

WORLD HEALTH ORGANIZATION
Regional Office
for the Eastern Mediterranean
ORGANISATION MONDIALE DE LA SANTE
Bureau regional de la Mediterranee orientale



منظمة الصحة العالمية
المكتب الإقليمي
لشرق البحر المتوسط

REGIONAL COMMITTEE FOR THE
EASTERN MEDITERRANEAN

Forty-First Session

Agenda item 14

EM/RC41/12

April 1994

original: Arabic

PROGRESS REPORT

TUBERCULOSIS CONTROL

CONTENTS

	<u>page</u>
1. INTRODUCTION	1
2. EPIDEMIOLOGICAL SITUATION	3
3. FACTORS IMPEDING PROGRESS IN TB CONTROL IN THE REGION	5
4. FOLLOW-UP OF THE THIRTY-SIXTH SESSION OF THE REGIONAL COMMITTEE'S RECOMMENDATIONS ON TB CONTROL IN THE REGION	7
5. CONCLUSIONS AND RECOMMENDATIONS	13
Annex 1 - COST OF RECOMMENDED TREATMENT REGIMENS	15

1. INTRODUCTION

Since the last report on tuberculosis (TB) was presented to the Regional Committee meeting in 1989, new epidemiological information about the global TB situation has been obtained. Studies carried out by the World Health Organization (WHO) indicate that the world is facing an unusual resurgence of TB, affecting both developing and developed countries and the TB incidence rate is increasing at an alarming rate.

This deteriorating situation of TB is generally recognized as due to the following factors:

- universal neglect of TB control in the last two decades, including inefficient employment of the available technology for TB control;
- the pandemic spread of the human immunodeficiency virus (HIV) which adversely affects the immune system of infected persons resulting in the reactivation of old TB infection to clinical illness;
- spread of multi-drug resistant (MDR) tubercle bacilli which do not respond to the usual chemotherapy; and
- the social upheavals resulting from man-made or natural disasters, with the concomitant disruption of social services (including health services). The large number of refugees and internally displaced populations living under miserable conditions has also contributed to the emerging TB problem.

These factors, responsible for the increasing incidence of TB worldwide, have also been operating in the Region and thus it is necessary to view the TB situation with them in mind.

WHO estimates that, if the effectiveness and availability of TB control is not appreciably improved, about 7.5 million new cases and 2.9 million deaths from TB are expected in North Africa and the Middle East in the current decade.

Alarmed by the TB menace, WHO has exerted strenuous efforts to alert the international community to the threat posed by increasing global TB incidence, describing it as a "global emergency". WHO convened a series of specialist workshops and conferences to explain the social and economic consequences of TB which is unchecked and also to formulate appropriate strategies to prevent further deterioration of the TB situation, eventually bringing it under control. WHO's efforts culminated in adopting the World Health Assembly resolutions WHA44.8 (1991) and WHA46.36 (1993). The former resolution sets the global target for the year 2000 at 85% cure rate of smear-positive TB patients under treatment and 70% detection of such cases by smear examination, ensuring that TB control is integrated, as far as possible, into primary health care (PHC) activities. The 1993 resolution outlines the main components of the new WHO strategy for TB control.

