



Inequity in child health: what are the sustainable Pacific solutions?

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Child health will only improve when local structures are further strengthened, enabled and supported

Most countries in the western Asia-Pacific region have made consistent gains in child survival over the past 25 years (Box 1).^{1,2} Notable exceptions to this positive trend are Papua New Guinea (PNG) and East Timor. Sadly, a static child mortality rate such as has occurred in PNG, where the population has doubled over the past 25 years, means that, in this new century, about twice as many children are dying per year as in the mid-1970s. The health inequities between Australia and its nearest neighbours are many, and breathtaking in magnitude.

In this issue of the Journal, McGain et al (page 687) document 87 deaths from snakebite at Port Moresby General Hospital (PMGH) (the largest hospital in PNG) over a 10-year period.⁴ This hospital serves a population of about 500 000 people. By comparison, throughout the whole of Australia since 1981 there have been an average of 2.6 snakebite deaths per year.⁵

McGain et al point out that lack of antivenom is a major reason for the high mortality, and that the cost of antivenom in real terms is 40 times greater in PNG than in Australia. The reasons for this include a per-capita gross national income that is 2.9% of that in Australia,² price mark-up with privatisation of overseas distribution from Australian suppliers, and an Australian government subsidy for antivenoms sold in Australian hospitals that does not apply elsewhere. It is not difficult to suggest some feasible solutions to this problem: an Australian government subsidy for overseas developing-country purchasers, and/or direct supply from the manufacturer to the PNG Department of Health.

However, snakebite is just one small piece of a very large puzzle of poor child health outcomes in PNG and the Asia-Pacific, and lack of antivenom is only one factor in high death rates from snakebite. Other factors are more systemic: limited access to health services, limitations in the quality of health systems, inadequate manpower, and poor management and financing. These problems are greater in rural areas, where 85% of the population lives; they have a major impact on all causes of avoidable child mortality, and are more difficult to solve than the lack of snake antivenom.

Perspective

At PMGH, for every child who dies from snakebite, more than 50 die from other conditions that have been eradicated or controlled in Australia. In a 12-month period in 2001–2002 there were 238 child deaths at PMGH, of which four were from snakebite. Of 195 deaths in which the cause could be certified, 29 were from measles, 35 from meningitis (about a third of which were caused

by *Haemophilus influenzae* type b [Hib]), 14 from HIV, 7 from tuberculosis, 66 from pneumonia and 11 from acute gastroenteritis.⁶ Throughout PNG, about a third of Hib isolates are resistant to available antibiotics (principally chloramphenicol),^{7,8} and rates of HIV are rising rapidly. The persistence of these infections in PNG despite the existence of effective methods of prevention or control should be a cause for concern and action in Australia as well as in PNG. Two-thirds of all child deaths are associated with moderate to severe malnutrition.

On the role of aid and economic development

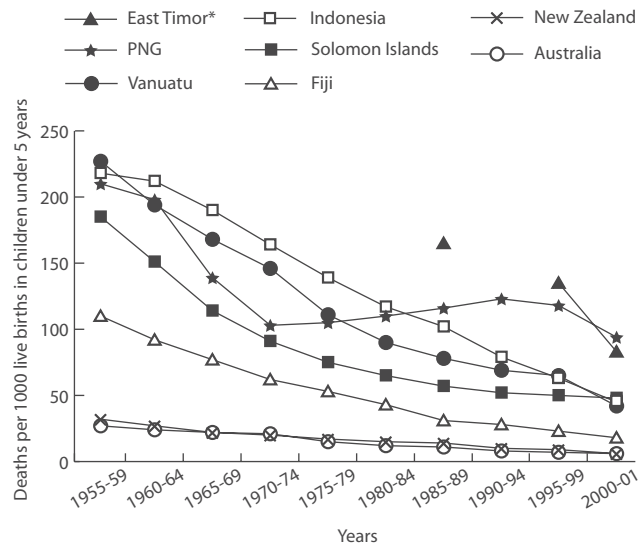
Australia currently allocates \$435 million in aid to PNG (representing 20% of Australia's official development assistance and 0.26% of its gross national income⁹ — far short of the benchmark of 0.7% agreed to by rich nations at the Earth Summit in 1992, and only achieved by Scandinavian countries and The Netherlands¹⁰). Much of Australia's aid is now tied to strengthening law-making and law-enforcement facilities and financial management, but a proportion is allocated to social services (principally health and education).

