



# **POOLED PROCUREMENT OF INSULINS AND ASSOCIATED SUPPLIES**

Analysis of Mechanisms and their Applicability for Small  
State Countries or Countries with Limited Needs

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Limited Needs

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# TABLE OF CONTENTS

<b>ACKNOWLEDGMENTS</b> .....	2
<b>ACRONYMS</b> .....	3
<b>OBJECTIVE</b> .....	5
<b>GENERAL DISCLAIMER</b> .....	5
<b>LITERATURE REVIEW</b> .....	5
<b>Gulf Joint Procurement Programme</b> .....	6
<b>Organisation of Eastern Caribbean States</b> .....	10
<b>PAHO Strategic Fund</b> .....	12
<b>COMISCA</b> .....	14
<b>African Pooled Procurement Initiatives</b> .....	14
Small Island Development States .....	14
ACAME .....	16
Pricing Information.....	16
WHO Prices and Availability Survey Using MedMon Application and Study on Integration of Insulin in Immunisation Supply Chain .....	17
NCD Coalition.....	17
Defeat NCD .....	17
Tiered Prices for Insulin .....	18
<b>Lessons Learned</b> .....	18
<b>CASE STUDY OF THE PROCUREMENT OF INSULIN AND ASSOCIATED SUPPLIES IN PACIFIC NATIONS</b> .....	20
<b>Pooled Procurement Processes in the Pacific for Pharmaceuticals</b> .....	20
<b>Current Procurement Processes and Prices for Insulin and Associated Supplies in Pacific Island Countries</b> .....	24
Countries Selected and Criteria Used .....	24
Country 1: Federated States of Micronesia (Yap).....	24
Country 2: Fiji .....	25
Country 3: Kiribati .....	25
Country 4: Tonga .....	26
Country 5: Tuvalu.....	26

Summary Table of Products Procured and Prices Obtained in Pacific Countries .....	28
<b>Applicability of Existing Pooled Procurement Mechanisms in Other Regions.....</b>	<b>32</b>
<b>INITIAL ASSESSMENT OF UN POOLED PROCUREMENT OPPORTUNITIES FOR INSULIN AND ASSOCIATED SUPPLIES .....</b>	<b>33</b>
<b>WHO Global Supply Policies.....</b>	<b>33</b>
<b>UNDP .....</b>	<b>34</b>
<b>UNICEF SD .....</b>	<b>34</b>
<b>PROCUREMENT OPTIONS FOR SMALL STATE COUNTRIES OR COUNTRIES WITH LIMITED DEMAND FOR INSULIN AND ASSOCIATED SUPPLIES .....</b>	<b>36</b>
<b>Competitive Procurement at National Level.....</b>	<b>37</b>
<b>Multi-country Pooled Procurement/Negotiations .....</b>	<b>38</b>
<b>Direct Procurement from a Pharmaceutical Company with an Access Price for Insulin for LMICs .....</b>	<b>38</b>
<b>Direct Procurement Through an International Procurement Agency (UN Agency or International Distributor) .....</b>	<b>39</b>
<b>ANNEX 1 LIST OF COUNTRIES SELECTED BASED ON CRITERIA DEFINED FOR THE STUDY .....</b>	<b>40</b>

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## ACRONYMS

ACAME	Association des Centrales d'Achats de Médicaments Essentiels
ACCISS	Addressing the Challenge and Constraints of Insulin Sources and Supply
AFRO	Regional Office for Africa
ARVs	Antiretrovirals
AUSAID	Australian Development Assistance Agency
CDC	Centers for Disease Control and Prevention
CEDAG	Cellule des Achats Groupés
CIP	Cost Insurance Paid
COMISCA	Consejo de Ministros de Salud de Centroamérica
COVID-19	Coronavirus
CPU	Central Procurement Unit
CVD	Cardiovascular diseases
DAP	Delivered At Place
DRC	Democratic Republic of Congo
EAC	East African Community
ECDS	Eastern Caribbean Drug Service
EMPs	Essential medicines and health products
EMRO	WHO Regional Office for the Eastern Mediterranean
EURO	WHO Regional Office for Europe
FCA	Free Carrier
FOB	Free On Board
FPBS	Fiji Pharmaceuticals and Biomedicals S
FPS	Fiji Pharmaceuticals S
FSM	Federated States of Micronesia
GCC	Gulf Cooperation Council
GHC	Gulf Health Council
GJPP	Gulf Joint Procurement Program
HAI	Health Action International
HIV/AIDS	Human immunodeficiency virus infection and acquired immunodeficiency syndrome
HPS	Health Products Policy and Standards
HR	Human Resource
IDA	International Dispensary Association
IEHK	Interagency Emergency Health Kit
IMRES	International Medical Relief Service
LMICs	Low and Middle-Income Countries
LMIS	Logistic Management Information System
LTA	Long Term Agreement
MEG	Medical Expert Group
MHP	Medicines and Health Products
MoH	Ministry of Health
MSF	Médecins Sans Frontières

MSH	Management Science for Health
NCD	Non communicable diseases
NEML	National Essential Medicines List
OECS	Organisation of Eastern Caribbean States
PAHO	Pan-American Health Organization
PICs	Pacific Island Countries
PIEMEDS	Price Information Exchange for Medicines
PO	Purchase Order
PP	Pooled Procurement
PPS	Pharmaceutical Procurement Service
QA	Quality Assurance
RDT	Rapid Diagnostic Test
SADC	Southern African Development Community
SDG	Sustainable Development Goals
SF	Strategic Fund
SICA	Central American Integration System
SIDS	Small Islands Developing States
SPC	Small Pacific Countries
SRA	Stringent Regulatory Authorities
STGs	Standard Treatment Guidelines
STI	Sexually Transmitted Infection
TGA	Health Therapeutic Goods Administration
UN	United Nations Office for Project Services
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
UNICEF	United Nations Children’s Fund
UNICEF SD	United Nations Children’s Fund Supply Division
UNITAR	United Nations Institute for Training and Research
US	United States
USA	United States of America
USAID	US Agency for International Development
USD	US Dollar
VAT	Value-added Tax
VVM	Vaccine Vial Monitor
WHO	World Health Organization
WHO HQ	World Health Organization headquarters
WPRO	WHO Regional Office for the Western Pacific

## OBJECTIVE

The objective of the study is to assess whether multi-country pooled procurement (tendering/purchasing/framework agreements or other) and/or information sharing initiatives could be beneficial for small lower-income nations for the purchasing of insulin, insulin syringes, blood glucose meters and blood glucose test strips, using the Pacific as a case study. It also sets out to assess pooled procurement opportunities for insulin and associated supplies by United Nations (UN) agencies, such as UN Children’s Fund (UNICEF), UN Development Programme (UNDP) and World Health Organization (WHO), and how small lower-income countries in different regions (e.g., Sub-Saharan Africa, Pacific, and others) could potentially benefit from economies of scale (rather than procuring nationally). The outcome of this study will contribute to the development of guidelines for the procurement of insulin and associated supplies.

## GENERAL DISCLAIMER

Research for this report took place from 21<sup>st</sup> December 2020 to 15<sup>th</sup> April 2021. The ongoing COVID-19 pandemic had a major impact on interviewees and reduced the capacity to conduct interviews and to obtain required data. It should also be noted that because of the time difference with Pacific countries, and unstable internet connections at the time of the interviews, the collection of information was lengthy and difficult. Despite several reminders, feedback was not received from all the countries initially contacted.

Recommendations proposed in this report are therefore based on (possibly) incomplete information, which could evolve if additional information is received in future.

## LITERATURE REVIEW

This review was mainly carried out based on internet searches on multi-country pooled procurement websites, reports and presentations documenting the different mechanisms, and data on insulin and associated supplies procured through these mechanisms was provided through email exchanges, with some information being completed through short interviews.

The term “pooled procurement” covers several concepts, from information sharing to centralised procurement through a centralised body on behalf of several countries. Each mechanism described here will be classified according to the scheme proposed below, extracted from a report published by the WHO Office for Europe (EURO)<sup>1</sup> and adapted from a model proposed by Management Science for Health (MSH).<sup>2</sup>

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<sup>1</sup> Challenges and opportunities in improving access to medicines through efficient public procurement in the WHO European Region, WHO 2016.

<sup>2</sup> Managing procurement. In: MDS-3: managing access to medicines and health technologies. Arlington, VA: Management Sciences for Health; 2012.

**Fig. 4** | Levels of collaboration



Note: PAHO = Pan American Health Organization.  
Source: Modified from Management Sciences for Health (22).

The following section describes existing multi-country pooled procurement mechanisms reviewed during this study and their experience with insulin and associated supplies. As stated above, each mechanism is classified depending on the level of collaboration of countries, while the applicability of the proposed classification to insulin and associated supplies is discussed more specifically for the PAHO Strategic Fund.

The summary of the information collected for each mechanism has been sent to the manager of the mechanism for final validation. The Gulf Cooperation Council (GCC) required the price information to be treated as confidential, meaning the Health Action International (HAI) and the consultant signed a confidentiality agreement to receive the information.

## Gulf Joint Procurement Programme

### Group Contracting

In 1976, The Gulf Health Council<sup>3</sup> centralised the purchase of pharmaceuticals through the Gulf Joint Procurement Programme<sup>4</sup> (GJPP) to ensure that immediate needs for medicines would be met, to eliminate medicine shortages, and to lower prices of imported medicines for all Member States. The success of the group purchasing of pharmaceuticals has led the GHC to use bulk purchasing for hospital supplies, vaccines and sera, pharmaceutical chemicals (raw materials), medical rehabilitation supplies, and laboratory apparatus. Partners in the GJPP are Ministries of Health of The United Arab Emirates, Bahrain, Kingdom of Saudi Arabia, Sultanate of Oman, Qatar and Kuwait, and Government Hospitals in these countries. Since the program started, 19 tenders have been completed. It began with 32 items for an amount of one million USD, and it now covers 20,420 items for an amount of 2.8 billion USD. Through the joint tenders, the GJPP managed to generate 30% savings and increase the number of licensed manufacturers and registered products in the region, including products manufactured in the region.

This pooled procurement helped:

- To standardise the medicines and medical devices used in the region and to regularly update the common directory (taking into consideration new medicines and technologies).
- To achieve savings through economies of scale by pooling volumes.

<sup>3</sup> [Welcome \(ghc.sa\)](http://www.ghc.sa)

<sup>4</sup> [About Gulf Joint Procurement Program \(ghc.sa\)](http://www.ghc.sa)



- To guarantee the quality of the products purchased through the implementation of strict quality assurance criteria and from regular monitoring done by countries (medicines should be registered centrally or at least in two countries, including Saudi Arabia).
- To increase the registration and purchase of generic products to increase savings.
- To facilitate the procurement process by avoiding duplication of operation costs and remove unnecessary administration burden.
- To reinforce equity between Member States.
- To harmonise the procurement rules and regulations in all countries and the exchange of information on the management of health products (planning of needs, strategic stock).
- To eliminate any kind of unethical procurement activities.
- To reduce the time of the bidding process (around four months) and to award contracts through reliance on an advanced program specifically designed for Joint Procurement Tenders following international procurement standards.
- To award contracts for each item to two companies to ensure supply continuity and to respond to the needs of tertiary hospitals in the region.
- To establish an electronic system between Member States and the manufacturing companies registered in GHC.
- To support regional production and more particularly, the Gulf pharmaceutical and medical supplies industry, to achieve Gulf medical security.
- To raise the possibility to support individual Member States to procure specific items not covered by the GJPP or for which no offer has been received.
- To support regular meetings between the Members to review the processes, exchange experiences, update procurement rules and regulations and to discuss and overcome difficulties.
- To continuously evaluate suppliers to supply health products on time, to assure products quality as well as fairness of prices.

This has been possible due to strong political will shared among countries, a dedicated secretariat and specialised workforce, the adherence to the best procurement practices, the purchase of medicines and medical devices from safe sources, and a secured payment mechanism. Member States are also highly active in the procurement process through participation in four technical committees: directory updating committee, envelope opening committee, bids vetting and award committee and complaints vetting committee.