Table 1. Reported tuberculosis (TB) incidence in the Region

Member States	(1) Population (000s) 1992 est.	(2) Total (all forms) new detected cases	(2) Smear- positive cases	(2) Estimated ARI% (Year)	(3) Expected smear- positive cases yearly
Afghanistan	19 044	--	--	3.0 (1993)	28 566
Bahrain	550	142	97	0.26 (1992)	72
Cyprus	714	38	16	0.007 (1991)	2
Djibouti	433	2 884	1 584	3.6 (1990)	779
Egypt	54 820	15 617	5 661	0.7 (1990)	19 187
Iran, Islamic Republic of	56 850	14 121	6 272	0.7 (1990)	19 897
Iraq	20 261	14 684	1 587	1.0 (1988)	10 130
Jordan	4 287	504	154	0.06 (1991)	289
Kuwait	2 163	185	96	0.8 (1989)	865
Lebanon	2 803	884	512	0.3 (1993)	420
Libyan Arab Jamahiriya	4 886	1 164	582	0.3 (1993)	733
Morocco	26 342	27 720	11 801	0.8 (1985)	10 537
Oman	1 619	367	149	1.0 (1988)	809
Pakistan	130 129	105 600	36 676	0.85 (1988)	54 654
Qatar	395	195	62	0.25 (1991)	47
Saudi Arabia	15 267	2 521	952	0.86 (1988)	6 565
Somalia	7 872	--	--	3.5 (1986)	13 776
Sudan	26 702	9 489	4 864	1.9 (1986)	25 367
Syrian Arab Republic	13 472	5 437	255	0.75 (1992)	5 119
Tunisia	8 543	2 064	1 040	0.5 (1986)	2 136
United Arab Emirates	1 668	--	--		--
Yemen	12 566	9 899	2 896	0.86 (1991)	5 403
Palestinian population	2 900	--	65	0.02	58
Total	414 286	213 515	76 021		205 411

Source (1) WHO Document WHO/HST/90.3 (1990), Geneva
(2) Questionnaire (1992) and country reports
(3) Calculated based on the formula that an annual risk of infection (ARI) % corresponds to an annual incidence of smear-positive TB cases of 50/100 000 population

2. EPIDEMIOLOGICAL SITUATION

During 1993, WHO/EMRO collected information from Member States of EMR about the total number of newly detected cases of TB (all forms), the number of smear positive cases and the most recent estimate of the annual risk of infection (AROI). The above data were obtained from all countries of the Region except from Afghanistan, Somalia and United Arab Emirates and are presented in Table 1.

Some anomalies are observed in Table 1 between the number of cases reported and the number of smear-positive expected. This can be explained by the fact that calculation of the expected number of cases using the annual risk of infection (AROI) does not hold when the TB incidence is very low, as in Cyprus for example. The second factor is the fact that in countries with a heterogeneous community such as some Gulf countries, most TB cases are contributed by one sector (expatriates) while the AROI is calculated for other sectors (indigenes) in which TB incidence is low. This is the same for Djibouti where a large percentage of cases under treatment is from Somalia and Ethiopia. The third factor relates to the methods used by national authorities in estimating the AROI.

At this juncture, it may be helpful to give a brief definition of what is meant by annual risk of infection (AROI), an important parameter when discussing the epidemiology of TB. AROI refers to the percentage of persons who over a period of one year become infected for the first time or are reinfected by tubercule bacilli. Thus the AROI is directly proportional to the amount of tuberculous infection in the community. It is also estimated that an AROI of 1% corresponds to an annual incidence of smear-positive TB cases of about 50 per 100 000 population.

Table 1 shows that among the 414 million population in the Region, 213 551 new cases of TB (all forms) and 75 994 smear positive cases were reported in 1992 giving a Regional annual rate of reported TB (all forms) of 50 per 100 000 population and a reported TB smear-positive incidence of about 20 per 100 000. This is considered to be much lower than the real situation. Calculating the expected number of cases using the AROI, Table 1 shows that the estimated number of smear-positive cases is nearly 205 000. Comparing estimated with reported number of TB smear-positives, it appears that nearly two-thirds of the smear-positive TB cases are probably not under treatment, a fact which also indicates that these cases are spreading TB among the communities in which they live. The new WHO strategy for TB control emphasizes the prevention of such a situation and has as its primary objective the detection and cure of as many smear-positive TB cases as possible to reduce and eventually eliminate the untreated TB smear-positive pool and thus break the cycle of TB transmission.

In spite of the fact that only 40% of TB smear-positive cases are detected, this rate represents a considerable improvement over the figures presented to the Regional Committee in 1989. Table 2 presents a comparison between the situation in 1989 and that in 1992 with respect to the number of reported and expected cases of tuberculosis.

