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# Full Moon Strategy Evaluation Central Australia

# **Final Report August 2009**

# prepared by Thérèse Kearns, 1 Rosalie Schultz, 2 and Ross Andrews 1

- 1. Menzies School of Health Research, Child Health Division, Darwin
- 2. Northern Territory Department of Health and Families, Rheumatic Heart Disease Program, Central Australian Remote Health Services, Alice Springs





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Valmai McDonald
Prue Crouch
Eleanor Hooke
Melissa Fidock
Alan Palmer
Nola Wilson
Jeannie Campbell
Lynette Windsor
Marion Swift
Denise Foster
Vanessa Davis
Audrey McCormack
Dianne Impu
Tiara Foster

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# **List of Abbreviations**

AHW	Aboriginal Health Worker
ARF	Acute Rheumatic Fever
BPG	Benzathine penicillin G
CAAC	Central Australian Aboriginal Congress
CAAMA	Central Australian Aboriginal Media Association
CAHREC	Central Australian Human Research Ethics Committee
CARPA	Central Australian Rural Practitioners Association
DHF	Department of Health and Families
GAS	Group A Streptococcus
HPO	Health Promotion Officer
HREC	Human Research Ethics Committee
IMI	Intramuscular Injections
Menzies	Menzies School of Health Research
NTDHF	Northern Territory Department of Health and Families
RN	Registered Nurse
RHD	Rheumatic Heart Disease
Unkwn	Unknown

## BACKGROUND

The incidence of Acute Rheumatic Fever (ARF) and the prevalence of Rheumatic Heart Disease (RHD) in Indigenous Australians are reported among the highest in the world.<sup>1</sup> An intramuscular injection (IMI) of benzathine penicillin G (BPG) every 28 days or more frequently is the only recommended chemoprophylaxis for the prevention of recurrent episodes of ARF and its sequelae RHD.<sup>2</sup> In the Northern Territory (NT) high rates of BPG uptake have not been achieved nor have some of the control strategies supported by the National Heart Foundation of Australia<sup>2</sup> had an impact on disease incidence and prevalence.<sup>3</sup>

In Central Australia the RHD program commenced in 2000 and has progressively implemented a number of evidence-based control strategies known to optimize the uptake of BPG and include: 1) establishment of a control program for RHD, 2) a Territory wide register of clients at risk of RHD, 3) a centralized RHD program coordinator, 4) improved staff awareness and understanding of RHD, and 5) promotion of measures to reduce pain caused by the intramuscular injection. Still to be implemented in all primary care services are dedicated health workers with responsibility for RHD in their primary health care setting. Whilst these strategies have been implemented the process has been challenging and is attributed in part to high staff turnover and competition with other chronic disease programs.<sup>3</sup>

In addition to the complexity of problems encountered implementing the control strategies are the treatment uptake barriers that were identified by clients in East Arnhem land and include: inconvenience, lack of family support, lack of confidence, forgetting, mobility between communities and uncertainty about when the injection is due.<sup>4</sup> The Full Moon Strategy developed by the Central Australian RHD program uses the concept of the full moon as a reminder to clients at risk of RHD and health care workers that the prophylactic BPG is due. This strategy, whilst not evidenced based, was implemented in June 2006 to complement the other control strategies and address the "uncertainty about when the injection is due".

The Full Moon Strategy aimed to educate clients, families and health care workers to use the full moon as a cue to remember BPG prophylaxis. In June 2007 a marketing campaign to promote the Full Moon Strategy was introduced, comprising wall calendars, hand held calendar cards for clients, radio advertisements and an adaptation to the RHD flipchart to include the full moon calendar. The health promotion materials were developed by the RHD Program staff in collaboration with the Health Promotion Unit and the Media and Corporate Communications Unit at Department of Health and Families (DHF).

The evaluation was undertaken to assess if the Full Moon Strategy and its implementation were effective by:

- 1. determining if clients at risk of RHD and primary health care workers were aware of and understood the concept of the Full Moon Strategy and
- 2. determining if the Strategy had impacted on the uptake of prophylactic BPG.

