SOCIAL INNOVATION IN HEALTH INITIATIVE

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INDIGENOUS HEALTH AGENT PROFESSIONALIZATION PROGRAMME IN THE ALTO RIO NEGRO REGION

CONTINENT	Latin America
COUNTRY	Brazil
HEALTH FOCUS	Primary health care
AREAS OF INTEREST	Community health workers, Indigenous peoples
HEALTH SYSTEM FOCUS	Health workforce

INDIGENOUS COMMUNITY HEALTH AGENT PROFESSIONALIZATION PROGRAMME IN THE ALTO RIO NEGRO REGION, BRAZIL

A programme equipping and raising the profile of indigenous health community agents in Brazil through context-specific and culturally appropriate training that uniquely blends traditional medicine, biomedical approaches and general education.

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CONTENTS

ABBREVIATIONS

AAISARN	Partnerships with the Association of Rio Negro Indigenous Health Agents
AIS	Indigenous Community Health Agents (Agentes Indígenas de Saúde)
DSEI	Special Indigenous Sanitary District
FIOCRUZ	Oswaldo Cruz Foundation
FIORN	Federation of Rio Negro Indigenous Organizations
FUNAI	National Indian Foundation
FUNASA	National Health Foundation
ICHAPP	Indigenous Community Health Agent Professionalization Programme
MEC	Ministry of Education
PNASPI	National Policy for the Health of Indigenous People
SASI	Subsystem of Indigenous Health
SESAI	Special Secretariat for Indigenous Health
SUS	Unified Health System (Sistema Único de Saúd)

CASE INTRODUCTION

The Indigenous Community Health Agent Professionalization Programme (ICHAPP) aims to enhance health care services in remote indigenous communities in Brazil by incorporating the cultural underpinnings and voices of the indigenous peoples and their local community health agents. It is the first community health worker programme that has developed a formalized training approach tailored to the contextual and cultural realities of these indigenous peoples. In a context where indigenous peoples are often severely marginalized, recognizing and equipping their local health agents helps ensure that health care services delivered to these remote indigenous communities are both high-quality and culturally appropriate. The training programme uniquely blends traditional medicine, biomedical approaches and general education. The first cycle of the programme, running from 2009 – 2015, trained and professionalized 189 indigenous health agents. Not only has ICHAPP raised awareness on the role of indigenous community health agents, but also the qualification that these health agents gain on completion of the education programme has enabled them to receive a salary for the work they do.

This case study illustrates how in countries with marginalized or distinct cultural population groups, a deep understanding of these communities' values and beliefs towards health and wellbeing provides insight into how health systems should be adapted or redesigned to allow for culturally respectful care that is truly person-centred. It shows how traditional community knowledge can be leveraged and integrated successfully along with biomedical approaches in a structured and cohesive way.

"It was the first time somebody was trying in a serious way to join tradition and biomedicine in Brazil." (Luiza Garnelo, Oswaldo Cruz Foundation)

1. INNOVATION PROFILE AT A GLANCE

Organization Details

Programme name	Indigenous Community Health Agent Professionalization Programme (ICHAPP)
Founding year	2009
Founders' names	Luiza Garnelo, Ana Lucia Pontes, Sully Sampaio, André Baniwa
Founders' nationality	Brazilian
Organization name	Oswaldo Cruz Foundation (FIOCRUZ) and Federation of Rio Negro Indigenous Organizations (FIORN)
Organizational structure	Government public health research institution (FIOCRUZ) and nongovernmental institution (FIORN)
Size	Daily programme implementation: four people Contributions during programme lifecycle: 62 people from 12 institutions

Innovation Value

Value proposition	A community health worker programme enhancing health care services in remote indigenous communities by incorporating the cultural underpinnings and voices of the Brazilian indigenous peoples and their community health agents
Beneficiaries	Direct beneficiaries: 189 indigenous community health agents Indirect beneficiaries: indigenous communities in the Alto Rio Negro Region
Key components	• Multi-disciplinary collaboration and participatory community design • Place-based education, supported by a bi-directional teaching-learning approach • Integrated high school training • Blended training of indigenous medical practices with biomedical approaches

