MATERNAL AND NEWBORN HEALTH:
THE MDGS AND SDGS, PROBLEMS AND ISSUES IN PNG

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PNG HAS SOME OF THE WORST MNBH INDICATORS IN THE REGION

- By every estimate PNG has not achieved the MDGs with respect to maternal and newborn health
- Just where we are is difficult because of wide data and estimate discrepancies
- Because of inability to reliably measure and estimate MMR and NNMR, it is better to focus more on known correlating process indicators, - the supervised birth proportion and FP

- In many respects the international metrics and UN agencies estimate figures have not been helpful
HEALTH DATA DISCREPANCIES

Types of data

- Cyclical or research Surveys,
  - Demographic Health Surveys (1996 and 2006)
  - Research surveys (e.g. the ones reported in the PNG Med J of 1980s & 90s)

- Health Information System of National Dept. of Health

- Individual facility data; some very good (PMGH), and some not (many facilities)

- Health Metrics (IHME, UNMMEIG): data from mathematical models
<table>
<thead>
<tr>
<th>Year</th>
<th>WHOa</th>
<th>UN MMEIGa</th>
<th>IHMEa</th>
<th>PNG DHSa</th>
<th>This studya</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td></td>
<td></td>
<td>5855</td>
<td>(343–956)</td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td>9301</td>
<td>390b</td>
<td>4765</td>
<td>(267–782)</td>
<td>3896</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>291.1–509.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995–96</td>
<td>330b</td>
<td></td>
<td></td>
<td>372c</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>310b</td>
<td></td>
<td>3715</td>
<td>(212–603)</td>
<td>3136</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>222.4–420.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td>47024</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>(130–1300)</td>
<td>(184–507)</td>
<td></td>
<td></td>
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<tr>
<td>2006</td>
<td></td>
<td>270b</td>
<td></td>
<td>773c</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>2505</td>
<td></td>
<td>3125</td>
<td></td>
<td></td>
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<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>545d</td>
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<tr>
<td>2010</td>
<td>230b</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(100–510)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td>288.96</td>
<td>(196.8–412.3)</td>
<td></td>
</tr>
</tbody>
</table>

a Confidence Intervals are in brackets under the MMR.
b Noted in ref 5 that range of uncertainty on annual % change of MMR has increased (lower estimate −7.8 and upper estimate +2.5).
c DHS MMR figures relate to 10–12 years prior to the year of the survey. There are no confidence intervals in the PNG DHS of 1996 or 2006.
Maternal mortality data

- IHME data trendline
- UNMMEIG trendline
- PNG DHS data trendline

MMR estimate from a 2009 survey

Years

MMR
Trends in Maternal Mortality Ratio 1990-2010 and 2015 target (UN estimates) from PNG MDGs scorecard report 2015 prepared by PNG Dept. of Planning & Monitoring
TWO PROCESS INDICATORS THAT CORRELATE WITH RISK OF MATERNAL DEATH

Supervised birth in a facility

Family Planning
- The total fertility rate (TFR)
THERE IS A LINEAR RELATIONSHIP BETWEEN SUPERVISED BIRTH PROPORTION AND THE MMR

\[ R^2 = 0.79 \]
Relationship among MMR, TFR and Life-time Risk of maternal death in selected countries or areas of WPR (1998)
How do international agencies and metrics organizations get their MMR figures?

(They use mathematical models – ie they don’t actually count anything)

- UN MMEIG
  - total fertility rate (TFR), gross national income (GNI) per capita, neonatal mortality rate, HIV seroprevalence, skilled birth attendance rate and age-specific female education (with five-year stratification) for the reproductive ages 15–45 years.

- IHME (Seattle, USA)
  - GDP per capita, general fertility rate and skilled birth attendance rate
AND HOW DOES PNG GET ITS LOCAL EMPIRICAL DATA ON MMR?

- **PNG Demographic Health Surveys** (Uses the indirect sisterhood method for MMR: this gives you a number that reflects the situation about 10-12 years in the past.)

Cluster sample population from the whole country is determined, and then people are interviewed intensively by a survey instrument. Indirect sisterhood method, means that women are asked if any of their sisters have died related to pregnancy conditions.

- **National Health Information System data.** Health facilities send in data collection sheets to Health HQ on a monthly basis. Not consistent, no data management pr data cleansing

- Research surveys
THE TRENDS IN THE PROCESS INDICATORS (NATIONAL HIS DATA)

% Supervised Births in health facilities, 2010-2014

CYP per 1000 Women of Reproductive Age, 2010-2014
A research project in 2009 that surveyed all the health facilities, triangulated data from community surveys in two rural provinces and national HIS data.