## **METHODS**

## Study Setting

The evaluation was conducted in Central Australia, where the Full Moon Strategy was introduced in June 2006 by the RHD program and included four remote Aboriginal communities in Central Australia and the town camps of Alice Springs. The combined population of Aboriginal people in the four remote communities is approximately 3400 (unpublished data, Central Australia Remote Health Services, DHF) with 2000 in the town camps. The total Alice Springs Aboriginal rural and urban populations are approximately 10 500 and 5 600 respectively. The four remote communities in the study are between 80km and 300km by road from Alice Springs, and the town camps are situated on the outskirts of Alice Springs. The prevalence of RHD in Aboriginal people for this region is 12.5 per 1000, whilst the incidence of ARF is 351 per 100,000 children aged 5 to 14 years.

#### Health Promotion Materials

The concept of the full moon as a reminder to receive prophylactic BPG was used in one-on-one and group education by the RHD program in Alice Springs for one year prior to the introduction of the media campaign and health promotion materials, which commenced in June 2007. Clients at risk of RHD and their parents/carers were encouraged to use the strategy when seen in Alice Springs Hospital or at their home communities. The Full Moon Strategy was also promoted in education sessions provided to health care workers.

The RHD program collaborated with the Health Promotion and Media and Corporate Communications Units of DHF Alice Springs to develop the media campaign and educational materials that included:

- A3 size calendar posters showing the dates of the full moon to be displayed in the clinic
- hand held calendar cards showing the dates of the full moon
- revision of the 2002 RHD flipchart to include a calendar of the full moon dates
- Radio advertisements played 6 times per day during the week of the full moon (from 3 days before until 3 days after) for a period of 14 months from June 2007 to July 2008.
   This amounted to 42 advertisements played during the week of the full moon.

#### Interview Questionnaires

Two questionnaires were used during interviews with clients at risk of RHD and primary health care workers. They were developed and piloted by the Health Promotion unit in Alice Springs and disseminated to the RHD program in Alice Springs and Menzies School of Health Research for comment. The questionnaires were modified slightly before being used in the remote communities and town camps (see Appendix A & B).

## **Chart Audit Data**

The chart audit data form was developed by Menzies School of Health Research staff in consultation with the RHD program. It was designed to provide information on prophylaxis from June 2004 that was not available from the current RHD database or its predecessor (see Appendix C).

The dates of the full moon were taken from the Australian Government Geoscience Australia site to compare with the dates the prophylactic BPG was given.<sup>8</sup> The radio advertisements were aired from 3 days before until 3 days after the full moon; this time period was used to determine if prophylaxis was given at that time.

## Staff Recruitment and Training Workshops

The evaluation interviewers for the remote communities were all employees of the Northern Territory Department of Health and Families and were recruited from four different program areas, whereas the interviewers for the town camps were recruited from Tangentyere Council. The interviewers recruited were:

- Five Aboriginal Health Workers (AHW) from the DHF program areas of Preventable Chronic Disease and Nutrition and Physical Activity
- Four Tangentyere Council Researchers
- Three Registered Nurses (RNs) from the RHD Program and one Health Promotion Officer (HPO) from the Health Promotion Unit at DHF.

The AHWs and Tangentyere researchers conducted the interviews with the clients at risk of RHD. The RNs and HPO interviewed the clinic staff and conducted the chart audits and database searches.

One day workshops were held to provide the remote and town camp interviewers with the necessary knowledge and skills to implement the evaluation and included information on: the evaluation process, ARF and RHD, informed consent, voluntary participation and interview techniques.

## Identification of Study Participants

The RHD database was used to identify clients at risk of RHD who were being prescribed prophylactic BPG injections when the interviews commenced in 2008 for each of the four remote communities and Alice Springs town camps. The lists generated from the RHD database were validated with hand written lists supplied to the RHD Program from the remote communities and the Communicare print out from the Central Australian Aboriginal Congress (CAAC) Health service.

The lists of clients at risk of RHD were taken to each of the four remote communities and town camps. Clients resident in the communities and camps at the time of the study visit were contacted at home and invited to participate. Consenting participants were then interviewed by an Aboriginal researcher who was not part of the RHD Program. The interviews were written in English and conducted in both English and Aboriginal languages as determined by the interviewer.

