

# Utilization of primary health care during summer

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## ABSTRACT

**Objectives:** To determine the workload on primary health care center services, to recognize the patterns of utilization of primary health care center services and morbidity patterns among the summer visitors who attended primary health care centers in Asir region in 1998.

**Methods:** A special form was designed to record demographic data, diagnosis and management. Ten percent of those forms were analyzed to study the patterns of morbidity and health service utilization. A special formula was used to calculate the size of the workload on the health services during the season.

**Results:** The total number of patients who attended primary health care centers during the study period was 387,727. Twenty-five percent of them were summer

visitors. The workload on the health services increased by 33%. Both sexes utilized the services equally. Most of the visitors were young, Saudis, and utilized curative services. Respiratory related problems represented 60% and digestive related problems represented 12%.

**Conclusion:** There was an excessive load on primary health care center services during the summer season. Re-organization, re-allocation of resources and provision of extra medical facilities in the Asir region are necessary to overcome this load.

**Keywords:** Summer visitors, Primary health care centers, utilization.

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Thanks to the support of His Royal Highness (HRH) Prince Khalid Al-Faisal, the Governor of Asir Region and the chairman of Asir Tourism Board (ATB), Asir Region has become one of the most popular summer resort areas in Saudi Arabia. Thousands of visitors from Saudi Arabia and the Gulf states come every summer to Asir region to spend their vacation and enjoy nice weather and recreational activities.<sup>1</sup> One study from Asir region conducted in 1991 found that there was an increase in the utilization of Primary Health Care Center (PHCC) services.<sup>2</sup> As a result of ATB efforts and the increase in the tourism projects, it is expected that the utilization of PHCCs in Asir region will increase. The objectives of this study were to determine the workload on PHCCs services, to recognize the

patterns of utilization of PHCCs services and morbidity patterns among the summer visitors who attended Asir region PHCCs during 1998.

**Methods.** This study was conducted at PHCCs in Asir region, Saudi Arabia from 1st June to 31st August 1998. The investigators designed a special form which contained name, age, sex, residency, diagnosis and management plan. Any visitor who attended PHCCs for medical services was provided with that form and directed by the receptionist to the relevant clinic at PHCC. At the end of the season the forms were collected and their data examined. Eligible forms were randomly selected using the stratified random sampling technique. Epi-info

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**Table 1** - Characteristics of the summer visitors attending primary health care centers in Asir Region, 1998.

Characteristics	No.	%
<b>Age:</b>		
< 1 year	182	(4)
1 - <5	969	(22)
5 - <15	1006	(23)
15 - <45	1607	(37)
45 - <65	458	(10.5)
>65	131	(3)
<b>Sex:</b>		
Male	2254	(52)
Female	2099	(48)
<b>Nationality:</b>		
Saudi	4252	(98)
Non-Saudi	101	(2)

**Table 2** - Patterns of clinics utilized by the summer visitors in Asir Region in 1998.

Clinic	No.	%
Sick Baby clinic	1493	(34)
Adult Male clinic	1264	(29)
Female clinic	940	(21)
Dental clinic	375	(9)
Well baby clinic	170	(4)
Antenatal clinic	111	(3)
<b>TOTAL</b>	<b>4353</b>	<b>(100)</b>

**Table 3** - Patterns of morbidity among the summer visitors according to ICD chapter.

Diseases according to ICD	No.	(%)
Respiratory	2601	(60)
Digestive	521	(12)
Skin	270	(6)
Musculoskeletal	235	(5)
Endocrine	135	(3)
Infection & Parasite	109	(2.5)
Injuries	119	(3)
Genito-urinary	169	(4)
Circulatory	29	(0.7)
Ill-defined condition	165	(4)
<b>TOTAL</b>	<b>4353</b>	<b>(100)</b>

program was used for data entry and analysis. The following formula was used to calculate the workload:  $A = [B/B-C] \times 100$ . Where (A) represented the workload, (B) represented the total visits to PHCCs during the study period, and (C) represented the total summer visitors who utilized the PHCCs services during the study period. Diseases were classified using the international classification of diseases, 9th revision in 1981 (ICD-9).

