Developing a sustainable programme of cervical screening using VIA and HPV testing in rural Malawi

Based in Nkhoma CCAP Hospital and its surrounding Health centres in Central Region

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Dr Christine Campbell and Professor Heather Cubie

Co-leads


Nkhoma
TANZANIA
ZAMBIA
MOZAMBIQUE
ZIMBABWE
INDIAN OCEAN
Mount Mahoni
6,170 ft.
NYIKA NATIONAL PARK
Karonga
Mzuzu
Mzimba
Likhata Bay
Lake Malawi
KASUNGU
NATIONAL PARK
Nkhotakota
Kasungu
Dowa
Salima
Mchinji
Lilongwe
Monkey Bay
LAKE MALAWI NATIONAL PARK
Dedza
Mangochi
Lake Malombe
SHIRE HIGHLANDS
Balaka
Lake Chilwa
Zomba
Blantyre
Mount Malanje
9,843 ft.
Chikwawa
Cholo
Nsanje
GREAT RIFT VALLEY
Luangwa
Bua
Zambezi
Shire
Lugenda
0 75 150 mi
0 75 150 km
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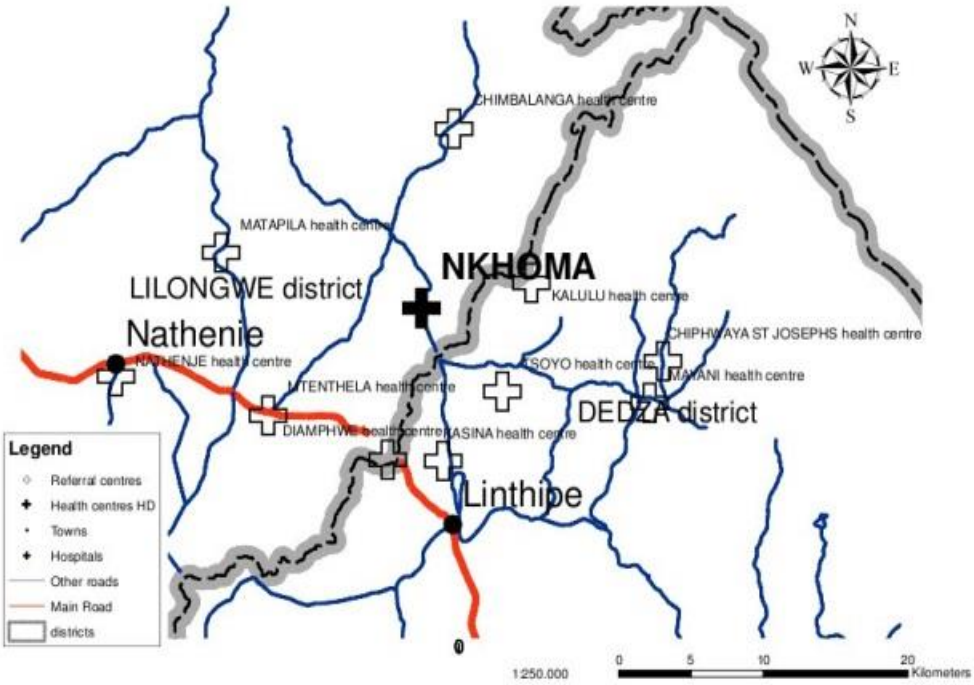
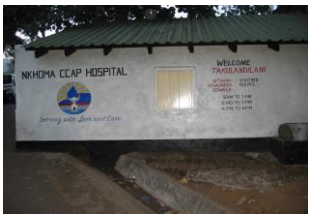

N
W
E
S
CHIMBALANGA health centre
MATAPILA health centre
LILONGWE district
NKHOMA
KALULU health centre
Nathenje
NATHENJE health centre
CHIPHWAYA ST JOSEPHS health centre
SOYO health centre
MANJANI health centre
NTENTHELA health centre
DIAMPHWE health centre
NASINA health centre
DEDZA district
Linthipe
Legend
Referral centres
Health centres HD
Towns
Hospitals
Other roads
Main Road
districts
1:250.000
0 5 10 20
Kilometers

Nkhoma Cervical Cancer Screening Programme (CCSP)

Nkhoma: Visit 1 May 2013

Off to a flying start!

