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The gift of health: Cuban medical cooperation in Kiribati

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Abstract

Since 2006, 33 I-Kiribati students have undertaken medical education in Cuba and returned home as doctors, but little is known about how they translate the Cuban preventive model of care to medical practice in the Pacific context. The research addresses this gap through qualitative fieldwork in South Tarawa and reveals that the assimilation of Cuban-trained doctors into medical practice is complicated by challenges related to clinical skills, language and contextual knowledge. These challenges have been successfully addressed with the development of the Kiribati Internship Training Programme but a misalignment between the prevention-focussed medicine taught in Cuba, and the curative orientation of the Kiribati health system and internship programme remains a concern, and the graduates' knowledge and experience of primary and preventative care is not yet well utilised. This paper argues that the challenge now is to ensure that the knowledge and skills gained by the Cuban graduates at all steps of this journey are utilised in order to bring better health outcomes for the people of Kiribati.

Keywords: Kiribati, Cuba, Cuban medical cooperation, medical education, Pacific health

Introduction

In 2013 Kiribati had just 22 doctors (2.04 per 10 000 population) (World Bank, 2021a). Since 2014, 33 I-Kiribati have completed medical education and joined the medical workforce. This rapid increase in the number of doctors is largely the result of a bilateral agreement between the Governments of Kiribati and Cuba. Under the agreement, Cuban doctors filled staff shortages in Kiribati while I-Kiribati students travelled to Cuba to receive medical training through the Latin American School of Medicine.

Cuba has a long history of medical cooperation including the deployment of Cuban doctors, the training of overseas doctors in Cuba, and sharing of experiences and knowledge in health which has traditionally been focused on Latin America and Africa. In the past two decades Cuba's attention has turned to the Pacific, beginning with Timor Leste in 2004, and then to Kiribati, Nauru, Vanuatu, Tuvalu, the Solomon Islands and elsewhere from 2006 (T. Anderson, 2010; McLennan et al., 2022). However, little is known about the impacts of this, and how the Cuban model of care has been translated to medical practice in the Pacific context. This paper addresses this gap through a case study of Kiribati drawn from qualitative fieldwork in South Tarawa.

Methods

This paper provides a case study of Cuban cooperation in Kiribati, which is part of a larger, multi-country study of Cuban cooperation in the Pacific. Study methods for the full project included multi-sited ethnographic methods and interviews as well as qualitative analysis of policy documents, reports and media sources. The findings of the case study reported here are drawn from qualitative fieldwork in Kiribati in 2019 and online data collection in 2020-2021, and from document analysis.

Cuban and Cuban-trained doctors were central sources of information for this research, however we also collected data from KITP supervisors, I-Kiribati nursing representatives and health workers and the I-Kiribati community. This research utilised the snowball technique to select participants, culturally appropriate and a feasible means of recruitment in a small place like Tarawa (Liamputtong, 2010; Uriam, 1995) where the people who are or have been engaged with the Cuban programme knew each other.

In total two Cuban and 14 Cuban-trained doctors were involved in the research (three also participated in follow-up Zoom interviews in 2020). Six Cuban-trained doctors were interviewed, while a further eight participated in a focus group. A focus group was not originally planned but as time was a constraint due to the heavy work schedules of participants, a KITP supervisor suggested that the researcher meet with a number of Cuban-trained interns together rather than individually. The session was attended by the cohort of Cuban-trained doctors undertaking the KITP at the time of the research, a group composed of interns from Kiribati (3), Tuvalu (3) and Nauru (2). All the Cuban graduates participating in this research had successfully completed their medical degrees in Cuba between 2013-

2018 and were at various stages in their career – most were interns at the time of the research, however three participants had been in the first cohort that returned to Kiribati in 2013 – two of these were working as General Medical Officers (registrars) in Kiribati while the third (interviewed via Zoom in 2021) was undertaking post-graduate studies in Fiji. Data collection also includes interviews with five KITP supervisors and one advisor, two I-Kiribati nursing representatives, two other health workers and three members of the I-Kiribati community (see Figure 1).

Participants	Focus Group	Interviews	Follow-up (Zoom) interviews
Cuban-trained interns/registrars	8	6	3
Cuban doctors	-	2	-
KITP supervisors	-	5	-
I-Kiribati health workers	-	2	-
I-Kiribati nursing representatives	-	2	-
I-Kiribati community	-	3	-

Table 1. Methods and number of research participants

Other data collection methods contributing to the case study include non-participant observation at Tungaru Central Hospital (TCH) over one month in 2019, and the analysis of policy documents, reports and media sources (see Figure 2).

Document type	**No of docs**
Kiribati's national health strategies	2
Kiribati's development and policy reports	6
Regional health and development strategies	5
Reports about the Kiribati Internship Training Programme	5
MEDICC (Medical Education Cooperation with Cuba) reports	4
MINREX (Ministerio de Relaciones Exteriores, Cuba) publications	3
Pacific media reports	6
Latin America media reports	5
Other media reports	20
Bilateral and multilateral donors' reports about Kiribati	8
Working papers and meeting's summaries	5
Reports about SSC	4
World Health Organization reports	11

Table 2. Documents analysed

Cuban cooperation for health

The provision of medical assistance, especially medical training, is a central element of Cuba's foreign policy. Cuban medical cooperation began in the first years following Cuba's 1959 revolution. Since 1960 Cuba has extended this cooperation to over 150 countries through bilateral agreements, and tri-lateral cooperation with organisations like the World Health Organisation and the Pan American Health Organisation, with more than 400,000 Cuban health professionals having worked abroad (Gorry, 2019).