Operational Details

Main income streams	Government and research grants
Annual expenditure	The equivalent of US$ 29 000

Scale and Transferability

Scope of operations	Alto Rio Negro Region in the North-West Brazilian Amazon located in the Municipality of Sao Gabriel da Cachoeira.
Local engagement	Partnerships with the Association of Rio Negro Indigenous Health Agents (AAISARN), the Special Indigenous Sanitary District (DSEI), Federation of Rio Negro Indigenous Organizations (FOIRN), National Indian Foundation (FUNAI), Special Secretariat for Indigenous Health (SESAI), National Health Foundation (FUNASA), the Ministry of Education (MEC), Municipal Health Department of São Gabriel da Cachoeira, Municipal and State Education Department of São Gabriel da Cachoeira and the Amazon
Scalability	This is a programme tailored specifically to the culture, language and beliefs of the specific indigenous communities. There is value in scaling this type of training programme, which integrates traditional and biomedical health approaches but requires careful attention in adapting it to the local community.
Sustainability	The programme invested significantly into building trust and strong relationships with indigenous communities. This has been an important element to ensure sustainability and community ownership.

2. CHALLENGES

Globally, there are an estimated 370 million indigenous peoples resident in 70 countries. The term 'indigenous peoples' represents groups such as the First Nations people of Canada, the Aboriginal and Torres Strait Islander people of Australia, and a variety of ethnic groups found in Latin American countries. They are characterized through their self-identification as indigenous peoples. They also have a historical continuity with pre-colonial societies; strong links to territories and natural resources; distinct cultures, beliefs and languages; and are resolved to maintain and reproduce their ancestral environments as distinct peoples and communities (United Nations Permanent Forum on Indigenous Issues, 2009).

Indigenous peoples across the world are some of the most marginalized in society. They are often poorer, less educated, and have worse health indicators than the general population. Over the decades, indigenous peoples have been subjected to institutional and legal discrimination that has threatened their land, culture and traditional knowledge systems. These knowledge systems are considered the foundation of community life as they provide the guiding principles for decision-making, approaches to health and education, and the management of natural resources (Stephens et al., 2006).

In Latin America, indigenous peoples represent over 400 different ethnic groups and comprise 10% of the total population (Montenegro & Stephens, 2006). The 2010 Brazilian census estimated the presence of approximately 900 000 indigenous Brazilians. Indigenous communities live in 600 federally recognized reserves, covering 12% of the land area of Brazil. The majority of the reserves are located in the Amazon (Coimbra et al., 2013). The Brazilian indigenous peoples face several challenges. They have higher rates of infectious diseases and, due to changes in their dietary patterns, non-communicable diseases are increasing (Stephens et al., 2006). A total of 30.3% of indigenous women are overweight and 15.8% are classified as obese (Coimbra et al., 2013). Recent data published on child health indicators show a difference in the health of indigenous children as compared to the benchmark general population. Infant mortality is 40.6% compared to 15.3%, and under-five stunting is 25.7% as compared to 7%. Socio-economic and sanitation indicators provide further insights into the determinants of ill health, with 63.3% of indigenous households having an income below the Brazilian minimum salary as compared to 41.5% of non-indigenous households. Only 22.1% of adults have completed secondary school, as compared to 40.3% of the general population. There remain major deficiencies in public services such as sanitation, provision of safe drinking water, and waste management (Coimbra et al., 2013).

Delivering health services to indigenous peoples has a complex history within the formal health care system in Brazil. The adoption of the new Constitution in 1988 signaled a change in many official structures and brought into existence the Unified Health System (Sistema Único de Saúd – SUS). The Constitution also signalled an important advance in the recognition of indigenous collective rights (Martinez de Oliveira, Brigagão & Spink, 2011). Prior to 1988, indigenous health was under the control of the National Indian Foundation (FUNAI) and until the mid-1990s, indigenous health was delivered by rotating health care teams. By 1999, the responsibility for indigenous health was transferred to the Brazilian Ministry of Health under the Subsystem of Indigenous Health (SASI). Under the 2002 National Policy for the Health of Indigenous People (PNASPI), the Subsystem was structured to deliver services through geographically organized Special Indigenous Sanitary Districts (DSEIs), coordinated by the National Health Foundation (FUNASA). Districts were responsible for the organization and provision of services, predominantly through nongovernmental providers. Due to technical deficiencies, management problems and accusations of corruption within FUNASA, protests were held by the Indigenous Movement and other indigenous groups. Finally, in late 2010, the government transitioned the responsibility from FUNASA to the newly created Special Secretariat for Indigenous Health (SESAI) to ensure higher service quality while promoting

