

# Incidence of Seasonal Diarrhea among Children at Child's Central Hospital

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## Abstract

**Objective:** Diarrhea is a symptom of a variety of conditions may attack the child. It considered one of main causes of mortality rates especially in low socio- economic level countries. The child can be easily got dehydration and pass from loss of too much body fluid and due to the Common thought of increasing the incidence of diarrhea during summer season, this study is done to find out the relation between the high incidences rate of diarrhea and weather variation

**Methodology:** This survey conducted in AL- Markazi Child's Teaching Hospital for the year 2005 the data were gathered from hospital records for the period (January - December) and age groups taxonomy used by hospital applied. Descriptive statistical analysis and diagrams used

**Results:** The analysis revealed that the incidence of diarrhea happens all around the year and for the whole age groups. Summer results pointed out high ratio in relation to the results of spring winter and autumn seasons. Also more incidence seen among the age group (<2 months- one year) then the age group (<5 years) held the second rank in getting diarrhea.

**Recommendations:** The study recommended after analysis of data statistically, orientation about danger of diarrhea very necessary to whole society by different means especially the parents and issue firm legislation to keep the environment as much as it should be free from outbreak of diarrhea.

**Key words :** Diarrhea, child, and season.

## Introduction

Diarrhea (Intestinal Hurry) is interruption of normal elimination pattern characterized by frequent loose stools <sup>(1)</sup>. The food will pass through so quickly and there will be no time for proper digestion and absorption <sup>(2)</sup>. It is symptom of a variety of conditions which together cause's acidosis <sup>(3)</sup>.

Mild diarrhea is the passage of a few loose or mushy bowel motions; severe diarrhea is the passage of many watery bowel motions. The best indication of the severity its frequency. <sup>(4)</sup>

The specific etiology is not always identified. It is very contagious and may be fatal. Many factors can contribute to the development of diarrhea <sup>(5)</sup>. These include-Introduction of a new food or formula, exposure to illness, change in routine such as travel, teething, change in water, and medication especially antibiotics.

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## Seasonal Diarrhea among Children

Diarrhea is most likely to be caused by a viral infection of the lining of the intestines<sup>(4)</sup>. Sometimes it is caused by bacteria or parasites. Occasionally food allergy or drinking too much fruit juice may cause it. Diarrhea is also a common side effect of

where the standard of living is low, death rate is likely to be high. Socioeconomic causes are difficult to determine. The incidence of contaminated milk and other foods as a cause of the disease is highest among lowest socioeconomic groups. In the higher socioeconomic the cause is more likely to be an infection by direct and indirect contact with someone who has the organisms.

Diarrhea is common in infants and young children, because their digestive system is still developing and vulnerable to infection<sup>(5)</sup>. Children under age of 5 years having average approximately two episodes each year. Infant and small children with diarrhea can quickly become dehydrated<sup>(7)</sup>, because of their smaller body size are at risk of hypovolemia, shock if fluid and electrolyte deficits are

usually lasts several days to a week regardless of the type of treatment. Most uncomplicated cases go away on their own without treatment except oral fluids to prevent dehydration. Antidiarrheal medications should usually be avoided.

The main goal of treatment is to prevent dehydration by correction of fluid and electrolyte imbalances. Oral Rehydration Therapy (ORT) is a supportive treatment that develops to combat the loss of water and salt.

Diarrhea is the main causes of morbidity among infants and children in many countries where sanitation and hygiene are poor. Unsanitary and unhygienic conditions have more serious consequences in infancy than in childhood because of the greater susceptibility to and lesser ability to combat infection.

Emphasize the necessity of good hygienic practices to prevent the spread of organisms that can cause diarrhea. This is crucial for keeping every one in the family safe from getting diarrhea.

The prevalence of diarrheal disease is so pervasive that in 1978 the World Health Assembly established a global program to reduce mortality and morbidity in infants and young children who suffer from all forms of disease.

It is estimated that some 5 million children under the age of two years die every year from diarrhea. Also it is estimated that one third of the pediatric beds in the developed countries are occupied by children with diarrheal disease. In developing countries where flies, insects and vectors abound, domestic rubbish and human waste are indiscriminately disposed of, and the general level of personal and environmental hygiene is so minimal, it is amazing how so many children survive the onslaught of these life threatening factors<sup>(12)</sup>.

