

GAZA'S CHILDREN: FALLING BEHIND

THE EFFECT OF THE BLOCKADE ON CHILD HEALTH IN GAZA



CONTENTS

GLOSSARY OF TERMS

Anaemia	The reduction to below needed levels of red blood cells or their oxygen-carrying capacity, often caused by insufficient iron intake.
Diarrhoea	The passage of loose or liquid stools more frequently than is normal, often as a result of gastrointestinal infection. Bloody or watery diarrhoea can result from different types of infections.
Haemorrhage	Profuse bleeding from ruptured blood vessels.
Infant mortality	The rate at which children die in the first year of birth, per 1,000 live births.
Maternal mortality	The rate at which women die from childbirth related causes, per 100,000 live births.
Neonatal asphyxia	The deprivation of oxygen to a newborn that lasts long enough during birth to cause physical harm.
Stunting	Low height for age, usually caused by long-term insufficient nutrient intake and frequent infections.
Underweight	Low weight for age, usually caused by under-nutrition.
Uterine rupture	A potentially catastrophic event during childbirth where the myometrial wall is breached.
Wasting	Low weight for height, usually resulting from acute food shortage or disease.

ACRONYMS

AHLC	Ad Hoc Liaison Committee	PCBS	Palestinian Central Bureau of Statistics
AIDA	Association of International Development Agencies	PNGO	Palestinian NGO Network
CMWU	Coastal Municipalities Water Utilities	UNCTAD	United Nations Conference on Trade and Development
EWASH	Emergency Water Sanitation and Hygiene in the oPt	UNDP	United Nations Development Programme
ICPH-BU	Institute of Community and Public Health at Birzeit University	UNEP	United Nations Environment Programme
MAS	Palestine Economic Policy Research Institute	UNESCO	United Nations Scientific and Cultural Organisation
OCHA	United Nations Office for the Coordination of Humanitarian Affairs	UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
oPt	occupied Palestinian territory	WHO	World Health Organisation

FOREWORD

A REPORT BY SAVE THE CHILDREN AND MEDICAL AID FOR PALESTINIANS



Photograph: Phoebe Greenwood

IMAGE: Jabalia Refugee Camp, Gaza, one of the most densely populated areas on earth.

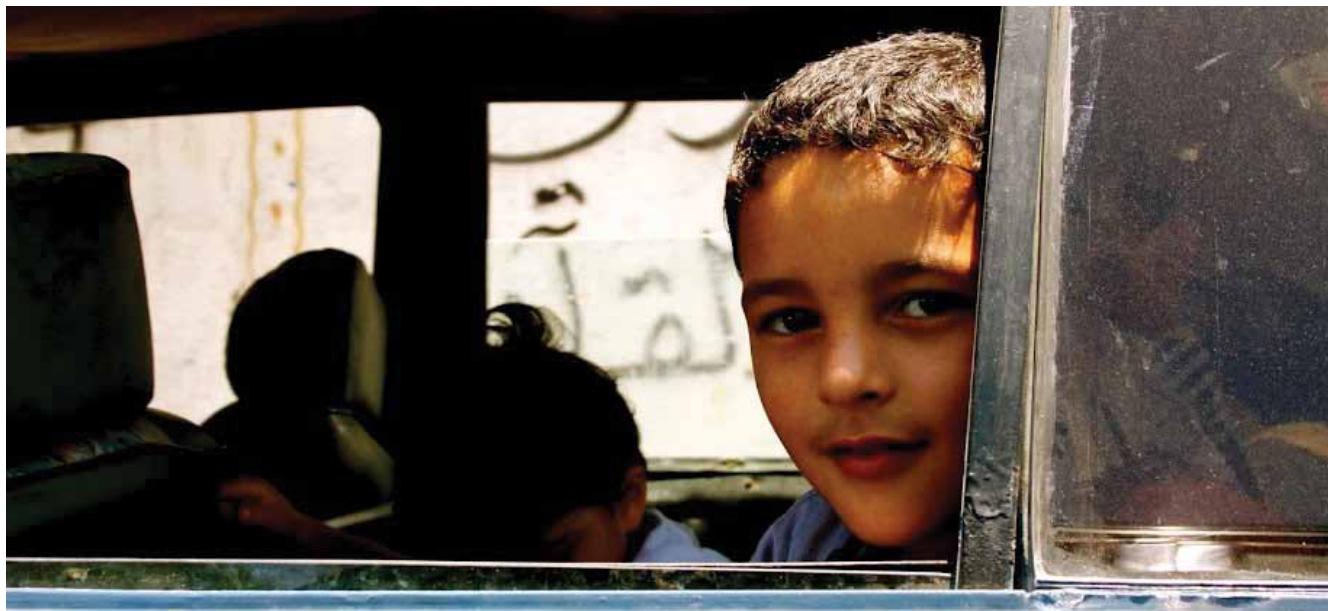
The blockade of the Gaza Strip has reached its fifth year. I have visited Palestine twice in the last few years and witnessed the problems Palestinians are facing first hand.

This report, by Save the Children and Medical Aid for Palestinians, lifts the lid on the human impact of the blockade placed on one of the most densely populated areas on earth. It gives a vital insight into the way in which the blockade has invaded every level and aspect of children's lives in Gaza: domestic, communal, and environmental, as well as social, educational, psychological and physical.

Despite Israel's 'easing' of the blockade in 2010, families continue to suffer from food insecurity and remain critically dependent on food assistance. Gaza's health sector is still suffering from shortages of equipment and medical supplies and is struggling to recover from conflict. Poor housing conditions, overcrowded schools and a heavily polluted environment are also exacting a high price on children's mental and physical health.

PROFESSOR TERENCE STEPHENSON

EXECUTIVE SUMMARY



Photograph: Nuriya Oswald

IMAGE: Boy in Gaza City

As of June 2012, the blockade of Gaza will be five years old. This report shows that the extensive restrictions placed on the movement of people and goods in and out of Gaza continues to have a real and negative impact on the lives and health of Gaza's children. The blockade has been the single greatest contributor to endemic and long-lasting household poverty in Gaza.¹ This has meant that families are unable to buy nutritious food and are less able to produce nutritious food themselves.²

- Stunting, or long-term exposure to chronic malnutrition, remains high, found among 10% of children under five.³
- Anaemia, usually caused by dietary iron deficiency, affects most children in Gaza (58.6% of schoolchildren⁴, 68.1% of children 9-12 months⁵) and one-third (36.8%) of pregnant women.⁶ If untreated, iron-deficiency anaemia adversely affects child development and pregnancy outcome.⁷
- Sanitation-related diseases with serious implications for child mortality, such as typhoid fever and watery diarrhoea in children under three years of age, have increased at clinics serving refugees in the Gaza Strip.⁸ Gaza's polluted water supply will have long-term health implications, but current monitoring is insufficient to measure the impact of untreated sewage and poor water quality.

Every child is entitled to an adequate standard of living, the right to survival and to develop their full potential. To have the best chance of a healthy, happy life, each child needs nurturing relationships, a safe environment in which to explore and play, nutritious food and clean water, and access to professional and responsive services, including medical care.

The Palestinian Authority has set goals to meet those needs, repeatedly establishing well-intentioned plans to improve crucial child health benchmarks. But time and again in Gaza, those plans have been waylaid. Today, the reason for this failure is due to the far-reaching impacts of the blockade on the broader social determinants of health. In addition, the blockade has exacerbated political differences between Gaza and West Bank authorities and contributed to a lack of national, coordinated strategic planning and delivery of services.

At every level where children seek support, that support has been shrinking due to the blockade: **families** bear the strains of prolonged poverty and food insecurity, with no end in sight; the **community** is torn by political disputes and critical services, including health, have been unable to recover from conflict; and the **environment** is heavily polluted, with Gaza's residents being squeezed into an ever-shrinking, increasingly unhealthy space with almost no clean water. It is the lack of this that makes children particularly vulnerable to the spread of diseases.

According to Article 6 of the Convention on the Rights of the Child, to which Israel is a signatory, "States Parties recognise that every child has the inherent right to life" and "shall ensure to the maximum extent possible the survival and development of the child."

The Convention also ensures, in Article 24, the child's right to the "highest attainable standard of health", specifically mentioning the child's right to access health services, and the State Party's duty to decrease infant mortality, disease, malnutrition and the risks of pollution. Yet there is evidence to suggest that conditions in Gaza are causing the avoidable deaths of children.

- A comprehensive 2009 study in the health journal *The Lancet*⁹ observed that the rate at which children die in the first year of life has not improved in Gaza for decades, while nearly all other countries in the world have improved in this respect. Data gathered on infant mortality rates since the blockade began is inconclusive and not comprehensive.
- Since 2007, 605 children in Gaza have been killed and 2,179 injured as a direct result of the conflict, and 60 children were killed and 82 injured in Palestinian factional and other fighting.¹⁰
- In 2012 alone, three children drowned in pools of open sewage that cannot be adequately addressed as long as the blockade hinders sanitation development.¹¹
- Delays and denials in the issuing of permits for Gaza children seeking medical care in Israel are also putting lives at risk. About one out of every 20 children (174 of about 3,949) referred abroad in 2011 for treatment missed his or her appointment due to delays in issuing the travel permit. Three were denied permission. Three children died while waiting for permission to travel.¹²
- Ongoing conflict has also put Israeli children at risk, in particular those living in communities near the perimeter of Gaza. Children have lost school days as a result of rocket fire from Gaza, and live in fear when there is active conflict.¹³

The Palestinian Authority devotes around 11% of its Gross Domestic Product to healthcare, more than most middle-income countries.¹⁴ In addition, hundreds of millions of dollars in international aid are directed towards the occupied Palestinian territory every year and yet child health in Gaza is deteriorating. Aid is helping to reduce many of the symptoms of this crisis but its solution demands political will.

Israel, as the Occupying Power¹⁵, has the right to address legitimate security concerns but it must also allow for the free flow of goods, people and services. According to the international laws of war, Israel is responsible for the welfare of Gaza's civilian population. At this key moment, five years on, we call on Israel to fulfil its responsibilities and end the blockade of Gaza immediately and in its entirety.

KEY RECOMMENDATIONS

- As a matter of urgent priority for the health and wellbeing of Gaza's children, Israel must lift the blockade in its entirety to enable the free movement of people and goods in and out of Gaza, including to the West Bank and East Jerusalem.
- Recognising that relying on humanitarian assistance to mitigate the devastating impacts of the blockade has not worked, robust funding and development strategies must be devised and implemented for Gaza based on aid effectiveness principles that include long-term assistance into key services. The Ad Hoc Liaison Committee¹⁶ should immediately be tasked with developing such a strategy and action plan by the end of 2012.
- The international community, along with the relevant authorities, should implement as a matter of priority long-term strategies specific to improving the nutritional status of Gaza's children.
- Given the direct relationship between a supply of clean water and deteriorating water and sanitation systems, on one hand, and child mortality on the other, all planned water and sanitation projects should be implemented immediately, and a clear timetable provided by the Israeli authorities for their completion.
- It is essential that the Palestinian Authority facilitates the impartial and rapid material provision and funding of medical supplies and services in Gaza, and all Palestinian authorities work as a matter of urgency to unify the health care system.

