

## BASIC PLASTIC SURGERY SKILLS FOR DISTRICT AND COMMUNITY DOCTORS TO MANAGE BURULI ULCER IN GHANA

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### Key words

Buruli ulcer, basic skills

### Abstract

**Background:** The increase in incidence of Buruli ulcer in Ghana has also been complicated by problems in the care of the patients including lack of knowledge and training by staff, unwillingness of the staff to handle the cases for fear of contracting the disease.

**Method:** An evaluation of training workshop on basic plastic surgery skills.

**Results:** Three basic plastic surgery skills training workshops were held in 3 hospitals in 3 different districts in the region with participation from 15 hospitals/health centers drawn from 7 districts of the Ashanti Region. In all 128 health personnel comprising of Doctors – 18, Medical Assistants – 24, Clinical Nurses – 60 and Others – 26 were trained. These trainees went on to form the core of the so-called Buruli Ulcer Management Teams (BUMTs), which are now active in 6 of the institutions that participated in the programme.

**Conclusion:** As a result of these workshops active Buruli Ulcer Management Teams (BUMTs) have been formed in 6 health institutions in the region.

### Mots clés

l'Ulcère de Buruli, l'atelier de compétences,

### Résumé

**Fond:** L'augmentation dans l'incidence d'ulcère de Buruli au Ghana a été aussi compliquée par les problèmes qui font face au soin des malades y compris le manque de connaissance et d'entraînement par le personnel, la mauvaise volonté du personnel pour entreprendre les cas en raison de la crainte de contracter la maladie.

**Méthode:** Une évaluation d'atelier de formation sur les compétences de chirurgie esthétique fondamentales.

**Résultats:** Trois ateliers de formation en compétences de chirurgie esthétique fondamentale ont été tenus à 3 hôpitaux dans 3 districts différents de la région avec la participation de 15 centres d'hôpitaux/de la santé choisis de 7 districts de la région d'Ashanti. Au total, 128 personnels de santé comprenant des médecins - 18, aides médicaux - 24, Infirmières cliniques - 60 et autres - 26 ont été entraînés. Ces stagiaires ont procédé pour former le noyau de soi-disant Equipes Dirigeantes d'Ulcère de Buruli (Buruli Ulcer Management Teams: BUMTs), qui sont maintenant actifs dans 6 des institutions qui ont participé au programme.

**Conclusion:** à la suite de ces ateliers, ces Equipes Dirigeantes d'Ulcère de Buruli actives ont été formées dans 6 institutions de santé de la région.

## Introduction

The increase in the incidence of Buruli ulcer patients in Ghana especially in the Ashanti Region is becoming more of public health and social problem.<sup>1,2</sup> The complicated cases with the increase in their management cost are equally a problem to the plastic surgeon. The results of treatment are better when these patients are seen and managed earlier. More so, the complications and sequel are far less when these patients are treated earlier.<sup>3-8</sup> On the average most of these patients reported to the tertiary health institutions after one year. Some cases reporting early to the district/community health institutions may not be managed properly due to various factors. Some of these factors might be:<sup>10,12</sup>

- The district/community health institution staff had none or inadequate knowledge on the management of these patients mainly because they had no training in handling them
- The unwillingness of the staff to handle these cases
- The fear of the staff to contract the disease from the patients
- Lack of surgical consumables to treat the patients

It was therefore thought wise to take up the challenge of training the district/community hospital staff in the management of the Buruli ulcer patients in their own or nearby institutions.

The programme was designed and started off on voluntary basis far back in 1996 while sources of funding was being sought for.<sup>7</sup> In the meantime voluntary teams were organized to various endemic areas in Ghana notably in the Ashanti Region and the Ga District of the Greater Accra Region. In 1998 a voluntary team visited Abor Catholic Hospital and also another one visited Comboni Catholic Hospital at Sogakofe in 1999, both in the Volta Region where there were reported cases of Buruli ulcers. Since 1994 the voluntary teams visited almost regularly institutions such as Agroyesum Catholic Hospital, Nkawie Government Hospital and the Evangelical Presbyterian Church of Ghana Medical Centre, Krapa.

The aim of the team was to operate as many as possible Buruli ulcer patients and also to train the local staff to do the same – *the Basic Plastic Surgery Skills*. However, as much as the team would have wished to continue this good work there was often lack of logistics to continue.

