

## النشرة الوبائية السعودية تصدرها وزارة الصحة

الوكالة المساعدة للطب الوقائي وبرنامج الوبائيات الحقلية  
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### Knowledge and Practices of health workers of Cold Chain.

Immunization is an important means of controlling serious infectious diseases. Careful attention to vaccine storage is essential to ensure optimal vaccine effectiveness. The system used for keeping and distributing vaccines in good condition is called the cold chain.

The main objective of this study was to assess cold chain utilization and the knowledge and practices of health care workers at primary health care facilities in Riyadh and Eastern province of Saudi Arabia. The study was conducted by a cross sectional approach. A stratified random cluster sampling technique was used to obtain a random sample of 60 health facilities; 37 Governmental (GHF) and 23 private (PHF). A standardized data collection form was designed both to evaluate cold chain components at each health center and to collect relevant information from health workers. Assessment of knowledge of participating health workers of different aspects of the cold chain was done by means of a composite score developed based on the questions they were asked. A correct answer was given a score of 1 and an incorrect answer 0. In this manner, the possible score range was 15-72. In the absence of any standard criteria of scoring for such knowledge questions, this median score of 55.5 was used as a cut off point to split the health workers into two categories: High knowledge group (score of 55.5 to 92) and low knowledge group (score of 15 to 55).

In Riyadh, 37 health facilities were included; 22 (59.5%) GHF and 15 (40.5%) PHF. A vaccination room was available at all GHF, compared to 73.3% of PHF. The vaccination room was well ventilated at 68.2% of GHF and 46.7% of PHF. One refrigerator reserved for EPI vaccines was available at 68.2% of GHF and 66.7% of PHF. However, the positions of most refrigerators were not ideal, since most were kept close to the wall with a space of under 30 cm at 63.6% of GHF and 80% of PHF. Positioning of the refrigerators was reasonable regarding not being directly exposed to sunlight at 68.4% of GHF and 100% of PHF.

Refrigerators contained two compartments (cooling and freezing) at 95.5% of GHF and 93.3% of PHF. Refrigerators had tightly closed doors, were fixed in place and in operating condition at all GHF and PHF. The refrigerator was solely

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# Knowledge and Practices of health workers on Cold Chain, cont...

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used for storage of EPI vaccines in 90.9% of GHF and 100% of PHF. Water bottles were available at the bottom part of the refrigerator in 99.0% of GHF and 53.3% of PHF.

On examination of the freezer compartments, the ice thickness was less than 5mm. in 54.5% of GHF compared to 75% of PHF. Ice packs were found in the freezers in 100% of both GHF and PHF. The regulator thermometer was available in 95.5% of GHF and 66.7% of PHF. The degree was 4°C in 38.8% of GHF and 50% of PHF. The thermometer was placed at the upper refrigerator drawer in 95.2% of GHF compared to 70% of PHF. The freezer watch indicator was available at only 4.5% of GHF and was located in the freezer. The temperature degree reading during the visit-time was 1°. The temperature recording card was available at 95.5% of GHF compared to 46.7% of PHF.

A vaccine register containing all information on each vaccine was available at 100% of GHF and 40% of PHF. Another register was kept for recording vaccine expiry dates at all GHF, and was regularly updated at 95.5%. The same was available at 53.3% of PHF and information was regularly updated at 37.5%. A substitute for electric current in case of disconnection was available at 31.8% of GHF compared to 100% of PHF.

All workers in the vaccination clinics were females, of whom in GHF 16 (72.7%) were Saudi and 6 (27.3%) non Saudi, compared to 2 (13.3%) Saudi and 13 (86.7%) non-Saudi in PHF. Table 1 represents knowledge of cold-chain elements.

Written guidelines on the cold chain were available at 40.9% of GHF, compared to 33.3% of PHF. Among GHW, 59.1% had previously read official guidelines for cold chain maintenance compared to 40% of PHW. Only 14.5% of GHW had received prior training compared to 26% of PHW.

In the Eastern province, 23 health facilities were included in the study; 15 (65.2%) GHF and 8 (34.8%) PHF. A vaccination room was available at all GHF, compared to 50% of PHF,

and was well ventilated at all GHF compared to 65.5% of PHF. A refrigerator for reserving EPI vaccines was available at all GHF and 87.5% of PHF. Refrigerators were kept at a distance of 30 cm from the wall at 93.3% of GHF compared to 37.5% of PHF, and were not directly exposed to sunlight at 80% of GHF and 100% of PHF. They had tightly closed doors, were fixed in place and in operating condition at all GHF and PHF.