However, countries continue to issue local tenders as well as buying products through the pooled procurement mechanism. This could lead to reduced purchasing power for GJPP. Countries placing orders through local suppliers (representing manufacturers) may also result in higher prices. It may be good in the future to confirm with GCC Member States directly that the pooled procurement mechanism results in competitive prices for them.

The GJPP has experience in procuring insulin and associated supplies. They purchase human and analogue insulins in various presentations (vials, cartridges, and pens).<sup>5</sup> See below the list of insulin purchased during the last tender in 2019.

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<sup>5</sup> [Item's Directory of various Tenders \(ghc.sa\)](#)

Year of tender/ procurement	Strength/Volume	Presentation
<b>Regular human insulin (short-acting)</b>		
2019	100 IU/ml, 10ml	vial
2019	100 IU/ml, 3ml	pen
<b>Isophane NPH human insulin (intermediate-acting)</b>		
2019	100 IU/ml, 10ml	vial
<b>Regular isophane 30/70 human insulin (biphasic)</b>		
2019	100 IU/ml, 10ml	vial
<b>Glargine analogue insulin (long-acting)</b>		
2019	100 IU/ml, 10ml	vial
2019	100 IU/ml, 3ml	prefilled syringe
2019	300 IU/ml, 3ml	pen
<b>Aspart analogue insulin (fast-acting)</b>		
2019	100 IU/ml, 3ml	pen
2019	100 IU/ml, 10ml	vial
<b>Aspart/Aspart protamine 30/70 analogue insulin (intermediate acting, biphasic)</b>		
2019	100 IU/ml, 3ml	pen
<b>Glulisine analogue insulin (fast-acting)</b>		
2019	100 IU/ml, 3ml	pen
<b>Lispro protamine 25/75 analogue insulin (intermediate acting, biphasic)</b>		
2019	100 IU/ml, 3ml	cartridge
<b>Lispro protamine 50/50 analogue insulin (short acting)</b>		
2019	100 IU/ml, 3ml	cartridge
<b>Detemir analogue insulin (long-acting)</b>		
2019	100 IU/ml, 3ml	prefilled syringe

In 2019, insulin syringes and needles for pens were also purchased.<sup>6</sup> However, blood glucose meters and blood glucose test strips are not part of the items purchased by GJPP as countries buy these items locally.

<sup>6</sup> [Item's Directory of various Tenders \(ghc.sa\)](#)

Year of tender/ procurement	Description	Presentation
<b>Insulin syringes 0,5ml (50 IU)</b>		
2019	Lock End and Fixed Graduation 1:50 Units, Latex Free with Needle Size: G31 x 6mm, Disposable, Sterile	Individually Wrapped, Peel Pack, 100Pcs/Pack.
2019	Lock End and Fixed Graduation 1:50 Units, Latex Free with Needle Size: G31 x8mm, Disposable, Sterile	Individually Wrapped, Peel Pack, 100Pcs/Pack.
<b>Insulin syringes 1ml (100 IU)</b>		
2019	Lock End and Fixed Graduation 1:100 Units with Needle Size: G30 x 12.7mm or Equivalent, Disposable, Sterile	Individually Wrapped, 100Pcs/Pack
2019	Lock End and Fixed Graduation 1:100 Units with Needle Size: G31 x 8mm or Equivalent, Disposable, Sterile	Individually Wrapped, 100Pcs/Pack
<b>Insulin needles for pen</b>		
2019	31G X 5mm	100Pcs/Pack
2019	32G X 4mm	100Pcs/Pack

The GJPP invites only registered suppliers to participate in tenders. Manufacturers of these products, provided that the products are registered centrally by the Gulf Central Committee for Drug Registration<sup>7</sup> or in two of the GCC countries, are asked to submit their quotations. Diabetes medical supplies are evaluated in at least two countries to ensure their suitability for medical use.

According to the GJPP Secretariat, items related to cardiac and diabetes medicines, as well as psychiatric and neurological medicines are awarded to two companies, one offering an originator product (brand) and the other a generic product (or biosimilar), from which Member States and participating parties are free to choose between. However, from the data received in 2019 for insulin, it seems only one contract has been awarded for each insulin (presentation- and strength-specific) included in the tender list. However, GCC started registration of biosimilar insulins (e.g., Eli Lilly's glargine, which is a biosimilar, was listed in the 2019 tender).

Tenders are carried out annually and based on the offers received, contracts are awarded for two years for each item based on estimated quantities (with some flexibility to increase quantities while the contract is valid), which are shared with Member States who then place their orders directly with the manufacturer's country representatives and pay the supplier upon delivery. We were unable to confirm the number of offers received during the tender process as this is considered confidential information by GJPP. Prices (of items delivered to central warehouses in countries) obtained are identical and applicable for all countries. A list of companies awarded by item is available on GJPP website.<sup>8</sup>

Companies pay a 2% fee on the total amount of products supplied to GHC to support the GJPP operations. This fee will be considered by manufacturers/suppliers when fixing the proposed price for each item.

<sup>7</sup> [Central Drug Registration \(ghc.sa\)](http://ghc.sa)

<sup>8</sup> [SGHR041008 \(ghc.sa\)](http://ghc.sa)

Price data and quantities purchased from recent tenders were received for all insulins, including for the list of items for the 2019 tender, but without the name of manufacturers awarded for each product. GHC also asked the price data to be handled under a confidentiality agreement. Therefore, this information will not be disclosed in this report.

From the data received, GHC buys human insulin in vials at a good price compared to other multi-country pooled procurement mechanisms, such as the Organisation of Eastern Caribbean States (OECS) and Pan American Health Organization (PAHO) Strategic Fund, or even in comparison to the prices obtained by global pooled procurement mechanisms considering the products are delivered to the central warehouse in each country. The volumes purchased by GJPP and their long procurement experience with suppliers, in addition to their financial reliability, likely contribute to the good prices achieved for human insulins. The prices of analogue insulins are higher than prices of human insulins, which means a significant increase in the budget is needed when procuring analogues.

## **Organisation of Eastern Caribbean States**

### **Central Contracting and Purchasing**

The Pharmaceutical Procurement Service (PPS), formerly the Eastern Caribbean Drug Service (ECDS), was established in 1986 by the OECS under a USAID project. It was established with the intention to reduce the pharmaceutical expenditures of participating Member States through reduced procurement costs of pharmaceuticals via a pooled mechanism. The PPS is a self-financing autonomous body that procures pharmaceuticals and medical supplies for the public health services (Ministries of Health) of the nine Member States: Antigua and Barbuda, St Kitts and Nevis, Montserrat, Anguilla, Dominica, St Lucia, St Vincent and the Grenadines, Grenada, and British Virgin Islands.

Its mission is to maximise healthcare services of the nine OECS countries by pooled procurement and management of pharmaceuticals and related medical supplies. It has a permanent secretariat and country-based committees, and payments are made through the Central Bank. It became self-financed in 1989 and currently has a 9% surcharge. The success of the mechanism is due to shared culture, language, and currency but also strong political will and the existence of a Central Bank. They purchase products through restricted bids among approved suppliers for 840 medical products and work with 30 suppliers (mainly based in the region). Suppliers are approved based on the review of key documents compiled through a questionnaire. However, a few years ago, OECS/PPS conducted on site visits to suppliers in Barbados. Among suppliers awarded, 80% are regional or international distributors and 20% are manufacturers. Between 1 July 2018 and 30 June 2019, the value of the purchase orders (POs) was USD 28.83 million.

The benefits of the PPS for countries are both economic and non-economic. By pooling their needs, it increases bargaining power with suppliers, reduces prices and allows them to obtain a fixed (and similar) CIP price for all countries for two years. Sixty-day payment terms are also an advantage for countries. It allows harmonisation of formulary manuals and standard treatment guidelines (STG), enhancing quality assurance (as there are no registration systems within the countries and the Caribbean Registration System is in the early stages), improving transparency and rational procurement, increasing confidence between clients and suppliers, and facilitates coordinated training, research, and monitoring. It also increases regional cooperation and integration, and favours sharing of information and experience between countries. An important element of having the same products in all countries is that it facilitates the distribution of stocks when a stock-out situation exists in a country.

Challenges faced by PPS are mainly linked to poor forecasting, late payments, the interference of donations and the fact countries continue to purchase the same items outside of the joint mechanism. According to OECS, Member States purchase items on tender through OECS unless the item is unavailable through the system for various reasons (e.g., item discontinued by

manufacturer or extended lead-time). Some Member States may choose to purchase outside the system if they want a specific branded product.

Until recently the PPS formulary included only human insulin, so procurement for countries was only done for human insulins listed below. However, some countries have expressed interest in the addition of analogue insulin (glargine), which resulted in its submission to the technical advisory committee who decided that this product added value for better management from a patient point of view. The item insulin glargine was then added to the OECS/PPS formulary at the last technical advisory committee held in May 2019 and, subsequently, there was a supplementary tender, where it was awarded and made available for purchase to Member States.

Year of tender/ procurement	Strength/Volume	Presentation	CIP Price per vial/cartridge/pen in USD (excl VAT/GST)	CIP Price per 10ml in USD	Annual quantity procured
<b>Regular human insulin (short-acting)</b>					
2019-2021	100 IU/ml, 10ml	vial	4,5	4,5	25320
<b>Isophane NPH human insulin (intermediate-acting)</b>					
2019-2021	100 IU/ml, 10ml	vial	4,5	4,5	101150
<b>Regular isophane 30/70 human insulin (biphasic)</b>					
2019-2021	100 IU/ml, 10ml	vial	4,5	4,5	7870
<b>Glargine analogue insulin (long-acting)</b>					
2019-2021	100 IU/ml, 10ml	vial	33,75	33,75	820

The formulary also includes insulin syringes, blood glucose meters and blood glucose test strips, but mainly for use in health facilities (therefore a control solution is necessary to calibrate the equipment on a regular basis due to the potential fluctuation of results between patients).

Year of tender/ procurement	Description	Presentation	CIP Unit price in USD (excl VAT/GST)	Annual quantity procured
<b>Insulin syringes 1ml (100 IU)</b>				
2019-2021	U-100 with needle 30G X 1/2	100 pcs/pack	0,0895	1146000
<b>Blood Glucose meter portable</b>				
2019-2021		meter	1	1920
<b>Blood Glucose test strips</b>				
2019-2021	strip	box of 50	0.24	3304350

Insulin is a high expenditure item in OECS procurement. It is mainly purchased through a distributor in Barbados and the price for the insulin glargine recently awarded is far higher. In the last tender, OECS PPS received offers from six distributors for short-acting insulin, four offers for intermediate-acting insulin (distributors) and seven offers for the premixed biphasic (distributors) for different brands. PPS is not looking at reference prices on a regular basis to compare the prices obtained with other countries. It should be noted that currently OECS is paying around 25% more than GCC for human insulin with a product delivered locally in both mechanisms. However, the price difference can probably be explained by the difference of volumes purchased by the two mechanisms.

It appears that blood glucose meters are often donated by manufacturers so that countries are forced to buy the strips from the same brands. Blood glucose meters currently bought by PPS are for health facilities but a recent change in guidelines has been introduced to encourage self-management or testing through home-based support. In many OECS Member States, patients

purchase blood glucose meters and strips to support self-management from the private sector. In some countries, like St. Lucia, blood glucose meters and strips are available for purchase at a reduced cost via the Diabetes Association. In St. Lucia, through a World Bank funded project aimed at improving quality of care for diabetes and hypertension through performance-based financing, people living with diabetes are provided with blood glucose meters and strips for free in the public sector, in addition to insulin which they can access for free under the Universal Health Coverage (UHC) programme. In Antigua, the Medical Benefits Scheme supports the supply of medicines and blood glucose monitoring devices for people living with diabetes. Many of the OECS Member States, through their Diabetes Associations, participate in the International Diabetes Federation (IDF) Life for a Child (LFAC) programme, which offers educational materials, insulin and blood glucose monitoring devices and strips for children with diabetes. LFAC supports children and young people up to the age of 25, after which they age out of the programme.

## **PAHO Strategic Fund**

### **Central Contracting and Purchasing**

PAHO's Strategic Fund<sup>9</sup> is a regional technical cooperation mechanism for pooled procurement of essential medicines and strategic health supplies. Thus, the Fund is a central component of PAHO's strategy to move towards UHC.

