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Evaluation of the Integrated Management of Childhood Illness Program Adopted in the Ministry of Health-Gaza Governorates

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Evaluation of the Integrated Management of Childhood Illness Program Adopted in the Ministry of Health-Gaza Governorates

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DEDICATION

This research is dedicated to my husband, Hossam and my lovely daughter Salma, I give my deepest expression of love and appreciation to you Hossam, for the endless support that you gave and the sacrifices you made during this research.

As Well this research dedicated to my Father and Mother for their love, care and invocations which intended for me.

Thank you my family for all the love, encouragement, help and care which has enriched and fulfilled my own life.

Declaration

I certify that this thesis submitted for the degree of Master, is the result of my own research, except where otherwise acknowledged, and that this study (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signed

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Abstract

In 1995, WHO and UNICEF developed a strategy known as the Integrated Management of Childhood Illnesses (IMCI), which provides a syndromic approach for managing sick children aiming at reduce mortality and morbidity associated with the five major causes of diseases among children under age five. In 2002 the Palestinian Ministry of Health endorsed the IMCI as a strategy for managing childhood illnesses and performed active steps in this regard including; adaptation, training and early implementation. The over all aim of this study is to evaluate the effectiveness of the implementation of the IMCI strategy and to identify how the implementation could be strengthened.

The design of the study was a triangulated cross sectional one and included administering an interviewed questionnaire for all trainees who received the IMCI training (160), in-depth interviews with purposively selected eight participants, facility audit for equipment and resources needed for the IMCI implementation and reviewing medical files of children (150). Response rate was high (90.6%) and data validity was assured through standardization of the implementation and experts' review of the study tool. Random meetings with 37 care takers (mothers), asking about counseling regarding nutrition and breast feeding were available at the PHCC visits.

The study revealed that around 77 % of the trainees perceived the training time on the IMCI as sufficient but still 86% of them requested further refreshing courses. The majority of participants believed that IMCI should be provided through the undergraduate curriculum. Only around half of participants knew that the IMCI has been adopted by the MOH. Although trainees' perceptions about the IMCI are positive in general, less than 10% of them often practice it in their clinics while the rest are either do not practice it or rarely practice it. The study showed that only around a quarter of supervisors are checking case management of the sick child and having the standard supervisory form. Drugs and equipment needed for the implementation of the IMCI are not always available (availability around 70%). The review of children records illustrates that only 25% of children are treated according to the IMCI guidelines and in only 20 of files, the IMCI related records were properly filled. This raises a big question about the impact of the IMCI training and its implementations in the field. Interviews with the key informants showed that implementation of the IMCI has been unnecessarily delayed and called for more effective supervision.
The study recommends that the whole IMCI strategy requires more attention including provision of equipment, drugs and facilities, intensifying training and follow up of trainees and strengthening supervision and monitoring.

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List of Abbreviations

ARI	Acute Respiratory Infection
CARE	Corporate for Assistance and Relief Everywhere
CBR	Crude Birth Rate
CDD	Control of Diarrheal Diseases
CDR	Crude Death Rate
C-IMCI	Community- Integrated Management of Childhood Illness
DHS	Demographic and Health Survey
EMRO	East Mediterranean Regional Office
EPI	Expanded Program of Immunization
GDP	Gross Domestic Product
GNI	Gross National Income
HH-IMCI	House Hold- Integrated Management of Childhood Illness
IMCI	Integrated Management of Childhood Illness
IOF	Israeli Occupation Forces
MCE	Multi Country Evaluation
MMR	Maternal Mortality Rate
MOH	Ministry of Health
NGOs	Non-Governmental Organizations
NIS	New Israeli Sheqal
OPT	Occupied Palestinian Territories
ORS	Oral Rehydration Solution

PA	Palestinian Authority
PAHO	Pan American Health Organization
PASSIA	Palestinian Academic Society for the Study of International Affairs
PCBS	Palestinian Central Bureau of Statistics
PHCC	Primary Health Care Centres
PLC	Palestinian Legislatives Council
PLO	Palestinian Liberation Organization
RTA	Road Traffic Accidents
SPSS	Statistical Package for Social Sciences
TOT	Training of Trainers
UNICEF	United Nations International Children's Fund
UNRWA	United Nations Relief and Works Agency
USAID	United States Agency for International Development
WB/GS	West Bank/ Gaza Strip
WHO	World Health Organization

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Chapter I. Introduction

Research background

Every year, over 10 million children under the age of five die from readily preventable and treatable illnesses such as diarrhoea and dehydration, acute respiratory infection, measles, and malaria. In half of the cases, illness is complicated by malnutrition. (United Nations for Children Funds (UNICEF, 1999). In response to this challenge, World Health Organization (WHO) and UNICEF developed a new strategy known as Integrated Management of Childhood Illness (IMCI), which provides a holistic approach to managing sick children. This initiative significantly reduces mortality and morbidity associated with the five major causes of disease in children aged less than five years and contributes to their healthy growth and development. Although, IMCI is concerned mainly with curative care of the most common childhood illnesses, the strategy combines improved case management of childhood illnesses in first-level health facilities with aspects of nutrition, immunization, and disease prevention and health promotion activities. The components of this strategies are improve the case management skills of health workers, improve the health system, and improve the household and community practices (USAID, 2001). The development and sustainability of health services for Palestinian children has been remains severely handicapped despite efforts of dedicated international and local health care agents and donors. Despite improvements in infant mortality rates there has been an increase in child mortality rate (USAID, 2001); the devastation of Palestinian economy and decrease in family incomes and even the loss of livelihood have left over half the Palestinian population living below the poverty line (World Bank, 2007).

This decrease in household income is strongly associated with the presence of acute and chronic malnutrition as well as anaemia especially among children and women of reproductive age. Some of the factors that deteriorate the Palestinian economy have also played a key role in affecting the availability of rich protein foods which necessary to prevent anaemia and malnutrition, the most important of which are: military incursions and border closures. Therefore, the Palestinian children face a demolished situation due to the sever and harsh siege against the Gaza Strip (GS) since 2006. This siege was accompanied by a smash up economic situation, high prevalence of malnutrition, mainly from macro and micronutrient deficiencies. This causes anaemia and immune deficiencies, that decrease the state of a child's immune system, particularly when influenced by factors such as the lack of clean water, overcrowded living conditions, poverty, lack of sewage disposal that can lead to other infectious diseases including: acute respiratory infections, water-born diseases such as diarrhoeal diseases and bacterial or viral meningitis (UNICEF, 2004). Assessment performed by experts in Palestinian MOH on 2005 revealed that the current provision of health services does not respond to the needs of the population. Further more, there is no system review of appropriateness of care to be performed and the two pillars of the system, namely the PHCC network and hospitals seem to work separately, the analysis of PHCC assessment revealed the following core problem; weak gate keeping function by PHCC. Shortage of drugs, lack of laboratories, shortage of human resources, inadequate distribution, time management, absence of community participation (MOH, 2005[a]). In this context and in parallel with WHO recommendations to improve child health services in Palestine, the MOH adopted the IMCI in 2002, and being activated on capacity building of primary health care settings, including training of health care providers at the PHC level. However, the program is not well followed up nor supervised, therefore, the aim

of the study is to evaluate the effective implementation of the IMCI program adopted in the MOH and to recognize how the implementation could be promoted.

1.2. Problem Statement

The IMCI provides a provocative challenge to move from vertical disease-specific approach of the traditional program to more integrated and horizontal child approach in line with the philosophy of primary health care. The MOH in Palestine adopted the IMCI strategy since the year 2002. It started with the orientation phase and the early implementation phase and still works on the first two phases of the IMCI and covers only 40% of PHCC of the MOH premises in GS. An important issue requiring investigation is the delayed implementation of this national policy, which raises many questions. The researcher deems that it is necessary to shed light status of the IMCI strategy, stages, components, adaptation, training, supervision, health facilities and management system to illustrate the limitation and to appraise the activities that have been carried out. The study can possibly reveal some suggestions, which might enhance the implementation of the IMCI strategy.

1.3. Justification of the study

To reduce deaths and the frequency/severity of illness, and to contribute to improved growth and development of children. The MOH has already started implementing IMCI activities in two stages: the introduction phase and the early implementation phase. At present, the early implementation phase is being activated on capacity building of primary health care settings, including training of health care providers at the PHC level in both GS and West Bank (WB) according to the nationally adapted IMCI guidelines (MOH, 2004).

Collaborating with UNICEF and other organizations, two training of the trainers (TOT) courses were conducted to prepare 15 trainers in GS and 30 trainers in WB who are responsible for the

training of other health providers from different sectors. The net result was the training of 270 physicians according to IMCI guidelines, and the finalization of the IMCI training guideline package for nursing. The expansion phase will include activation of the IMCI community component to increase the community awareness regarding the main key community practices, especially breastfeeding and caring for a sick child at home. However, IMCI evaluation is not well established, therefore, the aim of the study is to evaluate the IMCI program adopted in the MOH and to recognize how the implementation can be promoted.

There is a shortage of academic studies at this domain and there are no previous relevant studies according to the researcher knowledge. This study will give recommendations and provide a set of suggestions that can possibly enhance the effectiveness of the IMCI implementation**,** for seniors and decision makers at MOH/GS. Also, it can lead to suggestion and will help in planning a better management and performance to improve the IMCI program at MOH/GS in order to reduce childhood morbidity and mortality. This would be rather important, especially after the deterioration of children health status at GS as mentioned at the Palestinian family health survey, 2006. Data at the survey showed that infant mortality rate is 25.3 per 1000 live births; it is higher at GS compared to WB 28.8 and 22.9 per 1000 live births respectively; (PCBS, 2007).

1.4 Research objectives

1.4.1 General objective

To evaluate the adoption and implementation of the IMCI program by the MOH, and to assess how the implementation could be better promoted.

1.4.2 Specific Objectives

- To assess where the MOH has reached in terms of adopting and implementing the IMCI program.
- To recognize the areas of strength and areas of weakness in the MOH approach for implementing the IMCI program.
- To ascertain what should be done in order to ensure the full implementation of the IMCI.
- To evaluate the activities that has been so far carried out towards the adoption and the implementation of IMCI in the MOH.
- To provide a set of suggestions and recommendations that could possibly enhance the effectiveness of the IMCI implementation.

1.5 Research Questions

The study will address the following questions:

- What is the status of the IMCI implementation in the MOH?
- Has the concept of the IMCI been endorsed by different levels with a consensus?
- To which stage the MOH has reached in implementing the IMCI?
- Was the adoption stage appropriately done?
- How many persons have been trained?
- Was the training carried out in an appropriate way?
- Has the training being followed appropriately?
- Are the supervision tools available and in use?
- Are medical records ready?
- Do health facilities contain the equipment needed for the IMCI implementation?
- Does the management system support the implementation of the IMCI?

- What could be done to enhance the implementation of the IMCI?

1.6 Context of the study

1.6.1 Demographical context of Palestine

Palestine is situated on the eastern coast of the Mediterranean Sea, about 26,323 Square Kilometre in size. It has an important strategic geographic location as it is situated on the western edge of the continent of Asia, the eastern coastal extremely of the Mediterranean Sea, Palestine is bordered in north by Syria and Jordan in the East, the Gulf of Aqaba in the south and by Egypt and Mediterranean Sea in the west (MOH, 2005), See annex (1).

For centuries, Palestine has been under continuous occupation starting from the Turkish occupation (1517-1917) and ending with the current Israeli occupation. Now, Palestine comprises two areas separated geographically: the WB/GS. The total area is 6,020 sq. Km. with total population living in is 3,762,005 individuals in 2005 with capita per sq Km 625 (MOH, 2005[a]).

The WB lies within an area of 5,800 sq. KM^2. It is divided into four geographical regions, the Northern region including the districts of Nablus, Jenin, and Tulkarem, the central region that including the district of Ramallah, and Jerusalem, the southern region including the districts of Bethlehem and Al- Khaliel district and sparsely populated at the region of the Jordan valley including Jericho (MOH, 2005[a]).

1.6.2 Geographical Context of Gaza Strip

GS is a narrow piece of land lying on the coast of the Mediterranean Sea. Its position on the crossroads from Africa to Asia made it a target for occupiers and conquerors over the centuries. GS is very crowded place with an area of 365 sq. Km and constitutes 6.1% of total

area of PT land with 45 km² length and 5-12 km² in width (PASSIA, 2008). The administrative governorates in GS are five North, Gaza, Mid-Zone, Khan Younis and Rafah. In addition, four towns, fourteen villages and eight refugee camps contain two thirds of the population of GS. See annex (2).

1.6.3 Demographical Context of GS

The Gaza governorate has the highest population density with 6,593 people per km², with Population growth rate: 3.2 %.The most densely populated area in the WB was the Jerusalem governorate (over 1,67 persons/ km²), and the least densely populated area Jericho governorate with 71.3 persons / km². (PCBS, 2006). In GS half of the population is under age 18 (UNICEF, 2008). Life expectancy at birth was 73.46 WB/GS; sex ratio (male-female at birth, 2007) was 103.1. (PCBS, 2007). Some 73 Palestinian localities (10.3%) are urban, 605 rural (85.5%) and 30 are refugee camps (4.2%). The total urban population comprises 53.1% however large regional differences; in the WB, 46.6% of the population lives in urban area, in GS 63.5%. (PCBS, 2003). See Annexe (9).

1.6.4 Socio-Economic Context

With the establishment of the Palestinian Authority (PA) in 1994, numerous economic and development projects were initiated, but the WB/GS are still totally dependent on support from outside. The Palestinian economy is dominated by services, while industry remains underdeveloped and at a low level, and the agricultural sector deprived from the access to natural resources. The main reason behind the current economic crisis is the general closure and separation policy imposed by Israel in March 1993, which had never been lifted since then. In violation of international law, the closure used as collective punishment against the

Palestinian people. Any sustained Palestinian economic recovery will ultimately require the dismantling of the closure system (World Bank, 2007).

PCBS data suggest that per capita General national Income (GNI) declined by 15% and Gross domestic Product GDP by 6.6% in 2006, while others estimate worse declines (e.g., the World Bank suggested an 8% decline). The PA has been facing a severe liquidity crisis since early 2006. It is estimated that budgetary resources fell by over a third in 2006 compared to 2005 (from $2.20 billion to $1.45 billion), despite a doubling of external budgetary assistance, leading to a 30% contraction in cash spending (World Bank, 2007). According to the PCBS, the relative poverty line and the absolute poverty line for a six-member household in the Occupied Palestinian Territory (OPT) in 2006 stood at New Israeli Sheqal (NIS) 2,300 (US$518) and NIS 1,837 (US$ 414) respectively (PCBS, 2006).

Economic progress has been insufficient to stimulate growth in the OPT because of the restriction on movement, while dependency on aid was increasing. Approximately half of all Palestinian household are dependent on food assistance provided by the international community 80% of households in GS, 33% in the WB (World Bank, 2007).

1.7 Political Context

1.7.1 Israeli Occupation

In February 2005, the Israeli Government voted to disengage from the GS by dismantling all Israeli settlements and removing all Israeli settlers. This process completed in September 2005. Israel unilaterally withdrew all its settlers and soldiers and dismantled its military facilities in the GS, The Israeli evacuation involved 21 Gaza settlements, But they still controls maritime, airspace, and most access to the GS, Israel continued its yearlong blockade

of Gaza, however, and the humanitarian and economic crisis in Gaza intensified. The violent incursions still continues takeover resulting in numerous Palestinians deaths and injuries (kuttab, 2007).

1.7.2 The Internal Fragmentation

In January 2006, the Islamic resistance movement (HAMAS) won control of the Palestinian Legislative Council (PLC) and took control of the PA government in March 2006. Violent clashes took place between Fatah and HAMAS supporters in the GS in 2006 and early 2007, resulting in numerous Palestinian deaths and injuries; fighting continued in the GS, and in June, HAMAS militants succeeded in takeover of all military and governmental institutions in the GS. In response, Palestinian president Abbas dissolved the government, fired Prime Minister Ismail Haniya, and declared a state of emergency. Salam Fayyad took over as interim prime minister (kuttab, 2007).

The health condition in GS faces new challenges exacerbated by the intensified Israeli closure. The WHO expressed its concerns about the consequences of the Palestinian internal political fragmentation; the socioeconomic decline; military actions; and the Physical, psychological and economic isolation on the health of the population in GS (WHO, 2009).

1.8 Health Status and Health Indicators

Palestine is a developing country, facing many obstacles and troubles vary between economical and political as well as health related. The Palestinian health care system has been developing side by side with the development of Palestinian society over the past years, how ever it is extraordinary fragmented, Palestinian MOH is financed by a patchwork of patient payment, taxes, donor contribution and social revenues. Since the Palestinian has taken their

responsibilities of health at 1994, a great improvement and development in term of quantity and quality of health services (MOH, 2005[a]). Most of GS hospitals are only providing emergency services, with only about 40% of health workers reporting to work (World Bank, 2008).

Prevalence of micro and macronutrient deficiency was increased associated with the rising poverty, unemployment, smoking and continuous physical and psychological stress. The risk of morbidity and premature death, particularly from cardiovascular diseases and diabetics was also shown to be on the increase, as well about 35-50% of all hospitals' emergency admission were related to accidents, Accidents in Palestine were the second leading cause of death among adults after heart diseases (Abed, 2007).

According to the Palestinian family health survey which was done at 2006, the number of people suffering chronic diseases has surged 31.1% in the last two years. Also the number of households with safe drinking water dropped by more than 8% between 2000 and 2006 to 87.8% (PCBS, 2007). Some indicators are interesting to mention in this section like Crude Birth Rate (CBR) 27.2 births/1,000 population and Crude Death Rate (CDR): 2.7 deaths/1,000 population (PCBS, 2007). Maternal Mortality Ratio (MMR) per 100,000 live births at women aged from 15 to 49 was 12.7 (PCBS, 2005[a]).

1.9 Child Health Status and Illnesses

A study carried out by Johns Hopkins University and Al-Quds University at Jerusalem revealed very high levels of malnutrition among the Palestinian population. The study found that 17.5% of children aged 6–59 months suffered from chronic malnutrition. 53% of women of reproductive age and 44% of children were found to be anaemic. In the aftermath of the

Israeli withdrawal of August and September 2005, the healthcare system in GS continues to face severe challenges.

Over the last two decades infant and under-five mortality rates steadily declined and is well below the regional average, while life expectancy has increased significantly on average 4 years longer than the typical person in the region (Al Quds Univerity and John Hopkins University, 2002).

1.9.1 Infant and Child Mortality

According to the data analysis of the Palestinian family Health survey, 2006; the survey reveals on the same time child mortality rate reaches 28.2 per 100 live births and it is higher in GS compared to WB 31.8 and 25.8 respectively (PCBS, 2007).

1.9.2 Age and Cause of Infant Deaths

Deaths among young children, particularly at the neonatal period remain unacceptable for a country with reasonable availability of health care providers and a relatively high amount of spending on health 9% of the GDP according to the World Bank Report 2004. This structural effect may have been compounded by access problems, closures and military incursions after the start of the 2000 Intifada (World Bank, 2004).

Prematurely, congenital anomalies and infectious diseases are still the principal causes of infant morbidity and mortality in WB/GS. See Annex (5).

ARI are the third leading cause for infant deaths in Palestine. The available information indicates that 13.1% of the infant deaths are caused by pneumonia and other respiratory infectious (Hamad, 2005).

Recent reports indicate that only 0.6% of total infant deaths are due to diarrhoeal diseases (MOH, 2004). The damage to the water and sewage infrastructure has resulted in water-borne

epidemics, which combined with a collapse of adequate hygiene practices, have caused the number of diarrhoeal diseases to double. Availability of primary health care centres (PHCC) services reduced due to the lack of supplies and limited attendance of health staff due to restrictions on movements. The quality of health services is reduced due to the disruption of training and capacity development of health staff. Utilization of health services by rights holders is decreasing due to the restriction on access clearly; the situation in GS is worsening (UNICEF, 2004).

1.9.3 Nutrition

The recent demographic and health survey indicates an increase in chronic malnutrition and degradation of the nutritional status of small children.

malnutrition among children under five jumped 3% between 2004 & 2006; the data analysis at the Palestinian family health survey 2006 revealed that about 10 out 100 children under five in the PT suffer from stunting; this percentage is higher in GS 13.2% compared with WB. 7.9% (UNICEF, 2006). See Annex (7).

1.9.4 Micronutrient Deficiency

An increased level of anaemia and micronutrient deficiencies was observed. The stunting rate has increased since 2000. One in ten children under five is now suffering from stunting. (UNICEF, 2006). "There is a critical gap in the delivery of vitamin A and D supplementation. Only 61% of children less than one year old receive vitamin A/D (Hamad, 2005). The latest demographic health survey found that 65.3 percent of household consumed iodised salt (56.5 percent in the WB and 82.7 percent in GS) which showed an increase since the 2000 survey when only 37.4 percent of household consumed iodised salt (47.3 percent in the WB and 16.6

percent in GS). These figures suggest that iodine deficiency potentially remains a problem in the PT (MOH, 2005[b]).

1.9.5 Breast Feeding

Breast milk is the best type of food a child can get exclusively during the first six months of life and with safe. The percentage of Palestinian mothers breastfeed their babies around 95% (Hamad, 2005). The mean duration of breast feeding in WB/GS is 11 months and a round 10% of Palestinian children are weaned during the first three months of life (PCBS, 2004).

1.9.6 Immunization

The Palestinian family health survey 2006 showed that the percentage of children aged 12-23 months fully immunized was 96-5%, 94.4% in the WB and 99.4% in GS (PCBS, 2007).

