

**SOLOMON ISLANDS
NATIONAL CHILD HEALTH PLAN
2005-2010**

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Executive summary

In September 2005, at the fifty-sixth session of the Western Pacific Regional Committee of the World Health Organization, the Solomon Islands Government, through Health Minister supported and endorsed the WHO Child Survival Strategy.¹ The Minister stated that Solomon Islands program of action would put child health higher on political, economic and health agendas, renew efforts to reduce child mortality with support being mobilized by the Regional office and donors, and expand current child and reproductive health activities.²

Major recommendations of the WHO Child Survival Strategy are to have:

- One effective high level coordination mechanism (such as a Child Health Committee)
- One integrated national plan for child survival
- One national monitoring and evaluation system measuring core child survival indicators

This *National Child and Mother Health Plan* (the Plan) describes a balanced and integrated program that incorporates almost all of the 23 essential interventions proven to reduce child mortality in low income countries.³ The Plan emphasizes the strong expanded program of immunization (EPI) that has been developed over years and sustained despite the recent civil conflict. The Plan also emphasizes the importance of Safe Motherhood and Neonatal Care, which are crucial to reducing neonatal mortality, which causes a high proportion of infant mortality in Solomon Islands.

The Plan includes sustainable activities in service delivery and capacity building which have been introduced successfully in recent years, and which strengthen each level of the health service:

- Communities: Family Health Card and community nurse outreach (Community IMCI)
- Primary health clinics: IMCI and Standard Treatment
- Hospitals and Area Health Centres: Improvement program for small hospitals (based on the WHO Hospital Care for Children program).

None of these programs have national coverage yet, and it should be a major focus over the next five years to achieve expansion to each of the 9 provinces, as a basis for delivery of essential child survival interventions.

The Plan describes the composition of the coordinating committee (National Child and Reproductive Health Committee), which will have responsibility for implementation, oversight, and monitoring.

The Plan also describes the core indicators that would enable progress to be monitored by National Child and Reproductive Health Committee. These are simple, measurable, and objective indicators of progress towards establishment of sustainable programs with high coverage, and progress toward the achievement of the Millennium Development Goal targets, particularly MDG-4. However health systems are fragile because of low levels of financing, inadequate numbers of human resources, limited supervision and support for rural health workers, deficiencies in building and equipment maintenance, and systems of drug procurement and distribution.

It is essential that much effort is made to sustain and expand the programs described in the Plan to full National level, so that all children and their families, particularly those in remote provinces can benefit from good quality health care, health education and illness prevention.

Introduction and background

Recent history

Solomon Islands has recently undergone years of major unrest where much of the infrastructure, including primary and secondary child health services were disrupted or destroyed. For more than two years the country was marred by violence between Malaitan and Guadalcanal militants, during which there has been serious social and economic decline. In October 2000 the Townsville Peace Accord was signed, but lawlessness persisted because of large stocks of munitions. In early 2003 the Government of Solomon Islands invited the Australian Government to assist with peace keeping and ridding the country of the cache of illegal weapons. This Regional Assistance Mission (RAMSI) commenced in the second half of 2003. Solomon Island has begun a process of rebuilding its infrastructure and services, but with fewer resources than ever before. The economy contracted by 14% in 2000 and by an estimated 25% in 2001. The Nation's population of approximately 462,000 is spread over 29,000 square km.

Child mortality

WHO life-tables show that there were a total of 537 deaths in children under 5 recorded in 1999 out of a total of 79,131 children under 5.⁴ This is consistent with the recent summary estimates of under-5 mortality are 71 per 1000 live births for males and 62 per 1000 live births for females.⁵ The most recent census data suggest an infant mortality rate of 66 per 1000 live births. This would mean the under-5 mortality rate would be higher than that previously estimated.

Lack of data in health facilities during the years of civil conflict, and potential underreporting of home deaths, may result in an underestimation of the true mortality statistics. This is particularly evident in early neonatal deaths which even in hospitals are often classified as still births.

Common causes of child hospital admission and death

Case fatality data from most hospitals is incomplete or absent, and was particularly so during the years of the civil conflict. The common causes of hospital admission in children aged 1-60 months are malaria, acute respiratory infection, skin infections, diarrhoeal disease, tuberculosis, trauma, and bone/joint infections. The common causes of admission for neonates are sepsis (skin infection, pneumonia, bacteraemia, ophthalmitis and cord infection), prematurity, low birth weight, and birth asphyxia. At the National Referral Hospital (NRH), where the only comprehensive disease-specific case fatality data exists, the common causes of childhood deaths were pneumonia, malaria, acute gastroenteritis, and meningitis. Among neonates the commonest causes of death were complications of prematurity and low birth weight, sepsis and birth asphyxia.

Health facility network

In most of the nine provinces in Solomon Islands the health network consists of a hospital, area health centers, rural health clinics, nurse aid posts, malaria community posts and community health workers.

There are six Government hospitals and two mission hospitals (see Figure). The NRH is in Guadalcanal Province (population about 70,000). The other 5 hospitals are Kilu'ufi (Malaita Province; pop. 120,000), Gizo (Western Province; pop. 60,000), Kira Kira (Ulawa / Makira Province; pop. 40,000), Buala (Isabel Province; pop. 30,000), Taro (Choisieul Province; pop. 20,000), and Lata Hospital (island with pop. 20,000). Three other provinces ; Renol and Belona, Central Islands, and Guadalcanal have only primary health facilities, they all have access to the NRH. The Honiara City Council, is regarded as a province and it also provides PHC and access NRH for secondary health care.

Human resources in child health

Solomon Islands has four levels of health workers who manage children: paediatricians, general medical officers, nurses and nurse aids. There are only four paediatricians in the country and only three in public practice (two at NRH; one is Provincial Health Director for Guadalcanal Province). There were approximately 86 National medical officers, including residents, registrars, specialist medical officers, and dentists (of which there are about 15).

