



Report on two research visits to Atiu, Cook Islands,
2010 and 2011

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Introduction

The purpose of our research visits was to add a perspective from the island of Atiu to the research team's work on transnational health in the Cook Islands (Figure 0.1), part of a study that includes parallel work in Tuvalu. Other team members' work in the Cook Islands has complementary foci. Debi Futter Puati received an MA Honours in History for her thesis on the history of efforts to control tuberculosis in these islands (Futter Puati 2010). Evelyn Marsters is currently pursuing a PhD in Development Studies on contemporary health and health systems in the context of population mobility, with TB, diabetes and associated conditions as a focus. She has included Rarotonga, Aitutaki, and New Zealand in her research. A visit is also planned to one of the northern islands. In 2011, Rochelle Newport undertook a small project on health development. This drew on the findings of the earlier studies as well as incorporating Rochelle's own work on Rarotonga. She has followed this up in 2012 with a Master of Health Science thesis also on Health Promotion in Rarotonga. Julie Park undertook fieldwork on Atiu in June-July 2010. Julie and Judith Littleton did further research in August and September in 2011. This report describes the five weeks of our research in Atiu.



Figure 0.1: Map of the Cook Islands

1.0 The 2010 Research Visit, June 23-July 5

Julie Park

Initially, I planned a three week stay on Atiu—already extremely short for an ethnographic visit. However, this was truncated because of an unusual nine-day hiatus in air services, caused by Air Raro interrupting its usual schedule of four flights per week flight in order to service eclipse watchers wishing to visit Mangaia, where a total solar eclipse was to be visible on July 11th. I have described these details because everyone on the island had to accommodate this change in scheduling which had serious implications for those dependent on tourism as well as for everyone dependent on access to this air service for transport of people as well as goods. The 45 minute flight from Rarotonga (Figure 1.1) costs approximately \$NZ 200.

Even had I been able to stay for three weeks, this report, intended primarily for internal use in our research team and as feedback to key people, would be tentative. There are some major gaps which I discuss in the final section. Some of these were picked up during our second field trip, others remain as a pointer to further work.



Figure 1.1: Atiu as seen from the air

The research

My days on the island were divided between visits to the school and the hospital, spending time walking around to explore the villages and talk to various people I met on the way, and going

future afield, either on foot or on motor scooter, truck or van, to explore the island and its varied ecological zones accompanied by one of the small number of tour operators or other people whom I had met while on the island. I stayed in a guest house in Areora, the island's largest village. Although I conducted few formal interviews during my stay, I had many lengthy conversations in such venues as my front porch, the side of the road, at the hospital and school, over meals, on the plane and at the shops, or in the gardens, on a wide range of topics relating to island life. I learned a good deal from fellow guests at our guest house: 'Are Manuiri, Dr Nelesone and the nursing and health inspector staff located at the hospital, 'Mista' Bazza Ross and other teachers at the school, and the guides on the informative tours I took: Andrea, George and Marshall. Walking was an excellent way to meet people and visits to the school also turned out to be a way to become known in the community.

Before travelling to Atiu I had met with Helen Sinclair in the Ministry of Health Te Marae Ora (MoH) in Rarotonga. Helen is responsible for health concerns in the Outer Islands. She had arranged with the Island Secretary, Ina Mokoroa, to meet with me briefly when I arrived. She had also spoken with Dr Nelesone, the sole doctor on Atiu, whom I had not met, but with whom I (and other project members) had emailed. Dr Nelesone is Tuvaluan and is interested in our work in both the Cook Islands and Tuvalu. Dr Nelesone arranged for me to meet with the school principal and the deputy, who provided me with a timetable so that I could take part in the maximum number of classes concerned with health topics. Debi Futter Puati had also made an email introduction for me to one of the teachers, Bazza Ross, who was an invaluable source of advice and information.

At the school I attended two assemblies, observed six different classes which related to health, watched sport, and chatted to students, teachers and parents. I was able to make several presentations to the school library, both on behalf of the project and for the foundation, 'Ocean of Books'. I also copied all the photos I took at the school and gave them on CD to the school as they are producing some of their own Maori reading materials, with illustrations. When I met some of the teachers it was clear that they thought I was going to interview them; however, I quickly explained that I only wanted to observe and take part in what they were doing in class. Others realised from the outset that I was just 'in the classroom'. In the junior classes, the work is mostly in Maori. With my rudimentary language skills, I could not follow everything, but this was an excellent context for language learning.

I visited the hospital almost every day to get an idea of the routines and rhythms, talk informally to patients while they were waiting to be seen (if appropriate), and talk with staff and other people coming by (for example, a family member to help with an in-patient, the MoH IT specialist). I did not formally interview any patients. At the end of my stay I had a lengthy discussion with Dr Nelesone. I also did my emails at the hospital, often while conversing to folk there.

Other activities that I observed or participated in were two religious services, gardening, a visit to the disabilities centre, watching soccer, going to the market and shops, and several meals. On successive weekends I went on four tours: one around the island to see the places of interest, one to visit the Anatakitaki caves and a *tumunu* ('bush bar'), another to learn about flora and fauna and the final tour was to learn about the coffee industry. I attended one cultural performance of music and dance and a meal at 'Kura's kitchen'. The multi-age group performing was from Teenui village and they were preparing and fundraising for a trip (*tere*) later in the year. It was a special occasion for the visitors from Rimatara. I enjoyed several swims and long walks and took large numbers of photos.

Although at the beginning of my visit I was apprehensive about how it would all go, not knowing anyone on Atiu, the introductions made on my behalf, coupled with the friendly helpful reception I received, led to a very fruitful and enjoyable visit.

Getting to know Atiu

Atiu is the third largest island (26.9 sq km), in terms of its land area, in the Cook Islands. It is part of the Southern Cooks and more specifically of the grouping Nga Pu Toru, which consists of Atiu, Mauke and Mitiaro. The island has hills, swamps, ridges and valleys, makatea and a narrow lagoon. It is an attractive place with varied vegetation, several small beaches, a lake and interesting caves and birdlife. The temperature is a little warmer than Rarotonga, and I was there in 'winter' when temperatures are usually in the 20s Celsius.

The annual census conducted by the Health Inspectors in February and March 2010 indicated a current population of 511. This number did not include visitors, tourists and any people in the few holiday homes outside the villages. Over the summer when families visit for Christmas and the various celebrations scheduled for that time, such as hair cuttings or unveilings, I was told that the numbers can more than double. Over the two months of the 2009/2010 summer holidays 900 people stayed in the school buildings. At other times visitor numbers fluctuate at a lower level. During my visit there were about 20 tourists and holiday-makers plus a school group visiting from Rimatara (Figure 1.2) to celebrate the 2007 re-introduction of the *kura* bird on Atiu (from Rimatara), along with a few visitors on government business. There were three other researchers, all working on aspects of the *kura* reintroduction.

As in most of the other Outer Islands, the population has greatly reduced, with the last major migration, so locals told me, occurring in the 1990s as a result of the national structural adjustment programme which greatly reduced employment in the public sector. In the last three years, the annual census showed an overall decrease of 31 people. Two villages have gained numbers, while the other three lost people. Overall numbers have been reducing for many decades. In the 1980s over 1200 people lived in Atiu, while currently two of the villages have only about 50 residents. The many empty homes are testimony to the departure of families, friends and contributors to the community (Figure 1.3). However, there are also returnees newly settling in Atiu.

As Table 1 shows, the villages vary greatly in size of their population. While children and teenagers as well as the over 60s all contribute to family enterprises, the core working age group of 20-59 numbers only 224 from the total population of 511.

Table 1.1 Atiu Population 2010 (with kind permission of the Atiu Public Health Inspectorate)

Atiu Health Survey Feb March 2010. Author: Health Inspector, Atiu, Ministry of Health, Cook Islands																
Village	Tengatangi			Mapumai			Areora			Teenui			Ngatiarua			Atiu
Age	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	TOTAL
1-4yrs	2	2	4	5	4	9	12	8	20	3	8	11	3	3	6	50
5-19yrs	9	5	14	15	15	30	29	20	49	18	19	37	8	11	19	149
20-59	14	9	23	20	22	42	41	47	88	27	23	50	9	12	21	224
over 60	3	10	13	8	6	14	12	17	29	12	11	23	5	4	9	88
Total	28	26	54	48	47	95	94	92	186	60	61	121	25	30	55	511



Figure 1.2: School group from Rimatara



Figure 1.3: One of the empty houses

Atiuans can inherit land from either parental line. Atiuans living overseas are able to keep their interests in land alive. Land is not bought and sold. The Land Court acts as a registry and arbiter of interests in land. Many Cook Islands couples whom I met also had claims to land on other islands, perhaps a wife coming from Mauke and a husband from Atiu, for example, or a mother coming from Rakahanga and a father from Atiu. Similarly, some people had interests in land in different villages on Atiu. Because of depopulation, there is no overall shortage of land for cultivation.

In addition to the airport (Figure 1.4) on the north of the island, there is a small harbour built in the 1970s, making use of a gap in the reef on the western side. A barge with two very large outboard motors transports goods from the visiting boats to shore and vice versa. The harbour doubles as a salt water swimming pool with a built-in wave. At least two boats called during my 12-day visit. One was unable to unload all of its cargo because of bad weather, but the other was able to offload a large amount of building material to rebuild the huge CICC church (Figure 1.5), which was in need of repair. Near the harbour are several small outrigger canoes, some aluminium boats, and a large shed (Figure 1.6) and very small customs office. Boats are also to be found in back yards in the villages.



Figure 1.4: Atiu Airport, 2010



Figure 1.5: CICC Church



Figure 1.6: Sheds at harbour

Electricity on the island is provided by a diesel-generator plant and some solar panels for hot water (Figure 1.7). The diesel has to be shipped in. Some tests and experiments with wind power have been tried but so far without result. The electricity system, including some of the transformers, were acknowledged to be old and inefficient, and unable to cope with peak demands. This was clear in my village when every evening (and some mornings) the power went off for a while as people turned on their electrical appliances and lights around 6.30pm. I soon learned to charge up my laptop well before this time. It was more dramatically demonstrated one day when the whole island was without power. A ‘town crier’ drove around in a truck in the late evening shouting out that the power would not be on until the next day. His passage through each village was marked by the barking of every dog on the island. The new parts and two electrical engineers were flown on a special plane from Rarotonga the next day and some places had power restored by lunchtime. While the hospital and a couple of the stores and Atiu Villas had emergency generators, the school and the radio station did not. Consequently neither could operate that day. There was concern about frozen goods and food safety. It was 24 hours before power was restored in my village, the last to be fixed. The village is where there is the highest demand for electricity, with a large store serving takeaway foods which are cooked using electricity as well as serving the largest number of houses and tourist accommodations. After I left there was a similar outage. People on Atiu want the same sort of appliances one can find in any house in Auckland, but the electricity supply was not designed with this in mind. The Ministry of Infrastructure and Planning is aware of the old and inefficient plant.



Figure 1.7: Solar hot water on ‘Are Manu’iri Guest House in Areora Village

The five contiguous villages of Areora, Teenui, Ngatiarua, Mapumai and Tengtangi are located in the centre of the island on the tops of ridges which, as described by the *Lonely Planet Rarotonga and the Cook Islands* guide book (1998), stretch out like a starfish with deep wooded gullies between them. In pre-missionary times, the villages were dispersed and located closer to, but not right on, the coast, handy to the taro gardens. Some remains of what were probably ceremonial structures are still evident (Figure 1.8). All the churches and public buildings are in the central area of the island, where the villages are situated, although the Post Office and TV and Radio station are a little distance out, at the edge of the village of Mapumai. Tourist accommodation is mainly in Areora village and beyond, which is near where the first airstrip was located, but there are some elsewhere. The largest accommodation is 'Atiu Villas' which includes 'Kura's restaurant'. The owners have taken great trouble to use as much local material, sustainable construction and renewable energy resources as possible. Their varied and important contributions to the community are widely lauded. In this small community, key people make a big difference, bringing to the community skills, knowledge, experience, ways of working together and forms of communication. 'Roger from the Villas' was one of those known as a 'very handy person' to have on the island for a whole raft of reasons, especially for his knowledge and skills in things electrical and engineering. Other community members are remarked upon for their particular strengths too: Papa Moe for his knowledge and leadership, 'Mista' who sometimes take local youth hunting, 'George' who knows all about nature. Although the names of women do not crop up so much in the conversation, key women are also highly respected and one of the three *Ariki* (high chiefs) is a woman.



Figure 1.8: Ceremonial structures

The island has two representatives in the Cook Islands Parliament. The three Ariki and the level of traditional leadership below them, the *mataiapo*, it was explained to me, are influential in island life. They exert personal leadership, for example, in ensuring community work is done properly, and working to see that family problems are solved constructively, and not through violence. However, the governance of the island is through the Island Council (Figure 1.9) which is comprised of representatives from each of the villages. These representatives, in turn, raise Council matters at village meetings, allowing for the flow of information and opinions in both directions. The Secretary and staff administer island affairs, and a Mayor presides. Of course these distinctions between traditional leaders and the Council are not absolute, as a single person may wear multiple hats.

Christianity is an important part of island life and the churches are key social organisations. Several denominations are represented including CICC, Catholic, Seventh Day Adventist, Jehovah's Witnesses and Apostolic. Prayers and biblical or other Christian references are ubiquitous. An expectation of community service to the church and its ministers is taken for granted. I did not meet any non-Christian religious adherents. Several people commented how their religion had assisted in their personal life, whether it was dealing with bereavement, or moderating or giving up drinking, or changing to a more healthful diet. On the other hand, I wondered if sometimes Christian 'acceptance' may lead to, or justify, a tendency to 'let things be' in ways that adversely affect the life chances of self or others. The area of disabilities was one such example, and perhaps here it is combined with 'shame' at having a 'makimaki' child or family member. This speculation would need further study to determine whether or not it is borne out.



Figure 1.9: Island council building at the centre of the island

Cultivations and foods

I was told by many people that everyone on the island plants taro (Figure 1.10), and the many swamp plots in different stages of development, plus the activities of people in the early morning and afternoons, weekends and other times were testimony to the efforts put into growing food and raising animals. In addition to taro cultivation, growing coconut, pawpaw, banana, pig and chicken raising and fishing occupy at least some members of most families. Citrus trees, especially oranges, were common, along with mango, star fruits, breadfruit, chestnut and some avocados and guavas. A few families have large kitchen gardens, fenced against roaming animals, but these are the exception. In a couple of instances where I met the people involved, I found that the very large gardens were not just for their own use but for sale on Atiu, or possibly Rarotonga if Atiu did not provide a sufficient market for the produce. These gardens had a wide variety of vegetables, fruits and herbs such as tomatoes, bok choy, pineapple, maniota, lettuce, saladia, cucumber, watermelon, sweet basil, and passionfruit. A few islanders had herds of goats raised for meat, and in the bush there were wild pigs to be hunted (although I did hear some debate as to whether they were really wild, or whether they really all belonged to someone). Two coffee plantations were active (Figure 1.11), each employing organic methods and hand picking and production of 'Atiu' and 'Atiu Island' coffee brands. The coffee is sold locally and exported and is of high quality, attracting premium prices. Frangipani, gardenia, hibiscus, coloured cordylines and many beautiful flowers, flowering shrubs or shrubs and trees grown for foliage adorn private gardens and the roadsides, along with trees grown for shade. Large, shady trees are particularly prevalent on the narrow coastal flat on the lee side of the island (the western side) which is park-like, compared with the more exposed eastern side, but they grow to various degrees throughout the makatea and in the gullies right up to the central high points of the island.

