



# النشرة الوبائية السعودية Saudi Epidemiology Bulletin



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النشرة الوبائية السعودية

## Knowledge and preventive practices related to dengue fever among adult population attending the MOH-PHCCs in Jeddah city, 2010

This study was a descriptive cross-sectional study using a self-administered Arabic questionnaire, conducted among adults above 15 years of age living in Jeddah city, attending the MOH-PHCCs during 2010. The main study objective was to assess the knowledge of the Jeddah community regarding dengue fever and the preventive practices they undertook. Multistage stratified sampling technique was used to recruit the study population. During analysis cumulative knowledge score was calculated and divided into high and low level at median, and was used for bivariate analysis.

Among the total 404 respondents, 51.0% were males. 42.3% were in the age group 15-30 years and 42.6% in the age group 31-45 years; 92.1% were Saudi; 33.4% had university level qualification, 30.0% had high school level, and 3.2% were illiterate; 46.0% were government employees, 13.4% were students, 11.4% were unemployed, and 15.8% were housewives.

Regarding knowledge of respondents about dengue fever, 52.2% knew that dengue fever is caused by a virus, 82.9% knew that it is transmitted by mosquitoes, 46.5% knew that anyone can catch dengue fever and 32.4% knew that no lifelong immunity develops after an attack of dengue fever. The most common symptom mentioned by the respondents was fever (69.6%), followed by headache (48.8%), joint pain (32.9%), muscle pain (26.2%), and skin rash (20.5%). 19.3% knew that there is no specific treatment for dengue, while 34.9% answered that there is no specific vaccine.

As shown in figure 1, the most popular preventive practice reported against mosquito bites was using windows screens (64.1%), for eradication of the breeding sites of mosquitoes was disposing garbage regularly (56.2%), and for diagnosis and treatment was to take the patient

to a Governmental health facility (44.6%). Some participants incorrectly attributed some of their hygienic practices to dengue fever prevention, including strict hand washing (38.9%), thorough cooking of food (17.8%), using boiled water for drinking (13.9%) and covering mouth and nose by mask by (8.9%). 79.0% had received some information regarding dengue fever, and TV was the most frequently quoted source 52.0%.

Individuals in age group 31-45 years (55.8%) and >45 years (55.7%) had higher knowledge of dengue than those <30 years (41.5%) ( $P=0.018$ ). People with high education (university and above) (60.7%) had higher knowledge level than those with low education (43.3%) ( $P<0.001$ ). Employed individuals (57.1%) had higher knowledge than those unemployed, including housewives (39.0%) ( $P<0.001$ ). The respondents who had a monthly family income over 8000 Riyals (58.1%) had higher knowledge than those with lower income (45.8%) ( $P=0.021$ ). Among participants who reported to have received health education about dengue fever, 54.2% had high knowledge about dengue fever than 32.9% of those who did not ( $P<0.001$ ). Persons with high knowledge about dengue fever (72.5%) had significantly

higher level of practices against the disease than those with low knowledge level (27.1%) ( $P<0.001$ ).

*Reported by: Dr. Hasan M. Al Otaibi, Dr. Abdul Jamil Choudhry (Field Epidemiology Training Program)*

**Editorial notes:** In the absence of any specific treatment and vaccines for dengue fever, vector control is the only viable option available for disease control. Vector control cannot be achieved by the public health authorities alone and community participation has been found to be a major contributor to success of such efforts. Although contribution of the community in disease control can be directly evaluated by assessment of practices, but evaluation of knowledge, which forms the basis of these practices, is also important.

Regarding the etiology of the disease, only half of the respondents were aware that it is caused by a virus, but this apparently has little implication for control effort, as compared to 17% of the respondents who were not aware that it is transmitted by mosquitoes. If people do not know the mode of transmission, then they cannot be expected to protect themselves from the disease. However, the situation was found to be much better than some studies conducted in developing countries. In this regard, a study in India in 2004 among the general population in south Delhi, aged from 15-60 years, showed that only 68% respondents reported that dengue can spread and among them only 55% knew that it spread through mosquito bite.<sup>1</sup>

In this study, about two thirds of the respondents thought that if a person got dengue fever he/she will not acquire it again. This concept is quite worrisome, since after recovery of patients families may take less care of them; while there is a high chance of re-acquiring the infection or its severe form, i.e., DHF (Dengue hemorrhagic fever) / DSS (Dengue Shock Syndrome).<sup>2</sup>

Many studies found that people confused signs and symptoms of dengue with common cold or flu-like illness; people did not care for such illnesses, and did not relate these illnesses to the presence of mosquitoes, thus did not take the necessary precautions to protect themselves. Their ability to recognize the signs and symptoms of dengue was important for them to seek early treatment.<sup>3</sup> This study found that knowledge of important dengue symptoms was insufficient.

In order to develop an effective health education program, we need to identify the high risk group with poorer knowledge and

target them in health education campaigns. Older age, higher education, being employed, having higher income and receiving health education, which are usually correlated with each other, are positively associated with knowledge as seen in studies from Pakistan and Thailand.<sup>4,5</sup>

It was recommended that the Directorate of Health Affairs of Jeddah, in close collaboration with Jeddah Municipal Authorities, should organize more aggressive health education campaigns with message focusing on a clear concept of the mode of disease transmission; everyone's susceptibility irrespective of age or immunity status; non-development of lifelong immunity; non-availability of vaccine or specific treatment; methods of protection against mosquito bites and eradication of mosquito breeding sites; and safe water storage at home.