Primary health care workers were identified at the time of the study visit and invited to participate. The health care workers were interviewed by non-Aboriginal researchers who were employed in the RHD Program or Health Promotion Unit in Alice Springs. The same interviewers also conducted the chart audits and database reviews to collect information on prophylaxis given to clients at risk of RHD.

## **Funding Bodies**

The evaluation in the remote communities and the media campaign was funded by the RHD Program and the town camp evaluation was supported by UNICEF and the RHD Program.

#### Statistical Methods

The data was entered into an Access database and analysed in Stata 10. Responses to interview questions were reported as percentages as was the administration of prophylactic BPG, and where appropriate 95% confidence intervals were calculated.

## Ethics Approval

The ethics application was prepared by Menzies and the Alice Springs RHD program and submitted to the Central Australian Human Research Ethics Committee (CAHREC) in November 2007 (EC00155). Approval was granted in December 2007 for the initial proposal. Amendments to the proposal, reflecting changes in RHD program staff and broadening of the evaluation to include the Alice Springs town camps were approved by CAHREC in August 2008.

### **RESULTS**

The Full Moon Strategy Evaluation was conducted in four remote Aboriginal communities in Central Australia and in the Alice Springs town camps. A total of 55 clients at risk of RHD from the four remote communities were identified as being eligible for participation and 55 from Alice Springs town camps, including 38 with addresses only in Alice Springs and 17 with Alice Springs as an alternative address.

There were 69 interviews conducted of which 39 were with clients at risk of RHD, 11 were with parents/carers of clients at risk of RHD and 19 were with primary health care workers from the remote communities (Table 1). The 50 clients at risk of RHD or their parents/ carers interviewed, represented 45% (n=110) of the target population identified from the RHD database and remote clinics prophylaxis lists. Four clients at risk of RHD did not consent to be interviewed, three from a remote community and one from the town camps.

Of the 69 interviews conducted (parents/carers gave demographic information on children under 16 years), 54 (78%) were female and 59 (86%) identified as Aboriginal. All 10 non-Aboriginal interviewees were health care staff. The median age of the clients at risk was 28 years (range 8-58) and 38 years (range 23-62) for health care workers.

Table 1. Demographic details of clients at risk of RHD and health care workers.

Status	Clients at Risk of RHD (n=50)*		Health Care (n=19	
Median Age (range)	28 yrs	(8-58 yrs)	38 yrs	(23-62 yrs)
Aboriginal	50	(100%)	9	( 47%)
Non-Aboriginal	0	( 0%)	10	( 53%)
Male	9	( 18%)	6	( 32%)
Female	41	( 82%)	13	( 68%)

<sup>\*</sup>Includes demographic information about clients at risk of RHD from their parent/ carer (n=11) or self reports (n=39)

#### Calendar Poster

For the 50 clients at risk of RHD, 23 (46%) said that they had seen the calendar poster at the clinic (as reported themselves or by their parent/carers) and 19 (83%) of these knew that it was for reminding people when their prophylactic BPG was due (Table 2). Sixteen (70%) of the 23 participants who had seen the calendar in the clinic stated that they checked the calendar to see when they were due for their prophylaxis.

Of the 19 health care workers asked about the calendar poster, 10 (53%) said that they had never seen it displayed (Table 2). Only five (26%) health care workers stated that the poster was displayed in the clinic, whilst the remaining 4 (21%) stated that they did not know. The health care workers were also asked if they used the calendar in the clinic and 8 (42%) said yes. There were 9 responses recorded as to why the calendar was not displayed and the most common response (n=4, 44%) was that they did not have a copy of the calendar to display.