Atiu has been the focus of many 'good ideas' for economic development which have attempted to make use of the land resources to grow commercial crops for sale. As in other parts of the Cook Islands, the remains of these now failed enterprises are still visible. The succession of these enterprises and the reasons that they had such limited success make sad reading in the book *Atiu, An Island Community*, published in 1984 and written by a distinguished group of Atiuans. The details are given in an appendix based on a 1978 government report. Pineapples reached their peak of production in 1974. Citrus waxed and waned during the 19th and part of the 20th century; copra, peanuts, tomatoes and for a short time, taro, and fresh vegetables were all tried as export crops. Vanilla was mooted, though a few people still grow it. It seems that coffee is one of the few export crops that has been reinvigorated and survived into the 21st century.

Among the problems listed were insect pests, water shortages, expensive inputs of fertilisers and pesticides, inadequate and poorly coordinated transport, low prices, poor management, hurricanes and roaming pigs. Some local people believe that the pineapple crops (Figure 1.12), in particular, with their sprays and planting method, increased erosion, washing soil and spray residue into the taro swamps and out into the narrow lagoon. As a result it is thought that human health has suffered and fish poisoning from lagoon fish has increased and is still a problem. Currently, there is a society to which growers can subscribe which will assist with marketing of their produce.



Figure 1.10: Taro plantations



Figure 1.11: Growing coffee

The diet of Atiuans is by no means dependent on locally produced foods as the half-dozen shops stock a range of frozen, tinned and bottled foods and drinks, along with biscuits, chips, confectionary, and general stores. In addition, a small number of restaurants for tourists and special occasion celebrations serve a combination of local and international foods. Hamburgers and fried foods are available six days a week from Super Brown in the centre of town and two wood-fired bakeries produce white bread and donuts on weekdays. Super Brown store was extending its operations at the time of my visit, becoming an increasingly popular social venue, offering food, drink and a pleasant place to sit overlooking the main sports field. The prevalence and popularity of high salt, high sugar, and no or low nutritional value 'foods', such as chips, fizzy drinks, pies and fried foods is a concern to health workers and some parents and teachers on Atiu, as it is elsewhere in the Cook Islands and New Zealand, because of the prevalence of obesity, diabetes and cardiovascular disease in which they are implicated. This concern is supported by the school curriculum and by the public health outreach from the Ministry of Health.

I was not able to study the contributions made by individuals living overseas to their Atiu families, villages, churches or other groups. Money and consumer goods, airplane tickets and other costs are frequently borne by the wage-earners overseas. *Tere* parties (travelling cultural performance groups) are another means of raising funds.

Some medicinal herbs and barks were pointed out to me that could assist with preventing mosquito bites, reducing the irritation of bites, helping one recover from fish poisoning, or which had antiseptic properties. The properties of the *vai* ('liquid') of young coconuts were also celebrated and I saw little babies being fed this to drink in between breast feeds.



Figure 1.12: Crop of new pineapples at Ministry of Agriculture garden

School and health

The single school on Atiu, Enuamanu School, takes children from preschool until the final year of high school. The classrooms are set in a rough semicircle around spacious playing fields and assembly areas, and they back on to the bush (which furnished coconuts, as needed). The school has large water tanks and provides filtered water for drinking for the children and staff. While I was there most classes in the junior school were undertaking a unit on foods, each at their own level (Figure 1.13). They were learning about the three major food groups: protective, bodybuilding/repair, and energy foods. The emphasis was on finding which local foods fitted into these groups and exploring protective foods in some detail. Through music, art, language (both Maori and English) children were learning which local foods were protective, and which of the imported foods (e.g. carrots) were protective also. At the same time, they were being taught to value the food that was available locally from gardens rather than store-bought foods. Although the children sang along happily with these sentiments this did not necessarily translate into action when they were at the shop.

However, the school policy went beyond the classroom. Home economics classes took it in turns to provide a 'healthy lunch' consisting of drinking coconuts and plates of fruit in season, such as pawpaw, banana, starfruit, *uto* (the inside of a sprouting coconut) topped with grated coconut, small bundles of sugar cane, and a cooked item such as vegetable samosas, or pancakes (Figure 1.14). The fruit plates in particular were very popular with children. Items were priced between 50c and \$2 and their sale was overseen by students from the senior school. The locally grown items were donated and the proceeds went to special school purposes, such as a trip for the children. The school was proud of this programme in which children learned some useful skills, while finding that



Figure 1.13: Health related class at school



Figure 1.14: Making school lunches

tasty food was readily available, and also learning about service to others. But some criticisms of this practice circulated, wondering whether students who were preparing the same foods repeatedly were having a worthwhile educational experience in terms of the learning goals of the home economics curriculum.

A strong emphasis on physical education, especially in the form of team sports, was evident at school and in the community. Soccer was commonly played at school and boys and girls waiting on the sidelines for their turn on the field busily plaited various types of coconut leaf headbands and armbands, following a range of patterns which they eagerly learned from one another. Cook Islands dancing, drumming and singing was also popular and accompanied special occasions. In the community, Friday afternoons from 3pm until about 5:30 were devoted to soccer (Figure 1.15). On Atiu different sports have short seasons as there are not enough people for several codes to be played at once. Villages competed against one another, starting with the primary age children who often played in bare feet, and proceeding up to the young adults who wore their village colours and the full range of safety equipment including boots and shin pads. Family members watched from the sidelines picnicking or buying food from fund raising efforts or the local takeaway. Some of the men watched from the balcony of the new Super Brown store, from which they could purchase drinks.

Despite this emphasis on physical exercise, some children were driven to school, although they usually walked home. Motor scooters were a key form of transport and some of the older people pointed out that ‘in their day’ walking was the only option for getting to school and going to the gardens. Some children had chores to complete before school, which began at 8am, and many joined their parents or relatives in the plantations after school, which ended at 1.30 or 2pm, depending on the age of the child. From the stories that children happily told me about why they liked being in the plantations, they did not always have to work hard and could often spend time playing in the surrounding bush.



Figure 1.15: Friday afternoon sports after school

A Memorandum of Understanding (MOU) was signed between the Cook Islands Ministries of Health and Education in the early 2000s to create a platform for the policy of Healthy Food in Schools which both Ministries had supported. With changes in personnel at the top levels (i.e., Ministers and Secretaries) and cutting of strategic appointments that could support this policy, knowledge of the MOU and its implications were not universal. As part of this policy I heard from several sources that efforts had been made at Enuamanu School in recent years to ensure that the children brought only healthy food and drink to school, apart from on occasional ‘treat’ days. I was told that this had somewhat fallen by the wayside, but was about to be reinstated when school resumed after the July holidays. Reinvigoration of this policy was supported by the public health service on Atiu. However, it was anticipated that a good deal of discussion would be necessary to ensure that the policy would get strong support and compliance from parents and shop-keepers.

Health Promotion

Public Health had begun an initiative in 2009 with a community lunchtime walk (most people in paid employment have an hour off for lunch) which had been popular when it first started but numbers attending had dwindled away. The idea of having a range of different pursuits on offer for lunchtime activities to keep people interested, such as aerobics, was being mooted as a health initiative. More ambitious plans were afoot in the community to have an activities centre in the refurbished island community hall in the centre of the settlement where the five villages meet, just down the road from the hospital. This initiative was supported by public health and several residents I spoke to independently, who expressed the need to provide a place for young people, especially, to go, and it would offer a variety of activities. For example, the boxing that Dr Nelesone supervised at his place would be moved to the new location, aerobics and other exercise or dance classes would be possible, and if the money could be raised to purchase the equipment, the facility could offer gym workouts and weightlifting. There were people on the island qualified to supervise these activities, and ways and means to acquire the funds were being investigated. As part of this activities centre, a youth health clinic might be discreetly incorporated, relieving young people of the embarrassment of going to a place which was for solely for health advice and treatment, where they might be spotted and asked questions. Drama with a health promotion theme (broadly conceived), by and for young people, was also suggested as a possible activity. The prospects for movement on this initiative looked quite positive. A Project Manager at the National Council of Women, working with youth under the auspices of findings from the Global Fund for HIV AIDS, TB and Malaria, came for a brief visit to consult youth during my stay and among their other suggestions were recreational activities and sexual health counselling that such a centre could provide. It may be feasible to source funding to assist this initiative, as providing healthy activities for youth is considered part of prevention of STIs and HIV.

Changing food habits is never simple. There was considerable enthusiasm for making the school a junk food-free zone, although I and the visiting health team (see below) was told some young parents resist this. The benefit of such a ban would be that children are much less likely to pressure their parents to buy junk food for their school lunch if the other children do not have it. At present, although there is quality food on offer, many of the children bring chips, pies, fizzy drinks and so on. Under the 'health promoting schools' policy, parents, the school committee, teachers and students will work together on this issue.

On the way to and from school and in their villages, children and adults have access to shops that stock all kinds of food including junk food. This is a small community. The people who run the shops are sure to have children at school and may even be on the school committee. The approach to reduce the consumption of such foods would need to be focussed on working together and producing win-win outcomes. Food at school is only a small amount of the food that young people eat, although it is hoped that the messages and practices they learn there will be taken into their families and communities. Quality and quantity of meals eaten at home or elsewhere in the community is also an issue which is little discussed in public -- although it is discussed in private.

Livelihoods and work

It is difficult to clearly define unemployment or underemployment on Atiu, but there was widespread community concern about the employment prospects for youth or people wanting to

return and this was something that concerned some young folk. As noted above, it was thought that all families grew at least some of their own food, and youth were involved in this, but not as much or for as many hours per day as was the case in the past. Fishing remained an important and enjoyed activity.

The government service provided the majority of jobs. Some of these were positions requiring professional and technical training that would require young people to leave the island either for Rarotonga or further afield, such as NZ, Australia or Fiji, and would require scholarships or other funding. Of course, some young people looked forward to these opportunities – but families and the community as a whole felt their loss from the island and worried that they would not return. The jobs requiring tertiary education were in teaching, health, religious ministries, police, administration, engineering and mechanics, agriculture, environment and so on. The public service operated the island infrastructure: diesel-generated electricity, roads, water, waste disposal and so on; and where possible carried out repairs to equipment on the island. The Agriculture Office maintained a nursery (Figure 1.16), there were two policemen, a social welfare officer, the Cook islands bank, an environmental officer, along with the teachers, nurses, doctor, other health staff and various administrative staff, such as the school secretary and post office staff. The island administration was another source of employment with the Island Secretary and staff occupying the former residence of the Resident Agent, right at the centre of the island. Telecom, Radio, Air Raro, the small coffee industry and the half dozen stores provided some further employment, as did the restaurants, guest houses, tours, bike hire and other services for visitors. A few people made and sold arts and crafts incorporating both local and imported materials, including one man who did woodwork and turned out many small Tangaroa figures for the tourist trade. Visitors were almost always welcomed and farewelled with floral *'ei* (garlands) and also *'ei pupu* (shell). Sometimes these were made by those giving them, but some women made a little money by making and selling these *'ei*. An early morning market held on Fridays at the Areora meeting house porch, which sold cooked and raw food, also brought a little extra money into the family budget.

Safety at work was an issue raised with me by a person who had had extensive experience in the public service. In formal employment situations, as he described it, safety equipment was usually not provided, even basic items like steel capped boots or safety glasses. He observed, thinking about the different bosses that he had had, that *papa'a* bosses were much more vigilant about safety than Maori ones and usually ensured that the right safety gear was on hand. This person was keen to point out that this was only his observation and it might not be general. Of course, many people were self-employed in their plantations or other activities. There they used skills honed through many years of practice, such as hunting, climbing coconut trees, using their bush (or other) knives for all manner of things, from opening coconuts, cutting coconut fronds, or butchering animals. Even primary-school age children could handle bush knives. Nonetheless, falls and cuts did provide the hospital with some business. Bad falls on the razor-like makatea gave particularly nasty injuries, often requiring stitches. I did detect an ethos of risk-taking associated with local gendered norms of masculinity– although women were also exposed to risk, of course. This was no more apparent than on the roads, where locals and tourists alike could very easily run their motor bikes into loose gravel, wet clay, coconuts, large holes or even dogs or pigs having a quiet rest on the road, and find that shorts, jandals and baseball caps were no protection. Bike accidents were the commonest emergency at the hospital. Part of the valued *'way things are on Atiu'* was about not being too hung up on rules and regulations, and safety measures were sometimes seen as *'bureaucracy'* and hence avoided.



Figure 1.16: Ministry of Agriculture nursery

Social issues

'Domestic violence', particularly where a man would injure his wife or partner, had been a considerable problem in this community, but I was told by people who were in a position to know that this had greatly reduced after concerted efforts in the last few years. Legally, a first offender could be given just a warning. However, a hard line had been adopted by the police and the JPs (who hear the more minor cases on the island), backed up by community support, and after a couple of 'short sharp shocks' (i.e., gaol sentences or substantial fines), the message had gotten across quite quickly that this was not acceptable behaviour. Violence or other trouble after drinking was followed by a ban on the offender buying liquor for a year, and the *tumunu* also imposed sanctions.

Some people expressed concern about violence towards children and other forms of family violence, including neglect of vulnerable members. Education about parenting was frequently mentioned as a need in the community, especially with regard to more positive and effective parenting approaches.

There was very little property crime in the community—the policeman mentioned one case several months ago of someone breaking into a storeroom. There were some arguments over pigs, given that many pigs roamed freely (Figure 1.17).

The police spent the first couple of months of the year dealing with personal licences and registrations for the many motor bikes and other vehicles on the island. The terrain was acknowledged as challenging for both people and vehicles and trying to keep the vehicles in a roadworthy state probably helped keep people safe.



Figure 1.17: Atiuan Pig

A Public Health Team visit from Rarotonga

In May of 2010 a public health team from Rarotonga had visited Atiu. The request for the visit had come from Dr Nelesone who was particularly concerned about non-communicable diseases. However, as the report explains, while preparing for the visit, those involved learned that other health professionals were also planning to visit in order to do clinical and health promotion work in the areas of sexual and reproductive health. Therefore, a team of nine visited in early May for five days (Te Marae Ora/Cook Islands Ministry of Health 2010).

The composition and funding of the team is instructive for what it reveals about inter-island, inter-agency and international linkages. The Cook Islands Family Welfare Association, an important local NGO which is affiliated with the International Planned Parenthood Federation, sent its very experienced Sexual and Reproductive Health Nurse and its Administrator and funded another Senior Public Health Nurse from the Ministry as well as the Ministry's Director of Public Health. The WHO funded three other Ministry people, the sole Nutritionist and NCD Coordinator, the Tobacco Issues Health Promoter and the Men's Health Coordinator, while the Global Fund and UNFPA each funded one person from the Ministry: the Adolescent Health Coordinator and the HIV/STI Officer.

The report was sent back to Atiu and I accessed it there. Well attended community workshops were held including general ones which welcomed all community members, and others specifically for men, women, young people in school and out of school, and teachers. Five of the tumunu (bush beer 'schools') were visited also. The workshops and visits were reported as being well received, as were a couple of spontaneous aerobics sessions conducted near the Super Brown

store. The workshops covered a large number of topics – too many in the time available according to the evaluations. For the women there were breast examinations and pap smears. The school children were weighed and measured and their health was checked. Their lunch boxes were checked on one day and were found to contain a good deal of junk food and fizzy drinks.

As noted above, concerns with obesity and non-communicable diseases are widespread across the Cook Islands, and Atiu is no different. The heights and weights of the 142 school children were assessed by the team using WHO guidelines. Of these 101 (71%) were a healthy weight, 15 (11%) were overweight, 24 (17%) were described as ‘at risk of overweight’ (i.e., in the area close to the healthy/overweight border), and two children (1%) were underweight. The most common problems were dental hygiene and caries, nits and lice, although a range of other health problems were detected. Some of the children were referred to the hospital for treatment, e.g. for sores, but others would be seen by visiting specialists, e.g. for eye problems. Teachers and medical staff I spoke with were reasonably happy with these results, especially concerning obesity, while agreeing that there was still work to be done so that all children would maintain healthy weight.

Other issues identified as important in the Report were tobacco use, problems around drinking, sexual health, relationships and contraception, especially for young people. In this regard, because everyone knows everyone and the hospital is by no means a private place, young people expressed fears of people finding out why they were visiting the doctor or nurse. Men’s health in general was also highlighted. A life expectancy of only 65 years for Atiu men was cited in this report, and discussed in community meetings and on Radio Atiu.

