Assessment of Knowledge, Attitude, and Practices of Ministry of Health physicians toward surveillance system in Riyadh region.

Over the past few years, new diseases such as Avian flu, Severe Acute Respiratory Syndrome (SARS) have emerged, while other diseases that were once thought in decline such as Tuberculosis (TB) have reemerged after having developed resistance to known antimicrobial drugs. As a result, fears from disease outbreaks have increased in both number and complexity.

A cross sectional descriptive self administered question based survey was conducted. This part involved only Riyadh region as part of a national study including all MOH physicians working in notifying disease in both governmental Primary Health Care Centers (PHCC’s) and hospitals. The study sample involved 970 physicians. Only completely filled records were included (760 (78.4%)).

There was a total of 550 (72.4%) physicians from 205 PHCCs and 210 (27.6%) from 21 hospitals. The physicians’ ages ranged from 25 to 60 years. The majority were in the 30-45 years age group (62.4%). Their mean age ± Standard Deviation (S.D) was 41.6 ± 7.8 years. The majority were males 545 (71.7%). Saudi nationality constituted only 4.3%, and Egyptian physicians were the most common among non-Saudis (33%). More than half (66.2%) had been working for MOH for 11-20 years. General practitioners (GPs) comprised the majority of physicians (78.9%), followed by specialists (19.3%), and consultants (1.8%).

Poor knowledge in general surveillance information was found among over half the respondents (58.3%), most (87.1%) scored poor knowledge in the notifiable diseases, and none achieved 100% correct answers in disease notification.

Over half (61.7%) agreed that the case definition in the surveillance system was clear, and 63.1% agreed that the operating surveillance system was good. Sixty

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percent agreed that the current notifiable diseases were sufficient, 70.1% were not sure if another disease should be added, 21.7% thought that some diseases (eg. HIV/AIDS, Chicken pox, rubella) should be added; 13.8% suggested removing some notifiable diseases such as: poliomyelitis, Gillian Barre Syndrome, suspected polio, and measles.

Sixty one percent strongly agreed that MOH should arrange training courses in surveillance, and 57.3% strongly agreed to attend such courses. The majority (88.2%) hadn’t attended any surveillance system training courses, and only 38.9% had a clear manual about surveillance. Seventy percent stated that they faced difficulties in notifying communicable diseases ranging from always to rarely. Difficulties reported were: patients uncooperative in giving information (55.9%), health inspector not always present (44.1%), insufficient time due to high patient load (35%), too much information to record (28.6%), patient not knowing his address (26.5%), communication system either busy or out of order (20.7%), and other reasons such as language barrier, staff not cooperative, patient didn’t care, and results come late (14.4%).

Physicians who reported difficulties in conducting control measures constituted (30.1%). The most common reasons were: uncooperative contacts (90%), no communication system with patient (84.7%), unclear control measures of the diagnosed disease (81.7%), unknown patient’s address (76.8%), transportation difficulties (75.1%), uncooperative non-governmental hospitals (44.1%), the information required to fill was not clear (37.1%), physicians’ lack of knowledge of the control measures of the diagnosed disease (35.8%), and other reasons (14.4%).

Physicians who had read about surveillance system comprised 85.8%, ranging from always to rarely. Journals and/or bulletins were the most common sources (60.7%), books (48.2%), internet (25%), and other sources (eg. MOH memo, mass media, symposia) (11.3%).

More than half (62.4%) stated that they received feedback from the directorate or regional district: always (11.6%), mostly (22.8%), sometimes (43.9%), and rarely (21.7%). Feedback was received in the form of letters (46.6%), reports (39.7%), journals and/or bulletins (25.1%), periodic meetings (5.1%), other means (eg. phone, through health inspector) (5.1%), and symposia (4.4%). Feedback was received via: Fax (43.9%), mail (37.8%), by hand (32.3%), and others (eg. hospital administration, regional director, newspaper) (7.8%).

Over half (55.7%) gave suggestions for improving the surveillance system, such as: periodic training courses, particularly directed at new physicians. Courses should be in English for non-Arabic speaking doctors, accredited from the Saudi council, and they should be held in a nearby place to minimize transportation and guarantee their appearance. Suggestions to improve the feedback system included: internet access and developing a website for feedback, more cooperation from referring hospitals, cooperative coordinators between the hospitals and the PHCCs.