**Results.** During the study period, 387,727 patients attended PHCCs in Asir region for medical care. One quarter (96,327) of them were summer visitors. The work load on PHCCs services increased by 33%. Ten percent of eligible forms (4,353) were examined to fulfill the 2nd and the 3rd objectives of this study. Table 1 shows the characteristics of the population under the study. The mean age was 20+18.9 years. Eighty-five percent of summer visitors were less than 45 years old, while children less than 15 represented about half of the total attendants. Both sexes utilized PHCCs services equally and almost all visitors were Saudis. Sixty percent of the visitors attended PHCCs during August while 60% of the work load was logged during the 3 hour evening shift. Table 2 displays the patterns of services that were utilized by the summer visitors. It was found that the curative services were utilized by 93.5% while preventive services were used by 6.5%. Table 3 summarizes the patterns of diseases among summer visitors. Sixty percent of summer visitors attended with respiratory system and related health problems such as upper respiratory tract infection which represented 50% of the total morbidity. Digestive system problems such as acute gastroenteritis, dyspepsia and hyperacidity represented 12%. Skin problems were encountered in 6% and musculo-skeletal problems encountered in 5%.

**Discussion.** During the last decade there has been a progressive increase in the number of summer visitors to Asir region.<sup>1</sup> There is no doubt that some of those visitors utilize the medical services in the region. To introduce good quality health services for those visitors it is essential to have a data base regarding the excess load on the health services, kinds of utilized health services and health problems among summer visitors. The current study found that the excess load on the PHCCs services during the season was increased by 33% which was higher than that reported by Mahfouz.<sup>2</sup> It was estimated that about 1.3 million visitors came to Asir region during the summer of 1997.<sup>3</sup> So, it was estimated that about 7% of the total summer visitors utilized the PHCCs services in Asir region during the season. Such important findings call for urgent and well designed plans in the following years. The guidelines for such

plans include re-allocation of human and non-human resources in the region to meet the excess load on the health services in PHCCs. Providing Asir region with adequate drugs and laboratory facilities and supplies in addition to human resources from other regions in the Kingdom could be utilized as another option to overcome the personnel shortage during the summer season.

Almost 60% of the summer visitors who utilized PHCCs services attended in the evening period which lasts 3 hours, compared to 40% who attended in the morning shift which lasts about 6 hours. This discrepancy between the working hours and intensity of work should be reorganized in order to give long duration for the evening shift and a short one for the morning shift. Most of the summer visitors who used the PHCCs services in Asir region were Saudis, less than 45 years old without differences regarding sex. These striking findings could indicate that most of the summer visitors to Asir region were from inside the Kingdom and came with their families as found in some previous studies.<sup>1,2,3</sup> More than 90% of summer visitors attended for curative purposes. Two reports from Asir region found similar findings.<sup>2,4</sup>

Morbidity analysis among summer visitors showed that respiratory, digestive and skin diseases were the most common conditions. Rate of respiratory disorders was higher than that reported by some local and international morbidity reports while the rates of digestive and skin disorders were similar to that reported by those studies.<sup>5,6,7</sup> The big differences in the rate between our results and those studies concerning respiratory diseases could be due to the season of conducting studies and should be interpreted carefully. In spite of the differences in the rates in the studies, health education regarding

avoidance of trigger factors for respiratory diseases such as frequent weather changes and mobilization and digestive problems such as eating contaminated and unclean food is essential to minimize those two conditions among the summer visitors.

In conclusion, this study showed that there was an excessive load on PHCCs services particularly the curative aspect during the season. Re-organization, re-allocation of human and non-human health services in the region and providing Asir region with extra medical facilities from other regions could be other options. Further studies in this regard are suggested.

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