1.10 Health Care System in Palestine

1.10.1 Health Services Provision

Main four providers, mainly the Palestinian MOH, UNRWA, Non Governmental Organization (NGOs) and the private sector, share the provision of health services in PA at WB/GS; also, the fifth group of providers are hospitals outside the territory in Jordan, Egypt and Israel. Referral abroad and this was seriously affected in recent years

1.10.1.1 Palestinian Ministry of Health

MOH plays the main role in providing health care services to the Palestinian population. Generally, MOH responsible for supervision, regulation, licensure and control of the whole health services. MOH operates 416 public health centres 56 in GS and 360 in WB (MOH, 2005[a]). Data on secondary care statistics for 2006 revealed that the number of hospitals in the PT was 75 hospitals, 53 in the WB, 22 in GS (PCBS, 2009).

1.10.1.2 The United Nations Relief and Works Agency

UNRWA sector mainly provide primary health services to the Palestinian refugees population and purchases secondary and tertiary care services when needed (WHO, 2008). The UNRWA operates about 8.1% of the total number of PHCC (MOH, 2005[a]). Also one hospital runs by UNRWA.

1.10.1.3 Non-Governmental Organization (NGOs)

They cover part of the health services of the population. It is extensive: from missionary hospitals, to facilitate supported by international organization, to community health centres (WHO, 2008). NGOs opiate is about 28.3% of the total number of PHCC and operates 27 hospitals (MOH, 2005[a]).

1.10.1.4 The Private Sector

The private for profit health sector operates hundreds of private settings by private individual medical specialists, physicians, dentists, pharmacists, lab technicians and x-ray technicians (MOH, 2005[a]).

1.12 Integrated Management of Childhood Illnesses (IMCI) in Palestine

The MOH has adopted IMCI strategy as a major strategy for improving children's health and nutrition in the PA, with UNICEF as a major partner and funding agency in the process. IMCI strategy seeks to reduce the child mortality through a broad and cross-cutting approach with the following components: improving the case management skills of the health worker, improving the health system and also improving the family and community practices (PCBS, 2007).

1.13 Primary Health Care Services in Palestine

PHC system is a major component of Palestinian health care system; this system has provided health care to all Palestinian people especially for children and other venerable groups. PHCC in Palestine provide primary and secondary health care services. In the last five years and after the uprising of second Intifada (Al Aqsa Intifada), PHCC in Palestine have been developed in a dynamic way to face the instability of Palestinian situation where Israeli Occupation Forces(IOF) tend to divide Palestinian localities into isolated geographical areas. PHCC try to offer accessible and affordable health services for all Palestinians regardless of geographical locations. According to MOH policy, They offer different health services according to clinic level, theses services include maternal and child health, care of chronic diseases, daily care, family planning, dental, mental services and other services (MOH, 2005[b]).

The MOH is working with other health sectors in providing the primary health services mainly with UNRWA, and NGOs sector. At the end of 2007, there are 654 PHCC in Palestine; these centres are served about 3.7 million people (129 centres in GS and 525 centres in WB). Classification of PHCC according to providers shows that, the MOH is considered the main provider from the total PHCC with 63.6% from the total PHC, followed by the NGOs with 28.3, then UNRWA with 8.1 %. It is worth to mention that, the private sector plays an important role in providing PHC services to Palestinian people. The average ratio of persons per centre was 5,752 (10,774 in GS and 4,519 in WB). The number of PHCC per 10,000 persons was 1.7 in 2005 while it was 1.9 in 2000 (MOH, 2005[a]).

1.14 Implementation of IMCI at MOH

1.14.1 The three phases

The introduction phase is to insure that key persons in MOH understand IMCI strategy, to establish a management structure and to build national capacity. The early implementation phase is to plan and prepare for IMCI implementation, including adaptation of the generic IMCI clinical guidelines, selection of a limited number of districts for initial implementation and to build national and district capacity to implement IMCI activities. The expansion phase includes efforts to increase access and to broaden the range of IMCI interventions. Problems identified during the early implementation phase are addressed, priorities agreed, and strategies for expanding access while maintaining quality are under developed. Currently the expansion phase is being prepared and a three-year national plan for implementation is designed.

1.14.2 IMCI National plan of implementation 2006-2008 Goal

The main Goal of implementing the IMCI strategy is to reduce mortality and morbidity rates among children under five years old and to improve growth and development of Palestinian children. The overall strategy is to implement IMCI in the health services and in the communities (MOH, 2005[a]).

The next chapter discuses the literature review about what was written on IMCI and the studies conducted from different places and authors. The researcher tried to evaluate the implementation of IMCI strategy at the MOH/GS, which may help the policy and decision makers to plan a better management in order to improve the IMCI performance of IMCI implementation at MOH/GS.

1.15 Operational Definition of Terms

Integrated Management of Childhood Illness

IMCI is a systematic approach to children's health, which focuses on the whole child.

This means not only focusing on both curative and prevention elements that are implemented by families and communities as well as by health facilities (WHO, 2008).

Childhood

Childhood is the time for a boy or a girl from birth until he or she is an adult and the more circumscribed period from infancy to the onset of puberty. During childhood, parents must nurture the potential of a unique human person (Medical Dictionary).

Infant mortality rate

It is calculated by dividing the number of infant death during a calendar year by the number of live births reported in the same year. It is expressed as the number of infant death per 1,000 lives birth (UNICEF, 2000).

The under-five mortality

The under-five mortality rate is the probability (expressed as a rate per 1,000 live births) of a child born in a specified year dying before reaching the age of five if subject to current age-specific mortality rates (UNICEF, 2000).

Health

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1999[b])

Health systems

A health systems all the organizations, institutions and resources that are dedicated to producing health .the function of health systems to serve delivery, developing and managing resources, mobilizing and challenging financing ,and ensuring an appropriate policy context and overall stewardship (WHO, 2000).

Primary health care

Essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of heir development in the spirit of self-determination (Alma Ata Declaration, 1978).

Training

Training is considered as an organized activity aimed at imparting and communicating information and instruction to improve the performance of the recipients in order to help them attain a required level of knowledge or skill (Carter, 1997).

Management

Organization and coordination of the activities of an enterprise in accordance with certain policies and in achievement of clearly defined objectives., the basic task of a management is increase the innovation (Business dictionary).

Supervision

Supervision is defined as “a formal process of professional support and learning which enables individual practitioners to develop knowledge and competence, assume responsibility for their

own practice and enhance consumer protection and safety of care in complex clinical situation" (UK MOH, 1993).

Protocol

It is a binding reference covering procedures. It illustrates step by step the implementation of the procedures. Protocols are more detailed than guidelines (Maram, 2004).

Chapter II. Literature Review

This chapter reviews the literature that clarifies different issues related to the evaluation of IMCI implementation. It begins with the conceptual framework of the study, which is considered as guide for the research process. The framework includes the main components of IMCI strategy and the process indicators that are used for demonstrating the effectiveness of IMCI implementation and ensure sustainability.

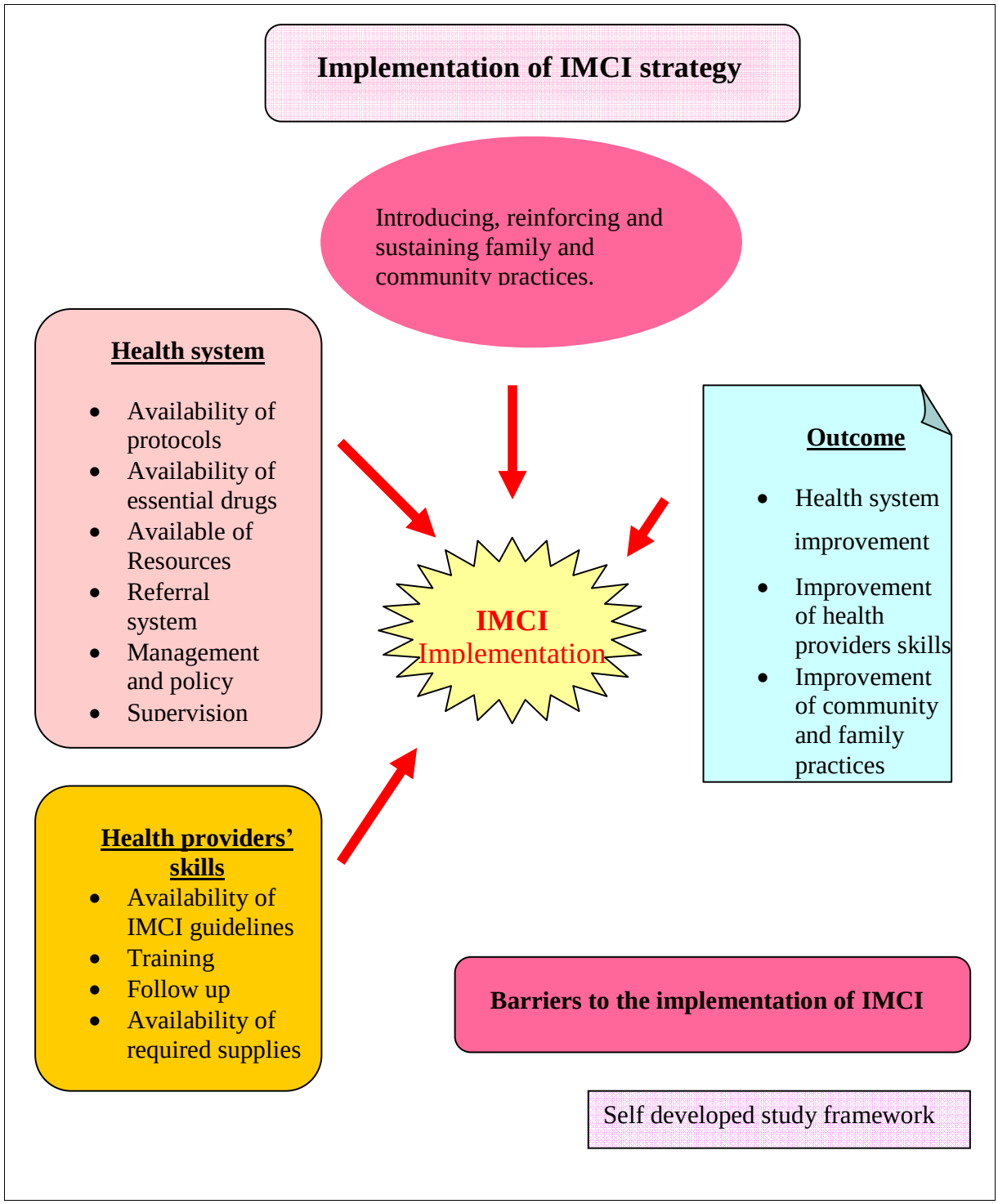
Since the IMCI introduction, many countries have adopted the IMCI strategy, and much experience has been gained. Several countries have also undertaken program review of IMCI implementation.

2.1 Conceptual Framework

This framework guides the research process and represents outline for the research. The dimension illustrated in the framework represents the scope of the research and identifies its boundaries.

The conceptual framework was developed by the researcher focuses on IMCI implementation, which is a new strategy that had three main components, the first component; is the improvement of the health system, the second component; is the improvement of the skills of health providers, and the third component, is the improvement of family and community practices.

Figure (2.1)


Implementation of IMCI strategy
Introducing, reinforcing and sustaining family and community practices.
Health system
Availability of protocols
Availability of essential drugs
Available of Resources
Referral system
Management and policy
Supervision
IMCI Implementation
Outcome
Health system improvement
Improvement of health providers skills
Improvement of community and family practices
Health providers' skills
Availability of IMCI guidelines
Training
Follow up
Availability of required supplies
Barriers to the implementation of IMCI
Self developed study framework

2.1.1 Health System

A) Availability of protocols

The IMCI medical algorithm signify a simple set of investigations to perform with the cough, diarrhea, fever and ear ache as well assess a child for malnutrition and recommended intervention for underweight children. IMCI algorithm guides health care providers to prompt for missing immunization and to provide counsel for the caregiver when to return at a fixed number of days or if certain symptoms arise, beside how to give drugs, how to treat local infection at home and feeding recommendations. In cases of danger sings, IMCI will recommend referring a child to a high-level facility. With IMCI, there are different rules for children from one week to two months old and for two months to five years. These medical algorithms do not cover children over five years old. The generic IMCI algorithm requires careful adaptation to reflect the epidemiological and cultural characteristics of the community (New Delhi MOH, 2002).

B) Availability of essential drugs

The countries which adopting IMCI strategy implementation should modifying the essential drug list to ensure that drugs are available at PHCC where health providers have been trained in IMCI. The availability of drugs in these centers, including procurement, distribution, and store and stock management of drugs (WHO & UNICEF, 1997[a]).

C) Available of Resources

Adequate and sustainable resources, the IMCI job aids should be available at the PHCC to facilitate the job of the health providers after the training courses in the management of sick

children and the consultation of caretakers. The IMCI wall chart, the IMCI guidelines, child records and mother records are main resources to the implementation of IMCI strategy.

D) Referral system

The guidelines 'Management of the child with a serious infection and severe malnutrition' for care at first referral level facilities should be available at the PHCC. As well the pre- referral needed drugs and the transportation should be available to facilitate referring any emergency cases to the nearest hospital.

E) Management and supportive policy

Traditionally, the term management refers to the people involved in the four general functions, which are planning, organizing resources, Leading and controlling or coordinating through the organization. Another common view is that management is getting things done through others that the job of management is to support employee's effort to be fully productive members of the organization.(Carter, 1997). additionally management refers to the organization and coordination of the activities of an enterprise in accordance with certain policies and in achievement of clearly defined objectives., the basic task of a management is increase the innovation (Business dictionary).

F) Supervision and monitoring

Monitoring is about collecting information that will help in answer questions about any project. It is important that this information to report on the project and to help the evaluation. All organization keeps records and notes and discusses what they are doing. This simple checking becomes monitoring when information collected routinely and systemically against a

plan. The information might be about activities or services, users, out side factors affecting the organization (Business dictionary).

Monitoring information collected at specific times, daily, monthly or quarterly. Supervision is defined as "a formal process of professional support and learning which enables individual practitioners to develop knowledge and competence, assume responsibility for their own practice and enhance consumer protection and safety of care in complex clinical situation" (UK MOH, 1993). Clinical supervision is both a structure and a process through which the principles of reflective practice may be facilitated (Cottrell, 2000).

2.1.2 Health Providers Skills.

A) Demographic characters:

Individual differences could affect the implementing of the IMCI strategy after the training; therefore the researcher included some demographic variables that affecting the implementations such as gender, years of clinical practice since graduation, level of responsibility at the clinic and years of experience in PHCC.

B) Training

The training is a learning process that involves the gaining knowledge, reinforcing skills, concepts, rules, or changing of attitudes and behaviours to enhance the performance of employees. Training is required to cover essential work related skills, techniques and knowledge. There are many different types of training, one-the-job training, informal training, classroom training, external training, internal training, and on-the-job, training and off-the-job training. Training is considered as an organized activity aimed at imparting and communicating information and instruction to improve the performance of the recipients in order to help them attain a required level of knowledge or skill (Carter,1997). The IMCI

training courses are considered as an integrated case management for first-level health providers; WHO and UNICEF developed it. The courses combines between classroom work with hands-on clinical practice, teaches health providers for effective management of sick children aged between one week to five years (WHO & UNICEF, 1997[b]).

2.1.3 Community and Family Practices

Improving partnerships between health facilities, services and the communities, they serve by increase utilization of health services and establish mechanism for the community feedback on management of health services. Also increasing appropriate and accessible care and information from community based providers by increase the quality of care, increase promotion of preventive practices and decrease harmful practices as will as Integrated promotion of key family practices critical for child health and nutrition by increasing adoption of key family practice for health, nutrition (Peter Winch et al, 2001).

2.2 Integrated management of Childhood Illnesses

2.2.1 Definition of Integrated management of Childhood Illnesses

IMCI is refers to a broad WHO/UNICEF initiative that was launched globally in 1995 with the objective of reducing less than five children mortality, morbidity, disability and improving child growth and development. The strategy considered as a provocative challenge to move from the vertical disease specific approach of traditional program to a more integrated and horizontal child approach in line with the philosophy of primary health care (WHO, 2004)

2.2.3 (I – M – C – I) Abbreviations

As published at the WHO reports and web sites about the definition of IMCI;

The abbreviation" I" is stand from Integrated which refers to a number of characteristics of the strategy and to the management approach. The main objective of the integration to provide a holistic care to under five age group children, as well to give curative, preventive and development aspects of child care into one strategy. That it supposed to be managed by managers, experts and key public health persons; based on clinical guidelines presented in a training course package which aim to create a field of care between health system services and care provided in the community.

The abbreviation "M" is stand from Management, which has both clinical, and public health meaning. The IMCI clinical management adopts a syndromic approach in which signs and symptoms are the entry point. Cases are classified into categories of severity based on a special key signs and symptoms. The classification help the primary health care provider in the selection of the management plan rather than making diagnosis so sick child is classified into one of three main categories, which highlighted with a color code. Red color indicating severe condition which in need to urgent referral to the hospital, Yellow color indicating that the situation can be managed with drugs at the center but with definite follow up, Green color indicating mild condition that require simple home care. In the IMCI strategy the community should take the role as a partner with the health system in order to deliver child care. See annex (3).

The abbreviation "C" is stand from childhood, which is, refers to children less than five years; who represent the most vulnerable age group to illness and death.

The abbreviation "I" is stand from Illness, which refers to the major causes of death; sever illness or disability in the age group of less than five such as diarrheal diseases including dehydration; acute respiratory infection including pneumonia; meningitis and sepsis; measles; Malnutrition and anemia (WHO, 2004).

2.2.4 The three traditional components of IMCI. See annex (6).

The management of childhood illness focuses on treatment as well provide the opportunity to underline prevention of illness through education on the value of immunization, micronutrient supplementation, beside enhanced nutrition status especially breastfeeding and infant feeding. IMCI seeks to decrease childhood mortality and morbidity by improving family and community practices for the home management of illness further more improving case management of skills of health providers (WHO & UNICEF, 1997[c]). The IMCI strategy combines improved case management of childhood illnesses in first-level health facilities with aspects of nutrition, immunization, disease prevention, and promotion of growth and development. There are three components to IMCI, and interventions in all three components include both curative and disease preventive health promotive activities. These are: improving the skills of health workers, improving the health system, and improving the household and community practices.

2.2.4.1 Improving the skills of health providers

The cornerstone of this component of IMCI is a set of flow-charts and guidelines for the integrated case management of diarrhea, pneumonia, malaria, measles, and malnutrition, and the endorsement of immunization in health facilities. Use of these flow-charts ensures that health workers concentrate on not only the most noticeable problems a sick child has, but a

range of nutritional and infectious disease problems that commonly affect children in a country. Each country adapts the flow-charts and guidelines, taking into account the local patterns of disease prevalence, clinical presentation and drug resistance.

An 11-day course trains health workers in the skills required to apply these algorithms. These skills are developed as health workers assess, classify, and treat children with each of the major signs and symptoms in health facilities. IMCI moreover looks at approaches for maintaining the performance of health workers. Tools are also available to improve the skills of health workers in referral care facilities. These include guidelines and training materials on the management of severely-ill children and children with severe malnutrition as well as a training course on breast-feeding counseling (USAID, 2001).

2.2.4.2 Improving the health system

To implement IMCI, health care infrastructure must be improved to provide equitable and sustainable solutions to the problems of childhood illnesses. Initial meetings with government ministers to inform and advocate for the strategy and its advantages are followed by orientation and training of other high-level officials and consultations with the ministry of health in each country. Available resources are evaluated, partnerships are created throughout the country, and goals are set to develop systems, which will maintain the IMCI program and adapt it in order to complete the implementations of IMCI stages. Particular issues that must be addressed include drug availability, IMCI planning and management, organization of work at the health facility level, and health information systems.

2.2.4.3 Improving household and community practices

The third component of the IMCI strategy is the household and community component which was officially launched at the first IMCI global review and coordination meeting in September

1997. The participants recognized that improving the quality of care at health facilities alone would not be effective in realizing significant reductions in childhood mortality and morbidity, because numerous caregivers do not seek care at facilities. Since that first meeting, many activities have been undertaken by multilateral institutions, such as UNICEF, WHO, Pan American Health Organization and World Bank, bilateral agencies and NGOs to strengthen inter-agency collaboration for promoting and implementing community approaches to child health and nutrition. Based on available evidence, 16 key practices were identified that are essential in providing the necessary care to improve child survival, growth, and development in families and communities. They were related to the provision of adequate home care to support healthy growth and development, appropriate responses to illness, seeking appropriate and timely care, and giving recommended treatments (USAID, 2001).

Community integrated management of childhood illnesses (C-IMCI), House Hold and community- integrated management of childhood illnesses (HH/C-IMCI) framework as defined by core workshop in January 2001 at Baltimore.

- Improving partnership between health facilities, services and communities, they serve.
- Increasing appropriate and accessible care and information from community based providers.
- Integrated promotion of key family practices critical for child health and nutrition (Core Group, 2001), See annex (8).

The main key family practices which adopted by WHO and UNICEF which presented at the international workshop on improving children's health and nutrition in communities; and they should be introduced in a gradual and phased manner.

- Physical growth and mental development.

- Diseases prevention.
- Appropriate home care.
- Seeking care (WHO & UNICEF, 2000).

2.2.5 The three phases of IMCI implementation

The IMCI introduction in any country should follows three phases:

2.2.5.1 Introduction phase

The Introduction phase is mostly to enable the MOH and its partners to create an informed decision about IMCI as a appropriate strategy to the country environment. It is characterized by country assessment and orientation meetings on IMCI of senior officers of the MOH, representatives of academia, international and bilateral organizations, civil society and NGOs. This phase results in the formal endorsement of IMCI as a national strategy by the concerned of MOH.

