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## **REGIONAL POOLED PROCUREMENT OF ESSENTIAL MEDICINES IN THE WESTERN PACIFIC REGION: AN ASSET OR A LIABILITY?**

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# REGIONAL POOLED PROCUREMENT OF ESSENTIAL MEDICINES IN THE WESTERN PACIFIC REGION: AN ASSET OR A LIABILITY?

O'neal M. Mendoza<sup>1</sup>

**Abstract:** The international development community considers lack of access to medicines as one of the major factors that contribute to millions of deaths. Although innovative approaches (cost-containment strategies) have been developed to ensure a consistent and sustainable supply, access to essential medicines remains a major public health problem in developing countries, particularly in many countries in the Western Pacific Region. The paper will explore the capacity and potential of pooled procurement in the region. Using Nancy Fraser's strands of social justice and conceptual tools as theoretical foundations, the study employs two sets of methodologies: an examination of the procurement system, political landscape and institutional arrangements of two sub-regions in the WPR (South East Asia and Pacific Island Countries), and the utilisation of a qualitative approach (via "virtual interviewing") to solicit primary data. The study concludes that pooled procurement (in the context of a cost-containment strategy) can serve the interests of developing countries in the region. However, several issues such as administrative costs, lack of political will, and political embargoes outweigh the benefits associated with this strategy. Therefore, the viability of pooled procurement in the region appears to be unworkable at the moment. The study offers suggestions regarding how pooled procurement might have a role to play in the future.

**Keywords:** *essential medicine; access; Western Pacific Region; South East Asia; Pacific; pooled procurement; monopsony.*

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## ***Introduction***

In the midst of increasing concerns on the current burden of diseases caused primarily by communicable and chronic diseases, policymakers continue to search for innovative approaches, as in cost-containment strategies, to ensure a consistent, sustainable supply of essential medicines. The international development community has recognised the issue of access to essential medicines as a critical target to fulfil at least four Millennium Development Goals (MDGs), namely (a) reducing child mortality, (b) improving maternal health, (c) combating HIV/AIDS, malaria and other diseases, and (d) developing a global partnership for development. Target 17 (Goal 8) emphasises the provision of affordable drugs in developing countries by pharmaceutical companies. High prices and non-availability of medicines are crucial factors in the complex mix of why people across the globe cannot afford to get treatment (WHO, 2008). As such, a number of government responses or institutional strategies have been adopted by developing countries.

## ***Cost-containment strategies***

Since the 1970s, government and international institutions such as the World Health Organization (WHO) have addressed the issue of drug supply with support from nongovernmental organisations (NGOs) such as Médecins Sans Frontières, Oxfam, and Health Action International (HAI) by promoting essential drugs programmes. They saw the need to create practical ways in which government policy-makers, essential drugs programme managers, NGOs, donors, and other stakeholders could work together to manage drug supply.

One area they examined was the relationship between revenue generation and cost- containment strategies for pharmaceutical supply systems. Cost containment can be seen as an ongoing series of attempts by governments to spend limited financial resources as efficiently as possible (Rietveld and Haaijer-Ruskamp, 2003). Huff-Rouselle and Burnett (1996) identified reasons why developing countries need to increase revenue and lower costs at the same time. First, after personnel costs, pharmaceuticals are generally the

largest item of expenditure within the public sector's health budgets, ranging from 25%-65% of total recurrent costs. Second, pharmaceutical manufacturing in the developing world is limited to the end stages of the process (such as re-packaging or turning imported finished compounds into tablets, capsules, or liquids); hence, it cannot provide an effective revenue-generating industry (Rovira, 2006; Huff-Rousselle et al., 1996). Third, most of the pharmaceutical products in developing countries are imported and thus represent the health sector's major requirement for foreign exchange. Finally, the increasing demand for scarce financial resources in the public health system contributes to frequent stock-outs and shortages.

These rationales can be seen in a number of cost-containment policy options such as *the introduction of pharmaceutical user fees*<sup>2</sup> (DeFerranti, 1985); *adopting cost-effective medicine selection* (Rovira, 2004; Laing, Waning, Gray, Ford & Hoen, 2003); *compulsory licensing* (Abbott, 2006; Gamharter, 2004; Pang, 2003; Bass, 2002; Correa, 2000); *establishing local state manufacturing* (Rovira, 2006; Kaplan and Laing, 2005); *implementing price control mechanism* (Weissman, 2006; Velásquez, Correa & Weissman, 2002; Correa, 2000; Bloor, Maynard & Freemantle, 1996); *the adoption of international open tendering* (Velásquez et al., 2002; Quick et al., 1997); and *the use of pooled procurement scheme* (Matiru & Ryan, 2007; Tansey, 2006; Velásquez et al., 2002; Huff-Rousselle et al., 1996).

Among the above cost-containment policy options, this research chose to examine the capacity of pooled procurement, particularly the regional pooled procurement scheme. My interest to delve into this area of study is primarily influenced by Tansey's (2006) persuasive argument that developing countries will benefit from pooled procurement efforts for pharmaceuticals because of monopsony power. George Tansey (2006) argued that better market intelligence on drug pricing and supply might strengthen through the use of monopsony power against monopoly power. Monopoly power ensures that companies are able to dictate market prices, while monopsony power fosters

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<sup>2</sup> Although critics claimed that user fees for pharmaceuticals are not a solution in many situations (Huff-Rousselle et al., 1996)

market competition and allows procurement agencies to take advantage of a larger collective group in setting drug prices. Regional pooled procurement, using the concept of monopsony, is one area of the drug supply management cycle that can offer the greatest amount of cost savings (Cohen, Gyansa-Lutterodt, Torpey, Esmail & Kurokawa, 2005; Quick et al., 1997). This strategy, in an ideal sense, can improve the capacity of the public health sector to purchase pharmaceutical products at the lowest possible price, and in the long-run guarantee a sufficient supply of essential medicines.

In addition to Tansey (2006), Huff-Rousselle and Burnett (1996, p. 136) argued that “since procurement is normally centralised, it can be easier to implement than other strategies – assuming there is the necessary political and administrative will.” They also contended that when basic purchase costs are reduced, the cost of other wastage in the supply system is also reduced.

Although pooled procurement at a regional level has been viewed as less popular due to the complexities associated with ensuring continuous regional coordination and commitment from participating countries as a vital precondition for this strategy to function (Quick et al., 1997), this approach has been effectively practised with considerable success in other situations such as the Eastern Caribbean Drug Services (ECDS) (Huff-Rousselle et al., 1996), the Pan American Health Organization (PAHO) – Expanded Program on Immunization (EPI) revolving fund, and the Gulf Cooperation Council (GCC) group-purchasing programme (DeRoeck, Bawazir, Carrasaco, Kaddar, Brooks & Fitzsimmons, 2006). It is evident from these regional initiatives that the practise of regional pooled procurement can yield substantial savings and improvement of medicine supplies.