management autonomy at district level. Service delivery continues to occur through the DSEIs and is structured according to three levels of care: health posts at village level supported by indigenous health agents; comprehensive medical units comprised of a multidisciplinary health team at selected geographical locations (or poles); and specialized referral care, at "Indian Health Houses" (Casai) established within urban areas (de Moura-Pontes & Garnelo, 2014a; Pontes et al., 2012).

Despite the attempts made, multiple health service delivery challenges continue to exist in indigenous communities. Distance, the location of health facilities, and the isolation of indigenous communities pose major barriers for accessing health services. If a patient requires specialized care, it could easily take up to four days to reach an Indian Health House. Another key issue is the lack of cultural sensitivity and appropriateness of the care delivered. The health system in Brazil is shaped according to western, scientific and liberal values (De Moura-Pontes, Garnelo & Rego, 2014). This is in stark contrast to the perception of health and illness held by indigenous peoples, who define well-being more broadly than merely the absence of disease. Well-being is considered to be the achievement of balance between the physical, mental, emotional and spiritual dimensions of life. This balance extends beyond individual health and healing, and includes the ability to live in harmony with the environment, the community and the spirit worlds (King & Gracey, 2009). Indigenous traditional medicine practices are passed down through generations and heavily depend on the land, food and availability of medicinal plants (Montenegro & Stephens, 2006). In contrast to western medical practices which focus on the individual, indigenous health systems are community-based. Healing involves a collective experience of consultation and public processes that includes offerings and gatherings (King & Gracey, 2009).

The Brazilian National Policy for the Health of Indigenous People calls for a complimentary and differentiated model of service organization that takes into account the indigenous cultural perceptions of health and well-being (National Health Foundation, 2002). The fusion of western and traditional medical practices has yet to occur and there has been a lack of recognition by official health authorities of the role of indigenous health workers. Despite indigenous community health agents' vast knowledge in traditional medicine and their embeddedness in the communities, the role of indigenous health agents as part of the DSEIs has been significantly limited. Instead, these workers are used to perform administrative functions, deliver medicines and conduct general maintenance such as cleaning (de Moura-Pontes & Garnelo, 2014b).

The Indigenous Movement continues to fight for the cultural and constitutional rights of indigenous people. Together with its partner organizations, it sets out to improve the health of the indigenous people living in the Rio Negro region by strengthening the role of indigenous community health agents.

3. INTERVENTION AND IMPLEMENTATION*

In 2007, leaders from the Federation of Rio Negro Indigenous Organizations (FOIRN), approached academics from the Oswaldo Cruz Foundation. They requested support in professionalising the role of the indigenous community health agents (Agentes Indígenas de Saúde - AIS) in the

* This section draws from the following sources:

Garnelo et al. (2009) Technical Training of Indigenous health community worker: a construction experience in the Rio Negro. *Work, Education and Health*, 7(2):373-383

Moura-Bridges et al. (2015) The model of special attention in the special indigenous health districts: reflections from the Upper Rio Negro. *Public Health*, 20(10)

de Moura Pontes AL & Garnelo L, (2014). Professional education and work of indigenous health agents in the Brazilian health system. *Salud Publica Mex*, 56(4):386-92

Northwest Amazon region of Rio Negro. The Upper Rio Negro (covering over 75% of the indigenous lands of the Rio Negro region) has a population of 38 000 indigenous people, spread throughout 600 villages, spanning over 12 million hectares of the Amazon region. There are 19 multiethnic and multilingual groups who are distributed widely across the area. Indigenous community health agents play an important role in caring for these remote communities and are often the only providers of health care.