2.2.5.2 The Early implementation phase

The Early implementation phase is to increase experience in implementing the adapted IMCI in specific areas in the country, because it aims at reaching a consensus among the main stakeholders. It plays a key role in establishing the basics for IMCI in the country and for active partnerships with the scientific community. It includes the participation of selected staff in IMCI activities in order to build capacity for adaptation and training. The IMCI guidelines and training materials should be adapted according to the local setting. This adaptation should be followed by the selection of a few districts according to approved criteria, preparation of

district plans, preparation of these districts and capacity building; additionally the implementation process should be with monitoring (WHO, 2008).

2.2.5.3 The Expansion phase

The expansion phase characterized by the beginning of scale up the IMCI implementation in the country as well expansion in range of the strategy and the same time as maintaining quality. Compared with the previous phases, the rate of steps forward is usually much faster, depending on the man-power and financial resources availability. This phase relies in extremely way on the work, which was done in the two earlier phases (WHO, 2008).

2.6 Benefits of the IMCI strategy

2.6.1 addresses major child health problems

The strategy systematically addresses the most important causes of childhood death and illness.

2.6.2 Responds to demand

Every day many parents take their sick children to hospitals and health centers, pharmacists and community health care providers. At least three out of four of these children are suffering from one of the five conditions that are the focus of IMCI.

2.6.3 Promotes prevention as well as cure

IMCI strategy is focusing on treatment as well give chance to enhance essential preventive interventions, such as immunization and promote infant and child nutrition status.

2.6.4 Cost- Effective

Investing in Health ranked IMCI among the ten most cost-effective interventions in both low- and middle-income countries.

2.6.5 Promotes Cost Saving

Unsuitable management of childhood illness wastes limited resources. While increased investment will be needed initially for training and reorganization, the IMCI strategy will result in expenditure savings.

2.6.6 Improves equity

Most of children in the developed countries have access to affordable preventive and curative care services that protects them from death due to acute respiratory infection (ARI), diarrhea, measles, malaria and malnutrition. Millions of children in the developing countries have access to this same life-saving care. The IMCI strategy addresses this inequity in global health care (WHO & UNICEF, 1997[c]).

2.7 Adaptation of IMCI Guidelines

2.7.1 Introduction

IMCI Guidelines and training materials should be adapted by each country before they are used. Adaptation ensures that the most important childhood illnesses that first-level health providers must be able to treat are included, the materials should be dependable on national treatment guidelines and they should be feasible to implement the guidelines through the health system. The adaptation process is considered as a key element in national preparations for implementing the IMCI strategy as well a mechanism for developing consensus on

technical issues. The WHO department of child and adolescent health and development has developed an Adaptation Guide to assist national program staff and expert advisors with the adaptation process (WHO, 1999[a]).

2.7.2 The need for national adaptation

Medical case management guidelines, charts, and related training materials were developed by WHO and UNICEF to be appropriate in the majority of developing countries where infant mortality is higher than 40 per 1000 live births. These materials focus on the five conditions that together cause more than 70% of mortality in children under the age of five years: ARI, mostly pneumonia, diarrhea, malaria, measles, and malnutrition. These five conditions are considered the main reason for a high proportion of visits to health facilities. The extent of adaptation required has been minimized by making those materials as widely applicable as possible. Case management guidelines must cover the most serious illnesses that contribute to child mortality in a specific country. Consensus is desirable to cover the childhood conditions. The final adaptation should reflect the most technically effective and practical aspects (WHO, 1999[d]).

2.8.2 Types of adaptation

Certain adaptations to the guidelines are essential, while assessment and discussion of some other parts of the guidelines may only be needed to allow consensus to be reached on logical treatment guidelines. Once consensus is reached on the guidelines, changes have to be made to the generic IMCI charts and as well to the training materials (WHO, 1999[d]).

2.9 The role of IMCI in Health Sector Reform

The IMCI strategy can play a vital role in most aspects of health sector reform, in particular through: Improving the cost-effectiveness of essential child health care services, escalation the capacity for decentralized management at district level, promoting the quality of child health care, sustaining the new role of the MOH, expenditure saving increasing drug supply. IMCI will strengthen the capacity of first level health facilities and enhance the quality of care delivered. Application of IMCI in a large number of facilities where health care for children is delivered, decrease fees (WHO, 1999[f]).

2.10 Training

One of the integral elements of IMCI strategy is an integrated case management-training course for first-level health providers; WHO and UNICEF developed it. This 11-day course, which combines classroom work with hands-on clinical practice, teaches health providers for effective management of sick children aged between one week and five years. The IMCI training course further more emphasizes the prevention of disease and endorses the communication with families. Health providers learn about routine updating of the immunizations of sick children, micronutrient supplementation, promotion of breastfeeding and counseling to solve feeding problems (WHO, 1999[g]).

2.10.1 Course objectives

When the health providers have completed the IMCI training course, they are expected to have the knowledge and skills to:

1- Assess, classify and treat sick children correctly following the IMCI case management guidelines.

2- Administer pre-referral treatment correctly and refer critically sick children.
3- Advice caretakers about home care program including how to give treatment, what is the danger signs to seek help and bring the child back to the health facility, and when to return for follow-up care.
4- Check children's immunization status regularly and give immunizations when required.
5- Carry out feeding assessments of children who are less than two years old or who are very low weight-for-age.
6- When necessary, provide caretakers with suitable nutrition and breastfeeding counseling.

2.10.2 Course preparation: selection and training of course facilitators and participants

To guarantee the quality of in-service IMCI training, WHO suggests that the course facilitators should if possible be medical personnel with widespread clinical and training experience that has involved clinical practice. The facilitator training should involve three phases: Participation in the 11-day standard course for first-level health providers, which gives future facilitators knowledge of the course content and methods used. Participation in a five-day facilitator training course in the instructional techniques used in the course; and direct application of newly acquired skills by the facilitator-trainees during the course for health providers with a support of an experienced course director. Special efforts should be done to identify and prepare an effective inpatient clinical instructor and he must have the competence and confidence to select cases appropriate for clinical practice from a ward of inpatients, assign these cases to participants, discuss their assessment and classifications, and ensure correct identification of as many clinical signs as possible. The clinical instructor should

experience the same training as other course facilitators and should already have significant clinical experience. Participants in IMCI training courses should be selected from first-level facility staff with daily responsibility for managing sick children and who come from health facilities where drug supplies are acceptable and where follow-up is feasible and likely to occur (WHO, 1999[g]).

2.10.3 Follow up is an integral part of IMCI training

IMCI training includes both skills achievement and skills strengthening. The IMCI course was planned to help health providers to acquire new skills to manage sick children more effectively. Health providers may find it difficult to begin using these skills when they check children in their PHCC. They often need help to transfer what they have learned during the training course to their own work situation. For this reason, follow-up after training is included as the second essential component of the IMCI training process. A follow-up visit is designed to support the transfer, submission, and strengthening of new skills acquired during training. At least one follow-up visit should be conducted within one month of the training course, in order to assist health providers with the transition to integrated case management. Using the planned procedure for follow-up visits, a trained supervisor helps health providers to overcome problems (WHO, 1999[g]).

2.10.4 In-Service Training

The IMCI training for all relevant health providers should require a huge organizational effort and significant resources. For this rationale, health authorities in many countries are paying attention in including IMCI in the teaching agendas of medical, nursing and other health professional schools. Introducing IMCI instruction in these institutions will potentially expand

the health system coverage by IMCI trained health providers in a cost-effective and sustainable manner, and will manipulate the practices of health professionals in both the public and private sectors (WHO, 1999[c]).

2.11 Steps for introducing IMCI teaching

WHO recommends a gradual, phased approach to planning and implementing IMCI in a country, including the introduction of IMCI teaching at medical, nursing and other health professional schools. IMCI planning and implementation in a country needs to involve, at an early stage, key stakeholders in pre-service training. A core of facility members from various departments of relevant training institutions should then be trained in IMCI to create a common base of understanding and encourage acceptance. This training should take place before any institutional decisions are made about the use of IMCI teaching materials or the modification of teaching agendas. In the context of pre-service training, the existing IMCI in-service training course can be used to orient school facility as well as to prepare district-level health facilities to receive IMCI-trained graduates (WHO, 1999[c]).

2.12 The role of IMCI in improving family and community practices to support child health and development

Achievement of reducing childhood mortality requires more than the availability of adequate health services with well-trained health providers. As families have the major responsibility for caring for their children, success requires a partnership between health providers and families, with support from their communities. Health providers need to work with families and their communities to ensure that families can provide adequate home care to support the healthy growth and development of their children. Families have to be able to respond

correctly when their children are sick, seeking appropriate and timely assistance when children need additional care and giving recommended treatments. Improving family and community practices is one of the three components of IMCI strategy, promoted by the WHO Department of Child and Adolescent Health and Development and UNICEF. This component aims to initiate, reinforce and sustain family practices that are important for child survival, growth and development (WHO, 1999[e]).

2.12.1 IMCI interventions to support improved family and community practices

IMCI improves practices within the community to support key family. Such actions could include building partnership with communities to improve nutrition and child development, through breastfeeding support groups or child feeding centers; and using opportunities such as community events to educate families. A community-feeding program, for example, could be encouraged to use locally adapted IMCI counseling cards to assist mothers in selecting and preparing food for their children, and to identify when to take children for health care. A health provider trained in breastfeeding counseling could reach out to breastfeeding support groups, providing them with the latest information and assisting mothers having trouble with breastfeeding. The health providers could involve schoolteachers and others working in the community in finding ways to provide follow-up for malnourished or undernourished children. Community groups can be encouraged to support families with children needing urgent care. Interventions at each level have to focus on the most important child health problems, to build on presented resources (WHO, 1999[e]).

2.13 IMCI Implementation Lessons Learned

WHO has conducted a comprehensive review of under five age deaths and now estimates that six causes accounted for 73 percent of these deaths in 2000 – 2003: pneumonia (19 percent),

diarrhea (18 percent), malaria (8 percent) neonatal pneumonia or sepsis (10 percent), preterm delivery (10 percent) and asphyxia at birth (8 percent). Under nutrition is an underlying cause in at least half of all under-five deaths. Few conditions, therefore, account for a large proportion of all deaths. Deaths are not randomly distributed (WHO, 2007).

They tend to occur in the poorest countries of the world, mostly in Sub-Saharan Africa and South Asia. Further more within the poor country they affected mostly the poorest families.

More than 80 countries have successfully adopted the integrated management of childhood illness into their health system; more than 40 countries are giving special attention to improving family and community practices as a key way of reaching vulnerable children (WHO, 2007).

2.13.1 Multi-Country Evaluation Sites.

Tanzania is the only Multi-Country Evaluation (MCE) sites where the evaluation has been completed. It's deign included a comparison of mortality in four districts, two with and two without IMCI over the two-year period starting in mid 2000. Demographic surveillance systems were used to compare under-five mortality rates in areas of the IMCI and control districts. Adjustment for age (zero to one and one to four years) and rainfall were made using poison regression models. During the IMCI phase-in period from July 1999 to June 2000, under-five mortality levels were almost identical in IMCI and comparison districts, at about 27 deaths per 1,000 child years or approximately 120 deaths per 1,000 children between birth and the age of less than five years. The quality of health care provided in the IMCI districts was substantially higher than in the control districts. Over the following two years, mortality levels became 13 percent lower in IMCI districts than in the comparison areas, parallel to the rate difference of 3.8 fewer deaths per 1,000 children per year. Stunting rates also became notably

lower in the IMCI districts. Contextual factors, such as mosquito net use, all favored the comparison districts (WHO, 2001).

Brazil is Multi-Country Evaluation another site, IMCI is being implemented in the context of an ambitious family health program, which is supported by the MOH and the World Bank and based at first-level government facilities. IMCI implementation started in 1996 and it is scaled up in the whole country, mainly in the northeast regions. The MCE was carried out in Brazil; the MCE study showed improved quality of care for fewer than five age group children after health providers were trained in IMCI. The results furthermore showed that the health care professional who received training in IMCI significantly improved compared to health care professional who had not received training in IMCI (WHO, 2001).

South Africa, The main causes of childhood morbidity and mortality at South Africa are a few remediable illnesses like acute respiratory infection, diarrheal diseases and malnutrition. So the IMCI strategy was adopted by South Africa in 1996. And in May 2001, a health facility survey was conducted in the four provinces (Mpumalanga, KwaZulu Natal, Northern Province and Northern Cape). The general finding was positive, which illustrated that health providers were able correctly to assess danger signs in 75% of children observed. 44% of all children needing urgent referral were identified, prescribed pre referral treatment and referred accordingly, immunization status was improved to 91%. Forty eight percent of caregivers knew at least two signs for seeking immediate care and generally, there were support from the health system. The drugs were available in the most health facility and almost all the essential equipment and supplies necessary to support the IMCI implementation strategy were available, more over the transportation for urgent referral sick children was available and around 72% of mothers received counseling and advice regarding child care and nutrition, particularly about breast feeding (WHO, 1999[e]).

In Philippines a national IMCI orientation and planning workshop was held in 1995. In February 1996 a national IMCI task force was recognized, bringing together staff from the department of child health and other concerned program areas under the leadership of the director of child health. The task force took charge of the planning and adaptation process. Two adaptation groups, consisting of department of health staff, pediatricians and technical experts, undertook the technical review and adaptation, which was completed in early 1997. The first training for core trainers and other staff took place in July 1997 in Davao, followed by facilitator training for this same group. Then additional facilitators were trained and this was followed by the training and follow-up of first level health workers in one district in each of two provinces. The two districts were supported in planning for training, follow-up and the provision of essential drugs. The results from the follow-up have been very encouraging, with almost all health providers actively adopting IMCI strategy. IMCI has been included as an important component of the early child development project funded by the World Bank and the Asian Development Bank in three regions of the country, and UNICEF will support activities in some other regions. Steps to introduce pre-service training in IMCI in medical and nursing schools are taken (WHO, 2001).

Nepal established a Working Group for IMCI in 1997. The guidelines and training materials have been adapted and translated into Nepali. IMCI training courses at national and district levels, including one facilitator training course, have been conducted successfully and follow-up visits to trained health providers have been done. IMCI is implemented in one district. A district planning workshop and a national review and re-planning meeting was held in September 1998, to provide the basis for the expansion phase (WHO, 1999[g]).

2.13.2 Regional overview

Since 1996 when it was first introduced in the Eastern Mediterranean Region, as many as 12 countries in the region had adopted the IMCI strategy and were in different stages of implementation, with three more countries planning to introduce IMCI in 2001, namely Djibouti, Libyan Arab Jamahiriya and Oman. One of the lessons learned from this experience in the Region was the importance of starting planning and implementation of the three IMCI components at the same time. Noteworthy were those approaches viewed in the Region as instrumental to achieve sustainability in IMCI, such as IMCI pre-service training and the establishment of close links with other initiatives. In this context, IMCI elements had already been introduced into the teaching curriculum of a total of five medical universities and four nursing schools in two countries implementing IMCI, mainly Egypt and Morocco (WHO, 2001).

Egypt Experience

The MOH in Egypt has endorsed the IMCI strategy at 1997, they started with the national IMCI orientation meeting and preliminary planning work shop and the early implementation phase at march 1998 was conducted by the national IMCI planning and adaptation workshop. After that, the adaptation of IMCI clinical guidelines completed and 11 days IMCI case management at central level for doctors were conducted. They introduced the IMCI in pre services education at Alexandria University at April 1999. In September 1999, they developed the translation of the training materials in Arabic for the 4 days course for nurses. At Nov. 1999 IMCI early implementation phase completed in three districts, In April, 2000 they conducted review of the early implementation phase and planning for explanation phase. From

2002 to 2004, they conducted the 11 days training courses for doctors and lately 7 days to speed up the implementation of IMCI strategy, and 4 days for nurses, drugs management, and supervisory guidelines were developed, national child health policy prepared. 427 IMCI clinical courses have been conducted and 10260 physicians and nurses have been trained in the end of 2005. There were following up after training to increase the reinforcement of skills and training coursers on supervision were developed for supervisors; documentation, reports and follow up visits were also conducted (WHO, 2001).

2.14 Barriers for IMCI Implementations

There are major challenges to IMCI strategy implementation, firstly the when the training coverage is low, the trained health providers don't follow guidelines and house holds and community members face barriers to accessing IMCI services.

Low level of IMCI implementation

A) Low training coverage, the main cause for this situation are

1- High cost of training.

2- Inadequate resources.

3- Shortage of MCI fund.

4- Inadequate pre-service training.

B) Trained health workers don't follow protocols

1- Duration of sick child assessment management

2- Shortage of job aids and facilities.

3- Shortage of frequent IMCI drugs.

4- Negative attitudes of some trained physicians or nurses

5- Inadequate supervision, monitoring, evaluation.

C) Barriers to access for house holds and community members

1- Use fees at PHCC.

2- High cost of referrals (USAID, 2005).

In March 1999, the Benin Ministry of Public Health formally adopted the IMCI strategy and selected an area in southeastern Benin as a pilot site; the population is about 1 million and mostly rural, and the mortality rate for children younger than 5 years is 158 per 1000 live births. In a step to for preparation of IMCI the implementation and evaluation of IMCI, they were studied the management of sick children at outpatients departments at health facilities. The purpose was to identify areas needing emphasis during IMCI training courses and to identify institutional factors, such as supervision, drug supplies, and time management that may have affected IMCI implementation. Many health providers' explanations regarding the major barriers for full implementation of IMCI strategy in Benin referred to inadequate training, inadequate supervision and motivation. Beside the lack of equipment and supplies could be the reasons for deficiencies in case management quality. Poor communication may partially be a result of health workers' discomfort. When spending too much time speaking with someone else's wife, so it is recognized and addressed as a cultural barriers, In addition to cultural factors, health workers frequently mentioned caregiver beliefs (e.g., vaccines should not be given to an ill child) and attitudes (e.g., caregivers demand sedatives to calm their child) as reasons for deficiencies in case management. This finding underscores the role of factors influencing health workers that are outside the direct control of the health system, so there was a gap between health

system and caregivers, which impede the proper implementation of the strategy (Alexander K. Rowe et al. 2001).

2.15 Integrated Management of Childhood Illnesses (IMCI) in Palestine

The main Goal of implementing the IMCI strategy is to reduce mortality and morbidity rates among children under five years old and to improve growth and development of Palestinian children. The overall strategy is to implement IMCI in the health services and in the communities (MOH, 2005[a]). The Palestinian MOH has endorsed the IMCI strategy as a major strategy for improving children's health and nutrition in the occupied Palestinian Territories (OPT) since 2002, in collaboration with UNICEF as a major partner and funding agency in this process. The introduction phase was conducted to insure that key persons in MOH understand IMCI strategy, to establish a management structure, and to build national capacity. The early implementation phase was conducted to plan and prepare for IMCI implementation, including adaptation of the generic IMCI clinical guidelines, selection of a limited number of districts for initial implementation and building national and district capacity to implement IMCI activities.

The expansion phase includes efforts to increase access and to broaden the range of IMCI interventions. Problems identified during the early implementation phase are addressed, priorities agreed, and strategies for expanding access while maintaining quality are under developed. Currently the expansion phase is being prepared and a three-year national plan for implementation is designed (MOH, 2005[a]). In comparing Palestine with regional and global countries, which adopted the IMCI strategy, the comparison may reflect a delay of the implementation of the IMCI phases, additionally there were a number of gaps in the IMCI implementation process. In addition, the researcher deems in this research to

highlight the whole status of IMCI implementation weak points, strong points in order to the possibility to enhance the effectiveness of the IMCI implementation**.**

The next chapter discus how the researcher going on through the study methodology.

Chapter III. Methodology

This chapter addresses issue related to methodology used to answer the questions. It includes the study design, population, period and place of the study, sample size, sampling method and method of conducting the study. Beside, the construction of the questionnaire, as well as in-depth interviews, piloting. Then, it presents the ethical consideration and procedure, data collection, and data analysis. In addition, it illustrates the validity of the study. The final step is the limitation of the study.

3.1 Study design

The design of the study is descriptive and analytical cross sectional design. It is a triangulation one that includes both Qualitative and Quantitative data collection approaches. This design was chosen because it is the best design to describe the IMCI strategy situation in governmental PHCC. As well, it is provide a snapshot of the outcome and the characteristics associated with it, at a specific point in time. Additionally it is less expensive and enables the researcher to meet the study objective in a short time (Michigan, 2008).

3.2 The study population

A) The program coordinators, seniors, managers and trainers.

B) All health providers (physicians and nurses) who have received the IMCI training at MOH depending on the list which was given to the researcher by the national IMCI coordinator.

C) Reviewing medical files of children (150).

D) A random sample of care takers were selected randomly from visited PHCC, the total number of them were 37 mothers.

E) The total number of visited centres was 37 PHCC covering all GS depend on where the trained health providers distributed.

3.3 Sampling

A purposive sample was chosen when conducting the eight in depth interviews (qualitative method) with PHCC managers and IMCI trainers.

Census for all the physicians and nurses who received training in the IMCI, the collection of data was done through administering interviewed questionnaires (Quantitative method) . The total number of distributed questionnaires was 160 while the number of the study respondents was 145 questionnaires, so response rate was 145/160. The total number of visited centres was 37 PHCC covering all GS. facility audit through observation for equipments and resources needed for the IMCI implementation was done. The total number of medical files of children, which reviewed, was 150 file and 37 care takers were selected randomly during the visit to the PHCC.

