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Prevention of Blindness and Deafness

Report of the Eleventh Meeting of the WHO Alliance for the Global Elimination of Blinding Trachoma

Cairo, 2–4 April 2007

GET 2020

GLOBAL ELIMINATION OF BLINDING TRACHOMA BY THE YEAR 2020

CONTENTS

1. INTRODUCTION

The eleventh annual meeting of the WHO Alliance for the Global Elimination of Blinding Trachoma by the Year 2020 (GET 2020) was held at the World Health Organization (WHO) Regional Office for the Eastern Mediterranean, Cairo, from 2 to 4 April 2007. The meeting was attended by 85 participants, of whom 34 were national coordinators for trachoma control programmes (see Annex 1).

The opening ceremony commenced with an address from Dr Hussein A. Gezairy, Regional Director for the Eastern Mediterranean. Dr Ahmed Trabelsi, Regional Co-Chair, International Agency for the Prevention of Blindness/IMPACT, delivered a message from His Royal Highness Prince Abdulaziz Bin Ahmed Bin Abdulaziz Al-Saud, Regional Chair for the Eastern Mediterranean International Agency for Prevention of Blindness/ IMPACT. Dr Silvio Mariotti, Medical Officer, GET 2020 Secretary, World Health Organization, Geneva, Switzerland, provided a global update on trachoma. Other speakers included: Dr Nasr El Sayed, First Under-Secretary, Ministry of Health and Population, Egypt, speaking on behalf of H.E. Dr Hatem El-Gabaly, Minister of Health and Population; Mr Mohammed Demerdash , Ministry of Housing and Utilities & Community Settlements, Egypt, speaking on behalf of Dr Ahmed Maghrabi, Minister of Housing and Utilities & Community Settlements; Dr Akef El Maghraby, Al Noor Foundation; and Dr Tabita Botros Shokai, Minister of Health, Sudan. A summary record of the opening ceremony is provided in Annex 2.

Dr M.A. Jama, WHO Deputy Regional Director for the Eastern Mediterranean, opened the first working session of the meeting on behalf of the Regional Director. Welcoming the participants, he said that partnerships involving international organizations, nongovernmental organizations, professional groupings and academic institutions were playing an increasing role in global health and the work of WHO, and were leading to a growing investment in health in support of the priorities being set by countries. The Alliance was to be commended for the achievements of the previous decade, in which the generous donation of azithromycin by Pfizer Inc. had played a crucial role. The Alliance's successful balance of partners provided a model for others. However, trachoma continued to affect millions around the world, especially women and children in developing countries in Africa. Proven prevention measures were available, in particular the WHO-endorsed SAFE strategy, with its four integrated components, surgery (S), antibiotic treatment (A), facial cleanliness (F) and environmental improvement (E), and poverty reduction through socioeconomic development. Unfortunately, the financial resources made available to date had been unable to match the needs.
The Alliance must therefore continue to advocate for the mobilization of additional funds, including those available through the new WHO approach to the elimination of neglected tropical diseases. He looked forward to the guidance to be provided by the meeting.

Dr Rachel Jose (India) was elected Chairman and Dr Nouhou Diallo (Guinea) Vice-Chairman. The Agenda was adopted (see Annex 3).

2. COUNTRY REPORT

Dr Silvio Paolo Mariotti, Medical Officer, GET 2020 Secretary, World Health Organization, Geneva

The Alliance continues to attract strong interest, as shown by the high attendance at the current meeting, especially of representatives from endemic countries.

The trachoma data forms sent each year to endemic countries are the basic tool used at the global level to provide better knowledge of the disease burden and to monitor progress towards GET 2020. Trachoma data forms were sent to 40 of the 56 countries where trachoma remains endemic. Completed forms were received from 28/40, compared with 32/40 in 2006, and some were received very late, which meant that they could not be included in the analysis for the current Alliance meeting. Countries are urged to collaborate with their partners to ensure that all the data requested are collected and entered accurately. The forms are sent at the same time each year and countries are requested to submit them in a timely manner. The forms have been modified to make them simpler to complete and guidance on completion is available from WHO; the agenda for the current meeting includes a demonstration of the new forms (see section 10).

Details of the analysis of the trachoma data forms received are available on the Alliance web site. The forms showed a further increase in the availability of survey data at national and district levels, which provides better geographical definition of endemic areas. Surveys have been undertaken in Cameroon, Guinea-Bissau, India, Kenya, Nigeria and Uganda, among others, and the data provided have been used to refine ultimate intervention goals (UIGs) and annual intervention objectives (AIOs). Intersectoral collaboration has strengthened further, with increasing involvement of the water, sanitation and education sectors, and partnerships between nongovernmental organizations and governments are increasingly becoming more stable, longer-lasting and better coordinated, with emphasis on the incorporation of trachoma-control and eye-care activities into national health systems. Although financial resources for health are growing, they remain difficult to access and distribute, and further efforts to mobilize funds are needed. Delivery of the SAFE strategy is expanding. Although more forms gave information on UIGs and AIOs for the “S” and “A” components of the SAFE strategy, coverage data were not always adequate. The number of trichiasis surgeries performed rose; however, it was significantly lower than expected, possibly as a result of recent changes in the funding for this component. In many countries similarly, the number of antibiotic treatments increased but some countries reported fewer antibiotic treatments than expected, again probably because of financing changes. Such shortfalls have serious implications for the comprehensive delivery of the SAFE strategy and could jeopardize the significant investment made in trachoma control activities to date. Few countries provided adequate data on the “F” component, which remains difficult to measure, but there is better understanding of its importance, and an increasing number of countries are implementing activities in this area. There has also been a rise in the number of countries reporting progress in delivery of the “E” component in relation to progress towards Millennium Development Goal 7, Ensure environmental sustainability. Overall, while lack of security has delayed activities in some countries, others have achieved better progress than expected towards their elimination targets, which is very encouraging.

Trachoma is also now embedded in the framework for controlling neglected tropical diseases at WHO (see section 7) and in major funding and advocacy initiatives, such as the United States Agency for International Development-RTI grants. Every opportunity should be taken to determine how the joint approach can benefit trachoma control activities and how the SAFE strategy can support the control of the other diseases concerned. Other developments include an increase on research on the SAFE strategy as a whole, updating and expansion of the document resources on the web sites of the Alliance and Alliance partners, and further inclusion of trachoma

data in the online WHO Global atlas of diseases.

Discussion

Data collection

WHO, Alliance partners and national coordinators should investigate further the reasons why many countries are not providing adequate data, and countries should receive individual feedback on the quality of the information they provide.

Information sharing

Countries are requested to submit their national plans and programmes for inclusion on the WHO Prevention of Blindness web site so that the information can be shared for the benefit of all endemic countries and their partners. To date, only a few plans, collected on visits to countries, are available.

Neglected tropical diseases approach

WHO has integrated the previously separate programmes for the neglected tropical diseases, including trachoma, which are often present together in the same geographical areas and which have common intervention elements (see section 7).

Trichiasis surgery

National strategies should be adjusted, with increased support from partners, to increase the performance of trichiasis surgeries.

3. SELECTED COUNTRY REPORTS

3.1 PAKISTAN

Professor Asad Aslam Khan, National Coordinator, Prevention and Control of Blindness Programme and Director-General Punjab Institute of Preventive Ophthalmology, King Edward Medical College/Mayo Hospital, Lahore, Pakistan

A recent national survey of low vision and blindness in Pakistan indicated that 1.4 million people are blind, a prevalence of 0.9%. The leading causes of blindness are cataract (58%) and trachoma (14%).

Pakistan has included elimination of blindness as a priority in its tenth national development plan. Within the Ministry of Health, there is a national leprosy, blindness and tuberculosis control board under which is a steering committee for the prevention of blindness. The committee has national task forces dealing with trachoma, refractive errors and low vision, cornea, diabetic retinopathy, and glaucoma. These structures provide guidance for the implementation of activities by the provincial leprosy, blindness and tuberculosis control boards. The national trachoma task force was established in 2002 to determine the prevalence and incidence of trachoma, identify communities and groups at high risk, develop intervention and implementation strategies, approve action plans and supervise their implementation through the provincial boards, and report back to the steering committee. With support from WHO and Sight Savers International, the task force conducted a national trachoma rapid assessment in 233 villages selected from the four provinces and the northern area of the country in 2001–2002. The results were analysed to show villages with high, medium, low or no priority for trichiasis and active trachoma.

The national trachoma control programme started in March 2004 with the implementation of the SAFE strategy in three pilot areas; a fourth was added in 2006. Progress in the northern area was unfortunately delayed because of the earthquake there. The programme's objectives are to train ophthalmic surgeons, supply approved surgical kits and consumables for trichiasis surgery, perform all trichiasis surgeries required in the pilot areas, provide antibiotic treatment, form a subcommittee for development of public health education and promotion materials, raise awareness and capacity-building in relation to hygiene and sanitation, and seek support from national and international nongovernmental organizations.

A survey team was trained and a rapid assessment was conducted in three pilot areas in May 2004, followed by a door-to-door survey in June–August 2004. The survey in the fourth area was conducted in 2006. Surgery training was conducted and surgical kits were approved in the first half of 2005. During September–November 2005, trichiasis cases were collected from villages and taken to district hospitals for surgery using the recommended WHO procedure, which was performed free of charge. Azithromycin was purchased from a selected manufacturer and during August–October 2005 the first directly observed treatments with azithromycin, 20 mg/kg body weight, were distributed door-to-door to all trachoma-positive cases (100%) in the three villages. Health education materials on promotion of hygiene and facial cleanliness were developed and a trained ophthalmic technician, hired as a health educator for each pilot area, visited each village once a week to give health education talks and lead focus group discussions. Village health committees were formed to encourage community participation in environmental improvement activities, which included one-time cleaning of solid waste heaps, and spraying of insecticides. Cleaning and spraying equipment was then given to the village health committees. Sample latrines were constructed and

communities responded positively; 80–90% of households have since constructed indoor latrine of the same design, a breakthrough for behaviour change. Safe water supplies have also been constructed.

In March–August 2006 further door-to-door-surveys were carried out in all four provinces and data were analysed and reported to the sixth annual national trachoma task force meeting in September 2006. Prevalence was 0–13.7% for trachomatous inflammation (TF), 0–1.7% for intense trachomatous inflammation (TI). Interventions have been planned for implementation during 2007 in accordance with the situations found. The Chief Minister of the Government of Punjab has just approved the allocation of US$ 450 000 for trachoma control in the province. However, support is needed for elimination activities elsewhere in the country.

The programme has shown that community participation is essential to ensure the successful implementation of a trachoma control programme, and that a community-based approach requires a functioning primary health care system. It is also vital to understand barriers to access, community mobilization, identification of resources and their use and the establishment of partnerships. Formation of community citizen boards can motivate communities to run their own programmes. Health education and persistent contact with communities and political commitment by local government, with strong intersectoral public–private partnerships, are also essential.

Discussion

Elimination target date

Pakistan has been in the forefront in developing a prevention of blindness programme and is to be commended for giving priority to the elimination of blinding trachoma and for its comprehensive implementation of the SAFE strategy. Punjab was identified in 1998 as the province where trachoma was most serious as a public health problem. A three-year plan has been developed for Punjab and other provinces will be encouraged to follow. 2007 should see acceleration of programme and it is hoped that external evaluations will be conducted, for the pilot programme in 2007 and for the whole programme in 2012, with certification of elimination in 2014.

Antibiotic supplies

Pakistan manufactures azithromycin of assured quality, which is made available to the national trachoma control programme at special rates.

Environmental improvement

Householders have paid to construct their own latrines following a model constructed in the village by a nongovernmental organization.

3.2 NIGER

Dr Amza Abdou, Coordinator, National Programme for the Prevention of Blindness, Niamey, Niger

The population of Niger totals around 13 million, the majority living in rural areas. Literacy levels are low, safe drinking-water is available to 56% of the population and sanitation to 42%. A national survey in 1987 indicated that around 290 000 people were blind (prevalence 2.2%) and that the leading causes of blindness were cataract (45%), trachoma (25%) and glaucoma (22%). A Vision 2020 plan for the prevention of blindness was finalized in August 2006 and is being implemented. The main objectives of the strategic plan for the elimination of blinding trachoma 2005–2009 are to reduce the national prevalence of TF/TI from 36.4% to 7.5% in children aged 1–9 years, and to reduce the prevalence of trachomatous trichiasis (TT) in women over 15 years from 1.70% to 0.34% by 2009. Specific objectives and strategies to achieve them have been established. They include the performance of surgery in nearly 60 000 people affected by trichiasis by 2009 in health facilities or camps. It is also planned to treat 80% of the population in hyperendemic zones through community-based distribution of azithromycin and tetracycline ointment, and to achieve facial cleanliness in 80% of children aged 1–9 years in intervention villages through information, education and communication (IEC) activities. Environmental improvement objectives are to raise coverage with water supplies from 56% to 75% in the intervention areas, to promote appropriate solid waste disposal in 80% of households by 2009 through construction of latrines and IEC, and to achieve 100% of the plan objectives through the establishment of task forces, cooperation of the population, mobilization of resources, establishment of decentralized structures and coordination, monitoring and evaluation of activities.

A national survey conducted in 1997–1999 indicated a prevalence of TF/TI in children aged 1–9 years in the range 5.5–62.7% and a prevalence of TT of 0.1–4.1%. The areas covered by the interventions are those most affected, which were in the south of the country. Thanks are due to the following partners involved in activities relating to one or more components of the safe strategy: UNICEF, Americares, the Carter Center, ITI, Helen Keller International, and Lions Clubs International, SAPTA (a local nongovernmental organization and the West Africa Water Initiative.

The number of trichiasis surgeries performed in 2006 was 4 500 (AIO 10 580) compared with 6 500 in 2005 (AIO 7 560). Coverage of the other components of the SAFE strategy has increased considerably since the start of the programme in 2002. Antibiotic treatment is given as follows: infants aged under 6 months, tetracycline 1% ointment; children aged 6 months to 5 years, azithromycin syrup; and children aged over 5 years, azithromycin tablets. Coverage with mass distribution of antibiotics has risen from 72 villages in 2002 (95 000 treatments) to nine districts in 2005 (2.4 million treatments) and 11 districts in 2006 (2.5 million treatments). Since January 2007, discussions have been under way to incorporate this component of the SAFE strategy only in activities to control neglected tropical diseases. Of the 92 000 children examined in endemic districts, around 86% had clean faces. Latrine construction totalled around 6777 in 2006 compared with 7940 in 2003 and 3000 in 2002. IEC activities were undertaken in 14 512 villages in 2005 and 2006 compared with 1122 in 2003. Local and national trachoma control days have raised awareness of trachoma among the public and politicians alike.

Obstacles encountered

Personnel responsible for trichiasis surgery are overburdened, and the preparations for and implementation of national immunization days (four to six per year) involve all available human resources and so block other activities for several weeks. The supervision of surgery is irregular so that data may not be reliable. There were insufficient resources and a drop in surgery performance in one area in particular. Moreover, the activities of partners did not always coincide with those envisaged in the strategic plan. There was a lack of resources for distribution of antibiotics in two districts, reducing the number of treatments planned by more than 1 million people in 2006. Such problems lead to demotivation of distributors.