The refrigerator was used for storage of EPI vaccines in all GHF and PHF, but was also used for storage of drugs in 20% of GHF and 62.5% of PHF. Water bottles were kept at the bottom drawer in 93.3% of GHF and 75% of PHF. Ice thickness in the freezer was less than 5mm in 93.3% of GHF and 75% of PHF, and it contained ice-packs in all GHF and PHF. The regulator thermometer was available in all GHF and PHF, and was placed in the freezer or second drawer (50%). The freezer watch indicator was available at only 26.7% of GHF and was located in the freezer. Its temperature at the time of visit was 4° in all GHF, where also a temperature register was available, compared to 87.5% of PHF. A vaccines register was available at 93.3% of GHF and

75% of PHF. A register for recording vaccine expiry dates was available at 73.3% of GHF and 62.5% of PHF, and was regularly updated at all GHF and PHF. A substitute for electric current shortage was available at 53.3% of GHF and 71.4% of PHF.

All workers were females, 14 (93.3%) Saudi and 1 (6.7%) non Saudi in GHF compared to all non Saudi in PHF. (For knowledge see table 1).

Guide lines on cold chain were available at 93.3% of GHF and only 37.5% of PHF. Among the total, 93.3% of GHW had read official guidelines for cold chain maintenance compared to 62.5% of PHW. Only 86.7% of total GHW had received training in cold chain maintenance compared to 75% of PHW.

The workers knowledge varied on different aspects of the cold chain. On the basis of the cumulative score, 30 (50%) workers were included in the high knowledge group and 30 (50%) in the low knowledge group. A statistically significant difference in knowledge of both groups was found in case of sector (governmental better than private, p-value <0.05), nationality (Saudis better than non-Saudis, p-

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**Table(1): Knowledge (Correct responses) of health workers of cold chain elements.**

Cold chain elements	Riyadh city		Eastern province	
	GHW N=22	PHW N=15	GHW N=15	PHW N=8
Place of refrigerator	5 (22.7%)	2 (13.3%)	13 (86.3%)	3 (37.5%)
Defrosting time	0	1 (6.7%)	0	0
Location of vaccine during defrosting	16 (72.8%)	12 (80%)	15 (100%)	8 (100%)
Should water bottles be kept in refrigerator	22 (100%)	9 (60%)	14 (93.3%)	5 (62.5%)
Location of water bottles in refrigerator	22 (100%)	8 (53.3%)	14 (93.3%)	5 (62.5%)
Place of regular thermometer	19 (86.4%)	8 (53.3%)	11 (73.3%)	6 (75%)
Timing of temperature chart	19 (86.4%)	6 (40%)	15 (100%)	7 (87.5%)
Time to record temp. of refrigerator	22 (100%)	5 (33.3%)	14 (93.3%)	8 (100%)
Space between vials	22 (100%)	7 (46.7%)	13 (86.7%)	7 (87.5%)
Knowledge of VVM	10 (45.5%)	10 (66.7%)	4 (26.7%)	3 (37.5%)

# Cure Rate of Tuberculosis Cases Diagnosed in Eastern Province, Saudi Arabia During Years 2000 & 2001.

Tuberculosis is an infectious disease caused by *Mycobacterium tuberculosis*. It appears as pulmonary TB (80%), extra pulmonary, or a combination of both types. A treatment protocol for TB was recommended by the World Health Organization (WHO) in 1995 called Directly Observed Treatment Short-course (DOTS), which involves observing patients swallow their pills, and has been shown to improve TB treatment completion rates.<sup>1</sup> DOTS was implemented in Saudi Arabia as a preliminary stage in 8 regions in the third quarter of 1998, then expanded to the whole country by the end of 1999.<sup>2</sup>

This study aims to assess the cure rate among TB patients diagnosed in the Eastern province of Saudi Arabia, during a two year period from January 1<sup>st</sup> 2000 to December 31<sup>st</sup> 2001. To achieve this objective, a retrospective cross-sectional study was conducted, reviewing all TB cases diagnosed at different health institutes in the Eastern Province during the study period. The medical files of TB patients were reviewed at each hospital. TB cases were categorized according to MOH instruction (WHO definition). Cure Rate was estimated by considering the number of those who were cured or had completed the treatment as the nominator and the total number of TB patients, except those who had died, transferred out or deported, as the denominator.

During years 2000 & 2001, a total of 451 TB cases were diagnosed; 81% pulmonary and 19% extra pulmonary. The majority of Pulmonary (83%) and Extra Pulmonary (61%) cases had been diagnosed at MOH Chest hospital. The number of TB cases was slightly higher during year 2000 (n=240) than year 2001. There was a significant difference between the mean age of Pulmonary TB cases (38.5 years  $\pm$  15.3) and Extra Pulmonary TB cases (32.3  $\pm$  11.8),  $p < 0.05$ . The majority of TB cases were males whether Pulmonary (72.1%) or Extra Pulmonary (69.4%). Saudis accounted for 39% of Pulmonary and 21% of Extra Pulmonary TB cases. The majority of TB cases were

newly diagnosed, whether for Pulmonary (96.9%) or Extra Pulmonary (96.5%). Almost all the Pulmonary TB cases 95.6%, had been admitted into hospital, the mean duration of hospitalization was  $61.3 \pm 36.4$  days (Range 1-273 days); compared to 64.7% of Extra Pulmonary TB cases who had been admitted into hospital with a mean duration of hospitalization of  $24.3 \pm 19.5$  days (Range 1-66 days).