Table 2. Reported and expected number of tuberculosis (TB) cases in the Region

	Cases of TB	Number reported	Number expected	Ratio of reported to expected
1989	Number of smear-positive cases per year	40 000	250 000	1 : 6
1992*		76 000	205 000	1 : 3
1989	Number of cases under treatment	350 000	1 000 000	1 : 3
1992*		430 000	820 000	1 : 2

* Excluding Afghanistan, Somalia and United Arab Emirates.

Table 3. Estimated number of smear-positive pulmonary TB cases developing each year in three different epidemiological situations in the Region

Countries are grouped according to incidence of tuberculosis		Estimated level of AROI %	Population at risk (millions)	Expected average number of new smear positive TB cases yearly
Group I (Low incidence)	Bahrain, Cyprus, Jordan, Lebanon, Libyan Arab Jamahiriya, Qatar, Palestinian population	<0.5%	16.5 (4%)	1 621 (1%)
Group II (Intermediate incidence)	Egypt, Islamic Republic of Iran, Iraq, Kuwait, Morocco, Oman, Pakistan, Saudi Arabia, Syrian Arab Republic, Tunisia, Yemen	0.5 - 1%	343.7 (84%)	135 302 (66%)
Group III (High incidence)	Afghanistan, Djibouti, Somalia, Sudan	>1%	54.1 (12%)	68 488 (33%)
Regional total			414.3 (100%)	205 353 (100%)

It shows a 3-fold improvement in the reporting of cases. Table 2 also shows a comparison between the number of cases reported to be under treatment and the number of cases expected to require such treatment; this also shows considerable improvement.

It is generally agreed that the number of new smear-negative pulmonary and extrapulmonary TB cases yearly is at least as large as the number of yearly new smear-positive TB cases; also the TB prevalence is considered to be about twice the TB incidence. Using these relationships, the estimated number of cases of tuberculosis in all forms is nearly 820 000. This is the TB case load for which health services must be provided in the Region.

Classifying countries of the Region on the basis of the AROI rates, Table 3 shows that six countries and the Palestinian people under UNRWA, representing only 4% of the population of the Region, have an AROI of less than 0.5%. They contribute less than 1% of the expected smear-positive TB cases in the Region. On the other hand, four countries, representing 12% of the population of the Region, have an AROI of more than 1%. They contribute about 33% of the expected smear-positive TB cases in the Region. The remaining countries of the Region have an AROI rate of between 0.5 and 1%. They contribute 66% of the smear-positive cases.

The figures given in this report are approximations to indicate the magnitude of the TB problem in the Region and where efforts should be focused. More accurate and relevant information about TB in the Region is required to adequately monitor how the national TB control programmes are performing.

3. FACTORS IMPEDING PROGRESS IN TB CONTROL IN THE REGION

There are various factors that are impeding progress to achieve successful TB control in the Region. The main factors include:

- *Inadequate commitment and resources.* TB is a familiar disease, known for a long time and commitment to its control has often been lukewarm. The necessary political will and human and material resources needed for its control are not mobilized or effectively employed. It is hoped that the new threat posed by the resurgent TB (aided by HIV) will be fully appreciated by all concerned to create the commitment necessary and to mobilize resources.
- *Shortage of nationals with specialist technical and managerial knowledge of the recently advocated approaches to national TB control.* Training in TB is not given the priority it deserves by all countries as reflected by the fact that allocation for TB control in the programmes of collaboration with WHO, especially for training, is far from that required. Seventy-six fellowships in TB were sponsored by WHO during the last four years and nearly 1500 nationals participated in short national training courses on TB control.