Given the inefficient and non-transparent procurement process management, regional pooled procurement has been seen as one option that promises better leverage for governments in developing countries (Huff-Rousselle et al., 1996; DeRoeck et al., 2006; Correa 2006; Weissman, 2006; Tansey, 2006). Arguably, pharmaceutical procurement is one of the areas in the drug

management cycle where the public sector can contribute most to improving access to essential medicines.

### **Objectives**

The first objective of this study is to probe the extent to which pooled procurement can be beneficial to the region. The second objective is to identify the existing and possible obstacles encountered before and during the proposed implementation of this strategy. The third objective is to evaluate the viability of this strategy in relation to the current system in place in the region.

Against this background, this study addressed the following question - to what extent can a regional pooled procurement strategy increase or improve access to essential medicines in the region?

### **Methodology**

To examine the above questions, I delved into the politics behind pooled procurement. This exploration was carried out by gathering insights from experts who have a wide grasp of the issue.<sup>3</sup> The viewpoints from these experts provided critical information that explained the compatibility<sup>4</sup> (or otherwise) of pooled procurement through the lens of the current plans of PICs to embark on this emerging approach, and the possibilities of collaboration from other large countries in the WPR such as Malaysia, Philippines, Viet Nam, and other nations willing to cooperate.

I used two main approaches for this research. First, I employed document reviews through textual analysis of policies, legislation, and other important documents on drug supply management, particularly in the area of procurement to countries in the WPR including empirical studies conducted by the WHO. Relevant documents were gathered through the standard process of database searching including library, Internet, and electronic reports from

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<sup>3</sup> Identity of the experts is not mentioned in this research in order to guarantee anonymity.

<sup>4</sup> By compatibility, I mean pooled procurement is relevant not only to medicine policies and health goals and missions at the country level, but also relevant, in an extreme sense, to the country's political interests.

WHO websites. The documents were consequently reviewed and analysed for relevancy regarding content and context. This strategy essentially helped me to familiarise myself with the technicalities and complexity of the issue.

The following diagram shows the themes used in the search for relevant materials. The approach was qualitative rather than quantitative, that is, the number of articles reviewed was not the issue; rather, the thematic approach to the review became critical in understanding the dynamics and complexity of a procurement management system.



**Figure 1** *Cost containment strategies*

Six major cost containment strategies were reviewed.

Cost containment strategies	Description
Essential Medicine List (EML)	<ul style="list-style-type: none"> <li>• Defines the essential drugs selected with due regard to public health relevance, evidence of efficacy and safety, and comparative cost-effectiveness (Laing et.al., 2003).</li> <li>• EML is “divided into two categories: (1) <i>core</i>, defined as efficacious, safe and cost-effective medicines for priority conditions (selected on the basis of current and estimated future public-health relevance and potential for safe and cost-effective treatment); and (2) <i>complementary</i>, defined as medicines for priority diseases</li> </ul>



	<p>which are efficacious, safe and cost-effective but not necessarily affordable, or for which specialised health care facilities or services may be needed”.<sup>5</sup></p>
Compulsory Licensing	<ul style="list-style-type: none"> <li>• Allows for production of (generic) pharmaceuticals without the permission of the patent holder (Correa, 2006). This policy empowers government to compel a patent-holder to license his or her rights to generic manufacturers in exchange for monetary compensation (Bass, 2002, p. 198; Gamharter, 2004, p. 94).</li> <li>• It is stipulated in the TRIPS Agreement, Article 31</li> </ul>
Local State Production	<ul style="list-style-type: none"> <li>• In contrast to importation of medicines, local production pertains to the capacity of any government to develop or maintain local manufacturing industry to increase self-reliance towards local pharmaceutical production.</li> </ul>
Reference Pricing	<ul style="list-style-type: none"> <li>• Reference pricing is a reimbursement or procurement mechanism the third-party (normally the government); payer establishes the maximum ‘reasonable’ price the third-party is willing to pay. The supplier is allowed to set a market price above the reference price if he believes that the patient will be willing to pay the difference. It is also a pricing system when decision to include or exclude a product from public</li> </ul>

<sup>5</sup> Quoted by Laing et.al., (2003) from WHO 2002. *Report on the 12<sup>th</sup> Expert Committee on the Selection and Use of Essential Medicines*. Geneva: World Health Organization

	reimbursement depends on its price level (Lopez-Casasnovas & Puig-Junoy, 2000).
International Open Tendering	<ul style="list-style-type: none"> <li>• A “formal procedure by which quotations are invited from any manufacturer or manufacturer’s representative on a local or worldwide basis (Velásquez et al., 2002).</li> </ul>
Pooled Procurement	<ul style="list-style-type: none"> <li>• An agency negotiates prices and selects suppliers on behalf of a group, which in the case of the health sector, may be health facilities, health systems or even countries (Quick et al., 1997).</li> </ul>

**Table 1** *Experiences in regional pooled procurement*

After defining and gaining an understanding of the above cost containment strategies, I focused on the capacity of pooled procurement because it appeared to have potential for ameliorating some of the cost containment concerns described previously. Three cases that met considerable success in improving access to essential medicines through a pooled procurement scheme were selected for analysis. Although these cases focused on regions other than the Western Pacific, they offered insights into the experiences of organisations actively engaged in the regional pooled procurement process.

Eastern Caribbean Drug Services (ECDS)
Pan American Health Organization (PAHO) – Expanded Program on Immunization (EPI)
Gulf Cooperation Council (GCC)

**Table 2** *Pooled procurement in the WPR*

To examine pooled procurement in the WPR, I identified key informants, knowledgeable of the topic and focused in the field of pharmaceutical

procurement. My consultations with these key informants provided an understanding in regards to the viability of pooled procurement, while recognising other alternatives that might be appropriate for developing countries in the Region. The interviews were carried out using information technology. I employed real-time chatting using SKYPE (Sky peer-to-peer) and emailing using the university webmail service and my personal account. The use of both approaches (chat and email) was unplanned. They were a result of tailoring the research strategy to the convenience of my respondents. My original plan was to conduct face-to-face or phone interviews, but instead, virtual/online interviewing became more practical. I call such a data gathering method “virtual interviewing”, and given the monetary and time constraints under which I was working, it proved to be a useful tool in soliciting valuable insights from experts located in different parts of the region. However, I am aware of some of the potential contaminants when such an approach is used. For example, respondents have the option of consulting superiors before responding to a question. If such consultation takes place, answers may reflect official policy rather than personal judgement.