Symptoms recorded at time of admission for 366 Pulmonary TB cases were cough (92.2%), fever (75.2%), weight loss (67.1%), anorexia (52.1%), night sweat (48.5%), chest pain (26.7%), and haemoptysis (18.1%). The most common type of Extra Pulmonary TB was either Pleural Effusion (39.8%) or Cervical lymphadenitis (36.2%), Axillary lymphadenitis (7.2%), Submandibular and cervical lymphadenitis were 3.6% each, and 9.6% for other locations.

The final outcomes of Pulmonary TB were as follows: 35.2% were deported, 21% completely cured, 10.9%

lost to follow up, 18.6% completed their treatment but not cultured, 6.6% transferred to other health institutes, 4.9% defaulted, 1.9% died before treatment was completed, and 0.8% failed treatment. The final outcomes for Extra Pulmonary TB were: 47.1% completed their treatment but not cultured, 22.4% lost to follow up, 20% deported, 5.9% completely cured, 2.4% transferred to other health institute, 1.2% defaulted, 1.2% died before treatment was completed, and non had treatment failure. Patient and health care factors associated with cure rate of TB are shown in table 1. There was no significant association between the cure rate of Pulmonary TB and severity of infection at the time of starting treatment.

– Reported by: Dr. Abdulmohsen M. Alalwan (Eastern Province Health Affairs), Dr. Baker A. Ashoor, Dr. Adel M. Turkistani, Dr. Jamil Choudhry (Field Epidemiology Training Program).

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**Table 1: Patient and health care factors associated with cure rate of TB, Eastern Province, 2000 & 2001.**

	Pulmonary TB			Extra-Pulmonary TB		
	Cured n=145	Uncured n=61	P-val.	Cured n=45	Uncured n=20	P val.
<b>Years</b> 2000 2001	72(70.6%) 73(70.2%)	30(29.4%) 31(29.8%)	0.95	31(72.1%) 14(63.6%)	12(27.9%) 8(36.4%)	0.68
<b>Age Group</b> 5 - 14 Yrs 15 - 44 Yrs ≥ 45 Years	4 (100%) 98(76.0%) 43(58.9%)	0 (0.0%) 31(24.0%) 30(41.1%)	<b>0.016</b>	5 (83.3%) 35(68.6%) 4(57.1%)	1 (16.7%) 16(31.4%) 3 (42.9%)	0.59
<b>Gender</b> Male Female	100(65.8%) 45 (83.3%)	52(34.2%) 9(16.7%)	<b>0.015</b>	39(75.6%) 11(55.0%)	11(24.4%) 9 (45.0%)	0.17
<b>Nationality</b> Saudi Non Saudi	89(73.0%) 56(66.7%)	33(27.0%) 28(33.3%)	0.33	13(81.3%) 32(65.3%)	3 (18.8%) 17(34.7%)	0.37
<b>Patient type</b> New Other	141(71.2%) 4 (50%)	57(28.8%) 4(50.0%)	0.37	45(72.6%) 0 (0%)	17(27.4%) 3 (100%)	<b>0.04</b>
<b>Diagnosing hospital</b> Chest Private Other MOH Other Gov.	137(83.0%) 5(18.5%) 0 (0%) 3 (100%)	28(17.0%) 22(81.5%) 11 (100%) 0 (0%)	<b>0.000</b>	32(94.1%) 12 (50%) 1 (14.3%)	2 (5.9%) 12 (50%) 6 (85.7%)	<b>&lt;0.05</b>
<b>Admission</b> Yes No	142(73.2%) 3(25.0%)	52(26.8%) 9(75.0%)	<b>0.001</b>	28(75.7%) 17(60.7%)	9 (24.3%) 11(39.3%)	0.3

# Cure Rate of Tuberculosis Cases Diagnosed in Eastern Province, Saudi Arabia During Years 2000 & 2001, cont....

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**Editorial notes:** Tuberculosis remains a common health problem in Saudi Arabia, particularly among expatriate workers from Southeast Asia, where the disease is endemic with a high prevalence.<sup>3</sup> This may be aggravated by living in overcrowded houses, inadequate nutrition, poor hygienic habits, and poor health awareness, which play a major role in transmission of the disease. The majority of expatriate workers in Saudi Arabia are laborers, unskilled or technical workers, and drivers which may explain the predominance of males in our study. Also, most cases appeared in the adult middle age group in accordance with many studies showing the same pattern.<sup>4</sup>

The Chest hospital was the best among all health units in the Eastern province in terms of diagnosis and treatment of TB. This relatively high percentage came through the high application of DOTS, admission of cases in the intensive phase for the first two months and close follow up in the continuation phase.