This focus on sending Cuban health professionals to serve in other nations was the main focus until 1999when, following Hurricanes George and Mitch the Cuban government realised it was not sustainable for Cuban doctors to staff foreign health systems indefinitely. To address this Cuba created medical scholarships for international students, and established the Escuela Latinoamericana de Medicina (ELAM, the Latin American School of Medicine)[1] where international students study for free under the agreement that upon completion of their studies they return home to serve their communities (Gorry, 2019; Huish, 2013).

Cuba's commitment to Universal Health Care (UHC) and recognition of the value of primary care is deeply embedded in the education provided by ELAM (Gorry, 2019; Huish, 2013; McLennan et al., 2022). They emphasise public health, preventive and community care and the analysis of specific regional health risks, especially those grown out of poverty. This emerges from Cuba's recognition of the value of primary care in bolstering the total strength of health systems and its success with its epidemiological transition between 1959 and 1981 (Huish, 2013; Squires et al., 2020). The key elements of Cuban achievement are the expansion of Primary Health Care (PHC), the development of human resources for health and the practice of Medicina General Integral (Comprehensive General Medicine). These are reflected in Cuban medical education which emphasises primary health care, an interdisciplinary approach, and strong community participation, with much of the training taking place in rural polyclinics as part of a primary care team (Squires et al., 2020). This training emphasises solidarity with poor and disadvantaged communities, and a willingness to serve in a variety of challenging settings, potentially extending Universal Health Coverage by training doctors willing and able to work in difficult situations (Huish, 2013; Squires et al., 2020; Sui et al., 2019). This strong emphasis on community medicine in the Cuban programme aligns well with the needs of Pacific health systems (Condon et al., 2013; McLennan et al., 2022), however evidence from elsewhere indicates that

[1] ELAM is an international medical school in Cuba, established in 1999. Its goal is to 'educate physicians primarily for public service' with 'competencies in comprehensive primary care, from health promotion to treatment and rehabilitation (Reed, 2010, p. 325). It offers a six-year, full-scholarship program funded by the Cuban government. The first two years are spent at the ELAM campus in Havana, and students spend the remaining four years (including a one-year internship), at one of 21 medical schools around the country. All courses and materials are in Spanish – non-Spanish speaking students undertake 6 months of language training and a pre-medical program before commencing their medical studies.

it may contribute to popular criticism of the skills of Cuban-trained doctors as the training may not equip them well for acute and curative aspects of hospital care (Sui et al., 2019).

Health in Kiribati

Kiribati is an independent republic in the central Pacific with a population of 118 000 (World Bank, 2021b). The country is comprised of 32 atolls and one elevated coral island, spread over all 4 hemispheres. Although the country has a total land surface area of around 811 km2, the islands are dispersed over 3 million km2 of the Pacific Ocean. Most islands are less than 2 kilometres wide and less than 2 meters above sea level making them vulnerable to weather events and sea level rise associated with climate change (Frere et al., 2020). The island of Tarawa was the main site of fieldwork for this research, and is located north of the Equator in the Gilbert Islands. Over 70% the total population of Kiribati lives on Tarawa with 15.7% of those in the largest township of Betio, which has a land area of less than two square kilometres and is therefore very densely populated at 10,377 people per square kilometre (Kiribati National Statistics Office, 2016)

Historically, I-Kiribati lived in extended family groups on ancestral land linked through kinship into kainga (kinship residential groups), centred on a maneaba (meeting house), which functioned as the basic unit of economic organisation (Kuruppu, 2009; Webb, 2007). This system broke down as people were relocated from their traditional lands to centralised villages as a result of colonialism and the spread of Christianity (Kuruppu, 2009; Webb, 2007). However the egalitarian values of the kinship system remain strong and connection to a larger community group such as the village or church remains a priority (Kuruppu, 2009). Most of the population still lives a traditional semi-subsistence lifestyle, relying on copra and fishing (Borovnik, 2011). Employment opportunities are rare. A key source of employment is the maritime industry, and maritime training in Kiribati gives many i-Kiribati employment chances on merchant vessels, and on fishing vessels, providing much needed income (Borovnik, 2006, 2011)

Health and health care in Kiribati

Health is one of the core priorities for the Government of Kiribati. The primary goal of the Ministry of Health and Medical Services (MHMS) Strategic Plan 2016–2019 is to "improve population health and health equity through continuous improvement in the quality and responsiveness of health services, and by making the most effective and efficient use of available resources" (Ministry of Health and Medical Services, 2015, p. 15). The Government is committed to the 2030 Agenda for Sustainable Development and this is reflected in the strategic actions and core indicators of the Kiribati Development Plan 2016–2019 (World Health Organization, 2017). The coordination of domestic and external resources and initiatives towards the realisation of the Sustainable Development Goals (SDGs) was one of the priorities in the design of the Kiribati Development Plan (KDP) which expressed "a strong desire" to align with the priority issues and strategies in the new KDP, which should facilitate the coordination of actions for the achievement of the SDGs (Government of Kiribati, 2015; Ministry of Health and Medical Services, 2015, p. 10).