In the year 2000 two separate and identical applications were made to 3 organisations, including the American Leprosy Missions (ALM). The later organization replied positively and offered to assist through a Christian based organization. The Evangelical Presbyterian Church of Ghana was selected as the partner organization to help in the conduct of this project. The approved project title was “Basic Plastic Surgery Skills for District/Community Doctors to Manage Buruli Ulcer Patients in Ghana”. With the support of the ALM and the Ministry of Health-Ashanti Region three successful workshops were held:

- First Workshop: Agogo Presbyterian Hospital in November 2001
- Second Workshop: Nyinahini Government Hospital in August 2002
- Third Workshop: Asamang SDA Hospital in October 2002

An average of two workshops per year had been planned for till year 2006.

### *Purpose of the Workshops*

The purpose of the Workshops was to:

- To train district/community doctors and other health care providers to develop their own Buruli Ulcer Management (BUMTs) in order to provide holistic treatment to the Buruli ulcer patients in their own local health institutions. Only complicated cases need be referred to specialized centres.
- To reduce the pressure put on the few hospitals in the Ashanti Region noted for treating Buruli ulcer patients. Some of these health institutions had as many as 70% of their beds occupied by Buruli ulcer patients.
- To educate the participants to identify and encourage patients and their guardians to report Buruli ulcer cases to the health institutions at very early stages.

## Methods

The course was designed for district/community level health practitioners. The trainees included doctors, medical assistants, anaesthetists, clinical nurses and other health care providers in the districts. Each workshop was actually planned to have trainees selected from 1-3 nearby districts, all totaling 25 personnel. (But the reality was different Figures 1 and 4).

The training team (trainers), headed by a Consultant Plastic Surgeon (the Course Director) was coordinated by the Ashanti Regional Leprosy Control Officer. The team comprised of plastic surgeon 1, general surgeon 1, plastic surgical resident 1, clinical nurses 3, health educator 1 and anaesthetists 2. The course curriculum is shown in table 1.

## Results

Within the period of 1 year (November 2001 till October 2002) 3 of such training workshops were held in 3 hospitals in 3 different districts in the region with participation from 15 hospitals/health centers drawn from 7 districts of the Ashanti Region. A total of 128 personnel were trained during the three workshops (Figures 1, 2, 3, and 4); Doctors 18, medical assistants 24, clinical nurses 60, others 26 (these were disease control officers and ward assistants). A total of 49 patients were treated during the three workshops (Figure 5).

Table 1: Course curriculum

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*Theoretical session*

General information on Buruli ulcer

- Causative organism: *Mycobacterium ulcerans*
- Possible modes of transmission
  - Water bug
  - Direct contact
- Drug therapy for Buruli ulcer
  - Drug trials

Surgical treatment

- Simple elliptical excision and primary closure
- Tangential excision and debridement
- Split-thickness skin grafts
- Full-thickness skin grafts
- Local flap coverage
- Distant flaps

Anaesthesia

- Local
- Regional
- Spinal
- General

Health education

Wound dressing

Splinting and physiotherapy

General discussion and logistics

*Practical training sessions*

Operating theatre: basic plastic surgery skills

- Tangential excision and debridement
- Elliptical excision and primary closure
- Split-thickness skin grafts
- Full-thickness skin grafts
- Local flap coverage

Wound dressings

Health education

Splinting and physiotherapy

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The course was a full, 2-day intensive workshop

Figure 2: Workshop 1 (Agogo) (total No. trained = 40)

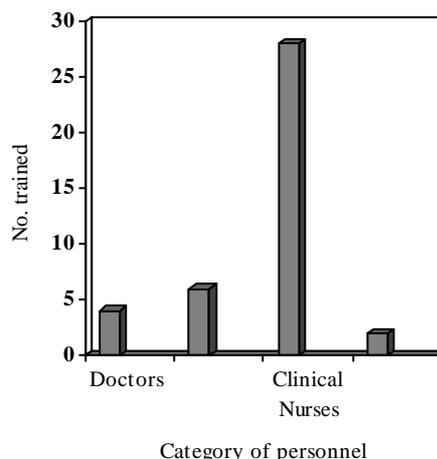


Figure 3: Workshop 2 (Nyinahini) (No. of personnel trained = 46)