The cure rates were reasonably good for both Pulmonary and Extra Pulmonary TB, but better results would be obtained if calculated only those cases that had been diagnosed and reported to the Regional TB organizer. One of the major duties of the organizer is to ensure that any diagnosed TB case will receive the allocated treatment. The study demonstrated a miss-communication between different health institutes and the organizer regarding the cases that did not show up for treatment. Unless the TB patient was treated, most of the health institutes did not report the case, which leads to a biased estimate of the cure rate for the regional health directorate.

Our study showed improved cure rates to other studies conducted in Saudi Arabia.<sup>5</sup> The DOTS strategy leads to a decline in treatment failure rate. However, defaulters were high in number as a result of patients interrupting their treatment. There are many obstacles for bringing patients back to therapy, whether as a result of inability to contact them due to wrong

addresses or phone numbers, or non-compliance. Compliance of patients is imperative for the success of TB treatment and control programs.<sup>5</sup>

The study showed reduction of resistance to anti-tuberculous drugs under DOTS strategy, which is almost similar to the result of the study that conducted by Al-Rubaish et al.<sup>6</sup> It showed low drug resistance compared to other regions in Saudi Arabia such as Gizan (42%), Taif (23%) and Riyadh (13%).<sup>6,7</sup>

Although DOTS strategy in Saudi Arabia is effective in controlling TB, it is only best practiced in chest hospitals during the intensive phase (first two months of treatment), since patients are admitted and under direct supervision and evaluation of health workers. It is essential that the awareness of the importance of DOTS be strengthened among patients and their families to render it a well functioning and successful program. Furthermore, improvement of the health system and facilities in other health units by simplifying DOTS application, which may reduce many of the obstacles such as patient noncompliance.

Enhancing the referral process of TB patients to chest hospitals for treatment and follow up is recommended. Pulmonary TB cases should be admitted for the intensive phase at least, in order to improve the cure rate. Physician's skills in TB diagnosis and treatment should be enhanced. It is also worthwhile to strengthen DOTS strategy.

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## Knowledge and Practices of Cold Chain, cont....

value <0.05), previous reading on cold chain maintenance ( $p < 0.05$ ), and previous training ( $p$ -value <0.001).

– Reported by: Dr. Munira Al Zamil, Dr. Haleema Al Johar, Dr. Suheir AlSaleh, Dr. Randa Nooh, Dr. Jamil Choudhry (Field Epidemiology Training Program).

**Editors notes:** Careful attention to vaccine storage is essential to ensure optimal vaccine effectiveness. Once vaccine potency is lost, the vaccine will no longer provide protection against the target disease. Vaccines are heat sensitive and have limited shelf lives. All vaccines are to some degree unstable. Their potency, and therefore the protection they give against disease, decreases over time. On the other hand, some vaccines may be damaged by freezing, such as DTP, Hepatitis B, DT, and TT. Others have to be kept frozen, such as OPV, Measles, Mumps, and yellow fever. Some vaccines are damaged by exposure to strong light as well as heat such as BCG and measles.<sup>1,2</sup> The cold chain system is, therefore, a very important component of an immunization program. Some previous studies have shown that knowledge of health workers about cold chain was inadequate.<sup>3,4</sup>

WHO recommendations state that the refrigerator inside the vaccination room should be placed away from sunlight and at least 15 cm away from the wall; defrosting should be done when the thickness of ice reaches 5 mm or more, and during defrosting vaccines should be left in another refrigerator or in an ice box. Water bottles should be kept in the lower part of the refrigerator; no materials should be stored in the EPI vaccines refrigerator except the EPI vaccines; thermostat should be placed in the first drawer of the refrigerator; refrigerator temperature registering record should be changed monthly; and the refrigerator temperature recorded twice daily. EPI vaccines and diluents should be stored between +2°C and +8°C, and should not be left to freeze. Each vaccine and its diluent have a recommended position inside the refrigerator, and recommended duration of storage after vial opening.

In this study, the majority of health workers managed to answer part of questions correctly. In general, the level of knowledge of GHW was better than PHW in both Riyadh and Eastern province, in spite of the fact that workers in Eastern Province claimed to previously read about cold

chain more than Riyadh workers. It was recommended to hold training courses on cold chain maintenance to all workers before working in the vaccination field, and periodically to bring current workers knowledge up-to-date. The importance of cold chain maintenance and its significance should be emphasized to all workers in the vaccination field.