Physician’s good knowledge was significantly higher among non-Saudis (100%) (P-value=0.01), male physicians (77.6%) compared to females (22.4%) (P-value=0.002), and GPs (78.6%) compared to specialists (20.4%) and consultants (1%) (P-value < 0.001). In addition, physicians working in PHCCs scored significantly higher knowledge score (63.3%) compared to hospital physicians (37.6%), P-value< 0.001.

There was no effect of physician’s attitude toward attending training courses in surveillance on their knowledge of the notifiable diseases (P-value=0.05). Physicians who had a clear manual and those who had read about surveillance scored significantly higher knowledge levels (P-values<0.001 and 0.03 respectively).

Difficulties faced by physicians in communicable disease notification was significantly lower among those who had attended training courses on surveillance (P-value <0.05), and those who had a clear manual (P-value =0.005).

- Reported by: Dr. Ghada Alqudaihi, Dr. Randa Nooh, Dr. Abdullah Al-Rabeah (Field Epidemiology Training Program).

Editorial notes: An epidemiological surveillance system is a set of interconnected elements and activities. It is well-known as a central part of health care system in order to monitor priority health events known to be taking place in the population and contributes to the achievement of surveillance objectives.

Early detection of disease outbreaks through notification helps health authorities plan preventive measures in order to control their spread. Despite

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Bronchial asthma has significant impact on childhood activities, schooling, dietary practices, in addition to the financial burden on the family. We were interested in assessing the socio-clinical profile of asthmatic Saudi children, and the impact of their symptoms on their life styles. A cross sectional, descriptive study was conducted at the Pediatric outpatient clinics of two major hospitals in Riyadh (Riyadh Medical Complex (RMC) and Prince Salman Hospital (PSH)), among asthmatic Saudi children of both sexes.

Two hundred participated in the study; 120 (60%) from RMC Pediatric Hospital and 80 (40%) from PSH, based on the average patients visiting the Asthma clinic per month from both hospitals. The sample composed of 120 (60%) males and 80 (40%) females. Their ages ranged between 5 months to 12 years (mean 6.4 years, SD ± 3.9). Their diagnostic age ranged from 1 month to 7 years (mean 1.6, SD ±1.36). Almost half were students 98 (49%), their grade levels ranged from Kindergarten to Grade V1; 20 (10%) were supposed to be registered at school but were not.

Of the total participants, 79.0% had a positive family history of bronchial asthma. The number of family members who lived in the same household ranged from 3 to 25 (mean 7.2, SD ± 2.95); those suffering from bronchial asthma ranged from 1 to 10 (mean 2.3, SD ± 1); 39.0% reported a currently smoking family member, of whom fathers constituted 75.9% and mothers 24.4%; 85.5% smoked cigarettes, 6.0% shisha, and 8.5% both.

Reported triggering factors were inhaled irritants (eg, tobacco smoke, incense, air fresheners, fumes or other) 98.5%, cold weather 96.0%, viral illness 95.5%, Exercise 70.5%, pets (eg, cats, birds and dogs) 56.5%, Stress 42.5% and pollen 40.5%.

Thirty one percent had been hospitalized during the previous year, among those 6.5% had been admitted to Intensive Care Unit (ICU). The frequency of admission into hospital in the previous year was once among 62.9%, with duration of under one week among 77.6%.

Regarding adverse effects on the child’s lifestyle, 97.5% reported inability to sleep well during the asthma attack, and 98.0% could not enjoy their holidays outside their homes because of asthmatic triggers. Frequent absence from school was reported by 93.9%; 76.5% reported embarrassment of using inhalers at school to avoid comments from their friends; 71.4% reported lower academic achievement; 42.9% had been absent from school between 4-8 days, 36.7% reported absence from exams.

Among mothers’, 99.0% reported limitations on their social life, 98.0% found difficulty in asking their friends and relatives not to smoke in their house, 95.9% reported that teachers did not know how to deal with the asthmatic children if they developed an attack at school. Among 34 (17.0%) employed mothers, all reported frequent absence from work as a result of their asthmatic child’s illness.

- Reported by: Dr. Aziza A. Donques, Dr. Randa M. Nooh (Field Epidemiology Training Program).