### Methodology

The incidence of diarrhea in relation to weather. The setting was Child's Central Hospital, this hospital is selected due to its vital location and considered the main children's hospital in the West of Baghdad city. The sample was derived from the records of case visits to the outpatient clinic and those who admitted to the wards, complaining and diagnosed of having diarrhea for the year 2005. The data were collected and analyzed with respect to the hospital taxonomy to the age groups, which are as follows: (< 2 months, > 2 months - one year, > one year - 5 years, > 5 years).

Seasons (The year divided into four seasons)

Winter (December, January and February) -

Spring (March, April and May) Summer (June, July

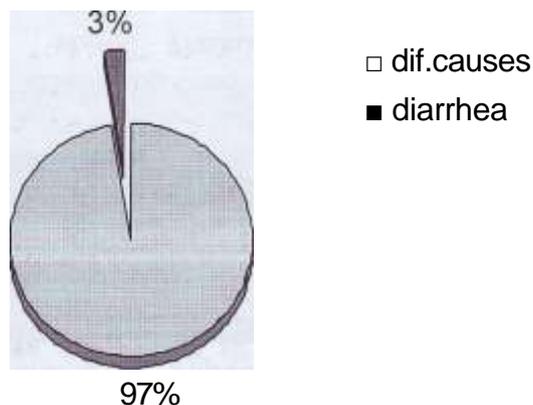
and August) Autumn (September, October, and

November)

Data analyzed by descriptive statistics (frequency, percentage, mean of score, and 5\* standard division) and diagrams.

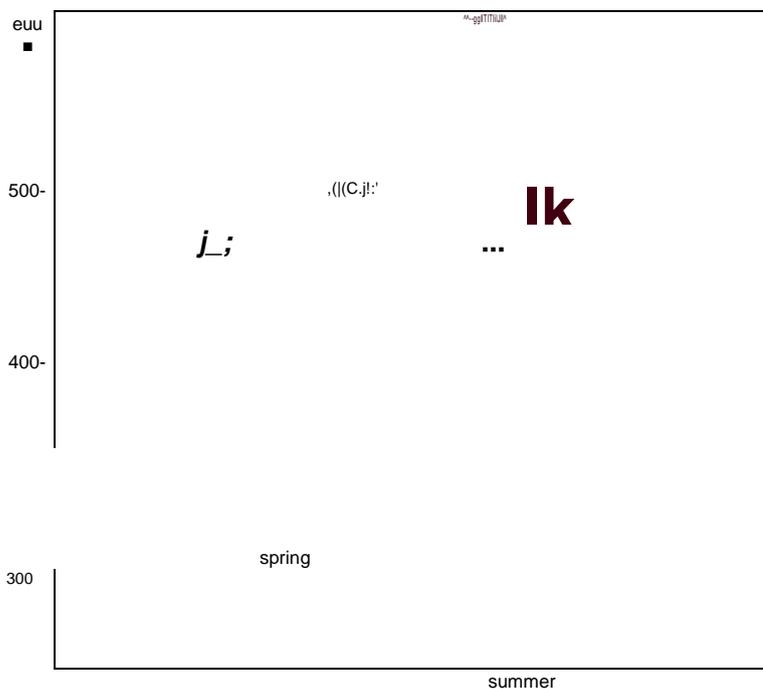
## Results

**Figure (1) The ratio between the number of sick children and others with diarrhea**



The total number of children who visited the hospital and complaining of 'erent *m* causes (other diseases rather than diarrhea such as leukemia, Respiratory .-eases, renal and etc. ) and those who are suffering of diarrhea

**Figure (2) The mean of diarrhea occurrence around the year 2005**



It reveals that episodes of diarrhea occur all around the year but there is marked ;ase during summer then spring months