Aid programs in PNG often find themselves “between a rock and a hard place”. Sustainable development cannot occur in an environment of poor governance. When existing systems are not functioning well, one outcome, sometimes occurring by default and sometimes by design, has been the development or evolution of “parallel projects”, which circumvent existing government structures to achieve a flow of services or information to the periphery. There is a tension between this project approach and the building of genuine long-term capacity (ie, the resources and structures that enable self-sustainability) within government programs. However, if inequity within PNG and between PNG and Australia is to be reduced, aid allocated to social services must be spent in ways that will strengthen local systems so that services reach the most marginalised communities.

One example of this dilemma is the Women's and Children's Health Project, funded by the Australian government and launched in PNG in 1997 (funding will cease at the end of 2004). The project has allocated \$10 million a year to improve child and family health services. Credit must be given for its achievements, such as improvements to the vaccine “cold chain” (previously a major limitation on the quality of vaccines distributed in remote areas) and training and capacity support in some rural areas. However, results have generally been disappointing. Only a small proportion of the aid money has filtered down to the villages and settlements where child mortality is highest. Much has been consumed by large infrastructure costs in Port Moresby. In an attempt to tick off activities as completed achievements, weak and sometimes frustratingly inefficient government systems have often been circumvented using a “parallel project” mentality, rather than taking the much slower approach of working with and strengthening existing local structures.

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1 Trends in mortality in children under 5 years (per 1000 live births) in the Asia-Pacific region over the past 50 years¹⁻³



* In a Demographic Health Survey (DHS) in East Timor in 2003, the mortality rate in 2003 among children under 5 years of age was estimated to be 107 per 1000 live births. Mortality rate estimates from the previous eras, represented on the graph, are also based on retrospective data from the 2003 DHS, so the accuracy of these trends is uncertain. Reliable data from previous years are not available.

public health, research, evidence-based understanding, policy development, advocacy and child health nursing capacity. Australian public hospitals and individual paediatricians have played key enabling roles in this development, and, in turn, their support has been greatly assisted by AusAID through the PNG Medical Officer, Nursing and Allied Health Professional program and its predecessors.

The outcomes are impressive. Locally trained PNG paediatricians now provide services in most of the 20 provinces, and contribute substantially to all areas of public child health, policy and service delivery.¹² The PNG standard treatment manual,¹³ along with the National Government Health Plan, is a blueprint for a quality child health service in a resource-poor setting, and has been reproduced in many other developing countries and in internationally adopted strategies. These advances have only been achieved through the work of vital national child health institutions, the PNG Paediatric Society and the Department of Child Health at the University of PNG, with aid projects providing background support at various stages.

Limiting factors to progress

Despite some successful programs, many activities in PNG have not resulted in health gains where they are needed. Support areas of the health service remain weak: health and human resources management at all levels, drug and vaccine procurement, distribution and stock management, and health financing. Primary care, the most essential form of healthcare in rural areas but the least robust and most vulnerable level of the health service, has suffered the most because of these deficiencies.¹⁴

There needs to be a similar concentration on building capacity and commitment in these areas, improving efficiency, and minimising waste of resources and squandering of funds.¹⁵ The beginnings of progress in some of these areas have occurred. Health management is stronger in some provincial health services and hospitals now than it was 10 years ago, partly as a result of structural reforms and support and mentoring for management capacity provided by the AusAID-funded Health Sector Support Program. More needs to be done, but sustainable change will only occur slowly, tailoring strategies to individual situations — an approach that is at odds with some aid projects, whose designers often propose a “one size fits all” formula for rolling out the latest Big Idea, with little critical evaluation of outcomes.

Equity and conditionality as principles of aid

Conditional aid, as Hughes suggests,¹¹ might be a useful strategy, providing direct funding to carefully selected high-priority areas, with an agreement that certain process milestones will be reached. Potential examples might be Australian government funding of Hib vaccine, conditional upon completion of the national supplemental immunisation activities¹⁶ and achieving coverage of over 80%; or subsidising the purchase of snake antivenom, nevirapine and ceftriaxone, conditional upon improvements in drug procurement and national distribution systems. A further condition to ensure commitment and sustainability would be the understanding that the PNG government would take over responsibility for funding after a mutually agreed period of time. These targeted interventions would have broad benefits to the health service, would enable the implementation of new (to PNG) and highly effective interventions, and would enhance equity within PNG and between our two countries. However, there are some risks with

In a thought-provoking but pessimistic review, Professor Helen Hughes, Senior Fellow at the Centre for Independent Studies, has argued that aid has failed the Pacific nations.¹¹ She believes that aid has created an ambiguity of independence, an environment in which government funds are spent on consumption rather than economic development, elevated exchange rates, and provided fodder for political corruption. These factors, plus high tariffs, have hindered manufacturing for domestic markets and export of agricultural products; reduced employment opportunities, skill development and entrepreneurship outside the government sector; and encouraged dependent welfare states. A partial solution suggested by Hughes¹¹ is to make receipt of aid conditional on achieving certain goals, under an agreement of mutual obligation. This would require removing aid from government budgets, with mutual agreement between recipient and donor countries on its use, mutual monitoring, and disbursement subject to regular account auditing.