Health services and medicines are publicly funded and delivered free of charge in Kiribati through a network of health facilities comprised of four hospitals, 30 health centres and 75 clinics. The clinics provide primary care services at the village level and are manned by a specially trained Public Health Nurse (PHN) who provides basic curative and preventive health care. The 30 health centres are staffed by medical assistants (MAs), who are nurse practitioners who have either a Bachelor of Nursing or a public health degree. On average, each clinic is responsible for looking after a catchment area of 4 -5000 people, and most clinics have the services of 1 MA and between 1-3 nurses. There is at least one health centre on each inhabited island. The centres and clinics provide primary health care services and health promotion activities.

Secondary care is provided through four hospitals. The largest, Tungaru Central Hospital (TCH), is a 120 bed hospital located in Nawerewere, South Tarawa. It provides emergency and outpatient care facilities and inpatient care in four major specialties – Internal Medicine, Surgery, Paediatrics and Gynaecology & Obstetrics. The hospital also has a dedicated ward for Tuberculosis patients. TCH is staffed with medical specialists as well as general medical officers and functions as a training centre for Intern Medical Officers (IMO) and for primary health care workers. There are three other referral hospitals, each with 10 beds or less, which receive referrals from health centres and are operated by doctors, nurses and allied health professionals – at Betio (Tarawa), Kiritimati Island (for the Line and Phoenix Island Groups) and Tabiteuea North (for the southern Gilbert Islands). Patients requiring more specialised secondary and tertiary medical attention are referred overseas by TCH, and the costs are covered by the Government of Kiribati (Government of Kiribati, 2018).

Kiribati has no private health system network, although a private clinic has opened in Bairiki, attached to a pharmacy. Some patients also seek medical assistance at the Marine Training Centre's private doctor. There is also a private ward for fee-paying patients at TCH. In parallel with the formal health structure, traditional healers also continue to provide care across Kiribati. Although there is anecdotal evidence that the numbers of traditional healers are diminishing (WHO, 2014; WHO & Ministry of Health and Medical Services, 2012), fieldwork data suggests that the informal network still very active in providing primary health care.

While most of the population of Kiribati has low cost access to basic health services, compared to other countries in the region Kiribati has low coverage of essential services and the country's Universal Health Coverage (UHC)[2] index indicates relatively limited service capacity and access (WHO, 2018). With a small population spread across a large area including many small, remote, and hard-to-reach outer islands, health services provision is very difficult, expensive and often only available by sea (Flanagan et al., 2018). As such, although facilities and staff vary significantly across the island groups, nearly two-thirds of the clinical staff are based in the highly urbanised island of South Tarawa.

[2] The UHC index estimates global progress towards universal health coverage (UHC) and specifically UHC effective coverage in 204 countries and territories. It is comprised of 23 indicators across a range of health service areas, measured on a scale from 0 (worst) to 100 (best). In 2017 Kiribati had a UHC index of 41.

While the national health strategy (Ministry of Health and Medical Services, 2015) recognises the need to effectively manage the health system through the use of laws, regulations, accreditation, standards and guidelines and showed an increase in budget allocation to preventive strategies, the centralisation of health services contributes to inequities in health service provision, and an emphasis on curative over preventative health care remains evident in health funding. The 2018 Health Financing System Assessment report shows that in 2016 the 68 percent of recurrent public expenditure on health occurred at hospital level, with 27 percent in lower-level facilities, and the balance – just 5% - on public health activities (Flanagan et al., 2018)

Despite these challenges Kiribati has made some significant health gains in recent years including a rise in life expectancy at birth from 60 years in 1990 to 66 years in 2015, and declines in the incidence of some common communicable diseases such as diarrhoea and respiratory tract infections (World Health Organization, 2017). However, Kiribati's scattered geography, colonial history and climate change vulnerability have significant implications for health and changes in lifestyle, poor water, sanitation and hygiene practices, and overcrowding in urban areas, which has significant impacts and has resulted in a non-Communicable diseases (NCDs) crisis and a high incidence of communicable diseases (CDs). The WHO considers Kiribati's current situation an NCD crisis, with little improvement between 2006 and 2016 and almost epidemic rises in diabetes and chronic kidney disease (K. Anderson et al., 2017). Kiribati also has one of the highest rates of TB in the Pacific. TB cases ranged between 366 and 429 per 100,000 population in 2010-2013, with 2016 data showing an increase to 470 (Government of Kiribati, 2018). Poor living conditions and overcrowding are main factors associated with the spread of TB, a reality in Kiribati where households host on average 5-7 people (Government of Kiribati, 2018). Leprosy is another concern in Kiribati, which is one of three countries in the Pacific where leprosy elimination status has not yet been achieved (Thompsona et al., 2020). High levels of maternal and neonatal mortality are also a concern. Kiribati has the fourth highest under-five mortality rate and fourth highest infant mortality rate in the Pacific region, in both cases ahead only of Lao, Cambodia and Papua New Guinea (Government of Kiribati, 2018; World Health Organization, 2017).