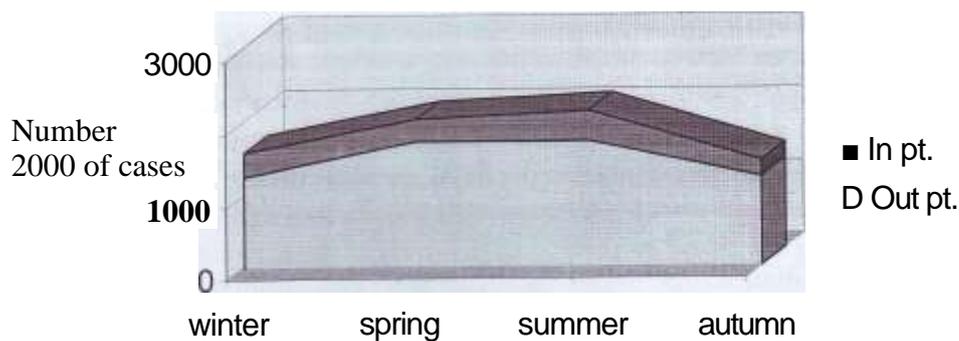
Seasonal Diarrhea among Children

**Table: shows the mean and standard deviation of incidence in relation to seasons**

Seasons	F	%	Mean	Std. Deviation
Winter	1578	22.1	394.5	276.664
Spring	2006	28.1	501.5	439.480
Summer	2128	29.8	<b>532.0</b>	<b>560.797</b>
Autumn	1440	20	360.0	<b>312.178</b>
<b>Total</b>	<b>7152</b>	<b>100</b>	<b>1788</b>	<b>1589.119</b>

This table shows that the more incidences occurred during summer

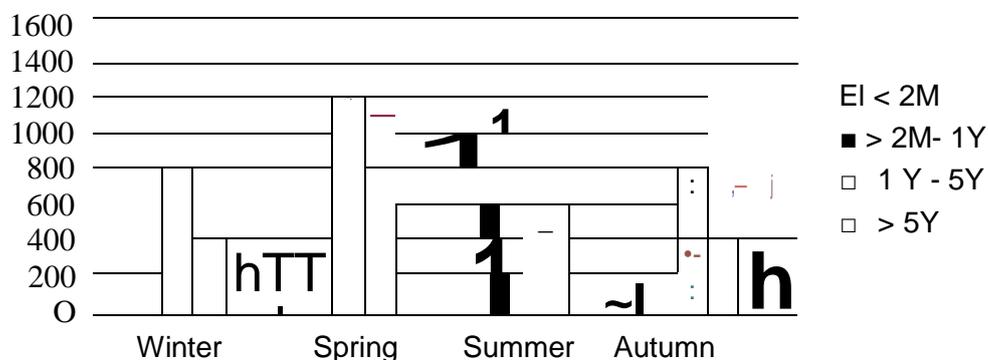
**Figure (3) Number of cases visited the out - patient department**



It shows the number of children with "diarrhea who visited the outpatient department and those admitted to the hospital (in-patient) for more care and follow-up

