provinces showed most improved **inputs**.

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	Ind 1		Ind 2		Ind 3		Ind 4		Ind 6		Ind 7		Ind 8		Ind 9a		Ind 9b		Ind 10		Ind 11		Ind 12		Ind 20		Ind 21		Ind 22		Ind 25		Ind 26		Ind 27				
	CFR		under-weight		LBW		malaria		diarrhoea		injury		outreach		measles vacc		penta vacc		sup birth		ANC		Fam Plan		supervision		OP access		AP open		Water in HF		radio/teleph one		med supply				
Province	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	Perf	rel score	overall score	constraint index (new)	Rank New CI
West Sepik	1.9%	3	35.5%	3	15.9%	1	444	1	227	3	33	6	24	2	50.9%	6	43.3%	4	29.9%	3	58.0%	6	90	3	100.0%	10	2	10	75.7%	8	66.7%	9	100.0%	10	74.7%	8	97	0.30	325
Morobe	5.4%	1	32.2%	3	7.6%	3	226	3	185	4	29	7	16	1	43.2%	5	42.9%	4	11.8%	1	65.7%	7	55	2	64.6%	6	1	4	56.8%	6	47.9%	6	95.8%	10	88.6%	10	84	0.26	322
EHP	3.4%	2	23.1%	4	3.7%	6	70	8	232	3	22	10	30	2	48.7%	6	34.0%	3	38.1%	4	64.4%	6	99	4	75.0%	8	1	3	50.3%	5	55.6%	7	94.4%	9	81.6%	9	100	0.32	314
SHP	1.6%	3	21.2%	4	6.0%	4	61	10	278	3	22	9	26	2	29.9%	4	25.2%	3	17.3%	2	39.7%	4	21	1	60.6%	6	1	5	63.3%	7	74.2%	10	36.4%	4	80.9%	9	89	0.29	305
Madang	2.8%	2	34.5%	3	15.9%	1	229	3	149	5	25	9	21	2	44.5%	5	51.6%	5	33.1%	3	70.5%	7	81	3	61.9%	6	1	6	63.8%	7	50.0%	7	81.0%	8	83.7%	9	91	0.31	294
East Sepik	3.4%	2	26.8%	3	20.7%	1	180	3	141	5	25	8	20	2	42.2%	5	43.0%	4	27.6%	3	64.5%	6	52	2	62.2%	6	1	4	55.2%	6	62.2%	8	71.1%	7	88.0%	10	87	0.30	291
Simbu	3.3%	2	14.3%	6	4.7%	5	106	6	225	3	28	7	122	10	50.9%	6	51.9%	5	40.0%	4	64.6%	6	87	3	68.8%	7	1	4	75.0%	8	59.4%	8	68.8%	7	84.5%	9	108	0.38	284
Enga	6.1%	1	15.6%	6	2.2%	10	59	10	391	2	31	7	38	3	33.8%	4	47.7%	5	26.6%	3	47.2%	5	27	1	69.2%	7	2	8	NA	0	30.8%	4	38.5%	4	86.2%	10	88	0.33	267
WHP	3.6%	2	20.5%	4	2.9%	8	108	5	333	2	36	6	29	2	37.8%	5	49.4%	5	37.7%	4	63.6%	6	64	2	72.2%	7	1	5	94.8%	10	50.0%	7	48.1%	5	85.3%	9	95	0.37	257
ENBP	2.8%	2	21.7%	4	4.2%	5	500	1	156	5	44	5	46	4	60.2%	7	79.0%	8	83.4%	9	91.6%	9	100	4	70.0%	7	2	7	75.2%	8	60.0%	8	95.0%	10	90.0%	10	112	0.44	255
Milne Bay	3.3%	2	40.1%	2	11.1%	2	405	1	87	9	47	4	115	9	67.9%	8	75.9%	8	45.7%	5	65.8%	7	111	4	70.0%	7	2	7	79.2%	8	57.5%	8	85.0%	9	81.9%	9	109	0.44	247
NIP	0.5%	10	27.0%	3	7.6%	3	432	1	176	4	57	4	82	7	68.3%	8	94.6%	10	55.3%	6	86.1%	9	56	2	47.6%	5	2	9	65.6%	7	19.0%	3	85.7%	9	82.7%	9	108	0.47	230
Gulf	2.3%	2	28.5%	3	10.4%	2	274	2	248	3	33	6	11	1	20.8%	3	26.4%	3	29.9%	3	56.9%	6	58	2	52.4%	5	2	7	70.4%	7	23.8%	3	71.4%	7	77.5%	9	74	0.33	226
WNBP	1.7%	3	23.9%	4	9.7%	2	324	2	216	4	39	5	51	4	81.9%	10	87.6%	9	48.8%	5	100.1%	10	70	3	66.7%	7	2	7	85.0%	9	33.3%	4	75.0%	8	68.2%	8	103	0.46	224
ARB	2.7%	2	20.2%	4	5.9%	4	197	3	110	7	21	10	55	5	63.8%	8	82.9%	9	61.9%	6	99.1%	10	107	4	63.2%	6	1	4	60.5%	6	47.4%	6	78.9%	8	77.6%	9	110	0.51	216
Central	3.2%	2	30.0%	3	3.9%	6	181	3	184	4	24	9	46	4	53.4%	7	52.0%	5	31.9%	3	51.4%	5	58	2	65.8%	7	1	4	72.4%	8	42.1%	6	57.9%	6	79.7%	9	92	0.46	199
Western	5.0%	1	22.6%	4	13.1%	2	245	2	273	3	47	4	23	2	39.0%	5	44.5%	5	51.2%	5	60.2%	6	126	4	30.8%	3	2	10	79.4%	8	12.8%	2	84.6%	8	85.6%	9	85	0.48	176
Manus	2.2%	3	21.1%	4	12.3%	2	343	2	76	10	45	5	108	9	61.6%	8	72.5%	7	50.0%	5	57.4%	6	103	4	88.5%	0	2	7	86.1%	9	40.0%	0	100.0%	0	86.7%	10	89	0.51	174
Oro	4.3%	1	24.0%	4	10.0%	2	231	3	188	4	36	6	33	3	42.9%	5	54.7%	6	37.7%	4	58.8%	6	66	2	38.9%	4	1	5	50.7%	5	50.0%	7	88.9%	9	75.8%	8	83	0.49	170
NCD	2.6%	2	9.1%	10	11.3%	2	226	3	NA	NA	44	5	2	0	68.2%	8	97.2%	10	95.8%	10	77.1%	8	280	10	66.7%	7	1	5	0.0%	0	40.0%	5	73.3%	7	90.4%	10	102	0.61	166

Method:

indicators that can be compared across provinces have been selected. Each province performance for each of the indicators is provided for the year 2011; these are scored from 1 to 10, with the best performance scoring 10, and the relative performance scaled against this. Overall performance is provided by adding up all scores.

Results:

Provinces are listed in order of performance outcome. **West Sepik , Morobe, EHP and SHP** have ranked highest with the constraint index is applied (this suggests that these provinces do comparatively well when one considers the relative hardships of the provinces)

Constraint Index:

The constraint index is designed to compensate for disadvantage that a province is subject to. This index has been revised from that previously used, to reflect more current data. The index considers mortality figures, social development and size. Full detail is available through NDoH.