Table 2. Responses to the calendar poster question from clients at risk of RHD or their parent/carers and healthcare workers

	Response	Clients at risk of RHD or parent/carer (%) (n=50)	Health care workers (%) (n=19)	Total (%) (n=69)
Calendar poster	Yes	23 (46)	5 (26)	28 (41)
displayed in the clinic?	No	24 (48)	10 (53)	34 (49)
	Unknown	3 (6)	4 (21)	7 (10)
Do you use the full	Yes	16 (32)	8 (42)	24 (35)
moon calendar in the	No	26 (52)	7 (37)	33 (48)
clinic?	Unknown	8 (16)	4 (21)	12 (17)

#### Hand Held Calendar Card

Of the 50 clients at risk of RHD, 19 (38%) had their own hand held calendar card and 14 (74%) of these indicated they found the card easy to understand. All checked the card to see when it is time for their injection. Of the 31 participants who did not have a card, the 2 most common responses reported were from 12 (39%) participants that stated that they had never been given a card and 7 (23%) said that they had lost their card.

Of the 19 health care workers interviewed, 9 (47%) stated that they gave the hand held cards to all clients who needed BPG prophylaxis. The 19 health staff were also asked how the Full Moon Strategy affected the clinic, 7 (37%) stated that it made it easier to remember and administer prophylaxis and 5 (26%) stated that it made no difference.

## **Flipchart**

The flipchart was seen by 43 (62%) of the 69 participants interviewed (Table 3). The clients at risk however were the least likely group to view the flipchart (51%) when compared to the parent/carer group (82%) and the health care workers (74%). Of the 29 clients at risk and parent/carers who had seen the flipchart there were 66 responses describing the usefulness of the chart. The most common response from 23 (35%) participants was that it told you when to receive your BPG, followed by 18 (27%) responses that stated it helped them to understand ARF and 16 (24%) responses that stated they use it to keep a record of their BPG.

Of the 14 health care workers who had seen the flipchart, 6 (43%) stated that they never used it, 7 (50%) stated that they used it sometimes and 1 (7%) person used it all the time. There were 17 responses from the 14 health care workers about which clients they used the flipcharts with. The most common responses were with adults (n=5, 29%) and children (n=5, 25%). The most frequently recorded response regarding the usefulness of the flipchart was from 7 (39%) health care workers stating that it made it easier to explain to clients when they needed to attend for prophylactic BPG.

Table 3. Responses to the flipchart question from clients at risk of RHD, parent/carers and healthcare workers

Seen the flip chart?	Clients At Risk (n=39)	Parent/Carer (n=11)	Aboriginal Health Care Worker (n=9)	Non-Aboriginal Health Care Worker (n=10)	Total (n=69)
Yes	20 (51%)	9 (82%)	7 (78%)	7 (70%)	43 (62%)
No	16 (41%)	2 (18%)	1 (11%)	0	19 (28%)
Unknown	3 (8%)		1 (11%)	3 (30%)	7 (10%)

#### Radio Advertisements

From the 69 interviews performed, 23 (33%) participants heard the radio advertisements of which 10 (44%) were residents in the town camps (Table 4). Although numbers were small, AHWs in the remote communities were more likely to have heard the radio advertisements (4/9, 44%) than non-Indigenous health care workers (1/10, 10%). Most parents/carers (6/11, 55%) had heard the radio advertisement, whilst 31% (12/39) of the clients at risk of RHD said they heard the radio advertisement. An equal proportion of males and females heard the radio advertisement (33%). The majority of participants who heard the radio advertisement liked the content and were able to articulate the main message of, "going to the clinic to get your needles."

For those 46 interviewees not hearing the radio advertisement, 52 reasons were recorded. The most common reason for not hearing the radio advertisement was from 14 (27%) interviewees who did not listen to the radio. Twelve (23%) said that they don't listen to CAAMA and 11 (21%) interviewees stated that they did not have a radio. Another 11 (21%) said that the ad was not on when they were listening to the radio, 2 said that they had no reception and 2 gave other responses. Three interviewees suggested that the advertisements should also have been on the Television.