The seven experts and practitioners who were interviewed were selected through a posted invitation to participate on the E-DRUG website. The set of respondents were composed of a supply and planning specialist, tender specialist, a consultant to the WHO, a consultant to one of the international procurement agencies, and a director of a pharmaceutical company (supplier). My respondents’ voluntary willingness to share their perspectives contributed largely to address the above research questions. Respondents’ names are not mentioned in order to protect identities and guarantee confidentiality. Clearly, these respondents do not represent a random sample; however, they possess unique knowledge of the situations in their regions, especially within their areas of responsibility, and thus are considered key informants.

	Description of the respondent	Date of the interview
A	Planning and Tender Specialist in one of the Pacific Island countries	17 August 2009 2 September 2009
B	Senior Pharmacist, Ministry of Health (outside the WPR)	17 August 2009
C	Senior Technical Advisor, Supply Chain Management System	2 September 2009
D	A correspondent from WHO South East Asia Regional Office	18 August 2009 4 September 2009
E	Previous Chief Pharmacist associated with a group purchase programme in the South Pacific	20 August 2009 24 August 2009
F	A correspondent working on a multi-country programme funded by Global Fund	22 September 2009
G	Practitioner who was involved in group contracting regional procurement in the East African Community (EAC)	4 September 2009

**Table 3** *Respondents list*

### ***Social justice as an analytical benchmark***

To situate the issue of access to essential medicines in the wider context of development, Nancy Fraser's framework of social justice was used. Fraser's theoretical framework was critical in identifying the obstacles (or "injustices") to pooled procurement, which could be referred to as injustices to access to essential medicines. This framework also served as an appropriate tool to evaluate cost containment programmes (in particular reference to pooled procurement) or, in Fraser's term, mechanisms that would mitigate obstacles to parity (or "justice") to access to essential medicines. In the context of development, I argue that the claim for social justice is similar to the aim of achieving the cause of development, which in this case, development can be

defined as the fulfilment of all health-related goals in the MDGs. Hence, Fraser's framework of achieving social justice is appropriate as a tool for examining development initiatives.

My analysis built upon these arguments, and it extended Fraser's concept of social justice to the area of pharmaceutical governance and regional integration. As Fraser explained, the nature of social injustice in a globalising world is not territorial in character (Fraser, 2005). The involvement of global health institutions provides important roles in the implementation of programmes that could help generate and disseminate health care to remote areas that are deprived of affordable medicines. International institutions are expected to partake and contribute to resolving this issue because the scope of this problem has extended outside the capacity and capability of national and local governance. This perspective is in contrast to the claims of those proponents of conventional social justice doctrine, wherein the territorial state is the appropriate unit within which we can pose and resolve disputes about justice. In the same way, the social justice component of access to essential medicines can also be reframed away from the classical view of justice and be extended to the area of international governance. Thus, programmes designed to improve access to essential medicines, such as cost containment strategies, should not be viewed as the sole responsibility of national or local governments.

In brief, Fraser's concept offers a compelling analytical framework for understanding how pooled procurement as a cost containment strategy impacts the WPR's access to essential medicines, either favourably or negatively. This research was able to distinguish if such impacts of pooled procurement are favourable (asset) or merely a liability through the insights shared by a number of respondents who have been involved in pharmaceutical governance.

### **Results**

Before I examined the issues that confront the WPR in relation to pooled procurement, I gathered general perceptions of my respondents (also referred

to as 'experts') to pooled procurement. In particular, I asked about the advantages of and disadvantages of pooled procurement. Although many reports/literatures are published regarding the capacity of pooled procurement, there is no consensus among experts that such a strategy could deliver a desired result, particularly in improving access to essential medicines. Therefore, it is appropriate to solicit direct insight from experts.

#### *Advantages of pooled procurement*

All respondents believed that pooled procurement is part of the solution to improving access. A practitioner who was involved in group contracting regional procurement in the East African Community (EAC) claimed that pooled procurement usually results in lower offered prices because manufacturers are able to spread the fixed costs over a large volume of product, thus decreasing production costs. From a supplier's point of view, pooled procurement also is attractive because it would streamline workload and complicated procurement processes in each country. As such, it could offer better prices against higher volumes. Manufacturers' and traders' mark ups can be reduced as long as the size of the market is assured.

Non-financial benefits were also identified. In fact the majority of the benefits discussed in interviews focused on non-financial aspects. First, pooled procurement was seen as mainly advantageous to countries with limited purchasing power. Because price is frequently a function of volume, a higher volume should give a lower price. The cases of Fiji and Tuvalu were raised as cases in point. Fiji has a large purchasing power, but Tuvalu's annual requirement is equivalent to a small health centre in Fiji. Tuvalu will significantly benefit from Fiji's purchasing power. However, not all the lines that Fiji procures are in high volume. Anti-cancer drugs are purchased in small quantities, for example. It is estimated that at least 50 per cent of their requirements would be low volume. Here, Fiji can benefit by pooling other countries' requirements in obtaining a better price. In brief, apart from obtaining a better price, in general, it should be noted that the main advantage of pooled procurement is to improve the purchasing power of developing countries, or as I argue, building the political leverage of weak/poor countries.

Another major non-financial benefit is standardisation in quality standards. Currently, each country has its own quality standards for pharmaceuticals. These diverse standards could be harmonised into one, and smaller countries would benefit from the better staffing resources and technical capability of larger countries to improve the standard of their own drugs. Maggie Huff-Rousselle, who conducted a study on the ECDS in 1996 and a feasibility study on PICs in 2006, argued the same point. She contended that given the increasing risk of procuring substandard or counterfeit pharmaceuticals, preventive quality assurance represents an advantage of pooled procurement equal to obtaining a good price (Huff-Rousselle, 2006).

Lastly, pooled procurement advances a decrease in the number of purchase points from multiple small buyers to a centralised tendering facility. This arrangement can dramatically shorten lead times when the aggregated funds are used to commit to multi-year tenders. This positive factor is particularly appropriate in the case of PIC's national procurement system, wherein experts expressed many concerns about long lead times and frequent stock-outs that typically cause interruptions in the medicine supply chain.

The issue of long lead times is also prevalent in countries where procurement of medicines is decentralised to each level of local government, as in the case of the Philippines. Long intervals in the supply, usually quarterly intervals based on purchase requests, and the delayed arrival of medicines are among the main problems of lower level public hospitals under local government units (LGU) (Higuchi, 2009, p. 83).