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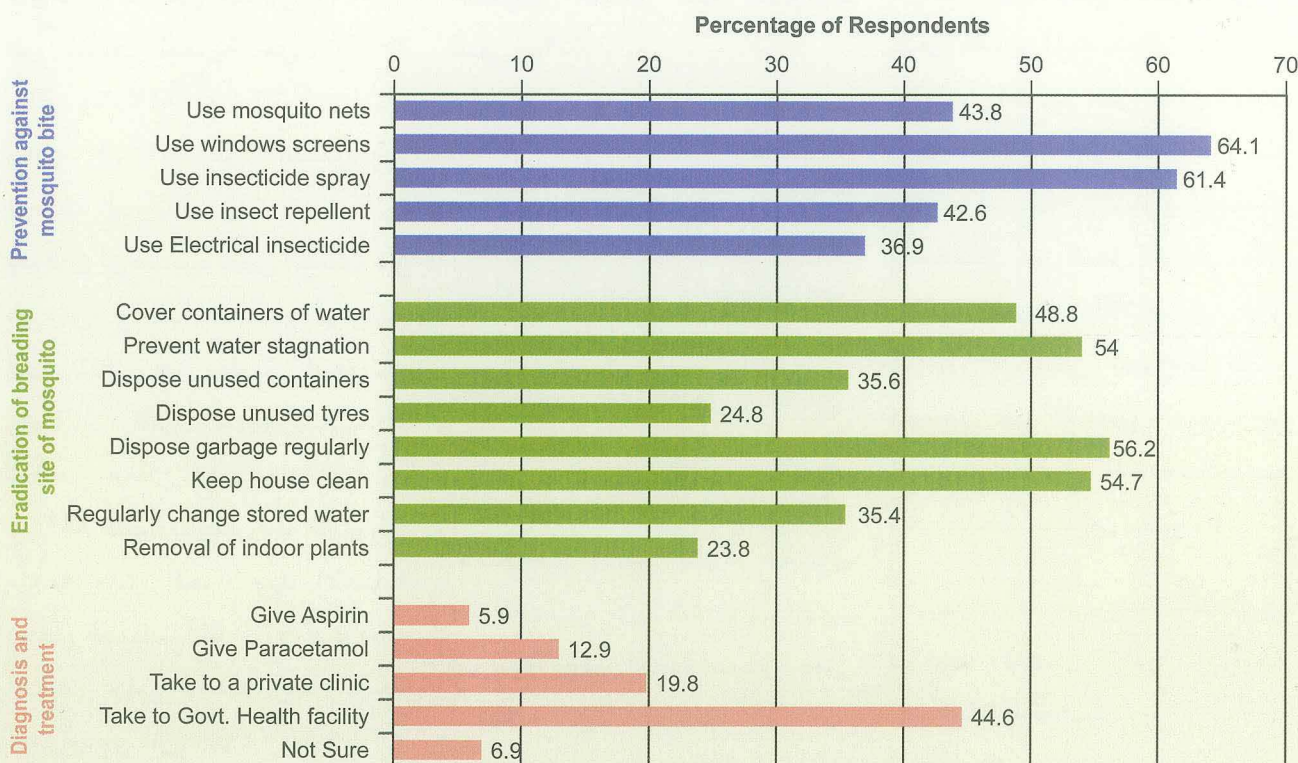
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**Figure 1 : Dengue fever related preventive practices of respondents, Jeddah 2010 (N=404)**



# المعرفة والممارسات الوقائية المتعلقة بحمى الضنك بين السكان البالغين المراجعين لمراكز الرعاية الصحية الأولية التابعة لوزارة الصحة في مدينة جدة عام 2010 م

المعرفة عن حمى الضنك .

كان مستوى المعرفة والإجراءات الوقائية ضد حمى الضنك لدى عينة الدراسة منخفض، مما قد يؤثر سلباً على جهود مكافحة المرض .

أوصت الدراسة بتنظيم حملة للتثقيف الصحي من قبل مديرية الشؤون الصحية بالتعاون مع بلدية مدينة جدة مع التركيز على طريقة انتقال المرض، قابلية الجميع للإصابة بالمرض، وعدم إمكانية الحصول على مناعة مدى الحياة بعد الإصابة بالمرض، عدم توفر علاج محدد ولقاح للمرض، طرق الحماية من لدغات البعوض، كيفية القضاء على مواقع تكاثر البعوض، كيفية تخزين المياه بشكل آمن داخل المنزل. و التركيز على بعض الفئات مثل الشباب دون سن ٣٠ سنة والاشخاص دون المستوى الجامعي والعاطلين عن العمل بما في ذلك ربات البيوت والأشخاص ذوي الدخل المنخفض خصوصاً الذين يعيشون في المناطق الفقيرة مع إعادة تقييم مواد التثقيف الصحي المستخدمة لتحسين محتواها .

إعداد : د. حسن مطر العتيبي،  
د. عبد الجميل شودري (برنامج الوبائيات الحقلية) .

■ تعتبر حمى الضنك في الوقت الحاضر من الاهتمامات الدولية

في جميع انحاء العالم . وتتوقع منظمة الصحة العالمية أن ما بين ٥٠ الى ١٠٠ مليون حالة مصابة بحمى الضنك تحدث سنوياً. وبما أن حمى الضنك من الأمراض المستوطنة في مدينة جدة، فقد قامت الكثير من البرامج التعليمية لتوعية السكان عن كيفية الوقاية منها. وقد أجريت هذه الدراسة لتقدير مستوى المعرفة والممارسات الوقائية من قبل سكان مدينة جدة في مراكز الرعاية الصحية الأولية التابعة لوزارة الصحة فيما يتعلق بحمى الضنك .

لا يوجد علاج محدد لحمى الضنك، كما أفاد ثلث المشاركين بأنه لا يوجد لقاح لحمى الضنك .

تبين ان ٦٤,١% كانوا يستخدمون الشبك الواقي في النوافذ، ٥٦,٢% كانوا يتخلصون من القمامة بشكل منتظم، وكان ٧٩,٠% قد تلقوا بعض المعلومات عن حمى الضنك، وكان التلفزيون مصدر هذه المعلومات لدى ٥٢,٠% .