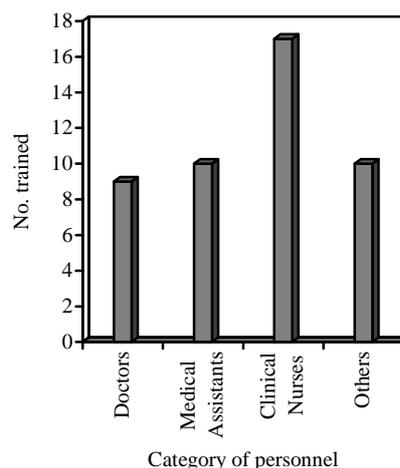


Figure 1: Distribution of participants during the 3 workshops

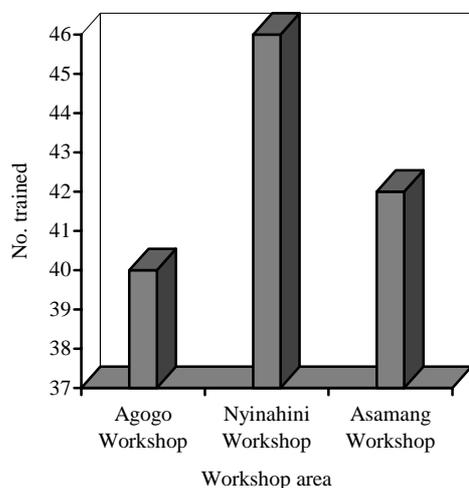


Figure 4: Workshop 3 (Asamang) (No. of personnel trained: 42)

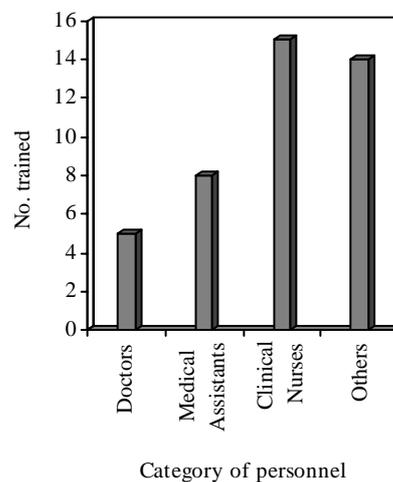
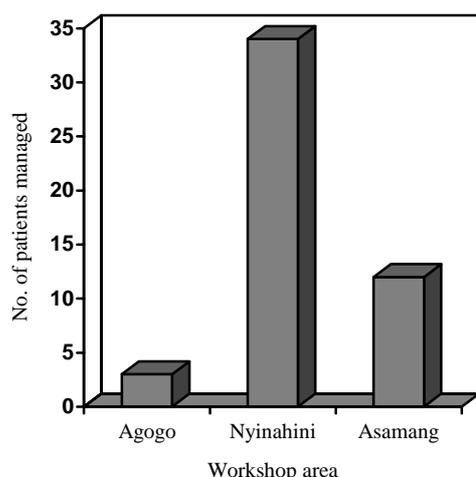


Table 5: Patients managed during the 3 workshops



### Discussion

To measure the impact of these training workshops one needs to use some parameters such as:

- Record of the Buruli ulcer patients in the various districts of the Ashanti region.
- Both OPD and Admission records of Buruli ulcer patients at the Komfo Anokye Teaching Hospital (KATH) over a period of years, say 5 years, before the start of these workshops.
- Present OPD and Admission records of KATH.

In the absence of these data it would be difficult to measure the impact. Comparing these figures to the general case reports of BU in the Ashanti Region (which is on the increase) one can deduce that the majority of the patients are now receiving treatments at the district/community health institutions. This is confirmed by monitoring and evaluating visits to some of these hospitals. For example the doctors at Nkawie and Nyinahini Government Hospitals now do more surgery on Buruli ulcer patients. In the past (before the workshops) these hospitals did mainly wound dressings for these patients for a few days and then referred them to KATH.

At the end of the five-year period of the running of the workshops, by which period the whole Ashanti Region would have been covered, there would be a proper assessment of the effectiveness of the workshops.

The idea of Buruli Ulcer Management Teams (BUMTs) now exists “loosely” in most of the hospital/health centres where personnel had been trained at the workshops. Active BUMTs now exist in 6 health institutions. The Ghana Health Service needs to provide more surgical consumables to these health institutions in order to enable them manage these patients more effectively.

As a result of these workshops active Buruli Ulcer Management Teams (BUMTs) have been formed in 6 health institutions in the region.

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