Having no coordinated procurement mechanism creates an uncertainty in medicine supply. One of my respondents emphasised that a pooled procurement approach, particularly in the inter-country set up or in a regional context, would ideally solve the issue of supply by shortening lead times in procurement and the delivery of purchased drugs. Through pooled procurement, suppliers subsequently have better visibility into the demand of the buyer and can align production cycles with demand.

### *Issues concerning pooled procurement*

Based on the interviews, four major issues were identified that need to be resolved before plans for pooled procurement can be developed. These are (1) the nature of governance; (2) the issue of problematic institutional arrangements; (3) the issue of 'uncompromised differences'; and (4) economic and other costs.

#### *1. Nature of governance*

Respondents agreed that corruption, along with the issue of political transparency in the public sector procurement process, remains a major part of the problem. My conversation with the experts indicated that this political nature became the target of pharmaceutical companies because it gave them more room to control the market. For instance, suppliers potentially have great influence on under-paid government workers. The corruption results in selling sub-standard products at the cheapest price to charging a few pennies more for each package when thousands of packages are being procured. Huff-Rousselle (2006) verified this relationship and exposed that the influence can begin subtly with the offer of trips to foreign conferences, and it can burgeon over time to something large-scale. The result of such favours is the potential for sub-standard or counterfeit drugs at inflated prices.

One practitioner revealed the status of procurement system in Viet Nam, which is a clear manifestation of poor governance, particularly a lack of transparency in the pharmaceutical sector. There is no central government procurement for medicines in Viet Nam. Provinces, districts, and hospitals have their own budgets for in-hospital medicines use only. They have a dispensing pharmacy in public hospitals for outpatient use with controlled prices. The hospital must have a yearly bidding or tendering process, but often "deals" are made during the bidding process. The Chief Pharmacist normally can make good money on the 'kickbacks'. Therefore, there is no financial incentive to obtain lower prices.



Besides Viet Nam, the Philippines is also known for such practices. The prescribing doctors receive a fee for each prescription from the manufacturer; therefore, there is an incentive to write prescriptions. This practise too works against open and clear competition (Higuchi, 2009). Moreover, drugs are only known by brand names, which means that generic names are seldom used. Despite the presence of stringent legislation, prices of brand name drugs and even generics are above the international reference price ("*Cheaper...*", 2007).

These situations show that within the health sector a lack of transparency seems to be prevalent. This problem is happening within the government bureaucracy. Furthermore, it is embedded in the culture of doctors who attempt to get large amounts of money out of each prescription. In general, because most public hospitals in developing countries in the region (as in the Philippines and Viet Nam) have insufficient medicines, patients tend to obtain them from outside pharmacies. And because doctors are paid for prescribing expensive brand names or locally manufactured medicines, they do not write prescriptions for cheaper generic equivalents. As a result, patients pay more for medicines than necessary.

The above situation is also evident in the case of the PIC's. They are known for their reputation for questionable government practices, although not exclusive to the health sector. As such it is difficult for all participating islands to have confidence in any multi-national procurement system (Huff-Rousselle, 2006).

## *2. The issue of problematic institutional arrangements*

The current supply management system makes it hard to consider a new strategy due to the type of institutional arrangements that exist in developing countries in the region. In conversations with experts, one of the major contestations discussed was the capacity of governments in developing countries to handle the pooled procurement scheme because of the current procurement system in place.

In the case of large countries in the Southeast Asia region, the procurement system is complicated. The presence of deregulated and decentralised schemes is deemed to be a liability, as explained above in the case of the Philippines. It was argued that it is not cost effective to procure medicines at the provincial or municipal level. The current management process has effected a system that transfers the responsibility to institutions, as in municipal/local government units, that are technically not equipped to deal with the complex procedures of procurement. As a respondent explained, a decentralisation scheme can be seen as projecting an escape mechanism for a government that tries to minimise its responsibilities and transfer them to the local units. If this system continues, it allows manufacturers to sway deals to their advantage.

Furthermore, procurement of drugs, particularly importation, is cumbersome and involves many difficult steps. It was disclosed that for a single project in Viet Nam the responsible agency had to employ three specialists while contracting with one of the government-importing agents just to get the permission and proper paperwork for the purchase. For any donation over US\$200,000, the Prime Minister's signature is required.

For small island countries, it is easier to implement a pooled procurement scheme because their procurement systems tend to be centralised. However, the dilemma identified was whether PIC's would be better off with the 'public' handling the proposed pooling strategy or would it be better if it were with 'private' hands. One of the respondents who worked in PIC's said that the current public procurement system is not giving governments sufficient leverage to obtain reasonable drug costs. He maintained that the public sector could hardly manage pooled procurement due to various management problems. Achieving discounts is just part of the chain, delivery of drugs (including warehousing) is another component. Many of the advantages gained through negotiated price reductions may be lost due to management inefficiencies. Some respondents argued that it is better to give the procurement process to private sectors that are more competent and possess better resources. However, one respondent strongly believed that the

procurement process should always be in public hands, especially in situations where there are no systems to register drugs.

### *3. The issue of 'uncompromised differences'*

My interviews revealed three major differences/issues that were considered as difficult to resolve. Such 'differences' were also regarded as one of the causes that restricted pooled procurement implementation in the region. Foremost is a loss of sovereignty due to the collaborative nature of pooled procurement. A respondent, who worked in Fiji for years and observed Fiji's trade relationships with other Pacific islands, commented that governments in the PICs may feel tied down to the system or scheme proposed by pooled procurement and may not have the flexibility to operate independently. It was also revealed that even Fiji would be concerned about its sovereignty if the country was not going to be driving the process. At this stage, Fiji is considered to be the 'host' country when the pooled procurement scheme is implemented in the PICs. Fiji Pharmaceutical Services (FPS) developed a bulk-purchasing scheme that includes small island countries. FPS established a commercial relationship among PICs. Hence, according to one respondent, removing from Fiji the capacity to house or manage the supply of medicines among its neighbours would be a major concern for them.

Although, according to another respondent, it is nearly impossible for those PICs to accept that they will be handing over some of their decision-making powers to an external body, public health officials must recognise that they alone cannot handle the technical complexities of the pharmaceutical industry; thus, regional cooperation is indeed necessary and beneficial in the long run. 'Sovereignty' should accede to healthcare needs, especially if requirements involve technical expertise that a national government is unable to manage. Besides the issue of sovereignty, a respondent raised the issue that countries in the Pacific may have a belief that supply relationships with particular companies or countries, built over the years, will come to an end when pooled procurement is implemented. For instance, Samoa and the Cook Islands may wish to purchase their requirements from New Zealand because this country is where traditional relationships lie.

