Cancer screening by local volunteers

Babu Mathew, Ramani Wesley, Suresh Chandra Dutt, Sreedevi Amma, & C. Sreekumar

In a tribal village in Kerala, India, local volunteers were trained to work in a programme for the primary prevention of tobacco-related cancers and the secondary prevention of common cancers. They gathered data on the use of tobacco and alcohol in a population of some 19,000 people, and identified one or more warning signals of cancer in 430 persons, who were subsequently examined by physicians. Confirmation was obtained of 10 new cancers, 7 recurrent cancers, 46 oral precancerous conditions, and 58 precancers at other sites. The community's awareness of cancer problems increased and the people learnt about the importance of self-examination in the detection of breast cancer and oral cancer.

During April 1991 a study was made in six randomly selected wards of Kalpetta, a remote and poor tribal village in Kerala State, India, of the efficacy of using trained volunteers from the community in a cancer screening programme. The local Red Cross Society selected 210 enthusiastic young people of both sexes who had received at least a basic education and were acceptable and accessible to the community. They were trained in a single day by specialists from the Regional Cancer Centre at Trivandrum, who, using audiovisual aids, discussed the clinical and etiological aspects of common cancers and explained self-examination for breast cancer and oral cancer. The volunteers were shown how to conduct oral inspections for the detection of precancers, malignancies and other suspicious lesions. They also learned how to assess the prevalence of tobacco and alcohol use, to create awareness of the cancer problem, and to identify persons exhibiting any of the seven warning signals of cancer described by the American Cancer Society. Pretraining and post-training evaluations of the volunteers' knowledge, attitudes and practices indicated average scores of 52% and 76% respectively.

After the programme had been publicized in the village and people had been encouraged to present themselves for examination, 21 groups of 10 volunteers, each containing both males and females, conducted a door-to-door campaign. With a view to identifying the warning signals they were instructed to ask questions and examine the oral cavity in high-risk individuals. They were also asked to tell people about the hazards of smoking and chewing tobacco and of drinking alcohol. The villagers were given free booklets on cancer in which their attention was drawn to the
importance of early detection and prompt treatment. Villagers who were reluctant to participate were contacted through their community leaders. The volunteers assembled each week to discuss problems with their group leaders.

Persons found to have one or more of the warning signals were given an appointment at a local cancer detection clinic so that they could be examined by specialists from the Regional Cancer Centre at Trivandrum. The range of confirmatory procedures included fine-needle aspiration cytology, punch biopsy, the Pap smear test, impression smears, and proctoscopy. Random checks made by the specialists on 400 of the persons whom the volunteers had not identified as suspect cases revealed no identifiable lesions. Confirmed cancer cases were treated in the Regional Cancer Centre; precancerous lesions were managed locally by doctors. Patients with oral precancerous lesions were encouraged by the volunteers to stop using tobacco and alcohol and were urged to eat green and yellow vegetables and fruits with a high vitamin A content.

All 3589 households in the designated wards were covered within a week, during which 18 064 persons were interviewed out of a total of about 19 000. One or more warning signals were identified in 430 individuals, of whom 287 attended the clinic as recommended. Of the 10 new cancers that were confirmed, 6 were in early localized stages. Also confirmed were 5 oral cancers, 2 cervical cancers, 2 sarcomas and 1 carcinoma of the lung. Among people aged over 15 years the use of tobacco occurred in 51% of males and 21% of females; this was combined with the use of alcohol in 14% of males and in 0.1% of females. Alcohol use in the absence of tobacco use occurred in 1.3% of males but in no females.

Achieved and there was a high degree of compliance among screened subjects in respect of attendance at cancer confirmation clinics. The volunteers helped to overcome the stigma and fear associated with cancer, and their performance was excellent in terms of the number of cases detected and their diagnosis.

Some 60% of the cancers detected were in early stages of development, whereas in the country as a whole since 1982 under 20% of cancer patients have presented early. Oral cancer was the predominant disease found among males.

The chewing of tobacco was particularly common among men and women aged 60 years and over, being practised by 40% and 49% respectively. Smoking predominated among middle-aged adults. In this connection it should be noted that a shift from chewing-related cancers to smoking-related cancers is now becoming evident in the national cancer registry.

Because of the project reported here, the people of Kalpetta have become much more aware of cancer problems than they were formerly and have learnt about the Pap smear test and self-examination of breast and mouth. The highly motivated volunteers, some of whom possess leadership qualities, could serve in future projects. Even after completion of the study the volunteers continued with anti-tobacco and cancer detection activities.

The volunteers worked without any remuneration to take the message of cancer control to people’s homes. Forms, publicity materials and training guides were sponsored by private businesses. Encouraging results were obtained and a similar approach could probably be adopted in other settings.

Acknowledgements

The authors are grateful to Dr Roijyam Jacob, Dr Rema Jyothismayi and Dr J. Ambika Kumari for their assistance in carrying out this study, and to Dr M. Krishnan Nair for his guidance.

In this study the target community provided the resource personnel. Thanks to the deployment of motivated and trained volunteers from the village, good population coverage was achieved.