Strengths

There is a strategic plan in place and there has been a gradual improvement in implementation of the “C” and “E” components, with better provision of safe water supplies in villages in endemic areas and construction of latrine blocks in schools.

Lessons learned

Coverage with IEC activities has been inadequate owing to a lack of funding for training. While the demand for latrines is strong, there is a need to raise awareness of the link between latrines, insects and trachoma. Regular supervision is essential to assure the quality of activities. Greater support is needed through education and use of rural radio stations, with particular efforts to involve women in all activities.

Challenges

The greatest challenge remains the mobilization of adequate resources for all activities, in particular to distribute the antibiotics provided by Pfizer through ITI. The size of the endemic area and the movement of the population make follow-up of activities at the district health level difficult. There is a need to reinforce sanitary measures and IEC in treatment zones to ensure sustained behavioural changes and to avoid the re-emergence of trachoma.

Recent surveys

Recent surveys have included estimates of prevalence in three districts in 2005 prior to distribution of antibiotics; an estimate of prevalence after three years of implementation of the SAFE strategy in 2005–2006; a survey to determine the quality of trichiasis surgery in three areas in 2006; and estimates of trachoma prevalence after three years of implementation of the SAFE strategy in four districts in 2007.

Results of the surveys conducted after three years of implementation showed that the mass distribution of azithromycin together with the implementation of the other components of the SAFE strategy produced a marked reduction in the prevalence of active trachoma in the endemic areas. However, construction of latrines remains insufficient and individual and environmental hygiene remains a problem despite the increased availability of water supplies. Further IEC activities are needed. There is also a need to maintain the distribution of azithromycin in endemic areas, intensify the campaigns to raise public awareness, reinforce sensitization to drinking-water use and hygiene, and pursue latrine construction.

Results of the survey on the quality of trichiasis surgery in three areas indicated that awareness of trachoma and acceptability of and access to surgery are relatively high. The main reasons given for refusal of surgery were fear (33%) and lack of funds (21%). Of the 128 subjects examined, surgery had been successful in 103 (80.5%). Failures were mainly due to recurrence (85%). It was concluded that the number of surgeries performed per operator and the supervision of operators is insufficient.

Discussion

Future action

Although azithromycin is donated through ITI, Niger pays the distribution costs. However, HIV/AIDS, malaria and meningitis are the main priorities for the Ministry of Health, leaving insufficient means for the planned distribution of antibiotics to treat trachoma. Niger has made good progress in implementing the full SAFE strategy and is committed to the strategy. However, some activities have faltered through lack of funds and consideration is currently being given as to how antibiotic distribution and trichiasis surgery will be implemented and how drug distributors will be trained under the proposed integrated approach to neglected tropical diseases. Surveys are currently being conducted to obtain baseline data on the neglected tropical diseases.

Concern was expressed at the drop in trachoma control activities that has been reported from Niger and several other African countries, in particular the lack of resources for drug distribution, which may lead to resurgence of trachoma. Efforts should be made to investigate the reasons for the drop and to ensure partner sustainability to maintain the flow of resources.

The integrated approach to the neglected tropical diseases, which appears to focus on antibiotic distribution, should not jeopardize the implementation of the non-antibiotic components of the SAFE strategy. There is also a need to take into account rises in demand for the antibiotics used to treat the neglected tropical diseases once people discover that they also treat other conditions. ITI sees the integrated approach to neglected tropical diseases as a great opportunity of implementing measures that are complementary to the SAFE strategy. In Niger, it would expand antibiotic distribution to an additional six million people. Moreover, the approach also includes training, planning, logistics and monitoring and evaluation, and will permit the integration of education programmes and provision of simple messages about personal health and hygiene. However, careful planning will be needed to ensure successful implementation down to the village level

Trichiasis surgery

In Niger, is free of charge when carried out at mobile clinics during campaigns, and costs less than US$ 3 when carried out on an outpatient basis at health facilities. It is important to ensure that surgery is of high quality so as to encourage others to come forward.

3.3 INDIA

Dr Rachel Jose, Deputy Director General (Ophth.), Directorate General of Health Service, Ministry of Health, New Delhi, India

Trachoma and blindness due to trachoma were major public health problems in India in the 1950s and 1960s with active trachoma rates as high as 79% in children under 10 years of age in some northern states. Corneal opacity was reported in more than 2% of cases of blindness in 1989. A survey in the late 1980s showed that trachoma accounted for 0.39% of blindness nationally and that prevalence of active trachoma in the four hyperendemic states of northern India was in the range 4.2–9.5% in children aged 1-9 years and 10.2–21.8% in those aged 0–14 years. A survey in two districts of one state in 1995 indicated a prevalence of active trachoma in schoolchildren aged 5–15 years of 8.5%, results being confirmed using the *Chlamydia* antibody detection test. In 2003, WHO estimated that about 3.4 million people required treatment for trachoma in India. Surgical correction was warranted in 2.7 million cases and the prevalence of active trachoma in children aged under10 years was estimated at 2.02%. As suggested at the Tenth Annual Meeting of the Alliance in 2006, a rapid assessment was needed to determine whether trachoma remained a public health problem, to determine the level of blinding trachoma and need for surgical services, to indicate the relations between trachoma, age and personal hygiene, and to suggest how trachoma control policy might be formulated.

A rapid assessment was undertaken in 2006 by trained teams using the standard WHO protocol in 10 districts in six previously hyperendemic states (Haryana, Gujarat, Punjab, Rajasthan, Uttar Pradesh and Uttarakhand). The districts, which were among the least developed, were selected in consultation with district administrations and local communities. In each village in the chosen districts, 50 children aged under 10 years were examined for TF/TI. For those aged over15 years, the accompanying guardian was examined for TT. Individuals suggested by community leaders were also examined.

The rapid assessment was conducted in 2 772 households in 101 villages with a total population of almost 250 000. Of the 5 764 children examined, 317 (5.4%; 0.6–15.2%) were found to have TF/TI. Prevalence of trichiasis was lower than expected (0.15%; 0.04–0.27) and there was no association between this level and the burden of active trachoma. However, access to trichiasis surgery was poor for those living in the selected villages. Most villages had access to water within 30 minutes' walking distance but environmental hygiene and access to latrines were poor. More than 70% of households had an animal pen inside or close to the premises.

The study indicates that efforts to control trachoma are still needed in some parts of the country and that activities to improve personal and environmental hygiene and the availability of water will be crucial if the country is to achieve GET 2020. The states and districts concerned are being encouraged to implement the SAFE strategy and to ask ophthalmologists to check for trachoma.

Discussion

Rapid trachoma assessment

India was commended for responding quickly to the 2006 Alliance recommendation that it should conduct a rapid trachoma assessment. The assessment confirmed suspicions that trachoma is still present, although the problem is manageable. Laboratory work to check circulation of *Chlamydia* was not undertaken. Prevalence surveys are being considered for the areas where prevalence of TF/TI is high.

Trichiasis

Levels may be low because of home epilation, which people prefer to surgery.

Future action

All districts are being encouraged to adopt the SAFE strategy, with emphasis on personal and environmental hygiene. However, scarcity of water remains a problem.

3.4 SENEGAL

Dr Boubacar Sarr, Coordinator of the National Programme for the Prevention of Blindness, Ministry of Health, Dakar, Senegal

Senegal has a strong administrative structure with 11 regions and 34 departments. The health care system includes primary health care facilities, secondary regional hospitals and tertiary national hospitals. There is at least one eye care centre per region. Trachoma has resulted in an estimated 25 000 cases of blindness, and is the second most important cause of blindness after cataract. A national survey conducted in 2000 (from which two regions were excluded for security reasons) indicated a prevalence of TF/TI of 10.8% (3.3–17.3%; 320 000 children under 10 years of age), and a prevalence of entropion trichiasis of 2.6% (0.6–4.1%; 91 500 cases).

The SAFE strategy has been adopted in the three most affected regions but there are no structured activities in the other regions. A 5-year plan was formulated in 2005. Surgery is being decentralized to health posts, and health post and community health workers and other distributors are being trained in mass distribution of azithromycin. The Ministry of Public Health is collaborating with the Ministry of Education in activities for the "C" and "E" components and advocacy.

A prevalence survey conducted in the eight districts of the Thies region in 2004 in accordance with the standardized WHO protocol indicated that prevalence was above 10% in three districts (11.6–28.7%). Coverage with mass distribution of antibiotics was more than 85% in three regions in 2006 but there were no specific activities in relation to the "C" and "E" components. The prevalence of TT was also greatest in these districts

(3.6–5%). Trichiasis surgeries totalled 1891 in 2006 (AIO 5050), compared with 1848 in 2005 (AIO 2300).

Strengths

There is a well-developed health system. Political support from the Minister of Health is strong and there is a five-year trachoma control plan with specific budget allocations. There are sufficient human resources for trichiasis surgery. Antibiotic distribution is supported by local financing mechanisms, and benefits from the experience of mass treatment in other programmes. Coverage with safe drinking-water within 250 m is 86%, and there is a programme for improvement of water and sanitation coverage.

Weaknesses

The trachoma control programme is new and human resources are inadequate – there is no full-time responsible officer. Although the necessary institutional framework has been established, it is not yet fully operational. Integration with other areas in the health sector is poor, especially as regards local supervision. Surgery services are currently concentrated in urban areas; strategies and resources for mobile surgery are needed. Notification of TT cases and quality of trichiasis surgery require improvement; there is currently a high rate of refusals. There is limited capacity for antibiotic management, motivation of distributors is weak and the communication plan has failed to involve community leaders in the distribution of azithromycin. Water and sanitation programmes lack basic data and do not take sufficient account of trachoma control needs.

Opportunities

Opportunities will be provided by the implementation of the second phase of the integrated programme for development of health. Ambitious water and sanitation programmes have been launched to attain Millennium Development Goal 7, Ensure environmental sustainability, and it is hoped that priority will be given to trachoma-endemic areas. The reinforcement of the partnership with Pfizer should improve drug management.

Threats include uncertainty regarding the engagement of partners and there is a need for mechanisms to mobilize resources and ensure sustainable activities. Without more funds there will be difficulties in mobilizing sufficient antibiotic distributors.

Challenges

Raising awareness of the relation between trachoma and poverty would raise demand for and improve the allocation of resources to trachoma control activities. It would also increase ownership by districts and communities, thereby enhancing delivery of the SAFE strategy. However, there is a need to coordinate the implementation of interventions.

Conclusions

Trachoma remains a public health and socioeconomic development problem in Senegal. Strong political commitment and effective intersectoral collaboration are needed for sustained success. The progress made has fallen short of expectations, and advocacy and sensitization activities should be intensified. Sustained and, if possible, increased support from partners is required.

Discussion

Trichiasis

Trichiasis levels are high because of the high trachoma levels in the past and there is a need to focus on trichiasis surgery.

Financing of antibiotic distribution

The first year of distribution was financed through ITI. The mechanism now in place relates to the Bamako Initiative drug revolving fund. Azithromycin is donated but the national procurement pharmacy sells other essential medicines to the district health service through a voucher system. The Ministry of Health pays for transport of the azithromycin to the district level. The district pays for transport to village level. The people pay a small amount for consultations and other medicines. Some of these cost-recovery funds are used to pay for the distribution of azithromycin. Some 350 000 people were treated in 2005 and the expected total for 2006 is 700 000. It is hoped that antibiotic distribution will soon be extended to two additional districts.

Participants expressed concern as it appears the to finance A distribution is supported by requesting people to pay for essential drugs, and this sounded effically questionable

3.5 ERITREA

Professor Volker Klaus, representative of Christian Blind Mission, University Eye Hospital, Munich, Germany[1]

Eritrea, a small country of three million people, emerging from a period of war, is just starting trachoma control and prevention of blindness activities. A trachoma prevalence survey was conducted in 2006 to provide benchmarks for the establishment of a national trachoma programme based on the SAFE strategy and to define indicators for future programme evaluation. The main objectives of the survey were to determine whether trachoma is a public health problem by estimating the prevalence of TF among children aged 1–9 years in three of the six regions (*zobas*) of the country, and the prevalence of TT among adults aged 15 years and older in those regions. The survey was also designed: to investigate the relations between the prevalence of trachoma and facial cleanliness, environmental hygiene and the availability of water; to prepare community mobilization and health education activities for the programme; and to increase community awareness of trachoma and its prevention. This information will help decision-makers to identify and target the communities in greatest need of trachoma control interventions.

The survey included a review of the literature, a field survey and a cross-sectional community-based survey conducted in three endemic regions (Debub, Gash Barka and North Red Sea) targeting children aged 1–9 years and adults over 15 years.

The survey was conducted in 1800 households. Of the 7546 eligible individuals, 6438 were present and interviewed (males 41%, females 59%), a response rate of 85.3%. Most respondents had had virtually no schooling (57–74%). More than 90% had access to water supplies available all year round within a walking time of 1 hour. The majority had an animal pen in or near the home. Few had a toilet. Around 75% of children had a few or many flies on the face, and 65% washed their faces two or more times per day.

Prevalence of TF in children aged 1–9 years was 16.8% in Debub, 3.0% in Gash Barka and 6.3% in North Red Sea. Some children already had TT. There were pockets where prevalence was more than 50%. Prevalence of TF was slightly higher in children aged 1–5 years (8.8%) than in those aged 6–9 years (6.6%) and prevalence of TT was highest in those aged over 44 years (4.4%). Prevalence of TF and TT were inversely associated with level of education, being highest in children and adults with no schooling. Prevalence of TF was highest in children with several flies on the face and higher in children with a clean face than those with a dirty face. Prevalence of trachoma was higher when animal pens were closer to the home and when human faeces were present within 15 m. Prevalence was also higher when a water source was not available throughout the year and when garbage was found within 15 m of the home.

Active trachoma is a public health problem in Debub and in some districts of Gash Barka and Northern Red Sea. Trichiasis is a public health problem in all three regions. Risk factors include poor sanitation and personal hygiene, illiteracy, dirty face, presence of animal pens and human faeces close to homes, drying up of water sources and, for trichiasis, older age.

Control of active trachoma could largely be achieved with health education and hygiene measures. A plan of action for the implementation of the SAFE strategy in areas of high prevalence should therefore be formulated. Early stages of infection should be treated with antibiotics, and mass distribution of azithromycin should be considered for areas where prevalence is more than 10%. A trichiasis surgery programme should be instituted. Other measures should include community outreach programmes and communications aimed at improving personal and environmental hygiene.

Discussion

The national trachoma burden

Participants welcomed Eritrea's first report to the Alliance and commended the country's efforts to develop a national prevention of blindness

[1] Speaking on behalf of Dr Mebrhatu Goitom, Director, Disease Control and Prevention, Ministry of Health, Asmara, Eritrea, who was unable to attend.

programme. Trachoma has clearly been shown to be a public health problem in certain areas and addressing the pockets of trachoma could be an important entry point for prevention of blindness activities. It is likely that areas of the country similar to those already surveyed will show a comparable trachoma prevalence. The situation is much like that in neighbouring regions of Ethiopia. Cooperative approaches across borders are needed in such situations.