The Indigenous still suffer from discrimination in Brazil, being considered inferior. They want recognition of the training, because it seems that all the knowledge that [indigenous] health workers have is not worth it. The focus now is to make government institutions recognize the specific training the health workers received and that they sign the documents for this. (Indigenous leader, FOIRN)

As stated in multiple Brazilian statutes and acts, the envisioned role of the indigenous health agent is to have adequate skills and knowledge to care for their communities and to act as a link between traditional knowledge and biomedical health systems. It is further expected of them to conduct home visits, perform health promotion and disease prevention activities and collect data for the health information system.

However, numerous challenges have affected the implementation of these role expectations. There has been:

- **Minimal training and development:** from 1990 – 2006, AIS received 12 short training courses offered by various institutions.
- **Lack of culturally appropriate training:** none of the courses that were offered took into account local culture, ethnicity or language. All courses were limited to biomedical training.
- **Lack of secondary education:** only 20.9% of AIS have completed secondary school, thus preventing them from enrolling in the official mid-level technical accreditation courses.
- **Top-down implementation:** most programmes, interventions or activities designed and implemented in indigenous communities have followed a top-down approach, reinforcing colonialist history and disregarding the contributions of indigenous knowledge.

In response to these challenges, FIORN approached a team of academics and researchers at the Oswaldo Cruz Foundation to assist. The team members, Luiza Garnelo, Ana Lucia Pontes and Sully Sampaio, set out to develop the first formalized training programme tailored to the contextual and cultural realities of indigenous communities. The intended outcome of the training programme was to produce mid-level, qualified AISs who feel responsible for their communities; whose communities feel confidence in their problem-solving ability; and who can advocate at an institutional level for recognition of the role AISs play. The first programme ran from 2009 to 2015, training 189 indigenous health agents.

Several elements differentiate this programme from other programmes implemented in Brazil:

Multi-disciplinary collaboration and participatory community design

The curriculum design took shape through a two-year consultative, participatory process (2007 – 2009) and involved all relevant stakeholders from state, municipal and community levels. These included a multi-disciplinary group of anthropologists, medical doctors, traditional indigenous healers and education specialists. This proved vital to ensure that the programme did not reinforce a 'colonialist approach' but rather acknowledged the voices of indigenous stakeholders throughout all its aspects. Workshops brought together existing AISs, teachers, and indigenous leaders. Due to the different languages and cultural nuances, representatives from each community were included. Support for the programme was received at the state and municipal level from the Ministry of Education and the DESAI.

Place-based education supported by a bi-directional, teaching-learning approach

The team adopted a place-based, teaching-learning approach (where there was bi-directional learning so that the teaching was influenced by the

learners) that provided the opportunity for the curriculum design and delivery to be guided by the cultural characteristics, political distinctions, language and geographical differences of the various ethnic groups in the five distinct geographical areas of the Rio Negro. The bi-directional, teaching-learning approach united theory, practice and personal experiences of the students in order to produce health care actions at the community level. Over 72 teachers were sourced, including several from each of the indigenous communities to account for community differences.

The delivery of the training programme occurred within the remote communities. Reaching these isolated areas posed several logistical challenges for the implementation team, often resulting in two to three days of travel via boat or plane. *"So it takes a lot of time to get places. In some places we need to go to the jungle and they go to the river because it is dangerous. You need a fast motor [boat] to make it quick."* (Luiza Garnelo, Oswaldo Cruz Foundation)

Building the trust and respect of the indigenous peoples was of paramount importance to the implementation team. Once the team reached the designated community, they would remain with the community for between 20 – 45 days, delivering the training course six days per week. Living with the communities for this extensive time was an important element in building strong relationships with the indigenous health agents, while also being able to tailor the programme based on the perceptions and feedback of the community. *"For me it is fundamental to build strong relationships with the people by sharing food, feelings and work. If you talk, share and also try to speak their language, you end up developing a special relationship, different from the one built professionally."* (Sully Sampio, Oswald Cruz Foundation)

Integrated vocational and high school training

Incomplete high school training is a key barrier for AISs to meet the entrance criteria for vocational biomedical training. The training programme delivered high school training alongside the vocational training in a stepwise manner through providing 1800 hours of regular schooling and 1440 hours of vocational training. High school subjects taught included Portuguese language, mathematics and science.