Table 4. Responses to the radio advertisement questions from clients at risk of RHD, parent/carers and healthcare workers

	Response	Clients (n=39)	Parent /Carer (n=11)	Aboriginal Health Care Worker (n=19)	Non-Aboriginal Health Care Worker (n=10)	Total (%) (n=69)
Heard the	Yes	12 (31%)	6 (55%)	4 (44%)	1 (10%)	23 (33)
radio ads?	No	27 (69%)	5 (45%)	5 (56%)	9 (90%)	46 (67)
Liked the ad?	Yes	10 (83%)	5 (83%)	4 (100%)	0	19 (83)
	No	1 (8%)	0	0	0	1 (4)
	Unkwn	1 (8%)	1 (17%)	0	1(100)	3 (13)
Was the main	Yes	11 (92%)	4 (67%)	3 (75%)	0	18 (78)
message, go	No	1 (8%)	1 (17%)	1 (25%)	0	3 (13)
to the clinic?	Unkwn	0	1 (17%)	0	1(100)	2 (9)

<sup>\*</sup>Aboriginal Australians

## Timeliness of prophylactic penicillin injections

All 50 of the clients at risk of RHD who were interviewed also consented to have their charts reviewed. Of the 50 chart reviews conducted, three were excluded from the data analysis as they had already ceased their prophylaxis before June 2004. From June 2004 - May 2006, before the Full Moon Program commenced, the percentage of penicillin prophylaxis administered during the week of the full moon was 22% (95% CI 18, 27). For the period June 2006 – May 2008, BPG uptake that coincided with the full moon was 24% (95% CI 21, 28) Whilst the point estimate was only marginally different, it was noticeable that the proportion of BPG given that coincided with the full moon was widely variable during the pre-program period but notably consistent, with a steady increase over time since the Full Moon Program commenced (Figure 1). Importantly, there was also an absolute increase in BPG uptake of 10% (95% CI 6,15 p<0.01), rising from 47% (95% CI 44,51) during June 2004 – May 2006 to 57% (95% CI 56, 60) during June 2006 – May 2008.

<sup>\*\*</sup> Non-Aboriginal health care workers

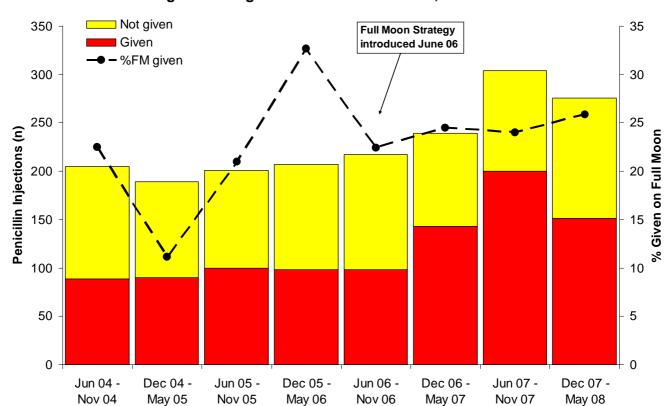


Figure 1. Penicillin prophylaxis due each month and the percentage of those administered that were given during the week of the full moon, June 2004 – June 2008.

## CONCLUSION

The Full Moon Strategy implemented four different health promotion tools as part of a campaign to promote the uptake of prophylactic BPG of which three were new resources. The flipchart was the only existing tool that had been used in the past and encouragingly was the most known and utilized resource in this study. The Strategy did not increase the administration of prophylactic BPG around the dates of the full moon, however the significant increase in the administered BPG reflected the timing of the introduction of the Full Moon Strategy. Despite this significant increase in prophylaxis the uptake of BPG remains unacceptably low and new innovative control measures are needed if any significant inroads are to be made in reducing the incidence and prevalence of ARF and RHD in our Indigenous population.

## LIMITATIONS and LESSONS LEARNT

The evaluation used different interviewers for each of the remote communities and town camp locations. This was intentional for the interviews conducted with the clients at risk of RHD as the Aboriginal interviewers recruited had affiliations with the community and town camps they visited. It was anticipated that this established connection would increase the participation rate of eligible clients as they would be interviewed by people already known to them. The interviewers visited the remote communities as day trips on 1 or 2 occasions and interviewed the clients who were present at the time. We were not able to determine with any accuracy what percentage of eligible participants were present in the community on the day the interviewers visited, however it was stated by most of the interviewers that those clients present in the community at the time of the visit were interviewed.