Human resources

There are only four ophthalmologists in the whole of Eritrea and the number of eye nurses is limited. However, there is concern that staff sent for training abroad may not return.

Antibiotic requirements

Careful planning is needed to calculate the needs for azithromycin treatments.

Relations with nongovernmental organizations

The Government has shown political commitment to trachoma control. However, it has been reluctant to accredit nongovernmental organizations that do not conform to its policies and the number of nongovernmental organizations working in the country has declined in recent years. New partnerships are beginning to develop but nongovernmental organizations will need to show sensitivity to governmental requirements.

3.6 MOROCCO

Dr Jaouad Hamou, Coordinator, National Programme for the Prevention of Blindness, Rabat, Morocco

Trachoma control activities are incorporated in the Moroccan national plan for the prevention of blindness. In 1992, a national survey on the causes and prevalence of visual deficiencies was undertaken to determine the magnitude of ocular disorders and to develop the national plan and the national strategy for ocular health. Between 1991 and 1993, provincial surveys identified endemic areas where trachoma was a public health problem. The SAFE strategy was adopted in 1997. In 2005 Morocco attained its ultimate intervention objectives for the elimination of blinding trachoma.

The provincial surveys indicated that trachoma was a public health problem in five provinces in the south-east of the country. Trachoma control was designated as a priority within the national programme for the prevention of blindness in these areas, and the SAFE strategy was adopted. Activities included case detection, repeated mass distribution of antibiotics, trichiasis surgery, elaboration of an IEC strategy with the aim of changing behaviour, and the institution of mechanisms to ensure effective intersectoral collaboration to improve the environment, with the participation of communities. Efforts were made to ensure that activities were coherent and well coordinated, with a good balance of partners, and that they responded to the specific needs of the local population. For treatment of active trachoma with antibiotics, personnel were trained in trachoma grading and treatment strategies for children aged 1–9 years. Adults were given sanitation education and infants were weighed before antibiotic treatment was given. Trichiasis surgery was decentralized, and carried out by trained operators at primary health care facilities and in mobile teams, with postoperative follow-up and evaluation of activities. Provincial surgery campaigns were also conducted. Efforts were made to reach decision-makers, elected officials, professional associations, local development agencies, community leaders and other partners to promote facial cleanliness, separation of humans and animals, sanitation and insect control. Sustainable community development was promoted through the provision of drinking-water, electrification, rehabilitation of schools, literacy classes for women, income-generating activities, etc.

Control of blinding trachoma has been achieved thanks to improvements in personal and environmental hygiene, access to water and general socioeconomic development. Prevalence of TT is now less than 1 per 1000 in the general population and prevalence of active trachoma in children aged 1–9 years is less than 5%. Antibiotic coverage is above 80% and the proportion of children aged 1–9 years with clean faces is above 80%.

Provincial surveys were carried out in 1997, 1999, 2001 and 2003 to evaluate progress. On the recommendation of WHO, surveys were conducted in 2004 and 2005 to determine whether UIOs had been achieved at community level, so as to decide whether mass distribution of

antibiotics could be discontinued and to verify trends. Efforts were made in 2005 to carry out the maximum possible number of trichiasis operations (nearly 8000) in order to attain the UIOs for the "S" component. The AIO for coverage with antibiotics (80%) has been attained each year since 1999 and the prevalence of active trachoma has fallen by more than 90% since 1997. AIOs for facial cleanliness (80%) in children aged 1–9 years have been achieved since 2001. Targets have also been achieved for provision of drinking-water, electrification and IEC activities.

The target date for elimination of blinding trachoma is the end of 2008.

Strengths

Strengths include political will, the national initiative for human development, good intersectoral collaboration, decentralization and continued support from WHO, ITI, Pfizer and governmental and nongovernmental organizations. Good coordination mechanisms have ensured synergy between the national, provincial and local levels, which has permitted the attainment of the UIOs for all the components of the SAFE strategy.

Challenges

The work is not yet complete. Phase III of the programme, 2006–2008 includes surveillance for TF and reinforcement of intersectoral collaboration with old and new partners, within the national initiative for human development, to consolidate and expand gains and undertake evaluation and follow-up in all relevant areas. It is hoped that blinding trachoma will have been eliminated by 2008. Sentinel surveillance for TF is carried out every six months in all children aged 1–9 years in selected villages Children are examined using a binocular loop (× 2.5) and all cases found are graded. Active TF cases and their families are treated and contacts are traced and treated if necessary. There is door-to-door case-finding.

Weaknesses

It is not certain whether preschool children and the poorest among children are reached with TF surveillance activities. Surveillance for TT requires considerable financial and human resources and there are difficulties in reaching the last few cases and in keeping records for cases operated, refusals and recurrences.

Discussion

2008 and beyond

The Government is committed to completion of the elimination task by 2008 but there has been some loss of enthusiasm among staff since the attainment of the UIOs and it will be important to continue to motivate them and to justify the support needed for the final push. The results of prevalence survey undertaken in collaboration with the London School of Hygiene and Tropical Medicine to evaluate the system and consolidate the records before certification should be available soon, and it is hoped that the certification process can be initiated with WHO. Trachoma surveillance will continue after 2008 and will be integrated in the national surveillance system. Most of the remaining TT cases are the result of recurrences but surveillance and incidence studies will be continued. Morocco subscribes to Vision 2020 and is planning a national programme to eliminate blindness due to cataract. The Ministry of Health has so far succeeded in allocating funds to replace those previously given by ITI, which has now disengaged, and new funding approaches are being explored, e.g. through the United States Millennium Challenge Account.

3.7 GUINEA-BISSAU

Dr Meno Nabicassa, National Coordinator, Programme for the Prevention of Blindness, Ministry of Public Health, Bissau, Guinea-Bissau

Guinea-Bissau has a population of 1.5 million and faces many public health problems. A national survey was conducted from July to December 2005 by the national programme for the prevention of blindness with the support of WHO and Sight Savers International to determine the prevalence of active trachoma in children under10 years of age and of TT in adults. Support for the survey was provided by a technical team from Gambia and one expert from the London School of Hygiene and Tropical Medicine. The study was planned using data from the latest national census and included the completion of questionnaires in interviews with heads of families and ophthalmological examination using the WHO trachoma grading scale.

A total of 12 801 people in 119 districts were selected for the study, of

whom 11 070 (86.5%) were examined; 1227 questionnaires were completed. There were 4 041 children aged under 10 years and 2 865 aged 30 years or more; 54% were female. Prevalence of active trachoma (TF/TI) was 18.9% in children aged 0–9 years (TF 18.3%, TI 5.9%) and 20.2% in children aged 1–9 years. Risk factors were low income, lack of education and lack of access to sanitation and drinking-water. Prevalence of TF/TI was highest in the age group 1–4 years and was generally higher in females than in males. It is estimated that around 108 000 children aged 0–9 years have active trachoma.

Prevalence of TS was 2.8% and was higher in females. Prevalence of TT in those over 15 years of age was 2.02% and was also higher in females. In women over 50 years of age, TT was associated with low income and lack of access to sanitation. It is estimated that 15 000 people (26 000 eyes) require trichiasis surgery.

The survey showed that trachoma is a public health problem and is associated with poverty. A national programme for visual health was started in 2001 and a basic infrastructure for prevention and treatment of eye diseases are in place. Ophthalmological training is being planned in collaboration with Gambia.

Discussion

Prevention of blindness plan

Trachoma is recognized in Guinea Bissau as a major eye health problem. The national prevention of blindness plan is currently awaiting authorization from the Minister of Health. Activities to date have been aimed at surveying endemic areas and implementing contingency measures. Adoption of the SAFE strategy should follow.

3.8 CHINA

Dr Ailian Hu, Beijing Tong Ren Eye Centre, Beijing Tong Ren Hospital, Beijing, China

A national survey in 1987 showed that the prevalence rates of trachoma and blindness due to trachoma had declined from the high rates of the 1950s to 18.9% and 4.3%, respectively, and trachoma was the fourth cause of blindness. Hospital data in 1999 indicated a further drop in prevalence to around 10% for trachoma and 2.9% for blindness due to trachoma.

Screening for active trachoma (TF/TI) in children in 30 provinces in the period 2003–2006 indicated prevalence rates ranging from 0–1.8% in Beijing to 2.9–7.8% in Shanxi and 3.9–29% in Chongqin. Similar surveys for TT in adults showed prevalence rates ranging from 0–2.4% in Beijing to 0.4–5.5% in Hainan.

The decline in trachoma prevalence is the result of long-running trachoma control policies and general socioeconomic development. The 1956 national development programme included prevention and treatment of trachoma, and a national campaign for trachoma prevention and treatment and improvements in sanitation was implemented from 1957 onwards. In 1984 the programme was converted to a comprehensive blindness prevention plan.

In 1999, China joined GET 2020 and in 2003 it formulated a national plan (2006–2010) for the elimination of blinding trachoma by 2010. Support is being provided to the Ministry of Health by WHO and the WHO Collaborating Centre in Japan, Juntendo University. The plan includes implementation of the SAFE strategy within primary health care and primary eye care services, training on the strategy and in conducting trachoma rapid assessments, education and eye-care promotion, trachoma screening and programme monitoring. IEC materials on the SAFE strategy, environmental hygiene and health promotion have been published and widely distributed, and health promotion events such as eye-care days and “Right to sight” tours have been organized. Screening and education are carried out in elementary schools and among elderly people. Families only have one child, so children receive good health care before going to school. Trachoma prevalence is therefore greater in children of school age. Simple handheld magnifying equipment is used to undertake eye examinations. Those found to have active trachoma are treated with antibiotics and those with trichiasis are offered surgery. Personal hygiene, including face- and hand-washing is taught in schools and facial cleanliness is now approaching 100%. Insect control and coverage with

water supplies (94.1%) and sanitation (96%) have been greatly improved. Data on these components are collected by a specific department within the Ministry of Health.

Challenges

Although active trachoma is no longer a serious problem in China, endemic pockets remain in some rural and less developed areas. However, given the size of the population, a national prevalence assessment would be a major undertaking requiring substantial financial and human resources. China is therefore seeking to expand its collaboration with external partners in order attain its goal of elimination of blinding trachoma by 2010.

Discussion

Trachoma prevalence

China was commended for the efforts undertaken to determine the trachoma burden and to confirm that, although pockets of trachoma remain, the problem is manageable. However, more detailed surveys are needed to update estimated data and develop a detailed POA.

Eye examination

Country coordinators need to learn from best practices. For example, China's programme of simple examination in schools could be copied elsewhere, bearing the intrinsic limitation that school children can't represent the whole population.

Trichiasis surgery

There are an estimated 26 000 surgeries to be done, although the data are difficult to collect as young doctors do not diagnose correctly.

3.9 MEXICO

Dr Jorge Raul Ricardez-Esquinca, State Ministry of Health, Chiapas, Mexico

Chiapas, with a population of four million, is the only state in Mexico where trachoma remains endemic. The state is in the south of the country and shares a border with Guatemala. The disease is restricted to five municipalities where socioeconomic development is low, and is found mostly in indigenous people. Prior to the establishment of the trachoma prevention and control programme in 2002, control activities were sporadic and mainly undertaken by nongovernmental organizations.

The main objective of the trachoma prevention and control programme is to establish a basis for the elimination of blinding trachoma as a public health problem in Chiapas. Programme strategies include microregional planning and implementation, and enhanced application of the SAFE strategy, with active surveillance, training and community and municipal participation. The programme also includes strong intersectoral and interinstitutional collaboration, epidemiological surveillance, operational research and monitoring and evaluation.

The devolvement of planning and implementation to local government and local health facilities is crucial to programme operation. Workshops were held with local government authorities to present and analyse the problem, and trachoma prevention and control has been integrated in municipal health plans, with the participation of community committees. House-to-house epidemiological surveillance is conducted throughout the endemic areas every six months and cases found are graded. There is also a twice-yearly screening at pre-school and elementary school levels. Treatment with oral azithromycin is given to those with active infection and all those living with them. Trichiasis surgery is conducted by certified physicians using the bilamellar tarsal rotation technique in outpatient surgeries in the nearest primary health care unit to the patient. Face hygiene is promoted with the objective of interrupting transmission of Chlamydia trachomatis, particularly from child to child and from child to mother. Improvements to basic environmental sanitation are being undertaken, with emphasis on latrines, responsible water use, clean house yards and building of fences.

Training in trachoma prevention and control is given to health care personnel, health promoters, municipal health committees, teachers and community members. A variety of educational materials have been produced, including booklets, guides, flipcharts, posters and audiovisual materials, some in local languages. Coordination between the health, water, social development, education, research and indigenous peoples sectors has been strengthened, and a regional week for fighting trachoma has been designated in October. Socioeconomic trends have also shown improvements in the endemic areas.

The results for 2006 show case-finding coverage of 97.0%, treatment of 100% of active cases found and a cure rate of 80%. There were eight TT cases identified for surgery at the first examination and 35 at the second. Prevalence rates were: overall 1.80%; TF 0.40%, TI 0.01% TC 1.40% and TT 0.17%. The prevalence rates of TF/TI in children aged under 10 years and TT in women aged over 40 years were 0.32% and 0.09%, respectively, compared with 1.04% and 1.90% for 2004–2005. No new cases of blindness have been detected since 2004.

Strengths

The programme has a specific budget allocation and is operated using a microregional and integrated approach, which facilitates field work. Surveillance ensures accurate epidemiological data. Personnel are well trained.

Opportunities

The health services undertake diagnosis at local level. Water availability has improved and there is stronger intersectoral collaboration, with enhanced participation of local authorities. Communities have better knowledge about trachoma and participate actively in decision-making for programme implementation. There is now a possibility of initiating the process of certification of trachoma elimination. This model could be used to combat other public health problems.

Threats

There is a change in the local authorities every three years, which could put at risk political stability. The population is resistant to government services.

Conclusions

Trachoma control requires an intersectoral approach with permanent mechanisms for exchange of information at all levels of government and with the participation of nongovernmental organizations and the community.

Discussion

Trachoma has not been found in other states of Mexico although further research may be needed to verify that the disease is not present in some pockets.

3.10 UGANDA

Dr Stanley Bubikire, Coordinator, National Eye Care, Disability Prevention and Rehabilitation, Ministry of Health, Kampala, Uganda

Uganda is currently implementing its third prevention of blindness plan. Trachoma remains endemic in 16 districts (one of which has recently been split into two for administrative purposes). Around 700 000 children under the age of 10 years are estimated to have active disease and some seven million people are at risk of being infected. It is estimated that 12 000 people are blind from trachoma while 35 000 have TT.

In the 2005–2009 health plan, priority is given to trachoma elimination in the 16 affected districts using the SAFE strategy. An interim national trachoma task force was formed and a training of trainers' workshop was organized in September 2005, facilitated by ITI experts. The task force was trained in the use of the WHO standard protocol for baseline trachoma surveys, and conducted surveys in the initial three districts (Kamuli, Iganga and Kotido) for which funding had been secured, with support from Sight Savers International and Lions Clubs International. The first district was surveyed from December 2005 to January 2006 and the other two from April to May 2006. District teams were trained and in each district 20 clusters (parishes) were pre-selected for the survey. Ethical clearance was sought from the district authorities and adherence to the stipulated ethical guidelines was ensured during the survey. Household members were examined after securing consent from heads of households.