Editorial notes: Bronchial Asthma is considered the most common chronic childhood disease. It is the major cause of school absenteeism, contributing to an estimated 10 million missed school days annually. Asthma is a major problem in the Kingdom of Saudi Arabia. Its prevalence has risen from 8% in 1986 to 25% in 2001, affecting about 10%-15% of school age children. Asthma in children has a substantial impact on health and quality of life, such as restriction of activities, interrupted sleep, disturbed routines, increased stress, and poor school performance. A study assessing the impact of bronchial asthma in children in India

(Continued on page 4)

Table 1: Impact of bronchial asthma on lifestyles of asthmatic children and their mothers: (N = 200)

<table>
<thead>
<tr>
<th>Impact on asthmatic children in general:</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot enjoy holiday outside home</td>
<td>196</td>
<td>98.0</td>
</tr>
<tr>
<td>Cannot sleep well during asthma attack</td>
<td>195</td>
<td>97.5</td>
</tr>
<tr>
<td>People don’t understand that I cannot cope with Perfume/ smoke.</td>
<td>185</td>
<td>92.5</td>
</tr>
<tr>
<td>Cannot participate in sports or other physical activities</td>
<td>151</td>
<td>75.5</td>
</tr>
<tr>
<td>Cannot own pets</td>
<td>148</td>
<td>74.0</td>
</tr>
<tr>
<td>Frequent visits or hospitalization</td>
<td>115</td>
<td>57.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact on asthmatic schoolchildren: (n = 98)</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashamed to use inhaler at school</td>
<td>75</td>
<td>76.5</td>
</tr>
<tr>
<td>Frequent absence from school</td>
<td>92</td>
<td>93.9</td>
</tr>
<tr>
<td>Absence from Exams</td>
<td>36</td>
<td>36.7</td>
</tr>
<tr>
<td>Lower level of achievement in studies</td>
<td>70</td>
<td>71.4</td>
</tr>
<tr>
<td>Admission into hospital</td>
<td>50</td>
<td>51.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact on asthmatic children mothers (n = 200)</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limitations on social life.</td>
<td>198</td>
<td>99.0</td>
</tr>
<tr>
<td>Difficult to ask friends &amp; relatives not to smoke in house.</td>
<td>196</td>
<td>98.0</td>
</tr>
<tr>
<td>During hospitalization, family and other children suffer.</td>
<td>195</td>
<td>97.5</td>
</tr>
<tr>
<td>The instruments used for treatment are costly</td>
<td>194</td>
<td>97.0</td>
</tr>
<tr>
<td>Difficult to ask friends and relatives not to use perfume &amp; incense in my house</td>
<td>194</td>
<td>97.0</td>
</tr>
<tr>
<td>Teachers do not know how to deal with asthmatic child if he or she developed BA attack at school (schoolchild).</td>
<td>94</td>
<td>95.9</td>
</tr>
<tr>
<td>Frequent absence from work (employed mothers n = 34)</td>
<td>34</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Assessment of Knowledge, Attitude, and Practices of Ministry of Health physicians toward surveillance system in Riyadh region, cont

(Continued from page 2)

this, notification suffers some obstacles as shown by worldwide studies. One of these obstacles is underreporting even with the clear directions from MOH requiring medical providers to report notifiable infectious diseases to their regional directorate.2

It is crucial for many diseases to be reported on time as timeliness is a key surveillance system metric in order to implement the control measures and prevent the disease spread and should be periodically evaluated. As a result, the knowledge of the physicians about the correct timing is crucial. Furthermore, it is mandatory for these physicians to report on time and be aware of the control measures of each disease and overcome the difficulties that they may face. Physicians’ good knowledge constituted only 12.9% in terms of identifying the time for reporting the 36 notifiable diseases. This is similar to the knowledge of disease notification among doctors in government hospitals in Benin City, Edo State, Nigeria (11.9%), and indicating poor doctor’s knowledge.4

Lack of sufficient training and lack of clear written manuals may explain the poor knowledge of the physicians, and calls for periodic training courses in surveillance.

Difficulties faced by the physicians in notification in addition to their low Steps taken to overcome such difficulties may include undergraduate education on surveillance, training courses, clear written manuals, and multidisciplinary cooperation to improve communication with patients. Simple, short and readily accessible forms may help improve reporting rate.

Feedback in response to notification, ensures its effectiveness. The low level of feedback needs to be studied separately, to determine factors that affect the feedback system and ways to overcome the difficulties.

References:

Impact of Bronchial Asthma Symptoms on the Life style of Asthmatic Saudi Children, Riyadh, Saudi Arabia, cont…..