Professor Heather Cubie and Dr Christine Campbell, co-leads for the programme organised their first visit to Nkhoma as soon as their success in the Scottish Government application process was announced and arrived at Nkhoma Hospital on Sunday 5th May 2013. We immediately received a welcome orientation from **Mr Savel Kafwafwa**, Clinical Officer for 8 years at Nkhoma, responsible for team of nurses involved in Out-Patient Services and our newly appointed project co-ordinator (50%) for our Cervical Cancer Screening Programme. Savel is energetic, enthusiastic with excellent English and an excellent communicator, immediately reassuring us that this was a good appointment for the programme.



Our week was spent entirely on meetings and planning sessions. First we met Dr **Reynier ter Haar**, Medical Director and renewed our acquaintance with **Dr David Morton**, Deputy Medical Director with whom we had developed the funding application when he was in Scotland in autumn 2012. After a tour of the 1915-established Hospital and clinics, we paid a formal call to the General Secretary of Nkhoma Synod who gave the project blessing.

Our next visit was to Lilongwe with Rey and Savel for a brief meeting with **Dr Bagrey Ngwira**, …….. College of Medicine, University of Malawi who outlined the Government Policy of providing **VIA at 90 sites, but emphasised the challenges associated with delivery** - lack of skilled personnel and lack of delivery of the 2 week training created by JHPIEGO a decade ago and inadequate provision of CO_2 gas for cryotherapy treatment of early lesions**.** He also updated us on the GAVI funded HPV vaccine demonstration project which was due to start in centres in North and South, but not Central Malawi. Finally, Bagrey commented that SOS Healthcare was running VIA with cryotherapy in Lilongwe and Rey felt we should visit there and then. This was indeed a hugely significant meeting as it identified more clearly the inadequate supply of gas and its huge cost. Recognising that to treat the anticipated number of women (approx. 10% of our target of 8000) would use the whole of our available budget, we immediately focused on potential alternatives.

Monday afternoon was taken up with an **Introductory project meeting** which was opened with prayer, chaired by David and minuted by Savel. Heather gave a short presentation on the project and the Scottish component and members of the Nkhoma team were introduced. Discussion centred on

a. Numbers: David was keen to concentrate on actual numbers of women to be screened and it was agreed that 800+1000+1000 were reasonable estimates for the hospital population since even now ~400 VIAs are being done per annum. Roll-out to 500 pa to each of 10 HC was too optimistic and not likely to be feasible. All agreed we should concentrate on hospital clinics for Year 1 as Nkhoma Hospital represents the hub in our hub and spokes model.

b. HPV samples: All postnatal mothers at 6 weeks and beyond are supposed to have a pelvic examination therefore taking a brush sample for HPV would be straightforward for them, whereas ART clinic patients do not and there was discussion about self-taken swabs, but decisions were deferred. We discussed the HPV test, the patient/sample flow and management algorithms and the need for very detailed protocols which need to be in place before the new level of service is introduced. Not only WHO guidelines but Zambian processes should be

looked at. It was however agreed at this stage, that HPV and VIA should run concurrently to start with, to test the validity of the intention to send only HPV+ women for VIA.

c. Information materials: Nkhoma had some materials which had been good for the original VIA trial, but they did need reviewed with a decision as to whether both English and Chichewa versions were necessary. David suggested there might be merit in combining community sensitisation with US funded male circumcision project so that both sexes were informed together.

d. Training: This is a big issue. The project team includes Beatrice who did the 2 week training in Blantyre and carried out most of last project, but would not be available for the current project until halfway through due to postgraduate study in Kenya. Two other nurses who attended 2 day training (Eunice and Harriet are undertaking VIA currently. Belito is the clinical co-ordinator for the project but has never had training. Heather and Christine were keen that he did the 2 week training in Blantyre if possible. Costs of training there or bringing a trainer to Nkhoma are to be investigated by Savel.

e. Communication: All recognised the importance of having good processes; a Nkhoma group email list would be set up by Chris; monthly teleconferences between Scotland and Nkhoma would be arranged for the last Thursday of each month. Savel would produce a reporting tool by the end of the week.

f. Laboratory: Edson Kawonga (Laboratory Manager) and Ngari Teakle (Australian Laboratory Advisor) attended part of the meeting. Heather gave a brief presentation about Cepheid GeneXpert® HPV test (first use in Africa) with discussion focussing on the practicalities of adding the HPV test to existing laboratory workload.

g. The meeting ended with prayer.