INTRODUCTION: FAILING GAZA'S CHILDREN



Photograph: Nuriya Oswald

IMAGE: Boys on their way home from school to their refugee camp

In Gaza today, border closures have left 1.59 million Palestinians¹⁷ confined within 365 square kilometres¹⁸, ever more vulnerable to poverty, hunger and disease. This includes about 819,000 children¹⁹ who are particularly vulnerable to the impacts of the blockade. To have the best chance of a healthy, happy life, each child needs nurturing relationships, a safe environment to explore and play in, nutritious food and clean water, and access to professional and responsive services, including medical care.

However, in 2012, Palestinians are in much the same place they were in 1999: trying to advance the health of children despite the odds.

In 1999, Palestinian officials set out to decrease the rate at which children die in the first year of life from 21.1 to 15/1,000 live births. They also sought to reduce by half the rate of infants that die in the first 28 days of life.²⁰ The current Palestinian Authority health strategy seeks more modestly to decrease the infant mortality rate to 18 by the year 2015.²¹

Despite billions in foreign aid, progress in improving the lives of Palestinian children has been stalled for over a decade. Gaza's children are in a prolonged health crisis that has been obscured by the fits and starts of conflict and reinforced by five years of blockade.²² The latest Palestinian Authority health strategy includes no current infant mortality statistics from Gaza due to years of estrangement between West Bank and

METHODOLOGY

This report combines data produced by Palestinian and international organisations with direct field research and the invaluable recommendations of experts working in the health sector. We have also been given exclusive access to data gathered in a household survey by the Institute of Community and Public Health at Birzeit University (ICPH-BU) between July and August 2009, with the support of Medical Aid for Palestinians, on a sample of 3,017 Gaza households with children under age five. One randomly chosen adult was interviewed from each household.

There are challenges and limitations to such an undertaking, particularly data that is lacking or poor in quality, as well as a lack of standardisation between various studies. However, we believe that the available information is of a quality to support the drawing of some concerning conclusions.

This report views health through the broad definition of the World Health Organization (WHO) as: "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".*

*See also *The Lancet*, "Health as human security in the occupied Palestinian territory", 2009; 373: 1133-43.

Gaza authorities.²³ Gaza's health authorities gather information and develop strategies largely in isolation, without reference to wider national analysis or strategic systems development.

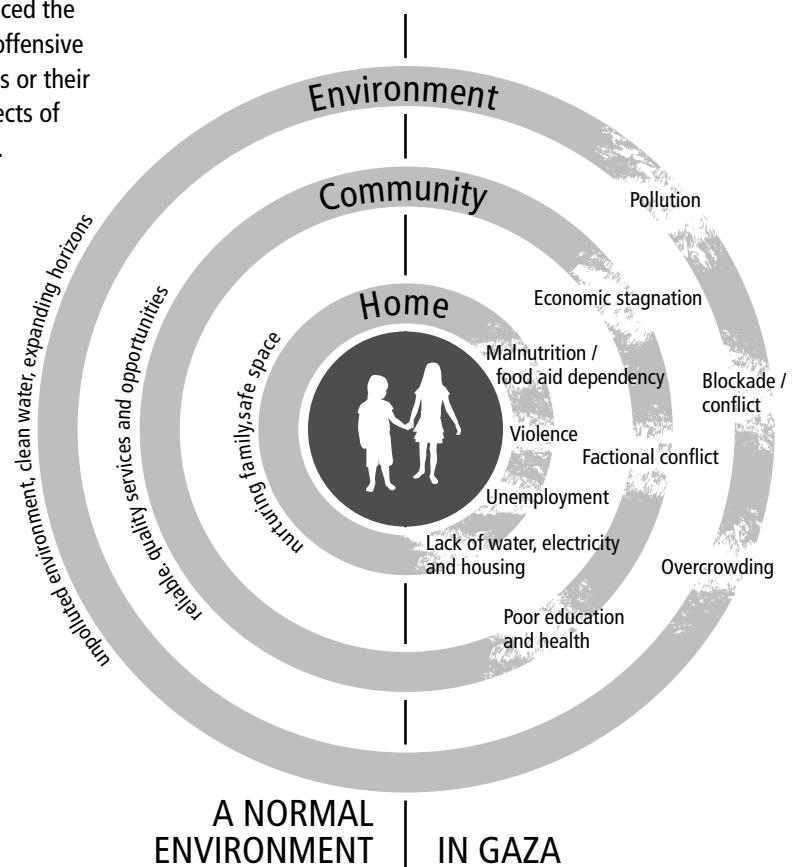
Under the terms of the blockade, many basic food items and medical supplies have been prevented from entering Gaza, including X-ray machines, electronic imaging scanners, laboratory equipment, batteries and spare parts without which equipment cannot be used.²⁴ In addition, exports continue to be severely curtailed, amounting to only one percent of pre-2007 levels.²⁵ Fuel and electricity supplies are also controlled and impeded, contributing to power cuts lasting eight hours every day.²⁶ In early 2012, a fuel crisis increased the daily blackouts to 12-18 hours a day.²⁷ These power cuts directly impact public health, especially that of children, because they also impede water supply and sewage treatment.²⁸ A clean and consistent water supply is key to ensuring that occurrences of diseases related to poor hygiene and sanitation, which have a greater impact upon infants and children, are reduced.²⁹

In the midst of this blockade, Gaza's children experienced the devastating effects of Operation Cast Lead, a 22-day offensive in late 2008 and early 2009. Thousands lost loved ones or their homes, vital infrastructure was destroyed, and the effects of trauma continue to reverberate across the community.

Although an easing of the blockade was announced in June 2010, this has only resulted in an increase in consumer goods, not reconstruction materials, entering Gaza from Israel and only a slight increase in the exports allowed out.³⁰ These measures have not been nearly enough to resuscitate Gaza's withered economy, respond to the aftermath of Operation Cast Lead or enable adequate provision of basic public services like education, housing and health.³¹

As long as the blockade on Gaza continues, Gaza's children have little chance of having their basic needs met. The safe haven of the home is threatened by violence and tension, as impoverished families struggle to get by. City neighbourhoods and agricultural areas alike remain scarred by destruction and environmental damage that cannot be adequately resolved without proper equipment and resources. Public services function sporadically, casualties of inadequate and uneven funding, political disputes and the inability to move goods and people in and out of Gaza. The health care system in Gaza, too, is compromised, meaning that worrying health trends are not adequately addressed.

Although the conflict continues to impact child health in Gaza, the blockade adds to, reinforces and compounds these impacts. On every level, the blockade on Gaza is interfering with children's wellbeing and must be brought to an end.



THE LEGACY OF OPERATION CAST LEAD

On December 27, 2008, Israel launched Operation Cast Lead. In 22 days, more than 1,400 Palestinians were killed, an estimated 1,172 of whom were civilians, and 5,300 Palestinians were injured.³² Of those killed, 353 were children and 860 children were injured.³³

Children's injuries in Cast Lead were sometimes serious, with limbs amputated or permanent disability sustained.³⁴ In 66 documented cases, children died when Israeli forces obstructed medical care during the war.³⁵ Three Israeli civilians and one soldier were also killed during the operation as a result of Palestinian rocket fire, while nine Israeli soldiers were killed in combat, including four in friendly fire incidents. A further 512 Israelis, including 182 civilians, were wounded.³⁶

Aside from the thousands killed and injured, Operation Cast Lead had a devastating impact upon Gaza's infrastructure, which was already weakened by a year and a half of the blockade. Thousands of homes, and numerous factories, farms, water and sewage systems, government buildings, electricity connections and medical centres were damaged or destroyed. During the offensive, at least 11 major wells and over 30 kilometres of water networks were destroyed.³⁷ 40 primary care clinics and 12 hospitals were damaged, some of them in direct hits.³⁸ For all or part of the operation, 21 of the Ministry of Health's 56 primary healthcare centres and three out of 17 clinics serving refugees were closed.³⁹ 16 health workers were killed and 25 injured.⁴⁰

In addition, many homes and businesses were destroyed and approximately 325,000 people were displaced or affected.⁴¹ Furthermore, six months after the conflict in July 2009, the Institute of Community and Public Health at Birzeit University (ICPH-BU) survey found that 53.8% of homes surveyed had one to two people living in each room, 32.9% had more than two people in a room and 13% had more than three.⁴²

Many displaced families have since moved out of relatives' homes and set up temporary shelters on or near their damaged homes.⁴³ While a more detailed picture of current living conditions does not exist, we know that since Operation Cast Lead, most destroyed and damaged homes have not been rebuilt. In January 2012, it was estimated that Gaza requires an additional 71,000 housing units to meet basic housing needs.⁴⁴ The restrictions of the blockade mean that the materials necessary to meet these needs are not available.

Operation Cast Lead increased pressure on families' ability to provide nutritious food, with 80.9% of families reporting

Shayma, 13, was living with her family in a tent after their Jabalia home was destroyed in Operation Cast Lead.

"Before the offensive, I had my own room. I had pictures of Barbie posted in every corner of my room. Now I sleep with my three sisters and three brothers in the same area."

"Before the offensive, I used to go to school, come back, have a shower, eat, study and then sleep. Now I go to school and come back without taking a shower because we always have a water shortage. I don't study, because I'm not comfortable."

"I don't feel at home at all. I stopped doing all the things I like, such as drawing and playing. I don't even like watching TV now, which was my favourite hobby of all."

"My academics are much worse than before the offensive. I was getting very good marks but now I'm not that good at all, and I'm afraid that now I won't be able to be a doctor."

food shortages during the operation and 10% continuing to do so six months afterwards.⁴⁵ Of the households surveyed in the ICPH-BU study, 91.1% said the quality of the food they were eating had diminished since before Operation Cast Lead. Almost all of the respondents (97.4%) said they were eating less meat and fresh fruit.

Rates of exclusive breastfeeding, 25.6% in 2007,⁴⁶ dropped to 2.7% in the aftermath of Operation Cast Lead.⁴⁷ Mothers believed their own diet wasn't healthy enough to sustain their child (89.6%) or stopped producing breast milk due to fear or stress (99%).⁴⁸

Not only did Operation Cast Lead affect the food infants and children were consuming, it also affected their physical and mental health. Six weeks after the offensive, the Fafo Institute for Applied International Studies and the United Nations Population Fund conducted a study⁴⁹ of more than 2,000 households to document what happened during the war. They found that, during the war, 30% of households had considered it too dangerous to go to hospital or clinic. In the week prior to the survey, 23% of children ages 5-14 had wet the bed and 26% of children reported experiencing difficulty concentrating.