Parish questionnaires were administered in consultation with parish leaders on the day of the survey. All eligible individuals in a selected household who were aged 1–9 years and 15 years or more were examined in bright daylight or using a torch with a × 2.5 magnifying loupe. Children with active trachoma were given 1% tetracycline eye ointment (azithromycin was not available at that time; it should be available soon). Individuals with TT were entered in a register and advised to seek surgical correction at the nearest health unit with appropriate facilities. Households with missing individuals were revisited once where possible. At the end of

each day data were checked for completeness and handed to the supervisors for cross-checking. Data and questionnaires were collected centrally for analysis.

Overall response rate was 84.5% and 76.0 % in Iganga and Kotido, respectively (no figure available for Kamuli). It was not possible to revisit households in Kotido owing to insecurity and because the community is semi-nomadic; some family members may be absent for up to three months, and others, especially the males, are often away looking after livestock. There were no village population data in any of the three districts so the parish was used as the primary cluster since it was the smallest administrative unit with census data. Budget constraints prevented prior enumeration and mapping of households in the study areas and adequate community sensitization. It also shortened the training period for the research assistants, although most of them had participated in earlier trachoma surveys.

Radio and bicycle ownership were more than 70% in Kamuli and Iganga but less than 12% in Kotido, where many people are nomadic. There was close contact between humans and animals in Kotido. Prevalence of trachoma was higher in Kotido than in the other two districts. In children aged 1–9 years, prevalence of TF was 20.1% Iganga, 33.6% in Kamuli and 65.7% in Kotido. Clean faces were found in 48.0%, 48.4% and 29.0% in the three districts, respectively. In people aged 15 years and above, prevalence of TT was 3.8%, 5.6% and 17.5%, and prevalence of corneal opacity was 1.6%, 1.7% and 1.4%. Knowledge among this group about the link between face-washing and trachoma was 76.7%, 0.9% and 27.0%, respectively.

There was access to safe water points in 66%, 30% and 50% of households, but in Kotido water was available all year round in only 40% compared with more than 85% in the other two districts. The proportion of households with toilet facilities was 63.8%, 81.0% and 7.7%; with animal pens 17.0%, 33.5% and 88.0%; and with hygienic refuse disposal 10.5%10.5%, 7.0% and 6.1%.

The trachoma control plan has been approved by ITI and plans are being drawn up for the implementation of the SAFE strategy and for baseline surveys in all endemic districts. Around 40 TT surgeons are being trained and existing surgeons are undergoing retraining. Lid rotation sets are being procured. Community workers are being trained in case-finding. Patients will be followed up for determination of surgical outcome. Media campaigns involving local leaders and churches will be conducted to raise community awareness and acceptance of TT surgical services. IEC materials will be developed and disseminated to communities to increase TT awareness. Mobile clinics will be established and existing health centres will be equipped to undertake trichiasis surgery. A supervision and monitoring system will be established to monitor the number and quality of surgeries conducted per surgeon. The plan also includes the introduction of health education programmes about trachoma in schools, the development and distribution of IEC materials and the training of school-health teachers. Activities in the area of environmental health will include the provision of water supplies for schools and communities, latrine construction and promotion of appropriate waste disposal methods.

Discussion

Uganda was commended for its survey work and its plans to implement the SAFE strategy.

4. SCHOOL HEALTH IN UNITED REPUBLIC OF TANZANIA

Dr Paul Mushi, Director, Tanzania Institute of Education, Dar es Salaam, United Republic of Tanzania

The United Republic of Tanzania has implemented a school health curriculum programme in partnership with Helen Keller International and WHO GET 2020 and with funding from the Conrad N. Hilton Foundation. The programme is based on the concept that school health can provide a sustainable platform from which to promote the knowledge and behaviour necessary to control and eliminate blinding trachoma on a long time base.

The main objectives of the programme are: to design an effective curriculum to increase knowledge on trachoma and improve health behaviours among schoolchildren; to integrate education on trachoma into the national school curriculum; to strengthen the link between schools and communities for trachoma prevention through a competency-based curriculum, i.e. one that teaches life skills as well as academic knowledge.

According to a demographic and health survey undertaken in 2004–2005, there are some7.7 million pupils enrolled in schools and some 1.2 million children who do not attend school; 65.3% of students complete six years of education.

Trachoma is endemic in 43 districts on the mainland, with a prevalence of TF/TI of more than 10%. There are almost 5000 schools in trachoma endemic districts, with 2.3 million pupils and around 40 500 teachers.

The first step in developing the programme was to identify the key stakeholders: the Ministry of Education and Vocational Training; the Ministry of Health and Social Welfare; the national eye care programme; the Tanzania Institute of Education; nongovernmental organizations working on trachoma, school health and related areas such as the environment and family health; and religious groups. The Tanzania Institute of Education is responsible for designing, developing, reviewing and monitoring the implementation of the school curriculum at all levels under the Ministry of Education and Vocational Training and has 50 well-qualified curriculum development officers. It also plays a role in quality control, design and testing of teaching and learning materials, research, in-service training of teachers, and monitoring and evaluation of curricula and teaching methods.

The next step was the development of a framework for knowledge, attitudes, skills, policies and indicators based on the WHO-endorsed SAFE strategy, for which a local name has been coined. The framework was used as the basis for developing the competency-based trachoma curriculum. The curriculum, which includes general information about trachoma, trachoma treatment, flies, cloths, clean faces, latrines and the environment, was approved by a stakeholders' committee. The stakeholders met at regular intervals to provide feedback on curriculum content and methodology and to approve the pilot testing in trachoma-endemic districts. The following materials were also prepared: teacher guides, student guides, teacher training modules and testing tools.

Pilot testing was carried out in 10 schools, with 10 control schools in the central part of the country; 40 teachers from various grades were trained on the trachoma curriculum. After one year, students and teachers in programme schools had significantly greater knowledge compared with the baseline about prevention of trachoma ($P<0.05$). The improvement was much greater than in control schools.

Education on trachoma was incorporated in the national curriculum as part of the primary school science syllabus in 2004–2005. There are checks to

ensure that information on trachoma is taught regularly in the classroom. Trachoma control is also the subject of a radio campaign.

Strengths

Review and revision of the national curriculum were undertaken concurrently with the project and a stakeholders' committee participated in the approval and validation of the curriculum. National ownership of the trachoma curriculum is important.

Challenges

The period of implementation has been too short to measure the full impact of the trachoma curriculum. The main challenges relate to teaching. At times, trained teachers have been transferred to other schools before sharing information and training with other teachers. Teachers need training in interactive teaching methods.

Future action.

The trachoma curriculum will be extended to all 43 endemic districts and incorporated in the teacher education curriculum as the new national curriculum is implemented by the Ministry of Education and Vocational Training. Monitoring and evaluation will be conducted to assure that the quality of trachoma teaching is maintained and high numbers of children are reached. Peer support groups will be established to assist teachers in using an active life-skills approach in teaching trachoma and other health topics as part of the science syllabus. The school–community link will be developed to increase the impact of the trachoma curriculum in the endemic districts.

Discussion

Further information

This is an excellent programme that has the potential to reach 2 million students in endemic areas and is a good model for others. Documents on the programme are available in Swahili and further information can be obtained from the Tanzania Institute of Education (www.tie.go.tz). As the trachoma content is integrated in the science curriculum, science teachers have been trained first. Later it will be incorporated into the revised general curriculum. Separate latrines for boys and girls and waste disposal facilities are being constructed in the programme schools. There is also a general development programme for primary schools, which receives World Bank support. However, environmental hygiene in the home is often inadequate.

Indicators of behaviour changes

Experience in HIV/AIDS control campaigns has shown that while knowledge may be increased it is difficult to verify changes in behaviour. There has not yet been time to evaluate this project properly but it is hoped that behaviour changes can be evaluated in due course. Focus groups with students and mothers have confirmed a change in behaviours and attitudes.

5. INTERNATIONAL COALITION FOR TRACHOMA CONTROL

Ms Catherine Cross, Manager, International Programmes, Sight Savers International, Haywards Heath, England

The International Coalition for Trachoma Control (ICTC) is a coalition of nongovernmental organizations formed nearly four years ago to work with national partners, WHO, ITI, Pfizer and others. Its three main objectives are: to collaborate in support of the expansion of trachoma control using the SAFE strategy; to engage new nongovernmental organizations and advocate for their involvement in implementing the SAFE strategy; and to mobilize additional resources for trachoma control.

There have been a number of recent successes. A consortium of nongovernmental organizations and the Government of Kenya have obtained funding of €1.5 million from the European Union for the first phase of the Kenya national trachoma control programme in six districts, through a funding mechanism available only to nongovernmental organizations. Funding has been obtained from the same source for a regional blindness prevention programme, which has a trachoma component, in Koulijkouro, Mali. Lions International Foundation is currently fund-raising to reach a target of US$ 150 million for Phase 2 of its SightFirst programme for global blindness prevention and has confirmed that significant funding will be made available for trichiasis surgery as part of the programme. Thanks to fund-raising by nongovernmental organizations, there is ongoing support for trachoma control from foundations such as the Conrad N. Hilton Foundation, corporate donors and private donors in North America and Europe.

Discussions are under way to obtain funding from new sources including the Champalimaud Foundation, which is interested in projects in Portuguese-speaking countries (through International Agency for the Prevention of Blindness), and the Canadian International Development Agency (through Operation Eyesight).

There are opportunities for further coalition-building to support applications for funding for national programmes through the USAID funding for programmes to control neglected tropical diseases (e.g. support from Helen Keller International and Sight Savers International for Northern Nigeria, and collaboration in the United Republic of Tanzania and Uganda). The deadline for submission for the first round was 15 April 2007.

Despite promising initial contact, ICTC still has difficulty in engaging the support of nongovernmental organizations with experience of the “E” component of the SAFE strategy. The cost of water and sanitation improvements is high and ICTC cannot offer any funding in these areas. It is also difficult to raise funds for survey activities, which are costly, and for research.

In the light of recent initiatives for integrated control of neglected tropical diseases, three nongovernmental networks, those concerned with onchocerciasis, lymphatic filariasis and trachoma held a joint meeting in March 2007 hosted by Lions Club International in the United States of America, Oak book (Chicago). They were joined by nongovernmental organizations concerned with schistosomiasis control. Discussions focused on areas of common interest, including disease mapping and co-administration of drugs, but also covered disease-specific control measures, such as the “S”, “F” and “E” components of the SAFE strategy

for trachoma control, to ensure that all the essential components of control were appreciated. The meeting was well attended by the nongovernmental organizations concerned, some new nongovernmental organizations, WHO, the African Programme on Onchocerciasis and pharmaceutical industry partners. It was decided that joint meetings should be held every six months for at least the next 18 months to consider the role of nongovernmental organizations in the initiatives to integrate the control of neglected tropical diseases.

Discussion

ICTC will continue to engage new nongovernmental organizations and to raise more funding for trachoma control. The opportunities likely to be presented by the integrated approach to neglected tropical diseases are not yet entirely clear. It remains difficult to encourage donors to provide resources for prevalence surveys or for research. ICTC does not itself have programmes; its main role is advocacy at the international level. ICTC members also cooperate at country level, with coordination through governmental organizations, sometimes with different agencies working in different states.

6. TRACHOMA SCIENTIFIC INFORMAL WORKSHOP 2007

Dr Paul Emerson, Technical Director, Trachoma Control Programme, The Carter Center, Atlanta, Georgia, USA

The 2007 Trachoma Scientific Informal Workshop was held in Cairo on 1 April. Professor West was elected Chairman.
The WHO-endorsed strategy for trachoma control is the SAFE strategy and all four components of the strategy should be implemented concurrently. The Workshop considered studies undertaken on each of four components.

Surgery

Recent research demonstrates that, in addition to preventing corneal opacity, trichiasis surgery reduces the irritation to the cornea and relieves photophobia. It is also reported to improve visual acuity by one line on the test chart, and to significantly improve quality of life in terms of ability to undertake tasks such as cooking, farming and childcare. A low recurrence of TT was reported from Ethiopia after surgery using absorbable sutures undertaken at surgery camps rather than in fixed facilities.

The Workshop recommended that all programmes should aim for high quality and a high quantity of trichiasis surgeries.

Antibiotics

A formulation for azithromycin eye drops has been developed that is comparable in effect with oral azithromycin. The product is still under development and is undergoing evaluation; field trials will start soon. A longitudinal study of 16 villages in Ethiopia demonstrated that after four rounds of high coverage with azithromycin (alone without the “F” and “E” components) at intervals of six months, infection with trachoma was successfully controlled. However, two years after stopping the antibiotic treatments, infection with trachoma was returning rapidly. It had not yet reached pre-treatment levels but the return was faster than expected. A mathematical model suggests that antibiotics alone will not lead to elimination or a sustained reduction in trachoma in settings with a high prevalence (more than 50%) of trachoma infection.

The Workshop recommended that programmes should implement the full SAFE strategy, since elimination or sustained reduction of trachoma cannot be achieved using antibiotics alone.

Face-washing/hygiene promotion

The Workshop considered a report, which was also presented to the Alliance (see section 4), on a school-based programme in the United Republic of Tanzania. The programme has yielded a modest, increase in knowledge of trachoma and reported practice of trachoma control measures. A valid and repeatable definition of “clean face” is still under discussion.

The Workshop made no recommendations in this area.

Environmental improvement

Although three studies were presented to the Workshop in this area, the results did not yield generalizable results and no recommendations were made. An increase in operational research on the “F” and “E” component should be encouraged.

Discussion

Azithromycin eye drops

Further studies are needed to test their efficacy. The drops are applied twice a day for three days and have shown a satisfactory IC50 against C. trachomatis. The formulation is an oily solution that sticks to the

	conjunctiva.
Quality of surgery	Studies to evaluate the different procedures might be useful. The quality of training and supervision of operators is important.

7. CURRENT STRATEGIES FOR THE CONTROL OF NEGLECTED TROPICAL DISEASES

Dr Silvio Paolo Mariotti, Medical Officer, GET 2020 Secretary, World Health Organization, Geneva, Switzerland[2]

In April 2007, WHO launched its new approach to the control of neglected tropical diseases. These diseases have a number of common features: they are all associated with impoverished settings, and industry donations of the antibiotics needed for mass treatment are available. Control of these diseases is now considered to be part of the global drive to reduce poverty and to attain the United Nations Millennium Development Goals.