The questionnaires used by the interviewers were intended to be used as open ended questionnaires in which responses were to be recorded against the appropriate option provided. If the interviewers were having difficulty in eliciting responses from the participants then the anticipated response options on the questionnaire could be asked. With different interviewers in each of the different locations it was evident during the analysis that some interviewers used the anticipated response options for the majority of interviews they conducted. This may have encouraged more responses to some questions than if the anticipated responses had not been asked. During the analysis it was also evident that some interviewers did not ask all the questions as some responses were consistently omitted. As the interviewers differed for each location and the data was entered at the one time point for each location, interim analysis for data quality did not influence subsequent data collected.

Many of the health care workers interviewed did not work directly with the clients at risk of RHD and therefore were not aware of all the resources available. It was anticipated that only those health care workers involved in the RHD program in their community would be interviewed so no provision on the questionnaire was made to include information that would differentiate the health care workers positions at the clinic. Encouragingly many of the health care workers not involved directly with clients at risk of RHD were aware of many of the resources used for the campaign.

The town camp residents were interviewed 5 months after the radio advertisements had ceased introducing a recall bias for this location. Despite this, many of the town camp clients at risk of RHD reported recall of the radio advertisements so their responses were not excluded from the analysis. By including the town camp residents responses the percentage of those hearing the radio advertisement increased from 30% (n=13/43) to 33% (n=23/69).

The lessons learnt from this evaluation and the limitations of conducting such a project in remote locations with a large number of interviewers are a reality when dealing with limited funds and human resources. This does not however hinder the implications that the results will have in supporting NT policy and public health practice in RHD control.

## REFERENCE LIST

- 1. Carapetis J, Wolff D, Currie B. Acute rheumatic fever and rheumatic heart disease in the top end of Australia's Northern Territory. Medical Journal of Australia 1996;164:146-9.
- 2. National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand. Diagnosis and Management of acute rheumatic fever and rheumatic heart disease in Australia an evidence-based review. In: group RRgdw, ed.; 2006.
- 3. Edwards K. The Acute Rheumatic Fever/Rheumatic Heart Disease Program an update. The Northern Territory Disease Control Bulletin 2007;14:26-8.
- 4. Harrington Z, Thomas D, Currie B, Bulkanhawuy J. Challenging perceptions of non-compliance with rheumatic fever prophylaxis in a remote Aboriginal community. Med J Aust 2006;184:514-7.
- 5. Foster D, Mitchell J, Ulrik J, Williams R. Population and Mobility in the Town Camps of Alice Springs. A report prepared by Tangentyere Council Research Unit, Desert Knowledge Cooperative Research Centre, Alice Springs; 2005.
- 6. NT resident population estimated by age, sex, indigenous status and health districts (2009, unpublished). (Accessed 8 July 2009, at <a href="http://internal.health.nt.gov.au/healthplan/epi/population/nt\_population08.xls.">http://internal.health.nt.gov.au/healthplan/epi/population/nt\_population08.xls.</a>)
- 7. Australian Institute of Health and Welfare. Rheumatic heart disease: all but forgotten in Australia except among Aboriginal and Torres Strait Islander people. In: B F, ed. Canberra: Australian Institute of Health and Welfare; 2004.
- 8. Moon Phase Data. Australian Government. (Accessed 2009, at <a href="http://www.ga.gov.au/geodesy/astro/moonphases/moonphases.jsp.">http://www.ga.gov.au/geodesy/astro/moonphases/moonphases.jsp.</a>)

## **APPENDIX A**

For clinic staff: Full Moon evaluation questionnaire for the radio advertisement, the flipchart, the poster, and the hand held card.

Date	
Age / DOB	
Community	AHW / RAN / EN
Gender M   F Indigenous Status	AB / TSI / NI
The radio advertisements	
Did you hear the CAAMA radio reminde	rs for the full moon? Yes   No
If no why not?	
If no why not?	Tick answer
Reception is no good here	
No radio	
Don't listen to the radio	
Wasn't on when I was listening	
I don't listen to CAAMA	
Record other answer	
IF NO GO TO FLIPCHART QUESTION	IS
If you heard the radio advertisements, v	what was the main message?
	Tick answer
Go for your needle at the full moon	
Record other answer eg. Dont know	
G	
Didn't understand the radio advertiseme	ent
	-
Did you like the ad?	
	Tick answer
Yes	1 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
No, Why?	
· · · · · · · · · · · · · · · · · · ·	

## The RHD information flipchart

Have you seen the flipchart? YES / NO

Do you use the flipchart?