Many National doctors who had been trained through University of Papua New Guinea and Fiji Schools of Medicine left the Solomon Islands during or before the civil unrest. Solomon Islands has a pre-service training college for nurses and nurse aids, and a midwifery college in Honiara. A Ministry of Health policy is to have a midwife on every shift in each provincial hospital and area health centre.

10 nurses have received post-graduate training in child health at the University of Papua New Guinea. These child health nurses work in 8 of the 9 provinces. Most hospitals have 1-4 general medical officers, however in several remote hospitals, and in all health centres, nurses and nurse aides are the only child health providers.

Program areas

Expanded Program of Immunization

EPI is one of the eight elements of the primary health care concept introduced at the Alma Ata Conference in 1978 for "*Health for all by Year 2000*". In its commitment to the concept, Solomon Islands established the EPI program under the then Maternal & Child Health / Family Planning Unit. The name was changed to Reproductive & Child Health Division to show its commitment to the ICPD in Cairo in 1994. The EPI program has a national coordinator who is responsible to the Reproductive & Child Health Program Manager and the Director of the Reproductive & Child Health Division. The provinces are represented by EPI program officers.

Official figures in 2001 reported coverage for all childhood vaccines of greater than 75%, including measles vaccine (78%), BCG (85%), and the third dose of Sabin vaccine (80%). This is a great improvement from surveys in 1990 that showed only 36-38% of children had completed all vaccines by their first birthday, and just over 50% of children were immunized against measles. During the civil conflict in 2002, vaccine services were interrupted and likely to be lower than official 2001 estimates. In 2003 many provinces conducted a third round of supplemental immunization activities (called the M3 campaign) in 2003, funded by the Republic of China. This involved delivering measles vaccine to all children and catch-up vaccination with all the other vaccines. The EPI program has several points of routine delivery (immunization clinics, one-a-year catch-up campaign and 3rd yearly measles SIA).

Major activities of the program include collaboration with the Cold Chain Program which is administered by the Pharmacy Division to procure and distribute vaccines and logistics including fridges, vaccine carriers and spare parts to vaccine distribution centers (VDC) which includes hospitals and identified health centers through out the country.

Immunization of infants and pregnant mothers is carried out by nurses at the hospitals, Area Health Centers and Nurse Aid Posts during child welfare clinics and outreach tours.

Vaccine-preventable diseases surveillance is also a major activity in the EPI program. The EPI program is well established with the EPI coverage and vaccine - preventable diseases monitored regularly using monthly reports from the health centers. The EPI coverage in SI has shown a trend of increasing success over recent years.

Currently the cold chain program is now in the process of shifting from its fridges from kerosene to gas and solar power, which are easier to maintain and will be cost effective in the medium and long term.

The important indicators of the EPI program are immunization coverage by vaccines, fully immunized child (FIC) coverage, dropout rates, and coverage of Hep B₁ given within the first 24 hours of birth (see Monitoring, below). The number of fridges and vaccine carriers in the health centers are also monitored to ensure a high coverage. Vaccine distribution centers (VDC) are also being increased to ensure improved and cheaper means of distribution of vaccines to the health centers.

An important aspiration of the Child Health Plan is to introduce *Haemophilus influenzae* (Hib) type B vaccine by 2008. Solomon Islands has sufficient coverage to fulfill the criteria specified by the Global Alliance Vaccine Initiative (GAVI): DTP3 > 60% and a well managed and monitored EPI system. Hib disease (meningitis and pneumonia) is a common cause of infant mortality in Solomon Islands. It has been shown in several countries that achievement of the same coverage of Hib vaccine that is achievable with the current Solomon Islands EPI program could eliminate the disease. This is a high priority of the EPI program in the next few years.

As new vaccines are available, there will be consideration of their relevance and priority. Currently being considered for GAVI-eligible countries are conjugated pneumococcal vaccine and rotavirus vaccine. It may be appropriate to begin collecting burden of disease information on these two pathogens, which are likely to be common in Solomon Islands, to enable informed decisions about the introduction of new vaccines in the future.

Integrated Management of Childhood Illness

The Solomon Islands adapted the WHO / UNICEF Integrated Management of Childhood Illnesses (IMCI) approach in 2000. Two paediatricians underwent IMCI Facilitator's Training in Fiji. Implementation of IMCI was delayed by the national civil unrest, but is now well established, albeit in a few provinces only. The first 11 days IMCI training course was conducted in March 2002. This course focused primarily on local capacity building at the national level. For practical and financial reasons, the 11-day generic training course had been reduced to 10 days, but achieving greater coverage with current resources may necessitate a further reduction in the duration of the course. The IMCI approach is currently piloted at clinics at Vella La Vella and Gizo out-patient department in the Western Province, and Kukum, Matanikau and Rove Clinics in the Honiara City Council area, and at the National Referral Hospital. In 2005, IMCI was extended to two other provinces – Guadalcanal and Choiseul. There is a plan that the piloted clinics will be assessed by the end of 2006.

The School of Nursing and Health Studies at SICHE, Honiara has introduced IMCI at its pre-service training program in 2003/2004. Also, trainers from the provinces, nursing schools including Atoifi, Helena Goldie and Maluu, and Church Hospitals have conducted IMCI training. These trainers will undergo a Facilitators' Training Course in the future to enable them to assist in the facilitation of future provincial trainings. At the end of 2005 a total of 146 health workers had been trained in IMCI, almost all of these nurses. The aim is to expand IMCI training to all provinces in 2006-07.