3.4 Selection criteria

3.4.1 Inclusion criteria

- The seniors, managers at the structure whom affect decision making process, coordinators and trainees at IMCI department at MOH who were available at the time of study.
- All health providers (physicians, nurses) who received IMCI training.

3.4.2 Exclusion criteria

- The study was excluding any staff volunteer present at PHC at the time of the study.
- The study was excluding the health providers who do not receive IMCI training.

- The study was excluding those who move to work in different places.

3.5 Setting of the study

The study was conducted in the PHCC- MOH/ GS; 37 clinics covering all GS were visited during the study to reflect the representative results, 37 PHCC including child health program and there was availability of trained physicians and nurses.

3.6 Ethical considerations and procedures

The researcher was intensely committed to all ethical considerations required to conduct research. First, ethical approval obtained from both the school of public health Al-Quds University and MOH/ PHC department. (Annex 14) to carry out the study. Second, an approval Letter was obtained from the general director of human resources department at MOH/ GS. (Annex 15).

Every participant was given an explanatory letter about the study. It was attached to the questionnaire both verbally and written. This form was include the purpose of the study, guarantee the confidentiality of the information, and the instructions how to deal with questionnaire. It was include a statement indicated that subjects had the right to refuse or participate in this study.

The participation was optional, anonymity and confidentiality was given and maintained. However, ethical concepts, respects for people was considered and maintained. Consent form was obtained from each participant and it was attached to each questionnaire to ensure his or her voluntary participation after signing the consent. See (Annex 10).

3.7 Period of the study

The study was conducted in the year of 2008-2009, started with the literature review in February 2008. The School of Public Health, Al-Quds University in May 2008, approved the proposal. An administration approval from the general directorate of PHC/MOH and department of human resources were obtained in November 2008. Construction of the research questionnaire and Pilot study were finished in February 2009, while actual data collection took place in April 2009. Data analysis was completed by May 2009. The final results were available by June 2009.

3.8 The study instruments

Two instruments were used in this study.

The first instrument was a structured questionnaire, designed and used for quantitative data collection.

The second instrument were an in- depth interviews, used for qualitative data collection.

1. Questionnaire design

The researcher developed a structured questionnaire. It is clear, no complex terms, nor jargons, neither leading questions nor double parallel questions. The questionnaire consists of three sections and takes approximately 20 minutes to complete. The first part covers the information related to demographic, social data, such as (age, sex, marital status, address, income). Assess where the MOH has reached in terms of adopting and implementing the IMCI program. Recognition of the areas of strength and areas of weakness in the MOH approach for the implementation the IMCI program. The researcher used the closed ended format (e.g. Dichotomous questions) and also used open ended questions which will cover the information that concerned with the study. The second part of the study was depending on facility audit for

equipment and resources needed for the IMCI implementation and reviewing medical files of children (150). A random sample of care takers were selected randomly from visited PHC, the total number of them were 37 mothers. See Annex (10).

2. In depth interviews design

To probe further findings from the in-depth interviews. The discussions covered essential topics; description of the IMCI implementation status at MOH, opinions on the appropriateness of adoption stage, IMCI and the pre-service training, IMCI strategy convenient to the Palestinian territory, recommendations for scaling up IMCI implementation and discus the major barriers which delay the IMCI implementation. The researcher used a prepared list of questions to lead the discussion. The questions contained open-ended questions and were seeking understanding and interpretation ones. All the interviews discussions were written in Arabic and translated into English. The researcher also collected the names of participants and their institutions.

3.8 Pilot

To test the appropriateness of data collection instrument, and standardize the suitable way for data collection, the researcher conducted a pilot study in three clinics; It provides a trial run for the questionnaire, which involves testing the wordings of question, identifying ambiguous questions, testing the techniques that used to collect data, and measuring the effectiveness of standard invitation to respondents. At the end of this process, some minor changes, modifications and additions were introduced to the questions and the final questionnaire was constructed.

3.9 Data collection

The data was collected through the structured face-to-face interview questionnaire. The questionnaire is designed to match the research objectives and give accurate relevant information to the research questions to minimize potential source of bias.

The in-depth interviews were considered the second tool for the study; the researcher was convened eight meetings with managers and decision makers in April 2009. The goal of conducting the interviews is deeply to explore the respondent's point of view, suggestions and perspectives.

3.10 Data entry

The data entry was done after over viewing of the filled data questionnaires, designing a data entry model using the computer statistical package for social, sciences (SPSS). The variables of questionnaires were coded then were entered, after that the data was cleaned to ensure correct entered of data.

3.11 Data management and statistical analysis

SPSS version 15. Chicago, USA, was used to analyze the quantitative data. A relevant statistical relationship between variables was done. Frequency of the different variables, cross tabulation for specific study variables and determine P-values of (<0.05%) with 95% confidence interval were done. Qualitative data was analyzed using an open coding thematic analysis. This method was done after the end of each interview, the big themes of the interview categorized , after that the researcher summarize the themes , some times the researcher write the same words.

3.12 Validity of the Study

We can define the validity of an instrument as a determination of the extent to which the instrument actually reflects the abstract construct being examined. "Validity refers to the degree to which an instrument measures what it is supposed to be measuring". High validity is the absence of systematic errors in the measuring instrument. When an instrument is valid, it truly reflects the concept it is supposed to measure. Achieving good validity required; they concern to the research design and sample selection. The questionnaire was re-examined and revised by the almost twelve supervisors and an expertise to evaluate the procedure of questions and the method of analyzing the results. The expertise agreed that the questionnaire was valid and suitable.

3.13 Limitation of the study

- Turn over of the trained health providers and changing their positions in the PHCC.
- The general unstable political and security situation at GS causes delay in the implementation of this research such as the war against GS (2008-2009).
- The strike in the health sector; it was difficult to reach part of the trained health professionals in the IMCI.
- Limited scientific resources and literature review.
- UNRWA, NGOs and private health professionals not involved in my research even though there were trained health providers available at those associations; since this study is focusing on the adoption of IMCI strategy by MOH.

Chapter IV. Findings and Discussion

This chapter presents the results in illustrated and organized tables and graphs; it illustrates the descriptive analysis for included sample to reflect the real situation regarding adoption of the IMCI strategy at MOH/ GS.

In the discussion of results and findings there will be comparing with other literature reviewed studies, attempt to interpret; discuss the results and finding of this study. Findings are established from quantitative data collected from all health providers who have received the IMCI training at MOH, and from the qualitative information provided by the program coordinators, seniors, trainers at MOH/GS and other supportive associations. There were two different tools used; each of them was interested by a specific goal. First one concerns with the characteristics of the study population; their perception and knowledge about IMCI strategy; availability of health management support regarding many variables particularly basic equipments, supplies and essential IMCI drugs and this subject obtained by facility audit technique through observation. Additionally availability of effective training, follow up visits. Reviewing the children files to check the IMCI practice at the PHCC and randomly conducted meetings with many caretakers to check the availability of mother counseling.

The second one was the in-depth interviews instrument; it was addressing the mangers, trainers and decision makers to get their opinions and suggestions regarding the adaptation, feasibility of the strategy implementation to our environment, the training efficiency, health system support and how to erase those barriers to accelerate the implementation of IMCI strategy in effective way.

A. Findings derived from the questionnaire

A.4.1 Subjects characteristics

The following table illustrated the distribution of the study population regarding Gender, province of work, occupation, clinical practice and experience at PHCC.

As illustrated in the table 1, the greater proportion of the study respondents was males who represented about 51% while females represented about 49% of the total respondents. There is no gap between staff gender at PHCC. There is no significant statistical difference between males and females.

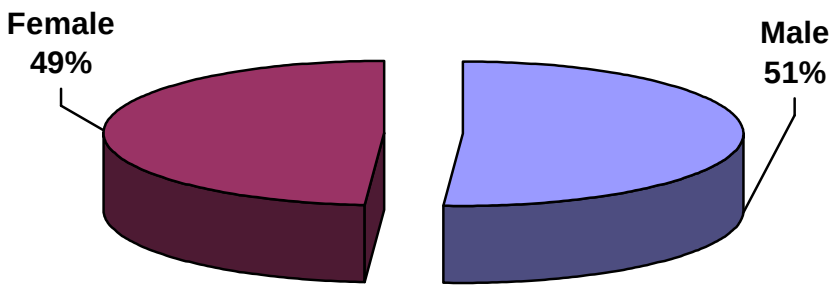


Figure 4.1: Distribution of population by Gender

Table 4.1: Distribution of the study population by their characteristics

Serial Number	Variables	Number	Percentages
1.	**Gender**		
	Male	74	51.0
	Female	71	49.0
	Total	**145**	**100.0**
2.	**Province of work**		
	North	34	23.4
	Gaza	41	28.3
	Mid zone	16	11.0
	Khan-younis	30	20.7
	Rafah	24	16.6
	Total	**145**	**100.0**
3.	**Occupation**		
	Physician	53	36.6
	Nurse	92	63.4
	Total	**145**	**100.0**
4.	**Clinical Practice at PHCC**		
	10Yrs and less	57	39.3
	From 11 to 20 Yrs	62	42.8
	More than 21 Yrs	26	17.9
	Total	**145**	**100.0**
5.	**Experience in PHCC**		
	Less than 10 Yrs	61	42.1
	From 10 to 15 Yrs	56	38.6
	More than 15 Yrs	28	19.3
	Total	**145**	**100.0**

Table 4.1 , as will as figure 4.2, shows that the most proportion of the study population worked in Gaza province (28.3 5), followed by those who worked in the North (23.4), then Khan-Younis represented 20.7 % , the forth province was Rafah which represented 16.6 % and the least percent was at Mid-zone which presented 11 % of the study population.

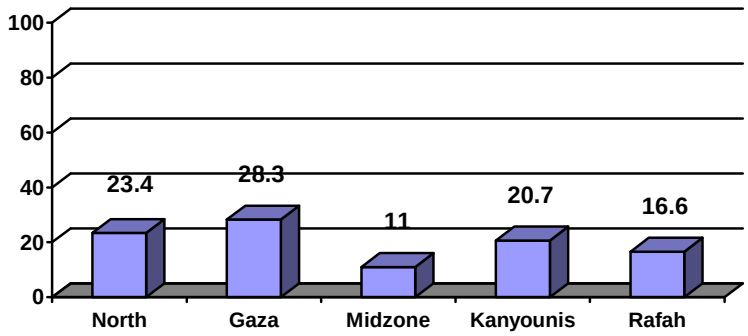


Figure 4.2: Distribution of the trained population by Province

The percentage of trained health providers at Gaza city around (28.3). This may reflect that the managers of PHCC/ in Gaza city interested in improving the quality of child health care, and also concern to improve the health providers' skills and performance at PHCC. So they consent that the health providers should attended the IMCI courses. In addition, it could reflect their convention regarding implementing IMCI strategy which would improve the quality of care to under age five; so they facilitate the participation at IMCI training courses more than the other health providers do. The mid zone reflects low percentage regarding the number of trained health providers. The national IMCI coordinator point of view concerning this issue that there were over load of work at the PHCC in the mid zone which prevent the health providers to participate in the IMCI training courses this was the main cause stated by the managers of the PHCC. (Interview with the national IMCI coordinator, 2008).

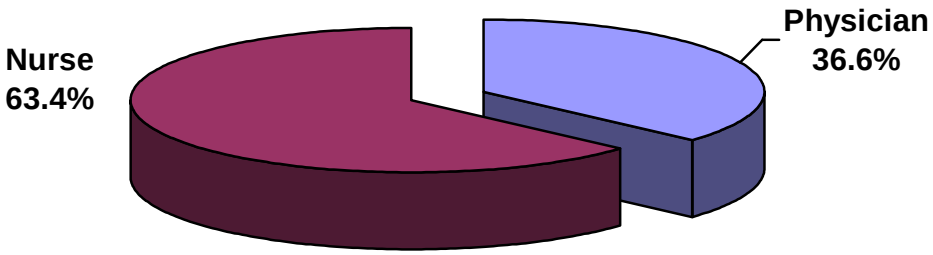


Figure 4.3: Distribution of Population by Professional Title

As illustrated in figure (4.3) the physicians represented the low percentage among the study population 36.6 %; the nurse represented the high percentage among the study population 63.4 %. This figure may reflect that there were no equity principles or logic distribution of the training coverage among the physicians and nurses. It also may reflect that the training of nurses was more feasible as it required only five days to be carried out whilst, training of physicians required 11 days in order to be accomplished.

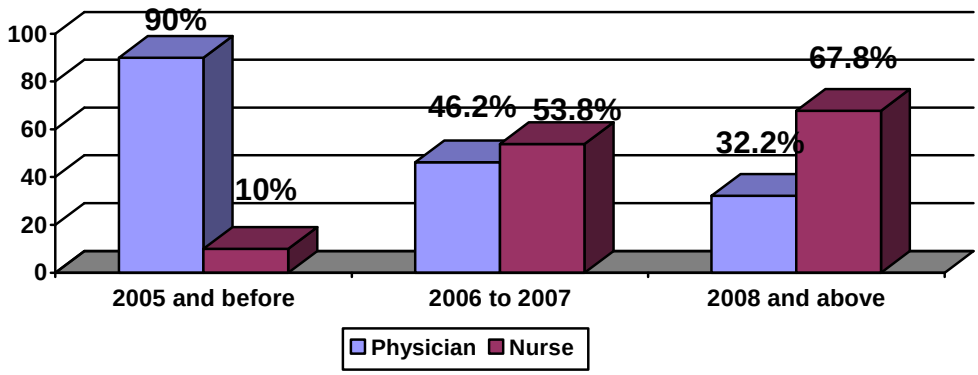


Figure 4.4: Distribution of professional title regarding the last training year

Figure (4.4) illustrated that 8.1% from the sample received last training at 2005 and before, and 21.1 % from the sample received last training at 2006 to 2007 and 70.8 % of the sample

received last training from 2008 until now. These percentages reflect the slow motion of MOH in implementing the IMCI training. Because there was gap of time between each course training and the one follow it at the same time the percentage of physicians and nurses who participated at the training courses was low in each year and not representative to the all health providers' numbers at the PHCC/ MOH.

The Physicians represented 90 % from the total subject who received training in 2005. However, he nurse represented 10 % at the same year and the next years and the year 2007. Until now the percentage of nurses started to be higher than the physicians; 39.3% from the sample the years of clinical practice less than 10 years, and 42.8 % from the sample the years of clinical practice between 11 -20 years, and 17.9 % from the sample the years of clinical practice more than 21 years. The majority of the study population had clinical experience in PHCC between 11-20 years so this reflects that the health providers are professional with good PHC experience. In reference to the years of experience, the study indicates that 42.1 % from the sample the years of experience in PHCC less than 10 years, and 38.6% from the sample the years of clinical practice between 10 -15 years, and 19.3 % from the sample the years of clinical practice more than 15 years. This may reflect the high rate of young health professionals (More than one third of the study sample had an experience less than 10 years).

A.4.2 Availability of training

One of the key elements of the IMCI strategy is an integrated case management training course for first-level health workers. The Palestinian MOH implemented the intervention according to WHO recommendations, the clinical training lasted 11-day the percentage of the study revealed that the majority of the health providers explain that they need further refreshing training and follow up. According to the WHO recommendations 11-day training

course is an effective tool for teaching health workers from first-level health facilities how to manage sick children using the IMCI approach.

Table 4.2: Distribution of the study population regarding training related variables

Serial Number	Variables	Number	Percentages
1.	**Period of IMCI training**		
	One week	92	63.4
	Two weeks	47	32.4
	Three and more weeks	6	4.1
	Total	**145**	**100.0**
2.	**Sufficient of the training time**		
	Strongly disagree	11	7.6
	Mildly disagree	29	20.0
	Mildly agree	67	46.2
	Agree	38	26.2
	Total	**145**	**100.0**
3.	**Appropriate educational training methods**		
	Strongly disagree	6	4.1
	Mildly disagree	14	9.7
	Mildly agree	65	44.8
	Agree	60	41.4
	Total	**145**	**100.0**
4.	**Needed more training for IMCI guidelines to refresh the knowledge**		
	Yes	126	86.9
	No	19	13.1
	Total	**145**	**100.0**
5.	**IMCI should be in pre services training**		
	Yes	112	77.2
	No	33	22.8
	Total	**145**	**100.0**

Table 4.2: The study indicates that the majority of the study population received the IMCI standard training. At the same time 72.4 % from the sample agree about the sufficient of training time; around eighty six percent (86.2 %) from the study population agree that the educational methods of training were appropriate and 77.2% from the sample think that IMCI should be in the pre-service training. Therefore, the study illustrated that high proportion of the study population satisfied with the IMCI training course and that was a good indicator for the training efficiency. The study indicated that the IMCI training courses were efficient enough, but need more intensified and scaling up IMCI training covering at all PHC/MOH among GS. The main cause of diminishing the impact IMCI training courses; that the training process not directly followed with provision of essential facilities, equipment, drugs and needed support; so unfortunately the training was getting lost.

The main barrier for this issue is the absence of decentralization of training process; shortage of trained key persons to scale up the implementation of the training, lack of follow up and shortage of administrative facilitation and provision of essential supplies to enhance proper implementation of IMCI strategy.

The researcher suggested that WHO recommendation regarding adaptation of IMCI training should be followed. The essential facilities also should be available at the PHCC. Further more, IMCI strategy should be included at the medical and paramedical academic curriculum of schools as the majority of health providers suggested in order to facilitate in job training of IMCI, consequently to reduce the expenditure of IMCI training courses. Those actions if considered by decision makers and high-level seniors the training will achieve its goal of improving and reinforcing the performance of health providers and at the same time sustain the use of IMCI guidelines in managing and treating sick children.

A.4.3 Health care providers' perceptions and knowledge

Table 4.3: shows that 51.7 % from the sample know that the IMCI policy adopted by MOH. 48.3 % from the sample don't know if it was adopted or not and this is a serious indicator that almost half the respondents ended the IMCI training courses have no idea about if IMCI strategy adopted by MOH/GS or not, these information may reflect that there were lack of good presentation of IMCI strategy during training courses. The same table also illustrated that 62 % from the sample not practicing the IMCI at their clinics and only 38 % practicing IMCI some times at their PHCC. This percentage revealed that the majority of the trained health providers are not following the IMCI guideline after they had received the training course consequently after a short time they may have forgotten the training course.

Table 4.3: perceptions of the study population regarding IMCI adoption, practices

Serial Number	Variables	Number	%
1.	**IMCI policy adopted by MOH**		
	Yes	75	51.7
	No	36	24.8
	DK	34	23.4
	Total	**145**	**100.0**
2.	**Practice IMCI in clinic**		
	Never	36	24.8
	Rarely	54	37.2
	Sometimes	41	28.3
	Often	14	9.7
	Total	**145**	**100.0**

Table 4.4: General perceptions of the study population regarding IMCI strategy

Serial Number	Variables	Numbers	Percentages
3.	**Three component to IMCI**		
A	**Improving skill of health workers**		
	A lot	71	49.0
	Limited	62	42.8
	Not at all	12	8.3
	Total	**145**	**100.0**
B	**Improving Health system**		
	A lot	63	43.4
	Limited	68	46.9
	Not at all	14	9.7
	Total	**145**	**100.0**
C	**Improving household and family component**		
	A lot	51	35.2
	Limited	61	42.1
	Not at all	33	22.8
	Total	**145**	**100.0**

Table 4.4: shows that 49 % of the sample agree that IMCI is improving the skills of health workers; 43.4 % from them agree that IMCI improving the health system and 35.2 % from them agree that IMCI improving the household and community practices; so the percentages indicate that large proportion of the respondents are convinced with the IMCI strategy.

Table 4.5: General perceptions of study population regarding effectiveness of IMCI strategy

Serial Numbers	Variables	Numbers	Percentages
1.	**IMCI strategy is effective in improving the quality for children under 5**		
	Strongly disagree	8	5.5
	Mildly disagree	8	5.5
	Mildly agree	46	31.7
	Strongly Agree	83	57.2
	Total	**145**	**100.0**
2.	**IMCI strategy is effective in providing comprehensive care for children under age five**		
	Strongly disagree	15	10.3
	Mildly disagree	15	10.3
	Mildly agree	33	22.8
	Strongly Agree	82	56.6
	Total	**145**	**100.0**
3.	**To which extent IMCI training suitable to the nature of work**		
	High suitable	24	16.6
	Suitable	106	73.1
	Un suitable	15	10.3
	Total	**145**	**100.0**

Table 4.5: shows that 88.9 % from the sample agree that IMCI strategy is effective in improving the quality of care for children under age five; 79.2 % from the sample agree that IMCI is effective in providing comprehensive care for children under age five and 89.7 % from the sample think that IMCI is suitable to the nature of their work . The study indicates that although the majority of the study population stated that the IMCI strategy is suitable to the nature of their work, it is providing a comprehensive care to children up to five, improve the quality of childcare, improve their skills, improve the health system and improve the family and community component. Nevertheless, unfortunately the trained health providers did not practice the IMCI strategy at their clinics. So this is a serious issue which should be considered; after the training directly the trained health providers should be able to implement the strategy according to the national adapted IMCI guidelines with follow up and supervision and this can be done when there are good health management support, availability of all basic pre-requisites at the PHCC.

A.4.4 Availability of health management support

The support of health management system is very important factor for proper implementation of IMCI strategy. Focuses on essential elements of the health system, which must be in place to ensure the effectiveness of child health interventions. Early experience with IMCI implementation led to greater awareness of the need to improve drug availability, support effective planning and management, at district and national levels, and address issues related to the organization of work at health facilities.

Table 4.6: Distribution of the study population regarding the availability of health management support variables.