(Continued from page 3)

revealed that asthma has an impact on the social, educational and emotional aspects of lives as well as financial burden on families. Among 162 children with Bronchial Asthma, restrictions in going out were reported in 48.8%, 59.8% of parents reported preventing their asthmatic children from attending social functions, and dietary restriction in 94%. Regarding the impact on parents work, 26.4% of fathers and 50% of working mothers took leave for 5 days (range 3.3 – 18) due to their child’s illness. Restriction of family’s social life was reported by 24.2% while 19.4% reported adverse effects on the family’s holidays. Absence from school showed a median of 4 days in the preceding 6 months.6

A study of the socioclinical profile of asthmatic children and the impact of asthma on their lifestyle was carried out in Al Majmaah, KSA, among 606 asthmatic children under 13 years old. Absence from school for about 1-3 weeks was reported by 8 (6%) with mild asthma, 6 (23%) with moderate asthma and 9 (39%) with severe asthma. Bronchial Asthma adversely affected their sleep pattern and schooling and resulted in overstay in the hospital.3

Our findings are in concordance with previous studies. A major impact of asthma was observed on children’s activities, such that 75.5% could not participate in sports or other physical activities. Coughlin reported that sports affected 64% of asthmatic children.6

Asthma is one of the common reasons for missing school. In our study 93.9% reported frequent absence from school, with a longest period of 24 days; 36.7% reported absence from exams; 10.5% of asthmatics who were supposed to be at school were not, which is a relatively high frequency of missing education. Speight, et al, observed that, since starting school, one third of 7 year old asthmatic children had missed more than 50 days of school as a result of asthma symptoms, which is three times higher than usual absenteeism.7

Absence from school may also be related to social stigma, since more than two thirds (76.5%) of schoolchildren in our study were ashamed of using Ventolin inhaler at school.

This study confirms the impact of bronchial asthma on lifestyles of asthmatic children and their mothers. Health education to raise awareness of parents and school teachers are recommended. It should be stressed to parents to continue registering the asthmatic child at school. Teachers should support asthmatic schoolchildren. Mass media can play an important role in this respect.

References:
4. Lodha R, Puranik M, Kattal N, Kabra SK. Social and economic impact of

(Continued on page 7)
Association between MMR vaccine and Autism: Issue of Argument.

The MMR Vaccine (Measles, Mumps, Rubella) is a live attenuated virus vaccine. Its efficacy is 95% (Range 90-98%), giving lifelong immunity. It is scheduled as 2 doses; once at 12 months, and another at 4-6 years.

Autism is one of a group of disorders known as autism spectrum disorders (ASDs). They are developmental disabilities that cause substantial impairment in social interaction and communication and the presence of unusual behaviors and interests. The severity of Autism varies greatly, from little speech and poor daily living skills, to functioning well in most settings. Its onset is usually before 3 years of age, and lasts throughout a person’s life. It can occur in all racial, ethnic, and socioeconomic groups and are four times more likely to occur in boys than in girls. Causes of Autism remain unknown, although both genetic and environmental factors are implicated.1

In 1998, a paper published in The Lancet by Dr. Andrew Wakefield et al. suggested that the MMR vaccine could contribute to the development of autism.2 This paper caused a lot of media attention, and many parents consequently refused MMR for their children. The MMR-autism theory is based on the idea that intestinal problems, such as Crohn’s disease, are the result of viral infection, and can contribute to the development of autism. In 1993, Wakefield et al. reported isolating measles virus in the intestinal tissue of persons with Inflammatory Bowel Disease (IBD). However, the validity of this finding was later brought into doubt when it could not be reproduced by other researchers.4,5

The 1998 Wakefield study2 reviewed reports of children with bowel disease and regressive developmental disorders, mostly autism, and suggested that MMR vaccine led to intestinal abnormalities resulting in impairment of intestinal function and developmental regression within 24 hours to a few weeks of vaccination. This hypothesis was based on only 12 children, which are too few to allow generalization of results. Also, they were referred to the researchers and may therefore not be a representative sample of autism cases; there was no healthy comparison group; and in at least 4 of the 12 cases, behavioral problems had appeared before IBD symptoms.