Blending indigenous medical practices with biomedical approaches

In its approach, the training had to account for the socio-cultural aspects, values and spiritual beliefs of the indigenous communities. The training then had to complement traditional knowledge with training in biomedical approaches to health and disease. *"It was the first time somebody was trying in a serious way to join tradition and biomedicine in Brazil."* (Luiza Garnelo, Oswaldo Cruz Foundation) The training programme included a wide range of biomedical and public health subjects such as health promotion, disease surveillance, and treatment of disease (common primary care conditions such as malaria, tuberculosis, respiratory infections, and diarrhoea). This component of the curriculum was developed from best-practice guidelines of the Brazilian Ministry of Health and the World Health Organization.

The training programme leveraged the local environment and society as a basis from which to start the training and ensured community interaction at each stage of the AIS learning journey. AISs were taken through a three-stage process to integrate traditional knowledge with biomedical knowledge as well as theory with practical action.

In Stage 1, the focus was on gaining knowledge of the environment and societal life, and understanding the traditional way of life, the historical changes resulting from colonization, political dimensions, and traditional knowledge systems. In Stage 2, the focus was on analyzing living conditions and health situations in order to promote health surveillance according to the life cycle in the indigenous context. In Stage 3, the focus was on developing a community action plan by incorporating knowledge gained on the delivery of health care in a culturally sensitive manner.

4. ORGANIZATION AND PEOPLE

The emergence of FOIRN dates back to 1987. In the decade prior to this, the Rio Negro region experienced an intensified military presence. Mining companies and prospectors threatened the area's natural and land resources. To provide a single voice for the indigenous people for the protection of their land, FOIRN was formed by uniting over 60 small, locally structured indigenous organizations, representing 750 different communities. The organization invests in conducting various initiatives and projects in support of the challenges faced by indigenous communities. Fundamental to their approach is the protection of the culture, traditions and generational knowledge of indigenous peoples. The Indigenous Health Agent Professionalization Programme was initiated by the Oswaldo Cruz Foundation (FIOCRUZ) at the request of FOIRN.

This is what happened in the political context of the indigenous movement, to revalue the health agent. It means that the training of health agents have now a great political importance to the Indigenous Movement. (Indigenous leader, FOIRN)

FIOCRUZ is the national Brazilian public health research institute established in 1990. The organization represents all regions of Brazil and supports the national health system through health policy formulation, research, teaching, health service delivery and medical product development. The implementation team from FIOCRUZ consisted of Ana Lucia Pontes, a medical doctor and professor of public health; Maria Luiza Garnelo, medical doctor and anthropologist; and Sully Sampaio, a social scientist. Collaboratively, they combine rich expertise and experience as well as a deep passion to improve the health of indigenous peoples.

The goal for these two organizations has been to work together within a larger *"network not a hierarchy"* (Luiza Garnelo, Oswald Cruz Foundation). The collaboration has been extended to all relevant stakeholders and organizations: the Secretary of State for Education and Teaching Quality, the Special Indigenous Sanitary District of the Rio Negro (DSEI), the National Health Foundation of Health (FUNASA), and the Municipal Health Secretariat.

5. COST CONSIDERATIONS

Different funding streams were combined from various organizations in order to support the pilot training programme that ran from 2009 to 2015. Strong political and financial backing was received from the Ministry of Education in support of the high school training delivered to the AISs. Local health districts and FIOCRUZ provided funding and materials for teachers delivering the health component of the training. The biggest cost consideration for the team was the transport and living costs for AISs and teachers during the course delivery. All of the professionals involved in teaching belonged to public institutions that supported the programme at no cost. It is estimated that the total cost of the project was approximately US$ 29 000 per year.

6. OUTPUTS AND OUTCOMES

The Indigenous Community Health Agent Professionalization Programme has experienced positive changes in several areas as determined by the programme monitoring process. Due to the lack of a strong health information system in the Rio Negro, the team has not been able to assess the impact of the programme on the health indicators of the community.