- *Inadequate or irregular supply of anti-TB drugs.* The countries hard hit with TB face great difficulties in securing a regular supply of essential anti-TB drugs for diagnosed TB patients. This is also true for the necessary diagnostic reagents and equipment for laboratory diagnosis by smear examination. Because of these financial constraints, supervisory and logistics support for the TB treatment centres is also limited. But the financial constraint is not wholly responsible for the difficulties experienced; deficient management in the effective utilization of available resources also plays a major role.
- *Inadequate integration of TB control into primary health care (PHC).* In countries where they are most needed, PHC services are not yet developed enough to deliver the necessary services for TB control, including the necessary diagnostic facilities. Nation-wide TB control in these countries necessitates the use of all available health facilities. It is especially important that the programme not be time-limited. Unfortunately some national authorities maintain vertical TB control programmes, some supported by UN or bilateral agencies. Such programmes are not only financially unrealistic or unaffordable by national authorities but also difficult to maintain.
- *Spread of HIV infection.* The spread of HIV infection has already adversely affected the TB situation in countries where HIV infection is significant. At present such an association between TB and HIV infection has been reported by eight countries. The reported rates of TB/HIV coinfection have reached figures as high as 25% in those countries with high HIV infection rates. It is expected that such a pattern will develop more in the coming years with the increase in the spread of HIV infection.
- *Lack of adequate information about the extent of drug resistant T.B. in the Region.* The available information indicates that a type of TB resistant to more than two drugs has been observed in the Region. This may also be considered a reflection of poor case-holding and underdeveloped laboratory services for TB control. There are, however, some NGOs which successfully offer services to limited areas in certain countries, particularly in Pakistan and Somalia. These services include the provision of drugs and follow-up treatment.
- *Inadequate role of private sector.* Although private medical care is an important resource for TB control, the contribution that this sector makes to TB control in the Region remains unknown in quantity and quality. At the same time, it is possible that TB patients are inappropriately managed and this remains a potential source of chronic and/or drug resistant TB.

- *Natural and man-made disasters faced by some countries in the Region.* The tragic situation in Afghanistan, Somalia and Sudan is a case in point. Other countries such as Djibouti are also affected. Apart from its own internally displaced population and refugees from neighbouring countries, this least developed country undergoes a regular and considerable influx of TB patients from neighbouring countries. In 1992, foreign TB patients in Djibouti outnumbered indigenous TB patients. The defaulter rate among these foreign TB patients is high and since they are from rural or nomadic communities, often without a fixed address, it is not easy to trace them. This situation has significant implications for TB control in the Region.

In all countries affected by disasters, social services (including health) have been disrupted and large proportions of their populations have either become refugees or have been internally displaced, living under unsatisfactory conditions favouring the spread of TB.

4. FOLLOW-UP OF THE THIRTY-SIXTH SESSION OF THE REGIONAL COMMITTEE'S RECOMMENDATIONS ON TB CONTROL IN THE REGION

In October 1989, the Regional Committee for the EMR adopted several recommendations which were included in its resolution EM/RC36/R.12. Activities, in line with each recommendation and carried out by member states and WHO/EMRO, are presented below.

A. Recommendations to Member States

Recommendation 1: "Member States to develop and strengthen national tuberculosis control programmes;"

Efforts in this regard were continued by national authorities, supported as appropriate by WHO. By 1993, 18 (80%) Member States had central TB units within the Ministries of Health. WHO has been actively involved in collaborating with the responsible officers in these units in the formulation of national TB control strategies, through workshops and technical visits in support of national managers.

Practically all member states of the EMR where TB is prevalent have prepared manuals or guidelines for procedures streamlining the control activities. Other countries are in the process of updating their guidelines. Manuals which are already available have been updated to incorporate the approaches recommended by WHO for TB control.

To increase the coverage of the TB control programme, at least 10 (45%) of the Member States have so far integrated their TB control programmes into the basic health services. All other Member States have accepted the principle of such integration. However, the rate at which this is taking place is a function of the strength of the basic health services.