As a result of the team’s visit an action plan and table of responsibilities between Atiu Health, Enuamanu school and the Health Promotion Unit in Rarotonga had been drawn up to be implemented in the new budget year, beginning July 1 2010. As part of this plan, the concept of Enuamanu as a “health promoting school” was to be introduced and an action plan developed, with funding to be sought from WHO. New nutrition and sexuality resources for the school were part of this plan, and several teachers were introduced to the nutrition resource during the team’s visit.

Health Services

The clinical health service on Atiu has a doctor, three registered nurses (two of whom are trained midwives, one of these a registered Nurse Practitioner), an enrolled nurse, and a dental therapist. The hospital has beds for admitted patients, clinics and assessment space for other patients, along with a waiting area, a bathroom and staff rooms and a kitchen. It also houses the office of the health inspectors and the public health clinic. The dental clinic is located on the hospital grounds, as well as a small house not currently used for anything. A large water tank and an emergency generator, plus laundry facilities are also in evidence. While I was there, the number of in-patients varied from none to three. Each patient has a family member come to assist at specific times of the day, and family members visit freely (Figure 1.18).



Figure 1.18: Clinic hours at the hospital

The policy in the Cook Islands is for women who are pregnant to travel to Rarotonga a month before they are due to deliver and give birth there. In Atiu, with a doctor and a two nurses with specialist qualifications in midwifery, and one other experienced nurse, there is the possibility for low-risk births to take place on the island, with much less disruption to the family. However, I was told that only a couple of deliveries had taken place there in recent times.

At the time of my visit, the hospital was about to be rebuilt to improve facilities for staff and patients. Greater privacy and better toilet and washing facilities were two of the desired outcomes, and the renovations were eagerly anticipated, despite the disruption that they would cause. I also heard both in Atiu and in Rarotonga complaints that the Outer Islands are neglected or 'forgotten' in comparison to the expenditure on health services in Rarotonga. For example, very basic equipment such as blood pressure measures, or even a steriliser might be unavailable for quite long periods of time when they had to be sent for repairs. There did not seem to be a 'bank' of equipment that could be sent from Rarotonga to the Outer Islands while other equipment was out of operation. While I was there, the internet was upgraded to a wireless system making it much more convenient and faster for the health staff.

The hospital is conveniently situated right in the middle of the villages, next to the doctor's residence. It operates the Cook Islands-wide Medtech system for patient notes. This was proving to be relatively reliable; Dr Nelesone estimated that there were perhaps only up to five days a month when it was not working properly (and perhaps fewer with the faster wireless connection).

Clinics are held at the hospital very regularly, for the various types of patients such as babies and children or people with chronic diseases or health challenges. Most mornings, people turn up in the breeze-way waiting area for dressings, medications and consultations of various sorts with both doctor and nurses. Dr Nelesone explained that the biggest group is patients with NCDs, especially

diabetes and hypertension. This group of 101 patients is divided into four and each person attends monthly one of the clinics which are held on three mornings each week. If they do not attend, a public health nurse follows up by contacting the patient. As well as getting a careful health check, the patient's medication from the month before is counted to see if it is being taken consistently, and the exact amount required of new medication is issued, along with counselling about medication and issues relating to the illness, e.g. smoking. Generally both diabetes and hypertension are quite well controlled and patients are on a standardised treatment plan, adapted for each person. Twenty-six people had both diabetes and hypertension, 58 had hypertension alone, and 17 diabetes alone. Only five people had to be on insulin.

Nurses visit the school regularly both for health promotion and to carry out procedures needed by the children. For example, one day they took new toothbrushes for the regular tooth brushing. Vaccinations may be done at the school as well. Both the doctor and nurses support health education and healthy eating at the schools and were scheduled to do more of this work from July on as noted above.

Visiting specialists

Funded mainly by NZAID, medical specialists from New Zealand are frequent visitors to Rarotonga, averaging at least one visit a month. Some of the specialists visit the outer islands, such as Atiu, for screening of patients and sometimes for treatment. Patients are also sent to Rarotonga to be seen there, sometimes after screening on an outer island. The precise arrangements depend on the number of likely patients in any one place, the type of equipment to be used, and the patients' health status, among other things. While some specialists come at least once a year or more often, others come more rarely. For example a neurologist was expected – an example of a rarer speciality, whereas specialists in NCDs come more often. These visits were opportunities for exchange as the visitors learned more about the situations in which people were being cared for and the solutions that had developed. At the same time, the Cook Islands staff were refreshed and supported by the visitors. Students doing internships were also very welcome. I met on Atiu a German family with three children. It turned out that the father had been an intern in Rarotonga 20 years earlier and had always wanted to bring his family back for a visit to the place where he had had such an enjoyable experience, demonstrating that these links can be long-lasting.

Referrals and health services 'on the move'

Referrals to Rarotonga, whether to doctors and services at Rarotonga hospital or to the visiting specialists, are negotiated by Dr Nelesone directly with the receiving doctor. While patient notes are available electronically on Medtech, emails and phone calls with the receiving doctor are also the norm and a standard referral form is completed and air transport booked. Air Raro, which normally flies four days a week to and from Atiu, will create space for seriously ill patients, even if a plane is fully booked, by asking other travellers to defer their flights. Referred patients have their airfare paid by the MoH and children or disabled people also may have a parent or caregiver accompany them whose fare is paid. Only where an emergency flight has to be arranged does the Ministry of Health in Rarotonga need to be involved. There has not been such a need in the two years that Dr Nelesone has been in Atiu (of course, for northern islands where there is only one scheduled flight a fortnight, or none, such airlifts would be more necessary.) I discussed with Dr

Nelesone any issues around referral, such as achieving a good balance around timing, judging the seriousness of the illness/injury and so on, as well as the response of receiving doctors. However, he noted that less experienced doctors or nurses might experience more difficulties, and referrals from some islands were extremely expensive. I heard from various sources that there had been some disquiet in the Cook Islands health service about some very expensive emergency medical evacuations from the northern group that may have been not strictly necessary, so this is a delicate point.

In some cases it is the need for X-ray or sonography, neither of which were available on Atiu, that determines a referral. Blood and other specimens can be sent by plane and the results are quickly available on Medtech, so those tests are not usually cause for referral. I learned of two recent cases of puzzling symptoms in children and young people where imaging techniques were essential in getting an accurate diagnosis. In each case the young patient's life was saved, or at least very serious consequences averted, by the timely referral occasioned because symptoms 'didn't add up'. These stories were well known in the community and I heard them from several sources, usually as part of people telling me that they were happy with their health services in Atiu at present.

On discharge from hospital in Rarotonga patients stay with family there or make other arrangements at their own expense so that they can attend any outpatients' clinics until they are given their final check up and discharge from care in Rarotonga. Electronic notes and reports generated from Rarotonga are available to the relevant outer island doctors. While I was visiting Atiu there was an unusual discharge of a terminally ill patient back to Atiu hospital, but this was the first time that this had happened in the memory of anyone there. In cases that cannot be handled in Rarotonga, some patients are referred to New Zealand. Again, if they are medical referrals their fares and hospital costs are covered under an agreement between the Cook Islands and New Zealand. If patients travel to Rarotonga or New Zealand for medical treatment without a referral they have to pay their own fares.

It is possible for people to visit health services in Rarotonga if they are there for other reasons, or to pay their own fares from Atiu. However, I did not hear of any example of the latter in recent years, although this does not mean that they did not occur. Similarly, Cook Islands people may self-refer to New Zealand at their own expense, but once in New Zealand they can use the health services like any other citizen. With the PHO system and the need to enrol in a practice, there can be up to three months delay from enrolment to receive subsidized primary health care, but the care is not restricted.

Many people on various forms of treatment travel for a range of reasons and may stay away for long periods (sometimes unanticipated), during which time they are out of touch with local health services. When they return they may not bring any medical notes with them and they may have been put on medications which are not available in the Cook Islands. Dr Nelesone found that this did create a range of difficulties for him in caring for his patients with chronic complaints such as NCDs, asthma and so on. It would be much simpler if patients could be kept on the locally available medications. This may be an area where patients can be educated to take care of their notes in the same way that they take care of their passports, and given small cards listing their medications and perhaps other medications available in the Cooks for their health problems, which could be given to the doctors treating them overseas.

Whenever possible I asked people whom I had met on Atiu how they managed their health when they were off the island, especially outside the Cook Islands, and asked about medical referrals, also. One man said he told himself he "was not allowed to get sick" when he was in

Australia or New Zealand, but also described how he always took his asthma medication with him. For others it was not a problem as they and their families were healthy and did not need services while away, or did not have problems with access to care. I discussed in some detail with two people who had recently been or were currently involved in arrangements for medical referrals either to regular staff at Rarotonga hospital or to visiting specialists. In each case the referrals had been arranged but with the different layers of bureaucracy involved; in both cases, it was time consuming, took considerable efforts to arrange and, of course, with visits to Rarotonga, took some flexibility with family and friends stepping in, in both places. From the doctor's point of view too, if the specialist needed was one of the ones who visit more rarely, such a visit has to be requested and sometimes argued for well in advance.

Pharmaceuticals and medical equipment

The Cook Islands participates in the bulk buying of medications organised by Pacific nations, buying generics wherever possible. This delivers a wider range of medications at the lowest possible costs. A database system for tracking supplies of pharmaceuticals and a standard range of small medical items such as bandages was set up a year or two ago by a consultant and it is still operating. Each month the doctor in an outer island hospital counts the medications and other items used and the expiry dates, along with any changes needed, and sends this information, as well as medicines that would otherwise expire before being used, to the MoH in Rarotonga. Within a few days the replacements arrive in Atiu. Dr Nelesone estimated that this aspect of his work takes about one afternoon a month and was well worth the effort because it conserved resources and prevented supplies from running out.

Disabilities

I spent some time with the family of a child with severe disabilities and with one of the two staff (the other was on leave) of the (Disabilities) Centre who collect a few adults with disabilities in their van to bring them to the Centre for crafts and company. The staff also visit several housebound people to assist with exercise. I learned that there was severe stigma around disabilities and a tendency to hide disabled people, including children, away, yet that with persistence, some of the social stigma could be eroded and disabled family members permitted to live more enriching lives. Certainly for the family with whom I spent time, having 12 hours a week of one-on-one care for their child had helped his developmental progress and alleviated some of the family's stress. Funding for caregivers was provided by the Ministry of Education or Social Welfare (depending on the case), but access to it was not necessarily easy. Access to specialists such as physiotherapists, speech/language therapists, eye specialists and neurologists was possible but took a long time and persistence by parents and local welfare and health staff to arrange.

The Centre was tucked behind one of the fine kitchen gardens, a little way from the centre of the villages. It was housed in an ordinary family home, lent by a local family who did not currently have need for it. It did not seem to be well known in the community. There was some enthusiasm to move it to the empty building beside the hospital where it would be more central and the clients would have easier access to clinics. However this building had apparently been gifted as an old persons' home, and negotiations to change it to a more general day centre were very delicate.

The Health Inspectors and Tutaka

One of the two health inspectors retired during my stay. I spoke with both men at some length over several occasions and benefitted from their knowledge of the villages, the state of housing, health hazards and so on. They get this knowledge through their house-to-house inspections which they do both in conjunction with the *tutaka* (health inspections), held every four months, and also independently as follow up. Tutaka are an institution in the Cook Islands. The Inspectors explained that there is a Tutaka Committee to organise and to carry out the inspections. As well as the health inspectors, they are usually accompanied by nurses, a police person, the environmental officer and sometimes the mayor. The nurses check on the cleanliness of the kitchen or cookhouse, and bathroom, will check the sleeping arrangements and will check the babies, old people and any people known to have disabilities. The fabric of the house is examined, inside and out, along with the yard. In the yard, the Committee notes that it is mowed the required distance, that it is tidy, that animals like pigs are fenced, and that the dogs do not run at people, although they do not need to be fenced. Each house gets a list of things that need to be attended to, but there are no prizes for houses and yards that are perfect.

These inspections keep mosquito levels around the houses low, which is important for diseases like dengue and filariasis. I was told that the last person with filariasis had died shortly before I arrived, but people still spoke of taking tablets to guard against it. However, there had been no mass administration of drugs for filariasis for the last two years. There is no dengue on Atiu, but the mosquito carrier is present. Inspection of sleeping arrangements is relevant to preventing the spread of respiratory diseases such as TB, along with flu. There has been no TB on Atiu since the 1980s. Formerly, typhoid was an issue but it is no longer a threat thanks to improved sanitation.

Water is an issue of concern for this island: both safety for drinking and household use and supply for all purposes. Despite the numbers of large community tanks (Figure 1.19), as well as household tanks, water supplies have to be conserved when there is little rain. At worst they run out. The tanks and pipes can develop leaks—this happened in the recent drought when ‘reserve’ tanks were revealed to be nearly empty because of undetected leaks. Droughts, coupled with insufficient storage, which in turn may be limited by lack of funds to buy tanks, put limits on the amount of food that can be grown. Water is piped into the villages, and has been for decades, but some people like to collect their drinking water from the large tanks with filters.

Both septic tanks and long-drops are in use for toilet waste, and the health inspectors noted that more and more septic tanks are being put in. Rubbish is collected regularly and taken to a landfill well away from where people live. Household scraps usually find their way into pig food or dog or chicken food. Rubbish from clearing yards, coconut husks, and dead foliage are regularly burned in open yard fires, so that the smell of bonfire smoke is part of the environment.

Food safety is part of the responsibility of the health inspectors. In the past this had been a major concern but now it is not such an issue. Similarly, the inspector who had been in his job since the 1980s said that initially he had done a lot of work at the school on various aspects of hygiene, but the school was now in a good state and the inspectors now only visit when there is a problem. The public health nurses now do most of the work in the school.



Figure 1.19: Water tanks

The health inspectors carry out a house-to-house census of the villages early each year. In their last census they also asked each adult about smoking and drinking. While the answers may not be entirely reliable, when one remembers that there are only 511 people on the island and all are known to the health inspectors, one might surmise that the answers would be more reliable than in some other circumstances. On the other hand, perhaps confessing to smoking or drinking might be considered embarrassing to some participants. The summary figures for smoking and drinking by people 15 and over are below. The numbers of men smoking is a concern, as is the fact that one-fifth of women between 20 and 39 smoke. It seems unlikely that no young women drink or smoke and the meaning of both of these results probably need some examination, as only habitual drinkers or smokers may so classify themselves.

Table 1.2. Smoking and drinking as reported to health inspectors, 2010

Age	Smoker		Drinker		Numbers in age groups		% Smokers		% Drinkers		Total
	M	F	M	F	M	F	M	F	M	F	
15-19	3	0	2	0	17	17	17.6	0.0	11.8	0.0	34
20-39	12	10	21	10	42	48	28.6	20.8	50.0	20.8	100
40-59	31	5	33	8	57	63	54.4	10.4	57.9	12.7	128
60+	9	3	10	4	42	45	21.4	6.3	23.8	8.9	91
	55	18	66	22	158	173					353.0

Tumunu

I heard about tumunu from many sources and visited one myself as the end point of a small tour to the famous cave of Anatakitaki. Tumunu are described in the guide books also. I was told that there were six on the island, that some were better than others, that to visit a tumunu one must be an official member or to be brought by a member, and also that any man could have his own tumunu. A guest could not pay but should bring a contribution or leave a small gift of money. The policeman noted that because tumunu do not sell alcohol, they are not under the 'Sale of Liquor Act'.