كان مستوى المعرفة عن حمى الضنك منخفض عند الشباب دون سن ٣٠ سنة والاشخاص دون المستوى الجامعي والعاطلين عن العمل بما في ذلك ربات البيوت والأشخاص ذوي الدخل المنخفض. كان استخدام الإجراءات الوقائية ضد حمى الضنك أعلى عند الأشخاص الذين لديهم مستوى معرفة عالي، كان الأشخاص الذين قد تلقوا بعض المعلومات عن حمى الضنك لديهم مستوى عالي في

كانت هذه الدراسة دراسة وصفية مقطعية باستخدام استبيانات تعباً ذاتياً وتم أخذ عينات الدراسة بالطريقة العشوائية الطبقية العنقودية . شارك في الدراسة ٤٠٤ من سكان جدة البالغين الذين حضروا للمراكز الصحية .

من بين المشاركين في الدراسة، كان ٥١,٠% من الذكور، ٤٢,٣% في الفئة العمرية من ١٥-٣٠ سنة، ٤٢,٦% بين ٣١-٤٥ سنة، وكان ٩٢,١% من السعوديين. وجدت الدراسة ان ٥٢,٢% كانوا يعرفون أن مسبب حمى الضنك هو فيروس، و ٨٢,٩% كانوا يعرفون أنها تنتقل عن طريق البعوض، و ٤٦,٥% كانوا يعرفون أن أي شخص ممكن أن يصاب بها، و ٣٢,٤% كانوا يعرفون انه لا توجد مناعة مدى الحياة بعد الإصابة بحمى الضنك. أفاد ٦٩,٦% أن من أعراض حمى الضنك ارتفاع درجة الحرارة، و كان ١٩,٣% يعلمون أنه

## Assessment of socio-demographic and clinical determinants of cesarean section among women delivering at Ibri Regional Hospital, Oman, 2009

The increase in Cesarean Section Rates (CSRs) has become an important public health issue all around the world.<sup>1</sup> This study was conducted to assess the socio-demographic and clinical determinants of cesarean section (CS) among women delivering at Ibri Regional Hospital (IRH), Dhahira region, Oman during the period from the 1st of January to the 30th of June 2009.

A case control study was conducted by reviewing the maternity register and medical records of all deliveries at the hospital during the study period. All women who had delivered at IRH during the above specified period and with whom the parent health institution was "Ibri polyclinic" were considered as the study population. Cases were all women who had delivered by CS (elective or emergency) and controls were all women who had delivered by normal vaginal delivery (NVD) (spontaneous or assisted).

The study included 587 women (151 cases and 436 controls). The CSR was 25.7%. No statistically significant association was found between socio-demographic factors and type of delivery. Fetal distress was the most common clinical indication for emergency CS 66 (55.5%), whereas previous CS was the most common clinical indication for elective CS 13 (40.6%). A significant association was found between gravidity, parity, birth spacing, and risk of delivering by CS (p-values were 0.0069, 0.0184 and 0.0264 respectively). Other significant risk factors for were previous CS(s) (OR 26.8, 95% CI= 8.77-91.46), pregnancy induced

hypertension (PIH) (OR 11.05, 95% CI= 4.39- 28.70), height < 155 cm (OR 4.93, 95% CI= 3.32-7.31). Day time deliveries were at a significantly higher risk of CS (OR 2.33, 95% C.I = 1.59-3.42). (Table 1) Maternal blood group type was also associated with the type of delivery (p value < 0.001). As compared to babies born by normal vaginal delivery, babies born by CS were at a significantly higher risk of a low Apgar score at one minute, low birth weight and admission to neonatal intensive care unit.

The study concluded that the level of CSR was high in Ibri Regional hospital and no statistical significant association was found between socio-demographic factors and type of delivery.

- Reported by: Dr. Mahmoud Al-Sekaiti, Dr. Randa Nooh (Field Epidemiology Training Program).

**Editorial Notes:** In recent years, many countries over the world have recognized high CSR as a major public health problem, and have introduced some measures of control.<sup>2</sup> Wide variations in CSR

between different regions and maternity centers suggest clinical uncertainty and variation in practices. The justification for rise in CSR is difficult, not only in economic terms but also in terms of fetal and maternal morbidity and mortality. Medical, legal, psychological, social and financial factors play a contributory role as well as demographic and clinical characteristics of pregnant women. There is no consensus regarding the ideal CSR, however, the World Health Organization (WHO) states that no additional health benefits are associated with a CSR above 10-15%.<sup>3</sup>

This study attempted to identify the determinants, indications and outcome of CS among women delivering at IRH, Dhahira region, Oman. The study revealed a high CSR of 25.7%, a rate much higher than the 10-15% WHO recommended limit, in spite of the fact that all CSs were justified and had been performed with specific indication(s). This may be explained by the fact that all study population were from Ibri Poly Clinic (IPC) which is an extended primary health care center (PHCC) with some secondary health care services. In terms of outpatient attendance, it is the busiest PHCC in this region and to some extent it is a referral institution to the rest of PHCCs in this region. High risk pregnancies are usually registered and followed up at this health institution before being referred to or delivered at IRH.

The study found no significant association between socio-demographic characteristics and CS, an observation that is opposite to the findings of other studies.<sup>4,5</sup> However, with regards to residence, the majority of cases (76.8%) were living in urban areas, which is in line with findings of other studies.<sup>4,5</sup>

In our study, the majority of cases (82.8%) were under 35 years old, and shorter women with height up to 155 cm were found to be at 4.93 times higher risk of delivering by CS. Maternal height is one of the crucial determinants of CS.<sup>6</sup> Also, primigravid women are at a higher risk of CS delivery, since their capacity of childbirth has never been put to the test. In our study 40.4% of total CS cases were first-time mothers. This alarming CSR among primies may be attributed to, but not fully explained by, the anticipated sense of fear, pain and stress associated with first time deliveries.