Successful examples

Papua New Guinea (PNG) needs human capacity to provide a quality health service. In some areas of endeavour, this has been achieved. The Paediatric Society of PNG is one example of the slow and successful development of indigenous technical and professional capacity. This is a story of committed engagement by many paediatricians over four decades, building on the foundation laid by the late Professor John Biddulph. Progress has been based on the principles of quiet example and mentorship, working together at the front line of healthcare and grappling with everyday problems. In the past decade there has been increasing development of a few subspecialty areas and extraclinical skills, such as

2 Increasing East Timor's capacity to meet its child health needs

The problems of capacity in East Timor are even deeper than in Papua New Guinea (PNG), and the child health system is in a much more embryonic stage of development. Currently, there are no East Timorese paediatricians, which is a major impediment to sustainable progress, local leadership, autonomy and direction. However, collaboration between the East Timorese Ministry of Health, the University of PNG and the Royal Australasian College of Physicians (RACP) will hopefully see East Timorese doctors trained in child health, largely in PNG, with some additional clinical experience in rural hospitals in Australia, over the next 5–10 years. This will provide training in settings that are similar to those of East Timor, foster personal and institutional connections between two developing countries, promote a developing-country university as a regional centre for high-quality specialist training, and minimise the risk of “brain drain” that would exist if specialist RACP Fellowship training were done in Australia.

conditional agreements. The withholding of interventions if conditions are not met would continue to hurt the people who are innocent of any waste or corruption — nurses and doctors who struggle every day to provide good healthcare, and the patients who suffer from the effects of a lack of quality services.

Support should be given to local training institutions rather than aid projects running unsustainable training programs. A portion of the aid budget could be provided to build key areas of capacity by financially supporting individuals or groups committed to collaboration in ways that are appropriate to Melanesian society. AusAID and the PNG Health Department are currently proposing a step in this direction by establishing a Capacity Building Service Centre, which will place more emphasis on engaging locally successful individuals to act as mentors, build capacity, and result in significant changes to external contracting.

The approaches outlined above are complementary and would reduce inequity between Australia and its Pacific neighbours. In some ways, they would be a departure from some current large aid projects, whose economic benefits often spin back to the donor country, and whose resources are consumed by project infrastructure that duplicates government institutions. I can see little place in a country like PNG for health projects that are managed by overseas private consortia. International tendering for health projects in a country that has no structured health management organisations can scarcely improve equity. This model has worked better for some aid development projects, such as road and water supply contracts, in which local engineering companies have won contracts, thus contributing to local development, employment and economic growth. However, the idea that health aid should be corporatised in a country that desperately needs an effective public health system is fundamentally flawed.

No easy answers

There are no easy answers to how Australia can best assist regional countries. Ongoing engagement remains necessary at many levels — between governments, professional societies, institutions, and individuals. Without this there can be no mutual understanding, which provides the basis for progress and is crucial for regional peace. Some of the best examples of success suggest that sustained, quiet and modest-budget collaboration by committed groups or

individuals who treat each other as equals will be the most effective strategy. As yet I have not addressed the problems of child mortality in the worst-affected country in the region — East Timor. A sustained collaborative approach would be of great benefit to this small country (Box 2).

The view of PNG as a “failed state” is wrong. Progress is being made in many areas. Now is not the time for Australia to abandon PNG or our closest Pacific neighbours, but to learn from institutions and areas that have achieved much, to support them to do more, and to tailor approaches to specific situations. Australia also has much to learn from Pacific countries — quiet persistence, patience and a sense of community are qualities that might help us have a more realistic view of what progress really means.

Acknowledgement

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Competing interests

I have previously been a short-term advisor on research on the AusAID PNG Women's and Children's Health Project and a Visiting Lecturer on the AusAID PNG Medical Officer, Nursing and Allied Health Professional project. Between 1997 and 2000, I was employed by the PNG Department of Health as a paediatrician.

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