Hospital care for children

In 2003 the Child and Adolescent Health and Development Division of WHO, Geneva, the Western Pacific Regional Office of WHO, the Solomon Islands WHO Country Liaison Office, and AusAID supported a program to improve the quality of care in small hospitals. This began with a needs assessment. Using a generic WHO instrument for measuring quality of care, modified for Asia-Pacific conditions, an assessment of the quality of paediatric care in 5 hospitals was made in November 2003. The assessment identified the strengths and weaknesses in the child health service, and provided recommendations for improvement. These included the updating of standardized treatment guidelines, training in the use of such guidelines for nurses and non-specialist doctors in provincial areas, and a program of provincial hospital supervision.

The Ministry of Health has adopted the WHO Pocketbook *Hospital care for children*⁶ as the standard technical resource for in-patient paediatric care. A National training course was conducted in Honiara in 2004 to teach nurses how to use the standard technical resources in everyday clinical practice. Provincial training courses, using a training CD-ROM based on *Hospital Care for Children* and the *Management of the child with a serious infection or severe malnutrition*⁷ were conducted for nurses in remote provinces, coupled with a program of supervision of provincial hospitals. In 2006-07 there was extension of this approach to all hospitals throughout the country. Provincial supervision of small hospitals is vital to maintaining morale and effective communication. Through the Hospital care for children

program and provincial supervision other obstacles to good quality paediatric care, including drug and equipment supplies will also be addressed.

The WHO Pocketbook *Hospital Care for Children* will be used in midwifery schools and pre-service nursing schools as the standard text in child health. This is important as the IMCI program does not have a neonatal component, and the WHO Pocketbook can be used to teach nurses basic neonatal care and to improve the care of the sick newborn with infection, low birth weight or birth asphyxia.

Safe motherhood

Solomon Islands established the Maternal and Child Health / Family Planning Unit in 1989 based on its commitment to the Primary Health Care concept, introduced at the Alma Ata Conference aiming for “*Health for All by year 2000*”. At the ICPD in Cairo in 1994, Solomon Islands was a signatory to the convention. This led to the establishment of the Reproductive Health Division in 1998.

The safe motherhood component in the RH division covers family planning (FP), antenatal care, clean and safe delivery and essential obstetric care. These areas ensure safety of the mother and baby throughout pregnancy, labour, delivery, the postpartum period, and control of fertility through provision of family planning.

Since the inception of the program, activities such as training of nurses through workshops / conferences, obstetric survey, development of interventions, protocols for obstetric / gynaecological complications and training of more FP nurses, midwives and RH male nurses overseas.

Other activities includes establishment of the Midwifery School, supporting health centers, developing the RH surveillance system (RHSS), improvement of data collection and reporting of RH indicators.

The other activities are to increase midwives to cover all area health centres (AHCs) and hospitals. The important indicators in this component are increasing the CPR, antenatal coverage, supervised health facility delivery rates, and post natal coverage (see Monitoring). These activities have shown improvement in most of the RH / SMH indicators. The ultimate aim in this component is to continue improvement on the indicators and to work hard on areas with low coverage.

Neonatal Care

Neonatal care is not a separate program, but is a major focus and outcome of all key Child Health programs, including Safe motherhood, Hospital care for children, IMCI and EPI. Neonatal care is highlighted here for special emphasis because of its high burden of disease and disproportionate contribution to mortality. Neonatal mortality makes up 50-60% of infant mortality, so the NMR for Solomon Islands is likely to be about 33-40 per thousand live births. Based on the Reproductive Health Surveillance System the Perinatal Mortality Rate is 34 per 1000 live births and the early NMR (first 7 days) is 20 per 1000 live births. According to the recent National Health Conference (Nov 2005) data, two thirds of neonatal deaths are associated with high risk pregnancies, labour and delivery. Although there can be many

factors, prematurity, low birth weight, deliveries that are not supervised by skilled health workers, and early neonatal sepsis account for the majority of neonatal deaths in Solomon Islands.

Efforts to reduce neonatal mortality are closely linked to the Safe motherhood program. Antenatal clinics continue to be a very important preventative tool to improve neonatal care, including maternal screening for common diseases like malaria, syphilis and haemoglobin checks for anaemia. All pregnant mothers should have a minimum of three ANC during pregnancy, have two tetanus toxoid in primiparous and one multiparous, and take prophylactic anti-malarials and Fefol through-out the current pregnancy. All high risk pregnancy will need qualified medical personnel to supervise the delivery.

Improving human resource capacity and technical guidelines for neonatal care is also important, as currently this is deficient and there are not coordinated national systems or protocols for neonatal care. The training intervention currently in place includes the training of mid-wives through the midwifery school. The policy aim is to have a midwife on all shifts in all health facilities to attend to all deliveries and identify and care for sick newborns. This would be improved by the training of midwives, child health nurses and other nurses in neonatal resuscitation, neonatal sepsis management and management of low birth weight neonates. The target for improving survival in low birth weight infants will be those that are more than thirty weeks gestational age or weighing 1000gm or more. Guidelines for the management of very low birth weight babies (1000-1750gm) in small hospitals are contained in the technical resources in *Hospital Care for Children*.

This training will be done through the Hospital care for children program using the WHO Pocketbook *Hospital Care for Children, the Solomon Islands Standard treatment guidelines for sick children* and the IMCI program as both in-service training in hospital and AHC and pre-service training in the Nursing and Nurse Aid Schools.

Nutrition

Nutrition is a program of the Reproductive and Child health Division. It is a significant program in Child Health strategies. The program is coordinated by the Program Coordinator who is responsible to the Reproductive Health Program Manager and the Director of the Reproductive Health division. It is represented in the provinces by the Health Promotion officers.

Its activities include growth monitoring and evaluation, training, National Nutrition policy, Breastfeeding and Vitamin A policies, Baby Friendly Hospital Initiative, micronutrients and development of IEC materials.