**Figure (4) Incidence among age groups**

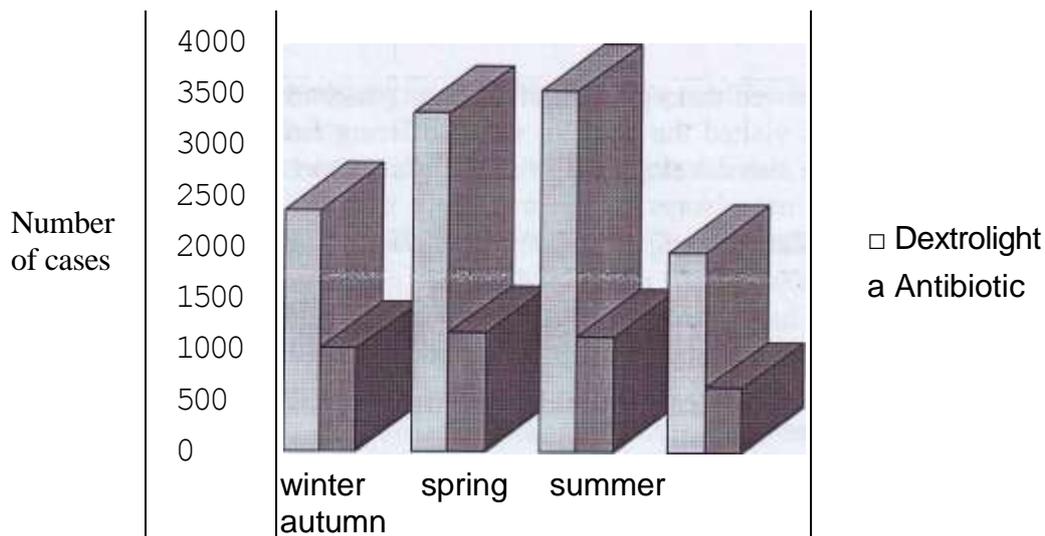
Number of cases



It shows incidence among age groups. It reveals that all age groups are reliable to get diarrhea and this increase among the age group (>2 M- 1year) especially during summer months



**Figure (5) Number of cases who received treatment**



moderate dehydration) and antibiotics suspended.

The Dextrolight which is used in ORT programs and offered to hospitalized children in hospital. (ORT: Oral Rehydration Therapy: It is recommended for replacing fluids lost and electrolyte in cases of diarrhea and mild to

This diagram shows the death among children due to different causes and due to diarrhea in out-patient's clinic and in-patient's wards

## Discussion

The approach of the study was quantitative with the aim of gaining increase insight into the relation of weather variables and its correlation with high incidence of diarrhea.

The study showed that episodes of diarrhea (diagram 1) seen all around the year, (3%) of all cases visited the hospital were suffering from this illness. Many factors can contribute to the development of diarrhea; certain happenings within a child's environment are not always within a parent's control. Lack of understanding and absence of legislations considered major issues in minimizing the outbreak of diarrhea.

On the other hand, the study revealed (The table and Diagram 2) that the peak of incidence is during summer then spring months. Priest emphasized that outbreaks of diarrhea is not uncommon especially during the summer months due to many reasons. the most important of all is infection (1).

Lack of understanding the danger of diarrhea and due to the fact that children can become quickly dehydrated, (Diagram 3) shows that (18%) of children admitted to the wards for more care and treatment.

Children (diagram 4) of age < 2 months to one year are more vulnerable to get diarrhea (57.1%) often the offender cannot be identified but contamination, overfeeding (6) unbalance diets containing excessive amount of sweets, and spoiled foods are considered main offenders in occurrence the study also exhibited that the children of age one year to 5 years (24%) are forming the rank two in displaying this symptom. For this age group other factors of importance in relation to nutrition and health care sufficient sleep, fresh air exercise combined with emotional stability **all** help to maintain a good appetite and a happy healthy individual also children should be taught by their parents whom should acknowledge the danger of how to recognize food that is fresh and clean particularly when it is bought from out side homes. In addition, this study showed (Diagram 5) how much medication although recent studies suggest that medications such as Lomotil, Paregoric, and Pectin, which slow intestinal mobility, may prolong the course of some infections entreaties. They should be generally avoided in the treatment of children and stick to the use of **Oral** Rehydration Solution (ORS: - containing 75 to 90m MOL sodium and 111 to 139m MOL glucose (e.g., world heath Organization solution, Pedialyte RS, Rehydralyte) is most commonly recommended for the first 4 to 6 hours. 50 ml of solution for each kg of the child weight should be the target intake.).

Death among children is dramatic episode to the family; diarrhea is one of the disorders responsible of high morbidity rate in many countries among children (Diagram 6) shows the death among children due to different causes and due to diarrhea.

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## Recommendations

1. Every effort should be made to educate parents and children good social habits in concern to feeding whether from home or outside the home especially during summer season.
2. Measures should be taken to prevent infection spread by food inspection and delegates firm regulations.
3. Teaching the parents especially the mothers about diarrhea and its precautions via media.
4. Teaching the contacts (health personnel) who give care to the sick children, the importance of prevention and cross infection for the sake of children health and nation.
5. Ministry of health involvement authorities should take the responsibility of indulging all other ministries in the programs regarding to prevent of diarrhea.
6. Establish "Diarrhea Control Programs," these programs focus on the promotion of oral rehydration therapy and supplementary feeding programs. However all these programs must be considered in conjunction with improving the social and economic conditions that contribute to safe environment, sanitary and general living conditions of population around the world.

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