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## The Second Regional Conference on Medical Journalism in the WHO Eastern Mediterranean Region

Following the success of the first regional conference on medical journalism in the WHO Eastern Mediterranean Region held in Cairo, Egypt, last year, the *Saudi Medical Journal*, the WHO Eastern Mediterranean Regional Office (EMRO), and some other Saudi science and research centers organized a second conference in Riyadh, Saudi Arabia on 10-12 October, 2004.

The participants, including editors, scientists and researchers of the region, as well as several invited guest speakers tried to outline the current status, as well as the problems and constraints of scientific research and biomedical journalism in the region. The presence of our western colleagues was more pronounced than at the 2003 conference. However, some

of our colleagues such as those from Iraq could not attend the conference.

The conference was devoted to delineating the current status and importance of biomedical research in the region, along with several talks presented on research methodology, a workshop on biostatistics, etc. Although, organizers meant to devote the second and third days of the conference to journalism in the region, we witnessed the extension of some intriguing discussions on research raised on the first day to the next two days. The audience provided lively comment and raised important questions following many of the talks. Many of the researchers have independently identified the problems in conduction of scientific research in the region. The problems mentioned were almost the same across the re-

gion: limited governmental funds for research, the brain drain, and lack of incentive for researchers, among other things. I learned that although many of the participants realized that they have trouble doing scientific research and even could identify some of the problems, almost none was successful enough to take a single step forward to find out a practical way to resolve the condition; almost all of them remained in state of self-analysis.

The most important event of this conference, in my opinion, was the announcement of the official birth of the Eastern Association of Medical Editors (EMAME). According to its constitution, EMAME shall be a non-governmental, non-partisan and non-profitable organization whose mission is to support and promote medical

## ملخص باللغة العربية

(٤٨,٥%)، ألم بالصدر (٢٦,٧%)، وكحة يصحبها نزييف (١٨,١).

لم يكن هناك فرق بين معدل الشفاء لمرضى الدرن الرئوي المشخصين خلال عام ٢٠٠٠م (٧٠,٦%) والمشخصين خلال عام ٢٠٠١م (٧٠,٢%). المرضى أقل من ١٤ سنة شفوا تماماً، يقابلها ٧٦% من المرضى بين ١٥-٤٤ عاماً فقط ٥٨,٩% من الذين أعمارهم أكبر من ٤٥ سنة (p=٠,٠٥١٦). كان معدل الشفاء بين الإناث أعلى منه بين الذكور (٨٣,٣% مقارنة بـ ٦٥,٨%) (p=٠,٠٥١٦). كما لم يكن هناك فرق في معدل الشفاء بين السعوديين والغير سعوديين (٧٣,٠% مقارنة بـ ٦٦,٧%). معدل الشفاء كان ٨٣,٠% لمرضى مستشفى الأمراض الصدرية مقارنة بـ ١٠٠% من مرضى المستشفيات الحكومية الأخرى. لم تظهر الدراسة أي علاقة بين معدل شفاء حالات الدرن الرئوي وشدة المرض في بداية العلاج.

بالنسبة لمرضى الدرن الغير رئوي فكان معدل الشفاء في عام ٢٠٠٠م ٧٢,١% مقارنة بـ ٦٣,٦% في ٢٠٠١م. كان معدل الشفاء ٨٣,٣% للمرضى أقل من ١٤ سنة، ٦٨,٦% للمرضى بين ١٥-٤٤ سنة، و ٥٧,١% للمرضى أكبر من ٤٥ سنة. كان معدل الشفاء بين الذكور أعلى منه بين الإناث (٧٥,٦% مقارنة بـ ٥٥%) وبين السعوديين أعلى منه بين غير السعوديين (٨١,٣% مقارنة بـ ٦٥,٣%)، لكن جميع هذه النتائج لم يكن لها دلالة إحصائية. مستشفى الأمراض الصدرية كان لها أعلى معدل للشفاء (٩٤,١%) مقارنة بالمستشفيات الخاصة (٥٠,٠%) والمستشفيات الحكومية الأخرى (١٤,٣%) ولكن هذه النتائج لم يكن لها دلالة إحصائية.

تم التوصية على تطوير تحويل مرضى الدرن إلى مستشفيات الأمراض الصدرية للعلاج والمتابعة، والعمل على رفع المستوى العلمي للأطباء في الجهات الصحية المختلفة وقدرتهم من حيث تشخيص حالات الدرن وعلاجها.

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التطعيمات بنشرات دورية عن سلسلة التبريد.

إعداد: د. منيرة الزامل، د. حليلة الجوهر، د. سهير الصالح، د. رائد نوح، د. عبد الجميل شودي (برنامج الوبائيات الحقلية).