Variables	Numbers	Percentages
Support from the management system to facilitate the IMCI implementation		
Strongly disagree	63	43.4
Mildly disagree	46	31.7
Mildly agree	25	17.2
Strongly Agree	11	7.6
Total	**145**	**100.0**

Table 4.6: shows that 24.8 % from the sample agree that there is support from the management system to facilitate the IMCI implementation at the clinic; so the study illustrated that the majority of the study population stated that there is no support from the management system. The study indicates that the support and the facilitations from the health management system regarding the IMCI implementation were weak and insufficient; so this delay the proper implementation of the strategy, the health management support is a very important factor to provide the needed rules, polices, plans, follow up, supervision, monitoring and the pre-requisites.

A.4.5 Supervision

Supervision is assumed to have a positive effect on the sustainability of health workers' performance over time. Supervisory visits are essential for the quality assurance of the IMCI strategy. During the visits, case management skills reinforced, constraints identified and determined where possible. On the other hand, supervision is adversely affected by the number of supervisors trained, the many other responsibilities that they carry and the lack of resources particularly transportation. Furthermore, the attitude and support of management for supervision is crucial and vital.

Table 4.7: Distribution of the study population regarding the availability of supervision

Serial Number	Variables	Number	%
1.	**Observing case management of sick child by supervisor**		
	Yes	39	26.9
	No	74	51.0
	DK	32	22.1
	Total	**145**	**100.0**
2.	**Availability of supervisory form**		
	Yes	38	26.2
	No	72	49.7
	DK	35	24.1
	Total	**145**	**100.0**
3.	**Supervisor is recording recommendations to the PHC staff**		
	Yes	20	52.6
	No	10	26.3
	DK	8	21.1
	Total	**38**	**100.0**

Table 4.7: shows that 26.9% only from the sample agrees that the supervisor observes case management of a sick child at the last visit to the clinic. Similarly, another percentage regarding if the record of the latest supervisory visit form include any recommendations to the clinic staff ; the percentage indicates that 47.4 % of the visited PHCC showed insufficient supervision forms and further more, lack of written recommendations for the staff at the supervisory forms. Those percentages may reveal that there is lack of the training of supervisor and the supervisory form not ready or not found. The study indicates that the supervision was weak, and there were no regular visits and the supervisor to the staff at the clinic wrote no recommendations. The IMCI strategy recommended that supervisors should be trained on the strategy and its facilitation techniques and be involved in the follow-up visits to the health workers after training.

Many experiences in the IMCI implementation revealed that supervision improves health workers' skills and sustaining performance. So the IMCI coordinators should concentrate on this vital element by training new supervisors, maintain the availability of the supervisory forms and encourage the supervisors to observe case management of a sick child during his visits to the clinic and write recommendations to the staff to enhance proper follow up of using IMCI guidelines.

A.4.6 Availability of basic equipments and drugs

According to the WHO recommendations, adequate material resources required to be allocated to enhance the facilitation of IMCI strategy at PHCC. The essential equipments needed administrative support to be available all the time at the clinics.

A.4.6.1 Availability of basic equipments

Table 4.8: Distribution of the availability of equipments, facilities and records needed for IMCI implementation.

Serial Number	Equipment s	Available		Not Available	
		No.	%	No.	%
1.	Handout guidelines of IMCI	33	89.2	4	10.8
2.	IMCI wall chart of guidelines	18	48.6	19	51.4
3.	Timer for respiratory rate	25	67.6	12	32.4
4.	Referral forms & records	29	78.4	8	21.6
5.	Mother cards	25	67.6	12	32.4
6.	Thermometer	33	89.2	4	10.8
7.	Torch	26	70.3	11	29.7
8.	Weight functioning scale	31	83.8	6	16.2
9.	Nebulizer	34	91.9	3	8.1
10.	Tongue depressor	35	94.6	2	5.4

Table 4.8: illustrated that there were many equipments facilitating the following of IMCI guidelines. But in fact those equipments were already available at the PHCC for reasonable cause to cover the needs of the served population, supplies like nebulizer, tongue depressor, Weight functioning scale, torch, thermometer, timer for respiratory rate, on the other hand the study indicates that there were shortage of basic IMCI records, mother cards, IMCI wall charts and IMCI guidelines. As a result this situation reflects that the health management system is paying no attention to supply the clinics with the required IMCI supplies and equipments.

A.4.6.2 Availability of drugs

Effective case management requires appropriate access to drugs every day in the PHCC. Although IMCI requires only a limited set of drug, the availability of those drugs at the PHCC varied from 20 % to 91 %. So from those percentage the study revealed that the essential IMCI drugs were not available all the time at the PHCC, so this may reflect that there were shortage of essential drugs because there were absence of administration actions regarding this subject. lack of national drug polices or not having essential IMCI drug list.

Table 4.9: Distribution of the availability of the essential drugs of IMCI at the health facility through out the year.

Serial Number	Items	Yes		No		DK	
		No.	%	No.	%	No.	%
1.	The essential IMCI drugs are available in stock	26	70.3	4	10.8	7	18.9
2.	MCI drugs are available in the clinic throughout the year	28	75.7	4	10.8	5	13.5

The table above illustrated that 70.3% from the sample agree that the essential IMCI drugs are available in stock; and 75.7% from the sample agree that MCI drugs are available at PHCC throughout the year.

The study indicates that not all the essential IMCI drugs were not available one hundred percent in the stock and throughout the year; the availability of the drugs at the clinic through out the year varied from 70.3 % to 75.7 %.

Table 4.10: Distribution of the availability and the amount the listed drug

Serial Number	Drugs	Availability			Amount	
		Always	Sometimes	Not	Adequate	In adequate
1.	ORS	97.3	2.7	0.0	86.5	13.5
2.	Contrimoxazole tablet or susp.	91.9	5.4	2.7	91.7	8.3
3.	Amoxycillin tablets (250mg) or susp.	91.9	5.4	2.7	80.6	19.4
4.	Nalidixic acid 250mgtab.	78.4	13.5	8.1	55.9	44.1
.5.	Vitamin A blue (100,000IU)or red(200,000IU) caps with nipple	37.8	29.7	32.4	36.0	64.0
6.	Iron syrup or Drops 25mg/ml	94.6	5.4	0.0	89.2	10.8
7.	Paracetamol syrup 120mg/5mlor Tablets 100mg or 500mg	100	0.0	0.0	94.6	5.4
8.	Tetracycline eye ointment	70.3	18.9	10.8	66.7	33.3
9.	Gentian violet (0.25%)	20.0	34.3	45.7	21.1	78.9
10.	Salbutamol solution or metered dose inhaler(MDI)	94.6	2.7	2.7	91.7	8.3
11.	Salbutamol syrup 2mg/5 ml or tablets 2mg or 4mg	97.2	2.8	0.0	77.8	22.2
12.	Diazepam ampule (10mg/2ml)	62.2	32.4	5.4	60.0	40.0
13.	Erythromycin syrup (200mg/5ml)	70.3	27.0	2.7	47.2	52.8
14.	Metronidazole 125mg/5ml	83.8	13.5	2.7	63.9	36.1
15.	Diloxanidide furoate 250mg tab.	25.0	41.7	33.3	37.5	62.5
16.	Chloramphenicol IM	5.6	5.6	88.9	50.0	50.0
17.	Benzylpenicillin IM	45.9	40.5	13.5	51.6	48.4
18.	Gentamycin IM	0..0	11.1	88.9	0.0	100.0

The study indicate that there were a kind of shortage of some essential IMCI drugs like Vitamin A blue (100,000IU)or red(200,000IU) caps with nipple ; Gentian violet (0.25%) Erythromycin syrup (200mg/5ml) ; Diloxanidide furoate 250mg tab; Chloramphenicol IM ; Benzylpenicillin IM and Gentamycin IM the percentage varied from 0 to 51 % .

A.4.7 Assessment of Health Providers Skills

Table 4.11: Distribution of respondents regarding clinical practices of IMCI

Variables	Yes		No		N/A	
	No.	%	No.	%	No.	%
1. Assessment of skills of the Health worker						
Using IMCI guidelines in treating the child	37	25.5	35	24.1	73	50.3
Health workers correctly assessed a child <5	51	35.2	19	13.1	75	51.7
Health workers correctly classified the child	49	33.8	20	13.8	76	52.4
Child needing referral was referred	93	64.1	14	9.7	38	26.2
Correct home advice on treatment was given to the care taker	93	64.1	16	11.0	36	24.8
2. Evaluation of records						
Individual IMCI recording forms properly filled and maintained	29	20.0	43	29.7	73	50.3
OPD register in maintained according to IMCI table	19	13.1	50	34.5	76	52.4
Classification is written on the OPD register according to IMCI table	24	16.6	49	33.8	72	49.7
Record of follow up is maintained in the OPD register as well as the recording forms	22	15.2	48	33.1	75	51.7

The study indicates that there were deficiencies in the performance of the essential IMCI steps. Assessing, classifying and managing the sick child according to the IMCI guidelines. The results reviled that the implementation of the IMCI strategy needs more consideration and support from the health management system. Including maintaining equipments and supplies, e.g. IMCI guidelines and records have to be maintained; facilitate the referral pathway of the severely ill children. Follow up and support the trained staff at the health facilities by provide not only the needed technical support but also they needs to ensure that new courses or in-service training are coordinated and that health workers are supported after every course. There is a need for their difficulties and challenges to be addressed, so that newly acquired skills and knowledge can be applied.

Regarding this subject, the researcher suggested that it is advisable to link program and training courses during the training. For example, expanded program of immunization (EPI) and IMCI have a great deal in common. This will help health workers to integrate services.

A.4.8 Household and Community knowledge

The household and community component of IMCI seeks to address household knowledge and practices as critical keys for child survival, growth, and development. Table 4.12: shows that 86.5 % from the study population agree that they know children up to 6 months need exclusive breastfeeding. around ninety one percent (91.9 %) from them agree that know children aged 6-9 months should receive breast feed and complementary feeding, seventy three percent from them agree that they know children should be given increased fluid and continued feeding during illness and 73.0% from them agree know when to seek care during child's illness. The national IMCI coordinator stated that the family and community

component is still not promoted and still need refreshment and activation. (Interview with national IMCI coordinator, 2008).

Table 4.12: Distribution of care takers regarding various variables.

Serial Number	Items	Yes		No		DK	
		No.	%	No.	%	No.	%
1.	Care taker knows that children up to **6** months need exclusive breastfeeding.	32	86.5	2	5.4	3	8.1
2.	Care taker knows that children aged **6-9** months should receive breast feed and complementary feeding	34	91.9	1	2.7	2	5.4
3.	Care taker knows that children should be given increased fluid and continued feeding during illness	27	73.0	6	16.2	4	10.8
4.	Care taker knows at least two sings of when to return immediately	13	35.1	8	21.6	16	43.2
5.	Care takers know when to seek care during child's illness.	27	73.0	5	13.5	5	13.5

Four main areas should be achieved to promote the family and community component: growth promotion and development, disease prevention, home management, and care seeking and compliance to treatment and advice.

Strategies and activities to promote key household practices to achieve the above objectives and expected outcomes of the household and community component of IMCI, six strategies are recommended:

1. Advocacy at all levels to promote political and social commitment, mobilize resources, and stimulate development of supportive policies.

2. Social mobilizations for partnership building.

3. Program communications to promote and sustain positive behaviors among key target audiences.

4. Strengthening linkages between health facilities, communities and households.

5. Improving collection and utilization of community-based information.

6. Building capacity for effective program implementation.

(WHO, Sudan, 1999).

In- Depth Interviews Findings

The highlighted points regarding the IMCI implementation strategy

IMCI strategy is suitable and convenient

During the in-depth interviews with the managers of the supportive associations, trainers of IMCI and national coordinator they highlighted the following points regarding the adoption of IMCI strategy and its implementation status at MOH. The results indicated that there were major problem regarding the IMCI implementation. The majority of the participant has the same opinion that the IMCI strategy is feasible and convenient to be implemented at PHCC. The participant aware that strong managerial decisions, procedures and polices needed to enhance the implementation process to achieve good results.

Major problems that affected the IMCI implementation

Lack of Adaptation and Representation of IMCI Strategy to the National Plan

The participants agree that there were serious delay in the implementation process since the early implementation phase; that delay as a result to unfit procedures had bee done at the early adaptation stage. When MOH/GS adopted the IMCI strategy, the adapted guidelines were very long and have not clear language, as stated by one of the interviewed experts "*the responsible IMCI seniors program at WB changed and adapted the IMCI guidelines to the national plan without any coordination with GS* ". When seek more clarifications, he added, "*the adaptation process should be according to the WHO recommendations, further more the IMCI guidelines should be adapted to the local epidemiological and cultural conditions*". This points is matched the WHO recommendation that the adaptation process should involves a review and

revision of existing national policies and guidelines for outpatient paediatric care. IMCI guidelines may require sub national adaptations and periodic revision or updates (WHO, 2001).

Several participants strongly agreed that it is important in the early implementation phase of IMCI implementation to build and maintain consensus on the adapted guidelines among technical program related to child health to ensure successful and sustainable IMCI strategy implementation because the consensus is considered as integral factor in facilitating the implementation. One of the respondent stated, "*the IMCI strategy should be considered as a national need in order to increase the quality of care among under five age group, this can be achieved through collaborating between all the associations and societies that concern to improve the childhood conditions*".

Lack of Training and Follow up

Regarding the delay of the IMCI implementation issue; one respondent described the program and he said, "*the most integral cause of the implementation of IMCI delay that there were lack of representation of the strategy and the environment was not ready to accept a new approach, so this is the main challenge* ". At the same direction, he added, *"After the implementation of the training to the selected health workers there were lack of systematic follow up, insufficient supervision, inadequate materials and supplies to facilitate the implementation of the strategy*".

All the experts settled unanimously that there were lack of IMCI presentation to the primary health managers, health workers and community. Inadequate training coverage, insufficient follow-up, monitoring, and absence of policy to enhance the proper implementation of the

IMCI strategy. Regarding this subject, the absence of policy: one of the participants confirmed that " a clear policy is required to develop full implementation of IMCI strategy, later than a set it should be followed by procedures to insure the full implementation of all desirable support and activities in order to achieve the most wanted aims.

persuasion of IMCI as an useful strategy for under age five

The majority of participants strongly thought that the lack of convention among health providers in the IMCI strategy is considered a hindrance factor to use the national IMCI guidelines after the training courses in managing and treating sick children.

Shortage of Administration Support

At the same time, most of the participants agreed that high rotation and turn over of trained health staff was a critical element, which could slow down the progression of IMCI implementation. In addition; the majority of them approved that over load of the work and insufficient time for each child to be managed and treated were significant factors to pay no attention to follow IMCI guidelines. The respondents collectively confirmed that lack of administrative support for the IMCI strategy implementation such as the weak supervision and motivation. Inadequate of trained human resources and at the same time the trained health providers lost their training skills. And the main cause that there were lack of follow up for them after the training courses; lack of IMCI equipment and supplies; shortage of medical records, stationary, register forms lack of health providers incentives; were considered the most important barriers for the scaling up of the IMCI strategy. Regarding the incentives one of the IMCI trainees affirmed, "*the reward and punishment technique is an effective way in improving the health providers' performance*".

Suggestions to improve IMCI strategy

Improve the Supervision

Improve supervision and follow-up process should be sustained by integrating them into the regular supervisory system; consequently, when the supervision organized the health worker performance and skills could be improved. One of the participants stated, “Training *of supervisors should be done and accelerated in order to save the sustainability of the implementation of the IMCI program*". Another one added that " *Supervision needed to be activated with the provision of needed facilities like: supervisory forms, checklists and transportation to visit PHCC*".

Increase IMCI training coverage and initiate follow up visits after the training

The IMCI trainers suggested that the coverage of the IMCI training should be accelerated, referral and counter- referral system should be promoted and more over the rational use of drugs should be endorsed. Regarding the accelerated of the IMCI training coverage; one of the expert suggested, "*Training to key persons in every single governorate, then accelerate the training by those key persons to increase the number of trained health workers*". An innovative aspect of IMCI training according to the WHO recommendations is that to include a follow-up visit to each health worker managing children in a first-level health facility within four to six weeks of training. The purpose of this visit is to help the health providers to initiate IMCI at their PHCC, reinforce skills learned during training and identify faced problems in order to solve them. The visit also provides an opportunity to record monitoring information. In countries that carried out follow-up visits, staff reports that visiting trained workers can support the transfer of IMCI skills to routine work in facilities. Information collected during

follow-up visits suggests that health workers who have been trained in IMCI are performing well. Staff also reported that the quality of IMCI implementation is higher in facilities where more than one health worker is trained in the IMCI strategy. (WHO, 2001).

Improve the community and house holds participations

Most of the respondents granted that the household and community participation is a vital component of the IMCI strategy. Moreover, it could be achieved through building partnership between the health facilities and population they served through collaborating with the concerned local NGOs and volunteers' key persons to promote the family practices consequently improved the quality of children health and nutrition.

Initiate pre- service IMCI training

Further, more, they have the same opinion to initiate pre-service IMCI training at medical, para medical and nursing schools to improve the IMCI demonstration status among the health providers and to reduce the expenditure of the IMCI training courses. One of the interviewers confirmed that " *the endorsement of the IMCI strategy at the medical schools; will diminished the training expenses*".

6. Discussion

The present study was designed to evaluate the IMCI strategy which adopted by MOH/GS. The study considered the IMCI status at MOH. Additionally, the study points to the main challenges encountered the proper implementation of the strategy. The IMCI strategy offers a set of interventions that promote the rapid recognition and effective treatment of major killer-diseases of children under five. It aims to prevent and reduce the number of cases of these diseases and to improve the quality of care of children in the health services, while also involving parents, households and communities in the care of their children. To implement the guidelines, WHO recommends in-service training with job aids and a follow-up visit with feedback after training.

IMCI levels of application are:

a) In health services, to improve the quality of care and to better respond to population needs.

b) In the community area, to improve access, early diagnosis, treatment, and reference, placing more emphasis on promotion and prevention.

c) At the family level, to better address the needs of the mother and the child.

Studying the current situation regarding the evaluation of IMCI strategy is of great value to highlight the main barriers in order to develop predictive procedures aiming to help in improving the proper implementation of the IMCI strategy. The researcher in the next pages attempt to focus on the main findings that revealed by the study, and to explain those findings in the light of other studies.

6.1 Training

The training courses continues to represent the backbone of IMCI implementation, Generally, the study reveals that almost all the study population had received IMCI training courses . the

researcher found that ; although the training program have been carried out, still there is a chance to improve the IMCI training courses to ensure the sustainability and to scale up the IMCI strategy at all the PHCC/GS. According to the WHO recommendation, training for the IMCI includes both initial skill acquisition and skill reinforcement. The IMCI course is designed to help the health providers acquire new skills to manage sick children more effectively. Health providers may find that it is difficult or some times they are not convinced to change their way in treating and managing the children, however, to begin using these skills after the training; They often need help to transfer what they have learned in the IMCI training course to their clinics.

The literatures indicate that there is a clear correlation between productivity and training; the training strengthens an employee's knowledge base; increase care skills that yield higher level of productivity and create a sense of loyalty (Mark Benjamin, 2008). Additionally, training developed required skills; establish best practices for work and performance standard and further more it is establish new practices that support the improved performance (Susanne Rothschild, 2005).

When the health providers completed the IMCI course, they are expected to have the knowledge and skills to; assess, classify and treat sick children accurately following the IMCI case management guidelines. Administer pre-referral treatment correctly and refer ill children. Counsel caretakers about home care including how to give treatment, what signs to look for that indicate a child should be brought back immediately to the health facility, and when to return for follow up. Check children's immunization status routinely and give immunization when needed, carry out feeding assessments of children who are less than two years old or who are very low weights for age and when necessary, provide caretakers with appropriate

nutrition and breastfeeding counseling. "Based on experience on early used countries WHO recommended the following criteria for a standard IMCI in-service course ; maximum 24 participants per training course , ratio of facilitators to participants of no less than on to four , the completion of all training modules, duration of 80 hours , minimum of 30 % of time in clinical practice and minimum of 20 sick children managed by each trainee" (WHO, 1999[g]).

The study indicates that there was variation among GS regarding the number of trained health providers. The training should scale up to cover all the PHCC among all GS and the delivery method should be effective and equitable. In each country, it is helpful to test the adapted course materials during one or two training courses before they are used on a larger scale.

The experience of Nepal. Nepal established a Working Group for IMCI in 1997. The guidelines and training materials have been adapted and translated into Nepali. IMCI training courses at national and district levels, including one facilitator-training course, have been conducted successfully and follow-up visits to trained health workers have started. IMCI is implemented in one district. A district planning workshop and a national review and re-planning meeting was held in September 1998, to provide the basis for the expansion phase. (WHO, 1999[h]).

The experience of Uganda reflects the proper implementation of IMCI strategy. Uganda adopted the IMCI strategy at 1995, they were adapting the clinical guidelines and training materials in July 1996, the training for the national health providers started in August 1996 immediately after four to six weeks follow up visits to help the trainees to start the IMCI and reinforce their skills. After on year of implementation, Uganda reviewed the experience gained and began the expansion phase. By May 1998, 24 districts had started the introduction of IMCI and six of them already had more than 50 % of their health providers trained in IMCI.

The MOH adapted the feeding recommendations to make the IMCI more effective; IMCI is now included in the national health policy and the ministry of health plans to introduce IMCI community interventions in selected districts in 1998 and pre-service training in 1999 with the support of major partners , including UNICEF and the World Bank (Sabiiti et al, 2004).