As a result Kiribati is one of only three Pacific island countries that did not achieve any of the health-related Millennium Development Goals (World Health Organization, 2017), and Kiribati remains far from reaching most of the SDG 3 (good health and wellbeing) indicators (WHO, 2018). Meeting these goals and providing health care is difficult in such a challenging environment and improvements in health care delivery are further hindered by limited financial resources, poor institutional capacity, lack of reliable data and standardised medical protocols, and insufficient coordination of medical referrals (Werle, 2020). Compounding this inadequate numbers of skilled Human Resources for Health (HRH) which are central to the performance of health systems (Asante et al., 2014).

ODA and development cooperation

I argue that in order for researchers to address shortcomings prevalent in gender and law research Kiribati is highly reliant on Overseas Development Assistance (ODA), primarily from Development

Assistance Committee (DAC) member countries and multilateral institutions through bilateral, trilateral and multilateral flows. ODA makes up about 20% of Kiribati' GNI, and in 2019 included an estimated AU$22.35 million in ODA from Australia, $21.5 million from Japan, $13.28 million from Taiwan, $11.56 million from Japan $10.61 million from New Zealand, and $7.28 million from the World Bank (Lowy Institute, 2020). These figures predate Kiribati' 2019 switch in diplomatic recognition from Taiwan to China, which will undoubtedly affect aid flows into the country (Zhang, 2020).

The health sector is particularly dependent on external financing (Ministry of Health and Medical Services, 2015). In 2016, the donor partner contribution of AU$5.8 million to the health sector represented nearly 20 percent of public expenditure on health. A major share of that aid is destined to address communicable diseases, especially tuberculosis, leprosy and hepatitis B (Department of Foreign Affairs, 2019). Amongst other activities, according to the Australian Department of Foreign Affairs and Trade (DFAT), Australia has worked together with donor partners to construct the Family Health Clinic at TCH and to support students to graduate as nurses from the Kiribati Institute of Technology (KIT). Australia also provided financial assistance to the Kiribati Internship Training Programme (KITP), the bridging course set to facilitate the transition of foreign trained doctors, including those trained in Cuba, into medical practice in the Pacific nation, which will be discussed in this paper.

New Zealand is also a major donor, having committed NZ$88 million of its development funding for 2021-2024 to Kiribati (Ministry of Foreign Affairs and Trade, 2021). Health related priorities include tackling non-communicable and communicable diseases, improving child and maternal health, improving family health, and addressing environmental drivers of improved health such as solid waste management and access to clean water and sanitation. Like Australia, New Zealand has also provided support to Kiribati to expand human resources for health by supporting the Kiribati Internship Training Programme and the Kiribati School of Nursing (KSN).

Cuban cooperation

One of the more recent interventions in the Kiribati health sector, and the focus of the remainder of this paper, has been the provision of Cuban health personnel and the training of I-Kiribati as doctors in Cuba as a component of bilateral health assistance programs to address HRH shortages (Asante et al., 2014).

Cuba and Kiribati established diplomatic relations in 2002 (see Figure 3 – timeline), but their bilateral relationship was consolidated in 2006 when the medical programme began (Asante et al., 2014; WHO, 2014). Cuban medical outreach to Kiribati was established in two fronts: First, Cuba sent medical brigades to Kiribati to deliver much-needed health care services. The first medical brigade composed of 15 health workers arrived in 2006. Second, 23 I-Kiribati students received scholarships to study at ELAM and other Cuban medical institutions. The core idea of the programme is that once graduated,

I-Kiribati doctors would return home to replace the Cuban brigade working in their country and indeed, in 2021 just 1 Cuban doctor remained in Cuba, while approximately 30 Cuban-trained I-Kiribati graduates were working in Kiribati.

Timeline	
2002	Kiribati and Cuba establish diplomatic relations
2006	10 Cuban medical personnel arrive in Kiribati
2007	19 I-Kiribati students start medical training in Cuba
2008	Second cohort of 12 I-Kiribati students start study in Cuba First group of 10 Cuban doctors returns to Cuba (5 still working in Kiribati) Anote Tong, the first Pacific leader to make a state visit to Cuba, meets Raul Castro in Havana. Agreement to increase bilateral cooperation & increase number of Cuban doctors in Kiribati to 25 signed in Havana by Cuban & Kiribati Health Ministers with Anote Tong present.
2010	5 Cuban doctors return to Cuba Anote Tong's second state visit to Cuba – meets with Raul Castro and visits ELAM
2012	Fiji's Permanent Mission to the United Nations, represented by the First Secretary Ms Namita Khatri, visited I-Kiribati students in Cuba, to distribute allowances as and to discuss students' issues with the Cuban Ministry of Foreign Affairs.
2013	Third cohort of 2 students begin study in Cuba First cohort of 18 Cuban-trained medical graduates return to Kiribati
2014	Kiribati internship training programme commences
2016	First cohort complete KITP
2017	4 Cuban doctors complete NZ funded language training and travel to Kiribati and Vanuatu
2018	KITP external review

Table 3. Kiribati and Cuba timeline

The Kiribati Internship Training Programme

In 2013 the first 18 of those newly graduated Cuban-trained doctors were scheduled to return home. However, while these graduates represented much needed capacity for the health system, they needed to complete internships before they could be licensed and practice independently as doctors. Previously medical graduates from across the Pacific had completed internships through the Fiji School of Medicine at Fiji National University (FNU). However, at the same time that the first cohort of Cuban-trained doctors were due to return to Kiribati, FNU closed its internship programmes to applicants from non-Fijian medical schools (Condon et al., 2013; Tudravu & Roberts, 2019). This created a major problem for smaller Pacific states as it came at a time when new actors were increasingly diversifying the training of Pacific students- these included ELAM, Umanand Prasad

Medical School (University of Fiji), I-Shou University (Taiwan), Oceania University of Medicine (Samoa) and to a lesser extent institutions from Russia, Morocco and elsewhere (Condon et al., 2013).