<table>
<thead>
<tr>
<th>Geographical area and access</th>
<th>% population</th>
<th>Estimated births</th>
<th>Estimated MMR</th>
<th>Estimated number of maternal deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>15%</td>
<td>34,080</td>
<td>100</td>
<td>34</td>
</tr>
<tr>
<td>Rural with some access to health services</td>
<td>55%</td>
<td>124,960</td>
<td>400</td>
<td>500</td>
</tr>
<tr>
<td>Remote rural without access to health services</td>
<td>30%</td>
<td>68,180</td>
<td>900</td>
<td>613</td>
</tr>
<tr>
<td>Total PNG</td>
<td></td>
<td>227,200</td>
<td>545</td>
<td>1,147</td>
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</table>
But by taking all the available data into account

By triangulation of data sets and,

By cross checking and cross referencing data, and

By sensible analysis and synthesisisation of data taking circumstances and source into account

We can make an educated estimation of what the MMR is likely to be with more accuracy than that predicted by the mathematical models of the international agencies

And that PNG’s best estimate of MMR for 2005-2013 = 545

Standard errors for MMR estimation are very wide (no matter what methodology one uses), - and in fact this is the main reason it is not possible to use MMR as a health sector monitoring indicator. For national monitoring purposes, we need to monitor the process indicators.
## THE NEWBORN DATA

### THE SAME PROBLEMS WITH THE PNG NEWBORN DATA

<table>
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<tr>
<th></th>
<th>NNMR/1000 eNNMR/1000</th>
<th>% of U5 mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UNICEF est. (2010)</strong></td>
<td>23</td>
<td>39-43%</td>
</tr>
<tr>
<td><strong>DHS 2006</strong></td>
<td>29+/−2.2</td>
<td>40%</td>
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<tr>
<td><strong>SDG target</strong></td>
<td>12</td>
<td></td>
</tr>
<tr>
<td><strong>PMGH (booked) 2014</strong></td>
<td>Est. 13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td><strong>PMGH overall 2014</strong></td>
<td>Est. 19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td></td>
</tr>
<tr>
<td><strong>Provincial Hospitals 2014 data</strong></td>
<td>Est. 19-30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13-20</td>
<td></td>
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<tr>
<td><strong>PNG</strong></td>
<td>?</td>
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</table>
The Millennium Development Goals 2015

Goal 1: Eradicate Extreme Hunger and Poverty

Goal 2: Achieve Universal Primary Education

Goal 3: Promote Gender Equality and Empower Women

Goal 4: Reduce Child Mortality

Goal 5: Improve Maternal Health

Goal 6: Combat HIV/AIDS, Malaria and other diseases

Goal 7: Ensure Environmental Sustainability

Goal 8: Develop a Global Partnership for Development
The PNG experience – the MDGs

• We hardly ever talk about MDGs 1, 3, 7 and 8 except at ‘cocktail parties’ with UN agencies and other donor partners
• MDG 2 is a ‘great hope’, and the stuff of political rhetoric
• MDG 6 is vague – and we have always been ‘combating’ nasty diseases like HIV, malaria, TB etc.
• MDGs 4 and 5 are the two that have had some meaning because they are concrete, understandable and fit with government policies and the aspirations of the community, but

..........We don’t really know where we are starting from, and we have great difficulty measuring what is happening.......... Unluckily the MDGs do not mention population at all: runaway population sabotages the best efforts at achieving all the MDGs
And what about the SDGs......
The SDGs ...... mostly won’t work for PNG

• They are all too vague, reflect just a wish for something better (rather than goals we can realistically aim for), try to be something for everybody (including the middle income and developed countries), but will end up by being nothing for poor and system challenged societies like PNG

• It will be very difficult for developing countries like PNG to come to grips with them, because in our setting they are not measureable

• In addition the SDGs are unfinanced and therefore unattainable and unactionable.
The SDGs are encyclopaedic

• If there are 17 goals and 190 strategies – and all of them ‘important’; this means that nothing will end up being a priority and special interest groups will just pick and choose, there will be vertical siloed projects and no integrated programs.

• I fear that they will be the stuff of ‘workshops’ funded by development partners, but not be implemented in any meaningful way. and end up being of no benefit for ordinary people

And again there is no specific mention of population – although a sustainable population is implied in virtually every SDG…….