Taylor et al in 1999 published a study that argued against the suggested link between autism and the MMR vaccine. This study looked at all the known cases of ASD in children living in certain districts of London who were born in 1979, or after. The ASD patients were then matched with an independent registry of vaccinations. Among 498 children with autism, it was determined that the age at diagnosis was the same regardless of whether the children had received the MMR vaccine before or after 18 months of age, or whether they had never been vaccinated.5

In 1999, the British Committee on Safety of Medicine conducted a systematic review of reports of autism and GI diseases after receipt of MMR vaccine. They concluded that the available information did not support any association between the vaccine and autism or other diseases.7

In 2002, Madsen et al. conducted a study among all children born in Denmark from January 1991 up to December 1998.8 The total number was 537,303 children, among whom 440,655 had been vaccinated with the MMR vaccine. The researchers did not find a higher risk of autism among vaccinated children. Although there were a much higher number of vaccinated children in the study group, the sample was large enough to have a higher statistical power than previous studies that had suggested the association between MMR and autism, thus providing much stronger evidence.

DeStefano et al. investigated whether there was a difference in the age at which children with autism and without autism received their first MMR vaccination. The study’s findings showed that children with autism received their MMR at similar ages as children without autism.9

Should we delay vaccination until we know more about the negative effects of the vaccine? The answer is no, since current epidemiological evidence does not support a causal link between MMR vaccine and autism.

References:
المعلومات باللغة العربية

المؤشرات على تطورات الأمراض والصحة

الدراسة عن طريق مقابلة الأطفال المرضي

ملاحظات ونماذج لدراسة الأطباء

أظهرت النتائج أن ما يقرب من 90% من الأطفال الذين خلقوا في المغرب خلال القيمة لم يتعرضوا للعلاج في مركز للأطفال.

تتم التوصية على إعداد دور تدريبي للأطباء والممرضين في المواقع الصحية.

تم إعداد الصدمة بسلامة من قبل من قبل

الدوري ومسيرة تطوع من قبل المدارس

للمؤشرات الصحية والبيئية.

يجب أن يكون مدعمًا.

الدوري ومسيرة تطوع من قبل المدارس

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يجب أن يكون مدعمًا.
Symptoms on the Lifestyles of Asthmatic Saudi Children, Riyadh, Saudi Arabia, cont...

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Mark your calendar . . .

Inside the Kingdom
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Fax.: 966(1)4602316

April 01-04, 2007: 3rd Saudi Annual EBM Conference & Workshop.
Venue: The Westin Hotel, Jeddah, Kingdom of Saudi Arabia.
Contact: Academic Affairs, King Abdulaziz Medical City - Jeddah, KSA. Tel. +966-2-6240000 ext. 21244 / 21562.
Fax. + 966-2-624000 ext. 21009
E-mail: ngcebm@ngha.med.sa
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Tel.: 966(1) 2520252 ext. 45672 / 45448 / 45449
Email: ptc1@ngha.med.sa
http://www.ngha.med.sa

June 4-6, 2007: 7th Scientific Meeting of the Saudi Society of Family and Community Medicine.
Venue: King Faisal Hall Conference Hall, InterContinental Hotel, Riyadh.
Contact: Saudi Society of Family & Community Medicine, P.O.Box 40161, Al-Khobar 31952, Saudi Arabia
Fax. +966-3-8824241
E-mail: ssfcmhq@yahoo.com

June 19-21, 2007: 6th Jordanian Public Health Association Conference & 3rd TEPHINET Regional Scientific Conference
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  Consultant Epidemiologist, Bulletin Editor
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Selected notifiable diseases by region, Jan — Mar 2007

Comparisons of selected notifiable diseases, Jan - Mar 2006-2007

Diseases of low frequency, Jan – Mar 2007

Yellow fever, Plague, Diphtheria, Poliomyelitis, Rabies, Haemolytic Uraemic Syndrome: No Cases.

Pertussis: 7 Cases (Qasim 3, Jeddah 2, Makkah 2).

Neonatal Tetanus: 9 Cases (Makkah 6, Jeddah 1, Eastern 1, Jazan 1).

Ecchinoccocosis: 5 Cases (Riyadh 3, Eastern 2).

Guillain Barre Syndrome: 32 Cases (Riyadh 10, Madinah 3, Jeddah 3, Eastern 3, Jazan 3, Asir 4, Makkah 2, Hafr Al-Batin 2, Qasim 1, Hassa 1, Hail 1, Qunfudah 1).