Table 4. Some features of National Tuberculosis Control Programmes (NTCP)

Member States	Central TB unit exists	NTCP integrated	SCC * employed	% Smear + cases put on SCC	Cure rate %
Bahrain	Yes	Yes	No	-	79 (12-month regimen)
Cyprus	Yes	Yes	Yes
Djibouti	Yes	No	Yes	100	65
Egypt	Yes	No	Yes	62	46
Iran, Islamic Republic of	-	Yes	Yes	...	81
Iraq	Yes	No	Yes	100	78
Jordan	Yes	Yes	Yes	51	98
Kuwait	Yes	Yes	Yes	100	97
Lebanon	Yes	No	Yes	58	94
Morocco	Yes	No	Yes	100	90.5
Oman	Yes	Yes	Yes	...	73
Pakistan	Yes	Yes	No	-	68 (12-month regimen)
Qatar	Yes	No	Yes	100	94
Saudi Arabia	Yes	No	Yes	100	...
Sudan	Yes	Yes	Yes	4	46 (12-month regimen)
Syrian Arab Republic	Yes	No	Yes	...	88
Tunisia	Yes	Yes	Yes	100	...
Yemen	Yes	No	Yes	100	36
Palestinian population	Yes	Yes	Yes	100	...
Response rate: 18/22 (82%)	17/18 (94%)	9/18 (50%)	16/18 (89%)	12/16 (75%)	12/16 (75%)

* SCC: short course chemotherapy

During the four-year period 1990 to 1993, most national TB control programmes of Member States with intermediate to high TB prevalence underwent technical reviews and recommendations were made for their further improvements. Some programmes were reviewed more than once.

Recommendation 2: "to strengthen microscopic examination through development of peripheral laboratories to ensure the provision of microscopic examination of sputum at all levels of health care services and ensure satisfactory supervision of this basic service;"

Available data shown in Section 2 indicate a significant improvement in TB case detection by smear examination since 1989. This indicates that Member States have been making more use of microscopy for TB diagnosis. During this period, WHO collaboration has been restricted to the provision of microscopes and diagnostic reagents for the laboratory diagnosis of TB. Some supervision, particularly of quality control, takes place.

There is, however, a perceived need for making this basic service more widely available and for ensuring quality control through supervision and training.

Recommendation 3: "to ensure provision of adequate chemo-therapy to every diagnosed patient until complete cure is achieved, through the administration of short-course chemotherapy, using effective drugs;"

Data collected during 1993 indicate that nearly 50% of the expected number of patients in the Region were undergoing treatment in 1992. This compares favourably with the 33% reported in 1989. Among the 15 Member States reporting their cure rates for smear-positive TB patients in 1992, the results ranged from 36% to 89%.

In 1989, few Member States employed short-course chemotherapy. By 1993, at least 18 (80%) Member States had introduced short-course chemotherapy into their national TB control programmes and the marked improvement in treatment rate since 1989 is a reflection of the shift to short-course chemotherapy which is more cost effective than the standard 12-month regimen.

Table 4 presents the main features of the national TB control programmes emphasized in the RC resolution.

It is satisfying to note that the anti-TB drugs purchased for the national TB control programmes are normally proven effective and are procured from reputable manufacturers. Again, as mentioned in Section 3, the problem of drug procurement in low-income countries and the effect this has on treatment results has a bearing on TB control in the Region as a whole.

Recommendation 4: "to maintain BCG vaccination within EPI and ensure high vaccine quality and trained vaccinators so as to limit complications;"

BCG vaccination is provided to infants within EPI except in 5 Member States with low TB incidence where BCG is not given during the basic immunization of infants. Some of these countries vaccinate older age groups such as at school entry. The Regional BCG coverage for 1992 was 89%, compared to 80% in 1989. BCG vaccination (as well as other vaccinations and health services) has been disrupted in the countries experiencing civil unrest, specifically Afghanistan, Djibouti, Somalia and Sudan which are unfortunately the countries most in need of BCG vaccination for infants.

Except for complications such as lymphadenitis, no major side-effects have been reported from the BCG vaccine used for EPI in the Region during the last few years.

B. Recommendations to WHO

Recommendation 1: "The Regional Office to strengthen the Regional technical capabilities in tuberculosis control to respond to the increasing demands from countries in the areas of programme planning, training, implementation, monitoring and evaluation;"

The WHO response to this recommendation was made in three areas:

- (a) establishing a post for a medical officer (TB epidemiologist) to be responsible exclusively for the Regional TB control programme

However, WHO efforts have been facing the major problem of financing this post. It was only in 1994 that WHO has been offered extrabudgetary funds from Japan and the right candidate for the post.