Monday afternoon team meeting

back row: Christine Campbell, Edson Kawonga, Naomi Kapangaziwiri, Heather Cubie, David Morton

front row: Beatrice Kabota, Belito Madetsa, Savel Kafwafwa, Reynier Ter Haar

What an amazing first day!

In the morning of the following day we accompanied Savel and 12 other healthcare staff to an outreach site (Khokhwa) for the monthly mothers and children clinic. An old, open classroom is used as the base for the clinic but most aspects take place outside. Infants are weighed and weight recorded, immunisations given signs of illness and malnutrition direct them to other healthcare assistants for examination. Antenatal and family planning services all also offered.

In 2.5 hours the team saw 316 of the village's 405 children under 5, gave 70 infant PentaV+Polio+Pneumcoccal+Rota immunisations, 67 family planning attendances, 24 children had a consultation with the Clinical officer present (none were serious) and there was 1 antenatal patient (most go to Nkhoma for antenatal care). It was very impressive. Savel took the time to point out signs of malnutrition in many children, to explain traditional charms which are often erroneously used with infants before medical help is sought and to inform us that girls might be sexually active from age 8-9, partly because of tribal customs. He also informed us that in this type of setting drama, a live band and Fanta would always bring the village together! After lunch we had a budget planning session with David, Savel and Agness, the accounts administrator. We discussed intervals for reporting and invoicing. It was agreed that Agness would send monthly statements of expenditure with an invoice quarterly in June, September, December and March to fit with the fiscal year in the UK, to Neil McLean, the NHS Lothian R&D accountant. There was discussion about immediate costs and it was agreed that the first quarter would include salaries from May 1st, the element for refurbishment of the VIA rooms, some office costs and the whole year's overhead allocation to allow smooth running.

On Wednesday we visited two **Health centres** which would become spokes of the Nkhoma model. The first at Kasina was run by St Joseph's Catholic Mission and was an extensive, well laid out facility but lacked medical/clinical officer staff, had few nurses and did not offer VIA. With a large reproductive health and HIV caseload and a catchment area of 47,000 in 16 groups of villages, it will probably become the first outreach centre. We then went to Mayani, where the Government-run Health Centre was a much more humble facility, overcrowded, in need of some remedial work and having only 2 nurses, and 2 clinical officers. VIA was being carried out but only about 4-5 per month, by a male nurse who had had 1 week's training at a Government Hospital by Ministry staff in a completely inadequate space. No treatment is given but women are referred to Dedza District Hospital for cryotherapy when necessary (43km away on a dusty, bumpy road whereas Nkhoma Hospital is 20km away).

Perhaps our most important meeting in getting permission for the project was a very formal meeting with the **Senior Chief Mazengera** for the region. This required us to go with a Group Village Chief who worked in Nkhoma. We waited in the car at the Government residency of the Senior Chief until the Group Village chief had been granted an audience for us. The meeting was opened (and closed) with prayer and we were very formally welcomed. With Savel acting as interpreter, we explained the project and the Senior Chief expressed her thanks and support and said she would call a meeting of the Group Village Chiefs at Nkhoma Hospital to ensure their support. She was a very gracious and obviously compassionate woman who cared for the well-being of her people. After gifts (including Scotland-Malawi badges) were given, we were permitted photographs with Her Excellency.

Meeting with Regional Senior Chief Masengera

Left to right: The Senior Chief's Security Guard, Christine, Heather, Senior Chief Masengera, Group Village Head Kalind

Our final visit that day was to discuss IT issues in Nkhoma. Chris Kulanga explained the patient level system, Afyapro which had been in the hospital for about 3.5 years and which within the the Scottish ICT funded project should extend to 9 surrounding sites by 2015. Currently information was added at sites where it is installed, there being 2 associated with increasing to 9 overall. Roll-out is slow and training in accurate use complex. A new project called Nkhoma Mhealth, which is funded by Cordaid under an umbrella body of several organizations called Connect 4 Change (C4C) aims at improving communication between the hospital, community health care workers and clients using SMS and data capture at community level by means of mobile phones. We discussed adding a cervical screening module to Afyapro, with the priority task being to identify all the fields required to meet our needs.