The final training module was completed in mid-2015. From 250 agents who qualified for enrolment, 198 participated in the programme and of those, 139 agents (70%) completed the full training programme. These agents gained competency in screening for diseases (malaria, tuberculosis and other infectious disease), and were skilled in caring for pregnant women and children under five. *"They are the only 139 health workers with professionalization in Brazil. It makes them proud."* (Sully Sampio, Oswald Cruz Foundation)

Secondary school completion increased from 20.9 % to 84% amongst AISs. AISs have reported that they felt valued by the training process, their confidence in their work has increased and they are now able to actively participate in the delivery of services. *"We learned about culture, politics, how to value food, and the treatment of water. In the communities, people thought they only knew about the disease and how to administer medicines. But the course allowed us to learn about health: how to care for the community health and for them not to get sick."* (Romero, Indigenous Health Community Agent)

The programme has achieved its political goal of increasing recognition for the role of indigenous community health agents. The qualification gained on completion of the education programme has enabled these health agents to receive a salary for the work they do. More work is required to gain full official recognition for them from the national health system.

7. SUSTAINABILITY AND SCALABILITY

The programme was developed and implemented as a pilot project. The implementation team has been consolidating the experience and knowledge gained. As researchers, their goal has been to share the knowledge with others through grey and academic literature. A second important aspect of ensuring sustainability has been advocacy and the uniting of various stakeholders. Since inception, the team has hosted regular assemblies with the goal of strengthening relationships and support for indigenous health agents at a national level.

To support the upscaling of the programme, several considerations need to be taken into account:

- **Contextualization:** with the wide variety of cultural, language and ethnic differences between indigenous groups, it will be necessary to adapt the programme according to these.
- **Evaluation:** in the absence of a formal programme evaluation, the implementation team will need to build further linkages with other academic institutions to support this.
- **Funding**: the pilot programme was financed by research grants but it will require more sustainable funding in order to scale it beyond the Rio Negro region.
- **Political support:** the programme hopes to achieve a national policy for workforce training in the indigenous health system.

8. IMPLEMENTATION LESSONS

Getting Started

Building trust with and getting commitment from the community through communication, collaboration and inclusion has been vital for securing initial support from local and national governmental and nongovernmental organizations. The strong political will of the

FIORN catalyzed progress and partnerships. The FIOCRUZ team's longstanding academic expertise and collaborations were central to obtaining the funding and implementing the ICHAPP.

Maintaining Efforts

With the main implementation team members being resident in academic institutions in different cities in Brazil, the presence of the field coordinator and researcher, Sully Sampaio, was an essential investment to the programme's smooth running and success. Mr Sampaioi often travelled to the communities (a remote flight and then sometimes a further four-day journey by boat) and stayed for prolonged periods of time to support the AISs with any challenges they may encounter. This helped develop trust and strong relationships with the indigenous communities.

Overcoming Challenges

A number of obstacles complicated the programme's implementation:

- The vast geographical spread of the communities gave the programme some unique logistical challenges.
- Different political tensions existed among the various indigenous ethnic groups. Where possible, the team tried to find teachers and tutors of similar background for AISs of each ethnic group.
- Sicknesses and personal situations arose where some AISs needed to take time off from their modules and go back to their communities. Costly transport and care had to be arranged for them to make the long journey back and forth, and catch up arrangements had to be considered when they returned. Flexibility and strong regional partnerships were central in responding to these challenges.
- Some of the AISs did not complete their training for a variety of reasons: *"Some of them were local chiefs and the people were upset with them because they would be absent for long periods. We had old people who had no problems in continuing being health workers but it was harder for them to keep up with all the reading and studying required to achieve the medium level, but most of them made until the end of the course."* (Ana Lucia Pontes, Oswaldo Cruz Foundation)

CASE INSIGHTS

1. In countries with marginalized or distinct cultural population groups, a deep understanding of their values and beliefs towards health and well-being provides insight into how health systems should be adapted or redesigned to allow for culturally respectful care that is truly person-centred.

2. Traditional health systems should not be neglected or undermined. Instead, the value of traditional community knowledge can be leveraged and integrated along with biomedical approaches in a structured and cohesive way.

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