As of June 2020, 34 countries and territories in Latin America and the Caribbean have signed agreements with PAHO to use the mechanism (Argentina, Bahamas, Barbados, Belize, Bermuda, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Grenada, Guyana, Haiti, Honduras, Turks and Caicos Islands, British Virgin Islands, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay and Venezuela), as well 10 social security and public health institutions.

The Strategic Fund strengthens strategic supply management systems, provides technical cooperation to plan demand, guarantees rational use and avoids stock-outs in the countries of the Americas. The products purchased through the Fund meet regionally agreed standards for safety, efficacy, and quality adapted from WHO norms and standards. Between 2016 and 2020, 68.3 million essential medicines and health supplies were ordered, and 7.5 million people served.

By pooling resources, the Strategic Fund offers significant savings for Member States by securing prices that are often considerably lower than market rates. Moreover, through its wide-ranging technical cooperation, the Strategic Fund supports national-level capacity-building for supply chain management, demand forecasting, and procurement planning, while ensuring a single fair price for all participating countries.

Benefits of using the Strategic Fund include: increased access to essential medicines and strategic health supplies, coordination with PAHO programmes to provide inter-programmatic technical cooperation, quality assurance for all products procured according to regional agreed standards, sustainable reduction in prices of critical medicines and health supplies, strengthened supply chain management and country ownership, demand consolidation to leverage economies of scale, financing options to facilitate Member State procurement, transparency and governance in pricing and international bidding processes, and robust partnerships with the United Nations system and other agencies.

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<sup>9</sup> [PAHO Strategic Fund - PAHO/WHO | Pan American Health Organization](#)

The PAHO Strategic Fund has long-term agreements (LTA) in place for several products including non-communicable disease (NCD) medicines (such as cardiovascular or cancer medicines) and the information on LTAs in place (with name of manufacturers and prices obtained) is fully transparent on the PAHO website. They have been involved in recent discussions on pooled procurement for NCDs.<sup>10</sup>

Insulin is part of the list of items purchasable by PAHO:<sup>11</sup>

- Insulin short acting regular (soluble) 40 IU/ml and 100 IU/ml in 10ml vial Injection
- Intermediate-acting insulin 40 IU/ml and 100 IU/ml in 10ml vial (compound insulin zinc suspension or isophane insulin) Injection

The Strategic Fund purchases insulin syringes on an ad-hoc basis for emergencies but always through international distributors. They have not yet purchased blood glucose meters or blood glucose test strips. However, mechanisms are in place with the technical units and Member States in case of future interest.

No LTAs have been put in place for insulin because the demand from countries is still extremely limited. Considering they serve countries with different levels of development, it is also difficult for them to get a single price from manufacturers, which is usually their target. On some occasions, countries will ask quotations from PAHO but only to benchmark prices with local distributors and orders will never materialise.

In the past, they have procured insulin on an ad-hoc basis for a few individual countries to respond to emergencies, mainly from Novo Nordisk (Cuba, Ecuador, Venezuela, and Haiti). Some of these purchases have also been made through international distributors due to small quantities required and the requests were combined with other essential medicines (IMRES, Medical Export Group, or IDA).

Year of tender/ procurement	Strength/Volume	Presentation	FCA Price per vial/cartridge/pen in USD (excl VAT/GST)	FCA Price per 10ml in USD	Annual quantity procured
<b>Regular human insulin (short-acting)</b>					
2018 (Venezuela)	100 IU/ml, 10ml	vial	3,67	3,67	25000
<b>Isophane NPH human insulin (intermediate-acting)</b>					
2018 (Venezuela)	100 IU/ml, 10ml	vial	3,67	3,67	25000

The FCA price obtained from PAHO Strategic Fund for insulin does not include transport, insurance, or custom clearance costs, which means the final price for countries will be higher. They may also get different prices from pharmaceutical companies depending on the economic level of the recipient country.

Even though the current model used by the Strategic Fund is a central contracting and purchasing mechanism, it currently acts much more as an informed buying mechanism for insulin as they only buy insulin and associated supplies on an ad hoc basis. However, the PAHO SF team is considering establishing LTAs for these products soon in close collaboration with the WHO Global Supply Chain Policy Department.

<sup>10</sup> [https://www.paho.org/hq/index.php?option=com\\_content&view=article&id=13858:pooled-procurement-mechanisms-innovative-strategies-to-promote-equitable](https://www.paho.org/hq/index.php?option=com_content&view=article&id=13858:pooled-procurement-mechanisms-innovative-strategies-to-promote-equitable)

<sup>11</sup> [Strategic Fund Medicine List - PAHO/WHO | Pan American Health Organization](#)

## COMISCA

### Coordinated Informed Buying

Some countries of the Central American Integration System (Sistema de la Intergración Centroamericana – SICA) are, through Consejo de Ministros de Salud de Centroamérica (COMISCA), carrying out price negotiations for medicines necessary for the countries in the region (Guatemala, El Salvador, Honduras, Nicaragua, Costa Ric, Panama, Belize, and the Dominican Republic).

Insulin appears to be covered by this mechanism in the past and they succeeded in getting reduced prices. In 2010, they mentioned a 45% economy of human insulin 100IU/ml purchased through Novo Nordisk.<sup>12</sup> It was again mentioned in a communication from PAHO in El Salvador in 2012.<sup>13</sup>

A report published by COMISCA<sup>14</sup> on eight pooled negotiations undertaken between 2008 and 2014 through pooled negotiations suggests countries saved 26 million USD. However, the report did not specify the details of savings per product.

Despite repeated attempts to contact COMISCA, with the support of PAHO colleagues, we could not reach them to confirm the current situation and whether the pooled negotiations are ongoing and achieving good results, particularly for insulin and associated supplies.

### African Pooled Procurement Initiatives

Until recently, pooled procurement initiatives between countries in Africa have been unsuccessful. The WHO Regional Office (AFRO) is now providing support to different initiatives in different economic blocks (East African Community (EAC), Southern African Development Community (SADC), Small Islands Developing States (SIDS) or through the Association Africaine des Centrales d'Achats de Médicaments Essentiels (ACAME). They are also considering the possibility of coordinating the different initiatives on the continent to avoid overlap and increase the exchange of experiences between countries. This report focuses on two initiatives for SIDS and a few countries in West Africa. It should be noted that no real progress seems to have been made recently in pooled procurement in EAC and SADC regions, which include countries with more bargaining power due to the purchase volumes they represent for suppliers.

#### Small Island Development States

##### **Central Contracting and Purchasing (still to be confirmed when the full mechanism will be in place)**

The SIDS initiative<sup>15,16</sup> is an inter-country procurement mechanism for medicines and health products. It includes Cabo Verde, Comoros, Guinea-Bissau, Madagascar, Mauritius, Sao Tome and Principe and Seychelles, all of which have previously experienced difficulties buying on the worldwide market, particularly for NCD medicines. The Programme aims to coordinate the procurement of selected medicines and health products to reduce procurement costs and

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<sup>12</sup> [SE-COMISCA realiza con éxito negociación de dos medicamentos \(sica.int\)](http://sica.int)

<sup>13</sup> [OPS/OMS El Salvador - Finaliza con éxito la negociación conjunta de precios y compra de medicamentos \(paho.org\)](http://paho.org)

<sup>14</sup> NEGOCIACION CONJUNTA DE PRECIOS Y COMPRA DE MEDICAMENTOS PARA CENTROAMERICA Y REPUBLICA DOMINICANA UNA MIRADA DESDE LA PERSPECTIVA DE SALUD INTERNACIONAL, February 2016, COMISCA

<sup>15</sup> [SIDS Pooled Procurement Initiative to Improve Access To Quality Medicines | Regional Office for Africa \(who.int\)](http://who.int)

<sup>16</sup> [African island nations agree on consolidated medicines procurement | WHO | Regional Office for Africa](http://who.int)



improve product quality.<sup>17</sup><sup>18</sup> They are planning to use the experience of OECS to develop the mechanism and will receive technical support from the developers of OECS PPS.

In 2017, the WHO gave a presentation to Ministers of Health of those countries to further their understanding around pooled procurement. The most important factors in implementing such an initiative are to establish political will and to foster agreements with each of the countries that clarify responsibilities (what, how, etc). Pooled procurement agreements were signed in September 2020<sup>19</sup><sup>20</sup> and two committees have been put in place: a procurement committee and a technical committee.

To identify products considered under this pooled procurement mechanism, two sets of data collection were taken and from this, 58 products (some with different formulations) have been considered by the mechanism. After thorough review of the initial list, 25 products were listed, including insulin. This list will be presented very soon to countries for final validation. It should be noted that the mechanism focuses on medicines only and not on other health products.

Products listed are mainly small volume items (even the total quantity is small) and may not be attractive for manufacturers as the total quantity will be below the size of a production batch. Some products proposed were relevant only for one country.

The plan is to test the mechanism first with a few countries (five to seven), but this would require additional work on the procurement process and the regulatory requirements. An additional point to agree between countries would be to select the procurement agency in the region which will take care of the procurement process. Mauritius is under consideration.

Insulin short-acting regular, 100IU/ml, 10ml vial and insulin intermediate-acting (as compound insulin zinc suspension and isophane), 100 IU/ml, 10ml vial are part of the list of items under consideration by the countries. In June 2020, the consolidated needs expressed by countries were of 30,400 and 9,550 vials respectively for Seychelles, Madagascar, Mauritius, and Comoros (still waiting for Sao Tomé, Cap Verde, and Guinea Bissau).

From a new discussion with an AFRO colleague at the end of March, it seems all countries have now signed an agreement to participate in the pooled procurement mechanism and a final list of products has been agreed between countries (except Portuguese speaking countries) but may not include insulin.

It would be interesting to follow-up on the progress made by this initiative and the impact it will have on the prices of insulin and associated supplies in these countries, or to understand the reasons for not considering these products, if confirmed.

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<sup>17</sup> POOLED PROCUREMENT STRATEGY FOR SMALL ISLAND DEVELOPING STATES 2018–2022, AFRO, Brazzaville, May 2018

<sup>18</sup> POOLED PROCUREMENT PROGRAM FOR SMALL ISLAND DEVELOPING STATES FIRST TECHNICAL MEETING, AFRO, Mauritius, July 2019

<sup>19</sup> AGREEMENT ON THE POOLED PROCUREMENT OF MEDICINES AND OTHER HEALTH PRODUCTS BETWEEN SMALL ISLAND DEVELOPING STATES IN THE WHO AFRICAN REGION, May 2020

<sup>20</sup> [Seychelles signs pooled procurement agreement to improve access to quality medicines - Ministry of Health - Seychelles](#)

## ACAME

Following the previous attempts of national procurement agencies within ACAME to jointly purchase products, a new initiative has been launched to support a pilot project of pooled procurement for few priority medicines in the West African region. This project receives funding from the 5% Initiative of the Global Fund through Expertise France. Technical support is provided by AEDES, with the aim of starting pooled procurement for Burkina Faso, Togo, Guinea Bissau, Ivory Coast, Benin, Niger, Senegal, and Mali. The objective is to develop, under ACAME, a central cell called “Cellule d’Execution des Achats Groupés” (CEDAG) and to put in place procedures adapted to the national and regional regulations and the economic reality in West Africa. The initiative is currently identifying the list of priority products to launch their first tender by mid-2021. A first technical meeting took place in December 2020 and a new meeting is planned with national procurement centre managers very soon to approve the first list of items. The first list of products identified included human insulin (short-acting, intermediary-acting and biphasic).

It would be interesting to follow-up on the progress made by this initiative and the impact it will have on the prices of insulin and associated supplies in these countries.

## Information Sharing Initiatives

### Pricing Information

Sources for pricing information can be found on the WHO website through the health products and policy standards pages.<sup>21</sup> Of the resources available on these pages, of particular interest for insulin are:

- PIEMEDS (Price Information Exchange for Medicines)<sup>22</sup> where prices of medicines in the Pacific Region are shared between countries (NB: *requires access to be granted*).
- The WHO Collaborating Centre for Pharmaceutical Pricing and Reimbursement Policies, which could provide under the Pharma Price Information Project, manufacturer price / ex-factory price, pharmacy purchasing price / wholesale price and pharmacy retail price / public price (including or excluding VAT) in 30 countries.<sup>23</sup> (NB: *data is provided upon payment*).
- The UNICEF SD Catalogue.<sup>24</sup>
- The IDA Foundation e-catalogue<sup>25</sup> available online (and the electronic price indicator could be provided upon demand).