### معدل الشفاء لحالات الدرن المشخصة بالمنطقة الشرقية في عامي ٢٠٠٠ و ٢٠٠١م.

تمت هذه الدراسة للتعرف على معدل شفاء مرضى الدرن المشخصون بالمنطقة الشرقية بالمملكة العربية السعودية خلال الفترة من ايناير ٢٠٠٠ الى ٣١ ديسمبر ٢٠٠١م.

تم إجراء دراسة مقطعية إسترجاعية لجميع حالات الدرن المسجلة بمختلف القطاعات الصحية بالمنطقة الشرقية خلال فترة الدراسة. تمت مراجعة السجل المرضى لجميع مرضى الدرن بكل المستشفيات وتصنيفهم، تم حساب معدل الشفاء.

خلال عامي الدراسة تم تشخيص ٤٥١ مريضاً للدرن بمختلف المنشآت الصحية بالمنطقة الشرقية، ٨١% منهم درن رئوي و ١٩% درن غير رئوي. الغالبية العظمى من حالات الدرن الرئوي ٨٣% والغير رئوي ٦١% تم تشخيصها بمستشفى الأمراض الصدرية التابعة لوزارة الصحة. كان هناك فرق ذا دلالة إحصائية في المعدل العمري لحالات الدرن الرئوي ٣٨,٥ عاماً (±١٥,٣) مقارنة بحالات الدرن الغير رئوي ٣٢,٣ عاماً (±١١,٨). أغلبية المرضى كانوا من الذكور ٧٢,١% بين حالات الدرن الرئوي مقارنة بـ ٦٩,٤% من حالات الدرن الغير رئوي. شكل السعوديون ٣٩% من حالات الدرن الرئوي و ٢١% من حالات الدرن الغير رئوي.

تقريباً جميع حالات الدرن الرئوي (٩٥,٦%) نوموا بالمستشفيات وكان معدل المكوث بالمستشفى ٦١,٣ يوماً (±٣٦,٤)، مقارنة بـ ٦٤,٧% من حالات الدرن الغير رئوي ٢٤,٣ يوماً (±١٩,٥). الأعراض المسجلة عند التنويم كانت كحة (٩٢,٢%)، حمى (٧٥,٢%)، فقدان الوزن (٦٧,١%)، فقدان الشهية (٥٢,١%)، التعرق الليلي

تقرير عن معرفة وموقف العاملين في مجال التطعيمات عن ماهية سلسلة التبريد وعناصرها وكيفية تطبيقها، ١٤٢٥هـ.

تم تكوين فريق من برنامج الوبائيات الحقلية لإجراء دراسة ميدانية للإطلاع على مدى معرفة وموقف وتطبيق العاملين في مجال التطعيمات عن ماهية سلسلة التبريد وعناصرها وكيفية تطبيقها. وسلسلة التبريد تعني سلسلة من التخزين والنقل صممت للحفاظ على صلاحية اللقاح حتى يصل للمستخدم.

تمت زيارة عينة مجموعها ٦٠ مؤسسة صحية ومقابلة ٦٠ عاملة صحية فيها. بلغ عدد المؤسسات الصحية التي تمت زيارتها في مدينة الرياض ٣٧ مؤسسة صحية، ٢٢ (٥٩,٥%) حكومية و ١٥ (٤٠,٥%) خاصة. في مدينة الرياض كانت ١٨ (٤٨,٦%) من العاملات سعودية و ١٩ (٥١,٤%) غير سعودية. بلغ عدد المؤسسات الصحية التي تمت زيارتها في المنطقة الشرقية ٢٣ مؤسسة صحية ١٥ (٦٥,٢%) منها حكومية و ٨ (٣٤,٨%) خاصة، و كانت ١٤ (٦٠,٩%) منهن سعودية و ٩ (٣٩,١%) غير سعودية.

أوضحت الدراسة تفاوت معلومات العاملات ببرنامج التحصين الموسع في كل من مدينة الرياض والمنطقة الشرقية عن ماهية سلسلة التبريد وعناصرها، و لكن إجمالاً كانت معلومات العاملات بالقطاع الصحي الحكومي أفضل من العاملات بالقطاع الخاص وكان الفرق ذا دلالة إحصائية (p=٠,٠٠٢)، كما كانت معلومات العاملات السعوديات أفضل من الغير سعوديات وكان الفرق ذا دلالة إحصائية (p=٠,٠٠٤)، كذلك كانت معلومات العاملات اللاتي سبق لهن القراءة عن ساسلة التبريد (p=٠,٠٠٤)، و اللاتي سبق لهن أخذ دورات تدريبية في هذا المجال (p=٠,٠٠٠).