The neglected tropical diseases affect one third of the global population, especially poor populations living in remote rural areas or urban slums that have little or no political voice. More than 70% of countries and territories affected by neglected tropical diseases have a low or low–middle income and 100% of low-income countries are affected by at least five of the diseases. The diseases are linked to poverty, unsafe water, poor sanitation, substandard housing and poor education, conditions conducive to vector reservoirs. Although they are communicable diseases, they are not perceived as a threat to the developed countries. However, they are disabling and disfiguring, leading to social stigmatization and discrimination perpetrating the vicious cycle of poverty. They also kill large numbers of people: 20% of deaths and 24% of disability-adjusted life years (DALYs) lost as a result of communicable diseases are due to the neglected tropical diseases, and annual deaths have been estimated at more than 500 000. These diseases are often given low priority given by national health programmes. There is a lack of basic data and control strategies have not always been implemented correctly.

The European Parliament, the United States Congress and the Commission for Africa are taking renewed interest in these neglected diseases as part of their commitment to attaining the Millennium Development Goals. The aim of WHO's new approach is to make the optimum use of resources and of intersectoral collaboration at the national level and to take advantage of emerging funding opportunities. This will include: the synergy of vertical strategies to improve effectiveness; adaptation of strategies to local conditions; education and local empowerment; comprehensive health care; safe and effective treatments; large-scale preventive chemotherapy; capacity-building and strengthening of primary health care services; development of surveillance systems and indicators; and the establishment of effective partnerships. Instruments are being developed to achieve harmonization of technical and financial strategies as well as intervention activities. Investment in research by the public and private sector will be encouraged. Much-needed drugs are becoming affordable and available thanks to donations or

[2] Speaking on behalf of Dr Lorenzo Savioli, Director, Department of Control of Neglected Tropical Diseases, World Health Organization, Geneva, Switzerland, who was unable to attend.

preferential pricing by the pharmaceutical industry. However, successful intervention will require sustained political commitment and coordinated intersectoral collaboration.

Further information can be obtained from Department of Control of Neglected Tropical Diseases, World Health Organization, Geneva, Switzerland, (www.who.int/neglected_diseases).

8. REPORT FROM THE INTERNATIONAL TRACHOMA INITIATIVE: NEGLECTED TROPICAL DISEASES GRANT FROM USAID

Dr Jakob Kumaresan, President, International Trachoma Initiative, New York, NY, United States of America

Since the establishment of the Alliance 10 years ago, ITI has been involved in trachoma control programmes in numerous countries. Considerable successes have been achieved. Implementation of the comprehensive SAFE strategy has been shown to be effective and the donation of azithromycin has made a crucial contribution. However, scaling up these control programmes required human and financial resources and technical expertise just at the time when the world was focusing on other public health problems such as HIV/AIDS, tuberculosis and malaria, and it was feared that diseases such as trachoma would become even more neglected.

There are now signs that opportunities for the control of neglected tropical diseases are opening up. WHO has created a department for the control of neglected diseases (see section 7) and the WHO Director-General and the WHO Regional Director for the Eastern Mediterranean have given commitments to making the control of these diseases a priority. Successful bids have been made to the European Union for funding in respect of trachoma control in Kenya (as indicated in section 5) and submissions have been made for the new funding available from USAID for an integrated approach to the control of neglected tropical diseases. Advocacy is focusing, inter alia, on the life years and death resulting from this group of diseases and on the fact that, thanks to the generous donations by the pharmaceutical industry of the antibiotics needed for mass treatment, these diseases of poverty can be eliminated with relatively low incremental costs.

ITI together with several partners was awarded a grant from USAID in September 2006 to work with countries to develop activities that use an integrated approach. The rationale for this approach includes the fact that two or more of the diseases frequently occur together in a particular geographical area, and that it provides opportunities to reduce duplication of effort, for example by combining antibiotic distribution efforts, surveillance, and monitoring and evaluation of programmes, which will increase the cost-effectiveness of activities. Ministries of Health submitted letters to indicate their interest in piloting the integrated approach and identifying a lead nongovernmental organization.

The project focuses on Africa, with ITI collaborating with Ghana and Mali and SSI with Burkina Faso, Niger and Uganda. Current

control activities overlap so there is an opportunity for rationalization. This is achieved through a planning process that includes preparatory meetings, situation analyses and disease mapping, stakeholder meetings and formulation of detailed work plans for the first year. The main efforts will be community based. Stakeholder meetings were held in Uganda in November 2006, in Burkina Faso, Mali and Niger in January 2007, and in Ghana in February 2007. USAID and the nongovernmental organizations concerned attended these meetings in the countries concerned. The main component of the project is the integrated distribution of antibiotics, with the necessary logistic support, training and IEC activities. Monitoring and evaluation will also be integrated. Draft working documents have been prepared and national task forces with representation of all stakeholders are being established.

The approach aims at scaling up of the different programmes and the implementation of integrated strategies. For example, the different pharmaceutical companies involved in donation have different drug delivery schedules. Deliveries will have to be coordinated in order to ensure that the drugs are available for integrated distribution. Forecasting of drug needs will therefore be critical. However, there is no single model for the country plans. Plans will be tailored to each country's specific needs and situation.

This project focuses on antibiotic distribution, which of course is not the whole strategy in the case of trachoma control. However, ITI considers it essential to take advantage of the resources available in the current complex financing environment, and to use its comparative advantage to maintain advocacy for inclusion in country plans of the implementation of the full SAFE strategy, for poverty alleviation and for the attainment of the Millennium Development Goals. USAID is hoping that its initiative will draw in other resources. Phase 2 of the Lions Clubs International SightFirst programme will make a significant contribution; other such programmes are needed.

It is important to recognize that the situation has changed radically in the past 10 years and that partnerships are becoming more complex. To date, Pfizer has donated azithromycin to the value of a remarkable US$ 594 million. However, azithromycin is no longer under patent and there is more generic manufacture, adding to the complexity. The switch to integrated control of neglected tropical diseases will not be easy but should be pursued, with careful consideration as to how it will operate in each country. Innovative delivery systems will be needed and it will be critical to retain community ownership of programmes.

Discussion

Integrated approach

Concern was expressed that the focus on antibiotics might jeopardize the implementation of the full SAFE strategy and adversely affect national prevention of blindness plans. However, the aim is to undertake complementary activities that will be tailored to each country's needs. It makes sense to integrate the various vertical programmes from the logistics point of view, for the distribution of antibiotics, but good planning and supervision will be essential. At the moment five countries are taking part in the new USAID initiative. ITI will submit further projects to USAID for consideration. Ghana considers that the programme will definitely help trachoma control since it provides funding for training and development of IEC materials as well as for antibiotics and their distribution. This frees up other resources for the implementation of the SAFE strategy. Improvements in water and sanitation will also help to control other diseases besides trachoma and so will be given greater priority in the integrated approach. However, the Alliance must ensure that the S component remains a priority given that preventing blindness is the main objective of GET 2020. Countries need external support for trichiasis surgery.

9. PROCESS FOR THE CERTIFICATION OF ELIMINATION OF BLINDING TRACHOMA

Dr Silvio Paolo Mariotti, Medical Officer, GET 2020 Secretary, World Health Organization, Geneva, Switzerland[3]

Discussion

WHO is currently developing the process of certification of elimination of blinding trachoma. Certification of disease elimination or eradication is a core normative function of WHO and is regulated by standard WHO procedures. Countries will notify the GET 2020 secretariat that they have documented evidence that they have satisfied the elimination criteria and achieved the UIGs and wish to request consideration for certification of elimination. The country will be required to provide documentation that will include a general country profile, trachoma-specific data, details of trachoma control activities, data on the disease in neighbouring countries and information on surveillance system performance. The national and regional certification commissions concerned will examine the request and undertake surveillance. An international certification team, working with the ministry of health of the country concerned, will review the documentation, especially the surveillance data, make visits to the country and draw up recommendations. Finally, the International Commission for Certification of Elimination of Trachoma (ICCET) will review the recommendations and certify elimination as appropriate.

A number of countries are almost ready for certification to begin; the planned year of elimination for Morocco was 2005, for Gambia and Oman it is 2007, for China, Ghana, Myanmar and Nepal, 2010, and for Cambodia, Niger, Pakistan and Senegal, 2015.

Guidelines for the process have been developed in two stages: the definition of criteria and procedures; and the appointment of International, Regional and National Certification Commissions. The first stage is being overseen by the Guidelines Steering Group, with contributions from the Technical Guidelines Development Group and the Guidelines Task Forces. The Steering Group will report to the Director-General; and the terms of reference of the International Commission and criteria for certification will be developed.

The Technical Development Group has been asked to define the assessments to be included in certification, to verify assessment methods, to validate survey criteria and to develop surveillance criteria (data from trachoma rapid assessments will not be included) and epidemiological indicators for validation of elimination. It is anticipated that countries may be offered conditional certification, which will require them to maintain surveillance and continue TT management activities. In cases of natural disasters, conflict or large-scale migration, countries may have to prove that trachoma has not re-merged as a public health problem. If they are in the pre-certification phase at this time, the

[3] Speaking on behalf of Dr Lorenzo Savioli, Director, Department of Control of Neglected Tropical Diseases, World Health Organization, Geneva, Switzerland, who was unable to attend.

process will stop and will not restart until it is shown that prevalence of TF is lower than 5% in exposed populations.

Countries seeking certification are of three types, those where trachoma has been recently endemic; those where endemicity is not recent and which have been undertaking TT management; and those where there is no recent history of endemic trachoma and there are historical records and case-finding data. For the former, pre-certification will begin after the last administrative unit has reached its UIG and three years after the last mass drug administration intervention. There will have been a sustained reduction in active trachoma and a TT management system will be in place. Full documentation of the trachoma prevention and control programme and its outcome will need to be submitted.

The development process had been approved at the Assistant Director-General level in WHO, preliminary technical consultations have been held and the Technical Development group has prepared a draft report. The next steps will be for the Guidelines Steering Group to approve the report and forward it to the Director-General for approval. The certification framework will also be further developed at the regional office and country office levels. It will include consideration of the allocation of resources for the certification procedure.

Discussion

Duration of the certification process

The time needed for validation of the submission will depend on the quality of the information provided and the situation in the country, including political commitment and the human and financial resource available. There is a need to clarify precisely what is meant by elimination of blinding trachoma (UIOs) will need to be carefully targeted) and what will happen if there is a re-emergence of trachoma as a public health problem.

10. DEMONSTRATION OF REVISED TRACHOMA DATA FORMS[4]

Dr P.H. Huguet, Medical Officer, Prevention of Blindness and Deafness, World Health Organization, Geneva, Switzerland

Accurate completion of the trachoma data forms is vital for monitoring progress towards GET 2020. In 2006, the Alliance recommended that the forms were simplified to reduce the reporting burden. The new electronic forms were finalized in 2006 and sent for validation to two French-speaking and two English-speaking countries. On the basis of the comments received from the only country to respond, Senegal, the forms were revised. Countries are asked to send in suggestions for further modifications so that the forms can be refined further in due course.

The forms consist of a questionnaire that countries are asked to complete. Each year the form should be downloaded from the WHO web site by the national officer responsible. The forms can be completed electronically or on a paper printout as preferred. The responses to a number of questions can be selected from drop-down menus. For each country, the forms retain basic data, such a demographic and administrative information and information on previous surveys, from year to year, so that these do not need to be re-entered each time (unless there have been any changes). National trachoma control plans include the selection of realistic AIOs and UIGs. Data on achievements at the district level towards these targets should be entered each year. This enables countries and WHO to see trends and determine how obstacles encountered can be overcome. The figures are dynamic: as knowledge about prevalence increases or availability of resources varies, the objectives and goals may change. The data must be entered and analysed accordingly; additional data sheets can be completed if necessary.

The boxes must be filled in clearly and precisely, otherwise the data cannot be interpreted and therefore cannot be entered in the database. Boxes should not be left empty – if no data are available, this should be stated. Guidelines for completing the forms in English and French are available free of charge through the web site of the WHO Department of Prevention of Blindness (www.who.int/blindness). A package containing the guidelines plus revised and updated materials on managing trachoma control programme can also be downloaded from the web site.

[4] Completion of the electronic trachoma data forms was demonstrated with the aid of overhead projections. The electronic form is available at www.who.int/blindness/data_maps/data_form.

11. COUNTRY STATEMENTS

11.1 ZAMBIA

Dr Grace Chipalo-Mutati, Consultant Ophthalmology, University Teaching Hospital, Lusaka, Zambia

Zambia has an estimated population of 10–11 million, with 60% living in urban areas. Administratively it is divided into nine provinces and 72 districts. WHO has estimated prevalence of blindness at 1%. Around half the population has access to safe water. The mortality rate of children under five years of age was 168 per 1000 in 2001. Life expectancy is 40 years. There have been significant health sector reforms since 1992. However, the country remains poor, with a GDP of US$ 4.3 billion. The proportion of GDP spent on health was in 8.0% 2006 and 10.7% in 2007.

Although there has been no national trachoma survey, the disease is thought to be endemic and to be a public health problem in several provinces. A 2001 population-based survey in one area showed that overall prevalence of trachoma had dropped from 47% to 7.6% after two years of implementation of the SAFE strategy. In the copper mining areas, the S and A components of the SAFE strategy are implemented.

The Ministry of Health has endorsed the SAFE strategy as the best approach to tackling trachoma in the country. A protocol for a population-based survey to determine trachoma prevalence is under development. The objectives are: to estimate the prevalence, pattern and distribution of trachoma in five selected districts; to establish known risk factors associated with trachoma; to establish baselines for monitoring and evaluation; and to identify target areas and set priorities for the control programme. The main challenges are to determine the disease burden through surveys in all endemic districts, to secure funding for the introduction of the SAFE strategy and to train or retrain personnel in trichiasis surgery.

Support for the survey is being provided by Operation Eyesight Universal, Sight Savers International and CBM. Approaches are being made to other nongovernmental organizations to seek support for the implementation of SAFE strategy and, through ITI, to request donation of azithromycin. The Ministry of Energy and Water Supply will contribute to the F and E component by drilling boreholes. Efforts are being made to raise community awareness through schools teachers and community and church leaders.

11.2 AFGHANISTAN

Dr Ahmad Shah Salam, National Coordinator for Comprehensive Eye Care Programme, Ministry of Public Health, Kabul, Afghanistan

A trachoma rapid assessment conducted in five provinces showed that four were eligible for intervention and three villages from Nangarhar province were selected for a door-to-door survey. The survey team was hired and trained and the survey started in March 2006. Training included use of the WHO-recommended trachoma grading.

The survey included 845 households and 4522 people (54% males, 46% females) of whom 1780 were aged 1–9 years. Prevalence of trachoma was 13.8%: TF 8.6%, TI 2.0% TT 1.2% and CO 1.9%. In children aged 1–9 years, prevalence was 21.1%: TF 5.00%. Prevalence was higher in females. Lack of clean water and proper sewage disposal system were the main environmental problems in the three villages. Faces were washed daily by 87.0% and latrine use was 86.2%.