Other activities include working with NCD program and the Health Promotion department in awareness programs, and assessment of nutritional status of children in the country through nurses conducting Child Welfare clinics both in the Health centers and during outreach clinics.

A National Nutrition survey was conducted in 1989. Results showed 23% of pregnant women had moderate anaemia and 12% of babies had low birth weight.

The Nutrition program through the RH division had helped set up the National Nutrition Advisory Committee and the National Plan Action Nutrition (NPAN). These committees need reviewing.

Important indicators of the program that are relevant to child health include the proportion of exclusive breastfeeding infants for 6 months, % of malnutrition (<80%), and use of the National Nutrition, breastfeeding and Vitamin A policies.

Malaria, TB and HIV

These three diseases don't represent specific program areas in Child Health, but programs within the Ministry of Health and Medical Services where close liaison and interaction must occur. The activities in these programs are largely set by the programs themselves, but it will be important for the Child Health Committee to highlight areas where childhood needs in these diseases are unmet. The outcome data required for monitoring these programs is mostly derived by the separate programs, and the Child Health Committee will need to have data on the specified core indicators available on at least an annual basis. A brief description of these three programs are given below.

Malaria

Malaria is a major disease in the Solomon Islands. The malaria control program in the Solomon Islands is an established program and forms the major activity of the vector borne disease control program that also deals with dengue and filariasis. Dengue and filariasis are rare in the country.

The malaria program has wide-ranging activities involving the following areas:

1. Vector control programs and research
2. Laboratory diagnosis of malaria
3. Malaria surveillance
4. Drug efficacy studies
5. Formulating malaria treatment policies and guidelines
6. Malaria health promotion

Several components of the malaria program are integrated into the health delivery system such as microscopy and laboratory diagnosis in all rural health clinics, area health centers and hospitals, malaria parasitological, morbidity and mortality surveillance, distribution of treated bed nets and re-treatment of bed nets, malaria health promotion and drug treatment of malaria. Spraying and environmental programs to control vector are largely done by the unit outside of the formal health delivery system.

The malaria program is currently dependent on support from the Solomon Islands Government, World Health Organization with the Roll Back Malaria program and Global Fund for HIV, TB and Malaria.

Tuberculosis and leprosy

The TB / leprosy unit is a function of the Communicable Diseases Division of the Ministry of Health that also oversees the HIV/AIDS program. The unit provides support to the health delivery system to increase the DOTs coverage within the country. Data input into the unit is dependent on the health system records (i.e. clinics and hospitals through the TB notification process). Through the notification process it attempts to monitor clinical resistance, relapses and treatment failures. It also does surveillance through this notification process. Current challenges are active case detection as medical imaging and laboratory support are based only in the large hospitals. Transport difficulties hinder transfer of smears from rural clinics to laboratory centers capable of AFB examination. Treatments have had to be instituted on clinical grounds. Strategies to deal with TB / leprosy in the coming years include: - strengthening case finding, case holding and treatment (hospitalization for initial treatment phase and DOTs for the continuation phase), recording and reporting (notification), drug supply and logistical support and capacity building in terms of updating the training of nurses supervising DOTs in the clinics and to be involved in active case finding.

HIV

This program developed from 1988 first as a short-term plan of action for health facilities. Epidemiological analysis of sexually transmitted infections and risk behavior led to Multi-sector Strategic Plan (2000) completed with a range of stakeholders which involved NGOs and churches. In 2004 the country had its first diagnosed AIDS person (since then 6 further diagnoses have been made) and the National AIDS Council reviewed, updated and expanded policy issues around HIV/AIDS management, human rights and support teams for treatment and care of patients. Confidentiality and drug treatment issues were a major concern. Included with this are the plans developed in 2005 for the training of health workers in prevention of mother to child transmission (PMTCT) and treatment of childhood AIDS. The program is in its infancy and capacity building is an important task, but fortunately to this point there have not been any documented cases of childhood HIV.

Health training schools

Availability of human resources will be a vital key to success in implementing this Plan. The nursing and midwifery schools play a crucial role in providing capacity in child health, and it is vital that these institutions are supported and that their curricula reflect the strategies in the Plan. It is also vital that these schools be seen as partners in child and reproductive health, as they will be the forum by which many of the training strategies (such as IMCI and Hospital Care) are sustained and made a part of the National health culture.

The Reproductive Health Department conducts successful post-graduate and distance learning courses in Midwifery and Family Planning, and there is an opportunity to provide a similar course in Child Health. This had been the plan, but there is a need to develop a curriculum for this. The technical teaching materials now exist to build a course in Child Health that is consistent with this Plan. These materials are:

- IMCI charts
- WHO Pocketbook Hospital Care for Children

- Teaching CD-ROM based on learning how to use the WHO Pocketbook
- Solomon Islands Standard Treatment Manual 3rd Edition

It is recommended that these materials be the basis of a post-graduate course in Child Health nursing. These materials can also be used to assist the under-graduate nursing and post-graduate midwifery schools to bring their teaching in line with the Child Health Plan.

National Child Health Committee

In line with the WHO Child Survival Strategy recommendations a National Child Health Committee will be established. It will have responsibility for implementation, oversight and monitoring of the Plan. The Committee will be an expansion of the current EPI / IMCI Committee to include representatives from all program areas. The Committee will meet quarterly, and will publish a biennial report to Government on progress in each of the program areas, and progress to achievement of the MDGs.

The Committee could comprise of:

- EPI coordinator
- IMCI coordinator
- Nutrition
- Hospital care: paediatrician responsible for program
- Chief paediatrician
- Director of Reproductive Health
- Provincial representative
- Schools of nursing and midwifery
- Obstetrician
- Malaria: Director of Vector Borne Diseases
- HIV / TB: Director of communicable diseases

National Director of Child Health & Provincial Child Health Coordinators

As well as establishing a Child Health Committee, there needs to be clear national leadership and provincial coordination in Child Health to oversee and implement this Plan. It is recommended that a position be created of National Director of Child Health, to work closely with the Director of Reproductive Health within the Department of Reproductive and Child Health.