Kiribati was one of the first Pacific states to welcome home a significant cohort of Cuban-trained medical graduates and needed an internship training programme fast. The Kiribati Internship Training Programme (KITP) was a creative strategy launched in response to the return of the Cuban graduates, limited internship places in Fiji and the need to improve the national doctor to population ratio in Kiribati (Tudravu & Roberts, 2019). The aim of the two-year KITP was to facilitate the integration of foreign-trained medical graduates into Kiribati's health system and to establish a pathway to full qualification so they can work as medical professionals. It was implemented by the MHMS with technical guidance from Fiji, DFAT and the WHO. While initially funded by Australia through DFAT and managed by FNU, for the period of 2017-2019 the KITP was mainly supported through a bilateral agreement with New Zealand.

Since 2013 the KITP has graduated approximately 40 medical interns, including several from Tuvalu and Nauru. Upon completion of KITP, graduates are granted a qualification equivalent to what they would have if they had undertaken medical education and internship in Fiji. The Kiribati internship program is now an accredited entry pathway to post graduate training at FNU, and some graduates have since gone on to undertake post-graduate training in Fiji and New Zealand.

Findings

The impacts of Cuban cooperation in Kiribati

It is now 15 years since the first Cuban doctors arrived in Kiribati, and nearly a decade since the first Cuban-trained graduates began their internship training with the KITP. Since that time key health statistics, including child and maternal mortality rates, have continued to improve. It would be too simplistic and perhaps still too early to link these improvements to the Cuban programme, particularly as they continue a trajectory of improvements predating 2006. Regardless, the Government of Kiribati has highlighted the work done by Cuban and Cuban-trained doctors as a driver in the strengthening of the country's health system (Minrex, 2016). According to the Ministry of Finance and Economic Development, medical doctor availability improved from 4.1 per 10,000 in 2015 to 6.0 per 10,000 in 2017 (Government of Kiribati, 2018). This is reflected in interviews with KITP supervisors who noted that since the beginning of the Cuban programme the number of departments at TCH that have a full team (nurse, medical intern, registrar, and specialist) has increased and the ability of the hospital to respond more promptly to afterhour's medical care and emergency situations has improved.

> Now is better because one is looking after each department and there is more service being provided to patients. It is much quicker to assess patients as well. That's a positive side of the programme, the interns are learning but still they help the hospital a lot and for the patient's sake, they provide a lot of services to the hospital (KITP Supervisor 1)

> There has been a lot of improvement, increase in the number of doctors. Almost all the departments have a full team – the consultants, the registrars. They got more 24-hour intern cover in each department. I think it's a big improvement. (KITP Supervisor 2)

Qualitatively, there have been some notable improvements in health delivery in Kiribati as the Cuban-trained doctors move into practice. Interviews with health professionals and the I-Kiribati community indicate that the increase in health workforce pool is enabling doctors to spend more time with patients and deliver higher value care:

> In the past, before the start of KITP, if you were lucky you would get seen by the doctor once a week. Now patients get seen by the doctors two or three times a day, so patients are commenting about that. In terms of patient time and contact with doctors, it is much better since the establishment of KITP. (KITP Supervisor 3)

While some changes are evident, the Cuban trained doctors are still early in their careers, and the true impact may be well into the future. However, as one graduate noted:

> We are the pioneers, and we are the ones who will have to make the change. We are here and we are still growing, maybe in 10 years' time you can come back and see what happens. I'm pretty sure we each have in our minds how to improve and to change and to make health in general better. We don't know how yet, but this is just a first step through the KITP, gathering information we need and then be able to make the changes. (Cuban-trained graduate 1)

Cuban-trained graduates and the transition to practice

By the time the medical graduates start their internship with the KITP they are already at least seven years into their journey to become doctors. They began that journey by travelling over 10 000km to Cuba – a much larger island with a very different culture and language. They then spent a year learning Spanish, completing the premedical program, and acclimating to Cuban culture before starting six years of medical training, during which time they may only have returned home once or twice. The challenges these graduates faced in order to complete medical training are substantial but are just the beginning. On their return to Kiribati the graduates face the challenge of readjusting to life at home and completing their internship, a process complicated by criticism of clinical skills and knowledge, and an insufficient understanding of Cuban and Cuban medical training.