The sources listed below were international reference prices in the past but have now very limited value considering they are out-of-date:

- The Management Sciences for Health (MSH) International Drug Price Indicator Guide (data are quite old considering the last data set is from 2015).<sup>26</sup>
- The WHO/HAI project on Medicines Prices and Availability Database.<sup>27</sup>

This clearly shows that reliable and transparent reference procurement price information is missing for insulin. We should also note that procurement actors are often not allowed by manufacturers to publicly disclose the prices they obtain for insulin.

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<sup>21</sup> [Health product and policy standards \(who.int\)](#)

<sup>22</sup> [PIEMEDS](#)

<sup>23</sup> [Medicine price data | WHOCC PPRI \(goeg.at\)](#)

<sup>24</sup> [Home page \(unicef.org\)](#)

<sup>25</sup> [PI\\_IDA\\_2021.pdf \(idafoundation.org\)](#)

<sup>26</sup> [International Medical Products Price Guide – International Medical Products Price Guide \(mshpriceguide.org\)](#)

<sup>27</sup> [HAI - HEALTH ACTION INTERNATIONAL - Global Database \(haiweb.org\)](#)

## **WHO Prices and Availability Survey Using MedMon Application and Study on Integration of Insulin in Immunisation Supply Chain**

The WHO NCD department, in collaboration with the Health Policy Products Standards department, is using the mobile phone application MedMon to conduct price and availability surveys. The NCD Department plans to use it in four European (EURO) countries and three Eastern Mediterranean (EMRO) countries (and possibly in five PAHO countries at a later stage) to identify prices and availability of 48 NCD health products.

They are also looking at the possibility of integrating insulin into the immunisation supply chain to maximise the existing cold chain supply for vaccines. This initiative is of great interest for Pacific countries where pooled procurement of vaccines is already through UNICEF SD and could benefit from the infrastructure in place in Suva, Fiji.

### **NCD Coalition**

The NCD Coalition was launched in 2017 and the secretariat is hosted in PATH.<sup>28</sup> This Coalition of government agencies, private-sector entities, nongovernmental organisations, philanthropic foundations, and academic institutions is dedicated to increasing access to medicines and health products for NCDs to reduce the impact of diseases such as diabetes, hypertension, and cardiovascular disease.

Under the Supply Chain Strengthening workstream, one of the objectives is to gather and strengthen data available at the national level to clearly define supply chain barriers and solutions for increased availability of affordable essential medicines and health products for cardiovascular disease and diabetes. In 2015, a global review of the availability and affordability of the 22 essential medicines and technologies for comprehensive diagnosis and treatment of diabetes in low-resource settings was done.<sup>29</sup> It included insulin and associated supplies.

Based on this review, the NCD Coalition has carried out supply chain assessments for NCD medicines (antidiabetics and antihypertensives) in Kenya, Ghana, and Vietnam. They developed and piloted the Diabetes CarePak (which included insulin and associated supplies) project in Kenya. With funding from the Helmsley Charitable Trust, this project will expand to Tanzania, Mozambique and Mali.

The concept of bundling products necessary to treat a diabetes patient should be explored further. It should also consider the lessons to be learned from the supply of kits in countries with the risk of overstocking some items and waste of resources if not well designed.

### **Defeat NCD**

The Defeat NCD Partnership<sup>30</sup> is hosted in UNITAR and focuses mainly on diabetes and hypertension. One of the objectives of Defeat NCD is to establish a marketplace<sup>31</sup> to help countries, especially the poorer ones, to get value-for-money in their procurement, alongside ensuring quality and continuity of supplies.

The Defeat-NCD Marketplace is an easy-to-use online facility specifically designed to reduce barriers and costs so that quality-assured medicines, diagnostics, and associated equipment get to where they are needed, speedily and reliably. This Marketplace is a centrepiece of the Defeat-NCD Partnership's Essential Supplies Procurement and Distribution Facility:

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<sup>28</sup> [Home - Coalition for Access to NCD Medicines and Products \(coalition4ncds.org\)](http://coalition4ncds.org)

<sup>29</sup> [Diabetes Supplies: Are they there when needed? \(executive summary\) \(azureedge.net\)](http://azureedge.net)

<sup>30</sup> [The Defeat-NCD Partnership – Universal NCD care. Everywhere, at anytime. \(defeat-ncd.org\)](http://defeat-ncd.org)

<sup>31</sup> [The Defeat-NCD Marketplace – The Defeat-NCD Partnership \(defeat-ncd.org\)](http://defeat-ncd.org)

- To create a competitive environment serving the interests of both buyers and suppliers.
- To ensure that the underlying technology is easily scalable at a global level.
- To ensure transparency of process that helps to build mutual trust and confidence.

For the most recent activities of the Marketplace, please visit their website: <https://defeat-ncd.org/the-defeat-ncd-partnership-marketplace/>.

### **Tiered Prices for Insulin**

Novo Nordisk, through its Defeat Diabetes Strategy<sup>32</sup>, is reducing the ceiling price of human insulin from USD 4 to USD 3 for 76 low- and middle-income countries (LMICs) as part of its Access to Insulin Commitment to strengthen their efforts to reach the most vulnerable people with low-cost insulin. The Incoterms for this price is not known. We also do not have a clear list of countries benefiting from this strategy and no feedback on the actual products supplied, volumes or prices of products reaching the countries.

Through their Changing Diabetes in Children programme they are also providing medical care, insulin and supplies to more than 26,000 children in 14 LMICs. However, none of the Pacific small states are included in this programme.

### **Lessons Learned**

Based on the multi-country pooled procurement mechanisms reviewed, further literature reviews of pooled procurement mechanisms in general<sup>33</sup><sup>34</sup><sup>35</sup><sup>36</sup>, and the existing information sharing initiatives, the advantages for small countries to enter into multi-country pooled procurement mechanisms have been identified:

- To improve competition and consolidate purchasing power with a greater degree of leverage in the marketplace.
- To improve predictability for suppliers and to improve incentives for manufacturers to make offers.
- To reduce unit purchase prices.
- To improve quality assurance of products supplied (particularly for countries having limited regulatory capacity).
- To rationalise the choice of products through better-informed selection and standardisation.
- To reduce the operational costs and administrative burden of doing procurement.
- To benefit from additional centralized expertise (in procurement, QA, logistics) when HR is limited
- To increase equity between Members as products supplied will be for a price on similar Incoterms (and often delivered to the Central Medical Store or similar entities in countries).
- To create a professional network to stimulate professionalism and work jointly on innovative approaches.
- To improve other aspects in supply chain management.
- To improve supply of products to populations in need.

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<sup>32</sup> [Defeat diabetes \(novonordisk.com\)](http://defeatdiabetes.novonordisk.com)

<sup>33</sup> Regional Pooled Procurement of Drugs: Evaluation of Programs, MSH, Dec 2002

<sup>34</sup> The logical underpinnings and benefits of pooled pharmaceutical procurement: A pragmatic role for our public institutions, Maggie Huff-Rousselle, 2012

<sup>35</sup> A study on existing regional and global mechanisms on accessibility to quality-assured essential medicines and technologies at country-level: Report on lessons learnt for improving access to NCD medicines and technologies, Douglas Ball, June 2014

<sup>36</sup> [nds3-jan2014.pdf \(msh.org\)](http://msh.org/nds3-jan2014.pdf)

- To facilitate cross border exchange of products from one country to another when stock-out situations exist.
- To increase transparency in procurement processes and reduce the risk of corruption and influence the manufacturers/suppliers have in the marketplace.

However, to be successful, based on GCC, OECS and PAHO Strategic Fund experiences, countries embarking in pooled procurement activities should ensure that:

- National political will exists at the highest level and agreements are signed with a firm commitment to honour the conditions of said agreements.
- national law/regulations could be adapted to support the use of this mechanism.
- regulatory aspects for health products are harmonised to facilitate the importation of products in countries.
- financial commitment is made to support the establishment of the mechanism (constitution of an initial capital) and to pay the suppliers on time.
- similar currency is used in countries with the support of a central bank when procurement is at central level.
- full support is given to a permanent and autonomous secretariat in charge of PP activities.
- expertise in procurement and quality assurance is made available.
- standardisation is well understood and agreed from the start.
- effective communication is in place to reinforce trust between countries and the pooled procurement mechanism.
- voluntary commitment to favour the pooled procurement mechanism for the items in its scope over national procurement system (at least for a certain % of the quantities to be procured).
- alignment of procurement cycles.
- sources and prices awarded are made available to all participating members or, even better, on a public platform.

Based on the information collected on insulin, thanks to their experience and relationships with suppliers, OECS and GCC were able to obtain better prices for human insulin through local suppliers in the region close to the ceiling differential prices offered by Novo Nordisk for LMICs. They have recently started to buy analogues, but it is still difficult to see the benefit of the pooled procurement for this category of products not largely purchased by countries.

## CASE STUDY OF THE PROCUREMENT OF INSULIN AND ASSOCIATED SUPPLIES IN PACIFIC NATIONS

Pacific Island's Countries (PICs) procurement of medicines and other health products in the public sector is led by the Ministry of Health. In most of the countries, except Fiji, no private pharmacies are available, so patients must rely on the public sector even if they have the means to pay out-of-pocket. In most of the PICs, medicines and other health products are funded by the government and given for free or subsidised by the government. Due to the small population sizes, the required quantities are often limited and, even when tendering, Chief Pharmacists mainly receive offers from suppliers in the region (Australia, New Zealand, Fiji) or from international suppliers (such as the International Dispensary Association). All PICs seem to have procurement regulations in place requiring annual tenders with a threshold under which they can go directly to suppliers to get quotations. Tender processes tend to be long (seven to nine months) leading to stock-outs and emergency procurement at higher prices. It should be noted that pharmaceutical resources are very scarce in the region, with often only one or two pharmacists dealing with all activities (procurement, regulation and being hospital pharmacists at the same time) and sometimes with limited experience in procurement and supply chain management. The difficulty we faced in reaching some of them for interviews suggests that infrastructure and connectivity is a problem in many contexts.

### Pooled Procurement Processes in the Pacific for Pharmaceuticals

According to key informants interviewed during this consultancy, multi-country pooled procurement in the Pacific has been discussed on many occasions for over 20 years but has never materialised.

In March 2007, while pooled procurement was still in regional activities of the Pacific Plan for Strengthening Regional Cooperation and Integration (dated 2005) for the period 2006-2008, an informal consultation on pooled procurement of pharmaceuticals for PICs was held in Fiji.<sup>37</sup> The objectives of the consultation were to conceptualise pooled procurement, discuss possible pooled medicines procurement options and to recommend the most feasible and cost-effective options. As a result of the consultation, it was agreed to establish a steering committee and to do a feasibility study, to develop a proposal and workplan to submit it to governments.

A feasibility study on pooled procurement for PICs<sup>38</sup> was carried out in March/April 2007 and recommended three options: to expand the Fiji Pharmaceutical Services/Bulk Purchasing Scheme, to establish a new pooled procurement scheme with the participation of other big PICs, or to establish a hybrid of these two options.

Following the feasibility study, consultations were held among Chief Pharmacists in Tonga (2007) and Fiji (2008) to go over the proposed models. Group contracting was identified as the most favourable option for PICs but that preconditions should be met before establishing the scheme, including harmonisation and standardisation. This included confirming formal commitment from countries to support harmonisation efforts, establishing technical working groups, developing norms and standards, national essential medicines lists and guidelines. This proposal<sup>39</sup> was presented to the 8<sup>th</sup> meeting of Ministers of Health for the Pacific Island Countries jointly by WPRO and the Secretariat of the Pacific Community in Papua New Guinea in July 2009. During this meeting, the idea of pooled procurement was dismissed, along with any other ideas of 'harmonisation'. It was accepted that there was a need for further consultation for improving the

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<sup>37</sup> WPRO Report, Informal Consultation on Pooled Procurement of Pharmaceuticals for Pacific Island Countries, Suva, Fiji, 29-30 March 2007

<sup>38</sup> [WP\\_PHA\\_PIC\\_EDM\\_3\\_2\\_01\\_eng.pdf\(who.int\)](#)

<sup>39</sup> WPRO and SPC, Pooled procurement for Improving Access to Essential Medicines in Pacific Island Countries, July 2009

procurement and supply chain management system in each PIC. However, they did not think that pooled procurement would be the best solution. Health officials were concerned that it interfered with sovereignty. The meeting was considered politically sensitive, and there have been limited sources of information available to further investigate this issue.