Among other duties, the TB epidemiologist will respond to requests from countries in the areas specified by the above recommendation.

- (b) establishing a centre for TB training in the Region

In 1993 WHO/EMRO designated the National Institute of Tuberculosis and Lung Diseases, Teheran, Islamic Republic of Iran, as a WHO Collaborating Centre for Tuberculosis Training. Some of the key staff of this centre have been introduced to the newly prepared training material.

The training courses conducted in this Centre for nationals from the Region will be based on the new WHO strategy for TB control.

- (c) identifying national TB experts in the Region and using their services, as appropriate

It was with this idea in mind that the Regional Director established, in 1991, a Regional Advisory Group (RAG) on TB control in the Region. The members of the Group are national TB specialists in the Region. Their main function is to advise the Regional Director on the strategy for TB control in the Region. Members of the Group can also be used as consultants for TB control.

Some members of RAG participated in a Consultation Meeting on TB control in the Region, held in February 1994. The meeting reviewed the TB situation in the Region, updated the Regional TB programme and discussed ways and means of promoting national commitment, including resource mobilization, to TB control. The meeting also made useful recommendations for strengthening TB control activities in the Region.

Recommendation 2: "The Regional Office to continue to mobilize resources from both the Regular Budget and extra-budgetary sources to support tuberculosis control efforts;"

Unfortunately regular budget (RB) allocations made by countries of the Region for TB control remained very limited. The Joint government/WHO programme review missions (JPRMs) allocated very small amounts of funds for TB control. EMRO has been making determined efforts to mobilize extra resources for TB control in the region to offset the low RB allocation and response to the RC resolution. In this regard:

- (a) EMRO has been instrumental in launching international appeals for TB control in the Member States which experience social upheavals as a consequence of civil unrest. Afghanistan, Djibouti, Somalia and Sudan have been beneficiaries of such appeals.
- (b) Some funds were secured from the global programme (WHO/HQ) which were used for the intercountry training workshop mentioned under Recommendation 3 and conducted in 1993, and a similar workshop for the francophone Member States of the Region is to be conducted in November 1994.

As well, extra budgetary funds secured from the TB programme at WHO/HQ will be used for an in-depth review of the TB programmes of two Member States which will be conducted in 1994/95. Also extrabudgetary funds have been secured for the translation of technical WHO documents on TB control into Arabic.

The Arab Gulf Programme for the United Nations Development Organizations (AGFUND) still continues to fund the project for TB control among Afghan refugees in Baluchistan Province in Pakistan. Through this generous support the project has maintained a high standard of performance and the project components, such as laboratory diagnosis, chemotherapy, supervision, etc., are functioning efficiently. The cure rate over the last few years averages 80% and BCG coverage is over 85%. Defaulters have been minimized to a large extent.

**Table 6. Local training on WHO Regular Budget
for TB control in the Region**

By country

Country	1990/91		1992/93	
	Number of courses	Number of participants	Number of courses	Number of participants
Afghanistan	7	146	21	410
Djibouti	1	32	1	16
Morocco	-	-	5	131
Sudan	-	-	9	355
Syrian Arab Republic	4	67	2	82
Yemen	1	40	3	36
Total	13	285	41	1 030

**Table 7. Fellowships on WHO Regular Budget for
TB control in the Region**

By country

Country	1990/91	1992/93
Afghanistan	3	5
Djibouti	-	1
Egypt	2	4
Iran, Islamic Republic of	-	9
Iraq	1	5
Lebanon	-	1
Libyan Arab Jamahiriya	-	1
Morocco	4	2
Oman	-	1
Pakistan	2	4
Saudi Arabia	1	1
Somalia	-	3
Sudan	1	4
Syrian Arab Republic	1	6
Tunisia	2	1
Yemen	3	8
Total	20	56