To strengthen Child Health at Provincial level there should be the creation of a Provincial Child Health Coordinator, to coordinate primary care, IMCI, Small hospitals (+/- Nutrition). The EPI coordinator is a very important position, and this should be strengthened, currently this person is overburdened with work in several areas, and unable to focus on activities other than EPI. There needs to be also a coordinating mechanism other child health activities at

Provincial level (see Figure 3). There are 10 nurses trained in child health at University of PNG. These are extremely capable nurses and their skills should be used in both clinical and public health areas: creating the post of Provincial Child Health Coordinator would facilitate this. As more nurses are trained in child health through the Distance Learning and Hospital improvement activities there will be greater capacity of nurses at provincial level for these responsibilities.

Monitoring

There are several systems for data collection that are relevant to children:

- The Health Information System
- The Reproductive Health Monitoring System
- Vaccine preventable disease surveillance
- Acute flaccid paralysis surveillance
- Family Health Card information
- Child death reporting system
- Demographic Health Survey
- Census

There is good data reporting from primary health clinics, but *no systematic and coordinated qualitative data collected from hospitals*. The lack of an official system of hospital admission, diagnosis and outcome data is a major problem in understanding the gaps in quality of care. The excellent Reproductive Health Monitoring System, which provides maternal and perinatal data has been developed by Reproductive and Child Health Division and implemented in all provinces. It would be relatively simple to include health facility child health outcome reporting in this data-base. Such data should be able to derive under-5 case, infant and neonatal mortality, and case fatality rates for pneumonia, diarrhea, malaria and malnutrition. There should be a timeline set for the introduction of such data collection; this is a crucial issue in monitoring of the quality of the health system.

Family Health Card

The Family Health Card was first introduced in Choiseul in 1993 to register all families and provide details to be used to improve Community Health Programs. The card was used as a Passport to get to the family to assess the family's health status, provide relevant health advice depending on the situation and carry out preventive health services. The overall goal is to improve the health and well being of the family and community. The objective of the Family Health Card is to equip nurses on the field of community health nursing through the use of family health card to diagnose family health problems and address such situation at early stage.

Since the pilot in Choiseul, other trials have been conducted in Makira in 2003, Temotu and Guadalcanal Provinces in 2005.

The anticipated outcome benefits of the strategy are:

1. That nurse and patient's relationship will be established
2. Nurse will know each individual family's community health problems
3. Nurse will know high risk, domiciliary cases, under-weights, and any illness that may hinder the health of the family/ community.
4. Patient's personal health needs (privacy) are attended to.
5. Positive inter-personal relationship with high acceptance of health education approach will be achieved.
6. Nurses will know areas covered by means of each individual families, communities, health problems, achievements and constraints. Need for continuous follow-ups and focused attention.
7. Improve household hygiene and sanitation
8. Individual's and family's confidence to the work of the nurse.
9. Improve and raise standard of healthy living of each individual family, community, areas and the province as a whole..

If the family health card can be expanded to the national level, this would provide a vital link between primary health facilities and the community, and population-based data collection.

There is very little true population based data that is currently measured nationally. The Family Health Card program may give a good opportunity for population-based data in the future, but this currently only exists in one province. If this system were to be expanded to all provinces there would be many benefits: the link between health facilities and the community, and the annual collection of population-based data.

Child mortality reporting system

Currently there are inadequate data on the causes of child deaths in Solomon Islands. There is some idea of the numbers and proportion of reported deaths that occur in different age groups, and some disease-specific mortality data from NRH. However these are almost certainly an underestimate of the total numbers of deaths because of systematic under-reporting, and there are no data on the conditions or diseases causing deaths in provinces, or potentially avoidable factors in child deaths. Therefore it is difficult to use these data to plan specific priorities for future interventions. A detailed system of mortality reporting (from *all* health facilities, not just hospitals) will be established. Such a qualitative child mortality reporting system would assist in planning a quality child health service that is responsive to specific local needs.

It is proposed that a small working Group on Maternal, Neonatal and Paediatric Mortality will be set up to coordinate this. This group will receive reports of all deaths of mothers and children and classify them into diagnostic categories, identify patterns of death and decide whether they were potentially preventable or not, and decide what public health, legislative or clinical interventions are necessary to further reduce child mortality. The outputs will be various recommendations to the MoH, recommendations to doctors and health administrators, appropriate feedback to health workers who submitted reports, and an annual report. This will be consistent with, and build on the data collected through National Health Information System.

The reporting form includes questions on pre-hospital care including care seeking behaviour and primary preventative care, transport and referral, initial triage and emergency care, diagnosis and treatment and complications: features that were found to be preventable factors in child deaths in other similar areas.

Once the system is established a Child Mortality Review Committee will review the reports from the provinces, the public policy implications will be discussed, and feedback will be given to health workers in provincial health facilities.