In 2010, the Centre for Development Studies in the University of Auckland<sup>40</sup> published a paper that summarised the benefits, and identified issues, with pooled procurement. The study concluded that pooled procurement could serve the interests of developing countries in the region but also highlighted several barriers, such as administrative costs, lack of political will, and political embargoes. Therefore, the viability of pooled procurement in the region appeared to be unworkable at that time.

In August 2015, a consultant from the World Bank<sup>41</sup> produced a summary of the recent history of pooled procurement of pharmaceuticals and medical supplies in the Pacific. This history clearly shows that the concept of a collaboration between countries in procurement has never succeeded in the region.

In this report it was mentioned that *“cultural differences (including reported concerns about issues of sovereignty and a lack of trust between countries following previous attempts at pooled procurement (e.g., late deliveries, receipt of inadequate quantities, and products close to expiring) mean that the anecdotal evidence against pooled procurement seems to be stronger than the evidence presented regarding the benefits of a pooled system”*.<sup>42</sup>

Finally in 2017, the Western Pacific Regional Action Agenda on Regulatory Strengthening, Convergence and Cooperation for Medicines and the Health Workforce was endorsed by the WHO Regional Committee for the Western Pacific in 2017, which urges Member States to participate in regional convergence and cooperation initiatives to collectively strengthen the regulatory capacity of the region and address common public health issues.<sup>43</sup>

During the 13<sup>th</sup> Pacific Health Ministers meeting in Tahiti in August 2019, a summary of progress made with this agenda to strengthen regulatory systems in Pacific Island Countries was presented<sup>44</sup>. From this, the WHO Secretariat proposed options for the organisation and operationalisation of the subregional platform to be presented and discussed in detail at the next Heads of Health meeting in April 2020. However, due to the COVID-19 pandemic, these options still need to be discussed.

Strengthening regulations will enable countries to: 1) improve the availability of essential medicines as well as the network and integrity of supply chains; 2) ensure quality and safety of medicines and build public trust and confidence; and, 3) facilitate the growth of the pharmaceutical sector, thus allowing the entry of a wider range of quality assured and affordable medicines into the market.

In Fiji, the Fiji Pharmaceutical and Biomedical Services (FPBS) was briefly considered as a potential option to serve the small countries in the region, particularly under their Bulk Purchase Scheme. However, it appears from the interviews during this consultancy that FPBS is now primarily focused on the needs of Fiji only and that the scheme is in place to serve the private sector. Even if they could respond to demands from other countries, it will always be on an ad hoc basis and based on available stocks at the time of the request. It seems also that other

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<sup>40</sup> Summary of recent history of pooled procurement of pharmaceutical and medical supplies in the Pacific, August 2015, World Bank

<sup>41</sup> Summary of recent history of pooled procurement of pharmaceutical and medical supplies in the Pacific, August 2015, World Bank

<sup>42</sup> Summary of recent history of pooled procurement of pharmaceutical and medical supplies in the Pacific, August 2015, World Bank

<sup>43</sup> [WPR-RC068-Res07-2017-en.pdf \(who.int\)](#)

<sup>44</sup> PIC13/S7/4 Strengthening Regulatory Systems for medicines in the Pacific: a subregional approach

countries are not willing to consider FPBS for regular supplies of health products due to previous experience.

**However, pooled procurement initiatives do exist in the region when they are driven by international organisations.**

Pooled procurement for HIV/AIDS and TB medicines is done through the Global Fund grants. In 2009, the Principal Recipient was the Secretariat of the Pacific Community (SPC) who received some technical assistance to manage the HIV/AIDS and TB procurement through the Fiji Pharmaceutical Services (FPS) for 12 PICs. According to key informants, the subject was politically sensitive between the different sub-regions (Micronesia, Melanesia, and Polynesia). Fiji was not readily accepted as the central point for pooled procurement activity. It was difficult to establish good relationships between countries. The mechanism was used for antiretrovirals (ARVs) only and for some expensive Sexually Transmitted Diseases (STIs) medicines, as well as Rapid Diagnostic Tests (RDTs). Thanks to this support they manage an uninterrupted supply and generate cost savings through procurement from international suppliers (such as IDA or Medical Export Group (MEG)). During this period, the Fiji Central Medical Store, FPBS<sup>45</sup>, had the ambition to become a regional supply centre (a wholesaler) for the other countries. One of the main issues was poor quantification capacity in countries, which led to stock-out or over-stock situations which led to the introduction of a Logistic Management Information System (M Supply) to improve the situation.

For several years now, UNDP has been the Principal Recipient for Global Fund HIV/AIDS, MDR TB and malaria grants and procurement is carried out by a team in Copenhagen using their Global long-term agreements (LTAs) with delivery of products to Fiji. UNDP is based in Fiji, who are procuring for 11 small countries (Cook Islands, Kiribati, FSM, Nauru, Niue, Palau, Marshall Islands, Samoa, Tonga, Tuvalu, Vanuatu). Small populations have smaller needs in terms of quantities, for example, there are just 56 HIV/AIDS patients in 11 countries. The main challenges described by UNDP in these countries are the inadequate number of qualified staff, limited expertise in quantification and supply chain issues, high turnover of people when they gain expertise, weak inventory management systems, poor connectivity (with impossibility for them to use M Supply) and regular stock-outs due to long delivery time. UNDP has organised staff training on quantification tools for TB, but the those it trained soon left the countries, so the problem remains. To compensate for the lack of proper quantification and long delivery time, UNDP has put in place a buffer stock of products in Fiji with the support of Global Fund. To stock products, they have an agreement with the Fiji Pharmaceutical and Biomedical Services. They also organise a biannual delivery to countries and ask them to keep at least three months buffer stock at their level. One of the main challenges for the region is the high cost of shipping goods to countries due to limited flights as well as long delivery times (exacerbated by the COVID-19 situation, for example, from four to 15 days in some cases). They also confirmed that it is common to pay up to 50% on the total cost of goods to ship products from Fiji to other countries. Recently, due to the pandemic, over 200% freight costs were charged to bring goods from India to Fiji and then on to other countries. When UNDP receives cold chain items, they usually use the cold chain available from UNICEF to store the goods close to the airport before shipping them to countries.

Another pooled procurement mechanism, the Pacific Vaccine Independent Initiative, has been in place since 1995 for 10 to 15 vaccines (depending on the national immunisation programme), under the leadership of WHO and UNICEF. WHO mainly supports the immunisation programmes on programmatic aspects and UNICEF manages the procurement initiative. This initiative is consolidating needs for vaccines of 13 Pacific countries (Cook Islands, Fiji, Kiribati, Marshall Islands, FSM, Nauru, Palau, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu). It was

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<sup>45</sup> [Fiji Pharmaceutical & Biomedical Services Centre \(FPBS\) – Ministry of Health & Medical Services](#)



initially funded by donors with a capital of USD 1 million, which is used to support pre-financing of vaccines allowing countries to place orders at the beginning of the year and to only pay the invoice at the end of the year. This bridge financing gives each country a ceiling (based on funds given by donors) which is used as a revolving fund. Orders are placed once a year based on an estimation of needs carried out by countries with the support of UNICEF. Quantities are then consolidated by the Sub-Regional Office and a unique order is placed through UNICEF SD. UNICEF SD in turn, places orders through vaccine suppliers. The vaccines are delivered to Suva in Fiji where UNICEF sub-regional office has a cold room in a third-party warehouse. Country orders are packed and shipped to the individual countries by the Sub Regional Office. The main contact persons are within immunisation programmes. Chief Pharmacists are not typically involved in this procurement process. If needed, countries can also request the support of the sub-regional office to place additional orders for specific vaccines (this is the case for COVID-19 vaccines), but they will need to pay in advance (or to have a donor paying for them) and the shipment will be delivered directly to individual countries. Deliveries from Fiji to individual countries was quite easy in the past, except in the North Pacific where flight connections are more problematic (Federated States of Micronesia (FSM) and Marshall Islands). However, since the COVID-19 pandemic, deliveries have become more challenging due to the lack of commercial flights. To avoid stock-out situations in countries, the sub-regional office keeps a buffer stock of key vaccines in Suva and countries are asked to include a three-month buffer stock when quantifying their needs. Key informants in previous reports mentioned several challenges with this mechanism: significant charges for freight, the fact UNICEF is not always flexible/reactive, delays in payment by purchasers and delivery from Fiji<sup>46</sup>. Considering only Chief Pharmacists were contacted for this consultancy, we could not get more feedback on this initiative from beneficiary countries.

UNFPA is also carrying out pooled procurement of reproductive health products through their sub-regional office in Fiji. Products are funded by UNFPA, and consolidation of orders are done by the sub-regional office. Country offices and the sub-regional office are providing support to individual countries for quantification of needs and supply chain improvements. Copenhagen's procurement unit processes the order with their suppliers with direct delivery of products to Suva where UNFPA has a warehouse. The sub-regional office takes care of deliveries to the individual countries. In addition, when necessary, Australia is an important partner of PICs in the region, goods can be delivered in an emergency to Brisbane, where AUSAID has a warehouse. They can then be delivered to individual countries.

According to some key informants, FPBS was never really used by small countries due mainly to a lack of trust from the Fiji government in the capacity of small countries to pay for the goods on time and how that might undermine their capacity to pay suppliers and respond properly to domestic needs in Fiji. More recently it seems that they have limited warehouse capacity to store products and their management system seems to be underperforming as they regularly face shortages of products, including insulin, and have difficulty in supplying even the needs of Fiji.

This signals that pooled procurement is possible for PICs when through international agencies for specific products with investment from an organisation. From the feedback received from key informants, obstacles faced in establishing a multi-country pooled procurement mechanism are linked to the diversity of countries, the lack of political will, the large distances between countries and logistic routes for freights quite different due to the history of the countries (and their close link to Australia, US, or France). It appears also from discussions that the central role played by Fiji, which could have been considered as a key player in the region (having storage capacity), was not readily accepted. Other challenges identified were the difficulty to harmonise the list of medicines between countries, the fact they have few pharmacists and no regulatory convergence. It appears also that Chief Pharmacists and elected Ministers did not have the same

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<sup>46</sup> [Revised-Pacific-Possible-Procurement-Note-February-02-2016.pdf \(worldbank.org\)](#)

views on a pooled procurement mechanism. Despite much support from WHO in this discussion, many countries were not in agreement with this concept and rejected the idea. The financing aspects and the different currencies used in countries were also part of the barriers identified.

## **Current Procurement Processes and Prices for Insulin and Associated Supplies in Pacific Island Countries**

Current procurement processes and prices for insulin and associated supplies in PICs were assessed through interviews and further email exchanges with Chief Pharmacists. Obtaining this information was challenging due to busy schedules, but also because of connectivity problems. The COVID-19 context probably also impacted their availability to participate in this study. Due to this context, the analysis below might not fully reflect the situation in the region and would benefit from additional discussions.

### **Countries Selected and Criteria Used**

The objective of the study was to focus on six priority countries based on a mix by population size, wealth, geographic spread, and government capacity. Initially, nine countries were selected on the advice of WHO HQ, former and current WPRO staff based on population, classification of countries by the World Bank, population size, geographical location, NCD and diabetes indicators. The nine countries were FSM, Fiji, Kiribati, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

Contact details of the Chief Pharmacists were obtained from the sub-regional WHO Office in Fiji, as well as through a Health Action International Asia Pacific (HAI AP) contact. Emails were sent to present the study with an Excel sheet to collect data on insulin and associated supplies purchased in these countries. A list of questions was also developed as a guide to conduct the interviews.

As both WPRO and the HAI AP contact had expressed doubts in successfully reaching the attention of Chief Pharmacists because of COVID-19, it was decided to initially contact all nine countries identified to increase our chances of receiving replies, and to reach the six interviews required for the study. By the conclusion of the consultancy, we managed to have interviews and to receive data from Fiji, FSM, Kiribati, Tonga, and Tuvalu. The information received on insulin and associated products purchased (description, prices, and volumes) is available at the end of this section in two tables.