تم التوصية على عقد دورات تدريبية لتعريف العاملين في مجال التطعيمات بأهمية سلسلة التبريد قبل الالتحاق بالعمل، وكذلك عقدها بشكل دوري ليتسنى للعاملين في مجال التطعيمات الإحاطة بكل ماهو جديد عن سلسلة التبريد، و تزويد العاملين في مجال

## The Second Regional Conference on Medical Journalism in the WHO Eastern Mediterranean Region, cont ....

(Continued from page 29)

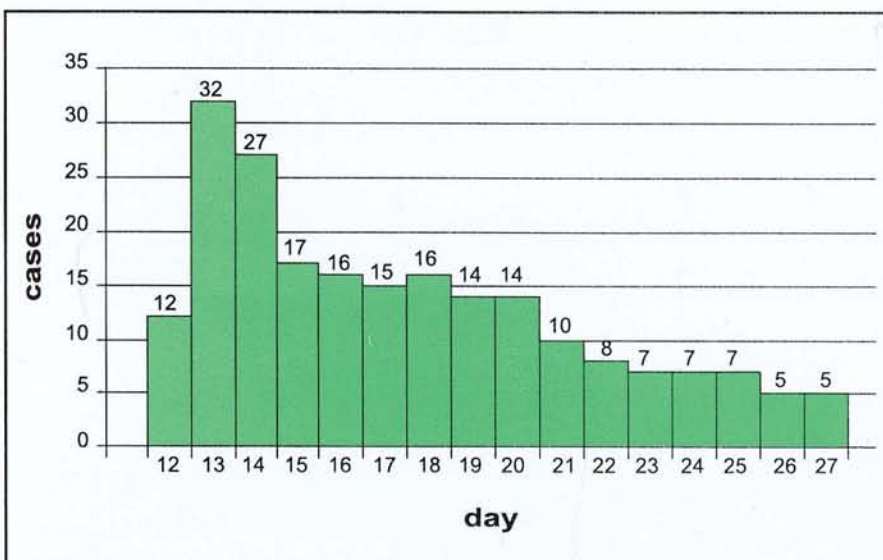
journalism in the Eastern Mediterranean Region by fostering networking, education, discussion, and exchange and to be an authoritative resource on current and emerging issues in the communication of scientific information. The Discussion Group of EMAME, though not highly active, has been working since last year. The interim Executive Council is now working on the structure of the Association committees, on registration of members, and on the launch of its website to be announced in near future. It was agreed that the third conference will be held in Shiraz, Iran, within the next two years. EMAME will help editors in the region discuss and face their current problems—very basic problems specific to the region such as lack of expertise in desktop publishing.

Farrokh Habibzadeh, MD. WAME

1. Habibzadeh F. First regional conference on medical journalism in the WHO Eastern Mediterranean Association. European Science Editing. 2003;29:18.

### Erratum: Saudi Epidemiology Bulletin; Vol 11, Number 1, 2004:

Erratum in manuscript "Keratoconjunctivitis outbreak in Jubail". The following Epidemic curve fell from print.



## Mark your calendar . . .

### Inside the Kingdom

#### February 16-17, 2005: 1st Scientific Conference of the Saudi Cancer Foundation.

Location: Meridien Hotel, Al Khobar, Kingdom of Saudi Arabia.  
Contact: Dr. Ibrahim Alsheneber, Chairman, Organizing Committee, PO Box 31997, Alaqrabia, Kingdom of Saudi Arabia Tel. +966 (3) 8647557 Fax. +966 (3) 8649884 E-mail: [dralshen@yahoo.com](mailto:dralshen@yahoo.com)

### Outside the Kingdom

#### January 5 - 8, 2005: 3rd Asia Pacific Evidence-Based Medicine Workshop and Conference

Location: Clinical Research Centre Block MD 11, Faculty of Medicine, National University of Singapore  
10 Medical Drive, Singapore 117597  
Contact: Ms Jap Ren Fang, Medical Affairs (Education) Department, National University Hospital, 5 Lower Kent Ridge Road, Level 5 Kent Ridge Wing, Singapore 119074. Tel: (65) 6772-5926, Fax: (65) 6775-6757  
Email: [ebm@nuh.com.sg](mailto:ebm@nuh.com.sg)

#### February 21-23, 2005: International Conference On Biosafety.

Location: Muscat-Oman  
Contact: [biosaftey@mrmewr.gov.om](mailto:biosaftey@mrmewr.gov.om)

#### March 1-4, 2005: The burden of diseases in poor resource countries: meeting the challenges of combating HIV/AIDS, Tuberculosis and Malaria. 20th annual joint scientific conference and silver jubilee anniversary of the national institute for medical research.