Tumunu are located in the bush, usually a little off a road or track, but not necessarily hidden from view. By chance I saw four of them while exploring the island. Those buildings consisted of a small shed in which the beer is brewed and stored, a larger roof of corrugated iron or kikau or some combination and stools or benches under it. There may be electric light. These days, the beer is brewed in a plastic barrel rather than in the wooden tree trunk after which the institution is named. The beer is served in a small coconut shell by the appointed leader, and everyone drinks from the same shell in turn. Tumunu are men's social and drinking groups and are often accompanied by music which may be played by the members or may be recorded. The beer brews for a week and is made from Maltexo, water, sugar, hops and flavoured with orange. It tasted a bit like a margarita. It is served by the Leader who also keeps an eye on those attending. Women are not prohibited, but I was told that local women tend not to want to come. Although I did not see this myself, I was told that any person who makes a nuisance of himself while drinking, or gets into strife, especially violence, afterwards, is banned from the tumunu, initially for a month. The tumunu involves drinking rounds of the brew with the timing controlled by the leader, talking, a prayer, usually some organised discussion of specific agreed-on topics, and sometimes more general talking, joking and music. In the more ceremonial parts there is an order of precedence, not unlike kava ceremonies in other parts of Polynesia. The history books suggest that when kava was banned by the missionaries, the tumunu came to replace the kava circle. As far as I am aware, no food is served.

Although the benefits of this male socialising and discussion are widely recognised, and men enjoy them, tumunu are also criticised or worried about, including by men. These concerns are detailed here. They are on virtually every day and while originally men would go after work in the late afternoon, nowadays, I was told, some people, including quite young men, go to the tumunu and stay all day and through the evening, not going to the plantations at all. One man pointed out that even attending for a few hours nearly every night is a lot of time away from the family, placing burdens on the women in the family and depriving children of their father's help, e.g. with homework and other skills, and the family of his companionship. He suggested a couple of nights a week would be fine for a couple of hours. The drinking of alcohol itself can be a problem for some, although this was not stressed as the main issue. Rather it was that the beer was highly calorific and was adding to the burden of obesity and diabetes. This seems highly likely given the sugar-loaded ingredients and the short time for brewing. In addition, this is a site of regular, heavy smoking, which was noted as a big problem for men. While the village meeting houses and other public buildings are non-smoking areas, these little 'pubs' (as I heard them called) in the bush are most decidedly not.

Some final thoughts

In this section I reflect on the gaps and limitations in this preliminary report. The major gaps that I see include a lack of interviews with the priests, ministers and pastors; the need for more formal interviews with the nurses; some more discussion with teachers; the social welfare officer and possibly other officials; and many more interviews and opportunities for participation with families and individuals in the community. In addition, repeated participation / observations of activities that I saw only once, plus participation in occasional events such as youth consultation, or the processes towards health-promoting schools, would give greater depth and substance to the report.

These gaps and limitations are mainly to do with the time I had available. However, my low level of language ability was also a problem (although that too would be somewhat overcome with more time). I did not feel that my age or gender was a particular issue. For a longer stay it would be much better to rent a house – there are many vacant ones in good repair—as that would lead to more everyday kinds of interactions with neighbours. I would like the opportunity to follow up on this preliminary visit.

Because this is such a small study in a small community I have been unable to fully incorporate some very telling case studies as it would be impossible to maintain anonymity. However, these may be able to be of use in the larger study.

2.0 The 2011 Research Visit, August 25 –September 8

Julie Park and Judith Littleton

We arrived in Atiu for a second research period on Wednesday 25th August 2011, after a few days in Rarotonga where we had visited relevant ministries, the Prime Minister's office and a number of friends. At the Ministry of Health in Rarotonga we had met with, among others, Minister Nandi Glassie who is also a MP for Atiu and the Minister of Agriculture. He was flying to Atiu with Mrs Glassie on the same flight as us, and he invited us to attend the welcome lunch and meetings he was going to hold on his arrival, as his guests. We also travelled with some other people we knew on the 45 minute flight, including the Chair of the School Board. Dr Nelesone and The Island Secretary, Mr Ina Mokoroa, had been advised of our visit by email from the Ministry of Health, as was the correct protocol. We had been in contact with Dr Nelesone on a range of matters since Julie's last visit, and had sent a brief report on that visit to the relevant officials, as well as a longer one for discussion to Dr Nelesone. We had also been in touch with Mr Bazza Ross, a teacher at Enuamano School, who provided us with a great deal of good advice and had arranged our accommodation.

Julie was very happy to be back in Atiu not much more than a year since her first visit, and Judith took in the warmth, the people and the island. It was her first visit. The airport was crowded and flower 'ei (garlands) were much in evidence to our eyes and noses as warm greetings were exchanged. Below, we give an illustrated overview of our first day.

Dr Nelesone met the plane to pick us up along with some hospital supplies and took us to the meeting at the Administration Centre where Mr and Mrs Glassie, a Ministry of Agriculture official, the Island Secretary, the Queen's Representative, one of the Atiu Ariki (high chiefs), the Deputy Mayor (as the Mayor was away), local council members, and some elders were assembled. After the Deputy Mayor opened the proceedings, Mr Glassie spoke briefly, apologising for having to return to Rarotonga very shortly, as Parliament would be sitting that night at short notice. He introduced us as well as another visitor who was writing a report on water and water storage for the Asian Development Bank. Mr Glassie briefly mentioned his plans for agricultural development and promised to return in a few days to conduct the meeting that had been planned. After grace, we were all invited to help ourselves to the bounteous lunch prepared by the wives of Council members and the Administration staff.

After lunch everyone dispersed and Dr Nelesone showed us the 'new' (completely rebuilt) hospital (Figure 2.1). It was conveniently laid out, with better facilities and walls which would be easier to keep clean. The Public Health Clinic and Doctor's rooms opened onto a cool covered outdoor area for people to wait, where there were notices pinned up. The Doctor's room also opened into the emergency room. The pharmacy had been relocated and offered a convenient window in a covered area where people could collect their prescriptions. The hospital ward had new easy-to-operate beds and a cot (Figure 2.2); accessible, hygienic bathrooms (Figure 2.3); and a room for nurses to sleep over. It was just awaiting the completion of the curtain rails. The emergency room was private and refurbished and had outside doors which would easily admit a wheelchair or stretcher and to which a small truck would have easy access. At the back of the building was a lockable breezeway which provided a place for staff and family attending to patients to eat and take their breaks, and off this area was a kitchen and the Health Inspector's office. This area also was used for meetings and in-service training, and for the morning prayer. A washing machine and places

to store cleaning equipment completed the tidy complex. Across the lawn or path were the refurbished Disability Centre (Figure 2.4), in what had been an empty building, and the Dental Rooms. We enjoyed talking to the staff on duty and learned that there was one inpatient at the time, a young girl, meaning that the hospital needed to be staffed at night.

We would be renting a house just up the road from the hospital in Ngatiarua Village. While it was being readied we took a walk around three of the five villages, noticing the many empty houses. Later, we learned from the health staff that there were 79 empty houses and the population had dropped from 511 the year before to 448 in 2011 at the time of the annual census in February-March. Even on our first day, we found as we talked to people that this large decrease was causing a great deal of worry to many people as it was threatening the viability of key services—Mr Teipo, the Principal, told us that the school roll had approximately halved from 300 in 1996—as well as putting strain on the remaining residents who had to care not only for elders and the young, but also the abandoned plantations, the empty houses and their surrounding land. A community garden was being planted in our village, and there were a few individual gardens in Mapumai and Teenui. The effects of the drought were obvious.



Figure 2.1: The hospital with dental clinic on right and disability unit behind



Figure 2.2: New ward facilities at the hospital



Figure 2.3: Bathroom in newly refurbished hospital



Figure 2.4: Disability centre

We noticed that the large CICC church had been refurbished and looked splendid. We learned that the hall next to the administration building was being used for youth activities, as had been hoped a year earlier. At present a boxing ring had been donated, and young men were being trained, with the possibility of extending such training to young women in the future. Gym equipment was also on its way to the facility and would be placed in the hall for all to use. Volleyball was the sport being played during the time of our visit, and several teams were in action on the playing field next to the Super Brown store (Figure 2.5). We noted a couple of very young women with babies, watching the volleyball. They could, of course, have been older sisters, cousins or aunts giving the babies' mothers or grandmothers some time out, but we found they were indeed the mothers and that the completion or furthering of their education would now be a challenge. From our discussion with these young women overlooking the volleyball match we learned that sending children away to complete their schooling or to begin tertiary education was a perilous path: a pregnancy often interrupted young women's education, and drinking and car accidents were a risk for both sexes.

As we had been warned, because the boat was late, there was very little food available in the stores. Different stores had different availability. For example, we could get flour in one store and UHT milk in another. Milk powder was available everywhere and no rice was to be seen. Shortages did not mean the prices were hiked but if items had to be air freighted in then the price reflected that – bread was \$8 or \$10 a loaf, for example; a carton of eggs, \$10. Without flour, the local bakers could not produce bread. One great comfort to us was that excellent coffee is a local product.



Figure 2.5: Sport behind Super Brown in the afternoons

Later in the day Dr Nelesone took us to the social function at the school which was in honour of the Glassies, although Mr Glassie had returned to Rarotonga by this time. The Glassies had supported the Year 12 students who had recently travelled to Rarotonga to attend a Careers Expo, and they had given bouquets to the eight Atiu graduates at the recent University of the South Pacific graduation ceremony. The social occasion was organized as a way to recognise and show appreciation for this support. The students, their parents and school staff brought in quantities of fine food, with local favourites much in evidence. Mrs Glassie, who is Atiuan like her husband, spoke on behalf of herself and her husband. We were not the only visitors and had the opportunity to speak informally with several of the guests and school staff.

On returning home, we found that the lady through whom we were renting our house had kindly brought us supplies to get us started. A school administrator, she had been down the land feeding the family's pigs and dogs. They leave the dogs in the plantation "to look after the taro". And so to our notes.

As we discussed and typed up our experiences of the day we realised that we had been apprised of many important things. These would subsequently resurface as we talked to different people and made our way around the island in the next two weeks. These topics included depopulation, shipping delays causing shortage of food and other essentials, drought affecting the availability of water and some fruit and vegetables, efforts to promote health and to provide meaningful, enjoyable and health-promoting activities, especially for young people, challenges for school-leavers, plans for creating jobs and resources on Atiu, the improved health and disability facilities, and inter-relationships between national and local government and island organisations. Our experience of hospitality and of the centrality of food to social gatherings intimated to us the intricacies of reciprocity in which we, and everyone else, were being immersed.

Overview of the interviews with community participants

The community participants were invited by Dr Nelesone to meet with us. Some of those who agreed were brought to our door by the doctor, or a nurse, or the health inspector, using the hospital van. Others could walk or come by bike or car. We visited two participants in their homes, at their invitation.

In our home, which was an ordinary house with two bedrooms, a front room, kitchen and bathroom, with a covered area at the back, we had our interviews in the front room and always offered refreshments. However, apart from glasses of water, they were rarely touched. In two cases, small children came along too and cuddled up to their parent or grandparent on the sofa, alternately snoozing or wriggling. In fact the children were the only ones who accepted a biscuit.

Most interviews were an hour to an hour and a half long, but one was shorter in order to fit into a lunch break. Both of us took part in each interview. All these interviews were tape recorded on a small digital recorder, with permission, and transcribed immediately. We also made research notes on the interviews immediately afterwards.

Dr Nelesone thoroughly understood our study aims and he invited a cross-section of adults representing a range of participants by age, education, village where they lived, and whether they had lived mainly in Atiu or elsewhere during their lives to date. Our participants had experienced a range of health situations. We did not know anything about each person whom we greeted at our door, with a couple of exceptions where we had met the participant or a close family member already. As we learned about each person, we appreciated the thought that Dr Nelesone had put in, because we had many different personal stories and many different perspectives. We by no means reached 'saturation' as a result of our interviews with these 12 participants. Further interviews would have produced more information or lead us to confirm or question information that we already had. However, this is what we could manage in the time available.

These interviews with community people also provided some information about services and organisations which the 'key person interviews' were mainly designed to provide, just as those interviews also revealed a number of personal stories. Of course, key persons were community members also, just as our 'community' interviewees sometimes held or had held key positions. Therefore there is no clear divide between the two sets of interviews.

During our time on the island we interviewed staff from the Ministry of Health and other key people (such as the Social Welfare and Probation Officers). These interviews were not taped, but we both took notes and typed them up together on the same day. Some of our questions and discussion topics arose from our frequent visits to the hospital in particular during our stay and also from Julie's previous fieldtrip. The majority of such interviews were held in people's place of work – for instance, we talked to Muru, the public health nurse and Te Kura, the enrolled nurse, in the newly refurbished ward of the hospital at a time when things were quiet. One interview was at our house and another, with Seipua, Staff Nurse, under the shade of a palm tree.

Our aim in these interviews was to obtain a sense of how the health system (and other systems) was organised and practised on the island, and what people involved in delivery of services saw as major benefits, barriers or opportunities for their work and for the island. The interviews are supported by our fieldnotes which include many casual conversations with the same people who provided key person interviews. Everyone signed consent forms for these interviews to go ahead and we gave small donations at the end of the interviews.

The initial few minutes of each interview was spent in greetings, explanation of our study, reading over the information sheet and consent forms and completing the paperwork, including signing the consent form, discussing whether each person wanted a copy of their transcript and summary report and how to get that to them. Everyone was happy to sign consent and wanted copies of their transcripts and the report. We worked out that the best way to get these to the participants was to send them in sealed envelopes in a parcel addressed to Dr Nelesone and they could collect them on their visits to the clinics. This was duly done. Although we knew that everyone who came had already agreed to talk with us, we did not assume that we had consent for the interview and had anticipated that there might be some sensitivity about signing consent. We had been prepared to record oral consent. This proved to be unnecessary. In fact, most people seemed to rather appreciate the formality and seriousness that this paperwork conveyed. Our interviews followed a general life story format, with some specific questions about health, health services, and community health concerns.

Community interview participants

We conducted 11 interviews in total. One of our interviews was with two people who were friends. Dr Nelesone had asked one of this pair and he invited a friend to contribute. We interviewed a married couple, each in a separate interview. Many of the other interviewees were related in various ways, but that was not unusual for Atiu where, we were told on many occasions, most people are related some way or another.

All of the people we interviewed were Atiuans, not always because they had been born there, but because they had recognised claims to land there through one or both of their parents. Most had been born on Atiu or had come from Rarotonga to live there as young children, accompanying a parent or grandparent. All of them had spent at least brief periods on other islands in the Cook Islands, particularly Rarotonga, but a few had visited other islands in the southern and northern groups. All of them had visited New Zealand, four had visited Australia, one had visited many other Pacific islands in the course of work, while another had travelled extensively throughout the world as a young person. These visits were mainly for family reasons such as birthdays, births, illnesses and deaths, or through *tere pati* tours, but a few people had travelled for work or for their voluntary organisations.

Six people had spent several years either during early childhood, while attending high school or further training, or working, in Rarotonga. Three (including one who had spent several years in Rarotonga) lived for many years in New Zealand, and one, who had also lived in Rarotonga, had spent many years living in Australia. Most of their many children and grandchildren were in Australia or New Zealand, some were in Rarotonga, and just a few were in Atiu. What was rather surprising was how few of the children or grandchildren lived further afield than Australia or New Zealand. In New Zealand, most were in Auckland, but some were further south, including in Dunedin. In Australia, most of the descendants lived in the east coast areas.

One of the social concerns on the island was the loss of the population, which threatened viability of services. Several family stories show the personal and family side of this statistical pattern. For example, one woman in her early 70s came from family of 12 brothers and sisters. Six were alive at the time of our interview, three having died as children, but none were in Atiu. One was in Australia and the rest were in the Auckland area. She herself had left Atiu for Auckland as a young woman and had returned to live there about 20 years earlier, but with many trips back to Auckland. Her four children lived in Auckland as did her grandchildren. She and her husband had

brought up two of the grandchildren in Atiu, but both had gone back to Auckland for work and further education. She has other relatives living in Atiu, and her Auckland relatives come to Atiu for big family occasions, if they can afford it.