Clinical Challenges

One of the most contentious themes raised during interviews and in the documents analysed related to the clinical skills of Cuban-trained doctors. While recognising that with time Cuban graduates 'catch

up' with Fijian-trained and other medical graduates, all the KITP supervisors interviewed agreed that returning students were initially deficient in terms of clinical skills. For example, most of the graduates were unable to insert an IV line (cannulate), and needed instruction in "the basics":

> When they first came they didn't know where to start. We just have to be patient around them... The patient comes through and we show them – these are the complications, these are what you need to look for, this is how you should treat – because in Cuba, they have very good medical schools, but most of the time they are not in the front, dealing with the patients. The interaction with patients is very minimal, they couldn't do procedures on patients. They didn't know how to put an IV in the patient, they didn't know how to collect blood. Because all of this was done by the nurses there. … so we had to teach them back to the basics – "this is how you examine the respiratory system, the cardiovascular system, the gastrointestinal, the neurological system, this is what you look for. If you have a patient with meningitis, these are the signs you look for…" (KITP Supervisor 4)

This meant that supervisors found they were spending time bringing Cuban-trained intern's skills up to the level of other graduates and therefore were not able to spend time developing further skills and knowledge. This was also a considerable burden on supervisor's workload, and led one supervisor to suggest the Cuban training was a waste of time:

> To me, personally, I don't think they should go to Cuba, it's a waste of seven years, they go and they come back still as nurses, or paramedics, then we have to train them again. (It) Is like going back to medical school here, I think is not healthy, they suffer out there and they come back and they suffer here too… If they want to train doctors they should train them elsewhere. No offense, it's just the quality that we have seen, we don't want them to start killing our people (KITP supervisor 4)

While this research found no evidence of medical harm, let along deaths, associated with the Cuban graduates, the Cuban graduates struggled with this focus on their skills, wanting "to show them [the community] we are safe" (Cuban graduate 1). However they did acknowledge their lack of exposure to or ability to practice some clinical procedures during their training. This was often expressed in terms of "touch", with doctors in Kiribati needing to be far more hands-on and involved in clinical procedures than in Cuba:

> In Cuba you get exposed in a different way. It's very hard to touch the patient, put the needle in the patient. The people there, they don't want you to do it. Some people might allow you if you ask, even though because you are a student you don't. In terms of exposure, I think here in Kiribati is better, because you know your own people, you can get their consent and do the things, and feel more comfortable as well. (Cuban graduate 2)

> Here [Kiribati] we must do everything, like the cannulation, but there [Cuba] the nurses are there to do that. There we didn't have to do the delivery of babies, the registrars did it, but here we have to do it. In general is all the same, is more about the different roles. Here we touch everything. (Cuban graduate 3)

As noted in by KITP Supervisor 4 and Cuban graduate 3, a number of tasks they are expected to do in Kiribati are performed by nurses in Cuba. Cuban medical training occurs in a system that has a high doctor to population ratio, and with the support of large numbers of nursing and allied health staff, meaning that roles within the system are far more prescribed, whereas doctors in Kiribati need to be able to practice much more independently and to undertake tasks that are done by nurses and allied health professionals in Cuba.

While difficulties with clinical skills were the most obvious challenge and most closely linked to differences in the training and expectations of doctors, these were underpinned and exacerbated by a range of other factors including language and local knowledge. As medical training in Cuba occurs in Spanish and the KITP is taught in English, Cuban-trained interns struggled with medical English and to communicate with colleagues and patients in I-Kiribati language and English. The participants in the focus group clearly identified language as their main challenge in integrating into practice. Many believe that their lack of ability to use medical English influenced perceptions about their level of medical competence and skills.

> When they asked me something and I forgot how to say a word in English, I would ask the nurses, and people reacted like "how come she is a doctor and she doesn't know". (Cuban graduate 1)

> The main problem was to transform everything we learned from Spanish to English. When we started out internship we hardly communicated in English. It's hard for us to communicate directly in English, specially solving problems and things like that… it's more like a problem of translation. We know things but the way we express it and translate it, our supervisors don't understand what we are trying to say. (Cuban graduate 2)

As a result, a bridging programme was instigated to provide language learning alongside the teaching of clinical skills. Most Cuban graduates must complete this prior to starting the KITP. This led to some questions from the Cuban graduates with one Cuban graduate describing KITP as an English course while and others questioned why they were required to learn English when they would mainly provide services to and communicate with I-Kiribati people in the I-Kiribati language as one graduate (4) noted – "my patients don't speak Spanish or English, they speak Kiribati". However, over time most become proficient in English and language has become far less of a concern to both the interns and the community:

> It's not a problem, we figured it out as soon as possible and we adapt and learn. It's not different things, the things we learned back there are the same, is only the way to express it. Sometimes you can easily forget what you learned there because that is not your language. Those are the most challenging things. After we adapt learning in English and it's alright, is not a problem. (Cuban graduate 2)

Underlying the issues with clinical skills and language are some significant differences between the Cuban health context and the health system and needs in Kiribati. As noted above, Cuban-trained graduates are trained in a more developed system with a high doctor to population ratio and a large number of nurses and allied health professionals. Despite the sanctions and low resourcing, Cuba maintains a strong focus on health.

> Here (Kiribati) they are more focused on sparing resources. Cuba lacks resources, but they still prioritise health. (Cuban graduate 5)

This prioritisation of health in Cuba, particularly primary and preventative health care, means that doctors trained in Cuba do not often see many of the conditions that remain major concerns in the Pacific.