### **Country 1: Federated States of Micronesia (Yap)**

There is no central medical supply unit for FSM, instead each state carries out its own procurement. The information provided is the information from the Yap State.

Procurement of medicines and health products in Yap usually occurs on a quarterly basis with purchase orders placed to suppliers (mainly in the US). However, for insulin, procurement is carried out once a year through a supplier in the US. They do not do tenders and only ask for quotations from suppliers. Purchase Orders with specific quantities for each occasion are used in place of LTAs. Procurement uses the governmental budget, and products are subsidised by the government so that patients only pay a symbolic amount to access their treatment. For emergency orders, they also use a supplier called Medpharm based in Guam, but prices are higher. Delivery time from the US is one month, when from Guam it would be two weeks.

From the information received, insulin and associated supplies purchased from the US are higher priced than in other countries in the study. This is also because of their specific historical link with the US.

They usually have no problems in ensuring regular supply of medicines and health products, except recently with a national lockdown impacting logistical aspects and creating delays from

suppliers. They have also experienced difficulties in their inventory system, which complicates the quantification of needs as everything must be done manually, with a risk of missing some recordings. This could lead to stock-outs.

Blood glucose meters are bought for health facilities only, not for self-monitoring by individuals.

The country is already benefiting from the pooled procurement of vaccines by UNICEF SD, but this is managed by the Centres for Disease Control and Prevention (CDC) locally and not by the Chief Pharmacist. It means the procurement regulation allows the use of international agencies for specific products.

### **Country 2: Fiji**

In Fiji, the Fiji Pharmaceutical and Biomedical Services is a branch of the Ministry of Health for procurement of health products. They purchase medicines and other health products through annual tenders. In the past, contracts were awarded for five years, but are now awarded for three years. These contracts are for fixed quantities, so they include a maximum amount, and they only have one LTA in place for each product. If the maximum amount/cap covered by the contract is reached for the year, the Minister is the only person who could give a waiver to allow FPBS to instigate a request for quotations from other suppliers to cover the extra-needs.

FPBS purchases insulin through Novo Nordisk in New Zealand and benefits from the differential price offered to middle-income countries (CIF Prices). However, they recently faced shortages and could not provide continuous supply of human insulins to the population. The reasons given for these shortages are the logistical difficulties faced during COVID-19. However, other key informants mentioned more regular shortages putting people living with diabetes in difficulty.

FPBS also has a Bulk Purchase Scheme. It was assumed this scheme was in place to support the public sector in other countries but in fact it focuses mainly on supplying specific products to the private sector in Fiji and in other countries. It clearly shows that the FPBS has a commercial approach. However, if other countries need some products, they can contact FPBS and if stocks are available, they can be supplied. This requires a pre-payment of the goods, and their embassy will need to take care of the transport of goods from Fiji to their respective countries.

From our interview, it seems FPBS capacity is limited and has struggled to adequately respond to the needs of the Fiji population. They are currently upgrading their Warehouse Management System, are considering hiring additional staff and building a new, larger warehouse. They have a carrier system to transport goods from Suva to the other regions (by road, boats or even planes in case of emergency).

Considering no registration system exists in country, FPBS oversees the assessment of products proposed mainly by suppliers. Their QA system relies on inspections done by PIC/S inspectors, the registration in the country of origin and some additional quality control done through an agreement with the Therapeutic Goods Administration (TGA) in Australia.

FPBS is also supplying insulin syringes and blood glucose meters from B. Braun.

### **Country 3: Kiribati**

In Kiribati, medicines and health products procurement is through an annual tender, receiving bids from suppliers mainly based in Australia and New Zealand. In case of emergency orders, they get quotations from these suppliers directly for small quantities.

They recently benefited from a donation of insulin by Novo Nordisk through the WHO Country Office. This was confirmed by WHO Headquarters, who indicated that they faced challenges in delivering the donation due to the freight limitations (they usually have flights twice a week).

Based on the outcome of the tenders, goods are delivered to the country, but no LTAs have been established.

Blood glucose meters are purchased for use in health facilities only and not for patients. This will require identifying a different product if they want to start buying blood glucose meters for self-monitoring.

Human insulin is free for patients and the government purchases these insulins using a designated budget. It seems if patients want insulin analogues (e.g., in pens) they must buy them from private pharmacies.

Kiribati sometimes uses the services of FPBS when they are short of stock. However, they often ask the support of UNDP to help them with the delivery to ensure the goods are received on time.

The country is already benefiting from the pooled procurement for vaccines by UNICEF SD. They also receive HIV/AIDS medicines through UNDP and reproductive health commodities from UNFPA. It means the procurement regulation allows the use of international agencies for specific products.

The Chief Pharmacist confirmed that regular discussions on pooled procurement have taken place in the past but have not yet been implemented. When exploring with him the possible options to increase access to insulin and associated supplies, the support from a UN organisation was considered a good option but would require that immunisation programmes accept the use of fridges currently in place for vaccines for other products.

#### **Country 4: Tonga**

A new Act was passed in 2010/2011 that imposes central procurement for all public facilities through a Central Procurement Unit (CPU) (not managed by pharmacists). Procurement is through an annual tender and, considering quantities required for Tonga are quite small, they mainly receive offers from suppliers. When products have been assigned to specific suppliers, they will receive several deliveries during the year. Each facility will be allowed to purchase directly from suppliers only below a certain threshold of USD 1,000. Delivery time when purchasing through CPU is three months. If quantification is not properly done, the CPU will be able to do emergency orders through the same suppliers. Procurement is carried out using governmental budget and insulin is given for free to patients.

Blood glucose meters are purchased for health facilities only. Stock-outs occur from time-to-time and one of the issues raised was the lack of maintenance of blood glucose meters.

They confirmed pooled procurement was discussed in the past but never materialised, even though there is agreement that it could be helpful to improve the access to insulin and associated supplies.

#### **Country 5: Tuvalu**

Procurement of medicines and health products in Tuvalu is through an annual tender. Considering the quantities required are small, they mainly receive offers from suppliers in Australia, Fiji, or New Zealand. They can also sometimes buy directly from some international distributors, such as IDA in the Netherlands.

Procurement is carried out using a governmental budget and all products, including insulin, are given for free to patients.

Blood glucose meters are purchased for health facilities, and for self-monitoring of patients. They need to buy controls when blood glucose meters are used in health facilities with different patients (with different levels of glucose in blood) to ensure reliability in results.

Insulin is purchased from a supplier in Australia who claimed their products are registered by TGA. However, when checking the TGA website, the insulin from Biocon and Wockhardt have not been registered by TGA. From our discussion, it seems QA criteria in tender documents are not

strong enough, but we could not get access to the tender document, or at least not the QA criteria defined.

According to the Chief Pharmacist, they do not face real challenges for this procurement, except recently on logistical aspects because of the COVID-19 pandemic and the impact on flights.

They confirmed multi-country pooled procurement was discussed in the past but never materialised. It seems that financial issues and the different currencies used across the region were major obstacles, as well as the identification of a lead country for this pooled procurement mechanism. They also confirmed FPBS Bulk Purchasing Scheme does its own procurement and prioritises its own population. They used to place orders with FPBS, but they will supply Tuvalu only if their stocks can cater. Currently, because of COVID-19, they are not open for business, but consider case by case if Tuvalu send them an order.

Tuvalu is benefiting from the pooled procurement for vaccines by UNICEF SD. They confirmed their Pharmacy Act and procurement regulations is allowing the use of international agencies for specific products.

## Summary Table of Products Procured and Prices Obtained in Pacific Countries

### Insulin Procured in 2020 (1 AU\$ = 0,778 USD)

Countries	Strength/Volume	Presentation	Pack size	Price per vial/cartridge/pen in purchased currency	Price per vial/cartridge/pen in USD	Price per 10ml in USD	Incoterms	Annual unit quantity procured
<b>Regular human insulin (short-acting)</b>								
Fiji	100 IU/ml, 10ml	vial	1 vial	4 USD	4	4	CIF	7055
FSM, Yap State	100 IU/ml, 10ml	vial	10x10ml vials	21,21 USD	21,21	21,21	Yap State Department of Health, Medical supply unit	285
Kiribati	100 IU/ml, 10ml	vial	1 vial	4 AU\$	3,11	3,11	CIF	800
Tuvalu	100 IU/ml, 10ml	vial	1 vial	23,9 AU\$	18,59	18,59	CIP	50
Tonga	100 IU/ml, 10ml	vial	10x10ml vials	7,12 AU\$	5,54	5,54	DAP	600
<b>Isophane NPH human insulin (intermediate-acting)</b>								
Fiji	100 IU/ml, 10ml	vial	1 vial	4 USD	4	4	CIF	12600
FSM, Yap State	100 IU/ml, 10ml	vial	10x10ml vials	21,21 USD	21,21	21,21	Yap State Department of Health, Medical supply unit	250
Kiribati	100 IU/ml, 10ml	vial	1 vial	6 AU\$	4,67	4,67	CIF	950
Tuvalu	100 IU/ml, 10ml	vial	1 vial	23,9 AU\$	18,59	18,59	CIP	100
Tonga	100 IU/ml, 10ml	vial	10x10ml vials	7,12 AU\$	5,54	5,54	DAP	15000
<b>Regular isophane 30/70 human insulin (biphasic)</b>								
Fiji	100 IU/ml, 10ml	vial	1 vial	4 USD	4	4	CIF	82500

FSM, Yap State	100 IU/ml, 10ml	vial	10x10ml vials	20,6 USD	20,6	20,6	Yap State Department of Health, Medical supply unit	379
Kiribati	100 IU/ml, 10ml	vial	1 vial	4 AUD	3,11	3,11	CIF	1500
Tuvalu	100 IU/ml, 10ml	vial	1 vial	54,54 AUD	42,43	42,43	CIP	50
Tonga	100 IU/ml, 10ml	vial	10x10ml vials	7,12 AUD	5,54	5,54	DAP	13000
<b>Glargine analogue insulin (long-acting)</b>								
FSM, Yap State	100 IU/ml, 3ml	Prefilled pen	1x 3ml pen	53,82 USD	53,82	179,4	Yap State Department of Health, Medical supply unit	135
FSM, Yap State	100 IU/ml, 10ml	vial	10x10ml vials	114,38 USD	114,38	114,38	Yap State Department of Health, Medical supply unit	
Tonga	100 IU/ml, 3ml	Prefilled pen	5x3ml pen	18,48 AUD	14,38	47,93	DAP	50

From the data collected, Fiji, Kiribati and Tonga managed to get a price for human insulin delivered in country close to the prices obtained by GCC and OECS countries with small quantities purchased. However, FSM and Tuvalu are paying higher prices.

The prices obtained for long-acting glargine analogue insulin by FSM and Tonga are higher with significant differences in prices between the two countries for prefilled pens.

**Associated Products Purchased in 2020** (1 AUD = 0,778 USD)

Country	Description	Pack size	Unit price in purchased currency	Unit price in USD	IncoTerms	Annual quantity procured
<b>Insulin syringes 1ml (100 IU)</b>						
Fiji	1ml	Box of 100	11,59 USD	11,59	CIF	300000 (3000x100)
FSM (Yap State)	1ml, 100IU/ml 29G x 1/2 (0.33mm x 13mm)	Box of 100	60,4 USD	60,4	Yap State Department of Health, Medical supply unit	25000 (250x100)
Kiribati	1mL insulin w/29Gx12"fixed needle	1 syringe	0,04 AUD	0,031	CIF	50000
Tuvalu	100IU+fxd ndl 29Gx1/2", 1ml	Box of 100	1,2 AUD	0,93	CIP	126500 (1265 X100)
Tonga	1mL with fixed needle 29G x 12.7mm	Box of 100	1,26 AUD	0,98	DAP	500000 (5000X100)
<b>Blood glucose meter portable</b>						
Fiji		1 Meter	16,73 USD	16,73	CIF	400
FSM (Yap State)	500 test memory + two way scrolling buttons	1 Meter	75,26 USD	75,26	Yap State Department of Health, Medical supply unit	20
Kiribati		1 Meter	9,57 AUD	7,45	CIF	
Tuvalu		1 Meter	For free	For free	CIP	
Tonga		1 Meter	14,30 AUD	11,13	DAP	40
<b>Blood glucose test strips</b>						
Fiji		Box of 100	28,67 USD	28,67	CIF	18000X100
FSM (Yap State)	50 Test Strips Bandelettes reactives	Box of 50	49,07 USD	49,07	Yap State Department of Health, Medical supply unit	50x50



Kiribati		Box of 100	43,50 AUD	33,84	CIF	528x100
Tuvalu		Box of 100	40 AUD	31,12	CIP	288x100
Tonga		Box of 100	26,93 AUD	20,95	DAP	916x100
<b>Insulin needles for pen</b>						
FSM (Yap State)	0.25mm (31G) x 5mm	Pack of 100	66,33 USD	66,33	Yap State Department of Health, Medical supply unit	26x100

The variety of prices for the associated products clearly shows that some improvement could be made in national procurement by comparing prices obtained by other countries. For blood glucose meters, two main brands are purchased in countries and for, one brand (Omnitest 3), prices vary significantly. It also has an impact on the cost of blood glucose test strips.