Not all the family migration stories were quite as extreme as this in terms of a whole sibling set leaving Atiu. For example, another woman in her early forties had two sisters living in Atiu but all of her seven brothers were in Australia or New Zealand. She had lived in Atiu all her life, although she had visited New Zealand a number of times. One adult child was in Auckland, another in Rarotonga. One son was being brought up by her sister-in-law and brother in Australia, one son was with her and going to school in Atiu and she was looking after her pre-school granddaughter from Auckland.

We were told of instances of children or grandchildren who had been born and brought up in New Zealand or Australia 'returning' to the Cook Islands as adults. In our small group of interviewees, three people who had lived elsewhere for all or most of their lives had established households on Atiu: one in his young middle years and two as active retired persons. The movement therefore is by no means all one way, but the net result is a decreasing population and, especially, reduced numbers of working-age adults.

For some people migration happened more by circumstance than design. For example, one young woman went with a couple with several young children on the boat to Auckland around 1960. It was supposed to be a holiday but they 'left [her] behind' to work when they returned to the Cooks. She found work with a Cook Island friend, met her husband, had her four children and stayed on in Auckland for many years. Her husband was employed the whole time but she stopped work after she had her children. Another had her fare paid by her sister who was married and lived in Auckland. She went initially because her younger sister was very ill in hospital with cancer. She described the trip as a big adventure, flying there by herself on the "flying boat". She stayed on in Auckland and got a job sewing, became very skilled and was promoted to supervisor. She married and had her boys in Auckland and did not return to Atiu until the last of them had grown up.

Topics and Issues

In the following sections we have grouped the information gleaned from our community interviews, our interviews with key persons and our informal interactions, observations and experience in Atiu.

Health

The personal health problems that people told us about were those that are most prevalent on Atiu. These are hypertension, diabetes, gout and asthma, eye problems and various accidents, such as an infected cut, or old sports injuries, which were giving pain as a person aged. Several people mentioned that 'the doctor told me I should lose X kilos' where X might be somewhere between five and 20. One woman, who had had diabetes in pregnancy and as an older adult, explained that diabetes was only on her side of the family, not her husband's, and that her mother had had it too.

While headaches and dizziness had often led people to the doctor and to a diagnosis of hypertension or diabetes, and pain to a diagnosis of gout, quite often these diagnoses resulted from visits for something else. For example, one woman had an odd reaction to a wasp sting and that led to her diabetes diagnoses. We also found that some people put up with headaches for weeks or

months before going to the doctor. The problem would often be discussed with family and friends too.

When we asked people what were the main health problems on the island, the list was very much the same with the first four illnesses (hypertension, diabetes, gout and asthma) being repeatedly mentioned although cancer and fish poisoning were also mentioned. Because a Chlamydia programme had just been completed, several people mentioned 'this new disease that we just had the pills for'. We did not hear anyone saying "sexually transmitted infection" except for health staff. One of our interviewees observed that fish poisoning had been quite common on Atiu for a time, but was rarer now. He noted that it seemed to have "spread to Rarotonga" now.

The health staff also identified non-communicable diseases (NCDs), particularly cardiovascular disease, along with diabetes, as the main problems that they face. However, they have been working at limiting the damage these conditions cause and keeping people on appropriate medication. For a period some people were coming for weekly clinic visits but now these visits are being scheduled at longer intervals such as once a month or less. One measure of the success is that there are now fewer transfers to Rarotonga.

Dr Nelesone found that when he arrived on Atiu in 2008 that there were about 30 people with gout and they were having many painful episodes. Nowadays, when people take Allopurinol as prescribed, there are very few painful episodes and these are usually people who have skipped their daily medication or who have been visiting the tumunu very often.

Health staff also mentioned asthma as quite common on the island. There are about 20 people documented to have the condition, some of whom are children. The condition is managed but there is the occasional hospital visit with asthma attacks. In at least one case this was a greater problem during winter when it is dry, dusty and cold (for the tropics). Some of our community interviewees also mentioned asthma within their families.

A man who had had problems with asthma as a boy had been advised by a school teacher from New Zealand who was working in Atiu to take up athletics to help manage it. He did so and with a few other boys went running on a regular basis. He found that not only did it help his asthma, but that he was selected as an Atiuan and later a Cook Islands representative for sport. He also played lots of other sports. Due to an injury and a feeling that he was getting "too old", he gave up sports at age 50 and five years later he suffered a stroke. His care and full rehabilitation was all carried out on Atiu, but as a person in his 60s, most of the exercise he now gets is working in his plantation. He was aware that the doctor wanted the over-60s to take morning walks, but he did not do that very often. On the other hand, some Atiuans had incorporated regular walks into their daily routines.

Several people, both men and women, shared with us what a struggle it is for them to manage their diabetes or hypertension. They described that they were mostly "good" about taking their medication; as one woman said of her husband, "It is his memory verse". In other words, every day he reminded himself to take his pills, just like learning a verse from the Bible for Sunday School. The hard part was eating well. "Doctor tells me not to put sugar in my tea, but it is very hard for me, so I have sugar and sweet things". "When I see all that food, I have to have it". For those who already had cardiovascular problems, taking pills and following the doctor's advice were cited as important to keeping healthy. It seems that taking the pills was not too much of an issue for most people, but following the dietary and exercise advice was a good deal more challenging.

Having had a bad experience with a blackout when she was alone with just her dog to look after her had taught one woman with diabetes to always take a little bit of food with her when she

went down to the plantation. On this occasion she managed to find a bit of *uto* (sprouting coconut) to give her the strength to get back to the road. Although most people owned to loving meat, coconut and starchy vegetables which were not supposed to be a big part of their diet, most of them did like other vegetables too, taro tops being a favourite. At the time we were there in 2011, however, a severe drought greatly limited the amount of fresh vegetables and fruits available.

Some health problems that had required surgical treatment such as eye problems, appendicitis and cysts were also reported and these required treatment off the island, as did diabetes in pregnancy. A number of people had also been ill while living or visiting in New Zealand, or less commonly, in Australia, so had had experience of health care in those countries as well as in Rarotonga.

Family members, including children, also had had serious health problems. Two of the people we interviewed each had had the sad experience of their two children dying, and others had had siblings die at a young age. Heart failure, cancer, accident, suicide, kidney failure and unknown, as well as TB, were the reasons for these premature deaths. Dr Nelesone has identified men's health as an area of interest. Men are not so inclined to come along for clinic visits, although in general attendance is good.

In the small incidents of everyday life we observed some disregard for health and safety. For example, in one of the stores bulging tins of canned food were not uncommon, and rust in that environment was hard to keep at bay. Checking and rotating stock did not seem to be a priority, nor did discarding dangerous foodstuffs. One of the push bikes we hired, unknown to us but known to the person who hired it, came without a nut on the front wheel. After Judith had ridden the bike at some speed down one of the bumpy roads to a beach we discovered the nut was missing; fortunately the wheel was still more or less in place. On returning the bike we pointed out the dangerous lack of a nut and this is when we discovered the hirer had known all along that it was missing. We suggested that a nut be found before the bike was next hired.

Why do we have these health problems or how can we keep healthy?

People readily explained why there were all these health problems now, and conversely, how to stay as well as possible. A marked change in the routines of everyday life had been enabled by the importation of motor bikes and other vehicles. People no longer walked to the plantations or carried loads home, they did not walk down to the shore to fish, nor back up hill to return home. When they did fish from a boat, it was often with the help of a motor. Even just going a few hundred metres down the road, it was tempting to go on the bike or the van or truck, rather than to walk. However, men and some women still did work in the plantations and in their kitchen gardens, and they still did go out to fish, even when they had other paid jobs which might not be so active. Fishing was curtailed while we were in Atiu in 2011 because the petrol had run out on the island due to a shipping delay (a frequent occurrence; see Figure 2.6), and there was a continuing heavy swell much of the time. A few people said that even at other times, there were not enough people fishing, and many people could not afford to buy fish if it were available.



Figure 2.6: Petrol shortages due to delay of boat

Although there were many labour saving devices in homes, cleaning the house and the yard, cooking and doing the laundry were still energy intensive and therefore were ways of keeping healthy, especially for the women. But several people said that “too much sitting” was to blame for ill health. So it was generally agreed that keeping healthy involved being physically active.

While many younger people played sports, as we listened to life stories we heard that as most people got older they stopped regular sports and did not substitute with other exercise, such as regular walks or swims. Some men did go to a gym that was set up in one man’s home. When we were there, new gym equipment was eagerly awaited – it was to be shipped to Atiu in a few weeks and at that point the gym would move into a community hall. It was hoped that it would appeal to both men and women.

Many people also pointed to the increase in the money-based economy and the ready availability of certain store-bought foods as part of the problem, and moderating one’s intake of these as part of the solution. These included fatty, salty, tinned corned beef, sugar-laden soft drinks, salt- and fat-laden chips and snacks, sweets and ice cream, and all those other delicious foods that stock the shelves, alongside the frozen meat and veggies and household necessities. Takeaways of fish and chips were also pointed to as part of the new dietary scene, which seemed to particularly appeal to children. Conversely, cutting down on meat, especially fatty meat, and eating more vegetables were offered as solutions.

Nearly everyone noted that water was a major limitation to vegetable growing, but nonetheless there were several flourishing gardens which were carefully tended and watered with grey water or fresh water when it was available. These were both family and community gardens. Gardens had to be well fenced against pigs and protected from chickens, so putting in a garden was often heavy work and the perimeters needed careful checking. Soils often needed improving and

pests were a constant battle. Some of the gardeners were operating on organic principles and using homemade pest deterrents and companion planting. We admired more than half a dozen large gardens, in addition to the nurseries and gardens of the Agriculture Department. The larger gardens supplied the shops and the restaurant at Atiu villas as well as family, friends and workmates, but at least while we were there, the demand greatly outstripped the supply. News that cucumber or tomatoes were available at a particular shop would spread rapidly, but only the swift got the vegetables.

Water was an issue in several ways. While we had been in Rarotonga, we learned from our visit to Infrastructure and Planning that doubling the amount of water storage on Atiu was part of their planned programme of work. Currently, all houses had large (around 6000 l) green plastic water tanks, although not all had been connected because of problems with the collecting roof or spouting. Some of the community water storage facilities had been damaged in earlier hurricanes and not all had been repaired. We encountered a certain amount of distrust about the integrity of decision-making when it came to spending government or aid money on such projects as public water supply, especially regarding where facilities were to be located. We found that disputes about land also might prevent the optimal siting of such facilities or delay their installation. There were filtered tanks at the school and in Tengtangi and Ngatiarua.

Some people were a little suspicious of the quality of some of the drinking water. The community water tanks in our village of Ngatiarua which supplied drinking water, for example, were not well used although we used them regularly and did not boil the water, with no ill effects. Yet we were told that the Ngatiarua water “tasted funny” and that was why people who might be very short of water themselves did not use it.

During our interviews at the hospital and in our home, we could see out the window the water truck returning back and forth collecting and distributing water, which they do during all droughts. Only one water source was being used, since the health inspector had found that two were contaminated with animal and human faeces. During water shortages Dr Nelesone mentioned that there are increased health problems, particularly with skin infections and colds. Skin infections are a concern, with at least one hospital admission of a cellulitis patient during our stay.

We were told that suicide had been a problem in Atiu in the 1980s but was less so currently—although suicide was a big problem in Rarotonga. Dr Nelesone had attended only one suicide attempt in his years on Atiu and confirmed that it was far from frequent. One person thought that the work of Punanga Tauturu, which takes mental health training and awareness to the villages, was part of the reason why there were fewer suicides. Drinking and partner-related problems were also suggested as triggers for suicide. In the one detailed instance that was shared with us, it seems that the young girl involved left Atiu for further educational and work opportunities and was abused by her supposed caregivers. She developed severe mental health problems. Though she had received treatment she had remained very troubled. Unfortunately, the full picture of what had been going on emerged only after her death. We did get rather confused messages about suicide: for example one person who thought it was related to mental illness and relationship problems stated that suicide survivors should go to jail.

Health Education and Health Promotion

The health staff are actively engaged in health promotion activities. There is a weekly radio session on Friday mornings about health on Atiu. Aerenga, the health inspector, often spoke: during our stay the broadcasts were about the tutaka. The radio shows are an ongoing programme but in

addition there are specific programmes originating from Rarotonga and involving both visiting and resident staff.

Several of our participants mentioned island-wide recent and up-coming events relating to health education, health protection and health promotion. These were the Chlamydia awareness and treatment which had happened shortly before our visit, and the tutaka which was going to happen shortly after we returned to Rarotonga. It was interesting that filariasis, a mosquito-borne illness, was often mentioned in the same breath as Chlamydia. This was because filariasis was also an island-wide programme but because there had been none on Atiu for years, people no longer had to take their pills. Instead, people considered that filariasis had been “replaced” by Chlamydia, which was also a nasty disease, so just like for filariasis, “you have to take your treatment”—or at least those between 12 and 50. People we spoke to were concerned to protect the young from this infection and the trouble it caused. Attendees enjoyed the workshops and learning all about it, and spoke of being horrified by the photographs which were shown as part of the workshops (which were of STIs in general).

There was overwhelming support for the Chlamydia project and Maru, the public health nurse, who was involved in the public presentations, said they worked well. Everyone between the ages of 12 and 50 took the pill as well as a few older people. There were some concerns about side effects and some did occur but there were no major issues reported to the hospital.

In contrast, the H1N1 (flu) vaccination has been a more difficult public health campaign with greater resistance. Some of the resistance seemed to be generated by the writings of a journalist which focussed on side effects and the role of the WHO. People who were reluctant to be vaccinated were invited up to the hospital to discuss it in detail. Pointing out the risks to young infants who are too young to be vaccinated seemed to be an effective counterargument and in the end everyone was vaccinated.

In general, though, vaccination rates are very high. Children received the Hepatitis B inoculation as part of the normal set of vaccinations. Consent forms have been introduced but parents often say that they don't want to be asked for consent, that the nurses have done the vaccinations for years and they should just keep on doing it.

One of the professional women said that she thought the parents now were more open to their children having sex education but overcoming parental fears about this had inhibited sexual health promotion in the past. She thought parents understood more about sexually transmitted infections and their effects on health and fertility so perhaps that made them more welcoming of sex education for their children.

Teenage pregnancies, sexual health and sexual health promotion are perceived as a problem both by the health staff and community members although there are varying opinions as to the size of the issue (partly related to whether the pregnancy occurs in Atiu or not). Although the birth outcomes for teen parents have been good, health staff expressed concern around the care of the infants and what happens with the young mothers (which was echoed in the community interviews). Dr Nelesone also spoke of the high rates of STIs reported for the Cook Islands. People we spoke to are not opposed to contraception but said that the primary constraints are the availability of the service and the comfort and privacy around accessing it in such a small community. Contraception can be obtained at the hospital, and the Red Cross is allowed to give out condoms—there is no formal office on the island but the woman who provides this voluntary service works from her home. While the health staff do as much as possible in their clinics, Dr Nelesone said he would like to see families taking more responsibility for sexual health and taking the time to talk with their children.

Prevention of mosquito-borne illnesses, worms and TB had been a very important part of the Cook Islands public health history (Futter Puati 2010). These concerns continued, but at a lower level, today. The TB vaccination BCG was still given to newborns as was the case in New Zealand, where the rates among Cook Islanders were low by world standards but higher than in the islands themselves. Scabies was also in the sights of the public health team, and Dr Nelesone was hoping that a drug which would treat both worms and scabies might be introduced instead of the current one which just targeted worms. Dr Nelesone explained that scabies is not only an unpleasant, highly irritating and infectious parasitic skin problem, but especially in children, it may lead to damage to heart function in later life. Only the children over two are now treated for hookworm, and as several of our interviewees told us, dosing for filariasis has been discontinued as there is no longer anyone diagnosed with the disease living in Atiu. Mosquito control continues as an important preventative as mosquitoes that can carry dengue and filariasis are present. All it takes is a visitor with dengue to be bitten for dengue to spread. The Cook Islands are well outside malaria zones. With TB, filariasis and leprosy no longer problems, the main health protection effort was directed to everyday sanitation, clean water and hygiene and the non-communicable diseases.