Core indicators and potential mechanism for monitoring

This Plan would require the following information be collected, reported and published annually:

Statistic	Mechanism for data collection
Population based	
Under 5 mortality rate	DHS, Family Health Card+
Infant mortality rate	DHS, Family Health Card+
Neonatal mortality rate	DHS, Family Health Card+, Reproductive Health Monitoring System
Proportion of infants exclusively breast fed to 6 months of age	Family Health Card+, DHS
Percentage of children who are <80% expected weight for age (underweight or malnourished)	Family Health Card+, DHS
Coverage rates for all vaccines	EPI reporting, Family Health Card+
Vaccine preventable disease incidence	Vaccine preventable disease reporting
Proportion of children who are fully immunized children by age 1 year	Family Health Card+, DHS
Percentage of babies who receive Hep B vaccine in first 24 hours of life	EPI program
Proportion of mothers attending 3 or more ANC's	Family Health Card+, Reproductive Health Monitoring System
Proportion of primiparous mothers receiving 2 doses of tetanus toxoid	Reproductive Health Monitoring System
Proportion of mothers having supervised health facility deliveries	Family Health Card+, Reproductive Health Monitoring System
CPR: Percentage of mothers of child bearing age using family planning	Family Health Card+, Reproductive Health Monitoring System
Percentage of mothers delivering who have received bed-nets	Malaria program
Infant blood-slide positive rate	Malaria program
Health facility-based outcome data	
Under 5 CFR	Hospital data*
Neonatal CFR	Hospital data*
Case fatality rates for pneumonia	Hospital data*
Case fatality rates for diarrhea	Hospital data*
Case fatality rates for malaria	Hospital data*
Case fatality rates for malnutrition	Hospital data*
Incidence of military TB or TB meningitis	TB program data

Health facility-based program progress data	
Proportion of hospitals and AHCs in which the Hospital Care for Children training has been conducted	Program information
Proportion of health facilities that have a nurse trained in IMCI	Program information
Proportion of health facilities that have a trained midwife	Program information
Proportion of health facilities with a microscopist or RDTs	Malaria program information

+ The Family Health Card would only provide this population based data if it were expanded across all provinces.

* A system for collecting and analyzing facility outcome data for the country would need to be established.

Tables of program areas

Program area	Aims and timeline	Strategies	Who is responsible?	Financed by	Monitoring: Core indicators	Coverage / current estimate	Reporting frequency
EPI	Universal vaccination coverage	Cold chain upgrade: change to solar panels	National cold chain manager (pharmacy staff)	JICA WHO SIG	Coverage rates for all vaccines		
	Introduce Hib vaccine by 2008	Establishment of new vaccine distribution centres and upgrading of established centres	National EPI manager (RCHD) Provincial EPI manager (nurse)		Vaccine preventable disease surveillance system – AFP/AFR reporting		
		Vaccine quality control	Provincial cold chain manager (pharmacist)		Proportion of children who are fully immunized children by age 1 year		
		Delivery at immunization clinics	RCHD		% of babies who receive Hep B vaccine in first 24 hours of life		
		Catch-up campaign annually					
		Measles SIA campaign (3 rd yearly)					
		Introduction of Hib vaccine					

Program area	Aims and timeline	Strategies	Who is responsible?	Financed by	Monitoring: Core indicators	Coverage / current estimation	Reporting frequency
Hospitals and Area Health Centres	<p>Improve the quality of paediatric care in hospitals and area health centres</p> <p>Coverage of all hospitals with training, implementation of guidelines and system of data collection by end of 2007</p>	<p>Introduction of standardized clinical guidelines:</p> <p>WHO Pocketbook of Hospital Care for Children</p> <p>Standard Treatment Manual 3rd Edition</p> <p>Provincial training program for nurses and doctors</p> <p>Address equipment and drug needs</p> <p>Supervisory visits by paediatricians as part of training strategy</p> <p>Introduce in-patient data reporting</p>	<p>National - Paediatricians IMCI coordinator</p> <p>Provincial – Nurses in children’s wards</p>	<p>WHO SIG</p>	<p>Number of hospitals and AHCs in which WHO Pocketbook training has been done</p>		Annually
					<p>Implementation of reporting of hospital case fatality rates:</p> <p>Under 5 Neonatal Pneumonia Diarrhoea Malaria Malnutrition</p>		

Program area	Aims and timeline	Strategies	Who is responsible?	Financed by	Monitoring: Core indicators	Coverage / current estimate	Reporting frequency
bIMCI	Expansion to implementation in all 9 provinces by 2007	<p>Training: In-service School of nursing Midwifery</p> <p>Graduates of course act as facilitators to address shortage</p> <p>Make IMCI teaching resources available for educational institutions</p>	<p>National IMCI coordinator RCHD</p> <p>Provincial level (Child health nurses and nurse trainers)</p> <p>School of Nursing (Honiara and Atoifi)</p> <p>Nurse-aid schools (Maluu and Helena Goldie)</p>	WHO UNICEF	Proportion of health facilities in each province who had nurses trained in IMCI	<p>3 Provinces: Western pilot area (80%) Honiara town council (80%) Guadalcanal (40%) Choisieul (50%)</p>	Annually

Program area	Aims	Strategies	Who is responsible?	Financed by	Monitoring: Core indicators	Coverage / current estimate	Reporting frequency
Neonatal care	Healthy babies Reduce neonatal mortality and morbidity	Antenatal care	RCHD Paediatricians		Neonatal mortality		Annual
		Supervised health facility deliveries			Proportion of health centres that have a trained midwife		
		Education of midwives (both in midwifery and neonatal care, using the WHO Pocketbook of Hospital Care for Children)			Proportion of hospitals that have a trained midwife on every shift		
		Good quality management of neonatal sepsis (as per WHO Pocketbook)			Proportion of mothers having supervised health facility deliveries		
		Good quality low birth weight care (as per WHO Pocketbook)					
		Neonatal resuscitation (as part of hospital training program)					

Program area	Aims and timeline	Strategies	Who is responsible?	Financed by	Monitoring: Core indicators	Coverage / current estimate	Reporting frequency
Safe motherhood	Well babies and mothers To minimize maternal deaths, and to reduce the neonatal mortality rate	Antenatal clinics: promotion of at least 3 visits for all pregnant women Outreach clinics Tetanus toxoid Intermittant preventative treatment with antimalarials Family planning	National – RCHD Provincial – RH Program Coordinator	UNFPA SIG	Proportion of mothers having supervised health facility deliveries		
					Proportion of mothers receiving 2 doses of tetanus toxoid		
					Proportion of mothers attending 3 or more ANC's		
					Proportion of mothers receiving IPT		
					CPR: Percentage of mothers of child bearing age using family planning		