After completion of the survey, an intervention action plan was developed and launched in the pilot area. Surgery using the bilamellar tarsal rotation

technique was performed in 35 of the 54 cases found. Follow-up indicated a successful outcome. Azithromycin was distributed to all community members in the three villages (80%) using a directly observed treatment strategy; treatments were recorded in special booklets. Distribution will be continued for two years. Pesticides were provided for insect control, and health education and promotion materials, including flip-charts and posters in the local language, were distributed. Community leaders were briefed by the trachoma control team. As it was not culturally appropriate to hold sessions with female groups, the role of females in the household regarding personal and family hygiene was emphasized in health education and promotion sessions held in schools, communities and homes. A water project was launched, to provide an adequate source of clean water. Village cleaning kits were purchased and a nominal charge to households was introduced to cover the costs of labour and pesticides. Village committees were formed to take responsibility for confirming that everyone had received antibiotic and for village cleanliness. It was decided that refresher health education and promotion training would be held after six months

It was concluded that active trachoma was at a level requiring mass antibiotic therapy. Trachoma appears to have re-emerged and prevalence is increasing, probably because of the current situation in the country. A comprehensive national trachoma control plan must be developed and implemented as soon as possible if blinding trachoma is to be eliminated in the whole country by 2020. Empowerment of women regarding their health care and personal hygiene should be part of the strategy.

The Ministry of Public Health acknowledges the financial and technical support provided by WHO, Christian Blind Mission and the Pakistan Institute of community Ophthalmology. Further external support is requested.

11.3 NEPAL

Mr BB Thapa, Programme Director, National Trachoma Programme, Kathmandu, Nepal

Despite the civil unrest in the country over the past10 years, the trachoma control programme has continued to operate. Azithromycin has been distributed in nine programme districts and blinding trachoma has been eliminated in four districts. The recent resolution of the conflict should make it possible to invite donors back.

Nepal has five development regions, 14 zones, 75 districts and 3913 village development committees. Annual per capita income is US$ 271 and the rate of growth of GDP is 3.6%. The population totals around 23 million, 85% living in rural areas.

A Memorandum of Understanding was signed by the Ministry of Health and Population, the Department of Water Supply and Sewerage, Nepal Netra Jyoti Sangh (the Nepal Society for Comprehensive Eye Care, a national nongovernmental organization) and ITI to enable the national trachoma control programme to implement the SAFE strategy. A programme steering committee was established and a SAFE programme was initiated in 2002 in nine trachoma-endemic districts. A five year strategic plan 2005–2009 has since been developed and approved with the aim of eliminating blinding trachoma from Nepal by 2010. Objectives include 29 000 TT surgeries (90%) and distribution of an estimated 10.5 million doses of azithromycin to treat the population of 3.5 million living in trachoma-endemic districts and the improvement or construction of water supply and sanitation services in those areas.

So far 46 surgeons have been trained in the bilamellar tarsal rotation technique and 1624 TT surgeries were performed in 2006 (11 881 to date). In 2006, training in the SAFE strategy was given to 3 168 female community health volunteers (15 624 to date) and 489 health promotion staff (1870 to date). A total of 1.1 million doses of azithromycin were administered (2.9 million to date). With the support of Helen Keller International, 2 591 primary school teachers were trained and 8 385 students from 58 primary schools were given trachoma education and provided with trachoma booklets. Almost 19 000 household latrines were built (27 821 to date).

	In four districts prevalence of TF fell from 12.0–19.9% to 0.5–4.5% after three years of intervention. Prevalence of TT in people aged over 15 years declined from 0.6–2.6 to 0.15–1.2 during same period. The strategic plan envisages the identification of districts with a high burden of disease, increased intervention coverage in endemic districts, the provision of good-quality services at no cost to the target group, and the mobilization of additional national and international resources to fund the programme. Trachoma rapid assessments or population-based prevalence surveys have been conducted in 46 of the 75 districts. Prevalence of TF/TI in children aged under 10 years was less than 5% in 10, 5–10% in 17 and more than 10% in 19. In 2007, interventions are planned in eight districts and surveys in three.
Strengths	All partners have signed the Memorandum of Understanding for the five-year period 2005–2009 and have approved the strategic plan. The Ministry of Health and Population is giving priority to the national trachoma programme. There is a strong, dedicated, trained and well-motivated national trachoma control programme team in place. An independent programme steering committee has been established.
Weaknesses	Trachoma burden data for the whole country are not yet available. Financial constraints have prevented the rapid expansion of the SAFE strategy. Antibiotic coverage has not been as high as anticipated in the programme districts.
Opportunities	The peace process is under way. Nepal has a strong eye hospital network ready to deliver the S component and the Indian Embassy has agreed to provide financial support for TT surgery. The health network is ready to deliver the A component. The Department of Water Supply and Sanitation, Helen Keller International and other partners are collaborating to implement the F and E components. Through ITI, Pfizer has agreed to donate the required quantity of azithromycin.
Threats	Although trachoma is declining in Nepal (11.1% in 2007 compared with 14.3% in 2006), it is still a public health problem in certain districts. Further efforts will be required by governmental and nongovernmental organizations and new donors will be needed if the elimination goal of 2010 is to be attained.

11.4 KENYA

Dr M.M. Gichangi, Head, Division of Ophthalmic Services, Nairobi , Kenya

Kenya has a population of around 33 million: 41% are under the age of 14 years; 66% live in rural areas and 56% live below the poverty line. An estimated 224 000 people are blind (prevalence 0.7%) and 672 000 have low vision, with cataract accounting for 43% and trachoma 19%. Trachoma is the leading cause of preventable blindness and is endemic in 18 districts, mainly found along the rift valley. The population at risk numbers around six million.

Trachoma control activities used to be integrated with other primary eye care activities in the primary health care system. There were no accurate data on trachoma prevalence before 2004 and the only information available was from outpatient registers. Six districts were surveyed in June–July 2004 in phase 1 of the national trachoma prevalence survey, which covered a population of 2.3 million. Prevalence of TF ranged from 6.4% to 30.5%. Trachoma was shown to be a public health problem across the whole of four districts and in pockets in the other two. Prevalence of TT ranged from 1.0% to 6.0%.

A two-year proposal for the implementation of the SAFE strategy in the surveyed districts was formulated in August 2004 and approved by ITI in February 2005. Preparations were started for implementation in one district, population around 450 000, on the southern border with the United Republic of Tanzania. Prevalence of TF was 28.1% in children aged 1–9 years (88 500). Prevalence of TT was 3.3% in those aged over 15 years (266 000). An integrated trachoma control project was launched by the Ministry of Health on 20 June 2006 with the support of the African Medical Research Foundation, Christian Blind Mission, Sight Savers International and the Kenya Society for the Blind.

The second and third phases of the survey will cover the other endemic districts and it is hoped that, with political good will and strengthened partnerships, an integrated and coordinated national trachoma control programme based on the SAFE strategy can be established in 2007. Further support is being provided by the Fred Hollows foundation, Lions Clubs International and Operation Eyesight Universal. Intersectoral collaboration is being strengthened under the leadership of the Ministry of Health.

Challenges

Challenges include the scarcity of human resources, limited ownership of the programme by Government, poor integration of eye-care services and poor coordination.

11.5 ETHIOPIA

Mr Zegeye Haile Zewde, National Coordinator, Prevention of Blindness Programme, FMOH, Addis Ababa, Ethiopia

Ethiopia has a population of 75 million, 85% living in rural areas, and more than 550 of the 611 districts in the country are endemic for trachoma. A prevention of blindness unit, a national committee for the prevention of blindness and a national trachoma task force have been established. With support from Christian Blind Mission, the Carter Center, Helen Keller International, Light for the World and the International Trachoma Initiative (ITI), a national survey on blindness, low vision and trachoma was conducted from December 2005 to September 2006. It indicated that the prevalence of blindness was 1.6% (12.2 million people) and that 11.5% of blindness (138 000) was due to trachomatous corneal opacity. Around 9 million children aged 1–9 years were estimated to have active trachoma; prevalence was four times higher in children living in rural areas than in those in urban areas. Prevalence of TT in people over the age of 15 years was 3.1% (1.2 million) and was considerably higher in women and again in those living in rural areas. Support for community-based trachoma control activities is being provided by a variety of partners including ORBIS (38 districts), the Carter Center (19 districts). CBM (eight districts), World Vision Ethiopia (seven districts), ITI (six districts) and the African Medical Research Foundation (three districts). In 81 districts at least one component of the SAFE strategy is being implemented.

In 2006, 52 000 TT surgeries were performed, which was 52% of the AIO and 4% of the backlog. The AIO for 2007 is 129 357. Human resources for

	TT surgery increased considerably in 2006 compared with 2005. A total of 4.37 million people were treated with azithromycin in 2006 in 36 districts, which is 44% of the target of 9.95 million. The AIO for 2007 is 9.6 million; the figure could be higher if more resources become available to cover distribution costs. Tetracycline eye ointment is provided at government health institutions at a cost of US$ 0.25–0.50. The Ministry of Health is strongly committed to the attainment of the Millennium Development Goals and has a plan to ensure environmental sustainability (Goal 7). It hopes to double the proportion of people with access to safe drinking-water by 2015 and is also scaling up latrine construction. Health education to improve facial cleanliness and latrine use is being given by the health authorities and nongovernmental organizations at community level.
Challenges	There are insufficient trained eye care personnel and the budget allocation for eye care is inadequate. There are shortages of equipment, medical supplies and funding to cover the costs of antibiotic distribution. Coordination of activities at the regional state level is inadequate.
Strengths	The Minister of Health is committed to the implementation of the SAFE strategy and it is hoped to deploy at least two health extension workers per village to provide primary health care and primary eye care in rural areas within three years. A national survey on blindness, low vision and trachoma has been conducted (2005–2006) and a national five-year strategic plan for eye care (2006–2010) is in place. The number of partners providing support for eye care is increasing.

12. THE CARTER CENTER LIBRARY OF TRACHOMA HEALTH EDUCATION MATERIALS

Dr Paul Emerson, Technical Director, Trachoma Control Programme, The Carter Center, Atlanta, Georgia, United States of America

Over the past 18 months, the Carter Center has gathered together health education and promotion resources that focus on trachoma and its control. The collection – the Trachoma Health Education Materials Library – is now available through the Carter Center web site (www.cartercenter.org). The materials come from many countries around the world and are in a wide variety of languages. They include technical manuals, health education publications, leaflets, posters and flip charts, and information on designs for T-shirts, hats, bags, etc. The aim is to provide ideas that can be used in designing materials tailored to the specific conditions of a country or region within a country. The materials are therefore accompanied by tutorials on how to prepare such materials.

Thanks are due to the many partners that have provided materials for the library. The original publishers have all given permission for the materials to appear in the library. However, many of the texts are in copyright and cannot be copied or reproduced directly; permission must be sought from the publishers to use the materials. Countries are therefore invited to use the library as a source of ideas on which to base their own designs.

The library is by no means an exhaustive collection and countries and partners are encouraged to send in additional materials for inclusion.[5]

[5] Note: materials on trachoma in Arabic and English from Saudi Arabia are available from the following web sites: www.kkesh.med.sa and www.sos.org.sa.

13. CONCLUSIONS AND RECOMMENDATIONS

The participants in the Eleventh Meeting of the WHO Alliance for the Global Elimination of Blinding Trachoma by 2020 adopted the following conclusions and recommendations.

1. The Alliance welcomed the opportunity to celebrate its tenth anniversary in Egypt and commended the remarkable commitment of partners in maintaining and expanding trachoma control programmes, and their ongoing investment in the goal of global elimination of blinding trachoma by 2020 (GET 2020), as part of Vision 2020. The Alliance appreciates the essential role played by national and international nongovernmental organizations; it also recognizes the crucial role played by WHO in building existing and new partnerships and strongly recommends the continuation of that role in the future.

2. The Alliance expressed appreciation to the WHO Regional Office for the Eastern Mediterranean for its hospitality in hosting the meeting, the excellent arrangements made and the high-level participation attracted. It also thanked all those who prepared presentations for the meeting.

3. Recognizing the importance of national ownership of trachoma control programmes, the Alliance welcomed the increased representation of national coordinators at the meeting.

4. The Alliance noted with concern that fewer trachoma data forms had been received from endemic countries in 2006 than in 2005 (28/40 compared with 32/40) and that the data were not always clearly entered. Endemic countries are therefore urged to complete their forms in accordance with WHO guidelines and to submit them to the WHO Secretariat by the stipulated deadline each year. Provision of further reliable data from the district level will permit the revision of trachoma estimates and thereby provide a more accurate picture of progress towards GET 2020.

5. The WHO analysis of the trachoma data forms received showed an increase in the provision of data from the district level, expansion of intersectoral collaboration and further progress in delivery of the SAFE strategy. However, it also showed a significant decrease in the number of trichiasis surgeries performed owing to a reported decrease in funding for this purpose. All stakeholders are recommended to increase efforts to mobilize resources for trichiasis surgery, which remains a priority in many countries and is a crucial activity for the elimination of blindness resulting from trachoma.

6. The two countries with the highest number of people with trachoma, India and China, are to be congratulated on their recent efforts – in response to a previous recommendation by the Alliance – to assess their trachoma burden. The two countries are encouraged to ensure implementation of the SAFE strategy in order to eliminate the remaining pockets of blinding trachoma.

7. The models reported at the meeting by Mexico (micro-regional planning) and Pakistan (comprehensive primary

eye care), which both involve community participation, deserve further consideration by countries implementing the full SAFE strategy.

8. The experience reported by the United Republic of Tanzania shows the potential for trachoma control through education in schools in a health-promoting environment using the methodology developed with support from the Hilton Foundation. Endemic countries are therefore recommended to strengthen the involvement of ministries of education in integrating education on trachoma in the curricula of schools and institutions that train teachers and health educators.

9. Having reviewed the report of the International Coalition for Trachoma Control, the Alliance expressed appreciation of the Coalition's role at international and national level in supporting trachoma control and its successes in accessing bilateral funding. All partners are urged to continue their efforts to engage support for the E component of the SAFE strategy.

10. The Trachoma Scientific Informal Workshop reported on the growing body of evidence for the need to implement the full SAFE strategy in order to ensure sustainable elimination of blinding trachoma.

11. The development of neglected tropical disease (NTD) initiatives was reviewed with interest. The Alliance recognizes that there is an opportunity for profiting from an optimized approach to multiple disease control. However, NTD interventions will vary according to country situations. WHO and all Alliance members should ensure that NTD strategies and national plans include all components of the SAFE strategy

12. Partners should continue to explore innovative financing mechanisms for the delivery of the SAFE strategy and to build in safeguards to assure universal access to essential medicines and surgical services.

13. Recognizing that the final stages in attaining GET 2020 will be the most difficult, the Alliance urges all partners to continue building on the achievements made and to keep focusing on the attainment of the goal in each and every endemic country as the global trachoma burden declines.

14. Having reached the ultimate intervention goal at subnational level, each country should set up and maintain trachoma surveillance as part of its national surveillance system in order to ensure that there is no re-emergence of the disease. Surveillance results should be reported to the WHO Alliance.

15. The Alliance notes the progress made by WHO in developing the procedures for the certification of elimination of blinding trachoma and recommends finalization of these procedures as soon as possible

14. DATE AND PLACE OF THE TWELFTH MEETING

Given the success of the current meeting at the WHO Regional Office for the Mediterranean, and the benefits to the host country of raising the profile of the need to control blinding trachoma, it was suggested that WHO should explore the possibility of holding the Twelfth Meeting of the Alliance at the Regional Office for South-East Asia in New Delhi.