Lastly, another uncompromised difference in the region is the attitude of jealousy over the choice of host for the pooled procurement centre. The natural choice for a host country will be one with good shipping services and technical management skills, such as Fiji. The presence of FPS places Fiji in a good position to manage the entire system. Small countries, particularly the Solomon Islands, are not amenable to this arrangement. They are not comfortable having Fiji host another regional cooperation given their prior experiences. Fiji has been viewed as having an advantage every time it hosts any trade agreement. In the case of pharmaceutical procurement, a consideration is that if the products are coming from Fiji, it is inevitable there will be extra costs incurred from distribution, freight, and shipment expenses for other countries. This situation is considered unfair to those smaller countries that live farthest from Fiji. They viewed that such an arrangement would only benefit Fiji, not smaller countries. On the other hand, Fiji is hesitant to move the centre to another country, as it would incur extra costs to its local distribution/transportation system. Further, Fiji does not appear to be amenable to having its dominance removed.

It is due to such dilemmas, one of my respondents suggested, that Fiji and the Solomon Islands have the option to set up independent procurement systems, rather than pooling with other Pacific Island nations. Alternatively, because one is located in the North Pacific (Solomon Islands) and the other in the South (Fiji), according to Huff-Rousselle (2006), their physical location could be an argument for each country being the physical base for the administration of a separate pooled-procurement system. She suggested that the issue of jealousy and freight expenses could be resolved by establishing separate systems.

Large countries in South East Asia may face dilemmas similar to those described above. Although there have been no imminent plans for adopting a pooled procurement scheme, the “host” country would benefit much from this scheme. However, an official in the WHO-WPRO suggested ways to resolve this issue. For example, financial incentives and other arrangements can be

instituted that could either waive transportation/distribution costs or lessen the costs, if such were to become a major issue.

#### *4. Economic and other costs*

A number of additional costs were identified. They were considered to be minor obstacles yet crucial in actualising the potential of pooled procurement and making sure it functions properly. As mentioned previously, the choice of a pooled procurement centre would add additional freight for non-host countries. These costs can be significant as, unlike the other pooled procurement examples (i.e., PAHO and GCC), the countries in the Pacific are geographically distant from each other. Islands of the Eastern Caribbean are located in one tight arc that covers a few hundred miles, and only a few of the countries consist of more than one inhabited island. By contrast, the nine PICs are distributed across the North and South Pacific, and some individual countries consist of hundreds of islands. Additional costs due to geographical distance are deemed by some experts to outweigh the benefits gained through pooled procurement.

The difference in currencies in the region might also add a complication. As part of a pooled procurement scheme, participating countries would agree to establish a centralised procurement agency that could assume the central bank's functions in managing drug accounts for each country and paying suppliers for shipments made to countries under the central agency's contracts. However, a complication would be that, in the case of PICs, there are seven different currencies among the nine countries. Some of these countries have a lack of fiscal stability, which is made manifest by the devaluation experienced in the recent years. As such, it complicates their ability to be dependable client countries for a multi-national procurement agency, and this situation causes difficulty regarding the agency's ability to manage them as client countries (Huff-Rousselle, 2006).

In addition to the issues described previously, one of my respondents commented that volume, as created by economies of scale, does not necessarily affect price. For example, a sustainable payment scheme plays a

vital role in the case of East African Community group procurement, a situation that showed efficient payment mechanisms or rapid payment in foreign currency provides a beneficial impact on offered tender prices, particularly when the cost of capital (i.e., interest rates) is relatively high.

## ***Discussion***

### *The future of pooled procurement in the WPR*

The above discussion illustrates the pluses and minuses of pooled procurement in the region. Respondents' insights identified promising benefits both to the South East Asia sub-region and the group of Pacific Islands. However, such an arrangement is complicated and difficult to carry out, as this scheme needs to face the challenging political and economic uncertainties in the region.

#### *A. The case of South East Asia group*

To date, there have been no recorded meetings or announced plans among South East Asia countries, including Malaysia, the Philippines, and Viet Nam, to enter into a procurement cooperation scheme. Most respondents believed these countries would not be interested in entering into a pooled procurement scheme. As in the case of Viet Nam, a respondent mentioned there are no financial incentives for Viet Nam medical professionals, including doctors and pharmacies, to enter into any regional pooled procurement arrangement. No one in the government would be interested in making it work because there is no centralised procurement of medicines except for the TB programme. Historically, the Vietnamese government decided not to create a centralised procurement programme. The Ministry of Finance, in particular, is against any centralised procurement, even to the centralised system of HIV/AIDS medicines of The United States President's Emergency Plan for AIDS Relief (PEPFAR) programme.<sup>6</sup>

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<sup>6</sup> The U.S. Government (USG) works in partnership with the Government of Vietnam, as well as international organizations, community- and faith-based organizations, and international and local non-governmental organizations to implement comprehensive HIV prevention, treatment, and care programs in line with the National Strategic Plan (Refer to PEPFAR's webpage at <http://vietnam.usembassy.gov/pepfar.html>, retrieved 27 January 2010).

Moreover, privatisation and decentralisation of public health sectors, evident in countries such as the Philippines and Malaysia, create a significant barrier for these governments to even consider pooled procurement. Such countries may prefer their sources to be suppliers instead of relying on external manufacturers. Naturally, a country with a large pharmaceutical market desires greater involvement of its manufacturing industry as an exercise in developing local capacity towards the final goal of the country creating self-sufficiency in essential drugs.

Some respondents were also concerned that there would not be sufficient economies of scale to be derived from pooling. Large countries have sufficient markets as private pharmaceutical companies are established there. A large population offers a positive market environment for multi-national companies. Moreover, governments exert less control or influence over prices of medicines because they are fully dependent on the manufacturers. In Malaysia, manufacturers, distributors, and retailers are given the right to set prices; government has no control over pharmaceutical prices (Babar, 2006). Clearly, such a political set up would be a major stumbling block for a regional pooled procurement scheme.

#### *B. The case of Pacific Island countries*

Exploring pooled procurement of pharmaceutical medicines has been a long-term plan of the Pacific Island countries and areas, based on the recommendations of the meetings of Ministers and Directors of Health for the Pacific Island countries held in Yanuca Island, Fiji (March 1995), Rarotonga, Cook Islands (August 1997), and Palau (March 1999). An outcome of these meetings was that officials recognised quality improvements and availability of medicines in PICs could be achieved through a pooled procurement scheme. In March 2007, the WHO- Regional Office for the Western Pacific (ROWP) convened an informal consultation on pooled procurement of pharmaceuticals for PIC's. The sessions were attended by health officials from Fiji, Samoa, Solomon Islands, and Tonga. Participants concluded that the establishment of

pooled procurement scheme was crucial for ensuring the availability and affordability of good quality essential medicines.