Program area	Aims	Strategies	Who is responsible?	Financed by	Monitoring: Core indicators	Coverage / current estimate	Reporting frequency
Nutrition	Universal breast feeding for 6 months	Breast feeding and complimentary feeding promotion	National – RCHD National Manager		Percentage of infants exclusively breast fed for 6 months		
	To reduce the incidence of underweight and malnutrition	Breast feeding mothers support groups	Provincial – Health Promotion Department		Percentage of children who are <80% expected weight for age (underweight or malnourished)		
	To introduce universal vitamin A supplementation	Breast feeding and complimentary feeding training for nurses in pre-service curriculum	Provincial - RCHD Program Officer		Number of provinces that have introduced the Family Health Card and conducted annual village visits		
	To ensure that all children receive micronutrient supplementation and albendazole for deworming	Growth monitoring using Family Health Card, annual village visits by nurses, and high risk register IEC materials and training annual School canteen program (Honiara) Enforce breast feeding policy and discourage bottle feeding					

Program area	Aims	Strategies	Who is responsible?	Financed by	Monitoring: Core indicators	Coverage / current estimate	Reporting frequency
Malaria	Reduce the burden of disease from malaria Reduce the incidence of anaemia in children	Free bed nets for every pregnant woman Intermittent preventative treatment in pregnancy Insecticide spraying in high-risk areas Rapid diagnostic testing (RDT) Microscopist at every health facility	Director of Vector Borne Disease Control National drug and therapeutic committee		Percentage of mothers delivering in a health facility who have received bed-nets		
					Malaria mortality		
					Infant blood-slide positive rate		
					Proportion of health facilities with functioning microscopy (microscopes and microscopist) or RDTs		

Program area	Aims	Strategies	Who is responsible?	Financed by	Monitoring: Core indicators	Coverage / current estimate	Reporting frequency
Tuberculosis		DOTS BCG Active case finding: rarely done	National - TB program manager Provincial – Provincial TB officer		BCG coverage		
					Military TB and TB meningitis		
					Proportion of provinces that have implemented DOTS		

Program area	Aims	Strategies	Who is responsible?	Financed by	Monitoring: Core indicators	Coverage / current estimate	Reporting frequency
Family Health Card	To introduce the Family Health Card and annual village visits by nurses in every province	To use the family Health Card for: Growth monitoring Identification of high-risk children Immunization status in all children Population-based data collection of: Rates of exclusive breast feeding at 6 months Immunization coverage	RCHD		Proportion of provinces in which the Family Health Card is implemented		