It was agreed that the Twelfth Meeting should take place in the last two weeks of March or the first two weeks of April 2008, provided the necessary arrangements could be made.

12. CLOSURE

With the customary exchange of courtesies, the Chairman closed the meeting.

ANNEX 1. LIST OF PARTICIPANTS

Representatives of national programmes

Dr. A.H.M. Ahmed, National Coordinator, Sudan Trachoma Control Programme, Federal Ministry of Health, Khartoum, Sudan

Dr S. M. Al Gehedan, National Coordinator, Prevention of Blindness, Riyadh, Saudi Arabia

Dr A. Al-Kholany, Coordinator, Guinea Worm Eradication Programme, Mnistry of Health, Sanaa, Yemen

Dr A.H. Al-Raisi, Head, Eye Department, Al Nahdha, Ministry of Health, Muscat, Oman

Dr A. Amza, Coordinateur adjoint, Programme National de Lutte contre la Cécité, Niamey, Niger

Dr S. Bamani, Coordinateur, Programme National de Lutte contre la Cécité, Ministère de la Santé, Bamako, Mali

Dr S. Bubikire, Coordinator, National Eye Care Disability Prevention and Rehabilitation, Ministry of Health, Kampala, Uganda

Dr O. Debrah, National coordinator, Eye Care unit, Ghana Health Service, Accra, Ghana

Dr D. Dezoumbe, Coordinateur National Programme Nat. de Lutte contre la Cécité, N'Djaména, Tchad

Pr N.K. Diallo, Coordinateur National, Programme de Lutte contre l'Onchocercose et la Cécité, Ministère de la Santé Publique, Conakry, Guinea

Dr Essam El-Toukhy, Diriector, National Center Medicine and Ophtalmolory, Egypt

Dr S. Fituri, President, National Committe for Prevention of Blindness Tripoli, Libian Arab J.

Dr M. Gichangi, National Eye care coordinator, Ministry of Health Nairobi, Kenya

Dr J. Hammou, Coordinateur, Programme National de Lutte contre la Cécité, Rabat, Morocco

Dr Ai Lian Hu, Beijing Tong Ren Eye Centre, Beijing Tong Ren Hospital, Beijing, China

Dr R. Jose, Deputy Director General (Ophth.), Directorate General of Health Service, Ministry of Health, New Delhi, India

Dr K. Kalua, Senior Community Ophthalmologist, Ministry of Health, Lions Sightfirst Eye Hospital, Blantyre, Malawi

Pr A.A. Khan, National Coordinator, King Edward Medical College, Visiting Eye Surgeon, Mayo Hospital, Lahore, Pakistan

Dr S. Kuang, Project officer, Ministry of Health, Beijing, China

Dr M. Nabicassa, Natonal Coordinator, Programme de lutte contre la Cécité, Ministère de la Santé Publique, Guinea-Bissau

Dr H. Nouri, Coordinator of Eye Care Program, Teheran, Islamic Republic of Iran

Dr A.i Ould-Minnih, Coordinateur adjoint national
Ministere de la Santé et des Affaires Sociales, Nouakchott, Mauritania

Dr J. R. Ricardez-Esquinca, Ministerio de la Salud del Estado de Chiapas, Chiapas, Mexico

Dr G.E.B. Saguti, Coordinator, National Eye Care/Onchocerciasis, Ministry of Health and Social Welfare, Dar Es Salaam, United Republic of Tanzania

Dr A.S. Salam, National Coordinator for Comprehensive Eye Care, Ministry of Public Health, Kabul, Afghanistan

Dr B. Sarr, Coordinateur, Programme National contre la Cécité, Ministère de la Santé, Dakar, Senegal

Dr D. Seiha, Prevention of Blindness Coordinator, Preah Ang Duong Hospital, c/o WHO Representative, Phnom Penh, Cambodia

Mr A. Sillah, Manager, Gambia National Eye Care Programme, Medical Headquarters, Banjul, Gambia

Dr T.K.T Ton, Director, National Institute of Ophthalmology, Hanoi, Viet Nam

Mr B. B. Thapa, Director, National Trachoma Programme, Kathmandu, Nepal

Dr J.B. Veira, Coordinator, Trachoma program, Health Ministry, Brasilia, Brazil

Dr V. Visonnavong, Directeur, Centre d'Ophtalmologie, Ministère de la Santé Publique, Vientiane, Lao People's Democratic Republic

Dr B. Yoda, Coordinateur, Programme National de Prévention de la Cécité, Ministère de la Santé, Ouagadougou, Burkina Faso

Other participants

Dr A. Aboe, ITI Representative, International Trachoma Initiative, Accra, Ghana

Prof S. E. Ahmedou, Coordinateur, Programme national contre la Cécité, Ministère de la Santé et des Affaires Sociales, Nouakchott, Mauritania

Dr K. Amer, National Coordinator for vision 2020, Cairo, Egypt

Dr R. Bailey, Reader, Department of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, United Kingdom

Ms I. Blake, Department of Infectious Disease Epidemiology, Imperial college, London, United Kingdom

Ms J. Bohl, Coordinator, Operation Eyesight Universal, Vancouver, Canada

Dr M. Burton, Lecturer, London School of Hygiene and Tropical Medicine (LSHTD), International Centre for Eye Health, London, United Kingdom

Dr Y. C. Khazraji, Organisation de Prevention de la Cecité, Rabat, Morocco

Dr P. Courtright, Co-Director, Kilimanjaro Centre for Community Ophthalmology, Tumaini University, Moshi, United Republic of Tanzania

Ms C. Cross, Manager, International Programmes, Sight Savers International, Haywards Heath, United Kingdom

Dr M. del Socorro De la Cruz, Coordinator, Trachoma Control Program, Chiapas Mexico

Mr P. Emerson, Technical Director, The Carter Center, Trachoma Control Program, Atlanta, GA, USA

Dr M. Gambhir, Research Associate, Imperial College London, Dept infectious disease epidemiology, London, United Kingdom

Dr B. Gaynor, WHO Collaborating Center for Prevention, Francis I. Proctor Foundation for Research in Ophthalmology, University of California, San Francisco, USA

Dr P. Goldschmidt, Praticien Hospitalier, CHNO des Quinze-Vingts, Paris, France

Mr R. Graham, Regional Director, Sightsavers International, Nairobi, Kenya

Dr Z. Heddaya, Epidemiologist, Central Department for Prevention and Co, Ministry of Health & Population, Cairo, Egypt

Dr J. House, UCSF Proctor Foundation, San Francisco, USA

Dr I. Jabr, Vice-President Programmes, International Trachoma Initiative, New York, NY, USA

Dr A. B. Kello, Programme Officer, International Trachoma Initiative, Ethiopia, Addis Ababa, Ethiopia

Prof M. D. KHAN, Vice Chancellor, Khyber Medical University, Peshawar, Pakistan

Dr R. B. KHANDEKAR, Ophthalmologist, Epidemiologist, Eye & Ear Health Care, Ministry of Health, Muscat, Oman

Pr. V. Klauss, University Eye Hospital, University of Munich, Munich, Germany

Dr K. Konyama, Professor, Department of Ophthalmology, Juntendo University School of Medicine, Tokyo, Japan

Ms N. Kruse, Chief Development Officer, Health Programs, The Carter Center, Atlanta, GA, USA

Dr J. Kumaresan, President, International Trachoma Initiative, New York, NY, USA

Dr M. Costa Lopes, National Coordinator Trachoma Program, Ministry of Health, Brasilia, Brazil

Mr C. MacArthur, Director, Training and Community Education, Helen Keller International, New York, NY, USA

Mr C. Morgan, Vice President, Operation Eyesight, North Vancouver, British Columbia, Canada

Dr P. S.D. MUSHI, Director, Tanzania Institute of Education, Ministry of Education, Dar es Salaam, United Rep. Tanzania

Dr E. Ngirwamungu, Country Representative, International trachoma Initiative, Dar es Salaam, United Rep. Tanzania

Mr J. Ngondi, Data Manager, The Carter Center, Cambridge, United Kingdom

Dr K. ONO, Medical Staff, Department of Ophthalmology, Juntendo University School of Medicine, Tokyo, Japan

Dr J. de G. Riverson, Executive Director, World Vision Ghana, Accra, Ghana

Ms L. Rotondo, Assistant Director, Trachoma Control Program, The Carter Center, Atlanta, GA, USA

Dr A. Sam -Abbenyi, Director, Planning and Analysis, International Trachoma Initiative, New York, NY, USA

Dr M. SAMNA, ITI Country Representative, Niamey, Niger

Dr H. Shiota, Professor and Chairman, Department of Ophthalmology and Visual Neuroscience, Institute of Health Biosciences, University of Tokushima, Tokushima City, Japan

Dr H. Taylor, Professor of Ophthalmology, Centre for Eye Research Australia, University of Melbourne, Melbourne, Victoria, Australia

Professor S. West, Professor of Ophthalmology and Epidemiology, Dana Center, The Wilmer Institute, Johns Hopkins Medical Institutions, Baltimore, MD, USA

Observer

Dr H. Lauver, Corporate Philanthropy, Pfizer Inc., New York, NY, USA

WHO Regional Office for Africa, Brazzaville

Dr E. Rasikindrahona, Responsable de la Prévention de la Cécité

WHO Headquarters, Geneva

Dr P. Huguet, Medical officer,

Dr S.P. Mariotti, Medical Officer, GET 2020 Secretary

ANNEX 2. SUMMARY RECORD OF THE OPENING CEREMONY OF THE ELEVENTH MEETING OF THE WHO ALLIANCE FOR THE GLOBAL ELIMINATION OF BLINDING TRACHOMA, CAIRO, 2–4 APRIL 2007

Opening

Dr Hussein Abdel-Razzak Al Gezairy (WHO Regional Director for the Eastern Mediterranean) welcomed the participants to the WHO Regional Office for the Eastern Mediterranean on the occasion of the tenth anniversary of the WHO Alliance for the Global Elimination of Blinding Trachoma. The Alliance had made great progress in the previous 10 years but there was still a long way to go before the attainment of the goal of global elimination of blinding trachoma by 2020 (GET 2020).

Blinding trachoma, one of the oldest diseases known, was a preventable and curable disease that affected the poorest of poor people in developing countries and countries with economies in transition. An estimated 80 million people, mainly children, were living with active trachoma infection and some 6 million, mainly women, in the late stages of the disease were at risk of immediate and irreversible visual loss. The disease was endemic in 55 countries, many in Africa, and perpetuated the vicious cycle of poverty, taking up scarce resources. Although there was a proven strategy to control the disease – the WHO-endorsed SAFE strategy – the financial resources available to implement it were inadequate at national and international levels. Moreover, when funds were available, they often covered only part of the strategy, reducing its effectiveness. The elimination of blinding trachoma should be addressed within the framework of elimination of the root causes of poverty, with everyone working together to link the elimination process to the development process at national and regional levels. However, in many endemic countries, trachoma was not perceived as a priority. The process of elimination could be advanced by linking the disease to poverty, to the United Nations Millennium

Development Goals and to community-based initiatives. Governments should take the necessary steps to implement national trachoma control plans and allocate the necessary resources for the implementation of the SAFE strategy. Trachoma was not a disease that could be treated by doctors alone; it was a developmental, preventable disease and control required adequate supplies of drinking-water and environmental hygiene measures.

The emerging possibilities for funding a synergistic approach to the control of neglected tropical diseases should provide further opportunities for the elimination of blinding trachoma. The Director-General of WHO had made elimination a priority and the disease was being successfully tackled in many countries, including three from the Eastern Mediterranean Region. More than 40 countries worldwide were implementing the SAFE strategy at various levels. There were many challenges facing countries in trying to respond to Health Assembly resolution WHA51.11, including the need to establish effective surveillance systems and intersectoral collaboration between ministries of health and relevant governmental and nongovernmental organizations. Everyone must work in partnership with a common agenda for attaining GET 2020. It was to be hoped that the meeting would give rise to practical recommendations that would advance progress towards that goal.

He particularly welcomed the presence at the meeting of Her Excellency the Minister of Health of Sudan, one of the countries most affected by trachoma, and hoped that the holding of the meeting in Cairo would provide an opportunity to bring a regional focus to the work of the Alliance. Good progress towards elimination had already been achieved by the Islamic Republic of Iran, Morocco and Oman in the Eastern Mediterranean Region, and Ethiopia, Gambia, Ghana, Niger, Senegal and United Republic of Tanzania in the African Region through a combination of public health measures including implementation of the SAFE strategy, and overall economic development. The meeting would provide the opportunity to discuss how progress could be made in other Member States in the Region, especially Egypt and Sudan.

Thanks were due to all participants in the meeting, in particular the representatives of Member States, and to the many international and nongovernmental partners that were contributing to the work of the Alliance. Particular thanks were due to Pfizer Inc. for its generous support in donating azithromycin, which he hoped would continue as it was a cornerstone of the elimination campaign. The WHO regional offices would continue to work with Member States and Alliance partners to attain GET 2020. In conclusion, he wished the meeting participants every success in their deliberations.

Dr Ahmed Trabelsi (Regional Co-Chair, International Agency for the Prevention of Blindness /IMPACT), speaking on behalf of His Royal Highness Prince Abdulaziz Bin Ahmed Bin Abdulaziz Al-Saud (Regional Chair, International Agency for the Prevention of Blindness/IMPACT), who was unable to attend, welcomed the Alliance to the Eastern Mediterranean Region. The Islamic Republic of Iran, Morocco and Oman had reported successes in implementing the SAFE strategy and, on 17 November 2006, Morocco had celebrated the attainment of its ultimate intervention goals for the elimination of blinding trachoma, marking a milestone in global trachoma control and providing a positive example for other endemic countries. The message was clear: comprehensive implementation of the SAFE strategy through planned collaborative efforts with the involvement of all relevant stakeholders could deliver successful results and prevent blindness from trachoma.

Trachoma affected the poorest and most remote communities in the endemic countries. In the Eastern Mediterranean Region, some 10 million people were affected by the disease and some 80 million people were living in endemic areas, principally in Egypt and Sudan. Since its launch in 1997, the efforts of the Alliance, together with socioeconomic development in endemic countries, had had a significant impact on the global trachoma burden, which had fallen from an estimated 360 million cases in 1985 to the current level of 80 million. In 2006, WHO had announced that several countries were on track to eliminate blinding trachoma. It was to be hoped that the Alliance's Eleventh Meeting would provide assurance that progress was continuing towards the attainment of GET 2020 in line with the joint WHO/ International Agency for the Prevention of Blindness global initiative of Vision 2020, the Right to Sight.

The WHO Regional Office for the Eastern Mediterranean, in collaboration with International Agency for the Prevention of Blindness had held a regional planning workshop in November 2005, which had attracted broad participation from interested partners and had resulted in a guideline and recommendations document. The countries of the Region looked forward to applying the WHO epidemiological assessment criteria for determining the elimination of blinding trachoma, which would help them to evaluate national strategies and tailor further activities to ensure successful elimination. He wished the meeting every success.