The quarterly tutaka was part of everyday life with competitions between villages being part of the whole experience. Those who talked about it with us described it as being an inside and outside inspection designed to control mosquitoes (dengue fever is always a threat), to check the health and family environment of babies and the elderly and others with special needs, and to make sure everything was safe and sanitary. Those folk who were looking after the properties of absent relatives had a lot of work to do to clean up the yards and some way down the gullies, and this elicited some grumbles, but the process was well accepted and even anticipated. Unfortunately for us, the tutaka was to take place shortly after we left, but we were able to admire the matching shirts that were being made for the tutaka group to wear as they walked around the villages.

The annual baby show and the garden competitions also were part of health promotion and seemed to be greatly enjoyed. All the babies were entered into the baby show, but not all the gardens. Other aspects of health promotion had a shorter life. One example is an attempt at encouraging gardens. The project lasted a year, with people provided with plants and encouraged to grow vegetables; but after that one year, the project ceased and the veggie gardening activity diminished. The gardening competition is not specially related to providing fresh vegetables.

Plans for the new gym in a community hall were mentioned several times. People from a wide range of ages also played sports but it was clear from the interviews that many women, especially, tended to give up sports quite early. However, many older women still enjoyed dancing. We learned from several quarters that resources for the sports teams and other activities were in short supply and that the work of organising often fell repeatedly on the same shoulders. From our discussions we gained the impression that for the more senior members of the community walking was seen as an ideal exercise, but not very many people actually did it. This matched our own observations in the short time we were there. On the other hand, except for children living far away and the very little ones, many children walked to school. As one man who lived near the school observed, "Atiu is the only place where you hear the children singing as they go to school and singing as they come home". The school had also instituted a compulsory walk after lunch around the spacious school yard so that teachers and students would get the habit of exercise. Another visitor to the school wryly observed that there was still a way to go: he had observed a teacher riding her motor bike from outside her classroom across to the volleyball court within the school grounds.

We asked about food and obesity. All agreed people know what they should be doing but that doing it is another matter. For a while, the hospital staff were taking a 20 minute walk at lunch time (similar to the school's break time walk) but they are not doing that any longer. Growing older and having more responsibilities were seen as reasons why it was harder to maintain activity levels. For instance, the hospital staff told us about how, in the past, people were in the habit of walking to the gardens and carrying taro back, but now they opt for riding a motorbike instead; many people spoke of playing sport regularly when they were younger, but now not having enough time due to family responsibilities. However, some do remain involved in sport.

Informal health promotion, where children and interested adults could learn by doing, was suggested by a couple of our interviewees as having the potential to encourage better health outcomes. They were thinking particularly of gardening and perhaps even cooking outside the school context, where people in the community with the relevant knowledge could work alongside others, imparting skills necessary for healthy living. These ideas extended to other life skills too, such as financial literacy, which of course does have an important effect on health, or hunting and fishing. Such work was already happening on an individual basis, but many people felt that extending it would be beneficial.

Enuamanu School has taken some initiatives with the support of the health team. Witness, for example, the healthy lunch scheme, the daily walk and the attention given to the health curriculum. However, the full implementation of the health promoting school framework had still not been effected, and the way ahead was by no means simple. Some people who would be involved in such a programme readily described their own eating habits. As an example, one day we were discussing tinned corned beef at a social gathering. One of the brands in the shop was much lower in fat and salt than the others, but few people bought it. We were told that it tasted sour, not sweet like the brand with the higher amount of fat. A person in our group summed this up, speaking for the island: "We like fat", she said. On another occasion another person, also in a situation where she would be supporting a health promoting schools programme if it went ahead, described how she had a banana for breakfast, but then often felt hungry during the morning so she had a drink of fizz (i.e., a sugary, fizzy soft drink) to keep herself going.

We were involved in a little health promotion ourselves. In 2010, Julie had spent time with an Enuamanu School home economics class and teacher, Mrs Tuariki, when they were making the "healthy lunch", which forms part of the school's health promotion work and raises a modest amount of funds. The lunch featured assorted local fruit such as bananas, pawpaw, star fruit, grated coconut, as well as sprouting coconut, and pancakes and the photos show the children and Mrs Tuariki doing the preparation. With the appropriate permissions, the photos of this occasion had been turned into a small book with English captions by Julie's son-in-law, James Gates. Copies of this book were presented to the school during an assembly in August 2011 and were well received (Figure 2.7). The students from the class prepared captions in Maori and a new version was prepared, this time by Ally Palmer. These books in Maori and English were for the school library and the hospital waiting area.



Figure 2.7: Presentation of book, *Enuamanu Healthy Lunch*, by Julie to the school

Health services

People were pleased with their current health service on Atiu. They appreciated the good communication they had with their doctor and how he wanted to know about *them* and anything that was on their minds, not just about a particular illness. They liked the idea that the staff were updating their skills and knowledge and that the health service was well run. They admired the medical skills and knowledge of the health staff. And they appreciated that the service would come to them if they could not get to the clinic or hospital. Of course this did not always mean they did exactly what the doctor or nurse said, but they knew that because of the regular clinics and follow up, a day of reckoning would come around. For example, one woman said how hard it was for her to take her tablets all the time, “but if you don’t it shows when you go for check up and then you are in trouble!”, she laughed.

The health team has been working on ways to extend and increase their care into the community. There have been several changes already. Instead of ringing people who have missed their clinic visits, Seipua and Maru visited those who missed the clinic at their homes in the afternoon. People tended to miss their appointments because transport wasn’t available or they forgot, but home visiting seemed to be very effective and both nurses said people seemed to like it.

Apart from this, the health team is improving access for their patients by taking services into the villages and people’s homes and making team visits to patients’ homes something of a routine. The idea of family-based care in the home would be true primary care, Dr Nelesone remarked. This would tie in very well with the whole-family approach to diabetes and CVDs in general, where to be effective, everyone needed to be aware of and implement eating and physical activity guidelines,

and to monitor one another's and their own well being. There is a very clear emphasis among the team and the services they provide about limitation of damage and management to avoid illness.

Based on similar thinking, the tutaka was also being expanded to include more health-related issues. This year, for the first time, the hospital staff would be involved, along with the social welfare office, the public health nurse and the health inspector. All aspects of the house and land are checked out. For example, is the necessary equipment—like an electric jug for boiling water—present in a house with a small child? Do people have clean beds? What is the condition of the toilet? The health inspector mainly checks outside the home—the compound, the cook house, the gas stove, the latrine and bath house. He does not check the water supply. In addition the Social Welfare officer checks for any sign of abuse (including financial) of older people. People are diligent about cleaning up their houses beforehand and take the inspections seriously. Community opinion was sought on what should be changed about the tutaka but no changes were suggested. The old people especially did not want change. An example of this is that there is not meant to be any washing on the line during the tutaka – some young people didn't want to have to take their washing in, but the older folk thought that the rule should not be changed.

The hospital refurbishment was nearly complete. The inside of the building is bright, with surfaces that are easy to keep clean. This is really appreciated by the staff. The Hospital Comforts NGO has assisted by providing curtains, cooking equipment, the water cooler, a cot and bassinette. In addition the staff at Atiu has raised funds as have Atiuan staff based elsewhere in the Cooks. The layout is now more open and clearly a good space which everyone enjoys. Particularly appreciated is the cleaner, who now works for three days a week. It is hoped that maybe that time could be extended so that they cleaned each day and did the cooking when patients were in hospital.

Along with the improved infrastructure, the other change that was noted was the improved availability of pharmaceuticals and other supplies. While we were there, a new system for pharmaceuticals was being instituted—Te Kura and Maru had just been to a workshop about it. They and Dr Nelesone said that supplies had been good, but supplies of all sorts needed to be managed. In the context of the petrol shortage on the Island, the hospital van had a drum of petrol set aside for it at the store to guarantee against shortages.

At times the hospital was a busy place. For example, on the CVD clinic days, around 15 people might be seen in a morning session, and a few others who did not make it into the clinic would need to be followed up in the afternoon. The pharmacy was often quite busy and people would sit in the shade outside and pass the time of day while waiting, or sometimes they would come and chat while on the way to somewhere else. Sometimes there would be music playing, including from Tuvalu where the doctor and his wife (who works in the hospital as well, as a nurse) came from. This was a place we spent quite a bit of time in, as we could check our emails via the wireless internet (when it was working), and join in the sociability. Both Cooks Islands Maori and English were commonly spoken.

Most people on the island knew that we were there to do some health research and people who came in to talk to us would often contribute to our study. For example, one man whom Julie knew from her last visit saw us sitting in the waiting area and came by to talk about a visiting specialist from Auckland for whom he had the utmost regard. He updated us on the progress of two Atiuan health sciences students studying in Auckland, and described the light-hearted tug-of-war between his siblings in Auckland and the family in Atiu about where his mother should spend her time. She had been telling him on the phone that she was cold in Auckland but her children and grandchildren wanted her to stay.

A preventative perspective was not so apparent in the dental services, although the dental nurse does talk on the radio with Aerenga on the Friday morning sessions at times. Dental services are free to Atiuans. Visits from the community are voluntary and two times a year there is a school check-up. Children needing work are then brought by Vito, the dental nurse, down to the clinic. Her main responsibility is fillings, as well as repairing and adding to existing plates. Extractions are dependent upon blood pressure measurement. Once a year, the dentist (an Atiuan) comes from Rarotonga for one to two weeks. There are also short visits (often less than a week) from dental students. Regular check-ups for adults are rare—most come along when something is wrong. There is no system in place to ensure attendance at check-up. This probably contributes to the high number of extractions.

The dental services have a closer ongoing relationship with the school, however, than the broader health staff. Health staff are not engaged in the curriculum and the health staff reported little involvement with the school, except when the health team comes from Rarotonga. They have supported the healthy lunch program and applauded the school's efforts in encouraging the daily walk of staff and students, but at the same time both the Public Health Nurse and Dr Nelesone saw opportunities for more engagement. Reproductive health was mentioned as one area that might be usefully addressed.

Disability services were provided via a NGO, which had been relocated with the hospital refurbishment onto the hospital grounds. The service was provided at this Centre, in people's homes, and at the school in the form of teacher aids working with children with special needs to enable them to cope with classroom routines. The Centre was funded by several grants; for example, funding was provided by the Seacology charity, and also for the services for the aged from Government funding. A government allowance for caregivers was also paid to people caring for neighbours or family members with disabilities. The health team were discussing the possibility of bringing older people into the hospital complex one day a week for activities and socialising.

One of the programmes that the health staff were involved in was to develop case studies of management of particular patients in the real circumstances of Atiu. Nurses and other staff could then present these at conferences to demonstrate what could be done, even with limited resources. One example that we heard about was an account of a nurse working with an older patient who had not been able to take her medication for CVD consistently. Over time, the lady became a consistent user of her pills and also established a kitchen garden, which provided her with a better diet as well as exercise and enjoyment.

Health services over time and space

Talking to our participants about their access to, and use of, health services over their lifetimes—in Atiu, Rarotonga, and various parts of New Zealand, especially Auckland, or Australia—our overwhelming impression was of good access and relatively unproblematic use. Several people had attended Dr Joe Williams, a very well known Cook Island GP, while they lived in Auckland, so they had no problem accessing care in their preferred language. Others had attended a range of different doctors and seemed quite happy with their treatment. One lady explained that the receptionist in her doctor's surgery was a Cook Islander. This had its good and bad points—the receptionist could interpret or explain things, but on the other hand she tended to talk loudly to any Cook Islands patients in Maori, and our interviewee was embarrassed by what she thought was rudeness in front of other patients.

Several of the women had had babies in Auckland. One told a funny story about a particular midwife not being ready for her baby to come, but otherwise seemed satisfied with her experiences of birthing. For the other women, the experience was unremarkable. Not all of the babies were born in hospital. Hospital could be a frightening place. An older lady who was hospitalised when on a visit to Auckland described how she was so frightened of the strange place and the different machines and the strange people that she cried. However, she went on to say that two nurses helped reassure her and stayed with her and were very kind.

Several people remarked how lucky they were in Atiu to have had a doctor most of the time over the years. We heard quite a few stories of speedy diagnoses and either treatment on the island or, more usually, referral to Rarotonga—just in the nick of time—for life-saving surgical procedures. From the point of view of the people who had been referred, the system had worked well. Where the problem was chronic rather than urgent, we heard of some instances of long waits before referral. This seemed to be mainly related to the timing of the arrival of the visiting specialists as well as the amount of persuading the Atiuan-based doctor had to do to get the referral approved. In one case, a patient could not travel by themselves but did not need a nurse on the flight; the delay was because no family member was willing to go. In that instance, eventually another person volunteered to travel with the patient.

Those people who had spent some of their lives on Rarotonga had access there to both public and private health care, as some doctors are in General Practice there. We did not interview enough people who had used both systems to detect any trend, but one woman thought that the private doctors were more attentive and keen to see you as their business depended on it. However, she thought the public system was pretty good too; it was just that the doctors seemed less attentive and “might walk right past you”. Of course, this could just as well be explained by other factors, such as patient loads and relative seriousness of one’s health problem.

As everyone we interviewed had travelled out of the Cook Islands, nearly everyone had had experience of health care elsewhere, usually in New Zealand. With the high rates of diabetes and hypertension most people travelled with their medications and their prescriptions. A couple of them joked that they did not want to be picked up as drug runners. But more seriously, the prescriptions and sometimes doctor’s notes were taken when travelling to try and ensure some continuity of care and to avoid inadvertent switching of medications. For most people this was not a problem, but in a couple of cases our interviewees were a little anxious about ‘health on the move’. For example, one woman said that because the same drugs sometimes have different names in the two places, she gets scared that she is taking the wrong thing. In another instance, a man was momentarily alarmed when the doctor in New Zealand replaced three of his pills with just one. The doctor quickly explained that it was a combination pill. On the other hand, a doctor’s visit in New Zealand could be reassuring. For example, a man who used an infusion of ‘rat tail’ grass as a monthly tonic saw a chart with this and other medicinal plants on the wall of a doctor’s surgery in New Zealand. He and the doctor, whom he thought was from India, had a talk about the benefits of this plant.

If a person was referred to Rarotonga, or from Rarotonga to New Zealand, they did not have to pay for their fares. However, self-referrals had to pay for travel costs and treatments themselves. It was quite difficult to get a clear idea of how much or whether people had to pay for their treatment, as it seems that if a person went to their family’s GP in New Zealand it might appear to be free because the family would pay. The same was true for prescriptions at the chemist. But some people did recall paying, such as \$30 for a GP visit or a few dollars at the chemist, which they thought was not too much. One woman said that she had paid for a hospital stay for the birth of her

baby in New Zealand when she had diabetes and some other problems, but the family had helped with the expense and her doctor had helped too.

We did come across some areas of discontent, but are not sure how widespread they are. For example, Atiu return visitors who live in New Zealand have to pay the 'visitor' rates for treatment at Atiu hospital (or any other Cook Island hospital). The fees payable are clearly posted in the waiting area of the hospital. Cook Islands resident nationals who are under 16 or over 60 do not pay and nor do residents in the outer islands or those deemed indigent or destitute. Non-resident Cook Islands nationals have to pay, as do foreign nationals, who pay more. People who need hospital treatment for alcohol-related incidents pay the highest rates. For example, a foreign national who has to stay overnight in a high-dependency unit would be charged, at 2011 rates, \$2000 per night if it were an alcohol-related incident, but only \$400 if it were not. Another area of discontent that was mentioned a couple of times was dental referrals. It seems however that these incidents may have occurred in the past, as dental referrals operate in much the same way as medical referrals, with the basic costs being covered by the government. The high cost of eye glasses was mentioned by a few people as a problem. One lady, for example, was waiting for her glasses which were being made up in Auckland. But they were going to cost \$400 and there was a delay, as her family tried to get the money together to pay for them. She had been waiting for a month when we spoke to her.