Resource mobilization was also the subject of a meeting of a select group organized by the Regional Director in September 1993; the group's proposals were discussed by the Regional Committee in 1993. This subject is still under active consideration.

recommendation 3: "The regional office to continue to strengthen the development of the necessary technical capabilities within Member States;"

The approaches adopted by EMRO in support of the development of technical capabilities within Member States were the following:

(a) supporting national training activities

In practically all collaborative TB control programmes there is a component for local training. During the last four years, 57 training courses were supported financially and technically by WHO; nearly 1500 nationals were trained. Afghanistan has received maximum support in this regard (Table 6). It is expected that the quality of such local training activities will now improve, as a result of well thought-out TB training modules recently formulated by WHO.

If the need is perceived to expose nationals to different experiences, EMRO offers them fellowships within the Region or outside. However, the general policy is to train nationals within their own "environment", that is, either in their own country or in the Region. During the last four years, 76 fellowships were offered for training in TB control for nationals from this Region (see Table 7).

(b) organizing intercountry technical training courses for senior national officers responsible for TB control

As mentioned above, WHO has developed technical training modules for managing TB control. The modules deal with practically all technical and managerial aspects of TB control.

To introduce the modules into the national TB control programmes, 22 senior national officers engaged in TB control in 12 Member States (comprising countries of intermediate to high TB prevalence) were trained as future trainers (facilitators) on the modules in 1993. The trained nationals are expected to train health personnel on TB control in their respective countries. Also, the best of the trained nationals may be used as consultants in the Region.

(c) extending technical support to national meetings and conferences held in the fields of TB control. EMRO has responded positively to all such requests by providing experts and technical materials.

5. CONCLUSIONS AND RECOMMENDATIONS

Significant developments were made in response to the Regional Committee resolution EM/RC36/R.12 on tuberculosis. However, TB remains

a significant public health problem in the Region and this is expected to continue in view of several factors which have been behind the resurgence of TB, including the spread of the pandemic of HIV infection, drug resistant TB and disasters.

To counteract such negative influences and to bring TB in the Region under control, intensified and sustained efforts are required.

Accordingly, the following recommendations are submitted for consideration by the Regional Committee:

1. that the new WHO strategy for TB control, based on World Health Assembly resolutions WHA44.0 (1991) and WHA46.36 (1993) on TB control, be adopted and implemented by all national programmes for tuberculosis control;
2. that national authorities, in particular those where TB prevalence is considered to be intermediate or high, commit the requisite national resources to effectively implement the new strategies for TB control;
3. that national authorities continue to implement the recommendations outlined in the RC resolution EM/RC36/R.12 on TB control as they remain valid and are unlimited in time;
4. that countries devise effective mechanisms for forming coalitions with the private sector for the benefit of TB control, while at the same time providing the sector with valid information about the TB problem within the country and the national policy adopted for its control;
5. that in their efforts to develop human resources for TB control, the countries base their local TB training on the WHO TB training modules; and
6. that countries carefully monitor the incidence of TB/HIV coinfection by screening, whenever feasible, newly diagnosed TB cases for HIV infection, always maintaining strict confidentiality.

Annex 1

Cost of recommended treatment regimens*

Category	Initial phase ^{a, b}	Costs (US\$)	Continuation phase ^{a, b}	Cost ^c (US\$)
I. New cases of smear-positive pulmonary TB and other newly diagnosed seriously ill patients with severe forms of TB	2HRZS	44 ^d	4HR	31
	2HRZE	29	4H ₃ R ₃	13
	1HRZE/1H ₃ R ₃ Z ₃ E ₃	21	6HE	11
			6HT	2
II. Smear-positive relapse and treatment failure	2HRZES/1HRZE	63 ^d	5HRE	46
	2HRZES/1H ₃ R ₃ Z ₃ E ₃	56 ^d	5H ₃ R ₃ E ₃	22
III. Pulmonary smear-negative TB with limited parenchymal involvement and extrapulmonary TB (excluding clinical forms in I)	2HRZ	25	2H ₃ R ₃	6
			2HR	16
			6HE	11
			6HT	2
	2H ₃ R ₃ Z ₃	11	2HE/4H	6