Meanwhile, Ms Dardane Arifaj, a WHO Consultant in collaboration with counterparts, conducted a feasibility study from 17 March to 12 April 2007. She defined the potential savings and costs for pooled procurement and recommended the most feasible and cost-effective options for a pooled procurement scheme and the requirements to pursue the scheme in interested Pacific Island countries.

Three options were considered<sup>7</sup>:

1. Explore and expand the ongoing Fiji Pharmaceutical Services Centre bulk purchasing scheme collaborating with Small Island States as equal partners using the central contracting and purchasing model, i.e., Organization of Eastern Caribbean States;
2. Establish a new pooled procurement scheme with the participation of other bigger Pacific Island countries using the group contracting model, i.e., the Gulf Cooperation Council; or
3. Create a hybrid model of the above two options.

Consultations were held among chief pharmacists of the PICs during a workshop in Tonga (2007) and Fiji (2009) to consider the proposed models. Group contracting was the favoured option. The 'group contracting' model was also proposed for the procurement of petroleum commodities in PICs, and it was promoted by the Pacific Islands Forum Secretariat as the model for the procurement of all other commodities at the regional level ("Pooled procurement...", 2009).

The idea of pooled procurement in PICs was well regarded by some respondents in the survey. According to them, regional pooled procurement in PICs makes even more sense because the demand volume of individual countries is so small that by aggregating orders some degree of scale can be

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<sup>7</sup> For reference, see 'Feasibility... 2008'.



achieved. Product is often prone to delay due to geography when there are multiple consignments coming from multiple suppliers. Hence, pooled procurement has practical advantages for the region.

Despite these seemingly positive initiatives, there was a counter development in the PIC's ministers' meeting in Madang, Papua New Guinea in July 2009. The idea of pooled procurement was dismissed, along with any other ideas of 'harmonisation'. As an example of such concern, there were reservations expressed about endorsing Phase I (harmonisation and standardisation)<sup>8</sup>. It was accepted that there is a need for further consultation for improving the procurement and supply chain management system in each PIC. The only problem was they did not think that pooled procurement would be the best solution. Health officials believed that it interferes with sovereignty. The meeting was considered politically sensitive, and there have been limited sources of information available to further investigate this issue. No official report has been published about this meeting.

In reference to this meeting in Madang, there were points made by a respondent as to the nature of the salient issues that emerged over the years of meetings and investigations. First, it has been found that even with the total quantity of pooled needs, the quantities are so small there is no economy of scale and little hope of savings. Second, if everything is shipped to Fiji, there is still the expense of shipping to individual PIC's. Third, not everything could be bulk procured, so the PIC pharmacists would have to carry out double procurement activities. Fourth, it would be hard to get the finance departments in PIC's to coordinate their release of finances. Fifth, the operation would require a dedicated staff and operations to coordinate it in Fiji, which would require additional funding.

Against this background, it is not surprising to hear a respondent say "this has been on *[the]* agenda for many many *[sic]* years and has never materialized

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<sup>8</sup> Phase I – Preparatory work to address precondition (standardisation and harmonisation)  
Phase II – Establish the scheme and define procurement procedures  
Phase III – Implementation of the scheme: First Group Contracting

and frankly, should just drop off the agenda...pooled procurement will never be successful.” To quote another respondent, regarding the Madang meeting, “[pooled procurement] seems like it’s dead in the water to me.”

At this stage, the future of pooled procurement in PICs appears bleak and uncertain. Obstacles to success are not seen as challenges but instead are accepted as insurmountable, at least by current governments. The concerns relate to practical matters, as described above, and advocates must take these issues seriously. Although there are a few individuals who value the notion of pooled procurement, they tend to represent neither officials in power nor do they constitute a strong voice of practitioners (e.g. pharmacists). Thus, for advocates, the question becomes what must be done to demonstrate the possible significance of pooled procurement.

### **Conclusion**

#### *Pooled procurement: an asset or a liability?*

Although most respondents were favourably inclined towards the positive impact of pooled procurement, they were not fully convinced about its application in the region. For them, it can be an asset if it works, no question about that. The key assertion these experts made was that it will not be a liability if well designed and received. Unfortunately, no one described a vision of this well designed and received model. Furthermore, some experts asserted there is nothing wrong with the current cost containment strategies; hence, their belief is that modifications to the system are not required. Other respondents claimed that pooled procurement is not necessary to change the situation. The status quo does not need a new mechanism, just refinement. For an advocate of the pooled procurement approach, these tepid or nuanced responses are discouraging.

At the conceptual level, pooled procurement can be defended as an asset in providing cheaper drugs as well as enhanced access to these drugs. However, looking at the current political and economic landscape of the region (developing countries in particular), many persons in either positions of power or those engaged to carry out policy view this strategy as a liability. I

inferred from interviews and the academic literature that the nature of this liability can be viewed in four dimensions. First, it will disrupt the current procurement system because it involves restructuring management processes. Second, it will require participating countries to commit an advance of approximately one-third of their annual drug budgets; substantial capital needs to be invested to cover operating costs through an initial period (Huff-Rousselle 2006). Third, implementation of such a strategy can be an added burden to developing countries. It is important to remember that there are already traditional policies in many PIC countries, and the 'culture of existing procurement' may impede new policies. A new system could bring more complications, and there is no assurance that it would be successful. Fourth, there has been political tension among some of the countries in PIC. Adopting pooled procurement may foster an additional contention or, at worst, incite hostility among countries. A portent of such a situation may be seen in the case of Solomon Islands and Fiji. The former is not amenable to another Fiji-controlled scheme that could result in further political and economic insecurity.

A comment from a practitioner who worked in several PICs said that even if the political will is present, the costs of freight, administration, and political adjustments would outweigh the benefits of consolidation; aggregation is not seen as significant enough across a wide range of products even though vertical programmes such as UNFPA (United Nations Population Fund), UNICEF, GAVI (Global Alliance for Vaccines and Immunisation), and others are already doing this for their respective areas of interest. Many developing countries in the region appear to prefer to work on the status quo instead of creating another system that may not succeed.

The situation is more complicated than expected. Despite the promising short and long term benefits, pooled procurement is considered a liability at this stage. Respondents, although not all, are divided in saying that pooled procurement might not happen in the region. The future is indeed bleak for pooled procurement. In conclusion, based on the discussion above, I infer that the extent in which pooled procurement can be beneficial in improving access

to medicine is dependent on how well the abovementioned obstacles are dealt with. Currently, it seems that obstacles outweigh benefits.