Although the training carried out but the majority of the study, population stated that they need more training for refreshment of their knowledge. The researcher point of view that the main rational for this is that the training was not systematically planned and developed. Further more there were no direct follow up to the trained staff; the researcher suggest that through providing sufficient and sustainable follow up this will intended to reinforce the new skills and solve the problems in the implementation of the IMCI guidelines also help in transferring and applying the gained skills to the PHCC.

6.2 Supervision

The study indicate that the supervision activates were clearly insufficient and weak. As mentioned at the finding chapter the majority of the study population stated that there were no regular visits and the supervisor to the staff at the clinic wrote no recommendations. According to the WHO recommendations follow-up visits, is the second component of the training. A team including a supervisor and IMCI facilitator who have been trained in IMCI, facilitation skills and conducting follow up visits; to help health workers apply what they have learned to their routine clinic responsibilities, should conduct follow-up visits. The visits should occur within four weeks after training in order to help health workers to get started. In addition, it should continue to ensure the sustainability of the implementation of the strategy. This result of the study is congruent with the results of an assessment of IMCI implementation which was conducted by Helen Keller International society with department of health at

Philippine from august 26 to September 13, 2002, in three provinces at Philippine. The results indicated that there are deficiencies in the performance of the essential IMCI steps, assessing, classifying and managing. The assessment also revealed that almost 90% of sick children were not appropriately managed, primarily because their signs and symptoms are not correctly, completely assessed and properly classified by the trained health providers. Provision of technical support offered by supervision from the local health systems as well as from the health department is frequently not available. This is a major explanation to the observed performance deficiencies of the health workers. (Helen Keller International, 2003). The literature indicate that the supervision improve the health provider performance as revealed by the Moroccan experience in implementing IMCI strategy. The supervision and follow-up visits after training; improving the quality of the management of sick children at health facilities. Follow up after training provides a fundamental mechanism for improving and maintaining the performance of health workers and strengthening the health system.

In Morocco, all health providers trained in IMCI were followed up once within four to six weeks of training and most of them received a second thorough follow-up visit within 6 months of training. The encouraging findings showed that, by the second visit, health workers, clinical assessment of cases had become more complete and integrated, assessment of child problems was carried out more frequently, staff's skills and counseling were improved (Joseph et al, 2002).

A review of facility based supervision, which was conducted at Ghana in 2001, the findings were as follow: positive findings, supervisory team are in place; schedule routine visits and make the majority of visits. Facilities had been visited between three and six times in the previous months. Standard checklists that combine administration and technical information are

used. The importance of solving the problem is recognized and a number of activities were undertaken routinely to address problem (MOH/Ghana, 2002).

Supervision is negatively affected by the number of trained supervisors and lack of resources especially transportation. Furthermore, the attitude and support of management for supervision is crucial.

The researcher suggested that the decision makers and director managers at the MOH should consider that the supervision needs activation and strengthening by establishing a well planned supervision program including supervisors training, provision of supervisory forms or checklists and transportations.

6.3 Pre-service training

As mentioned at the finding chapter, a high proportion of the study population stated that they want the IMCI strategy to be introduced in pre-service curriculum. The IMCI in-service training is essential for the sustainability of the strategy; good progress has been predicted in identifying effective approaches for introducing IMCI strategy in pre-service curriculum and involving the academia since the early beginning of IMCI introduction has proved to be a critical factor (WHO, 1999[c]). If paramedical and medical workers leave their basic training with skills in IMCI, improved case management and reduce the cost of the training. Several countries have begun experimenting with pre-service training; one of them is Egypt; the university of Alexandria agreed to introduce IMCI as an integral part of the essential paediatric curriculum for the 5th year of medical students of the faculty of medicine starting from the scholastic year 1999-2000. This experience at Alexandria university was followed by the introduction of IMCI in two other Egyptian universities Al Minya and Al Azhar starting from scholastic year 2000-2001.

Four other universities requested the help of WHO to adopt IMCI pre-service activate (WHO & MOH/Egypt, 2002).

Adequate representation in the IMCI management through working group not only from the ministry of health staff; but also from the academic, national and international institutions in health and civil society and other partners like: pediatricians, professional societies are share in the working group. This broad representation will be a key for the building of consensus; then cooperation in planning, adaptation and implementation. In Pakistan, both the program managers and pediatricians joined the IMCI orientation, involved in the planning process and being members of the IMCI implementation and adaptation-working group (WHO, 2000).

The researcher suggested that to introduce the IMCI strategy at our local universities agendas; at the medical and Para-medical professional; also at medical nursing schools or colleges. this step will enhance the IMCI representation among the varies health professionals and consequently facilitate the IMCI implementation because the link between health education and clinical training on IMCI give the trained health providers the chance to be familiar with the messages of the health promotion campaigns, further more decrease the cost of IMCI training courses. Additionally this will institutionalize the concepts of case management and reduce the cost of in-service training.

6.4 Support form the management system

The majority of the study population stated that the support from the management system was clearly insufficient. Most of literature reviews indicated that the administrative health system support improves the full implementation of the IMCI strategy. This result of the study is congruent with the results of a cross-sectional survey was designed to characterize the

performance of health care workers who treated ill children of age 2-59 months at health facilities in the Central African Republic from December 1995 to January 1996. The main aim of this survey to identify predictors of correct treatment by health care workers, assessment of health facility supplies using a checklist was done, also standardized interviews with health care workers to characterize their training, supervision and perceived barriers to the provision of optimal care to sick children. The most frequently reported points by health care providers were lack of training, lack of medications, lack of equipment, shortage of trained manpower and heavy patient load with lack of time considered the major barriers to providing correct treatment to sick children (Alexander K. Rowe et al. 2000). Health facility survey on outpatient child care services was done at Egypt in March 2002. The survey has evaluated the key supportive elements of the health system in facilities where the IMCI strategy has been implemented, particularly in terms of organization of work, clear distribution of tasks among doctors and nurses and availability of the essential drugs required for IMCI, supplies and equipment. The data on case management shows that providers trained in IMCI follow a systematic approach to a sick child, according to the standard IMCI guidelines of the MOH and population, and those drugs are used rationally. This situation is likely to have been strongly promoted and supported not only by training courses but also through the skill reinforcement and follow-up visits after IMCI training courses. An important role may have been played by the feedback meetings at the end of the follow-up visits that have seen the full involvement of the central IMCI team, trainers and key staff of the governorate, districts and facilities concerned (WHO, 2002).

Another lessons learned from the Mozambique experience which reflect how the support from the management system facilitate the proper implementation of the IMCI strategy and this experience should be as a lesson learned from the experiences of others. IMCI strategy was introduced in Mozambique in 1998, and because the strong support form the ministry of health

their; this resulting in rapid expansion of IMCI implementation. All provinces have facilitator teams able to conduct local training courses. As a result of decentralization, training coverage has been greatly improved (WHO, 2005).

The researcher is suggesting that managers at all levels need to be fully acquainted with the implications of implementation of the strategy. Adequate human, financial and material resources need to be allocated to maintain, promote and practice IMCI activities at community or health facility levels. Additionally MOH/GS should increase focus on policy formulation, strategic planning, setting standards, legislative and regulation mechanisms, multi-sectoral coordination, monitoring and controlling quality of health care. It should become known that the IMCI strategy is a national priority for the Palestinian society so that all program coordinators at national level, such as health promotion, human resource development should include IMCI in their agenda. The results of this study should be brought to the attention of all IMCI facilitators, course directors and clinical instructors.

6.5 Basic IMCI equipment and essential drugs

Findings indicated that the availability of the essential drugs at the PHC centers were reasonable to cover the needs of the served population. Further more the study revealed that there were shortage of basic IMCI supplies at the PHC facilities like IMCI hand out guidelines , the wall IMCI chart , child records, mother records and supervisory forms; at the same time there were shortage of some essential IMCI drugs e.g. vitamin A . Health management system should do efforts in attempt to improve the availability of basic and needed equipments and drugs at health facilities. Lack of access and irregular supplies are a problem which can affect negatively the IMCI implementation; with out the availability of

essential IMCI drugs at the facility level, IMCI implementation will suffer. Ensuring the availability of essential IMCI drugs at the PHCC is another key area of health system support to the implementation of the strategy. The results of this study match the results of a assessment of the PHC professional's knowledge and practices regarding the IMCI strategy. one of the barriers of the practice of IMCI at PHCC was that the shortage of essential equipments and drugs (Awadallah, 2005).

Sudan's experience was presented at this study to describe the challenge that was met in the shortage of IMCI essential drugs it was in a good position to share its experience to over come this problem; it can be summarized in the following points.

The first step: reviewing drug policy and consistency of guidelines; the issue of drug availability was addressed early during the IMCI adaptation process. A task group on drug was created under the national IMCI implementation group. It carried out a review of the national essential drug list and national standard therapeutic guidelines recommendations on use of first and second line drugs. The result of the review that, while all the IMCI drugs included in the national essential drug list, injectable pre-referral drugs were not listed for use at the PHCC; so those targeted by the IMCI strategy. Second step: making implementation decisions: PHCC targeted by IMCI in the early implementation phase were allowed to receive and use the recommended drugs. Third step: confirming IMCI role in improving drug availability; also this confirmed the critical role played by IMCI strategy in strengthening the health system. The last step: All concerned parties were involved in the review of the drug management system, objectives and policies. It was a major challenge, in term of procurement, distribution and affordability of drugs, including various cost recovery mechanisms, health insurance, MOH drug system, NGOs schemes, pharmacies (WHO, 2000).

The researcher suggested that the essential IMCI drugs should be available at the PHCC all the days of the month as recommended by the IMCI protocols through establishing a clear drug polices and executing administrative decisions to develop the IMCI implementation.

6.6 Health care provider's skills, perceptions and knowledge

The study revealed that a large proportion of the trainees stated that the IMCI strategy improve the health system, health providers skills, family and community participation. They also mentioned that the strategy is effective in improving the quality of fewer than five children. Additionally it gives a comprehensive care for those children; further more the IMCI suitable to their nature of work; but unfortunately, although the trainees reflected a good impressions and positive indicators the IMCI training courses not followed with planned visits, organized supervision, monitoring and evaluation to detect the strong points and weak points regarding the implementation at the PHC facilities. So after that the directors of the IMCI program can focus on the main problems and solve them to improve the health provider's performance in following the IMCI guidelines.

Other countries experiences revealed that the proper implementation of IMCI strategy have positive impact on decreasing the under five child morbidity and mortality rates. Studies in Uganda have shown that most IMCI counseling by health providers is good, and that IMCI counseling guidelines are effective in improving drug counseling quality and treatment compliance ; In India, workers can effectively use IMCI guidelines for diagnosis and management of illness and they used a modified form of the IMCI guidelines. A package of essential newborn care practices reduced sepsis mortality by 76 % and neonatal mortality declined by 62 %; In Kenya, the IMCI implementation have reduced child mortality by 49 %;

and increased DPT vaccinations to 84%; In Nepal, workers can correctly diagnose and treat pneumonia, and over 80% retain knowledge of danger signs and antibiotic dosages for several years after training (Baltimore, 2001).

The researcher suggest that the IMCI implementation should follow the WHO recommendations; the managers, directors, facilitators should brought to their attention that the training of the health providers alone can't improve their performance skills to follow the IMCI guidelines; the provision of all the needed support strengthen the IMCI implementation consequently scale it up to be institutionalize among GS.

6.7 Family and household component

The national IMCI coordinator stated that the family and community component is still not yet promoted and still need refreshment and activation (Interview with national IMCI coordinator, 2008). As families have the major responsibility for caring of their children; health care providers need to work with families to ensure adequate home care and to support the healthy growth and normal development of the children under five age group. On the other hand: families need to be respond appropriately when their children are sick, need to know the appropriate time for seeking assistance and also need to know additional care, counseling and recommendations for treatment. The improving of the family and community practices is one of the three components of the IMCI strategy, the main goals of this component to initiate a link between the families and the health providers, to reinforce and sustain the family practices that are very necessary for the survival, growth and development of the children. In order to improve the care of children by their families there are several elements ; firstly: family should response to illness care seeking by asking advice from the health providers,

additionally there were a preventive and promotive child interventions like : improving feeding practices, micronutrient supplementation and reducing indoor air pollution.

Examples of the best practices in the improvement of the family and community practices at several countries. In Ethiopia, trials teaching home treatment of malaria reduced deaths among children to 29 per 1000 from 50 per 1000 in controlled communities. A study in Bangladesh has revealed that exclusive breastfeeding rates increased to 84 % with the community promotion program. A research in Peru and India demonstrated that it is possible to improve the infant feeding with nutritional counseling in the health services. Also the positive deviance mode reduced severs malnutrition in Vietnam from 26 % to 4 % in two years (Baltimore, 2001).

The researcher suggested that the family and community component should be activated and empowered by learned the lessons form other countries experiences. In order to enhance the third component of the IMCI strategy implementation as well increase the quality of care to under five age group children.

Conclusion and Recommendations

Conclusion

In an attempt to evaluate the IMCI strategy that adopted by MOH/ GS, the current descriptive analytical study was conducted at PHCC. Parallel with WHO recommendation is to improve child health services in Palestine, the MOH adopted the IMCI in 2002, and is being activated on capacity building of primary health care settings, including training of health care providers at the PHCC level. However, the program is not well followed up nor supervised, therefore, the aim of the study is to evaluate the IMCI strategy status to recognize how the implementation could be promoted. Main goal for establishing the IMCI strategy is to achieve a greatest benefit for up to five age group in order to decrease morbidity and mortality rates. Also it is effective in improving the quality of care to the same age group and ensuring a comprehensive care for them. Additionally the IMCI strategy improves the health system structure, it improves the health providers skills in treating and managing sick children and it promotes family and community practices. So if the implementation of the IMCI promoted and developed by overcoming the main present barriers, adoption of clear supportive policies and provision of basic supplies and facilities parallel with the WHO recommendations all these necessary actions and procedures ensure the proper implementation of the IMCI strategy.

This study is the first one in GS, which deals with evaluation of the implementation of IMCI strategy and the main objective of the study to promote the implementation. The study sample included all the PHC physicians and nurses who received training in the IMCI the response rate was 90.6 %; also seniors and decision makers and trainees at MOH and supportive associations. The study demonstrates that there were major problems affecting the IMCI implementation

strategy. The training was carried out; but still there is a chance to improve the IMCI training courses. So managerial interventions such as sufficient follow up, supervision and monitoring are crucially important to promote the IMCI implementation.

a round seventy seven percent (77.2 %) stated that they need the IMCI to be included in the pre-service training at medical and paramedical curriculum. So the researcher suggests that the IMCI strategy should be introduced at the local universities to give the trained health providers the chance to be familiar with the messages of the entire implementation of the strategy. At the same time, the study demonstrated that there was lack of support from the health management system around of 75 % of the study population agree on that issue and this could be eased through sufficient managerial intervention.

the study revealed that the supervision insufficient as well there were insufficient supervisory visits to the PHCC; insufficient supervisory forms available and no recommendations written to the staff. All those problems could be alleviated through reinforcement of the supervision by establishing training courses for new supervisors and well planned supervisory visits program. On the other hand the study revealed that there were shortage of basic IMCI supplies at the PHCC like IMCI hand out guidelines, the wall IMCI chart, child records, mother records and supervisory forms; at the same time there were shortage of some essential IMCI drugs e.g. vitamin A; managerial intervention is necessary to over come drug. so effort should be done for the improvement of the availability of essential drugs, basic equipments and supplies. Also the study revealed that the involvement of the third component to improve the family and community practices as the national of the IMCI coordinator stated is still not promoted and still need refreshment and activation. (Interview with national IMCI coordinator. Nov.-2008)

The researcher suggested that the family and house holds practices should be promoted to create a partnership between health providers and families. The result of in depth interviews emphasized the same results of the questionnaire. The people who participate at the in-depth interviews revealed that there were numerous barriers including the over load of work at the PHCC. Inadequate training programs with non-planned follow up after it, poor acceptance of the community to the benefit of the strategy, lack of support from the management system, no clear supportive policy, insufficient supervision and monitoring, insufficient provision of basic need IMCI supplies. Most of them suggested that there is a need for clear policy, clear managerial intervention procedures and support from the health management system to reinforce the implementation of the strategy, scaling up the coverage, coordinate with other different players including the governmental organizations, NGOs, UNRWA. Also, activate the supervision and follow up programs by training new supervisors, establishing systematic planned visits, providing the essential drugs and equipments and other facilities needed for the implementation of IMCI strategy after training, increase the trainee's numbers by establishing equity principles to cover all GS. Increasing the participation of the community by building up relationship in order to increase the quality of children health.

Recommendations

The study enabled the researcher to put useful recommendations to help in improving and promoting the status of IMCI strategy at the ministry of health if considered by policy makers, managers and health professionals as follows:

- Managers at all levels need to be fully aware with the IMCI strategy; Policy makers needed to take decisions focusing on the holistic concept of the IMCI strategy.

- The management capacity of the health care system should be empowered in a way that would strengthen the implementation of IMCI and follow up the protocols.
- Adequate human, financial and material resources needed to be allocated to facilitate and maintain what has been achieved and to cope with the expansion phase.
- Follow up of trained IMCI health providers should be intensified.
- The supervisory visits should be sufficient to PHC in order to provide support and guidance as well as to reinforce the performance of health providers.
- Adequate data for evaluation must be collected regularly and used to adjust Implementation.
- Introducing the IMCI strategy in the teaching agendas of the local Universities as it should be an integral part of the medical and Para- medical curriculum to enhance the understanding of the message of the strategy.
- There is a need to develop community participation and family support to the health system to create community collaboration.

Study recommendations

- More focused studies that tackle certain group of variables independently need to be conducted such as training, supervision.
- More studies that concentrate on how the health providers' skills and performance can be promoted in using the IMCI guidelines.

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Medical Dictionary

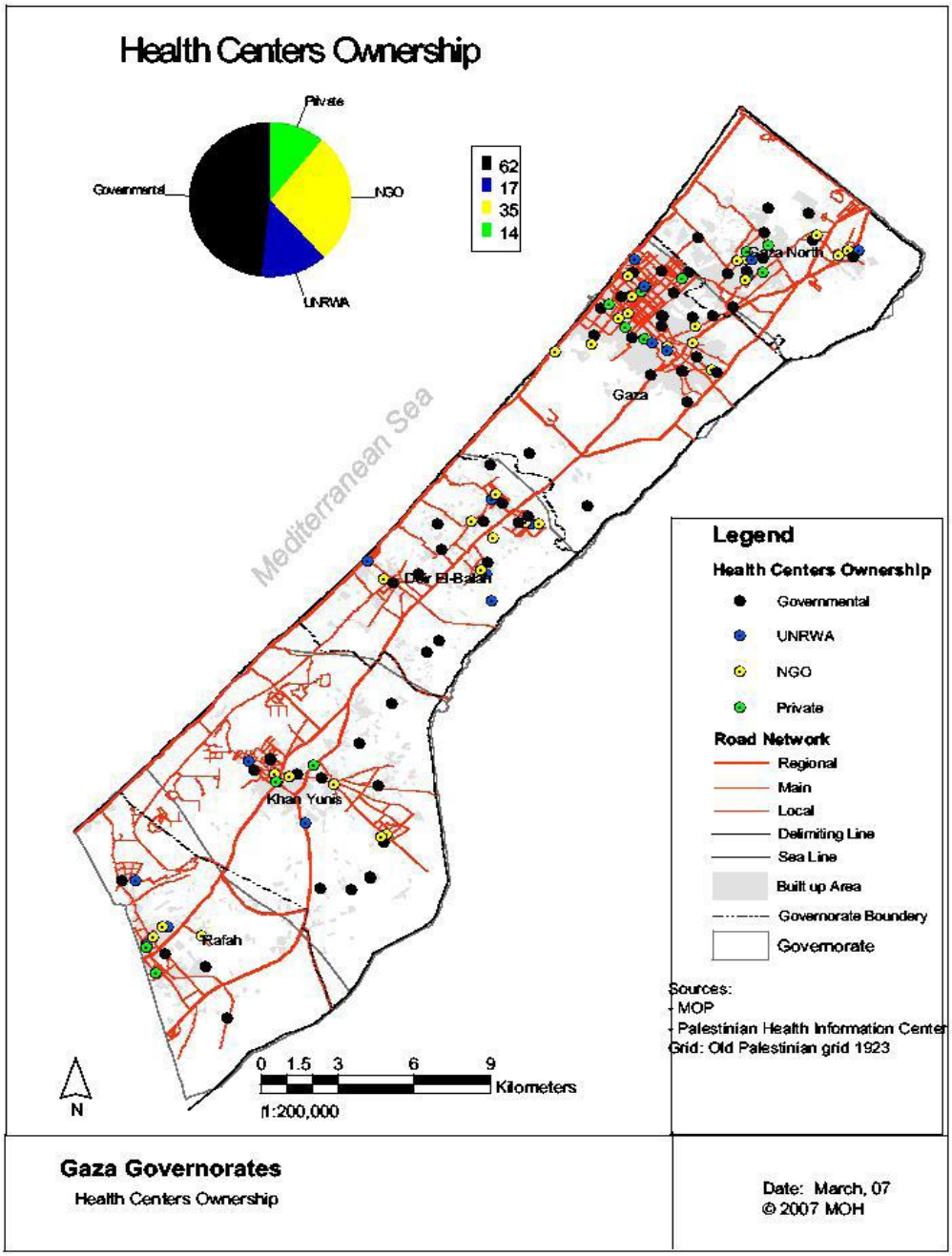
Business Dictionary

Annex (1)

Map of Palestine

Annex (2)