Our study also found a significant association between PIH and the risk of delivering by CS. Good antenatal care can detect such problems earlier and early management can prevent further complications. There was also a significant association between birth spacing and CS, where slightly over half of the cases (52.3%) had a previous childbirth less than 2 years earlier, which stresses the importance of birth spacing.

Avoiding unnecessary CS would spare precious resources in the health care system and, most

importantly, reduce iatrogenic complications for mothers and neonates.

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**Table 1: Risk factors for cesarean section among women delivering in IRH during the study period.**

	Cases (N = 151)		Controls (N = 436)			Controls (N = 436)	
	N	%	N	%		N	%
<b>Previous CS</b>							
yes	30	19.9	4	0.9	26.78	8.77	91.46
No	121	80.1	432	99.1	1		
<b>Total</b>	151	100.0	436	100.0			
<b>PIH</b>							
yes	29	41.4	8	6.0	11.05	4.39	28.70
No	41	58.6	125	94.0	1		
<b>Total</b>	70	100.0	133	100.0			
<b>Maternal Height</b>							
Up to 155 cm	98	64.9	119	27.3	4.93	3.32	7.31
156 - 170 cm	53	35.1	317	72.7	1		
<b>Total</b>	151	100.0	436	100.0			
<b>Gestational Age ( Weeks)</b>							
Preterm <37 wks	28	18.5	14	3.2	6.86	3.50	13.44
Term ≥ 37 wks	123	81.5	422	96.8	1		
<b>Total</b>	151	100.0	436	100.0			
<b>Time of delivery</b>							
Day time	98	64.9	193	44.3	2.33	1.59	3.42
Night time	53	35.1	243	55.7	1		
<b>Total</b>	151	100.0	436	100.0			
<b>Apgar score at one minute</b>							
Low (<7)	31	20.5	26	6.0	4.07	2.33	
Normal (≥7)	120	49.5	410	94.0	1		
<b>Total</b>	151	100.0	436	100.0			
<b>Apgar score at five minute</b>							
Low (<7)	4	2.6	8	1.8	1.46	0.43	
Normal (≥7)	147	97.4	428	98.2	1		
<b>Total</b>	151	100.0	436	100.0			
<b>Birth weight (kg)</b>							
Extreme Low <1.0	0	0.0	1	0.2	0.00	0.00	
Very Low <1.5	2	1.3	2	0.5	3.43	0.34	
Low <2.5	26	17.2	21	4.8	4.24	2.21	
Normal 2.5 - 3.99	117	77.5	401	92.0	1		
High > 4.0 kg	6	4.0	11	2.5	1.87	0.60	
<b>Total</b>	151	100.0	436	100.0			
<b>Admission to Neonatal ICU</b>							
Yes	41	27.2	28	6.4	5.43	3.21	
No	110	72.8	408	93.6	1		
<b>Total</b>	151	100.0	436	100.0			

# دراسة تقييم المحددات الاجتماعية السكانية والسريية لعمليات الولادة القيصرية في مستشفى عبري المرجعي بسلطنة عمان في عام ٢٠٠٩ م

■ ازداد خلال العقود الثلاثة الأخيرة اهتمام وقلق المعنيين بالصحة العامة فيما يتعلق بزيادة معدل الولادات القيصرية، والتي شملت معظم بلدان العالم. وقد أوضحت الدراسات أن الخصائص الديموغرافية والسريية للأمهات الحوامل تلعب دورا كبيرا في ارتفاع معدلات الولادات القيصرية، إضافة إلى العوامل الطبية، القانونية، النفسية، الاجتماعية و المالية. تم إجراء هذه الدراسة في مستشفى عبري المرجعي بمنطقة الظاهرة في سلطنة عمان لتقييم المحددات الاجتماعية الديموغرافية والسريية للولادات القيصرية التي أجريت في هذا المستشفى خلال الفترة من ١ يناير حتى ٣٠ يونيو ٢٠٠٩.

أن الضائقة الجنينية هي أكثر دواعي إجراء العملية القيصرية الطارئة في حين أن وجود عملية قيصرية سابقة هي أكثر دواعي إجراء العملية القيصرية الاختيارية .

لم تتوصل الدراسة إلى علاقة إحصائية ذات أهمية بين الخصائص الاجتماعية السكانية للأمهات مثل عمر الأم ، القرابة بين الزوجين، نوع السكن ، الجنسية ، و الديانة و نوع الولادة، غير أن تحليل بيانات الدراسة أوضح وجود علاقة إحصائية ذات أهمية بين عدد مرات الحمل وعدد مرات الولادة والولادة القيصرية حيث أن الأمهات اللواتي لم يلدن من قبل كن أكثر عرضة للولادة القيصرية وشكلن ٤٣,٧٪ من نسبة النساء الوالدات ولادة قيصرية وهي أعلى النسب. كما أوضح تحليل البيانات وجود علاقة إحصائية بين قصر المدة بين الولادات والولادة القيصرية حيث أن ٧٩ حالة (٥٢,٣٪) من حالات الولادة القيصرية وُلدن قبل أقل من سنتين وهذه الفئة شكلت أعلى النسب بين حالات الولادة القيصرية. كما أظهرت البيانات وجود علاقة إحصائية بين الولادة القيصرية السابقة و حدوث ولادة قيصرية حالية حيث أن الأمهات اللواتي خضعن لولادة

تم عمل دراسة من نوع الحالة والحالة الضابطة من خلال مراجعة سجل الولادات والملفات الطبية لجميع الولادات التي أجريت في المستشفى خلال الفترة المذكورة . كانت الحالات هي جميع النساء اللواتي ولدن ولادة قيصرية ( طارئة أو اختيارية) بينما كانت الحالات الضابطة جميع النساء اللواتي ولدن ولادة طبيعية ( تلقائية أو بمساعدة).