In the last year, referrals to Rarotonga have been rare—only two were remembered by the people we spoke to. In order to save money, the system has been changed so that a nurse flies out from Rarotonga and returns with the patient. In the past someone went from Atiu. Women with complications of pregnancy such as diabetes are referred at 36 weeks and stay with family living in Rarotonga. Sometimes they just received a thorough check-up and returned to Atiu. No one reported any problems with the system, although the nurses said that they missed the opportunity to go to Rarotonga.

There seemed to be more difficulties with people coming to the islands and wanting services than with Atiuans travelling away. Hospital staff told us of people turning up at the hospital with prescriptions from overseas—they sometimes needed assurance that the drugs offered were the same. Maru recounted, though, how an older member of her family visited from Australia and refused to return, partly because she was given a full check-up while on the island, and the medication supply and medical care for generally was accessible and inexpensive. A parallel to this was reported by the dental nurse about some Tahitian groups paying to have their dental work done in Rarotonga. This was confirmed (with New Zealand residents) in field work by Rochelle Newport.

People do move back and forth from the island with relatively little disruption to treatment. Dr Nelesone told us of one person who travels every three months to visit Middlemore hospital in Auckland for check-ups and prescriptions. The cost is paid for by the children in the family.

Health Staff Training and Staff Development

We asked about staff development and training. Two members of staff were studying at the time, undertaking a University of the South Pacific academic preparation course. The aim of this was to prepare them for further training. Nurses wanting further training apply to the Director of Nursing in Rarotonga, which was perceived as a fair system.

There is some support for staff to attend workshops. The public health nurse and enrolled nurse had just been to a symposium on pharmaceuticals. They both talked about how helpful the workshop was and, as noted above, were working at the time to put the new system in place. Sometimes, however, the workshops did not necessarily have such a good fit with the particular

circumstances on Atiu. For example, Teina, the charge nurse, went on a leadership workshop to the University of Technology, Sydney, which she found challenging and she wondered how applicable it was to her role. However, in all of these instances, their workshop attendance is taken seriously and the results are fed back to the team.

Every Friday there is a presentation by a member of the staff in turn on something relating to their area of work. We attended one such session, which was a reporting back to the staff about the pharmacy workshop in Rarotonga. Everyone showed up, and in each interview people talked about these presentations with interest. There are scheduled fortnightly staff meetings, and work begins each day with communal devotions at 7:45 am. These initiatives are designed to develop a team spirit and a cohesive program and were mentioned in each interview and in casual conversations. A data projector would be a big help with this—currently, the hospital has to rent the data projector, which is fairly expensive.

As a further aspect of developing professionalism, the staff are tasked with preparing annual reports and work plans for each area of the service. Aerenga, the health inspector, undertakes an assignment each month (e.g., vector control, food safety, quarantine) which is sent off to Rarotonga. At the time of our visit in 2011, he was about to go to Rarotonga for a workshop on smoking cessation.

Maori medicine

Maori medicine was a very broad category which seemed to include what might be understood as local remedies that were not store brought. It included ginger infusions, garlic infusions, infusions of coffee leaves (coffee has been cultivated on Atiu since early colonial times), lemon drink, noni juice (*Morinda citrifolia*, a member of the coffee family, which grows all over the island), coconut oil to drink, and several infusions or compresses made of local grasses, bark and so on. While some of these items were taken internally, bathing or applying to the affected part was also part of many treatments, such as frangipani juice for a wasp sting. Not everyone used Maori medicine. For example, one woman used it while she lived in Auckland where she knew some practitioners, but since she has returned to Atiu she has not used it. One aspect that she did not like was that in her experience, the healer would watch you while you took the medicine and force you to take it. This was not mentioned by anyone else as a problem.

Local medicine was used as a preventative as well as for specific problems. For example, one lady who took ginger tea said she had heard it was to prevent cancer, but she just took it because she liked it. Another lady, who is a smoker, liked to take noni and lemon juice as a kind of tonic. A man in his 60s told us how once a month on the new moon he takes a drink made from the leaves of the rat tail grass (possibly *Sporobolus virginicus*, a coastal tussock), which is called *hurimea* in Maori. He took it to improve the health of his chest, heart and whole body. This remedy came from his wife's grandma who was a *ta'unga*. Another told us how their family's routine of everyone drinking coconut (later castor) oil once a month probably helped to keep them healthy and saved his two sisters from TB. He explained that taking the oil was for the internal cleanliness important for health. Coffee leaf infusion was also noted by one of our interviewees as a preventative against diabetes and gout.

We asked a few people about how they knew which healer to approach and about using the medicines. Sometimes, a person would just volunteer a remedy, seeing someone with a problem. One woman told us that a man saw her in hospital with fish poisoning and brought her a specific medicine which came from a Tahitian healer. She was able to pass the remedy on to others to help

them recover and relieve the awful itch from the poisoning. Other times, the old people advise on which healer to approach, or a family member might have the desired expertise. Different healers have different specialities: some might deal mainly in broken bones or wounds, others with internal problems. Some remedies were very secret and were only obtainable from the healer. For others, the healer might give permission to the patient to prepare the remedy for himself or herself only. But in other cases, the patient was quite free to pass the remedy on as was the case for the fish poisoning remedy. The same was true for a remedy which could help bones grow well together after a break, which involved mashing coconut bark and 'oi 'oi (ylang ylang) bark together with coconut and water and bathing the affected part intermittently for three days.

Some people kept biomedical and local remedies quite separate and would use only one or the other for a particular problem. But others used both at the same time. For example, one man, who remembered the TB times well, said that he followed the doctor's advice, but also used herbs prescribed by a local healer, a Tahitian lady. The doctor at the time, he thought, also cooperated with the local healers and also sometimes suggested local remedies. Others told us that because some doctors were opposed to local healers, they would not tell the biomedical doctor that they were using local remedies. However, if the doctor was open to local medicine, then they would tell him / her what else they were taking or doing for their complaint.

Local remedies might be used first, sometimes to try to effect a cure without going to the hospital, at other times because that was what was at hand. For example, about 10 years earlier, one man had a stroke one evening when he was at home. He could no longer feel his leg. Fortunately, a neighbour got him comfortable on a chair and knew how to work on his leg. He kept up the massage until daybreak when they could go to the hospital. The man recovered completely after his time in hospital.

At other times local healers were involved after treatment at hospital had finished. This was the case for one of the fathers we interviewed, whose daughter had become extremely ill with some unknown virus when they were in New Zealand some years before. She was treated as well as possible in hospital there, but she was still not strong when they returned to Atiu. At this point a *ta'unga* who dealt with internal problems helped. The treatment involved soaking in a medicinal bath for up to half an hour three times a day; then, after three days, drinking some medicine. His daughter is quite well now, but her father remarked that "the virus could still be in her". He did not claim that it was only the local healing that helped his daughter, but that it was part of the overall successful treatment. He was a champion of both modern biomedicine and local remedies and healing.

We discussed Maori medicine with Dr Nelesone on several occasions. His observation was that people turn to Maori medicine first. For him this was only problematic if it led to delay in effective treatment. Another area of concern was when people were taking both Maori and biomedical treatments for diabetes and not telling him, because the active ingredients in one might affect the other. He was trying to persuade people to tell him what they were taking and advised them to stop one or the other treatment, preferring them to continue with the hospital-derived treatment that he and the nurses were monitoring so carefully.

Religion and health

Two of the women we interviewed attended the SDA church and explained that each week an aspect of health is discussed. The message they came away with was to eat well, especially to eat lots of vegetables, and to prefer water to fizzy drink. One remarked that it was quite difficult to

follow the advice about vegetables, especially during the drought when they were hard to find. A man and a woman who were involved with the CICC church felt that this involvement was good for them in terms of their well being. One added, joking, that if you are going to church you are not going down the gullies drinking and then falling off your bike coming home. An adherent of the Apostolic church said that her church has a lot of teachings about relationships between boyfriend and girlfriend. It also was against smoking and drinking, because of its teachings that the body was the temple of God. The church was a comfort in times of sickness, as members will pray and fast for the sick person. She was enthusiastic about the Chlamydia campaign which she saw as necessary “to protect young people from this bad disease”.

TB stories

Nearly everyone we interviewed had heard of tuberculosis but not every had “seen” it -- which was how several described personal knowledge of illness. It was a disease that belonged to their childhoods or their parents’ time or earlier, not a current concern. TB and leprosy were often mentioned together, not because they were related bacteriologically (which they are) but because they were both “scary” diseases, which were treated by isolating the patients. In Atiu the ‘*are*’ (house) for isolating leprosy patients were *kikau* (coconut thatch) huts not far from those for the more severe TB patients, down the road which now goes to Atiu Villas, leading away from Mapumai village towards the beach. We were told where to look but despite this we did not locate the sites exactly. Pa Paiere Mokoroa explained to us that the term ‘*maki maro*’ (with a long o), which is used nowadays for TB is a more recent phrase. In earlier times it was classified as ‘*pua roto*’ or ‘flowering from the inside’, i.e., an internal disease.

For some of those who had not “seen” it, TB still had had a important effect on their families. For example, one woman who had been born around 1950 had heard that two of her sisters had caught TB and died when young; an older man, born a decade earlier, had two young sisters with suspected (possibly latent) TB who were isolated for a while but were eventually cleared of it. Another man recalled that when he was little his grandfather used to have a cup of tea each morning with another older man who had TB and lived by himself.

Others had had more intimate contact with the disease. One woman’s father died of TB in Atiu in the 1960s. He had his own small sleeping house with his own cup, plate and spoon, near the family home. She explained that the mosquito control officers would bring the medicine for him from the hospital and treat him. They tried to say that they were just coming to visit him, but she thought they were trying to make sure he really was in isolation from the rest of his family. However, late at night, she crept into his hut to sleep near him to make sure he was comfortable. He died a little later, having been out fishing two days before. She commented that a lot of people had TB at that time, but in her extended family only her brother’s daughter got it. She was cured after a year in hospital in Rarotonga.

We asked our usual question of one participant: “Have you heard of TB/maki maro? He said, ‘You’ve got the right man. I was a tuberculosis’. At around age nine or 10 years, he developed pains in his chest when he breathed and became very skinny. He had to leave school and spend nearly a year in isolation in a room at the hospital. In those days, it was situated where the doctor’s residence is now, i.e., slightly uphill from the current hospital and across the road. The site was gifted by one of the island’s chiefs. Dr Teariki Matenga was the doctor at the time, at around 1957.

He explained that he was “B grade TB” so he did not have to be sent down the road near the lepers where the worst “A” cases were isolated. He was lucky that a girl of about his own age also

had TB and was there to share this lonely time with him. He did not remember very much about his treatment, except taking “a spoon of malt, it tasted like fish oil, everyday”, but he recalled the long days, the kindly nurses, and feeling sad and lonely, especially in the evenings when he would think of his parents and Grandma having their meal without him. The patients were not allowed visitors.

Once he and his roommate were cleared to go back to their families and to school they did not appear to suffer from discrimination. He explained that both he and his co-patient had “TP” (no b in Maori) tacked onto the end of their names, and they used this addition with each other in fun, and some other people used it too. From the way he spoke about this, it did not seem a stigmatising use, but rather followed the local habit of personal names being linked to particular events – witness the numbers of people with ‘Tere’ as part of their names. He conveyed the story of his illness to us as humorous, and told us that when he sees this lady today, he calls out to her, still tacking TP to her name, as she does to him. He believed that the A grade cases, who were mainly adolescents and young adults, all got better, but they all went to New Zealand after they recovered.

Work and livelihood

“Life in Atiu is good, but the trouble is, there is no job!”. This sums up a very widespread view. Of course, there were jobs for some people, and retired people were not worried about jobs for themselves, but for the school leavers and other young people who would either leave the island to look for work, or mooch about and get into trouble if they stayed on the island without a job. The jobs available were primarily in government service, including teaching, health, social welfare, and administration, or in private businesses, such as the shops and tourist accommodation and food service. Some people were cautiously optimistic about new agricultural schemes that were being promoted by the Minister of Agriculture (and Health), the Hon Mr Glassie. This includes the growing of vanilla and new varieties of pineapples. Others were more sceptical, having “seen it all before”. Adequate water storage was essential for further agricultural development, as several people pointed out, and this required further investment.

One of the positive features of the mooted agricultural schemes was that some research on the markets had already been done. For example, the Minister of Agriculture told us that vanilla was well established in Tahiti, but the Tahitian growers could not keep up with the demand. The proposals would also provide considerable employment if they went ahead. Vanilla, for example, needs to be pollinated by hand, a labour-intensive but apparently pleasant job, and the proposed noni industry was to involve exporting the juice which would be manufactured on the island. This would also reduce transport costs.

Amongst our interviewees there were a few who had had government jobs in the Cook Islands their whole lives. These were people with professional or administrative training. What was more common was for people in Atiu, especially men but also, to a slightly lesser degree, for women, to have some periods of employment interspersed with some periods where they planted and fished for a living. Others had been in New Zealand or Australia for most of their working lives.

Mr H’s work history shows a pattern common to men who spent their life mainly on Atiu. When he left school in the late 1960s he spent some years as a planter and fisher, but then got paid work.

Mr H: In those days (1960s and 70s), we had to live on our land.

J: Did you have a motor bike in those days?

Mr H: No, we have to walk. Walk to the land, come back home, walk to the beach to do our fishing. In a team, go together. Every night. But in the midst of the '70s ...I started working on the pineapple scheme. We started working at \$11 a week. That was a big amount of money for us in those days. And the prices in the shop were really low. The tinned fish and the mackerel were 36c. So in 70s to 80s the rate went up to \$15 a week. I started working for the Incorporation, the pineapples.

[This was one of the agricultural schemes. Mr H worked for the Incorporation which had about 40 acres and also planted about two acres of his own land. The men worked in teams on one another's land and on the Incorporation land. He liked working in the team and also getting paid. They worked from 7 in the morning to 4 in the afternoon. Pineapples take a year to mature and during that time the work teams were busy].

Mr H: Weeding, keep it clean, then about three months, manuring, fertilising the pineapple and sometime caring for the pineapple. A different kind of disease was attacking the pineapple. And a doctor came over from the Philippines to do something for our pineapple. I would say, people those days, working, were very, very happy, because although our rate is low we have got plenty to eat at home and I can tell you, in about five years I can build my house: four bedrooms and one sitting room. So what else to buy from the shop? Only sugar and bread.

J: So you felt pretty well off?

Mr H: Yes, so I put \$10 in the bank and \$5 take home for the kids.

[Eventually in the late 1980s, the New Zealand market for these fresh pineapples dried up because of competition from much cheaper produce from Asia. The schemes folded but some men got work as labourers until the mid 90s.]

Mr H: It was '96, there's a transition in those days. I was one of those to go home and work on the land, plant the land, feed the pigs and fish the ocean.

All over the Cook Islands, in the mid-90s, government employees lost their jobs as the state sector restructured in response to external pressure to run the country within a limited budget: this period is referred to as the transition. Many jobs were subsequently advertised and some of our participants were without employment for only a short time. However, after this date, the government could not be relied upon to provide employment for the majority of the population.

Although, as we were told many times, no one starves on Atiu because food is available even in a drought, and housing is also in plentiful supply, people do need cash for many things. From our interviews and more casual discussions and observation, we learned that those who do not have paid employment obtain cash (or goods) in several ways. They might be in a household where one or more people are employed and their wages are accessible by other household members, who contribute in other ways to the family economy. Some household appliances are bought for families on Atiu by relatives in New Zealand, Australia or in Rarotonga, or money is sent or brought back by New Zealand or Australian-based family members. Some family in Rarotonga also send food over to Atiu, especially if there are shortages. Government allowances are paid for children, the over 62s have pensions and some care-giver allowances are paid too. People who have worked in New Zealand or Australia can bring their superannuation with them. Other ways of making money involve selling goats, pork, fish or produce—but these things are also often given away or contributed to family and community occasions. Money is often given away, too, at family

ceremonies and village or church or sports fund raising, and in appreciation of dancers. Cooked food is also sold on specific occasions.