## **Applicability of Existing Pooled Procurement Mechanisms in Other Regions**

The information gathered during this study shows that countries in the PIC region could benefit from a pooled procurement mechanism to better standardise their requirements for insulin and associated supplies, to achieve lower prices by pooling demands, and thus improve equity between countries.

However, based on historical discussions on pooled procurement in the Pacific, and considering the governments decided first to invest in regulatory harmonisations, we do not think models like those in place in GCC, OECS or at PAHO SF will be applicable for PICs. The establishment of a central contracting and procurement unit or a group contracting system requires strong political will that does not seem to exist in Pacific countries at present. As shown by the experience in OECS and GCC, it also requires an existing entity to drive the political agenda and to lead financial discussions necessary to support such a mechanism, ideally with similar currencies and, if possible, a central bank system. It also requires some level of trust between countries on their capacity to finance their procurement and to respect their commitment to the pooled procurement mechanism. The fact Small Pacific Islands have never really used the Fiji Pharmaceutical and Biomedical Services, which could have played this role but prefers to purchase products from Australia, New Zealand or from international distributors such as IDA, confirms this.

A pooled procurement mechanism based on an international organisation having a presence in the region seems to be the only option for further consideration at this stage. Further, considering volumes to be purchased are extremely limited, it will be better to explore the possibility of using the existing procurement capacity for such products at global level with some support at regional level to handle custom clearance, storage, and deliveries to individual countries. However, insulin and associated supplies are part of a long list of products to be purchased by these countries and some countries might not want to split their annual procurement from other products, and to continue buying them as part of their annual tender.

One possibility is to consider grouping insulin and associated supplies with other products already purchased at global level by UN agencies, such as UNICEF SD (vaccines) or UNDP (for HIV/AIDS and STIs). However, this will require accepting different funding sources as some of these products are funded by donors and insulin and associated supplies are covered by the governmental budget. In some countries, procurement for these products is also not always carried out by the same entity. This will require some coordination between different focal points. Another element to consider is that UN agencies often require prepayment to start the procurement process.

Based on this conclusion, an initial assessment of global procurement capacity for insulin and associated supplies through UN agencies has been completed.

# INITIAL ASSESSMENT OF UN POOLED PROCUREMENT OPPORTUNITIES FOR INSULIN AND ASSOCIATED SUPPLIES

## WHO Global Supply Policies

The WHO Global Supply Policies department provides procurement support to countries through WHO Country Offices. This is mainly managed using donor funds given to specific countries in emergency situations. Therefore, the procurement priority of WHO is mainly to supply kits. They can also provide, on an ad hoc basis, some additional procurement services if countries request the support of WHO Country Offices.

Insulin and associated supplies (insulin syringes, blood glucose meters, blood glucose test strips and lancets) are part of the Interagency Emergency Health Kit (IEHK).<sup>47</sup> These items are also part of the NCD kit used mainly to maintain treatment for displaced people.<sup>48</sup> Kits are supplied by WHO under LTAs in place with international suppliers (IDA, IMRES, MEG).

To support the procurement of insulin in these emergency situations, WHO has an LTA in place with Novo Nordisk for short-acting human insulin, intermediate acting human insulin and biphasic 70/30 human insulin in vials. All LMICs can benefit from these LTAs where procurement is in a humanitarian context. However, the prices obtained through this LTA are confidential and cannot be disclosed outside of a procurement transaction. Similar Free on-Board airport prices are available for the three insulin formulations and the prices obtained seem to be below the differential price announced by Novo Nordisk for LMICs.

Due to COVID-19, in 2020 Novo Nordisk has also donated 540,000 vials of human insulin to WHO (and UNICEF). Each agency was free to identify the countries in most need. Médecins Sans Frontières (MSF) was also offered this donation but declined. The amount of this donation represented 10% of the volumes sold to the agencies in 2019. This donation was used in around 40 countries and, more particularly, to supply Solomon Islands, Kiribati, and Vanuatu. However, it should be noted that the shipment to Kiribati has been a challenge for WHO because of the lack of flights. One of the challenges in the delivery of insulin is linked to the cold chain, where insulin is often frozen during transportation if specific conditions are not properly managed.

In 2020 along with the IEHK, WHO directly supplied 333,550 vials of short-acting human insulin, 349,550 vials of intermediate-acting insulin and 1,062,000 vials of biphasic 70/30 human insulin in Congo, DRC, Guinea Bissau, Democratic Peoples' Republic of Korea, Kyrgyzstan, Lebanon, Yemen, Syrian Arab Republic, Turkey, United Arab Emirates. The cold chain modules (including insulin) of the NCD kits were also supplied to Bangladesh, Libya, Syrian Arab Republic, and Yemen.

Other than those supplied in the kits, WHO does not have an LTA for insulin syringes. They rely on the insulin syringes selected by their suppliers. Until recently, they had LTAs in place for blood glucose meters for the Vivacheck Ino<sup>49</sup> via IMRES at 7.62 USD and the SD Codefree<sup>50</sup> from SD Biosensor Healthcare through IDA at 38 USD. They are now establishing new LTAs for blood glucose meters and the range of prices in offers received is between 10 and 30 USD. Glucose control solutions (low, medium, and high) are purchased mainly for blood glucose meters used in health facilities where the equipment is used, with many patients having various blood glucose levels. This is not needed for blood glucose meters used for self-monitoring of a single patient (or

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<sup>47</sup>[Interagency Emergency Health Kit 2017 \(who.int\)](https://www.who.int)

<sup>48</sup>[Noncommunicable diseases kit \(NCDK\) 2016 \(who.int\)](https://www.who.int)

<sup>49</sup>[Ino Blood Glucose Meter | VivaChek Biotech](https://www.vivachek.com)

<sup>50</sup>[SD CodeFree \(sdbiosensor.co.in\)](https://www.sdbiosensor.co.in)

if used, only one low control solution will be necessary). These solutions usually have a shelf-life of 18 months.

WHO is currently developing specifications for insulin syringes and blood glucose meters with the objective to support prequalification of some of the equipment.

It means WHO should mainly be considered for supplying insulin and associated supplies in humanitarian contexts as they currently do not focus on providing procurement services to countries outside of these contexts (and do not plan to expand their mandate in this direction).

## UNDP

UNDP mainly procures for Global Fund projects as they are Principal Recipients in several countries. However, they also provide procurement services to governments under financing agreements for NCD medicines and other health products. Recently, they provided support to the national procurement centre for human insulin in Sudan under an LTA put in place with Novo Nordisk regional office in Nairobi. The LTA was established by the UNDP country office for this specific procurement. Previously, another tendering process was also carried out at local level in Ukraine through Sanofi. Based on recent demands from new countries, they are now engaged in a negotiation with Novo Nordisk and seem to be making progress for an LTA that will cover 47 Least Developed Countries with a common DAP price. They hope to finalise this agreement in the coming months. For other countries, UNDP will need to obtain from Novo Nordisk commercial departments specific prices. In the past, UNDP tried to get a unique LTA for human insulins valid for all countries, but this failed as they were not operating only in humanitarian fields and the products were not always given for free to populations. They now have new demand from Turkmenistan and are planning to launch a tender that will be used, if possible, to establish a Global LTA. This LTA will require FCA prices from manufacturers and UNDP will take care of the transport, insurance and customs clearance based on their current contracts.

UNDP also supplies insulin syringes, blood glucose meters, and test strips but in small quantities and only upon requests of countries through UNDP country offices. These products are bought through suppliers (consolidators) that have LTAs with UNDP. It means products offered by these suppliers will depend on the sourcing strategy of the suppliers and will be proposed to countries. In 2020, insulin syringes from Tian Kang Medical were bought through Amex in Austria for Azerbaijan (3.80 USD per pack of 100) and Accu-Check active blood glucose meters from Roche (36.6 USD) and strips (17.60 for a box of 50) were bought for Bolivia through Amex and Omnitest 3 Solo blood glucose meters from B Braun (26.90 EUR) and strips (33.20 EUR for a Box of 50) were bought for Burundi through VWR.

UNDP does not currently have LTAs in place directly with manufacturers at global level for human insulins and associated supplies. This situation might change for human insulin in the coming months if they are able to establish a global LTA with Novo Nordisk and get additional demand from countries.

## UNICEF SD

UNICEF SD previously had two LTAs in place for human insulins with two manufacturers. However, one of them was for products with shorter shelf-life and, as they never used it, decided to maintain only one LTA with Novo Nordisk. This LTA is valid for 46 Least Developed Countries, and in humanitarian contexts in all countries, so it is not yet a Global LTA valid for all LMICs.

When looking at the UNICEF SD catalogue of products, we can see that they offer:

- Short-acting regular (soluble) insulin 100 IU/ml, 10 ml vial in pack of 1 vial at 2.65 USD (price from their warehouse in Copenhagen).<sup>51</sup>

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<sup>51</sup> [SolubleInsulin100IU/ml inj 10ml vl/BOX-1 \(unicef.org\)](https://www.unicef.org/procurement/procurement-products/soluble-insulin-100iu-ml-inj-10ml-vl-box-1)

- Intermediate-acting NPH insulin 100 IU/ml, 10ml vial in pack of 1 at 2.65 USD (price from their warehouse in Copenhagen).<sup>52</sup>

Both are Novo Nordisk products and are included in the IEHK when needed. The price listed in the catalogue is average and, if larger orders are placed directly through Novo Nordisk, they can obtain a lower price. They recently put in place a cold room in their warehouse in Copenhagen and the necessary SOPs to manage this cold chain for insulin. A system is in place to track the orders from the warehouse to recipient countries using dataloggers in shipments, and they have the support of the QA/QC team to review dataloggers data when temperature excursions occur.

The stock kept in the warehouse can be shipped to all LMICs as part of a humanitarian response or when small quantities are required by countries covered by the LTA. When they receive larger requests from countries, they need to consult with Novo Nordisk to confirm the prices and will organise direct delivery to the recipient country. Usually, prices will be the same for lower middle-income countries. They have no experience with upper middle-income countries, and they have not recently supplied Pacific Island Countries.

UNICEF SD has received some enquiries for analogue insulins, mainly from Eastern Europe countries, but no action has yet been taken.

UNICEF SD can also supply insulin syringes, but they do not supply blood glucose meters and test strips for individual/self-monitoring.

The only products supplied to countries are the Photometer, HemoCue Glucose 201+/SET<sup>53</sup> (indicative price 862.17 USD) and the Microcuvettes, for Glucose 201+/BOX-100<sup>54</sup> (indicative price 51.36 USD) used in health facilities.

Insulin syringes, 1ml, UI 100, 30-31G are available in box of 100 at 4.81 USD (0.0481 USD per syringe).<sup>55</sup>

From their experience of delivering vaccines to the Pacific Region under the Vaccine Independent Initiative, there have been few real challenges, as conditions could be easily tracked during deliveries through dataloggers and Vaccine Vial Monitors on vaccines supplied. However, when shipping vaccines directly to individual countries for specific vaccines, they faced additional challenges (lack of dry ice in Vanuatu or Solomon Island for COVID-19 vaccines, lack of cargo space in limited commercial flights). They even had to use multiple-stop charters to deliver the vaccines on time and avoid stock out situations. They confirmed also that freight costs are extremely high in this region.