شملت الدراسة ٥٨٧ امرأة . بلغ عدد الولادات القيصرية ١٥١ من ضمنها ١١٩ (٨٠,٧٪) ولادة طارئة و ٣٢ (٢١,٣٪) ولادة اختيارية، بينما بلغ عدد الولادات الطبيعية ٤٣٦ ولادة من ضمنها ٣٨٠ (٨٧,٢٪) ولادة طبيعية تلقائية و ٥٦ (١٢,٨٪) ولادة طبيعية بمساعدة. تراوحت أعمار الحالات ما بين ١٨-٥١ سنة (متوسط ٢٨,٧ سنة وانحراف معياري ٥,٧) بينما تراوحت أعمار الحالات الضابطة ما بين ١٦-٥٠ سنة (متوسط عمري ٢٨,٧ سنة وانحراف معياري ٥,٤).

توصلت الدراسة إلى أن نسبة الولادة القيصرية بالمستشفى الذي أجريت فيه الدراسة بلغت ٧٢,٥٪ وهو يفوق الحد الموصى به من قبل منظمة الصحة العالمية. كما أوضحت الدراسة

قيصرية سابقة كن أكثر عرضة للولادة القيصرية الآتية بمعدل ٢٦,٨ مرة مقارنة مع الأمهات اللواتي لم يخضعن لولادة قيصرية سابقة . وكذلك فإن الأمهات اللواتي كان لديهن مضاعفات أثناء الحمل كن أكثر عرضة للولادة القيصرية وبالأخص الأمهات اللواتي كان لديهن مرض ارتفاع ضغط الدم الناجم عن الحمل حيث كن ١١,٠ مرة أكثر عرضة للولادة القيصرية. كما أوضح تحليل بيانات الدراسة وجود علاقة إحصائية ذات أهمية بين فصائل دم الأمهات والولادة القيصرية. أما بالنسبة لأطوال الأمهات فإن الأمهات اللواتي كان طولهن أقل من ١٥٥ سم كن أكثر عرضة للولادة القيصرية ب ٤,٩٣ مرة من الأمهات اللواتي أطوالهن أكثر من ١٥٥ سم. وكذلك فإن الولادات المبكرة كن أكثر عرضة للعملية القيصرية ب ٦,٨٦ مرة من الولادات المكتملة.

تمت التوصية على ضرورة محاولة الولادة الطبيعية للأمهات اللواتي خضعن لعملية قيصرية سابقة وضرورة التشديد على أهمية زيارات متابعة الحوامل للكشف المبكر وتلقي العلاج المناسب لمشاكل ومضاعفات الحمل، وكذلك التشديد على أهمية المباعدة بين الولادات . وأخيرا فإن الحد من العمليات القيصرية الغير الضرورية من شأنه أن يقلل من هدر الموارد الصحية، والأهم من ذلك الحد من المضاعفات التي قد تحدث للأمهات وحديثي الولادة والنتيجة عن التدخلات العلاجية والجراحية.

إعداد : د. محمود بن حميد السكيبي،  
د. رائد محمد نوح (برنامج الباثيات الحقلية).

# Effect of home monitoring of blood pressure on control of hypertension

**T**his cross-sectional study aimed to find out the proportion of hypertensive patients using home BP monitoring devices, assess the effectiveness of these devices in controlling HPN and assess the barriers of using them.

The study was conducted in a sample of all hypertensive patients attending follow up chronic disease clinic at Primary Health care Centers in Al-Ahsa region within a one month period. Data was collected by direct interview and review of medical records.

The total study population was 406 hypertensive patients. Their mean age was 57.6 years (SD ±13.54). Half were in the age group 40-60 years (50.0%); 63.1% were males; 83.3% were married; 58.1% were illiterate; 33.7% were house wives; 23.9% were employed; and 64.9% had been diagnosed with hypertension for less than 10 years.

The majority (97.3%) was on anti-hypertensive drugs, and 2.7% were under diet/physical activity. Just over one third (38.4%) of the study population practiced home blood pressure monitoring (HMBP), 33.3% of whom practiced it according to relatives' advice. The highest percentage of use of HMBP was among patients diagnosed with HPN for < 5 years duration and those with duration of 10-15 years (45.8% and 39.4%, respectively); 47.4% checked their BP by themselves and 52.6% by the help of others. The duration of using HMBP was less than 40 months as reported by 73.1% of users. It was found that only 26.3% were practicing HMBP regularly and on a daily basis. However, only 22.4% recorded their BP reading, and only 46.8% had received teaching/training on how to use it.

Among users of HMBP the last BP measurement was

normal among 71.2% which was significantly higher than 40.8% among non users (p<0.001).

The following complications were reported among the studied patients: hyperlipidemia (30.8%), recurrent chest pain (11.8%), myocardial ischemia (9.9%) and proteinuria (8.1%). Some complications such as proteinuria, renal failure blindness recurrent chest pain and myocardial ischemia were found to be statistically significant lower occurrence among users of HMBP compared to non users. Factors that influenced practicing HMBP were age group 40-49 years (p value <0.001), educational level (p value <0.001), and being employed (p value <0.001).

– Reported by: Dr. Hussain A. Al-Bakheet, Dr. Ibrahim Kabbash (Field Epidemiology Training Program).