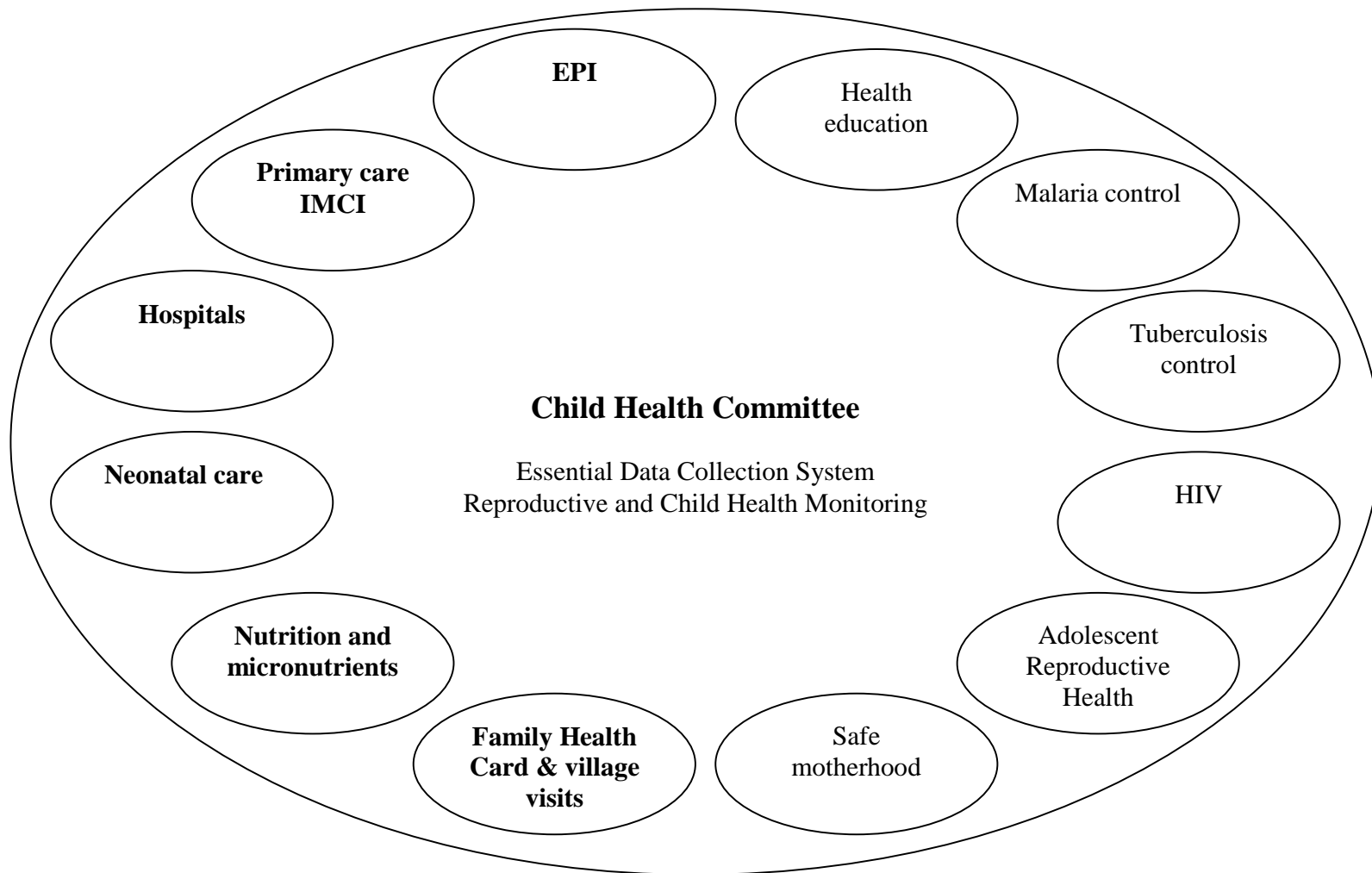
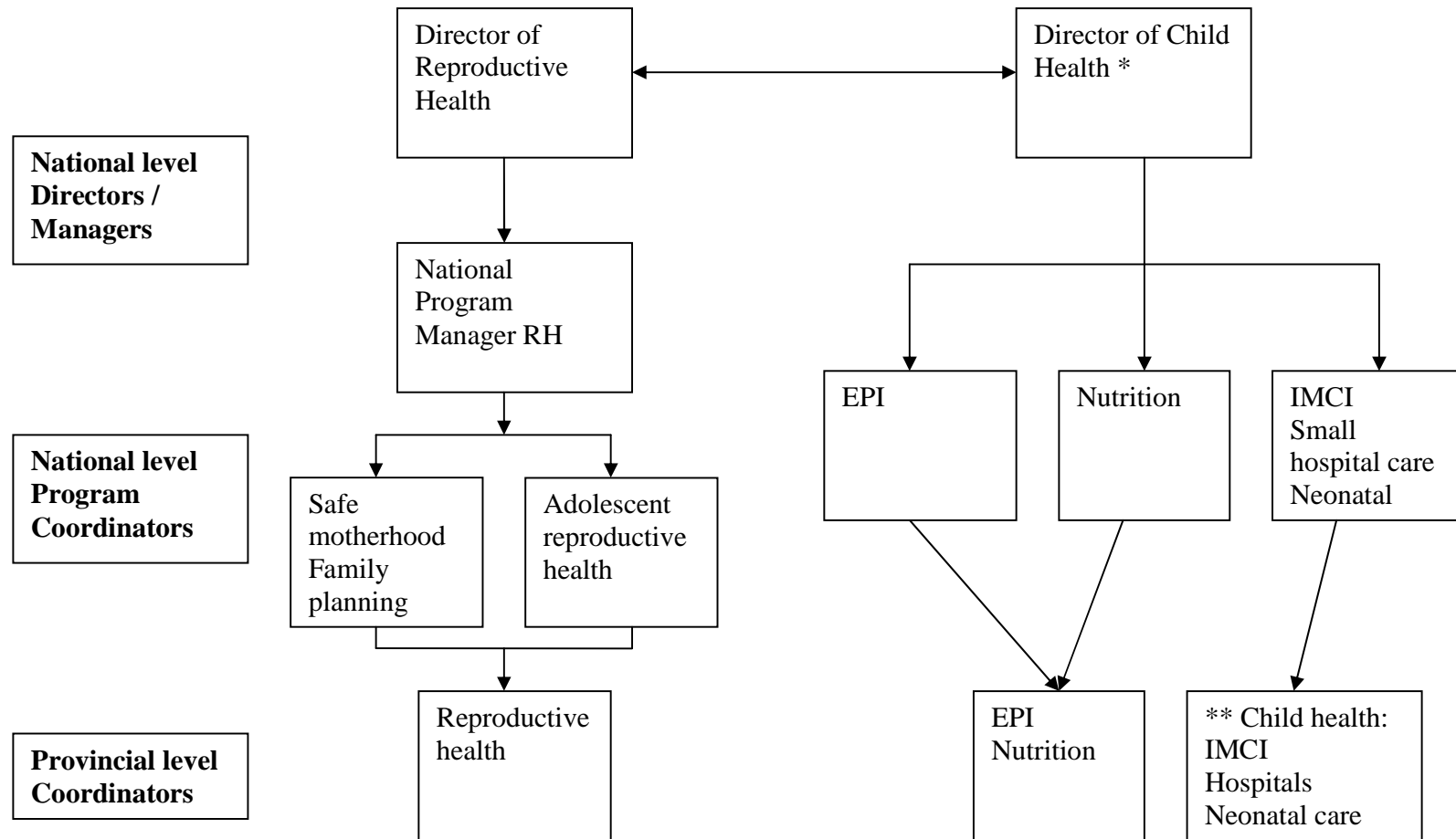


Figure 2. Solomon Islands Reproductive and Child Health

Figure 3. Proposed structure to strengthen child health



New positions:

* Director (or Program Manager) in Child Health. Senior paediatrician with public health experience and capacity

** Provincial Child Health coordinator: Qualified Child Health nurse

Acknowledgements

This Plan was developed in a series of meetings between November 24 and December 2nd 2005. Those who contributed to the development of this document are listed below.

Workshop participants

Dr Junelyn Pikacha, Director Reproductive Health

Dr James Auto, Chief Paediatrician

Dr Divi Ogaoga, Paediatrician and Director, Guadalcanal Provincial Health Service

Dr Titus Nasi, Paediatrician, National Referral Hospital

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Mr Winston Pitakomoki, National IMCI coordinator

Mrs Betty Manehanitai, School of Nursing

Sr Vaine Kuma, Midwifery School, Honiara

Dr Trevor Duke, University of Melbourne and World Health Organization Consultant

We are grateful to the World Health Organization and Dr George Malfoisi (under-Secretary for Health) for support for this process.

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