FAMILIES REPORTING PSYCHOSOCIAL SYMPTOMS RESULTING FROM OPERATION CAST LEAD

Observed behaviour	No. of families reporting behaviour from at least 1 member	Percentage out of total families surveyed
Crying attacks	1,198	42.5
Fear of permanent darkness	1,651	58.6
Exaggerated fear of blood	723	25.7
Nightmares	1,210	43
Sleep disturbance	1,535	54.5
Feelings of frustration	1,626	57.7
Bad mood	1,811	64.3
Decreased appetite, weight	425	15.1
Increased appetite	344	12.2
Increased yelling	1,751	62.2
Increased thoughts of death	1,027	36.5
Bedwetting	1,053	37.4
Increased irritability	1,751	62.2
Lack of interest in self	332	11.8
Lack of interest in children	124	4.4
Inability to perform daily activities in last two weeks	442	15.7

The ICPH-BU 2009 survey likewise found that Operation Cast Lead had left a profound psychological impact on Gaza families. Around half of the 3,017 families surveyed reported that at least one family member suffered irritability, bouts of crying, nightmares, insomnia and a fear of darkness. More than one-third reported experiencing repeated thoughts of death.

While the scope of Operation Cast Lead was unprecedented, violence and its effects continue in Gaza (see Section IV), degrading the daily health and security of its children. "The long-term exposure of Palestinians to security threats has led to a state of long-term insecurity and demoralisation," says *The Lancet*. "Social resilience, seen as a positive adaptation amid adversity, is holding together Palestinian society and its economy, including the health system."⁵⁰

1 THE HOME: A PRESSURE COOKER

A critical haven for a child is the home, the main source of food and shelter and family nurturing. But in Gaza, the home environment is fraught with the strains of poverty, unemployment and trauma from the ongoing conflict.

Gaza is not a poor region historically. Gaza's agricultural land previously produced some of the most valued olives, strawberries and citrus fruit in the region. In the 1990s, its 40km of Mediterranean coastline produced 3,500 tonnes of fish every year.⁵¹ But decades of conflict, reinforced and compounded by the blockade, have shattered Gaza's industries⁵² and resulted in widespread unemployment and poverty⁵³ from which ordinary people struggle to escape.

Over one-third (38%) of children in Gaza are living in poverty.⁵⁴ The Palestinian Central Bureau of Statistics estimates that in the fourth quarter of 2011, more than 30% of the population was unemployed, up from 15% in 2000.⁵⁵

One of the most damaging impacts of the blockade is the suffocation of Gaza's economy resulting in Gaza residents' inability to buy the food they need. Nutritious food is not scarce in Gaza, but families cannot afford it. The loss of agricultural land and reduced access to fishing territory (part of the blockade) and the inability to import the materials needed for food production have all reduced supplies and driven up the price of produce, putting it further out of reach for Gaza's poor.⁵⁶ As a result, the easing of the blockade for consumer goods in June 2010 has not significantly improved the lives of families living in Gaza. 54% of Palestinians in Gaza are considered food insecure,⁵⁷ including 428,500 children.

CHRONIC MALNUTRITION AND RELATED DISEASES

Despite aid efforts to provide food supplements, young children and pregnant women are not receiving the nutrients they need to stay healthy. Stunting, or long-term exposure to chronic malnutrition, remains high, found among 10% of children under five.⁵⁹

Micronutrient deficiencies are also high. Anaemia, usually caused by iron deficiency, affects most children in Gaza (58.6% of schoolchildren⁶⁰, 68.1% of children 9-12 months⁶¹) and one third (36.8%) of pregnant women.⁶² According to the World Health Organization (WHO), the major health consequences of anaemia include "poor pregnancy outcome, impaired physical and cognitive development, increased risk of morbidity in children and reduced work productivity in adults. Anaemia contributes to 20% of all maternal deaths."⁶³

Dr. Adnan Al Wahaidi, Medical Director of Ard El Ensani, a Gaza organisation that treats children suffering from malnutrition, is an internationally recognised expert on the nutritional health of children in Gaza. He makes a direct link between the deteriorating state of children's health in Gaza and the blockade:

"Malnutrition has many aggravating factors. The high rate of poverty and the poor resources of the Palestinian nation, in addition to the ongoing occupation, and the inability of the country to develop its infrastructure (not just health but also education), are factors.

Child malnutrition is caused by vulnerability to disease. The destruction of infrastructure leads to deterioration in hygiene which also increases [infections associated with] malnutrition. With the continuous blockade, and Gaza's closed borders, malnutrition will continue, as we cannot get the food that we need to reduce the incidence of children suffering from malnutrition.

My personal concern is that a child who is growing up in these devastating conditions, is no longer able to be mentally, physically and educationally sound. I am afraid of more sickness and an entire disabled generation."⁵⁸

Children 9-12 Months in Gaza, Nutrition Indicators Over Time

	2006	2007	2008	2009	2010	2011
Underweight	2.3%	2.21%	3.09%	3.89%	4.11%	3.72%
Wasting	5.1%	3.8%	5.7%	6.2%	6.8%	4.6%
Stunting	4.4%	4.22%	5.55%	5.9%	5.07%	5.11%
Anaemia	68.2%	71.2%	73.4%	4%	76.5%	68.1%

Anaemia in Pregnant Women in Gaza Over Time

2006	2007	2008	2009	2010	2011
37.6%	33.3%	31.7%	45.1%	47.4%	36.8%

Source: Ministry of Health, National Nutrition Surveillance System, 2011 Report

CASE STUDY

Mariam Baker Jarboa, 30, has three young children. She has come to the Ard El Ensan Feeding Centre with her youngest son Mohamed, 13 months old.

Mohamed is underweight and he's anaemic. He became sick around five months ago. My other children are five and three years old and they're healthy. He can't stand and his teeth are very slow to come in. His appetite was very low so my aunt advised me to come to Ard El Ensan for a check up. Now he's also got a cough and a cold too.

One of the main reasons he is sick is that we have no income, so we can't afford to buy food. My husband is a fisherman. He lost his brother at the end of the war. The two of them were out at sea fishing in the final days of the war. My husband's brother was shot dead by Israeli soldiers. He had four bullets in his legs and one in the head. My husband wasn't injured but he hasn't been able to work since.

We're surviving now with support from my brothers. All my husbands' brothers are fishermen and none of them are working now. Because we've got no income, we applied for humanitarian aid from various organisations. We haven't received any support but my father-in-law's family does, so they share it with us.

Before the war, we used to share a big house with my husband's family but we couldn't afford to keep it. My father-in-law has divided his house among his sons. It's a building with four rooms; there are 19 of us living there. Our family lives in one room together. We even cook there.

Our health is entirely linked to our income. When my husband was working we ate well, we had lots of different types of food then. Now we eat meat every four to five months. The last time I ate fish was when I was pregnant with Mohamed, two years ago.

The last time I had money to go to the market was three months ago. Food has become so expensive — the price of meat, chicken, eggs, fruit and cooking gas especially has gone up. I've been living on food from Ard El Ensan. They give us mixed beans, fortified biscuits and semolina.

Our first visit here was on October 24, two months ago. I've seen an improvement in Mohamed in the last two months. His haemoglobin is now 9.5. He still can't stand up but he's gaining weight. On his first visit, he weighed 7kg. Now he's 8kg.

I'm worried about Mohamed's health and for the health of all my children.⁶⁴



Photograph: Phoebe Greenwood

IMAGE: Mariam Baker Jarboa, 30, holds her son Mohamed, 13 months, who is being treated for micronutrient deficiencies.



Photograph: Nuriya Oswald

IMAGE: Children in Khan Younis use the tap on the back of a water truck to fill their containers.

POOR LIVING CONDITIONS

Too many children in Gaza have no safe shelter. In one of the most crowded areas on earth, a housing crisis has been exacerbated by the ongoing ban on the import of construction materials including steel and cement under the blockade.⁶⁵ Only 1,000 of the 3,500 homes completely destroyed during Operation Cast Lead have been rebuilt as a result.⁶⁶ Overcrowding from the housing shortage carries health risks for thousands of Gaza's children, including reduced hygiene due to a lack of privacy and access to bathrooms, and the spread of disease.⁶⁷

Exacerbating these problems, Gaza's children do not enjoy a continuous supply of water due to power cuts that last as long as eight hours a day. By September 2011, the Emergency Water, Sanitation and Hygiene Group in the oPt was reporting that most of the residents of Jabalia, Gaza City and Rafah were receiving water for 6-8 hours as infrequently as twice a week and only 10% received water every day.⁶⁸ In early 2012, a fuel crisis increased the daily blackouts to 12-18 hours a day.⁶⁹

Without regular supplies of clean water and reliable electricity, children are limited in the times when they can bathe, play or study.

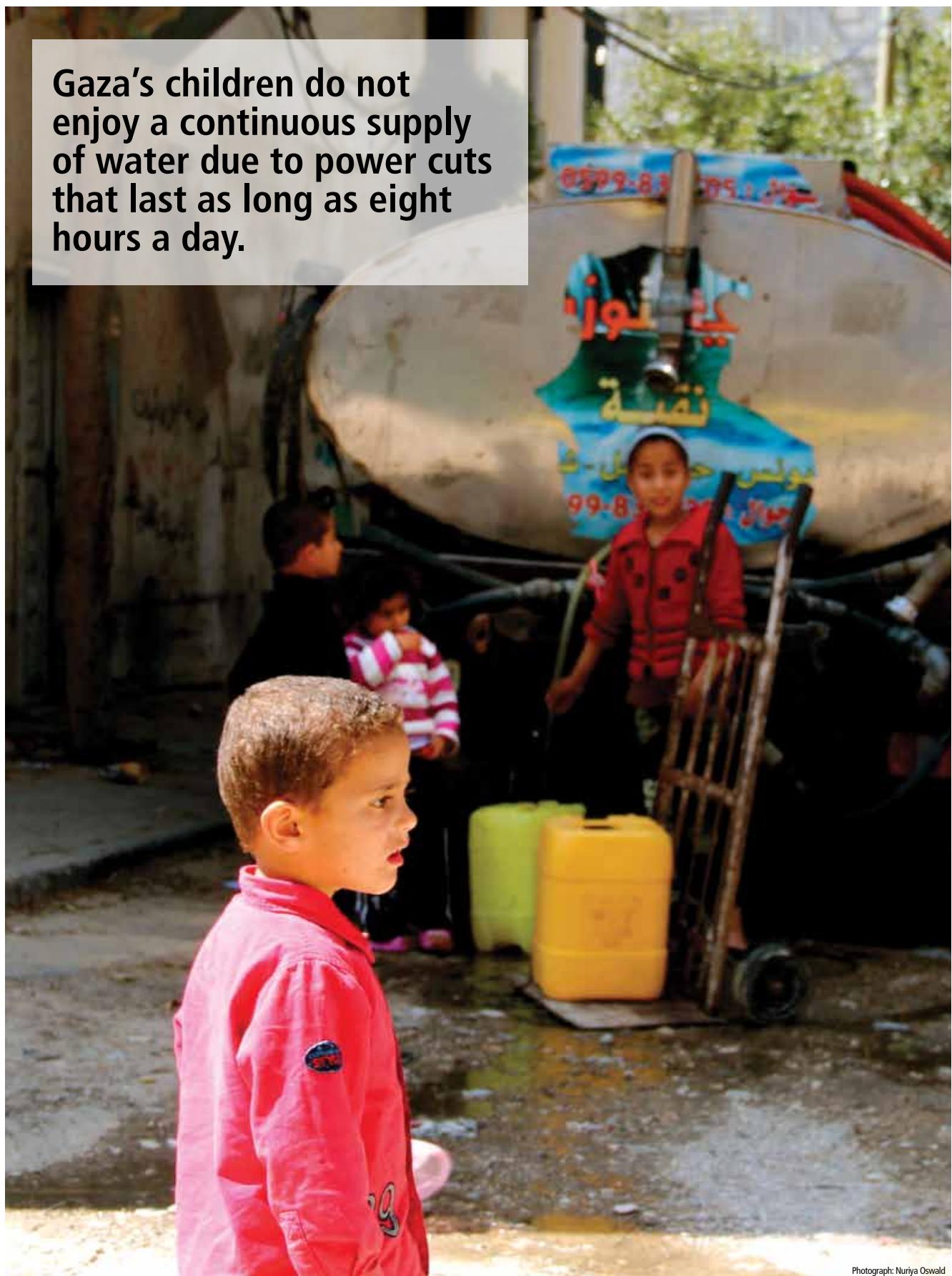
Many families have purchased generators to try to ease the problem, but Dr. Wahaidi says these too impact the health of Gaza's children:

"Another one of the disasters of the blockade is that, due to power cuts, most families rely on generators. The noise and the combustion of fuel when it's turned on are having a terrible affect on the health of the population. We are seeing a rise in bronchial asthma among children. Lead poisoning is fast becoming another of the major childhood challenges here."⁷⁰

Officials at one of Gaza's burns units report that a major cause of burns in children is the use of alternative fuels to run generators, and children have died in generator-related incidents.⁷¹

These health issues are a result of poverty and difficult living conditions, ongoing problems that are directly linked to the blockade, which compounds and reinforces the consequences of the ongoing conflict. In order to effectively tackle Gaza's nutritional crisis the local economy must be able to function. Until people and goods are allowed to move freely and agricultural and other local industries are supported, the health of Gaza's mothers and children will not improve.

Gaza's children do not enjoy a continuous supply of water due to power cuts that last as long as eight hours a day.



Photograph: Nuriya Oswald

2 THE COMMUNITY: FAULT LINES



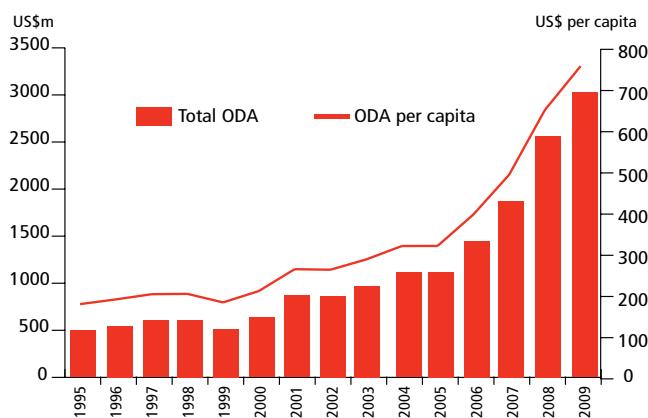
Photograph: Nuria Oswald

IMAGE: Al Awda Hospital, Jabalia

This report has already described how the conflict and the blockade impact the family unit, and therefore, the health of children. But children also gain critical health support from their communities, at school and when they go to the doctor. The blockade and the Hamas-Fatah split weaken the effective provision of essential services significantly.

As poverty has increased in Gaza, Palestinian authorities and the international community have sought to provide remedies. But the needs of Gaza's children have been lost amongst political differences between Gaza and West Bank authorities, a lack of comprehensive and coordinated strategic planning, as well as the restrictions of the blockade.

OFFICIAL DEVELOPMENT ASSISTANCE (ODA) TO THE PALESTINIAN TERRITORY



Source: OECD-DAC data from May 2011 World Development Indicators database (current prices)

After the blockade was instituted in 2007, international donors distributed billions of dollars in aid in Gaza in an effort to push Palestinians out of poverty. International aid to Palestinians increased dramatically, but funding through official channels was not permitted to go through Hamas-run ministries in Gaza.⁷²

Most projects described in the Palestinian Authority's Medium-Term Development Plan 2006-2008 never got off the ground. Between 1999 and 2008, the number of Palestinian non-governmental organizations in Gaza more than doubled.⁷³ Still, the percentage of foreign funding received by all Palestinian organisations providing health services declined steadily from about 33% in 2001 to 15% in 2008.⁷⁴

Health development aid has gone disproportionately to the West Bank.⁷⁵ In 2008, the United States (the biggest donor to the health sector overall) began funding an \$86m project to strengthen the Palestinian Authority Ministry of Health and modernize its facilities in the West Bank. No such funding has gone to Gaza ministries, meaning not only inequitable distribution, but the complete separation of development of the health systems in the two regions.

Implementation of a unified health system and systematic, cohesive data collection and analysis for planning has largely been abandoned by both Palestinian officials and international donors. As a result, major health indicators are now monitored separately in the West Bank and Gaza Strip, and programming is developed unevenly.

Restrictions on movement and access faced by aid organisations are partly responsible for this. A 2011 report by 84 aid organisations found that navigating the Gaza blockade and West Bank restrictions on movement cost them an additional \$4.5m annually, and most had faced trouble getting permission for international and local staff to enter Gaza.⁷⁶ Of all areas, the greatest affected was Gaza, where 88% of Association of International Development Agencies (AIDA)⁷⁷ members said that they had modified their optimal response strategies due to the difficulty in moving people and goods in and out of the territory.

Further affecting aid delivery, in June 2011, the United Nations Relief and Works Agency (UNRWA), which serves Gaza's more than one million refugees⁷⁸ had to cut Gaza programmes by 30% due to what it called a "critical" funding crisis.⁷⁹ The move affected health programming and halted back-to-school cash allowances for children's books and uniforms. Only 40% of UNRWA's budget for the oPt was funded last year and the agency has reduced its 2012 appeal, most of which goes to Gaza.⁸⁰

Prior to 2002, only 10% of refugees were dependent on UNRWA aid. Today, 70% of Gaza's refugees are receiving UNRWA assistance.⁸¹

Gaza's health system is increasingly ill-prepared to cope with the demands of its growing, impoverished population. The list of restricted goods – even after the blockade was 'eased'⁸² – far exceed the 'dual use' items (items that have both military and civilian use) outlined in the internationally-recognised Wassenaar Arrangement.⁸³ This, coupled with the difficulties in training medical staff abroad, and delays and shortfalls in the supply of approved drugs from the Fatah-controlled West Bank, is further degrading Gaza's health infrastructure.

WHO has composed a list of 480 medications and 700 medical disposables, including syringes, filters for dialysis and bandages, essential for providing health care in Gaza. These items are prerequisites for essential healthcare and must be available at all times. At the last inventory of Gaza's central pharmacy in March 2012, however, 39% (186) of the essential drugs and 29% (200) of the disposables were at or below one month's worth of supplies.⁸⁴ In the past, these have included paediatric items such as iron syrup used to treat anaemia in children and vitamin A and D supplements.⁸⁵ In fact, since 2007, stocks of medications and disposables have progressively declined after being delayed and not fully refilled by West Bank officials.⁸⁶

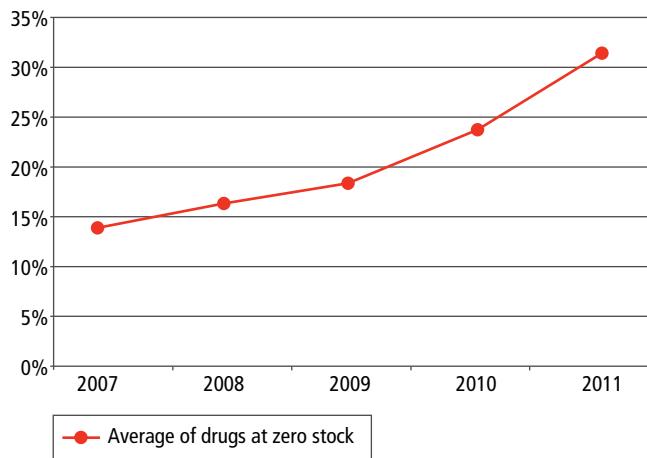
THE CONFLICT BETWEEN HAMAS AND FATAH

An internal division between rival Palestinian factions Hamas and Fatah is exacerbating the health crisis in Gaza, which is already at breaking point as a result of the blockade.

Hamas took control of Gaza following its victory in January 2006 parliamentary elections and subsequent clashes with ruling party Fatah in June 2007. Since then, the Fatah-dominated Palestinian Authority has governed the occupied West Bank and Hamas has governed occupied Gaza. The two factions signed a reconciliation agreement in February 2012, but its implementation has been delayed. While Gaza's health ministry is run by the Hamas government, it mostly relies on the Palestinian Authority in Ramallah, led by Fatah, for its funds and supplies.

The internal conflict means that communication between the two ministries is poor. For instance, mistrust between the ministries delays the approval of requests and results in serious shortfalls in deliveries of essential medical supplies to Gaza. The lack of a mutually agreed-upon mechanism for request, verification and supply between the West Bank and Gaza is largely responsible for the ongoing shortages of drugs and equipment in Gaza.

TRENDS OF ESSENTIAL DRUGS AT ZERO STOCK MONITORED BY THE WORLD HEALTH ORGANIZATION⁸⁷



Alarmingly, some hospitals report reusing disposables like rubber gloves, increasing the risk of infection and endangering patients.⁸⁸ The habitual long wait for prescription drugs is leading to longer stays in hospital and a protracted recovery for patients. This not only compromises patient health but piles additional costs of care onto Gaza's over-stretched health budget.⁸⁹ Some patients are asked to obtain the drugs and disposables they need from private sources, placing a greater burden on impoverished families.

[The drug shortage] affects all departments in our hospitals, especially oncology. We are missing [a medication] that is used to strengthen the bones of cancer patients. We haven't had this for three to four months. We're also missing painkillers used a lot with cancer patients and without which patients will suffer greatly. The problem is they don't send the right quantity. They never send enough so after the drugs finally arrive it's not long before we're short and the whole process has to begin again."

Mohamed Zemili, director of the Ministry of Health central pharmacy, in December 2010⁹⁰

In addition to a shortage in medication, Gaza's hospitals suffer from a shortage of adequately trained staff. Under the terms of the blockade, only a lucky few are able to exit Gaza and study abroad. This means that, increasingly, there simply aren't the numbers of trained medical staff to meet the needs of patients. Historically, Gaza's health service has suffered from piecemeal development in speciality areas including paediatric surgery, paediatric orthopaedics, oncology, cardiac surgery, neurosurgery, advanced critical care and neonatology. But the impact of the blockade has been to stop development in these areas altogether. Capacity-building, training and the updating of facilities are now effectively impossible.