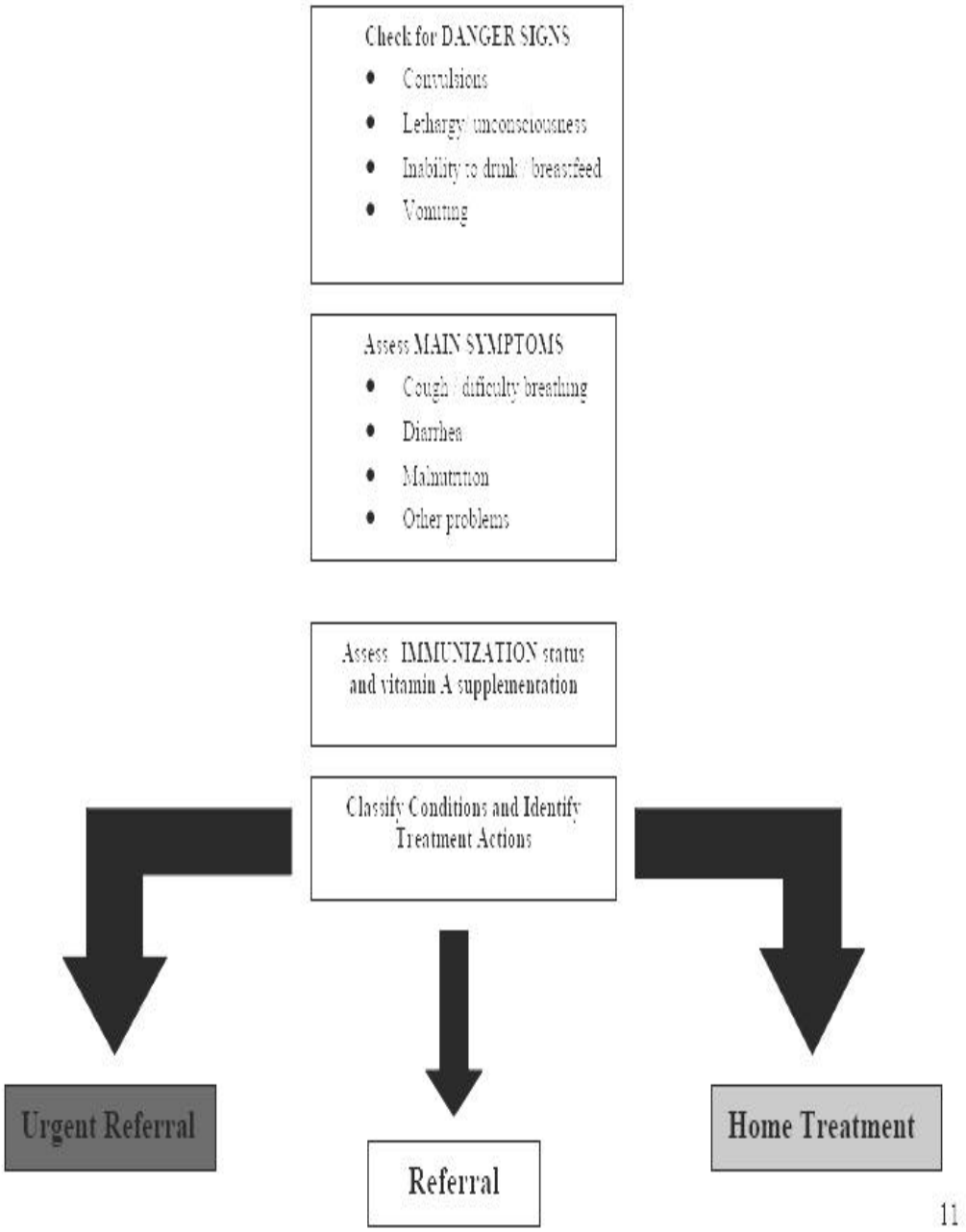
Map of Gaza Strip



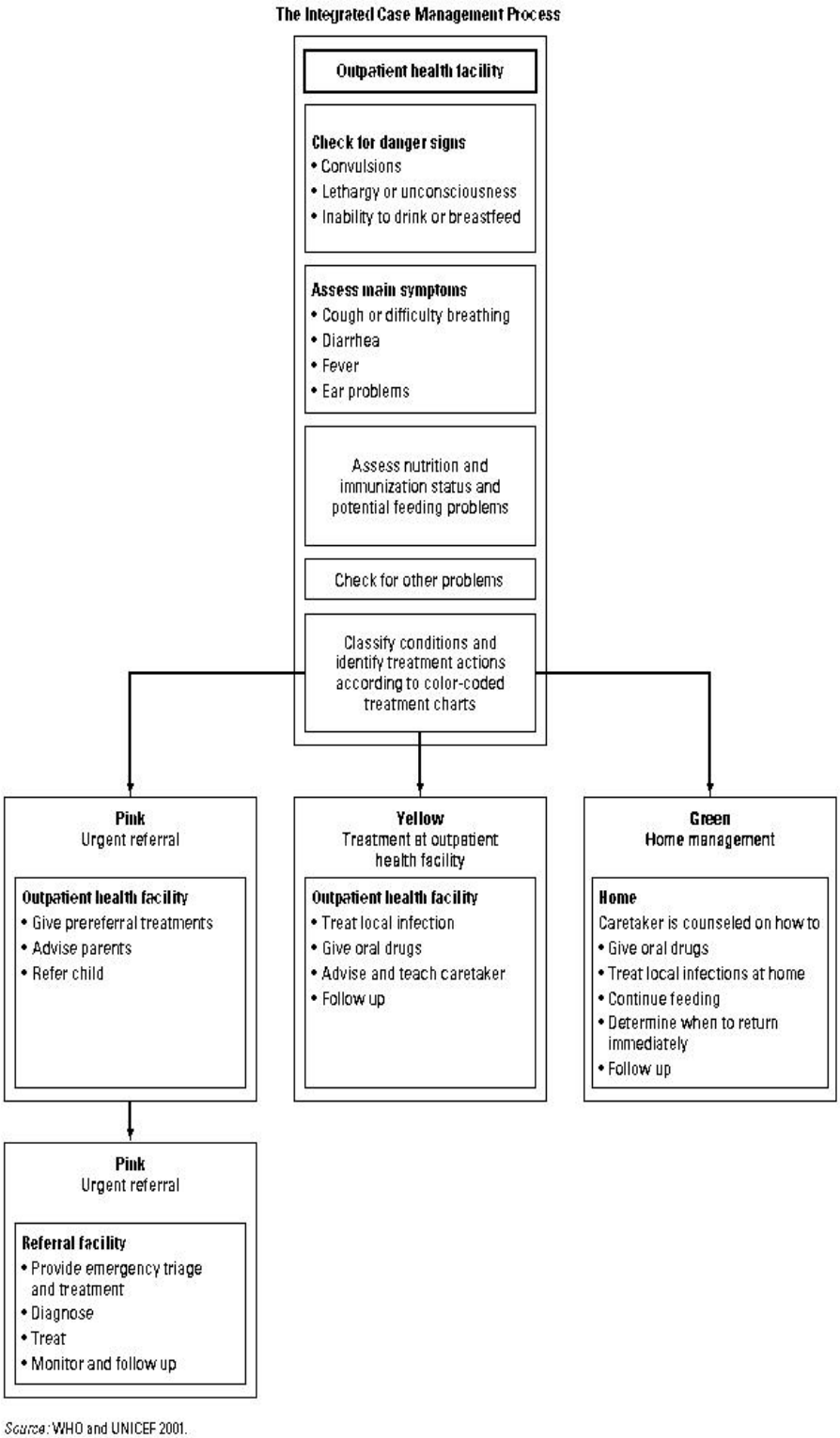
Annex (3)

(WHO,2004).

Figure 1. Process of the management of cases in the IMCI strategy for children of 2 months to 5 years old. (modified from WHO/UNICEF "model chapter for textbooks")



Annex (4) (WHO & UNICEF, 2001).

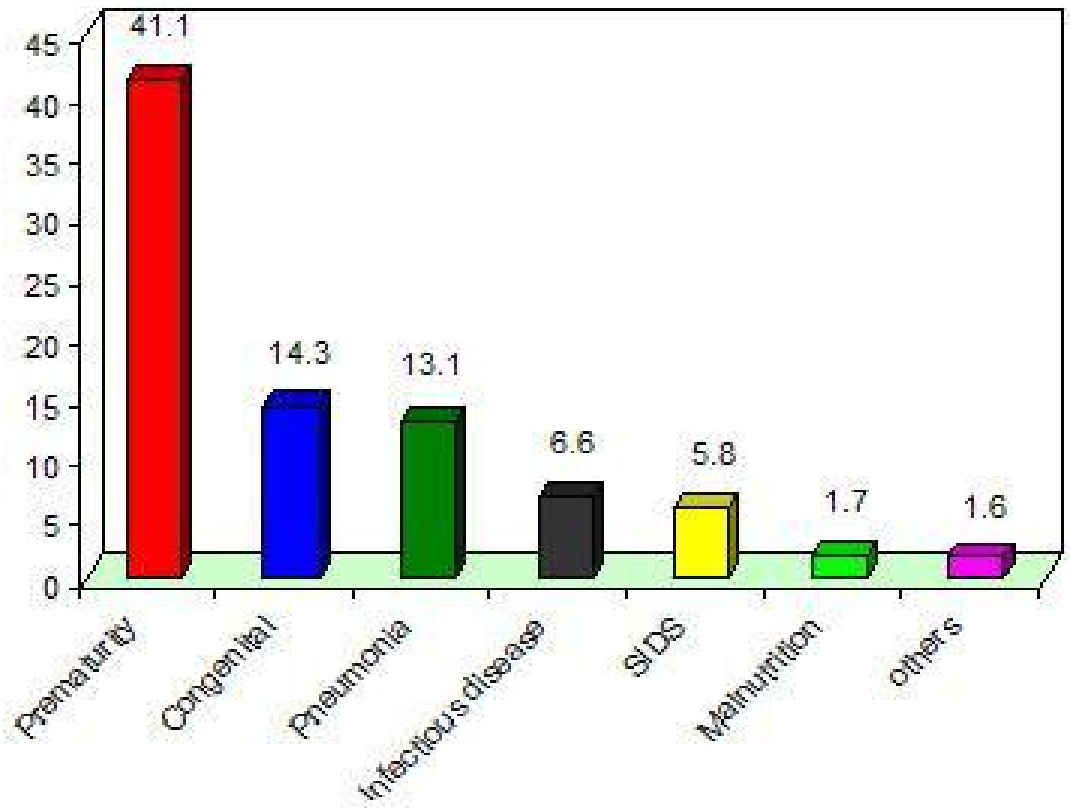


Source: WHO and UNICEF 2001.

Annex (5)

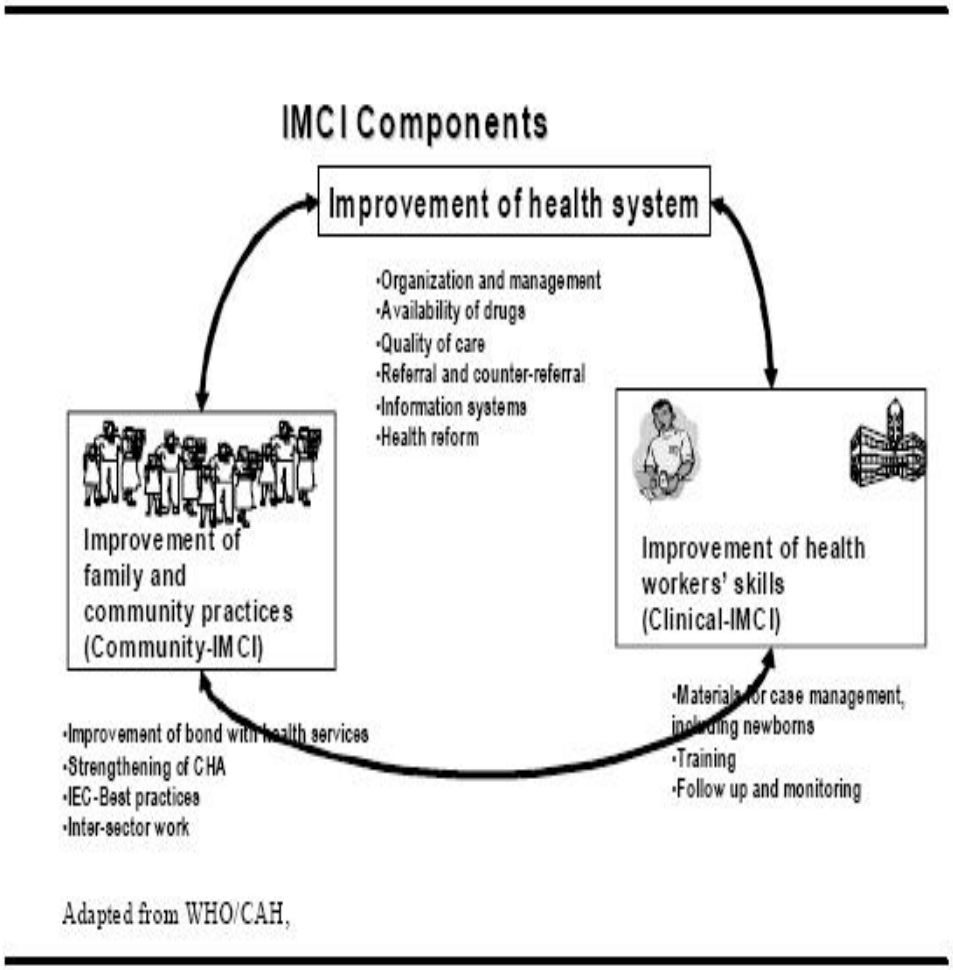
(Hamad, 2005)

Figure 3: Distribution of infant death by causes



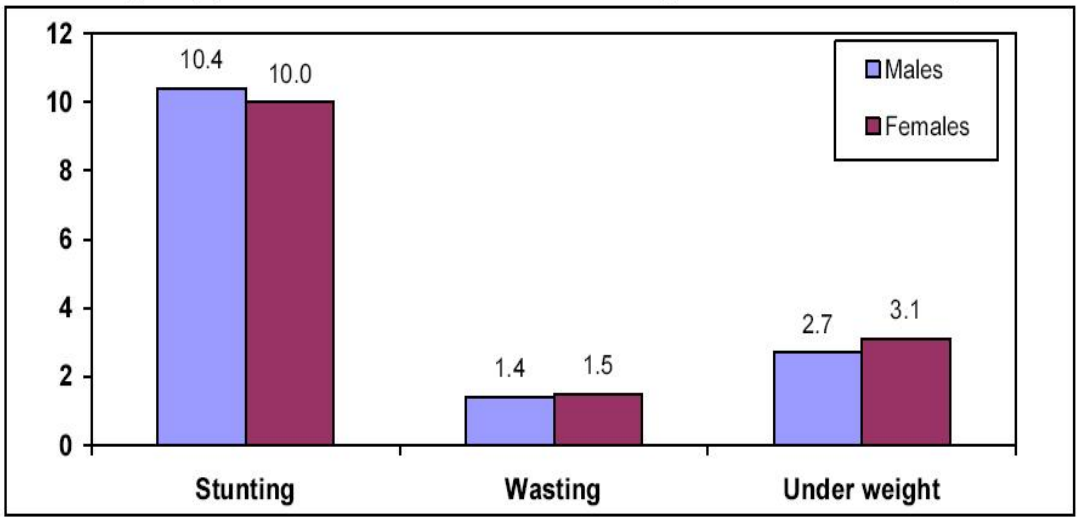
Annex (6) (USAID, 2001).

IMCI Components

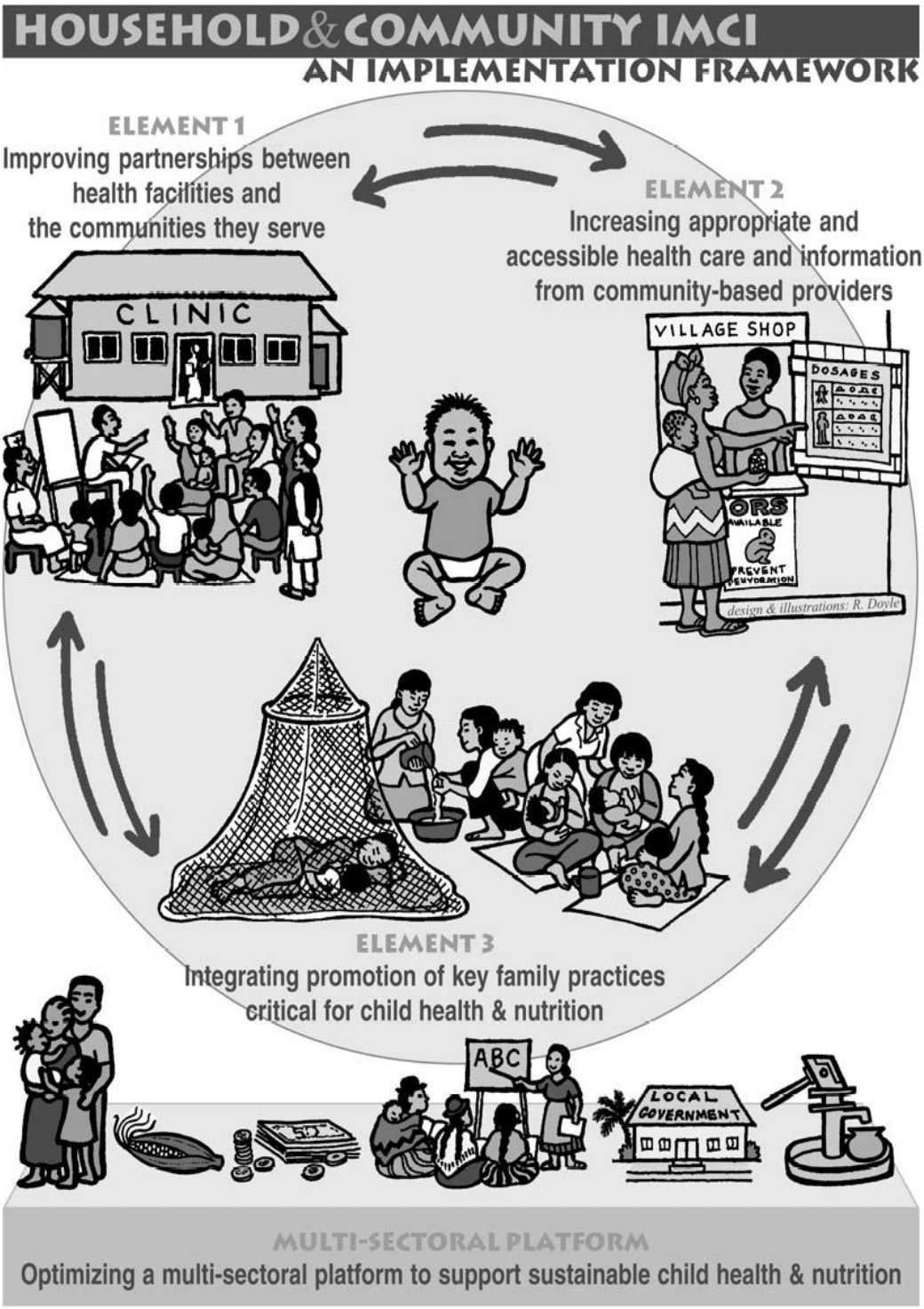


Annex (7) (UNICEF, 2006).

Figure (7): Prevalence of malnutrition among children under five by sex

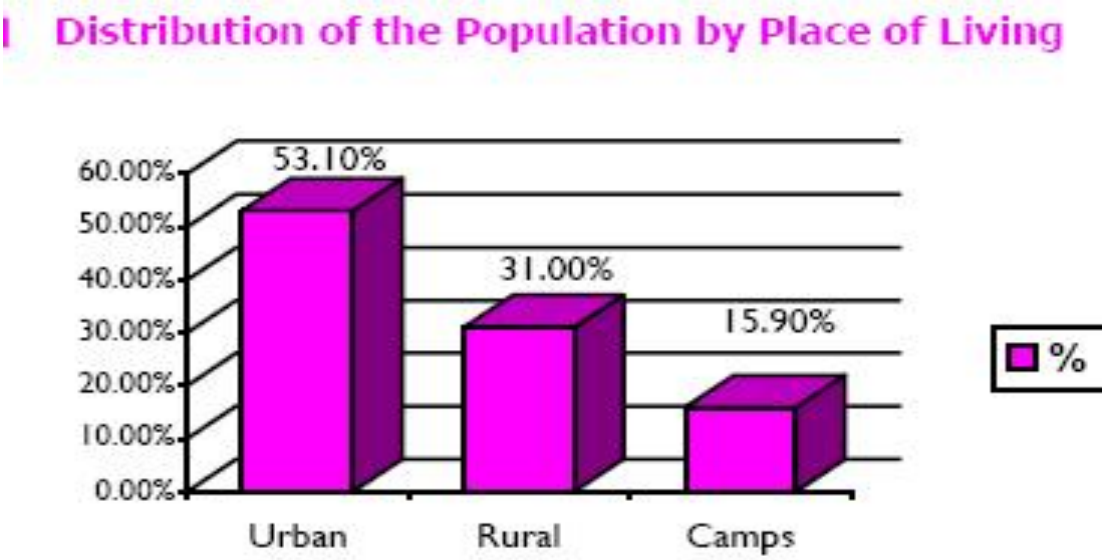


Annex (8) (Core Group, 2001)



Annex (9)

(PCBS, 2003).



Annex (10)

School of public health

Cover letter

Questionnaire

Dear participant:

This study is carried out by the researcher Abeer Abu Seif as a partial fulfilment of the requirements for the degree of Master of Public Health Al-Quds University.

The aim of the study is to evaluate the IMCI strategy implemented in the MoH and to recognize how the implementation could be promoted in order for the strategy to contribute in decreasing childhood mortality and morbidity in GS.