> In Kiribati or Tuvalu the first patient you see on your first day working in outpatients with a cough, high chance they'd have TB, rather than just somebody with a sniffle." (KITP Advisor)

> But when we came here we found out that some of those diseases didn't even exist here, and some of the diseases that exist here we didn't study… In Kiribati we have TB cases. In Cuba they have leptospirosis, here we don't (Cuban graduate 6)

As a result, a key focus of the KITP was upscaling capacity and developing the knowledge and skills of graduates so they would be competent to deal with local epidemiology and health systems. In this, the KITP has been successful - as the 2019 review of the programme notes, the programme has a reputation as a well-structured internship program that produces well-trained and well-balanced medical officers (Tudravu & Roberts, 2019). As noted above, graduates of the KITP have a qualification equivalent to medical education and internship in Fiji and a pathway to post graduate training at FNU and elsewhere. The importance of this was noted by a consultant to the KITP who recognised the value of the Cuban approach but also the reality of the needs of small Pacific nations:

> The fundamental premise of the Cuban undergraduate training is 'I go out to serve my community', and some of them are not specifically philosophically aligned with hospital specialisation. But in the Pacific, there is a shortage, particularly in certain specialties like internal medicine and paediatrics and the door needs to be open for people to have a grounded re-entry experience in their country after medical school outside the region. And then to go on and do that postgrad. (KITP Advisor)

However, as we will explore in the remainder of this discussion, this success may have come at some cost, with the strengths of Cuban training under-emphasised in the face of the urgent need to prepare graduates for practice in I-Kiribati hospitals and clinics.

Understanding of Cuba and Cuban training

The Cuban trained graduates have had to learn new skills and language in a very different medical context to that in which they trained. As the KITP advisor quote above notes, the fundamental premise of Cuban medical training is service to the community. This approach to medicine, and the concomitant emphasis on primary health care is one not well-understood outside Cuba. Indeed, the strengths of the Cuban training were - at least initially – not recognised or understood by their colleagues and supervisors.

> Sometimes I would suggest something in a way that we did in Cuba, and they [colleagues] would say that it was old, and that what they learned in Fiji is what happens now, this is the updated knowledge. (…) I think they should open their minds and say: 'they are bringing in new stuff, so we should consider'." (Cuban graduate 1)

Most KITP supervisors interviewed struggled to identify strengths of the Cuban approach to health care and had limited knowledge about Cuban strategies for health promotion and prevention.

> We didn't know what the structure of the medical school was, we didn't have a copy or knew what subjects they studied. We expected them to know basic medical science, anatomy, physiology, chemistry, pharmacology, all of that. We didn't know how long they trained in each area. (KITP Supervisor 2)

> I'm just talking based on what they [Cuban graduates] tell me. They say that the main focus is on the history side, the history taking, public health, more of it, not sure about the rest. That's what I hear, I can't be too sure. (KITP Supervisor 3)

> I think they probably learned a lot more primary health care, a lot more public health stuff...I'm only guessing. (KITP Supervisor 4)

Some Cuban graduates associated the emphasis in clinical skills and the classification of the Cuban training as inferior with politics and a lack of understanding about the ethos of the Cuban medicine:

> Most of the problems we are facing are political. In Tuvalu, when we first arrived there was this big shadow over Cuba, nobody knew anything about Cuba. (…) The image of Cuba is an issue, is what is really blocking our position in our own countries. (Cuban graduate 5)

The findings from this study suggest that this is related to an insufficient exchange of information between Cuba and Kiribati about ELAM's curriculum, and limited dialogue about both the needs of

the graduates and the contribution they could make. This was despite efforts by some KITP supervisors to access information:

> When there was a Cuban Embassy here [in Kiribati] we asked them "can you give us the curriculum and material?" but they couldn't give it to us, I don't know why. So I only assume, we don't know what they are taught that, we just assume based on what we know – that Cuba has one of the best primary health care systems so the concentration is around that rather than secondary and tertiary medicine. Not knowing what they learned makes it very difficult to plan on what we should be teaching them or what we should be concentrating on, building up on what they already know. (KITP supervisor 4)

Despite this, the knowledge and skills in primary and preventative care built into Cuban training remains with the Cuban-trained graduates. Those spoken to in the course of this research identified several synergies between the Cuban approach to health care and Kiribati's health needs. For example several graduates noted that the Cuban practice of Comprehensive General Medicine is well aligned with holistic understandings of health in Kiribati and Pacific Island Countries, and the utilisation of the Continuous Assessment and Risk Evaluation (CARE) tool[3] could markedly improve individual and community health data and enrich epidemiological analysis, which is especially relevant in the present Covid-19 context. It could also contribute to the design of more responsive health policies and the development of targeted public health initiatives. Combined, these activities could help Kiribati prevent CDs and address its NCD crisis.

Maternal, newborn, and child health is another area that graduates identified could potentially be improved through adaptation of Cuba's comprehensive prenatal and postnatal care strategies to Kiribati's context and close engagement with traditional birth attendants who cater for the needs of 10-30 per cent of women in Kiribati, especially in the outer islands (Government of Kiribati, 2018). In the current system, however, there is limited scope for this exchange of information as Cuban-trained doctors continue to be deployed to curative clinical services.

Unfortunately because supervisors and colleagues are unfamiliar with Cuban training and focussed on the gaps in clinical skills and local knowledge, and the need to bridge the gap between the Cuban training and local needs, the focus of the KITP – although necessary– has been on clinical care. The has contributed to the continued centralisation of services and, as we discuss in the next section, refocussed the graduates from preventative and proactive health care to reactive, curative services.