Moreover, WHO has found that medical staff frequently lack the equipment they need as the devices that are in place are often broken, missing spare parts or outmoded due to the restrictions of the blockade.⁹¹

WHO also reports that both childbirth and post-natal care could be significantly improved in Gaza. Maternity wards are crowded and childbirth is actively managed in order to speed up delivery and make room for patients. The use of unsafe procedures means increased risk of complications,

including haemorrhage, uterine rupture and neonatal asphyxia. Further, new mothers are often discharged within a few hours of delivery. Discharge before 24 hours after birth carries substantial health risks, including postpartum haemorrhage, infection and neonatal sepsis. All of these medical conditions are "frequent" in Gaza and are a main cause of maternal and neonatal deaths.⁹² Pressure on Gaza's medical system is putting children and mothers at risk.

Doctors are frequently forced to refer their patients to hospitals in the West Bank, Israel and Egypt for treatment that simply isn't available in Gaza—particularly care for illnesses related to cancer, neurology and cardiology. Nor is there the ability to treat children with severe and rare chronic diseases. Once a patient has been given this referral, he or she must then begin the bureaucratic, time-consuming and often unpredictable process of getting permission to leave Gaza to enter either Israel or Egypt. Delays and refusals in getting these exit permits lead to missed appointments and, tragically, deaths.

Since Hamas came to power in June 2007, there has been a dramatic decline in the number of patients given permission to leave Gaza for treatment in Israel. The rate of exit permits granted dropped from 89.3% in January 2007 to 64.3% in December 2007.⁹³ Approximately one out of every 20 children (174 of about 3,949) referred abroad in 2011 for treatment missed his or her appointment due to delays in issuing the travel permit. Three were denied permission. Three children died while waiting for permission to travel.⁹⁴

As a direct result of the Israeli blockade and the political rift between the Palestinian leaders in the West Bank and Gaza, children are dying for lack of adequate medical treatment.



Photograph: Nuriya Oswald

IMAGE: Newborn

CASE STUDY

Rahab Zo'rob, 21, has one son Mahmoud, 3½ years old. Her other son Zein Ibrahim died when he was nine months old in June last year waiting for clearance to travel to Israel for urgent medical treatment. Zo'rob lives in Rafah, close to the border with Egypt with her husband Ibrahim.

Zein was born on 17 September 2008, just before the war. The delivery was smooth. He seemed healthy and happy when he was born. His birth weight was three kilos, 900g, which is actually very good. For five months, he grew normally, putting on one kilo every month.

When he was five months old, his cough started. Soon he was coughing 24 hours a day. The doctors thought he had some sort of flu so they gave him painkillers and antibiotics. The cough didn't go away so we took him to another two doctors who said he had some sort of allergy in his lungs. They put him on a nebuliser so he would inhale steam to clear his lungs. The cough got worse so I took him to the European Hospital in Rafah. They put him on a drip with antibiotics and a nebuliser the whole time. He was six months old. He spent the rest of his life in hospital. I thought he'd be treated for his illness and he'd be okay. I never thought he would die.

He dropped from 9kg to 5½ kg within two months. On his first visit to hospital, he had been playing with all the nurses and smiling. He had been able to sit up and move about by himself. That all stopped.

When he was seven months the doctors told me he had an infection but antibiotics weren't working. They had done all they could do and he had to go to Israel. There was no one else in Gaza who could help him. My husband Ibrahim went to the referral department in Gaza City and started the application process early in April 2009. After one month they responded saying that the doctors had reserved an appointment on June 15.

We went back to the hospital in Rafah and asked why the appointment was so far off. We relaunched our application marking the case 'urgent' and the Israelis came back saying he could have an appointment one week earlier on June 6.

In May, Zein started to reject breastfeeding. He was crying almost constantly. At a certain point he was crying and

crying until he lost his voice. I stayed with him as much as I could. I was frightened. I felt that they didn't understand a thing at the hospital. He developed an infection in his mouth. It went completely white. A couple of days before his death, his legs blew up and were really swollen. The doctors just said to me they don't know what to do.

By early June, I could see he was dying. The doctor came by on his rounds and asked me when was Zein's referral date. When I told him 'June 6', he walked on. He didn't even look at my baby. Soon after, a nurse looked over at him and saw he'd turned blue. She shouted for the doctor saying, 'Run, get oxygen!' After an hour of begging, they finally found him a bed in the Intensive Care Unit. He was put in intensive care on the morning of June 3rd and died that evening. I was destroyed. I could do little else but cry for a month.

If we had been able to get to Israel sooner, I don't think Zein would have died. I've heard of other cases when a person has been really sick and been referred the same day. Why did Zein's referral take two months? ⁹⁵



Photograph: Phoebe Greenwood

IMAGE: Ibrahim Zo'rob, 30, holds a picture of his late son Zein

3 THE ENVIRONMENT: CONTAMINATED AND PERILOUS



Photograph: Nuriya Oswald

IMAGE: Sewage on the road north of Gaza City

Gaza is not a safe environment. Its water supply and land are contaminated with pollutants that will threaten the health of people living in Gaza for generations. Gaza is one of the most densely populated areas in the world. The population totals nearly 1.6 million.⁹⁶ This amounts to more than 4,353 inhabitants per square kilometre⁹⁷—more crowded than the city of Tokyo.⁹⁸ Gaza City has 16,500 people to every square kilometre.⁹⁹ Fertility remains high, at 4.9 children per woman.¹⁰⁰

Accessible land in Gaza is further reduced due to the 1.5 kilometre 'buffer zone' along the border fence with Israel, which constitutes 35% of Gaza's cultivable land. Clearing of agricultural land for military purposes has damaged Gaza's topsoil in prime agricultural areas.¹⁰¹ Ammunitions have also left a legacy in the land with traces of dangerous metals being found in demolished areas.¹⁰² Unexploded weaponry continues to pose a risk to children.¹⁰³ In addition, fishermen are prevented from steering their boats more than three nautical miles off the coast.

Gaza has two crossings that allow pedestrians to leave the territory, Erez crossing into Israel and Rafah crossing into Egypt. While tens of thousands of Palestinians once crossed Erez to work,¹⁰⁴ since the blockade only select Palestinians with special security permits are allowed to use the heavily-guarded crossing. Rules governing the Rafah crossing allow a limited number to cross every day. Additionally, some Palestinians cannot leave because West Bank authorities have not renewed their passports.¹⁰⁵

The blockade prevents Gaza's children from having normal opportunities to play in safe areas and to drink clean water as access to essential materials and land is severely restricted.

In five to ten years, Gaza's depleted aquifer, the sole water source, will stop producing water suitable for human consumption.¹⁰⁶ Currently, more than 90% of the water supplied through Gaza's aquifer does not meet WHO's safety standards and is unfit for drinking.¹⁰⁷

A September 2010 assessment found that 1.1 million Gazans in nearly half of Gaza's municipalities are at high risk of consuming biologically contaminated drinking water from private vendors,¹⁰⁸ the source of water for most Gaza residents.¹⁰⁹ Bacteriological contamination (either from poor hygiene in the home or contaminated water) was found in 63% of households sampled.¹¹⁰

Concentrations of chloride and nitrate, which is a component in fertilizer and is found in human and animal waste, are as much as ten times the safe levels established by WHO.¹¹¹ According to WHO, the ingestion of high levels of nitrates in drinking water has been linked to anaemia and some cancers. Long-term exposure has been shown to inhibit growth and cause Vitamin A deficiency in lab animals.¹¹²

High levels of nitrates pose a particular health risk to pregnant women and children.¹¹³ Although concerns have been raised about nitrate poisoning in infants in Gaza, the issue has yet to be thoroughly investigated.¹¹⁴ The most recent studies from 1998 and 2002 of infants and children indicated 48% prevalence of nitrate poisoning. Many more children are thought to be at risk today.¹¹⁵

The pollution of the aquifer is compounded by Gaza's inability to dispose properly of its sewage. Most Gaza residents (69%) are served by the sewage network, but much of it is destroyed or in disrepair.¹¹⁶ Treatment plants are overloaded or lacking fuel and as a result 60-90 million litres of untreated or partially-treated sewage have been dumped into Gaza's sea every day since 2008, with regional implications.¹¹⁷

Those residents that are not connected to the sewage system rely on cesspits or open sewage flows that further contaminate the environment.¹¹⁸ Children living near open sewage pools in Gaza have been found to have high rates of intestinal parasites, which contribute to nutritional deficiencies.¹¹⁹ In the first two months of 2012 alone, three children drowned in these open sewage pools.¹²⁰

Sixteen internationally-led projects to address Gaza's water and sanitation needs, valued at \$75m, continue to await facilitation following the easing of the blockade in June 2010. Only one-fifth of the materials required for these projects have been allowed to enter Gaza, with the remainder sitting in warehouses.¹²¹ No progress has been made on large-scale desalination projects addressing the lack of drinkable water.¹²²

The compound problem of Gaza's depleted aquifer, a lack of a proper sewage treatment and disposal system, and the difficulties of providing adequate service-delivery has produced a grave environmental situation with significant health risks.

Increases in sanitation-related diseases, such as typhoid fever and watery diarrhoea in children under three years of age, have been recorded at clinics serving refugees in the Gaza Strip. UNRWA reports that watery diarrhoea, acute bloody diarrhoea, and viral hepatitis are the most common illnesses reported among Gaza's refugees.¹²³



Photograph: Nuriya Oswald

IMAGE: Palestinian child cycling by Wadi Gaza

INCIDENCE RATE OF SELECT REPORTED DISEASES AT UNRWA CLINICS IN GAZA¹²⁴

Incidence rate of reported diseases per 100,000 served population							
Year	2005	2006	2007	2008	2009	2010	2011
Population served	887,431	817,515	838,500	869,375	907,079	907,079	1,002,329
Watery diarrhoea < 3 years	1,273.7	1,930.4	1,838.4	2,042.2	1,985.3	2,084.6	2,164.7
Bloody diarrhoea	643	830.3	681.3	491.4	429.5	370	263.9
Viral hepatitis	59.2	82.7	59.4	81	73.1	37.6	35.9
Mumps	4.5	11.1	4.8	1.8	4.1	7.8	13.8
Typhoid fever	3.9	7.7	35.1	10.6	12.4	15.2	4.3

More investigation is needed, but the prevalence of disease that can be linked to environmental conditions is worrying. Moreover, these illnesses place additional strains on Gaza's already buckling health system.

4 ONGOING CONFLICT: THE IMPACT ON CHILD HEALTH

Between 2007 and 2011, 605 children in Gaza were killed and 2,179 injured as a direct result of the conflict, and 60 children were killed and 82 injured in Palestinian factional and other fighting.¹²⁵ While the scope of Operation Cast Lead was unprecedented, conflict and its effects continue in Gaza.