Dr Silvio Mariotti (World Health Organization, Geneva) said that trachoma was of particular concern because it could give rise to irreversible blindness. The disease affected people worldwide and was linked to lack of socioeconomic development. However, it could be prevented and cured and could be eliminated as a cause of blindness. Estimates of the global trachoma burden were increasingly based on epidemiological assessments rather than expert opinion. In 2005, an estimated 60 million were infected; recent reports provided optimism that the global burden was being reduced to a manageable size. Nevertheless, trachoma remained the leading cause of avoidable blindness worldwide and the second cause of blindness in Africa. The African and South-East Asian Regions were particularly affected; the disease was also still a concern in the Eastern Mediterranean Region.

As previous speakers had indicated, trachoma was a disease of poverty and exclusion, affecting the populations of the poorest countries, the poorest populations of developing countries and neglected populations in developed countries and many of those affected, mainly women and children, considered it as “fate” and did not know that the disease could be cured. Trachoma had disappeared from many countries after industrial development. Sustained elimination requires changes in behaviour and personal and environmental hygiene that are complex and pose major challenges.

Prior to the establishment of the Alliance in 1997, trachoma was known but few countries had detailed epidemiological data or elimination plans, trachoma control activities were fragmented and rarely evaluated, and there was little exchange of information. Since 1997, efforts had been made to collect better data, there had been an overall reduction in the disease, agreement on indicators and monitoring procedures, and the attainment by some countries of ultimate intervention goals. Furthermore lasting partnerships had been established between governments and nongovernmental organizations, which had raised awareness of trachoma as a public health concern and increased the number of countries involved. The Alliance had been one of the first examples of the sustained engagement of the private sector thanks to the continuing donation of the antibiotic azithromycin by Pfizer. It was now possible to consider seriously the certification of elimination, a goal that some had not considered feasible at the outset. Recent achievements included: the collection of data from the district level, using standard protocols; improved provision of information from ministries of health; greater use of population-based surveys; and use of standard indicators to assess the disease and monitor progress. Trachoma control through the SAFE strategy was being implemented in 37 countries and in eight countries the target date for elimination as 2010. Mexico, Morocco, Islamic Republic of Iran and Oman had been reported to have achieved trachoma control or elimination of blinding trachoma; India and China were assessing their trachoma burden with a view to formulating eliminating plans; and Afghanistan was implementing trachoma control activities despite a most challenging environment. Moreover nongovernmental organizations were maintaining their support to countries through better-coordinated approaches in long-lasting partnerships with ministries of health, including involvement in national prevention of blindness activities from planning to evaluation. Private sector support continued to expand and around 136 million doses of drug would have been donated by 2007. Links with the Millennium Development Goals, poverty-reduction strategies and NDI had been established. The concept of ultimate intervention goals and annual intervention objectives had been adopted and development of the framework for certification of the elimination of blinding trachoma was almost complete.

Financing at all levels remained a significant challenge. Additional resources were needed to conduct further trachoma assessments, continue or launch the implementation of plans based on the SAFE strategy, undertake operational research on surveillance systems and

conduct the elimination certification processes. It would also be important to make the most of the opportunities provided by the integrated approaches to neglected tropical diseases, which included trachoma, and by activities related to the attainment of the Millennium Development Goal, poverty-reduction strategies and Vision 2020. In addition, further advocacy was required to secure increased political commitment in endemic countries for implementation of the SAFE strategy, trachoma surveillance and the consistent inclusion of trachoma control in development activities.

Recalling the role played by Egypt and the Eastern Mediterranean Region in the historical development of knowledge about the eye and eye care, and to the fact that resolution WHA51.11 had been adopted thanks to the clear lead from one country in the Region, he drew attention to the trachoma burden that remained in the Region. Although not as great as elsewhere in terms of numbers, trachoma remained a matter of concern. However, a number of countries had made trachoma control and prevention of blindness a priority and were cooperating with WHO and the Alliance. A number of countries were on the verge of elimination of blinding trachoma (including Islamic Republic of Iran, Lebanon, Oman, Morocco, Saudi Arabia, United Arab Emirates) and the goal was in reach for a number of others (such as the Libyan Arab Jamahiriya and Pakistan). Different models for elimination activities developed by those countries, included overall national socioeconomic development, full implementation of the SAFE strategy, and provision of comprehensive primary eye care at district level. Those models could be adapted by others. The elimination of blinding trachoma contributed to the attainment of the Millennium Development Goals and commitment to it was a political statement of care for neglected populations. Attainment of GET 2020 could be one of the next major achievements for WHO as a whole and a breakthrough for the Eastern Mediterranean Region; the endemic countries in the Region should therefore maintain their efforts, despite current health development constraints, to reach the goal and to share their experiences with other Member States of WHO.

Dr Nasr El Sayed, First Under-Secretary, Ministry of Health and Population, Egypt, speaking on behalf of Dr Hatem El-Gebali, Minister of Health and Population, welcomed the participants to Egypt and looked forward to the opportunity provided by the Alliance's Eleventh Annual Meeting to share ideas, appreciate achievements, address obstacles and coordinate further efforts to achieve the global elimination of blinding trachoma. The Ministry of Health of Egypt would continue to cooperate fully in activities to attain GET 2020.

Trachoma and other eye infections had had a long history in Egypt and blindness continued to have a significant socioeconomic impact. However, 80% of blindness was avoidable. The WHO-endorsed SAFE strategy provided comprehensive measures to combat trachoma and the blindness that could result from trichiasis. Trachoma remained a serious public health problem in many rural areas in Egypt. The main objectives were to reduce trichiasis in adults by 50% and the prevalence of active infection in children under 10 years of age by 60% in the coming three years. As elsewhere, the risk of trachoma was three to four times higher in females than in males. In collaboration with the Al Noor Foundation and other partners, the Ministry of Health had undertaken surveys in three governates since 1999, which had indicated prevalence rates of active trachoma infection of 36–47% in children under 10 years of age. By the end of 2007, trachoma surveillance would be integrated in the national surveillance system, which should provide a clearer picture of the current situation. Hygiene and sanitation remained a problem in some areas, and there were plans to ensure that most villages were provided with safe water supplies and sewage disposal facilities. There were some 5000 primary health care units from which antibiotic treatment could be distributed, although the high coverage needed in some areas would be expensive. Trichiasis surgery was supported at district and general hospitals by well-trained ophthalmologists. In addition, during 2006–2007, around 700 medical convoys would have been implemented, providing primary eye care and distributing antibiotics. The internal and external partnerships between government, nongovernmental organizations, donors and academic institutions were being strengthened and would share the full range of SAFE strategy activities.

Regional focus on support for the

Dr GEZAIRY (WHO Regional Director for the Eastern Mediterranean) recalled the important role played by eye disease, including trachoma, and eye specialists in the history of medicine in Egypt. Despite the introduction

elimination of blinding trachoma in priority countries in the WHO Eastern Mediterranean Region

of antibiotic treatment, trichiasis remained a serious cause of blindness in the country. However, if the disease was given priority and the support of numerous partners was obtained, it should be possible to eliminate blinding trachoma within the next few years. Similar efforts against trachoma were needed in Sudan, where experiences in controlling guinea-worm disease and malaria had shown that successes were possible despite difficult circumstances. Community participation was a major weapon in combating such diseases, in particular in improving cleanliness, hygiene. Provision of safe water supplies and sanitation would require considerable support.

Mr Mohammed Demerdash , Ministry of Housing and Utilities & Community Settlements, Egypt, speaking on behalf of Dr Ahmed Allaa'a El Din Maghrabi, Minister of Housing and Utilities & Community Settlements, said that the studies undertaken with the support of the Al Noor Eye Foundation has indicated the need to extend safe water supplies and sanitation systems in order to implement the full SAFE strategy for the control of trachoma. A sum of 2 billion Egyptian pounds had been budgeted for projects in the areas covered by the survey to the end of 2007. A further 19 billion Egyptian pounds was budgeted for the second phase, 2007–2012, which would see the extension of clean water supplies and swage disposal systems throughout the country. Thanks were due to the partners who were providing support for the various projects. The Minister wished the Alliance every success at its Eleventh Meeting and pledged support for the GET 2020 campaign.

Dr Akef El-Maghraby (Al Noor Eye Foundation) welcomed the participants to Egypt and wished the meeting every success. Outlining the trachoma control challenges in Egypt, he said that since the late 1990s, efforts had been made by the Ministry of Health, with the support of partners such as the Al Noor Foundation and the Magrabi Hospital, to gather prevalence data in order to determine more accurately the distribution of the disease and to pilot elimination strategies in target areas. As indicated earlier, epidemiological studies in three governates had shown prevalence of active trachoma in children under 10 years of age of 36–47%. The high rates of active infection in children and high levels of trichiasis in adults, especially women, in the three governates indicate that trachoma is a significant public health problem and that other governates are likely to have a similar trachoma burden. Distribution of azithromycin in a selected village in 2001 reduced active trachoma in children from 36% to 12% but prevalence rose again as the other components of the SAFE strategy were not in place. Risks of trachoma were higher in households lacking safe water supplies and sanitation and it was clearly not sufficient to tackle trachoma through health interventions alone. The Ministries of Housing and of the Environment were therefore providing support for the expansion of safe water supplies and waste management. Strong partnerships were being developed between a variety of governmental and nongovernmental organizations with a view to developing an action plan to implement a trachoma control programme through implementation of all four components of the SAFE strategy. Egypt was confident that it could eliminate trachoma as a public health problem by 2020.

H.E. Dr Tabita Botros Shokai, Minister of Health, Sudan, confirmed Sudan's commitment to the elimination of blinding trachoma, with a target date for elimination of 2015. The Sudan trachoma control programme had already made considerable progress thanks to collaboration between national and state government agencies, nongovernmental organizations, led by the Carter Center, WHO and local communities. Other nongovernmental organizations were requested to come forward and lend their support. Sudan had achieved a comprehensive peace agreement and was emerging from 21 years of war. However there was considerable population movement owing to the large numbers of people who had been displaced. Particular efforts were therefore needed in the areas affected by the war and to accelerate environmental improvements. On a visit to Sudan in February 2007, former United States President Carter and the President of Lions Clubs International Foundation had confirmed their continuing support for the national trachoma control programme, for which she was grateful. The support received to date had enabled the national trachoma control programme to undertake prevalence surveys in the camps for internally displaced persons around Khartoum and in the eastern and northern states most affected by the disease. The programme was being expanded to other states and activities were being decentralized to state level, as stipulated in the transitional constitution. The four components of the SAFE strategy were being integrated in primary health care activities. The national trachoma control programme was collaborating

with international and national nongovernmental organizations in Dafur, despite the continuing insecurity there. It was hoped that there would soon be peace across the whole of Sudan and that the country could achieve its goals in respect of the prevention of blindness, linking these to its Millennium Development Goal strategies.

Dr Jacob Kumaresan (International Trachoma Initiative) drew attention to the remarkable successes achieved in the 10 years since the establishment of the Alliance, which were a credit to the concerted efforts by loyal partners. Trachoma was an avoidable problem but one that could only be solved through a multisectoral, multicollaborative effort. Tribute was due to Pfizer for its donation of azithromycin, distribution of which had permitted acceleration towards the goal of elimination of blinding trachoma. Activities had resulted in an improvement in quality of life for many who might otherwise have become blind and had also brought socioeconomic savings in terms of disability-adjusted life years (DALYs). In the previous six years, the International Trachoma Initiative had supported around 300 000 trichiasis surgeries and some 53 million treatments with azithromycin. The Initiative would continue to work in partnership with governments and other organizations to attain the goal of GET 2020.

Dr Paul Emerson (The Carter Center), turning first to dracunculiasis, said that around 85% of the global burden of that disease was to be found in southern Sudan. It was hoped that, with the help of some 1700 volunteers, Sudan, with support from the Carter Center could achieve reductions in the disease of 40–50% per year, with elimination by 2009. President Carter took a great interest in the Eastern Mediterranean Region and had visited Khartoum and Juba in February 2007 and held constructive talks with the President and Vice-President. The Carter Center was also committed to trachoma control in Sudan and the Region as a whole. Its support to the Sudan trachoma control programme had been made possible through Lions Clubs International and the donation of azithromycin by Pfizer. The dracunculiasis control programme was developing a strong infrastructure in Southern Sudan and it was hoped that trachoma control activities could take advantage of that infrastructure.

Ms Paula Luff (Pfizer Inc.) said that tribute was due to the Alliance partners and their national counterparts for the amazing efforts they were making to ensure the elimination of blinding trachoma. It was a pleasure to note how the Alliance had expanded and strengthened. Pfizer had made available some 53 million treatments with azithromycin since the start of its involvement and remained deeply committed to the continuation of its donation programme and to the attainment of GET 2020.

Ms Catherine Cross (Sight Savers International), speaking on behalf of the International Coalition for Trachoma Control, said that the Coalition brought together the nongovernmental organizations that were supporting national trachoma control programmes and also worked with WHO at the international level. She thanked the WHO Regional Office for the Eastern Mediterranean for the excellent arrangements made for the Alliance's Eleventh Meeting. It was a pleasure to note the presence of such a large number of national representatives, in particular those from countries that had not been previously been represented. The Coalition looked forward to continuing its collaboration with the Alliance.

Dr M. D. Khan (Pakistan) paid tribute to the nongovernmental organizations, the World Health Organization and the professional experts concerned for the great commitment they had shown in supporting countries in combating trachoma over the previous decade. He also commended the WHO Regional Director for the Eastern Mediterranean Region and his team for the support provided to the Member States of the Region in the area of eye care and prevention of blindness, which had included meetings on diabetic retinopathy, trachoma and comprehensive eye care.

Dr Asad Aslam Khan (Pakistan) said that the Government of Punjab, the largest state in Pakistan, had recently allocated US$ 450 000 for the elimination of blinding trachoma and other states were expected to make similar commitments. He hoped that that those actions would motivate decision-makers in other countries.

In bringing the ceremony to a close, Dr GEZAIRY (WHO Regional Director for the Eastern Mediterranean), said that with the commitment being shown by all those involved in the elimination of blinding trachoma, it should be possible to attain the goal by the target date of 2020, and

thereby prevent many people from becoming blind.

ANNEX 3. AGENDA FOR THE ELEVENTH MEETING OF THE WHO ALLIANCE FOR THE GLOBAL ELIMINATION OF BLINDING TRACHOMA, CAIRO, 2–4 APRIL 2007

Opening

Nomination of officers

Adoption of the agenda

WHO report

Agenda item 1 – Country reports

- Pakistan
- Niger
- India
- Senegal
- Eritrea
- Morocco
- Guinea-Bissau
- China
- Uganda
- School health in the United Republic of Tanzania

Agenda item 2 – Report of the International Coalition for Trachoma Control

Agenda item 3 – Report from the Trachoma Scientific Informal Workshop 2007

Agenda item 4 – Report from the International Trachoma Initiative: neglected tropical diseases grant from USAID

- WHO
- ITI

Agenda item 5 – Any other business

- Process for certification of elimination of blinding trachoma
- TDF demo
- Country statements
- Resources available from the Carter Center

Conclusions and recommendations

Date and place of next meeting