On Thursday, we made an introductory visit to **Nkhoma College of Nursing** where we met with the Dean of Academics and VSO nurse tutor, Briony Jenkins and discussed the current curriculum and how it was changing, leaving room for increasing knowledge about HPV, cervical cancer, prevention and screening. Support was given for the development of a few lectures to increase the knowledge base of students, which could be delivered when the Scottish team returned to Nkhoma in October 2013. The VSO team (Briony, Chris Holt and David Atherton) would be happy to build these into a curriculum module.

Back in the hospital we were shown t**he new Reproductive Health Unit**, where all antenatal, family planning, STI clinics and VIA will be delivered within the same area. The funding of our project means that some re-arrangement of planned room allocation has already taken place, but building work is not complete. Two new clinic rooms and a dedicated office have been set aside for our Cervical Cancer Screening programme (CCSP). The Ministry of Health VIA Register showed approx. 16 women had come for screening in the previous two weeks, mostly from other hospital clinics, but there was no record of how often cryotherapy had been given.

There is much to do before introducing the new service and we spent time with Savel, attempting to create a timeline for the rest of 2013 with tasks and responsibilities separately allocated. A **project planning meeting followed, attended by** Heather, Christine, David, Savel, Agness, Beatrice, Belito and Rey, as well as Eunice Masinja (involved in VIA delivery in the earlier Dutch-funded pilot). We agreed the specific areas on which to focus at each team meeting should be:

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Infrastructure, Protocols, Personnel, Patients/clients, Training, IT preparedness, Sensitisation, Equipment, Finance, Project Management and Engagement with College of Nursing. Using the draft timeline for the next 6-12 month, each of these areas was discussed in some detail with the team and tasks/responsibilities allocated. The most cogent discussion centred round what to use for treatment of early lesions (CO_2 or N_2O or something else [cold coagulation was not really discussed at this point]. CO_2 is less expensive, WHO and other screening organisations support the use of either, but concerns about whether CO_2 is as effective.

Developing the project timeline with Savel

Friday morning discussion with David

It will also be important to develop and agree Protocols and Care Pathways early as these will drive training needs and that some sensitisation takes place early (of hospital staff, all levels) and in communities, without raising expectations too high too early. In terms of project management, it was agreed that the group email would be used to ensure all members of the Nkhoma team were kept informed of project issues. Both Nkhoma and Edinburgh teams will meet regularly but in addition a Senior Management team will aim to have monthly skype or teleconference calls on the last Thursday of each month, 3pm Nkhoma time. Heather and Christine thanked the team such a constructive start to the project and for the welcome they had been given.

A short time spent in the **Antenatal clinics** showed us where health messages about cervical screening could be easily incorporated, and women made aware of the opportunity of screening when they attend a postnatal follow-up visit. We saw health passports for women of child-bearing age being used; heard a health educator leading women in song ('don't make me old by having lots of children') and giving advice on exclusive breastfeeding and witnessed several husbands listening and participating.. A final meeting with David to discuss broader project issues, including costs, use of HPV tests, and cancer registry in Malawi.

On Friday midday we bid a sad farewell to Nkhoma, Savel driving us with Reynier to Lilongwe where we met with Mrs Twambilire Phiri (Reproductive Health Principal Nursing Officer with responsibility for Cervical Cancer Program) and were joined later by Dr Beatrice Mwagomba (Programme Manager, NCDs and Cancer), both at **the Ministry of Health**. Mrs Phiri described the national cervical screening policy and some recent meetings where reporting forms, WHO guidelines and manuals were promoted and distributed. Rey indicated that Nkhoma Hospital had received an invitation.

At Ministry of Health, Lilongwe, with Mrs Phiri (left) and Dr Mwagomba (right)

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