Moreover, the effects of the conflict impact on both Palestinian and Israeli children. During 2010 and 2011, 25 Palestinian children were killed and 203 injured in Gaza as a direct result of the conflict, including two children killed and 36 injured by explosives and rockets deployed by Palestinian armed groups.¹²⁶ In the same period, four Israeli children were killed and five injured.¹²⁷

Between 2009 and 2011, 24 Gaza schools were damaged in attacks and, in Israel, seven schools were damaged.¹²⁸ Schools are sometimes closed due to escalating violence. In Gaza, in 2011, seven schools serving 2,400 children were closed for one day.¹²⁹

During the same year, schools in southern Israel serving a total of 323,000 students were closed for up to three days at a time due to rockets fired from Gaza.¹³⁰

Children feel the threat of violence, even when there is calm. According to a 2010 study, 59.4% of Gaza primary school students and 69% of preparatory students surveyed did not feel safe going to and from school some or most of the time due to violence related to the armed conflict.¹³¹ Thirteen schools serving 4,497 girls and boys are located in border areas in Gaza. These areas see frequent Israeli incursions and activity by Palestinian armed groups, putting children and teachers at risk.¹³²

Airstrikes in 2011 destroyed \$1.3m's worth of water and sanitation infrastructure, including a new sewage pumping station connecting 130,000 residents in Al Nuseirat and Bureij to the main sewage system.¹³³



Photograph: Nuriya Oswald

IMAGE: Power plant heavily damaged during Operation Cast Lead

Diseases of poverty and conflict combined with a degenerating health care system are claiming growing numbers of Gaza's children.



Photograph: Nuria Oswald

CONCLUSION: HOW GAZA'S CHILDREN ARE PAYING THE PRICE



Photograph: Nuria Oswald

IMAGE: Gaza port

This report has shown how children in Gaza are being harmed by the blockade in every area of life. The fracturing of the support systems that are meant to protect children as they grow and develop – the home, the community, and the environment – has implications for the health of children in Gaza. Major indicators of child health have either remained stagnant as the rest of the world advances, or deteriorated.

Infant mortality is recognised as an important indicator of public well-being, reflecting the chances of survival for society's most vulnerable. In Gaza, the rate of death among infants has changed little in nearly two decades. This is the case even while other countries in the region – and the world – have steadily improved their infant mortality rates.¹³⁴ As noted in *The Lancet*, the problem of stagnating infant mortality is apparent in both the West Bank and Gaza Strip, but in Gaza more so.¹³⁵

Since the start of the blockade, it has been difficult to gain a clear picture of what has happened in Gaza due in part to the fragmentation of monitoring systems in place and differences in data collection.¹³⁶ Gaza's authorities report, based on infant death certificates, that infant mortality has remained much the same as before.¹³⁷ Studies using other methods, however, have drawn conflicting conclusions.

Although it is difficult to know conclusively why women die in childbirth since illness or other causes may not be apparent, a study of recent causes of maternal mortality strongly indicates that in Gaza better care could save mothers' lives.¹³⁸

Healthy children are vital to the development and wellbeing of any community. The exceptional crisis brought about by the blockade in Gaza which has reinforced and compounded the impact of the fits and starts of the conflict has created a uniquely destructive environment in which close to one million children are struggling to live a healthy and fulfilled life. Diseases of

poverty and conflict combined with a degenerating health care system are claiming growing numbers of Gaza's children.

The families of Gaza need to be able to afford and have access to nutritious food for the sake of their children. Gaza's health sector needs urgent help and investment. Infrastructure damage needs to be repaired. Hospitals and medical centres must be able to upgrade their equipment, supplies and essential drugs. Medical professionals must be supported in their efforts to prevent, detect and manage serious conditions and urgent improvements are needed particularly in the quality of antenatal, labour and delivery care. A four-year political split between the leadership of Gaza and the West Bank has further exacerbated a profound deterioration in healthcare. On an environmental level, Gaza's destroyed water, sewage and electricity systems must be repaired.

New homes must be constructed – not only to replace those damaged and destroyed by conflict – but to accommodate the growing population. Gaza's economy must be allowed to develop through unrestricted import and export. Each one of these issues must be addressed.

And yet, none of these developments will be possible while Gaza's borders are sealed. Until the blockade is lifted entirely, Gaza's children will not have access to the basic goods and services that they need and is their right.

International aid is helping, but it is not keeping pace with the level of the crisis. Food aid and micronutrient supplements can help ease these health problems, but they cannot end them. It is the moral imperative of the international community to intervene to protect and ensure the rights of children as set out in the UN convention on the Rights of the Child and other instruments of international law. As long as the blockade remains and conflict continues, children and mothers will continue to suffer.

CASE STUDY

Suhila Hamad, registered nurse, Al Awda Hospital, Jabalia, Northern Gaza. Al Awda is a private non-governmental organisation-run hospital serving one of the most densely populated areas in Gaza, and indeed the world, Jabalia refugee camp. It is considered to have the best standard of maternal care in Gaza. It costs 200 NIS (about US \$54) to have a baby here.

We have around 420 births a month, on average 150 a week. Of those cases, I would say five percent are urgent, due to complications.

The major cause of difficulties during labour is that the women have been neglected. Most women in Gaza suffer from emotional problems, in my experience. They are less likely to have the strength to get through a birth. They are exhausted. They aren't eating properly, they have problems with their husband, with their mother-in-law, they lost babies in the previous war, they've lost their home, and they are living in poverty.

Our midwives don't go out into the community; the mothers have to come here. More often than not, they don't come in for their antenatal services and so we regularly

see conditions like preterm rupture of membrane, breech births and placenta previa. We see a lot of pregnancy-induced hypertension, which is really dangerous.

Anaemia is very, very common but aside from anaemia, I would say the main problem with mothers is their psychological and emotional condition.

Sometimes we have to refer complicated cases to Shifa Hospital where they have specialist units [and] where the women can stay longer. Most of the patients can't afford the cost of staying in a private hospital for any length of time.

Many of the babies here are born with mild respiratory distress—around 20 cases are transferred to intensive care every month. Many more are born with mild complications that don't require intensive care but require urgent treatment. We don't have any statistics or records on this though.

Since Operation Cast Lead, we've seen an increase in the numbers of abortions for medical reasons. We've also seen a larger number of pre-term labours, I don't know what causes those – there have been no studies – but during and after the conflict there has been a definite increase. We've had 44 cases in 12 months.

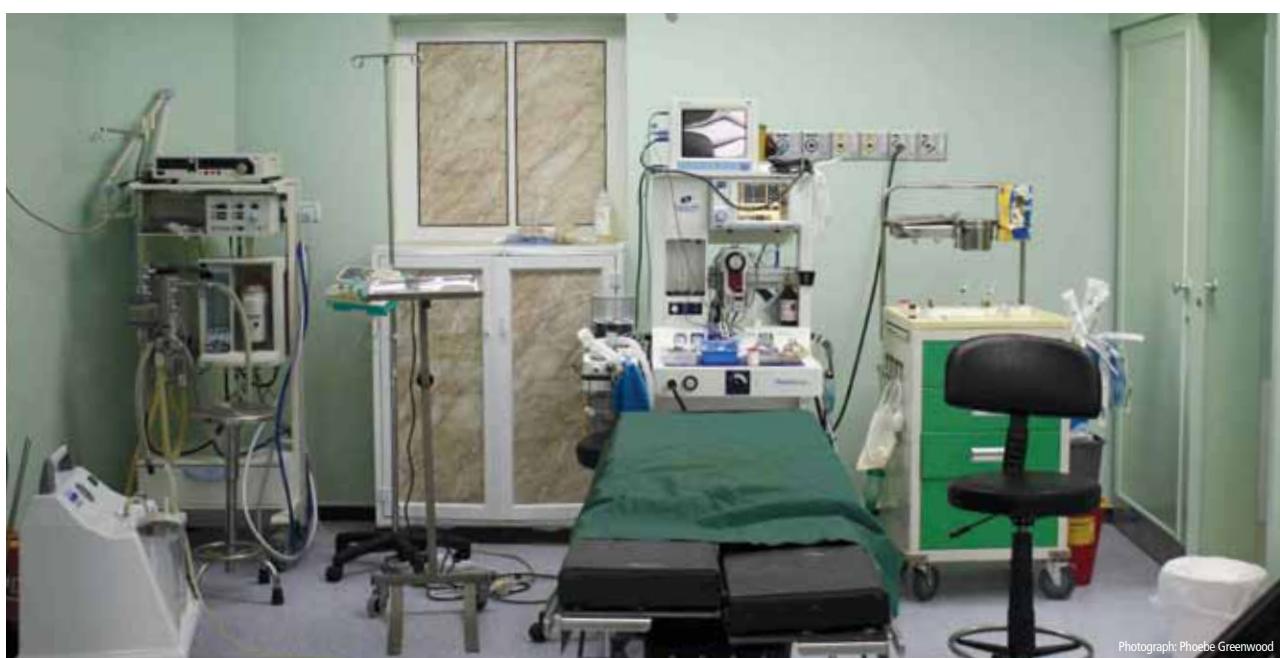


IMAGE: Operating room at Al Awda Hospital, providing the most advanced maternal care in Gaza

Photograph: Phoebe Greenwood

RECOMMENDATIONS

Israel, as the Occupying Power, has the right to address legitimate security concerns but it must also allow for the free flow of goods, people and services. According to the international laws of war, Israel remains responsible for ensuring the health and wellbeing of Gaza's civilian population. The dire economic conditions in Gaza are rooted in the blockade as well as in the ongoing military occupation and violence.

Children have the right to a life that is free from violence, abuse and neglect. In Gaza, immediate action is needed to address the factors that are breaking down family, community, and environmental protections for children and adversely affecting their health.

Urgent action is required to safeguard the health of children in Gaza, now and for future generations.

INTERNATIONAL COMMUNITY

- Recognising its responsibility to do more to protect the children of Gaza, the International Community should make ending the blockade a policy priority, establishing a clear timeline for removing movement and access restrictions and rehabilitating key crossing points for people and goods.
- The International Community along with the relevant authorities should implement as matter of priority long-term strategies specific to improving the nutritional status of Gaza's children.
- Given the direct relationship between a supply of clean water and deteriorating water and sanitation systems, on one hand, and child mortality on the other, all planned water and sanitation projects should be implemented immediately, and a clear timetable provided by the Israeli authorities for their completion.
- Recognising that relying on humanitarian assistance to mitigate the devastating impacts of the blockade has not worked, robust funding and development strategies must be developed and implemented for Gaza, based on aid effectiveness principles that include long-term assistance into key services. The Ad Hoc Liaison Committee¹³⁹ should immediately be tasked with developing such a strategy and action plan by the end of 2012.

ISRAEL

- As a matter of priority for the wellbeing of Gaza's children, Israel must lift its blockade to enable free movement in and out of Gaza, including to the West Bank and East Jerusalem.
- Israel should comply with its obligations as an Occupying Power to respect and protect relief personnel and facilitate impartial, rapid and unimpeded access in and between all areas of operation, specifically the West Bank, including East Jerusalem and Gaza. Israel should set up a transparent and timely mechanism to ensure this happens.
- Israel must demonstrate how current mechanisms facilitate the movement and access of patients and medical personnel to health care facilities. In particular with regard to access in and out of Gaza, guaranteeing access for all patients and staff to East Jerusalem and other specialised hospitals, with special considerations given to child patients and their caregivers. Where mechanisms are not facilitating this movement, Israel should urgently revise them.