***Beyond the not-so-promising future***

Against this seemingly unfortunate scenario expressed by respondents, I argue a couple of issues need to be addressed. Although the existing system appears to making progress, and the status quo seems reasonable, at least in the view of the protagonists, I contend that such is not sufficient to produce a long-term, sustainable public supply of medicines. The attitude of those who believe that pooled procurement is a mere invasion of their sovereignty, or indirectly clashes with their personal, economic interests, clearly demonstrates an unfortunate attitude towards promoting public health. Certainly, I cannot generalise hastily on each country's health policy decisions, as the issue of medicine access is multifaceted. However, I believe that regional cooperation through pooled procurement is one of the most advantageous strategies that can be adopted, particularly for those who have difficulties in managing drug supply and have a lack of purchasing power vis-à-vis big pharmaceutical companies.

What can be said with confidence, however, is that if health officials/ministers in the region recognise the potential of such a strategy, the region will be better positioned when it comes to purchasing power towards manufacturers and will be better off in fixing some of its management failures. This possibility of regional collective action among Western Pacific countries posits a better option to counter the expensive costs of drugs, advances the roles of national governments to participate effectively in increasing people's access to essential medicines, and promotes a regional, integrated system that warrants just and equitable cost of essential drugs to everyone.

Furthermore, to go beyond the rhetoric, it is clear that there are areas requiring further research in the subject of pooled procurement. By doing so, such research may provide a favourable ground for pooled procurement to be reconsidered by the governments in the WPR. A useful study would be to focus on the advantages and disadvantages of pooled procurement alongside

other strategies. Many of the experts' opinions in this study centred on problems with pooled procurement, especially considering the political situations in which they worked. Although it has not been proven, it can be argued that such fusion could actually resolve a number of loopholes in current cost-containment strategies. With knowledge of some of the real world realities surrounding drug procurement, it may be possible to devise a small-scale study designed to circumvent these problems, and test these notions against existing practises. For example, one important drug, used in all PICs could be selected as a candidate for a pooled procurement approach, one that would be followed closely to reveal problems as well as promise.

I return to a position described early in this study. Pooled procurement has potential for ameliorating some of the problems faced by PIC nations in obtaining and delivering drugs. My reasons are summarised here, both as suggestions for practise and research. First, pooled procurement has the potential to mitigate the rising cost of newly discovered, patented medicines such as Haemophilus influenza type B (Hib) vaccine, anti-retroviral drugs for HIV/AIDS and newer generation of antibiotics. Although compulsory licensing is one of the immediate mechanisms to reduce prices, it is criticised in the sense that not all developing countries have the audacity to challenge big pharmaceutical companies. In a regional pooled procurement approach, governments need not to undergo the rigour of granting compulsory licenses as it will be the responsibility of the regional procurement agency. Such an arrangement basically saves them from a hostile relationship that compulsory licensing could incur. However, as compulsory licensing operates in a national context, there would be a legal challenge as to how it applies to a regional setting. As the problem of medicine access, particularly to new generation of drugs, will be imminent in a not too distant future, the function of pooled procurement is indeed relevant. Hence, it is appropriate to explore in future research how pooled procurement can be used alongside compulsory licensing.

Second, reference pricing, as one of governments' price control mechanisms, is viewed to be compatible with procurement. This is a case in point at New

Zealand's PHARMAC, where it is seen to regulate the government's pharmaceutical procurement transactions that guarantee affordable and fair prices of medicines. PHARMAC is known for negotiating prices using reference pricing and single producer tenders. To a certain extent, the existence of this agency is considered to be cost effective. It would be interesting to explore this set up in a regional context. If both strategies seem to work fairly, how can reference pricing at the national level and pooled procurement at a regional level be brought together? Will they be compatible? How will this arrangement be set up and align with the nature of the pharmaceutical industry in developing countries given that New Zealand is a developed country and maintains a strict system of health economics, as well as compulsory subsidy of pharmaceuticals?

Aside from combining current techniques for achieving price reductions to a pooled procurement scheme, there is another salient alternative that can be explored. Partnership agreements, for instance, wherein smaller PICs are linked with a larger partner country to source their needs may be a solution to political and economic embargoes. Two of the respondents suggested this idea. The ideal situation for PICs is to agree for a pooled procurement with an agency, PHARMAC for example, or simply hire the services of PHARMAC to negotiate and harmonise their medicines. This task, however, is seen to be too complicated, as people in PHARMAC need to understand the complexity of medicine use and supply issues in developing countries. This system might also stop the development and training of pharmaceutical human resource in the PICs. It is interesting to see in a much clearer study how this set up will work, although the nature of pooled procurement in this case is different from what I have envisioned for the region. But collaborating with a large country may offer a more efficient procurement system.

Pooled procurement schemes for obtaining drugs appear to have advantages over arrangements where individual small Pacific nations negotiate drug supplies and carry out distribution independently. Despite sound arguments for such schemes, real world issues mitigate against implementation, at least in the near future. However, it is not sufficient to dismiss pooled procurement

because the existing political culture and logistical issues appear to impede its implementation. This study revealed some of these issues, indeed barriers to implementation, but by highlighting them, I also have demonstrated a path forward.

## **References**

- Abbott, F. M. (2006). The Cycle of Action and Reaction: Developments and Trends in Intellectual Property and Health. In P. Roffe, G. Tansey & D. Vivas-Eugui (Eds.), *Negotiating Health: Intellectual Property and Access to Medicines*. London; Sterling, VA: Earthscan.
- Arifaj-Blumi, D. (2007). Feasibility Study on Pooled Procurement of Medicines for Pacific Island Countries. (Unedited report to WHO)
- Babar, Z. U. D. (2006). Medicine Prices in Malaysia: Myth or reality? *Journal for the Advancement of Science and Arts*, 1.
- Babar, Z. U. D., Ibrahim, M. I. M., Singh, H., Bukahri, N. I., & Creese, A. (2007). Evaluating Drug Prices, Availability, Affordability, and Price Components: Implications for Access to Drugs in Malaysia. *PLoS Medicine*, 4(3).
- Bass, N. A. (2002). Implications of the TRIPS Agreement for developing countries: Pharmaceutical Patent Laws in Brazil and South Africa in the 21st Century. *The George Washington International Law Review*, 34(1).
- Bloor, K., Maynard, A., & Freemantle, N. (1996). Lessons from international experience in controlling pharmaceutical expenditure III: regulating industry. *British Medical Journal*, 313(7048), 33.
- Cameron, A., Ewen, M., Ross-Degnan, D., Bali, B., & Laing, R. (2008). Medicine prices, availability, and affordability in 36 developing and middle-income countries: a second analysis. *The Lancet*, 373(9659), 240-249.
- Cheaper Medicines Bill in the Philippines. (2007). *Essential Drugs & Medicines Policy* (Vol. VII). Manila, Philippines: World Health Organization – Western Pacific Region.