**Editorial notes :** A cross-sectional population-based survey in the Kingdom of Saudi Arabia found that 9.1% and 8.7% of the total sample investigated

had systolic and diastolic hypertension, respectively, while 12.4% and 7.9% of children younger than 18 years had systolic and diastolic hypertension.<sup>1</sup> The WHO stepwise surveillance in Saudi Arabia in 2005, estimated that the prevalence of HPN among males was higher than females.<sup>2</sup> Hypertension is poorly controlled in a large proportion of patients. Public education and awareness program is an integral part of prevention that should be encouraged. Such programs must include the importance of appropriate life style changes and self-monitoring blood pressure level at home.<sup>3</sup> People with HPN play an important role in their own medical care by controlling their life style and medications. It is essential for them to learn as much as possible about their condition and actively participate in their own health care decisions and treatment.<sup>5</sup> Home BP monitoring is an opportunity for patients with HPN to control their own blood pressure level and health. The main goal of treatment is to keep BP level in the normal or near-normal range.<sup>3</sup> Monitoring BP levels at home provides feedback about BP level at any time and helps prevent the immediate and long term consequences of very high or very low blood pressure levels.<sup>4</sup>

In our study, just over a third

**Table 1: Distribution of studied hajjis by their knowledge about PHCC and medical history during their stay in Mina.**

Blood Pressure	Users (N=156)		Non Users (N=250)		Users (N=406)		X <sup>2</sup>	P Value
	n	%	n	%	n	%		
Normal	111	71.2	102	40.8	213	52.5	35.49	< 0.001
Abnormal	45	28.8	148	59.2	193	47.5		



## مدى فعالية المراقبة المنزلية لضغط الدم في التحكم في مستوى ضغط الدم

of participants practiced home BP monitoring. A much higher proportion of those who practiced home monitoring had BP within normal range compared to those who did not. However, it was noted that only 22.4% who practiced the monitor recorded their BP reading. For benefiting of home BP monitoring, it is important to record the result after monitoring in order to show to the attending doctor or health educator for advice, keeping or altering the treatment plan. Therefore, the study demonstrated that home BP monitoring may be one of the important measures in controlling hypertension.

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■ يعتبر ضغط الدم المرتفع من المشاكل الصحية التي تؤثر على صحة الإنسان من خلال تأثيرها على أجهزة الجسم المختلفة ، يختلف مستوى ضغط الدم من شخص إلى آخر ولكنها تزداد بزيادة العمر و تغيرات أنماط الحياة. يعتبر جهاز قياس ضغط الدم فرصة جيدة لمرضى ارتفاع ضغط الدم للتحكم في مستوى الضغط لديهم حيث انه يعطي نتائج فورية لارتفاع أو انخفاض مستوى ضغط الدم ويجب أن يقاس مرتين في اليوم ، ما لا يقل عن مرة واحدة في الصباح ومرة في المساء.

وقد أجريت هذه الدراسة لمعرفة مدى فعالية المراقبة المنزلية لضغط الدم في التحكم في مستوى ضغط الدم وكان الهدف من هذه الدراسة هو معرفة نسبة مرضى ضغط الدم المرتفع الذين يستخدمون جهاز قياس ضغط الدم وكذلك تقييم مدى فعالية المراقبة المنزلية لضغط الدم في التحكم في مستوى ضغط الدم والتعرف على موانع استخدام جهاز قياس ضغط الدم في المنزل .

ولتحقيق هذه الأهداف فقد تم تصميم وإجراء دراسة مقطعية شملت مرضى ضغط الدم المرتفع، تم فيها اخذ عينة عشوائية مكونة من ٤٠٦ مريض . وقد تم تعبئة استبيان مكون من شقين . شمل الشق الأول معلومات تعريفية كالعمر والمستوى التعليمي والحالة الاجتماعية والمشاكل الصحية ، كما تضمن الشق الثاني من الاستبيان بعض المعلومات عن مدة ارتفاع ضغط الدم والمتابعة لدى عيادة الضغط وأنواع الأدوية المستخدمة وآخر قراءة لمستوى ضغط الدم . وقد تم إجراء الدراسة عن طريق مقابلة مرضى الضغط خلال مراجعتهم لعيادة الضغط.

لقد أظهرت نتائج الدراسة أن من بين مرضى الضغط البالغ عددهم ٤٠٦ ، وجد ١٥٦ (٣٨,٤%) منهم يستخدمون جهاز قياس لضغط و٥٢ (٣٣,٣%) يستخدمونه حسب نصيحة الأقارب ، وأن ٧٤ (٤٧,٤%) من مرضى ارتفاع ضغط الدم يقيسون الضغط لديهم بأنفسهم وأن ٨٢ (٥٢,٦%) منهم يقيسون الضغط لديهم بمساعدة الآخرين . وأن ٧٣ (٤٦,٨%) منهم قد تلقوا تعليم في كيفية استخدام جهاز قياس الضغط في المنزل . كما وجد أن المستوى التعليمي والوظيفي من العوامل المهمة في حيازة جهاز قياس الضغط . وجد لدى معظم مرضى الضغط الذين لديهم جهاز قياس الضغط مستوى ، ١١١ (٧١,٢%) ، ضغط طبيعي . كما وجد أن معدل حدوث المضاعفات بين المرضى الذين يمارسون قياس ضغط الدم بالمنزل أقل من أقرانهم الذين لا يمارسون ذلك .

ويستخلص من خلال هذه الدراسة أن معظم مرضى الضغط الذين يستخدمون جهاز قياس الضغط لديهم مستوى ضغط طبيعي كما

الضغط في المنزل . كما يجب على المراكز الصحية المشاركة في تدريب مرضى ارتفاع ضغط الدم على كيفية استخدام جهاز قياس ضغط الدم. وكذلك أن تساهم جزئياً في التكلفة المادية للجهاز وذلك لأن معظم مرضى الضغط لا يستطيعون الحصول عليه لأسباب مادية.