* Modified from WHO document: Treatment of Tuberculosis - Guidelines for National Programmes (1993)

a: Drugs used in these regimens are represented by the following letters

H = Isoniazid, R = Rifampicin, S = Streptomycin, Z = Pyrazinamide, T = Thioacetazone, E = Ethambutol

b: Number preceding the first letter indicates the duration in months of the initial and continuation phases of treatment; the number which follows the letter represents the number of weekly doses, if the regimen is intermittent

c: Refers to the approximate cost of treatment for adults weighing more than 50 kg, calculated on the basis of UNICEF prices in 1992, including a handling charge of 6% and using combined tablets of Rifampicin 150 mg + Isoniazid 100 mg

d: Includes the cost of water for injection

Forty-first Session

Agenda item 14

TUBERCULOSIS CONTROL

Summary of Recommendations

Intensified and sustained efforts are required to address the constraints facing national and regional efforts to bring tuberculosis under control in the Eastern Mediterranean Region of WHO.

To this end, the following recommendations are submitted for consideration by the Regional Committee.

1. The new WHO strategy for tuberculosis control, based on World Health Assembly resolutions WHA44.8 (1991) and WHA46.36 (1993) on tuberculosis control, should be actively pursued and implemented by all national programmes for tuberculosis control.
2. Member States need to continue to implement the recommendations outlined in the resolution of the Regional Committee on tuberculosis control (EM/RC36/R.12), as they continue to remain valid for the present and the future.
3. National authorities, particularly in those countries where prevalence of tuberculosis is considered to be intermediate or high, should commit the national resources required to effectively implement the new strategies for tuberculosis control.
4. National programmes should devise effective mechanisms for involving the private medical sector in tuberculosis control, by providing them with up-to-date information about the problem within the country and the national policy for its control.
5. Member States should continue to develop national human resources needed for control, basing their local training on the WHO tuberculosis training modules.

6. Countries should carefully monitor the incidence of TB/HIV co-infection by screening, where feasible, the newly diagnosed tuberculosis cases for HIV infection, always maintaining strict confidentiality.

Forty-first Session

Agenda item 14

TUBERCULOSIS CONTROL

Summary for the Report

Over the last few years there has been an alarming global resurgence of tuberculosis. This is due to a number of factors, including poor management of national tuberculosis control programmes (NTCP), the pandemic of HIV infection, widespread multidrug-resistant tuberculosis and social upheavals resulting from man-made and/or natural disasters. Countries in the Eastern Mediterranean Region have been affected, more or less, by all these factors, but with varying degrees.

The tuberculosis situation in the individual Member States of the Region varies widely. In some countries, the disease does not constitute a significant public health threat while in others it is a major public health problem. In 1992, 213 551 new cases (all forms) were reported among the 411 million population in the Region, giving a regional annual rate of incidence of 50/100 000 population, and the reported number of smear-positive cases was 75 956 or 20/100 000 population. Calculations based on these estimates indicate that over 800 000 cases need health services in the Region.

The present situation represents an appreciable progress than it was five years ago at the time a report was made to the Regional Committee in 1989. This progress is particularly marked in the reported total number as well as the proportion of smear-positive cases under treatment. Also, an increasing number of countries have been reorienting their NTCPs on the basis of the tuberculosis control policy advocated by WHO.

However, various factors, alone or in combination, have been impeding progress in tuberculosis control in some countries of the Region, and

3654

EM/RC41/12

page 2

these include, in particular disrupted health care services due to man-made or natural disasters, lack of national commitment to effective control, shortage of essential anti-tuberculosis drugs, scarce human resources trained in tuberculosis control, inadequate involvement of the private sector and limited integration of tuberculosis control into the primary health care services.

If these factors are addressed the observed overall progressive trend of improvement of the tuberculosis situation in the Region could be maintained, and there will be a good chance that the disease in the Region will be brought under acceptable control within a reasonable period of time.