You are selected to participate in this study and I'm looking foreword to your participation in filling this questionnaire.

It takes you about 20 minutes to complete it. Your participation is voluntary; you have the right to refuse to answer questions, you have the right not to participate.

I would like to assure you that the information will be confidential and the questionnaire will be coded.

The information will be used for scientific purpose.

I appreciate your cooperation.

Thank you for your cooperation

QUESTIONNAIRE

Form .1.

Part I **Serial No. ----------**

Code No. ---------

Personal Information

1-Sex □Male □Female

2- Province

□North Gaza □Gaza □ Mid zone □Khan Younis □ Rafah

3-Occupation □ Physician □ Nurse

4-Years of clinical practice since you have graduate…….

5-Specify your level of responsibility at the clinic…….

6- Name of clinic……..

7-Years of experience in Primary health care ……Years

8- When last time the current organization provided up date training …….

Part II

General perception of IMCI adoption

9-Can you explain in a few words, what IMCI is?

……

……

……

10- Do you know that the IMCI policy is adopted by the ministry of health or not?

1- Yes

2-No

3- Not sure

If Yes, How it is being implemented?

……

……

……

If No, kindly explain why?

……

……

……

11-Did you receive any IMCI training courses?

1- More than one training course.

2- Standard training

3- Never

12-How many weeks the IMCI training was?

1- One week

2-Two weeks

3- More than two weeks

13- The time of training was sufficient.

1-Strongly disagree

2- Mildly disagree

3-Mildly agree

4-Strongly agree

14- The educational methods of training were appropriate.

1-Strongly disagree

2-Mildly disagree

3-Mildly agree

4-Strongly agree

15- Do you need more training on IMCI guidelines to refresh your knowledge?

□ Yes □ No

16- There are three components to IMCI and we would appreciate if you evaluate the MOH involvement in each of these mentioned below questions.

A) Improving the skills of health workers.

1- A lot

2-Limited

3- Not at all

B) Improving the health system.

1- A lot

2- Limited

3-Not at all

C) Improving household and community practices.

1- A lot

2-Limited

3- Not at all

17- IMCI strategy is effective in improving the quality of care for children under 5.

1- Strongly disagree

2- Mildly disagree

3-Mildly agree

4-Strongly agree

Kindly explain, how?

……

……

……

18- IMCI strategy is effective in providing comprehensive care for children under 5

1- Strongly disagree

2- Mildly disagree

3-Mildly agree

4-Strongly agree

19- Do you believe that IMCI should be in the pre-service training?

□Yes □ No

20- Do you practice the IMCI at your clinic?

1- Never

2- Rarely

3- Sometimes

4- Often

21- There is support from the management system to facilitate the IMCI implementation at the clinic.

1- Strongly disagree

2-Mildly disagree

3-Mildly agree

4-Strongly agree

22- What are the three most important ways in which you receive support from the management system?

……

……

……

23- What are the three most important ways in which you feel lack of support from the management system?

……

……

……

24- To which extent the IMCI training you have participated in is suitable to the nature of your work?

1- Highly suitable

2- Suitable

3-Un suitable

25- How many times during the last six months did the clinic receive a supervisory visit? |—|—| Times/ Months

26-Does the supervisor observe case management of a sick child at the last time when he/she visited the clinic?

□ Yes □ No □ Don't Know

27- Does the clinic have a supervisory form?

□ Yes □ No □ Don't Know

IF Yes: 27.a. Does the record of the latest supervisory visit in the form include also any recommendations to the clinic staff?

□ Yes □ No □ Not Found

Part III

40. Please list the important factors that lead you to participate in IMCI training program?

Rank these factors according to its importance?

……

……

……

……

42. Please mention the most important skills you gained from the IMCI training you have participated in?

……

……

……

……

43. What are the main limitations & difficulties from your point of view that have delayed implementation of the IMCI?

……

……

……

……

…….

44. Please write down any comments, suggestions & thoughts you would like to share with us?

……

……

……

……

The end

Thank you for your cooperation

The researcher
Abeer Abu Seif

Evaluation checklist to evaluate the IMCI Activities

Form .2.

Serial No. ----------
Code No. ----------

Evaluation of Health System Support

This section will be filled up by observation.

Part I

1-There is enough space and other pre-requisites available to see patients at the clinic.
□ Yes □ No □ Not Applicable

2- Are the equipments and facilities needed to implement IMCI guidelines available at the clinic?

No.	Type of equipments or facilities	Available (Seen)	Not available
2.1	Handout guidelines		
2.2	IMCI wall chart of guidelines		
2.3	Timer for respiratory rate		
2.4	Referral forms & records		
2.5	Mother cards		
2.6	Thermometer		
2.7	Torch		
2.8	Weight functioning scale		
2.9	Nebulizer		
2.10	Tongue depressor		

Part II

This section will be filled by asking the internal pharmacy of the clinic.

1- All the essential IMCI drugs are available in stock.
□ Yes □ No □ Don't Know

2- IMCI drugs are available in the clinic throughout the year.
□ Yes □ No □ Not Applicable

3- Please tick the following regarding the availability and quantity of amount the listed drugs.

Note: This paper will be filled by the staff at each pharmacy of the visited PHC.

No.	**Drugs**	**Availability** **a. Always available** **b. Some times** **c. Not available**	**Amount** **a. Adequate** **b. In adequate**
3.1	**ORS**		
3.2	**Contrimoxazole** tablet or susp.		
3.3	**Amoxycillin** tablets (250mg) or susp.		
3.4	**Nalidixic acid** 250mgtab.		
3.5	**Vitamin A** blue (100,000IU)or red(200,000IU) caps with nipple		
3.6	**Iron** syrup or Drops 25mg/ml		
3.7	**Paracetamol** syrup 120mg/5mlor Tablets 100mg or 500mg		
3.8	**Tetracycline eye ointment**		
3.9	**Gentian violet** (0.25%)		
3.10	**Salbutamol** solution or metered dose inhaler(MDI)		
3.11	**Salbutamol** syrup 2mg/5 ml or tablets 2mg or 4mg		
3.12	**Diazepam** ampule (10mg/2ml)		
3.13	**Erythromycin** syrup (200mg/5ml)		
3.14	**Metronidazole** 125mg/5ml		
3.15	**Diloxanidide furoate** 250mg tab.		
3.16	**Chloramphenicol IM**		
3.17	**Benzylpenicillin IM**		
3.18	**Gentamycin IM**		

Part V

Assessment of improvement in the key community and family practices
Note: Mothers will be selected randomly from the clinic.

1- Care taker knows that children up to **6** months need exclusive breastfeeding.

□ Yes □ No □ Don't Know

2- Care taker knows that children aged **6-9** months should receive breast feeding and complementary feeding.

□ Yes □ No □ Don't Know

3- Caretaker knows that children should be given increased fluid and continued feeding during illness.

□ Yes □ No □ Don't Know

4- Caretaker knows at least two sings of when to return immediately.

□ Yes □ No □ Don't Know

5- Caretakers know when to seek care during child's illness.

□ Yes □ No □ Don't Know

Thank You

Annex (11)

In Depth Interview Questions

1 - Do you think that IMCI strategy is convenient to the Palestinian territory ?

……

……

……

2- Describe the MCI status at the Palestinian MOH ?

……

……

……

3 - There are three stages to the implementation of IMCI strategy and we would appreciate if you evaluate the MOH involvement in those stages?

……

……

……

4 - What are the main limitations & difficulties from your point of view that delayed the implementation of IMCI?

……

……

……

5 - Why do the trained health providers fail to follow the IMCI protocols ?

……

……

6 - Do you think that IMCI should be included in the pre-service training?

……

……

……

7 - From your point of view, how the barriers for full implementation can be over come ?

……

……

……

8- How the IMCI implementation could be accelerated and scaled up?

……

……

……

9 - Please write down any suggestions & thoughts you would like to share with us?

……

……

……

Annex (12)

List of the In Depth Interview Names

Dr. Youness Awad allaha (MOH)

Dr. Rafat Hassouna (UNICEF)

Dr. Mahmoud Daher(WHO)

Dr. Heam Sa'allah (UNRWA)

Mr. Jehad Matter (MOH)

Mr. Ahmed Manssour (MOH)

Mr. Abed Allaha El-Nurieb (MOH)

Mr. Ebraheem El- Hoor

Annex (13)

List of the Names of experts for the validity of the questionnaire topics

Dr. Yehia Abed- El-Quds University.

Dr. Bassam Abu Hamad- El-Quds University.

Dr. Ashraf El-Jeedee-El-Quds University.

Dr. Ayoup El-A'alem- UNRWA.

Dr. Abed El- Jabar El-Tebee- Director General at PHC ,MOH.

Dr. Sobhe Skeek-MOH.

Dr. Mohammed El-Madhoun- Islamic University.

Dr. Wa.ael Thabet – El-Quds University.

Dr. Nafeth Barakat - Islamic University;Director of Business Research Unit

Assistant Professor of Statistics and Mathematics

Dr. Akram Habeeb- Islamic University.

Mr. Sa'adee abu Awad- El-Quds University.

Mr. Na'ael Younes–UNDP.

Mr. Jehad Okasha- MoH.

Annex (14)

Al-Quds University
Jerusalem
School of Public Health

جامعة القدس
القدس
كلية الصحة العامة

2008/11/26

الأخ/د. فؤاد العيسوي المحترم
مدير عام الرعاية الأولية – وزارة الصحة
تحية طيبة وبعد،،،

الموضوع: مساعدة الطالبة عبير أبو سيف

تقوم الطالبة المذكورة بأعلاه بإجراء بحث بعنوان :

"Evaluation of the Integrated Management of Childhood Illnesses Program Adopted in the Ministry of Health –Gaza Governorates"

كمتطلب للحصول على درجة الماجستير في الصحة العامة–مسار إدارة صحية و عليه نرجو التكرم للإيعاز لمن ترونه مناسب لتسهيل مهمة الطالبة في جمع البيانات اللازمة من عيادات الرعاية الأولية التابعة لإدارتكم الموقرة .
علماً بأن المعلومات ستكون متوفرة لدى الباحثة و الجامعة فقط.

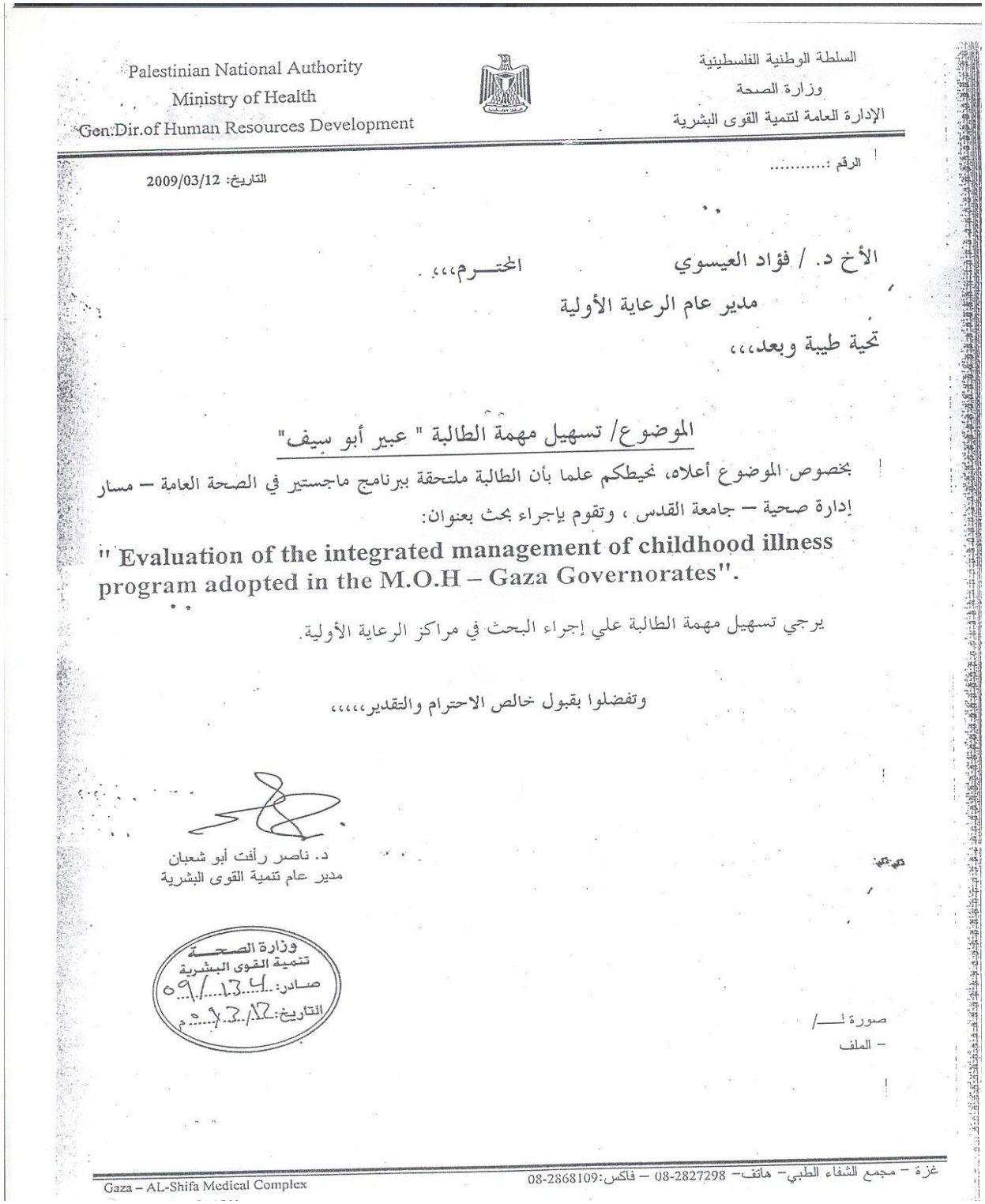
و اقبلوا فائق التحية و الاحترام،،،

د. بسام أبو حميد
منسق عام برامج الصحة العامة

نسخة:
- الملف

Jerusalem Branch/Telefax 02-24799234
Gaza Branch/telefax 08-2884422-2884411
Sphealth@admin.alquds.edu
فروع القدس/تلفاكس 02-2799234
فرع غزة/تلفاكس 08-2884422-2884411
ص.ب/51000-القدس

Annex (15)



Palestinian National Authority
Ministry of Health
Gen:Dir.of Human Resources Development

السلطة الوطنية الفلسطينية
وزارة الصحة
الإدارة العامة لتنمية القوى البشرية

الرقم :.....

التاريخ: 2009/03/12

الأخ د. / فؤاد العيسوي المحتـــرم،،،
مدير عام الرعاية الأولية
تحية طيبة وبعد،،،

الموضوع/ تسهيل مهمة الطالبة " عبير أبو سيف"

بخصوص الموضوع أعلاه، نحيطكم علما بأن الطالبة ملتحقة ببرنامج ماجستير في الصحة العامة – مسار إدارة صحية – جامعة القدس ، وتقوم بإجراء بحث بعنوان:

" Evaluation of the integrated management of childhood illness program adopted in the M.O.H – Gaza Governorates".

يرجي تسهيل مهمة الطالبة علي إجراء البحث في مراكز الرعاية الأولية.

وتفضلوا بقبول خالص الاحترام والتقدير،،،،

د. ناصر رأفت أبو شعبان
مدير عام تنمية القوى البشرية

وزارة الصحة
تنمية القوى البشرية
صادر: 09/13.4
التاريخ: 12/3/2009

صورة لـــ/
- الملف

Gaza – AL-Shifa Medical Complex

غزة – مجمع الشفاء الطبي– هاتف– 08-2827298 – فاكس:08-2868109

Summary (Arabic)

الملخص العربي للدراسة

تقييم استراتيجية التدابير العلاجية المتكاملة لأمراض الطفولة تحت سن الخمس سنوات التي تبنتها وزارة الصحة في محافظات غزة.

إعداد: عبير محمد أبو سيف

إشراف: دكتور/ ايريك ساريوت

ملخص الدراسة

في العام 1995قامت منظمة الصحة العالمية ومنظمة رعاية الطفولة التابعة للأمم المتحدة (اليونيسيف) بتطوير استراتيجية تعرف باسم استراتيجية التدابير العلاجية المتكاملة لأمراض الطفولة تحت سن الخمس سنوات .هذه الاستراتيجية هي طريقة معيارية تعمل بشكل فاعل على تقليل نسبة الوفيات والأمراض الناتجة عن المسببات الرئيسية الخمس لأمراض الطفولة تحت سن الخمس سنوات وتساهم في نموهؤلاء الأطفال وتطورهم الصحي.وزارة الصحة في غزة تبنت هذة الستراتيجية و قامت ببعض الخطوات للتطبيق منها التكييف لهذه الستراتيجية لتناسب قطاع غزة و تدريب الطواقم الطبية في مراكز الرعاية الاولية. الهدف العام من هذه الدراسة هو تقييم مدى فاعلية تطبيق هذه الاستراتيجية التي تم تبنيها من قبل وزارة الصحة الفلسطينية \ محافظات قطاع غزة، وإمكانية إيجاد آليات لتطوير هذا التطبيق.

أهداف الدراسة الخاصة

- تقييم اليات تطبيق استراتيجية التدابير العلاجية المتكاملة لأمراض الطفولة تحت سن الخمس سنوات التي تبنتها وزارة الصحة و المرحلة التي وصلت لها في التطبيق.
- معرفة نقاط القوة و نقاط الضعف في اليات وزارة الصحة في تطبيق الاستراتيجية.
- التحقق مما يمكن عمله لتحسين تطبيق الاستراتيجية.
- تقييم الانشطة التي نفذتها وزارة الصحة لتطبيق الاستراتيجية.
- وضع مقترحات و توصيات لتحسين فعالية تطبيق الاستراتيجية.

محيط الدراسة و أدواتها

تم تطبيق هذه الدراسة في مراكز الرعاية الأولية التابعة لوزارة الصحة الفلسطينية في قطاع غزة. وهي دراسة متعددة وصفية، تحليلية صممت لتكون كمية ونوعية نفذت في الأعوام 2008– 2009، حيث طبقت الطريقة الكمية عبر استبيان تم توزيعه على 160 طبيب وممرض مثلوا مجتمع الدراسة ، وهم الذين تدربوا على آليات تطبيق هذه الاستراتيجية، وقد استجاب لتعبئة الاستبيان 145 متدرب بين طبيب وممرض حيث كانت نسبة الاستجابة % 90.6 .و تم ايضا تقييم توفر الادوات، التجهيزات و الأدوية عن طريق ملاحظة المراكزالتي تم زيارتها خلال الدرلسة و البالغ عددها 37 مركز رعاية أولية، كما تم مراجعة 150 ملف للاطفال داخل العيادة للتاكد من تطبيق الاستراتيجية، اضافة الى ذلك تم مقابلة 37 من المترددات باطفالهن على المراكز، تم انتقائهن بشكل عشوائي للاستفسار عن الاستشارة المقدمة لهن عن طرق الرعاية و التغذية . واستخدمت الطريقة النوعية عبر إجراء مقابلات فردية معمَقة مع ثمانية من الخبراء و المدربين في البرنامج وصانعي القرار في وزارة الصحة ومنظمة الصحة العالمية ومنظمة اليونيسيف.

تحليل البيانات

تم استخدام البرنامج الاحصائي SPSS لتحليل المعلومات ، و تم اختبار النتائج باستخدام طريقة. Cross Tabulation لتوضيح الفروق بين متغيرات الدراسة .

نتائج الدراسة

وقد أظهرت نتائج الدراسة أن التدريب انجز، و لكن لم يكن هناك متابعة لتعزيز و تحسين أداء المتدربين، أيضا أظهرت الدراسة أن الدعم من الادارة في وزارة الصحة لتطبيق الاستراتيجية غير كافي وخاصة في الاشراف، المتابعة ، تزويد المراكز الصحية بالأدوات ، الأجهزة و الأدوية الضرورية لتعزيز التطبيق .77% من عينة الدراسة يريدون أن تشمل هذه الاستراتيجية في منهاج الطب والمهن الطبية في العموم. كما وبينت الدراسة أن أقلية حوالي 38% ممن شملتهم الدراسة قد قاموا بتطبيق هذه الاستراتيجية وأن 25,5% قد اتبعوا بروتوكولاتها. وأن الإشراف على تطبيق هذه الاستراتيجية لم يتعدى 26,2% مما يدلل على ضعف الاشراف و المتابعة لتطبيق الاستراتيجية ، حيث يعتبر سبب رئيسي في ضعف التطبيق.

توصيات الدراسة

- يأمل الباحث أن تساهم هذه الدراسة في تسليط الضوء على استراتيجية التدابير العلاجية المتكاملة لأمراض الطفولة تحت سن الخمس سنوات، بحيث التوصيات تساهم في تحسين تطبيق هذه الاستراتيجية في مراكز الرعاية الأولية التابعة لوزارة الصحة في قطاع غزة والتي بدورها قد تقلل من نسبة المرضى والوفيات لدى الأطفال تحت سن الخمس سنوات.
- صانعي القرار في وزارة الصحة والمؤسسات الدولية الداعمة لهذه الاستراتيجية يجب أن ياخذوا في عين الاعتبارتطبيق الاستراتيجية حسب توصيات منظمة الصحة العالمية.
- توفيرالدعم الاداري الضروري والاشراف و المتابعة لتعزيز تطبيق الاستراتيجية.
- ادخال مفاهيم الاستراتيجية في المناهج الطبية و المهن المساعدة.
- تعزيز المشاركة المجتمعية و تفعيل دور الاسرة في تطبيق الاستراتيجية.