A new cool store was being built during our stay, powered by solar and electricity. Some people hoped that this would allow them to send some produce to Rarotonga to sell. They could store taro there, for example, while waiting for a ship. A few people made some money from their particular skills, such as making ukulele, painting and other art, wood carving, embroidery, *tivaivai* (quilts), crochet, or making fresh flower 'ei, or shell 'ei (garlands) to greet and farewell visitors and for other special occasions. All of these items are also given away. Small business ventures, especially around tourism and food, were also in evidence and mentioned in the interviews. For example, there are two bakeries in Atiu, and several tours are offered to places of interest on the island.

Whether they had paid employment or not, many people were involved in voluntary work and committees. Church, sports clubs, youth groups (Figure 2.8), and village groups, such as dance groups, all took up a good deal of time and energy for those involved. Necessary community work, such as making the new curtains to go on the new curtain rails in the rebuilt hospital ward, was done by volunteers. A very large amount of care-giving was done on a volunteer basis.



Figure 2.8: One of the uniformed groups for youth

Drinking

Drinking alcohol and, less commonly, smoking, were sometimes mentioned as being bad for one's health. The drinking in question was mainly drinking home brew by men at one of the tumunu dotted around the outskirts of the villages. Tumunu sessions were also sites for smoking. Everyone we asked was in agreement that frequent drinking of the extremely sweet home brew had to be a contributing factor in the high rates of diabetes and hypertension. We heard that frequent drinking was a modern practice. In the old days, that is, up to around the 1980s, each tumunu group would gather only once a week, but now each might be open every late afternoon and evening, and there

was even criticism that some people were starting to drink in the mornings. Even people who defended the social functions of the tumunu and who thought that they were well run decried this frequent drinking for a range of reasons which are discussed elsewhere. Because commercial beer was relatively expensive, it was not seen as contributing much to health problems. Indeed, we noticed that during the drought and the shipping delay when many other commodities like flour, milk, rice and other basics had run out, the stores' fridges were well stocked with beer.

Several of the health staff also mentioned alcohol and tumunu. The perception is that a lot of men are drinking nearly every day, drinking a lot, and drinking even in the morning on weekends. Amounts drunk at the tumunu used to be controlled, but the health workers saw some of the practices breaking down with fewer restrictions on people's drinking behaviour. The associated problems identified were men not spending time with their families, not interacting with their children nor helping the wives. Apart from the alcohol content, beer has large amounts of sugar which is a health problem. Dr Nelesone spoke about this issue at a 2009 Island strategy plan meeting. There are varying opinions about how important it is as an issue and how effective the tumunu are in controlling excess.

One person who talked to us about his observations of drinking in Atiu had noted that there were different drinking patterns with the different generations. Men in their late teens and early 20s, and men in their 40s and 50s, were the ones most likely to drink heavily with the associated violence, 'accidents' and so on. Once men were in their 50s, they often seemed to take stock and take new directions and this was a time when several gave up drinking, or heavy drinking. He was not sure about the women's patterns.

Frequent drinking of home brew was widely recognised as a health problem because of the high sugar content, the alcohol itself, and the heavy smoking associated with it, and the time men spent away from their families which put extra strain on their wives. But there was considerable debate about other aspects of drinking.

For example: Did a large number of (mainly) men drink frequently and heavily, or was it just the same old few? Did tumunu meet much more frequently these days than they did say, 30 years ago? Did men drink more and more often? Were they well run in terms of policing violent and destructive behaviour? Did men who drank bush beer go home and frighten and physically assault their wives and even children? Did men jump on their bikes or get into their cars after drinking and cause road crashes and injuries? Were tumunu an important cultural and social institution?

In our interviews we heard support for both sides of these questions, and without sustained observations and more extensive interviews we cannot be adamant about the answers. However, we can give our impressions and leave it to the community to debate the issues further. It seemed clear from the stories that there were some men (we cannot estimate how many) who drank heavily and frequently but there were many others (most like the majority) who visited tumunu only once a week or less often. It does appear that the tumunu meet much more frequently these days, and perhaps start earlier. On the other hand, it also seems that they are rather well run and anyone who seriously misbehaves in terms of his behaviour either at the tumunu itself or in the family or community is blacklisted, not just from that tumunu but from the others as well. Similarly, the former woman's development officer told us that there is an efficient method of dealing with family violence (as long as it is reported), involving health and police and the court, to back up the tumunu sanctions. She thought that because of the implementation of a Bill of Rights and repeated workshops on the topic, women are now more likely to report violence and to realise that they do not have to put up with it. We did hear stories from women of family violence and frightened

children after drinking at the tumunu, but these stories were in mostly in the past. In one case, the man’s father was the main support for his daughter-in-law and grandchildren and together they managed to get the husband to give up his violent behaviour. Family violence after drinking, we were told, still does happen, but it is not as frequent as it was in the past, and women are much more likely to seek help for it nowadays. Car and bike “drink-drive accidents” are still a problem, but not all of them can be traced to tumunu. Although there was a good deal of criticism of tumunu, their personal, social and cultural value was also recognised. They were places where men, and some women (for example, women on return visits to Atiu), could socialise, catch up, tell stories, sing and play guitar and ukulele, and generally relax and have a good time.

Population Issues

Depopulation is the major issue facing the island and it has impacts in several areas. The Health Inspector’s reports quantify the decline in the population by year and by age group. This is shown graphically in Figures 1-2.

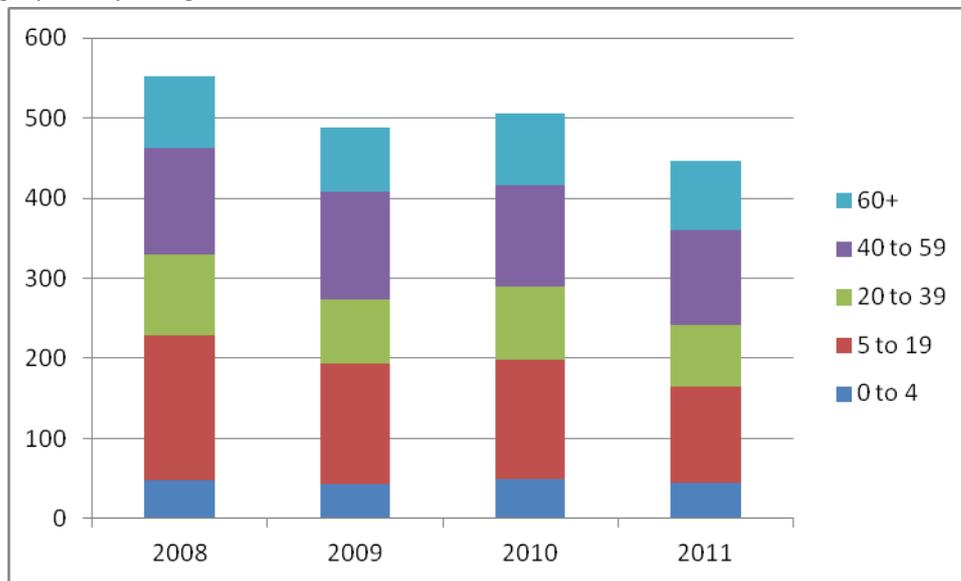


Figure 2.9 Population of Atiu from February Census by the Health Inspector 2008-2011

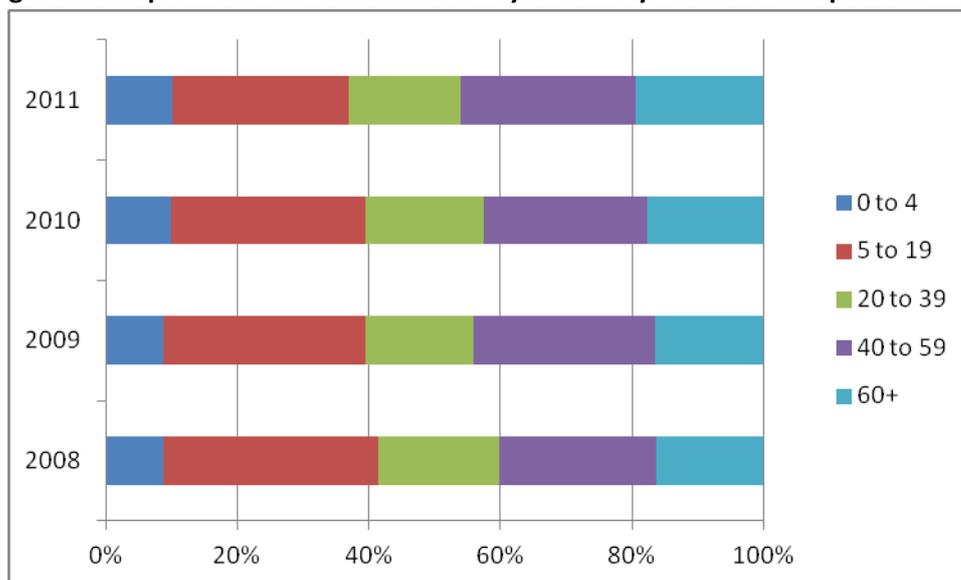


Figure 2.10 Proportional changes in population composition from 2008-2011 based on census

The groups that are obviously missing are school age children and adults up to around 40 years of age; Table 2.1 shows that difference very clearly. This year there were some jobs for young people in government service, but the availability of work for the younger ones was identified as a problem by several of our key people.

Table 2.1: Calculated percentage difference between 2008 and 2011 by age group and total

	2008	2011	% difference
0 to 4	48	45	-6.30
5 to 19	181	120	-33.70
20 to 39	101	76	-24.80
40 to 59	132	119	-9.85
60+	90	87	-3.30
total	552	447	-19.02

The high number of young adults leaving means that children usually go with them, although at times children, particularly the young ones, are left with grandparents. The Social Welfare Officer outlined the government payments for us. When the elders turn 60 they get \$200 a fortnight, which is a considerable help but this does not help those aged less than 60 who are without work. There is a child allowance provided for each child up to 12 years of age of \$30 a fortnight. On the other hand, the power bills are very large and a worry for elderly people, some of whom pay it in instalments each pension day.

The hospital staff identified some children left with grandparents who are not in very good health. One story told us was of an elderly infirm woman with a young grandson and even younger granddaughter. The grandson, at times, had to take time away from school to help at home. However, there is clearly a very close and special relationship between grandparents and the children they care for. Many of the difficulties that were talked about did not concern problems that happened while the children were on Atiu, but reflected on what happened when they had to move for school or for work, particularly the issues around unstable or unsuitable housing in Rarotonga. One solution that was mentioned in an interview was renting a house for several related children rather than placing them with relatives.

Another impact of depopulation is the many vacant houses and sections and the burden their maintenance places on those remaining in the village. This is particularly apparent around the time of the tutaka, when people have extra sections to clean up. Overall, this depopulation threatens the viability of services.

Children on the move

Sometimes it seems that children who are sent back to Atiu to be brought up by grandparents may have a more difficult time when they return to New Zealand or Australia. One grandmother told us that the grandchildren whom she brought up had so far been unable to go to university, despite having the qualifications, because there is no one in New Zealand to support them, and the fees and living costs are too high. From this and other stories we infer that the parents of the children in this situation do not contribute to their continuing support. There may

also be some intergenerational changes at work. This lady felt it was her children's responsibility to be aware that she would need money to help her grandchildren at university. She herself would never ask them for such help.

Grandparents loved having their grandchildren with them on Atiu. As one man told us, "even when they make us mad or sad, we love them". They loved having the children to cuddle and care for. But sometimes, it was difficult. Sending the children back to Atiu from Rarotonga or elsewhere was sometimes done to enable the younger couple to both keep on working, as well as to keep the grandparents company and reinforce family ties.

Several people we talked with were worried about sending their children away to Rarotonga or New Zealand to complete their education—the final high school year could be taken only at Tereora College in Rarotonga, and the stories we heard underpinned the reasons for their fears. Yet parents often believed that they needed to do this to enable their sons and daughters to go on to tertiary education and/ or to get a better job. They pointed out that although there were some jobs available in Atiu, many of them, such as teaching, nursing or higher level administrative jobs, required higher education. And there were not enough jobs for everyone on Atiu. Parents had to face this dilemma. They were worried about many things: that the family with whom their children stayed would not look after them properly and might even exploit them; that their children might fall in with bad companions; they might be injured or killed in a car accident (especially in Rarotonga), or if they were girls, they might get pregnant. And unfortunately, there were enough examples of all of these to keep these worries alive. We also came across a couple of instances where children had been sent away to go to school but they did not attend any classes. And even when everything went well, the parents and children missed one another.

Atiu has tried keeping the young people attending Tereora College in Rarotonga together at one of the island hostels—the Pukapuka one, because the Atiu one was being rebuilt—but relatives living in Rarotonga could not resist taking the children to live with them. The Ministry of Education pays \$40 a week for each student in this situation. Host families might expect the students to provide their own food from this allowance.

A recent good example of local employment, which several people told us about, was the restoration of the CICC church. The Orometua, Rev Rasmussen, from Penrhyn, who had building skills himself, made sure that young Atiuans were employed on the project, which lasted several months. The young people learned about regular work, developed many skills and became very well regarded in the community because of the high standard of their workmanship. When the project was finished there was no longer work for all of them, but Rev Rasmussen was asked to take a lead role in building the new power station, so he was able to take a few of the young people with him. Unfortunately, we did not find a time to talk with Rev Rasmussen who, understandably, was extremely busy at this time.

Reciprocity

While we were in Atiu we received many gifts of food: *kuru* (breadfruit) chips, fish cakes, bananas, doughnuts, and pawpaw; and we were invited to several community meals as well as dinners with family/friends. Our cooking facilities were limited, as was our access to food, but we had guavas, some bananas and breadfruit in our yard, had brought some tasty ingredients with us and could obtain others, so we were able to reciprocate to some extent. We also had brought *koha*

of money in envelopes to present to the hospital, the school and some community enterprises in recognition of the assistance they had given us in our research.

Another area in which we gave what help we could was to the extra-mural class studying via USP with a local tutor. We helped with ideas, and structuring and editing the adult students' work. After we returned home we sent the class further resources on a CD. Although there is internet access at several places on the island, it is slow and expensive and the students were simply not able to download the resources that they needed for their course. Judith also provided some assistance with a quantitative analysis programme to the Health Inspector who has been doing an admirable job of documenting many aspects relating to health, including the annual census on which so much depends.

Before we left we had a discussion with the Island Secretary, at his invitation, giving our personal views on some ideas that might help local people with some of the enterprises that had been mooted. For example, we suggested a map, aimed mainly at visitors, showing where they might find garden produce, craft items or other things to purchase, which would help the local economy and make visitors' stays more enjoyable. Guided tours of the many historical and archaeological sites might also be of interest and provide employment, as these sites would need to be kept accessible and visible. These would be an addition to the very attractive tours currently available. We were invited to contribute our views on the plan to have holiday housing for older people on Atiu, an idea which has considerable personal appeal, but one that needs careful planning and evaluation. We learned that the plan's proponents envisaged building new holiday houses down nearer the beaches. While we agreed that this might suit some, we rather thought that this idea could be used to bring skills to Atiu, as retired people who wanted to stay for a month or more are also likely to be people who are interested in contributing in some way, perhaps to ecological, educational or social programmes, and in interacting with the residents. Thus, some of the 79 empty houses in the villages might be made into suitable accommodation, providing employment and income.

Each person who contributed an interview was offered a small koha. Some preferred for us to donate it on their behalf, which we did. When we had finished transcribing all our interviews, we placed each one in a named envelope and parcelled them up to send back to our participants, via Dr Nelesone, who kindly made sure that they got to the right people. This report too, is part of our on-going exchange of ideas as we work towards the completion of our project. We welcome all feedback.

Acknowledgements

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