PALESTINIAN AUTHORITIES

- It is essential that the Palestinian Authority facilitates the impartial and rapid material provision and funding of medical supplies and services in Gaza, and all Palestinian authorities work as a matter of urgency to unify the health care system.
- As parties to the conflict, all Palestinian authorities and factions must keep their obligations under international humanitarian law to protect and respect the rights of the civilian population and to ensure their specific needs are met.

REFERENCES:

- 1 The World Bank's report, "Stagnation or Revival? Palestinian Economic Prospects, 21 March 2012", indicates a GNP growth rate of 25.8 percent in Gaza in 2011. However, this high growth reflects "the low base from which it is starting" as "the average Gazan today remains worse off than s/he was back in the late nineties". See <http://siteresources.worldbank.org/INTWESTBANKGAZA/Resources/WorldBankAHLReportMarch2012.pdf> (last accessed 4 April 2012). Gaza's unemployment rate remains one of the world's highest. In the final quarter of 2011, it increased by 2.3% to 30.3%, compared to 16.6% in the West Bank. Palestinian Central Bureau of Statistics (PCBS), "Labour Force Survey, October-December 2011", available online at http://www.pcbs.gov.ps/Portals/_pcbs/PressRelease/LabForQ42011E.pdf (last accessed 4 April 2012).
- 2 54% of Gazans are food insecure and over 75% aid dependent. See the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Factsheet, October 2011, http://www.ochaopt.org/documents/ocha_opt_Gaza_FactSheet_October_2011_english.pdf (last accessed 4 April 2012).
- 3 PCBS Family Survey, 2010, and email communication from Alaa Abu Rub, Nutrition Department Director, Ministry of Health, 27 April 2012, and email communication from Samia Halileh, 13 October 2011.
- 4 Palestinian Authority Ministry of Health, National Nutrition Surveillance System, 2010, available online at <http://www.moh.ps/attach/298.pdf> (last accessed 23 March 2012).
- 5 Palestinian Authority Ministry of Health, National Nutrition Surveillance System, 2011, to be published.
- 6 Ibid.
- 7 "The major health consequences include poor pregnancy outcome, impaired physical and cognitive development, increased risk of morbidity in children and reduced work productivity in adults. Anaemia contributes to 20% of all maternal deaths." World Health Organization website, <http://www.who.int/nutrition/topics/ida/en/index.html> (last accessed 10 February 2012).
- 8 United Nations Relief and Works Agency (UNRWA) Epidemiological Bulletin, Issue 12, Volume 2, 10 January 2011.
- 9 Abdul Rahim H. et al., "Maternal and Child Health in the Occupied Palestinian Territory", *The Lancet*, Vol. 373, 2009, pp. 837–49, available online at <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2809%2960108-2/abstract> (last accessed 23 March 2012).
- 10 These figures are for the years 2007-2011. Additional child deaths occurred indirectly from the conflict or in unclear circumstances. OCHA, Protection of Civilians Casualties Database, available online at <http://www.ochaopt.org/poc.aspx?id=1010002> (last accessed 10 February 2012).
- 11 OCHA, "Protection of Civilians Weekly Report", 8-14 February 2012, available online at http://www.ochaopt.org/documents/ocha_opt_protection_of_civilians_weekly_report_2012_02_17_english.pdf (last accessed 23 March 2012).
- 12 Communication from Jenny Oskarsson, WHO Advocacy Assistant, on upcoming 2011 report, 25 April 2012.
- 13 While we recognise that ongoing violence has had an impact on Israeli children, it is not the focus of this report.
- 14 Palestinian NGO Network (PNGO), "Priorities and Needs of Health Sector in Gaza Governorates: Consequences of the Long Siege and the Last War on Gaza," February 2009, available at <http://www.pngo.net/data/files/pngo/reports/Health%20Priorities%20and%20needs%20at%20P%20NGOWorkshop.pdf> (last accessed 15 August 2011).
- 15 Israel disputes its description as an Occupying Power, arguing that no state had clear rights in the West Bank and Gaza Strip prior to 1967. The United Nations and human rights organisations define the area as "occupied", however, even after Israel's withdrawal of settlements and military installations from the Gaza Strip in 2005. UN Security Council Resolution 1860 adopted on 8 January 2009 stated "the Gaza Strip constitutes an integral part of the territory occupied in 1967", for example. According to one legal analysis, the withdrawal of Israeli troops alone does not turn the occupied territory into unoccupied since "Israel maintains its effective control over the Gaza Strip by different means, such as control over air space, sea space and the international borders." From Diakonia's website, <http://www.diakonia.se/sa/node.asp?node=842> (last accessed 10 February 2012).
- 16 The Ad Hoc Liaison Committee (AHLC) was established on 1 October 1993 by the Multilateral Steering Group of the Washington Conference which followed the signing of the Declaration of Principles in Oslo in 1993. It is a 15-member committee that serves as the principal policy-level coordination mechanism for development assistance to the Palestinian people. See <http://www.lacs.ps/article.aspx?id=6>.
- 17 Estimate based on census of 2007. See PCBS, "On the Eve of the International Population Day 11/7/2011", available online at http://www.pcbs.gov.ps/DesktopModules/Articles/ArticlesView.aspx?tabID=0&lang=en&ItemID=1841&mid=1_2235 (last accessed 15 August 2011).
- 18 OCHA-World Food Programme, "Between the Fence and a Hard Place: The Humanitarian Impact of Israeli-Imposed Restrictions on Access to Land and Sea in the Gaza Strip", August 2010, available online at http://www.ochaopt.org/documents/ocha_opt_special_focus_2010_08_19_english.pdf (last accessed on 23 March 2012).
- 19 Based on PCBS data that 51.5% of Gazans are children. "The International Child Day", 20 November 2011, available online at

- http://www.pcbs.gov.ps/DesktopModules/Articles/ArticlesView.aspx?tabID=0&lang=en&ItemID=1572&mid=1_2235 (last accessed 23 March 2012).
- 20 See Abu Mourad, Tayser et al, "Palestinian primary health care in light of the National Strategic Health Plan 1999–2003", Journal of the Royal Institute of Public Health, 30 July 2007.
- 21 The target was set in line with United Nations Millennium Development Goals to cut the infant mortality rate by two-thirds after the year 2000. Palestinian Authority Ministry of Health, "Palestinian National Health Strategy 2011 – 2013: Setting The Strategic Direction Towards Getting Results."
- 22 It is important to note that while most sources put the start of the blockade in 2007, after Hamas took control of the Gaza Strip and Israel classified Gaza a "hostile entity" on 19 September, restrictions on movement and access to Gaza began with the permit and checkpoint regime commenced during the Iraq war in 1991. See B'Tselem's website at http://www.btselem.org/freedom_of_movement/closure (last accessed 10 February 2012).
- 23 Infant mortality is marked "not available". Palestinian Authority Ministry of Health, "Palestinian National Health Strategy 2011 – 2013: Setting The Strategic Direction Towards Getting Results."
- 24 For a detailed discussion of the items and people allowed to enter and leave Gaza under the blockade based on Israeli documents obtained under freedom of information requests, see Gisha Legal Centre for Freedom of Movement. "A Guide to the Gaza Closure: In Israel's Own Words", September 2011, available online at http://www.gisha.org/UserFiles/File/publications/gisha_brief_docs_eng_sep_2011.pdf (last accessed 23 March 2012).
- 25 See IRIN, "Promises of exports fall short for Gaza's manufacturers", 15 February 2012, <http://www.irinnews.org/Report/94872/OPT-Promises-of-exports-fall-short-for-Gaza-s-manufacturers> (last accessed 3 March 2012).
- 26 In June 2006, Israel destroyed the main power plant in Gaza after armed Palestinians kidnapped Israeli soldier Gilad Shalit. Five months later, the plant was up and running, but at reduced capacity. The blockade has contributed to subsequent power outages by restricting access to mechanical parts and fuel. In January 2010, European fuel subsidies for the plant expired and it has been forced to shut down entirely numerous times. It now produces 30 MW of power daily, as compared with 118 MW at peak production. See OCHA, "Gaza's Electricity Crisis: The Impact of Electricity Cuts on the Humanitarian Situation", 17 May 2010, available online at http://www.ochaopt.org/documents/ocha_opt_gaza_electricity_crisis_2010_05_17.pdf (last accessed on 15 August 2011).
- 27 OCHA, "Protection of Civilians Weekly Report", 8-14 February 2012, available online at http://www.ochaopt.org/documents/ocha_opt_protection_of_civilians_weekly_report_2012_02_17_english.pdf (last accessed 23 March 2012).
- 28 Many of Gaza's water and sewage facilities, including 190 water wells, 40 main sewage pump stations, 15 districts sewage pumping stations, four wastewater treatment plants, eight water desalination units and ten water lifting stations report having back-up fuel, however lower voltages from unreliable sources mean they remain vulnerable. OCHA, "Protection of Civilians Weekly Report", 8-14 February 2012, available online at http://www.ochaopt.org/documents/ocha_opt_protection_of_civilians_weekly_report_2012_02_17_english.pdf (last accessed 23 March 2012).
- 29 See, for example, UNICEF, "Protecting Children from Unsafe Water in Gaza", March 2011, available online at http://www.unicef.org/oPt/FINAL_Summary_Protecting_Children_from_unsafe_Water_in_Gaza_4_March_2011.pdf (last accessed 23 March 2012).
- 30 Gisha Legal Centre for Freedom of Movement. "A Guide to the Gaza Closure: In Israel's Own Words", September 2011, available online at http://www.gisha.org/UserFiles/File/publications/gisha_brief_docs_eng_sep_2011.pdf (last accessed 23 March 2012).
- 31 Amnesty International et al, "Dashed Hopes: Continuation of the Gaza Blockade", 10 November 2010, available online at http://www.oxfam.org.uk/resources/policy/conflict_disasters/dashed-hopes-gazablockade.html (last accessed 15 August 2011). Also OCHA, "Easing the Blockade", March 2011, available online at http://www.ochaopt.org/documents/ocha_opt_special_easing_the_blockade_2011_03_english.pdf (last accessed 23 March 2012).
- 32 Israel puts the number of civilians killed much lower. Defence for Children International – Palestine Section and Al Mezan Centre for Human Rights, "Bearing the Brunt Again, Child Rights Violations during Operation Cast Lead", September 2009, available online at <http://www.dcpal.org/english/display.cfm?DocId=1258&CategoryId=8> (last accessed 23 March 2012).
- 33 Ibid.
- 34 Ibid.
- 35 Ibid.
- 36 Ibid and OCHA, "Special Focus: Locked In", August 2009, available online at http://www.ochaopt.org/documents/Ocha_opt_Gaza_impact_of_two_years_of_blockade_August_2009_english.pdf (last accessed 23 March 2012).
- 37 Emergency Water Sanitation and Hygiene in the OPT (EWASH), "Fact Sheet: How Gaza's Blockade Impacts on Water and Sanitation", 2009, available online at <http://www.ewash.org/files/library/Factsheet%20A4.pdf> (last accessed 23 March 2012).