[3] The Cuban CARE program involved the gathering of information regarding individuals and families' environment, risk factors, demographics, present illness, and living environment. This information is used to assign categories and designations that are monitored, and adjusted at each subsequent visit (Hauge, 2007). The analysis is a fundamental tool that reflects every problem the doctor needs to treat not only in a household, but in the community as a whole.

Discussion

In traversing the geographical distance between Cuba and Kiribati and navigating the assimilation into practice in Kiribati, the Cuban trained I-Kiribati medical graduates are the interface between two health systems. They have trained in a system than emphases preventative and primary care, but on their return to Kiribati the graduates find themselves in a system that remains very centralised and focussed on curative care. While there is considerable potential in the Cuban programme for a nation that faces serious challenges in building capacity for comprehensive health care services, the differences are significant.

Most obviously there is the question of the graduates' clinical skills, the level of re-training necessary and whether the primary purpose of their medical training is met by Cuba. All the supervisors interviewed, and the independent review acknowledged that the training provided by the KITP is successful in ensuring graduates have the same clinical skill levels and ability to progress in their careers as those trained in Fiji and elsewhere. Clearly the graduates aren't repeating six years of medical school, and they arrive in Kiribati with a clear base on which to build a medical career. However, the responsibility of bridging the gap in clinical skills placed a strain on other staff and the supervisors, who were concerned about workloads and patient safety, and this caused some resentment.

More importantly there is clearly a misalignment between the prevention-focussed medicine taught in Cuba – a country with high levels of human resourcing for health, and the curative orientation and needs of the health system and internship programme that the graduates return to. The differences in perception of Cuban-trained graduates, KITP supervisors and I-Kiribati health workers regarding the language barrier and clinical skills illustrate these divergences. The Cuban-trained graduates interviewed for this research acknowledged these difficulties but also saw the strengths of a preventive health system and what they could contribute, while most other research participants primarily saw the deficiencies particularly in terms of clinical skills. As the focus of KITP supervisors and health officials is often on the deficiencies of the Cuban training, the graduate's knowledge about community and preventative medicine is underexplored.

These findings reflect the work of Sui et al. (2019) who noted that Cuban-trained doctors are often perceived as a problem. But, as they also note, these graduates could, if seen as an asset, become part of the solution. We concur that maximising the investment made in training doctors in Cuba and assimilating these doctors into practice at home will require "a reframing of the current negative narrative, which need to focus on positive aspects of their training, orientation towards primary care and public health, and their aspirations to work in rural and under-served urban areas" (p.1). This may require more dialogue and information sharing between Cuba and recipient countries, the promotion of knowledge-sharing between the local workforce and Cuban-trained doctors, and more investment in opportunities for graduates to develop careers in public, primary and community health.

Despite the many institutional and cultural challenges to the Cuban programme, the Cuban health care model is well aligned with health needs in Kiribati. The holistic and preventive nature of the

Cuban medicine is suitable for the Kiribati context of low resources, limited access to technology and logistical constraints, and the strategies implemented in Cuba could bring positive outcomes in Kiribati if adapted to the local reality. But the constraints of the current health system, and the need to back-fill medical positions in the secondary and tertiary sector along with the responsibility to ensure career options and specialisation pathways are available to the Cuban-trained graduates all collude to shape the graduates into reactive rather than proactive health workers.

Conclusion

Analyses of Cuban medical cooperation are often focused on examining how Cuba benefits from its medical internationalism rather than studying the potential of the Cuban approach and the synergies and challenges between the Caribbean nation and partner countries. If the principal objective of investigations of the Cuban medical cooperation is the identification of strategies that promote the expansion of PHC, the achievement of UHC, and the fulfilment of the human right to health, this case study offers valuable insights that can assist in the development of health policies that are more responsive to local contexts.

This research has shown that, although the graduates' knowledge and experience of primary and preventative care is not yet well utilised, overall the KITP has been very successful in establishing pathways for continuing professional development and accreditation of Cuban trained doctors. It is clear that there was a need to upskill and re-orient the Cuban graduates for work in Pacific nations, where the doctor-patient ratio is lower, there is not the extensive infrastructure and allied health workforce seen in Cuba, and health care needs are very different. Doctors practising in the Pacific need a range of clinical skills and medical knowledge that Cuban training doesn't provide. As an advisor to the KITP noted:

> Despite some of the cross-cultural challenges and health system challenges with the Cuban training they've done the Pacific a favour and during the hard days when we were seeing people not meeting their competency criteria during their quarterly assessments and having to extend or even repeat their rotation paediatrics, or whatever. We thought, Oh, my goodness. But then, you know, in retrospect, having seen people now running the emergency department, returning from Fiji with post grad qualifications and so on is clear that you know in purely backfilling terms for the workload Cuba's done the Pacific a favour.

Overall, this case study has shown that Cuba has indeed done the Pacific a favour. There is no other programme that has been able to provide the sheer quantity of doctors that Cuba can and willingly does – quite literally doubling the number of doctors in Kiribati in under a decade. Given the significant need for human resources for health in the region this contribution can't be understated. While there have been significant challenges in developing the graduates' clinical skills, and the KITP does refocus graduates towards curative medicine, the knowledge of another health system and the desire to improve public and community health in the region remains within these doctors. The

challenge now is to ensure that the knowledge and skills gained at all steps of this journey through Cuban medical training and the KITP is utilised in order to bring better health outcomes for the people of Kiribati and the Pacific.

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