إعداد : د. حسين البخيت ،  
د. إبراهيم كباش

بناء على النتائج السابق ذكرها فقد تم التوصية بضرورة أن يتوفر لمرضى ضغط الدم المرتفع جهاز قياس ضغط الدم في المنزل معتمدين في ذلك على فائدته ودوره في مساعدة مرضى الضغط في المحافظة على مستوى الضغط لديهم في مستوى طبيعي ، مع أهمية زيادة مستوى الوعي لدى مرضى الضغط خلال متابعتهم لدى عيادة الضغط بأهمية وفائدة جهاز قياس

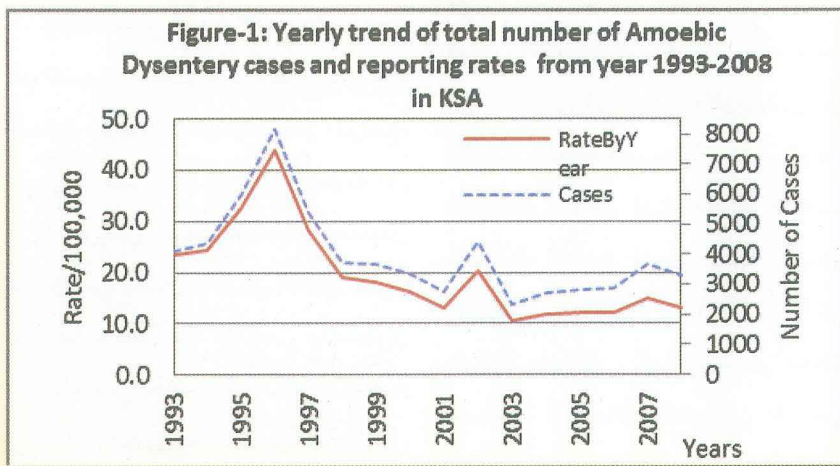
أن معدل حدوث مضاعفات ضغط الدم و الدخول للمستشفى أقل من أقرانهم الذين لا يمارسون قياس ضغط الدم بالمنزل وتدل هذه النتائج على أهمية جهاز قياس الضغط في المنزل وذلك لأنه يساعد مرضى الضغط على المحافظة على مستوى الضغط لديهم في مستوى طبيعي ويحسن لديهم مستوى التحكم في الضغط و يساعد على منع المضاعفات .

## Amoebic Dysentery In Saudi Arabia 1993-2008

**A**moebic Dysentery is an inflammatory disorder of the intestine, especially of the colon, caused by *Entamoeba histolytica* parasite that spreads fecal-orally by contaminated food, water, or flies. The incubation period is commonly 2-4 weeks. It presents with diarrhea containing mucus and/or blood, fatigue, weight loss, and fever in 10% of patients. Liver infection & subsequent amoebic abscesses in liver or brain can occur. Various factors contribute to the parasite transmission, such as poverty, overcrowding, poor personal & food hygiene, and travel to endemic areas. Increased severity of the disease is noted among children, elderly, pregnant or postpartum women, corticosteroids users, malignancy or malnourishment.

countries<sup>1</sup>. The incidence in US ranges between 1to3/100,000 (2).

Surveillance data from all 20 health regions in Saudi Arabia from 1993-2008 were analyzed. During this period, 63583 Amoebic Dysentery cases were reported, with an annual rang of 2328 to 8185 cases (incidence: 10.5 to 43.8/100,000). In 1993, the incidence of Amoebic Dysentery was high (23.6/100,000), then resumed its rise to its highest level in 1996 (43.8/100,000), after which a dramatic decline began to take place until it reached its lowest values in 2001 (13.1/100,000) and in 2003 (10.5/100,000), then started to rise again to reach (13.2/100,000) in 2008 (Figure-1). Through this period, the seasonal trend showed a slight decline of reported rates from the 1st quarter of the year to the 2nd quarter then a steady rise up to the 4th quarter.



For the prevention of Amoebic Dysentery diarrhea, several key measures can be used; such as easy access to safe drinking water, improved sanitation, good personal & food hygiene, safe traveling practices, health education about disease transmission and early treatment of carriers in non endemic

areas.

Worldwide, approximately 50 million cases of Amoebic Dysentery occur each year, with as many as 100,000 deaths, and only 10-20% of infected individuals become symptomatic. The estimates disease prevalence range from 1to 20% among persons in developing

The years 1998, 2003, and 2008 were selected to analyze the geographical distribution of cases. In year 1998, the lowest rates were recorded in Baha and Hafr Al-Batin (0.5 and 0.7/100,000 respectively) while the highest rates were reported from Aseer, Jeddah and Qunfuda (81.3, 50.4, and 50.4/100,000 respectively). In 2003, the lowest rates were recorded in Makkah, Hail

and Qurayyat (0.4/100,000 each) while the highest rates were reported from Bishah, Jeddah & Qunfuda (44.9, 43.1, and 43.1/100,000 respectively). In 2008, the lowest rates were recorded in Hail and Tabouk (0.5/100,000 each) while the highest rates were reported from Jeddah and Qunfuda (74.3/100,000 each) (Figure-2).

Though some regions showed a lower rate of Amoebic Dysentery cases in 2008 than in 1998 (Aseer, Hail, Tabouk, Qaseem, Bishah, Najran and Jazan), most of the regions demonstrated a remarkable increase. Jeddah and Qunfuda, which showed the highest rate in 2008 (74.3/100,000 each) are clear examples (Figure-2). The Southern & Western regions showed remarkable higher rates than the other region groups for all the years. It was higher in 1994 in the Southern regions the rate then declined down, and fluctuating in the Western regions.