<sup>52</sup> [IntermediateInsulin100IU/ml10mlVl/BOX-1 \(unicef.org\)](#)

<sup>53</sup> [Photometer,HemoCue Glucose 201+/SET \(unicef.org\)](#)

<sup>54</sup> [Microcuvette.for Glucose 201+/BOX-100 \(unicef.org\)](#)

<sup>55</sup> [Syringe,insulin,1ml,U-100,30-31G/BOX-100 \(unicef.org\)](#)

## PROCUREMENT OPTIONS FOR SMALL STATE COUNTRIES OR COUNTRIES WITH LIMITED DEMAND FOR INSULIN AND ASSOCIATED SUPPLIES

Health procurement in small lower-income countries or in countries with limited demand (considering this demand could expand overtime with the expansion of services and additional budget) could be challenging.

These countries are often characterised by **some** of the parameters below:

- Small population.
- Small quantities required.
- Limited budget.
- Procurement regulations not always adapted to small volume needs.
- Difficulty to receive offers when doing tenders for medicines and other health products.
- Difficulty to receive offers directly from manufacturers.
- Getting offers from suppliers, including high mark-ups from distributors/wholesalers resulting in higher prices.
- Not many suppliers responding to tenders.
- Limited or even sometimes no regulatory capacity.
- Limited QA expertise to define QA criteria when purchasing medicines and other health products (in tenders or for direct procurement).
- Limited number of qualified human resources (pharmacists doing several jobs at the same time: procurement, regulation, clinical etc.).
- Limited expertise in procurement and supply management.
- Limited capacity to quantify needs and/or no electronic Logistic Management Information Systems (e-LMIS) available to collect logistic data.
- Connectivity issues.
- Logistical issues:
  - Long delivery times.
  - Limited number of commercial flights and cargo space.
  - Limited cold chain capacity.
  - High cost of freight.
  - Highly impacted as soon as transport companies are affected by strikes, pandemic situation such as the COVID-19 situation (no flights due to lockdown) with the risk of reducing the capacity to use products before expiry date.

When defining their procurement strategies, small state countries, or countries with limited requests for insulin and associated supplies due to limited capacity, should consider different options.

Before looking at these procurement options, it is important for countries to clarify several points that would influence their procurement strategy:

- Does their national regulation for procurement include the possibility to do direct contracting or to do procurement through an international/UN organisation (and under which conditions) in addition to national tenders?
- To ensure the availability of all products necessary to deliver insulin and ensure monitoring of patients under insulin, do they want to procure all necessary products from the same supplier, or do they prefer to purchase each item separately?
- What is the available budget for purchasing these products and is the annual budget available in one tranche or is disbursement made progressively?

- Are specifications of the products to be supplied generic enough to ensure proper competition (particularly for insulin and blood glucose meters)?
- How to ensure quantification of needs for annual needs is done properly to avoid emergency orders that will have an impact of the cost of the products and the budget utilisation?
- What is the level of buffer stock necessary at central level and health facility level to avoid stock-out and over-stock situations?
- What are the quality assurance criteria to be applied to accept the products proposed (biological products and medical devices requirements)?
- What are the national regulatory requirements to import products in the country and their necessary documents?
- What will be the best shipment option (sea/freight/road) to supply the products to the country?
- What are the best IncoTerms to be used?
- What is the storage capacity at central level and, more particularly, cold chain capacity?

Based on our analysis of multi-country pooled procurement mechanisms in GCC, OECS and PAHO SF, the case study of PICs and the global pooled procurement by UNICEF SD, UNICEF and WHO Global Supply Chain Policies, several procurement options should be considered by small state countries or countries with limited requests for insulin and associated supplies.

For each option, a brief analysis of advantages and disadvantages is proposed for further consideration. Additional elements raised by this analysis for future consideration by the ACCISS Study are also proposed.

### **Competitive Procurement at National Level**

Often national regulations will require public procurement through a competitive process (annual tender) to increase competition and transparency. Sometimes this includes a threshold amount under which direct procurement can be considered. For small countries, competitive procurement will often be used for all health products needed for the country for a year and, due to limited quantity of insulins and associated supplies purchased, a limited number of offers will be received for these products, mainly from suppliers in their countries and regions with the risk of being charged higher prices. It also means that often the prices obtained will be similar whatever quantity is purchased considering suppliers will often have a fixed price for items offered in their catalogue. It will also require time to prepare the tender document, to qualify suppliers (as restricted tenders are highly recommended for health products procurement) and to analyse the offers in a context where human resources are already limited.

To increase the benefit of restrictive tenders, countries could consider including insulin and associated supplies in a lot to receive offers for all products needed at the same time. This will facilitate the analysis of offers and will simplify the shipment and custom clearance process. We would also strongly recommend opening the restricted tender not only to suppliers at country or regional level, but also to suppliers at international level to benefit from the economies of scale offered by international distributors.

To facilitate the comparison of offers received, it would be important to choose the right IncoTerms in the tender document, including the costs of freight or shipment, which are often significant when purchasing small quantities or when delivery is made to remote areas (such as islands).

In some countries, the national regulation allows for a request for quotations from a limited number of suppliers (often three quotations will be necessary). This could be a simpler way of doing procurement for small quantity items.

## Multi-country Pooled Procurement/Negotiations

In comparison to national competitive procurement, it is clear from our analysis of the GCC and the OECS mechanisms that multi-country pooled procurement for small states or countries with limited needs is a good option for insulins and associated supplies. Both mechanisms allow countries to benefit from better prices for quality-assured products, to increase transparency in the procurement process, to reinforce equity between countries and to reinforce standardisation and technical capacity in individual countries.

However, to achieve this, it will be necessary:

- To have political will at the highest level in each country as well as in a group of similar countries (language, currency, geography, etc.).
- To sign an agreement to confirm the country's commitment to honour the conditions of the agreement.
- To adapt national procurement law/regulations to use this mechanism.
- To harmonise regulatory aspects with other countries.
- To obtain financial commitment for the establishment of the mechanism and to pay suppliers on time.
- Having a similar currency and a central bank will be helpful.
- To ensure your country will give full support to a permanent and autonomous secretariat.
- To support the availability of expertise in procurement and quality assurance at central level.
- To standardise your needs with other countries.
- To put in place an effective communication to reinforce trust between countries and the pooled procurement mechanism.
- To commit to favour the pooled procurement mechanism for items in its scope in comparison to national procurement system.
- To align procurement cycles with other countries.
- To support transparency on prices obtained through the pooled procurement mechanism.

This requires a long-term commitment from countries to build such mechanisms, which are not always compatible with the political or economic context in many regions. It often also requires initial support from partners to support the dialogue between countries and to bring technical and financial expertise from the start of the process. It requires the quick identification of qualified and reliable staff in the region to further develop the system and maintain it over time.

The past failures of some multi-country pooled procurement mechanisms, and the challenges faced with the establishment of such mechanisms in the Pacific region, shows that this option, even if attractive, is not always possible. It is also clear that it will never materialise if a combination of political will and technical and financial capacity is not established.

## Direct Procurement from a Pharmaceutical Company with an Access Price for Insulin for LMICs

Several countries requiring insulin could benefit from a differential price offered by Novo Nordisk for human insulin. This price is available for 76 LMICs and is available for human insulin with a ceiling price of 3 USD as part of the Access to Insulin Commitment to strengthen their efforts to reach the most vulnerable people with low-cost insulin. To benefit from this access price, countries will need to have the capacity to do direct contracting with a manufacturer. However, as the list of countries included in this offer is not fully clear and IncoTerms attached to this price are not openly disclosed, the only possibility to check if your country could benefit from this offer would be through direct consultation with Novo Nordisk.



Based on past procurement experiences of some countries, if volumes purchased by countries are increasing (or by a pool of countries benefiting from this access price), price obtained for human insulin through this Access to Insulin Commitment can be further decreased by the company.

### **Direct Procurement Through an International Procurement Agency (UN Agency or International Distributor)**

When countries have limited requests, another option to consider is direct procurement through an international procurement agency with insulin and associated supplies in their catalogue. This will allow countries to benefit from economies of scale and global LTAs in place, as well as benefitting from the QA system in place to guarantee the quality of the products procured. If the procurement agency is also keeping stock of products, this could facilitate quick supply in case of emergency procurement. This will also open the possibility of buying insulin and associated supplies through the same channel.

National regulations are required for this option. International procurement agencies could be not-for-profit international distributors, for profit international distributors or UN agency offering procurement services for health products. Often, direct contracting from not-for-profit and for-profit distributors will require major changes in the regulations. However, many countries already use UN procurement services for specific categories of products, such as vaccines purchased through UNICEF SD or reproductive health products purchased through UNFPA. It is often quite easy when funds come from donors as this is one of the conditions included in the agreement with the country. Another condition is that prepayment is needed before procurement can take place, which could be an issue when using government funding. However, some UN agencies have already put in place financing facilities to overcome this barrier. This will often require a donor to capitalise this financing facility and to establish clear procedures for the payment of goods after delivery to countries. This should be further explored for insulin and associated supplies.

This option could also be valid for a group of countries, particularly when small countries are in the same region and require small quantities. Pooling demand from different countries with a delivery of goods to a central location could reduce the administrative burden, reduce shipment costs, and simplify the customs clearance process. However, it will require an entity to take care of the consolidation of needs, to place the Purchase Order to the UN procurement agency, to take care of the customs clearance, to store goods at arrival and to pack and deliver goods to each country. Some UN agencies are already playing this role in some regions (PAHO SF for Latin and Central American countries and UNICEF Regional Office in Pacific for vaccines). It will be good to assess their capacity to handle procurement of insulin and associated supplies for the countries in their region using procurement arrangements available at headquarter level or through another UN agency. In a specific situation like in the Pacific, this may also require establishing a revolving fund to support countries for the prepayment required as is done for vaccines.

## ANNEX 1 LIST OF COUNTRIES SELECTED BASED ON CRITERIA DEFINED FOR THE STUDY

COUNTRIES Capital city	Population size*	World Bank classific ation	Geographic location*	Governance*	Adult mortality rate from NCDs at ages 30–69 years**	NCDs are estimated to account for % of deaths (&)	Proportional mortality for diabetes (&)	Recommendations
Federated States of Micronesia (FSM) -	104,468	Lower- middle income	Micronesia	Associated with USA	26% (2015)	75%	9%	Jin
Fiji - Suva	935 974	Upper- middle income	Melanesia	Commonwealth	31% (2015)	84%	22%	Klara
Kiribati - South Tarawa	123,346	Lower- middle income	Micronesia	Commonwealth	28% (2015)	64%	10%	Klara/Jin
Papua New Guinea - Port Moresby	8,935,000	Lower- middle income	Melanesia	Commonwealth	NA	56%	4%	Klara/Jin
Samoa - Apia	193 483	Upper- middle income	Polynesia	Commonwealth	22% (2015)	81%	9%	Klara
Solomons Islands - Honiara	652,857	Lower- middle income	Melanesia	Commonwealth	26% (2015)	69%	7%	Klara

Tonga - Nuku' alofa	100 651	Upper-middle income	Polynesia	Commonwealth	24% (2015)	83%	13%	Jin
Tuvalu – Fongafale	11 342	Upper-middle income	Polynesia	Commonwealth	N/A	N/A	N/A	
Vanuatu - Port Vila	298 333	Lower-middle income	Melanesia	Commonwealth	22% (2015)	74%	6%	Klara

### **Sources of information**

\*Wikipedia resources on 20 January 2021

[World Bank Country and Lending Groups – World Bank Data Help Desk](#) 2019

\*\* [WPRO-2017-DPM-008-fji-eng.pdf](#) Country Cooperation Strategy 2018-2022

\*\* [WPRO-2017-DPM-027-pic-eng.pdf](#) Country Cooperation Strategy 2018-2022

\*\* [WPRO-2016-DPM-005-eng.pdf](#) Country Cooperation Strategy 2016-2020

\*\* [WPRO-2017-DPM-024-tuv-eng.pdf \(who.int\)](#) Country Cooperation Strategy 2018-2022

& WHO | Noncommunicable diseases country profiles