	Tick answer
Sometimes	
Most of the time	
All the time	
Never	

#### IF NEVER GO TO FULL MOON CALENDAR QUESTIONS

Who do you use the flipchart with?

	Tick answer
New clients	
If they have not seen it before	
Adults	
Kids	
No one	
Record other answer eg. Mothers and their children	

How was the flipchart useful?

	Tick answer
Makes it easy to explain when they need to come to the clinic	
for their injections	
Don't know	
Not useful	
Record other answer eg. Good for the older kids, language	
too hard to explain to the little kids	
•	

## The Full Moon Calendar poster

Do you have the Full Moon Calendar displayed?

	Tick answer
Yes	
No Why not? eg. Too many other things on the wall	

Do you use the full moon calendar in the clinic?

	Tick answer
Yes	
No Why not? eg. Kids just keep pulling it down	

## IF NO GO TO FULL MOON CALENDAR HAND HELD CARD

If you use it, what do you use the calendar for?

	Tick answer
Remind people when to come for their needles	
Record other answer	

## The Full Moon Calendar hand held card

Who do you give the card to?

	Tick answer
All people who require rheumatic fever needles	
Only people who have attend for their needles.	
Record other answer	

How does the full moon strategy affect the clinic?

	Tick answer
Makes it easier for us as there is only one week in the	
month we have to think about RHD needles	
Makes it too busy for us that week	
Makes no difference	
Record other answer	

## **APPENDIX B**

For people at risk of RHD: Full Moon evaluation questionnaire for the radio advertisement, the flipchart, the poster, and the hand held card.

Date		
Age	Community	
Gender M   F	Indigenous Status AB / TSI / NI	
Tick if answered the radio advertise	oy parent/carer sement	
Did you hear the C	AAMA radio reminders for the full moon	? Yes   No
If no why not?		
If no why not?		Tick answer
Reception is no go	od here	
No radio		
Don't listen to the r	adio	
Wasn't on when I v	vas listening	
I don't listen to CA		
Record other answ	er	
	PCHART QUESTIONS	20000000
ii you nearu ine rac	dio advertisements, what was the main n	nessage?
		Tick answer
Go for your needle	at the full moon	TION GITOWOT
	er eg. Don't know, didn't understand	
Did you like the ad	?	
		Tick answer
Yes		
No Why?		

## The RHD information flipchart

Have you seen the patient flip chart? Yes / No

## IF NO, GO TO FULL MOON CALENDAR POSTER QUESTIONS

What is useful about the flipchart?

	Tick answer
Tells me when to have my needles	
I use it to keep a record of my needles	
Helps me to understand rheumatic fever	
Nothing useful	
Never seen it	
Record other answer	

## The Full Moon Calendar poster

Have you seen the Full Moon Calendar poster in the clinic?

	Tick answer
Yes	
No	

## IF NO, GO TO FULL MOON CALENDAR HAND HELD CARD

What is the full moon calendar for?

	Tick answer
Remind people when to come for their needles	
Record other answer	

Do you check the calendar to see when it is time to have your needle?

	Tick answer
Yes	
No	

## The Full Moon Calendar hand held card

	Yes	No
Do you have a Full Moon card?		
If no why not? Eg. I don't have anywhere to keep it		
Do you like having your own card?		
Is the card easy to understand?		
If no why not?		
Do you check your card to see when it is time to have your needle?		

# **APPENDIX C**

## **Chart Audit Form**

Name	DOB	HRN	Community

Date	Rheumatic fever  *initial diagnosis (I)  *recurrences (R)  *suspected (S)	Rheumatic Heart Disease *Initial Diagnosis (I) *suspected (S)	Penicillin injections  * Place a X in the box beside the appropriate date (X)  **Check discharge summary as may have been given in hospital	* Place a X in the box beside the appropriate date (X)	Reason for Hospitalisation *ARF (ARF) *RHD (RHD) *Valve surgery (VS)	* Place a X in the box beside the appropriate date (X)