Reported by: Dr. Sami Almudarra, Dr. Mohamed Nageeb (Field Epidemiology Training Program)

**Editorial note:** Amoebiasis is no longer being included among national notifiable diseases in many countries; US, Australia and New Zealand 2. Since this data is of limited value for action by the central level at MOH, it would be appropriate to revise its

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Telephone: 966 1 4647272 Ext. 32600

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**14-15 Jun. 2011 : Research by Medical Trainees: Current Status and Future Planning**  
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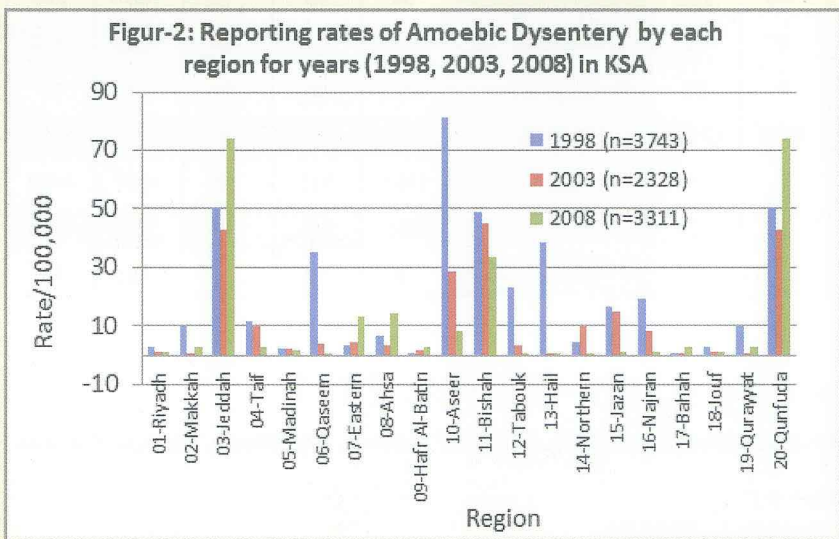
**4 - 6 April 2011 : Communicable Disease Control Conference**  
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<http://www.phaa.net.au/2011CommunicableDiseaseConference.php>

**11 - 13 June 2011 : 1st International HIV Social Science and Humanities Conference**  
Durban, Kwazulu Natal, South Africa  
Contact name: Mary Mabudafhasi  
<http://www.iaohss.org>

inclusion, among others, within the national list. The disease still has to be notified locally at regional level within a diarrheal diseases surveillance program.

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## Selected notifiable diseases by region, Jan - Mar 2011

	Riyadh	Makkah	Jeddah	Madinah	Taif	Qassim	Eastern	Hasa	Hafr-Al-batin	Asir	Bisha	Tabuk	Hail	Al-Shamal	Jizan	Najran	Al-Jouf	Baha	Goriat	Gonfuda	TOTAL	
Measles	39	1	28	1	2	26	2	0	0	10	4	1	1	0	9	6	0	0	0	0	0	130
Mumps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Varicella	686	180	130	207	177	464	792	559	80	762	53	54	65	88	26	113	21	36	34	21	4548	
Meningitis mening.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meningitis other	24	0	0	2	3	11	2	1	1	8	1	0	2	0	0	2	0	0	1	0	58	
Hepatitis B	274	0	120	130	66	110	166	3	3	116	18	87	5	17	31	32	0	0	1	13	1192	
Hepatitis C	161	1	102	59	17	37	80	4	0	49	15	11	1	4	4	13	0	18	2	4	582	
Hepatitis unspecified	1	0	0	0	0	0	0	0	0	22	0	0	1	0	0	0	0	0	0	0	24	
Hepatitis A	20	1	7	12	0	6	3	1	3	31	0	6	0	0	1	0	0	1	3	0	95	
Typhoid & paratyphoid	5	0	6	15	2	1	9	4	1	15	0	0	0	0	2	0	0	2	1	1	64	
Amoebic dysentery	1	5	120	29	36	3	136	29	1	94	36	0	0	0	0	0	0	0	8	0	498	
Shigellosis	4	0	1	3	0	0	4	4	0	0	0	0	0	0	2	4	0	0	0	0	22	
Salmonellosis	73	1	12	1	1	8	146	10	4	6	5	0	0	2	1	14	0	0	0	0	284	
Brucellosis	77	2	5	35	55	191	64	2	105	192	66	33	176	13	11	54	2	4	4	0	1091	
Dengue Fever	0	50	201	0	2	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	256	
Khorma	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	19	

## Comparisons of selected notifiable diseases, Jan - Mar 2010-2011

DISEASE	Jan-Mar 2011	Jan-Mar 2010	Change %	Jan-Mar 2011	Jan-Dec 2010	DISEASE	Jan-Mar 2011	Jan-Mar 2010	Change %	Jan-Mar 2011	Jan-Dec 2010
Cholera	0	0	0	0	6	Meningitis other	58	59	-2	58	228
Diphtheria	0	0	0	0	0	Hepatitis B	1192	1204	-1	1192	4854
Pertussis	2	0	100	2	0	Hepatitis C	582	578	1	582	2448
Tetanus, neonat	0	1	-100	0	4	Hepatitis unspecified	24	20	20	24	82
Tetanus, other	1	2	-50	1	6	Hepatitis A	95	192	-51	95	616
Measles	130	24	442	130	334	Typhoid & paratyphoid	64	60	7	64	324
Mumps	0	5	-100	0	45	Amoebic dysentery	498	720	-31	498	2852
Rubella	0	6	-100	0	35	Shigellosis	22	28	-21	22	93
Varicella	4548	4193	8	4548	18118	Salmonellosis	284	276	3	284	1393
Meningitis mening.	0	3	-100	0	3	Brucellosis	1091	993	10	1091	4460
Meningitis pneumo.	2	11	-82	2	18	Dengue Fever	256	641	-60	256	3526
Meningitis Haemoph. Inf.	0	0	0	0	0	Khorma Fever	19	16	19	19	81

## Disease of low frequency : Jan - March 2011

\* Yellow fever , Plaque , Poliomyelitis , Meningococcal Meningitis , Neonatal Tetanus , Diphtheria , Mumps , Rubella , Rabies , Ecchinococcosis : No Cases

\* Pertussis : 2 Cases ( Eastern 3 , Madinah 1 )

\* Pneumococcal Meningitis : 2 Cases ( Qassim 1 , Hasa 1 )