Contact: Secretariat, Annual Joint Scientific Conference, National Institute for Medical Research, P.O. Box 9653, Dar es Salaam, Tanzania. Tel: +255 -22-2121400, Fax: +255-22-2121360 / 2121380  
Email: [ajsc@nimr.or.tz](mailto:ajsc@nimr.or.tz)  
Website: [www.nimr.or.tz](http://www.nimr.or.tz)

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### Field Epidemiology Training Program:

Dr. Nasser Al-Hamdan, FETP Supervisor, SEB Editor-in-Chief

Dr. Randa Nooh  
Consultant Epidemiologist  
Bulletin Editor

Dr. Abdul Jamil Choudhry  
Consultant Epidemiologist,  
Bulletin Editor.

## Selected notifiable diseases by region, Oct—Dec 2004

	Riyadh	Makkah	Jeddah	Taif	Madinah	Qassim	Eastern	Hasa	Hafr Al-Batin	Asir	Bisha	Tabuk	Hail	Al-Shamal	Jizan	Najran	Baha	Al-Jouf	Gorlat	Gonfuda	Total	
Measles	7	0	22	4	2	0	4	0	0	2	0	4	0	0	11	0	0	0	0	0	0	56
Mumps	16	0	4	3	0	0	9	0	6	0	0	0	0	1	0	2	0	0	0	0	0	41
Rubella	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Varicella	1907	312	656	238	267	963	865	445	340	1496	222	574	142	182	315	168	281	66	52	79	9570	
Brucellosis	68	6	5	12	32	118	46	6	30	323	33	13	51	12	88	34	4	6	3	2	892	
Meningitis mening.	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Meningitis other	27	4	22	6	20	8	0	5	0	1	0	8	1	0	2	0	0	0	0	1	105	
Hepatitis A	84	20	18	26	5	46	29	24	10	29	17	52	12	17	172	68	12	2	22	5	670	
Hepatitis B	186	17	242	66	15	61	115	7	0	50	15	81	5	1	21	7	50	0	0	35	974	
Hepatitis C	124	18	286	30	3	41	60	10	0	9	9	17	10	1	7	0	16	0	1	12	654	
Hepatitis unspecified	35	1	14	0	0	0	0	7	0	54	0	37	1	0	200	0	0	0	0	0	349	
Typhoid & paratyphoid	9	2	0	4	0	0	6	7	0	14	3	0	6	8	4	0	5	0	0	0	68	
Amoebic dysentery	12	0	439	3	17	2	30	15	11	50	10	0	3	0	7	8	1	0	1	0	609	
Shigellosis	11	1	2	0	0	9	6	4	1	0	0	8	0	3	1	6	6	0	1	4	63	
Salmonellosis	121	1	24	3	0	2	178	36	4	3	6	7	0	0	1	18	12	0	2	0	418	
Syphilis	3	0	6	0	0	2	8	0	0	0	5	1	0	0	0	0	1	0	0	0	26	

## Comparisons of selected notifiable diseases, Oct - Dec 2003-2004

DISEASE	Oct-Dec 2003	Oct-Dec 2004	Change %	Jan-Dec 2004	Jan-Dec 2003	DISEASE	Oct-Dec 2003	Oct-Dec 2004	Change %	Jan-Dec 2004	Jan-Dec 2003
Diphtheria	1	0	-100	0	2	Meningitis other	123	105	-15	508	494
Pertussis	19	7	-63	64	120	Hepatitis A	408	670	64	2999	2104
Tetanus, neonat	12	8	-33	37	31	Hepatitis B	944	974	3	4594	4329
Tetanus, other	2	4	100	11	12	Hepatitis C	705	654	-7	2981	2812
Poliomyelitis	0	2*	200	2	0	Hepatitis unspecified	218	349	60	1260	1101
Measles	167	56	-66	1662	1208	Typhoid & paratyphoid	84	68	-19	365	403
Mumps	160	41	-74	349	749	Amoebic dysentery	483	609	26	2696	2328
Rubella	1	4	300	17	22	Shigellosis	117	63	-46	310	490
Varicella	11894	9570	-20	67451	70884	Salmonellosis	540	418	-23	1829	2219
Brucellosis	753	892	18	5169	4534	Syphilis	51	30	-41	231	166
Meningitis mening.	8	2	-75	10	44	VD, other	64	68	6	330	382

\* Imported cases

## Diseases of low frequency, Oct - Dec 2004

Yellow fever, Plaque, Rabies, Haemolytic Uraemic Syndrome: No Cases

Pertussis: 7 cases ( Eastern 3, Riyadh 2, Jeddah 1, Hasa 1)

Neonatal Tetanus: 8 cases ( Jeddah 4, Makkah 3, Madinah 1)

Guillain Barre Syndrome: 25 cases ( Riyadh 6, Eastern 4, Jeddah 3, Madinah 2, Assir 2, Qassim 2, Tabuk 2, Jazan 2, Makkah 1, Baha 1)