- Cohen, J., Gyansa-Lutterodt, M., Torpey, K., Esmail, L., & Kurokawa, G. (2005). TRIPS, the Doha Declaration and increasing access to medicines: policy options for Ghana. *BioMed Central*, 1(17).
- Correa, C. M. (2000). *Intellectual Property Rights, the WTO and Developing Countries: The TRIPS Agreement and Policy Options*. London & New York: Zed Books Ltd.
- Correa, C. M. (2006). Protecting Test Data for Pharmaceutical and Agrochemical Products under Free Trade Agreements. In P. Roffe, G. Tansey & D. Vivas-Eugui (Eds.), *Negotiating Health: Intellectual Property and Access to Medicines*. London; Sterling, VA: Earthscan.
- DeFerranti, D. (1985). Paying for health services in developing countries: an overview. *World Bank Staff Working Papers, No. 721*, Washington, DC.
- DeRoeck, D., Bawazir, S. A., Carrasco, P., Kaddar, M., Brooks, A., Fitzsimmons, J., et al. (2006). Regional group purchasing of vaccines: review of the Pan American Health Organization EPI revolving fund and the Gulf Cooperation Council group purchasing program. *International Journal of Health Planning and Management*, 21, 23-43.
- Feasibility of pooled procurement of medicines for Pacific Island countries. (2008). *Essential Drugs & Medicines Policy* (Vol. VIII (2)). Suva, Fiji: World Health Organization- Western Pacific Region.
- Fraser, N. (2005). Reframing Justice in a Globalizing World. *New Left Review*, 36(Nov-Dec).
- Gamharter, K. (2004). *Access to affordable medicines: developing responses under the TRIPS agreement and EC law*. Wien: Springer.
- Higuchi, M. (2009). *Costs, availability and affordability of diabetes care in the Philippines*. Tokyo, Japan: Foundation for Advanced Studies on International Development.
- Huff-Rousselle, M., & Burnett, F. (1996). Cost containment through pharmaceutical procurement: A Caribbean case study. *International Journal of Health Planning and Management*, 11, 135-157.
- Huff-Rousselle, M. (2006). Lessons for the Pacific Islands from the Eastern Caribbean: to do or not to do pooled procurement and if so, how? : Social Sectors Development Strategies, Inc., 2005.



- Kaplan, W., & Laing, R. (2005). *Local Production of Pharmaceuticals: Industrial Policy and Access to Medicines*. Paper presented at the World Bank Meeting on the Role of Generics and Local Industry in Attaining the Millennium Development Goals (MDGs) in Pharmaceutical and Vaccines Conference.
- Laing, R., Waning, B., Gray, A., Ford, N., & Hoen, E. F. M. t. (2003). 25 years of the WHO essential medicines lists: progress and challenges. *The Lancet*, 361, 1723-1729.
- Lopez-Casasnovas, G., & Puig-Junoy, J. (2000). Review of the literature on reference pricing *Health Policy*, 54(2), 87-123.
- Matiru, R., & Ryan, T. (2007). The Global Drug Facility: a unique, holistic and pioneering approach to drug procurement and management. *Bulletin of the World Health Organization*, 85, 348-353.
- Nguyen, A. T., Knight, R., Mant, A., Cao, Q. M., & Auton, M. (2009). Medicine prices, availability, and affordability in Vietnam. *Southern Med Review*, 2(2), 2-9.
- Pang, H. Y. (2003). *Implementation of Compulsory Licensing provision under TRIPS in China - balance between encouraging domestic innovation and wider access to patented drugs*. University of Toronto, Toronto.
- Pooled Procurement for improving access to essential medicines in Pacific Island countries (provisional agenda item 9). (2009). *Eight Meeting of Ministers of Health for the Pacific Island countries*. Madang, Papua New Guinea (7-9 July 2009): World Health Organization- Regional Office for the Western Pacific.
- Quick, J. D., Rankin, J. R., Laing, R. O., O'Connor, R. W., Hogerzeil, H. V., Dukes, M. N. G., et al. (1997). *Managing Drug Supply: The Selection, Procurement, Distribution, and Use of Pharmaceuticals* (2nd ed.): Kumarian Press Books on International Development.
- Rietveld, A. H., & Haaijer-Ruskamp, F. M. (2003). Policy options for cost containment processes of pharmaceuticals. In M. N. G. Dukes, F. M. Haaijer-Ruskamp, C. P. de Jonckheere & A. H. Rietveld (Eds.), *Drugs and Money: prices, affordability and cost containment* (7th ed.). Amsterdam; Washington, DC: World Health Organization.

- Rovira, J. (2006). Creating and Promoting Domestic Drug Manufacturing Capacities: A Solution for Developing Countries? In P. Roffe, G. Tansey & D. Vivas-Eugui (Eds.), *Negotiating Health: Intellectual Property and Access to Medicines* (pp. 227-240). London; Sterling, VA: Earthscan.
- Rovira, J. (2004). "Creating and Promoting Domestic drug Manufacturing Capacities: Legal and Economic Feasibility Assessment". ICTSD-UNCTAD Dialogue on Ensuring Policy Options for Affordable Access to Essential Medicines. Bellagio. 2-16 Oct.2004
- Tansey, G. (2006). Expanding Policy Options for Access to Medicines for All. In P. Roffe, G. Tansey & D. Vivas-Eugui (Eds.), *Negotiating Health: Intellectual Property and Access to Medicines*. London; Sterling, VA: Earthscan.
- VanDuzer, T. (2003). TRIPS and the Pharmaceutical Industry in Bangladesh: Towards a National Strategy. CPD Occasional Paper Series. Paper 24, April 2003.
- Velasquez, G., Correa, C., & Weissman, R. (2002). Cost-containment mechanisms for essential medicines, including antiretrovirals in China (Mission Report). Beijing, China: World Health Organization Essential Drugs and Medicines Policy.
- Weissman, R. (2006). Data protection: Options for Implementation. In P. Roffe, G. Tansey & D. Vivas-Eugui (Eds.), *Negotiating Health: Intellectual Property and Access to Medicines*. London; Sterling, VA: Earthscan.
- World Health Organization. (2005). *Core indicators 2005: health situation in the South-East Asia and Western Pacific Region, New Delhi and Manila*, WHO Regional Offices for South-East Asia and the Western Pacific.
- World Health Organization. (2008). *Health in Asia and the Pacific*. Geneva: World Health Organization.
- World Health Organization - Western Pacific Region (WHO-WPR). (2007). Comparative Trade Prices of Branded Medicines in the Philippines, India and Pakistan (in PhP), *Essential Drugs and Medicines Policy (Issue Number 7)*. Manila.