- 38 United Nations Development Programme, (UNDP), "One Year After Report: Gaza Early Recovery and Reconstruction Needs Assessment," 2010, available online at http://www.mapuk.org/files/710_undp_gaza_situation_may_2010.pdf (last accessed on 13 October 2011).
- 39 WHO, "Gaza Strip Initial Health Needs Assessment", 16 February 2009, available online at http://www.who.int/hac/crises/international/wbgs/gaza_early_health_assessment_16feb09.pdf (last accessed 23 March 2012).
- 40 Ibid.
- 41 Save the Children Child Rights Review, 2009, available online at http://www.savethechildren.org.uk/sites/default/files/docs/Child_Rights_Review_09.pdf (last accessed 23 March 2012).
- 42 ICPH-BU 2009 survey.
- 43 OCHA, "Special Focus: Easing the Blockade", March 2011, available online at http://www.ochaopt.org/documents/ocha_opt_special_easing_the_blockade_2011_03_english.pdf (last accessed 23 March 2012).
- 44 Shelter Sector Gaza, "Shelter Advocacy Fact Sheet 4", January 2012, available online at <http://www.sheltergaza.org:8081/ussd/fr/Gaza%20Shelter%20Fact%20Sheet%204.pdf> (last accessed 22 February 2012). Also the Shelter Cluster believes that at least 75,000 people in Gaza would be vulnerable and in need of shelter assistance in the event of another major military attack. Communication with Neil Jebb, 16 October 2011.
- 45 ICPH-BU 2009 survey.
- 46 Thurstans, Susan and Vicki Sibson, "Assessing the intervention on infant feeding in Gaza 2008", April 2010, available online at <http://fex.enronline.net/38/assessing.aspx> (last accessed 16 October 2011). Also, PCBS, "Results of the Family Survey 2010".
- 47 Ibid.
- 48 Ibid.
- 49 Fafo and UNFPA, "Life in the Gaza Strip six weeks after the armed conflict 27 Dec 2008–17 Jan 2009", 2009, available online at http://www.fafo.no/ais/mideast/opt/gazasrv09/Summary_EN.pdf (last accessed 16 October 2011).
- 50 Batniji, Rajaie et al, "Health as human security in the occupied Palestinian territory", *The Lancet* 2009; 373: 1133–43, available online at [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(2809\)2960110-0/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(2809)2960110-0/abstract) (last accessed 23 March 2012).
- 51 OCHA, "Gaza Fishing: An Industry in Danger", April 2007, available online at http://www.ochaopt.org/documents/OCHA_Special_report_gaza_fisheries_April2007.pdf (last accessed 15 August 2011).
- 52 65% of businesses in Gaza have closed and the rest are operating at partial capacity. See Amnesty International et al, "Dashed Hopes: Continuation of the Gaza Blockade", 10 November 2010, available online at http://www.oxfam.org.uk/resources/policy/conflict_disasters/dashed-hopes-gaza-blockade.html (last accessed 15 August 2011).
- 53 According to the PCBS, in 2010, 38% of Gazans were living below the poverty line, fluctuating from 33.7% in 2009, 49.5% in 2007, 30% in 2006, 28.4% in 2005 and 30.2% in 2004. A 2010 UNRWA survey found that the number of Gazan refugees living in abject poverty had tripled since 2007 when the blockade began. PCBS press release, "Poverty in the Palestinian territory, 2009-2011", 4 October 2010, available online at <http://www.pcbs.gov.ps/DesktopModules/Articles/ArticlesView.aspx?tabID=0&lang=en&ItemID=1693&mid=12235> (last accessed on 16 August 2011) and OCHA "The Humanitarian Monitor", April 2010, available online at http://www.ochaopt.org/documents/ocha_opt_the_humanitarian_monitor_2010_04_english.pdf (last accessed 16 August 2011).
- 54 PCBS, "Palestinian Children – Issues and Statistics Annual Report 2011", April 2011. The poverty line was set at 2,237 NIS (\$609) per month for a household of two adults and three children. A "deep poverty" line was set at 1,783 NIS (\$478) per month for a household of two adults and three children. PCBS press release, "Poverty in the Palestinian territory, 2009-2011", 4 October 2010, available online at <http://www.pcbs.gov.ps/DesktopModules/Articles/ArticlesView.aspx?tabID=0&lang=en&ItemID=1693&m id=12235> (23 March 2012).
- 55 It is important to note that Gaza unemployment reached a high in the third quarter of 2010 at 40.5%, gradually declining to today's levels. Palestinian Central Bureau of Statistics, "Labour Force Survey July-September, 2011)", 22 February 2012, available online at http://www.pcbs.gov.ps/Portals/_pcbs/PressRelease/LabForQ42011E.pdf (last accessed 23 April 2012).
- 56 In August 2010, OCHA estimated that 75,000 metric tonnes of produce valued at \$50.2 million are lost every year to land levelling and the blockade. Since 2008, when the fishing area off Gaza was restricted to three nautical miles, fishermen caught only 53% of the 2008 catch and 41% of 1999 levels, when restrictions began to be imposed. OCHA, "Special Focus: Between the Fence and a Hard Place", available online at http://www.ochaopt.org/documents/ocha_opt_special_focus_2010_08_19_english.pdf (last accessed on 23 March 2012) and Physicians for Human Rights in Israel, "Humanitarian Minimum", December 2010.
- 57 OCHA Factsheet, October 2011, available online at http://www.ochaopt.org/documents/ocha_opt_Gaza_FactSheet_October_2011_english.pdf, (last accessed 4 April 2012).

- 58 April 2011 interview.
- 59 The rates of stunting among infants 9-12 months and schoolchildren are unremarkable (although stunting among those 9-12 months has risen nearly consistently since 2006) and the reason for such high rates in preschoolers needs further study. See footnote 23, PCBS Family Survey, 2010 and Ministry of Health, National Nutrition Surveillance System, 2010, available online at <http://www.moh.ps/attach/298.pdf> (last accessed 23 March 2012). Email communication from Samia Halileh, 13 October 2011 and email communication from Alaa Abu Rub, Nutrition Department Director, Ministry of Health, 27 April 2012.
- 60 Palestinian Ministry of Health, National Nutrition Surveillance System, 2010, available online at <http://www.moh.ps/attach/298.pdf> (last accessed 23 March 2012).
- 61 Palestinian Ministry of Health, National Nutrition Surveillance System, 2011, forthcoming. 62ibid.
- 63 WHO website, <http://www.who.int/nutrition/topics/ida/en/index.html> (last accessed 10 February 2012).
- 64 April 2011 interview.
- 65 Gisha Legal Centre for Freedom of Movement. "A Guide to the Gaza Closure: In Israel's Own Words", September 2011, available online at http://www.gisha.org/UserFiles/File/publications/gisha_brief_docs_eng_sep_2011.pdf (last accessed 23 March 2012).
- 66 Many of these 1,000 homes were reconstructed using materials brought in through the underground network of tunnels running between Gaza and Egypt, not through official crossings. Communication from Shelter Cluster, 27 April 2012 and OCHA, Special Focus, "Easing the Blockade," March 2011, available online at http://www.ochaopt.org/documents/ocha_opt_special_easing_the_blockade_2011_03_english.pdf (last accessed 23 March 2012).
- 67 Ibid.
- 68 EWASH, "WASH Cluster OPT Monthly Situation Report", September 2011, available online at <http://www.ewash.org/files/library/September%20sitrep.pdf> (last accessed 23 March 2012).
- 69 OCHA, "Protection of Civilians Weekly Report", 8-14 February 2012, available online at http://www.ochaopt.org/documents/ocha_opt_protection_of_civilians_weekly_report_2012_02_17_english.pdf (last accessed 23 March 2012).
- 70 April 2011 interview.
- 71 Six children were killed in generator-related incidents, as a result of electrocution and open fires, in the first four months of 2010. OCHA, "Gaza's Electricity Crisis: The Impact of Electricity Cuts on the Humanitarian Situation", 17 May 2010, available online at http://www.ochaopt.org/documents/ocha_opt_gaza_electricity_crisis_2010_05_17.pdf (last accessed 23 March 2012). Also communication from Kathy al-Ju'beh, Director of Programmes oPt, MAP, March 2012.
- 72 See graph below from Portland Trust, "Reducing Aid Dependency in the Palestinian Territory", May 2011, available online at http://www.portlandtrust.org/documents/pdfs/bulletins/Special_Economic_Feature_May_%202011.pdf (last accessed 7 February 2012).
- 73 Palestine Economic Policy Research Institute (MAS), "Tracking External Donor Funding to Palestinian Non-Governmental Organizations In the West Bank and Gaza 1999-2008", 2009. Also communication from Kathy al-Ju'beh, Director of Programmes oPt, MAP, March 2012.
- 74 Ibid.
- 75 Rajaie Batniji, "Unhealthy aid? Development Assistance for Health to the occupied Palestinian territory (oPt), 1990-2008", to be published.
- 76 AIDA, "Restricting Aid: The Challenges of Delivering Assistance in the Occupied Palestinian Territory", July 2011, available online at <http://www.aidajerusalem.org/userfiles/20110605134812.pdf> (last accessed 23 March 2012).
- 77 AIDA is the principal coordination forum for internationals non-governmental organizations working in the occupied Palestinian territory.
- 78 In mid-2011, 67.3% of Gaza's 1.59 million people were refugees. PCBS, "Statistical Yearbook of Palestine 2011", December 2011, available online at http://www.pcbs.gov.ps/Portals/_PCBS/Downloads/book1814.pdf (last accessed 10 February 2012).
- 79 UNRWA, "Gaza on the Edge: Urgent Appeal to Help the Poorest of the Poor in Gaza", undated, available online at <http://www.unrwa.org/userfiles/2011091341838.pdf> (last accessed 10 February 2012).
- 80 UNRWA, "Deputy Commissioner-General statement on the 2012 Emergency Appeal", 17 January 2012, available online at <http://www.unrwa.org/etemplate.php?id=1226> (last accessed 10 February 2012).
- 81 UNRWA, "Gaza on the Edge: Urgent Appeal to Help the Poorest of the Poor in Gaza", undated, available online at <http://www.unrwa.org/userfiles/2011091341838.pdf> (last accessed 10 February 2012).
- 82 Gisha Legal Centre for Freedom of Movement. "A Guide to the Gaza Closure: In Israel's Own Words", September 2011, available online at http://www.gisha.org/UserFiles/File/publications/gisha_brief_docs_eng_sep_2011.pdf (last accessed 23 March 2012).
- 83 Gisha, "Reconstructing the Closure", December 2010, available online at http://www.gisha.org/item.asp?lang_id=en&p_id=1106 (last accessed 16 October 2011).

- 84 "Shortages of Supplies for Health Services", March 2012, available online at http://www.lacs.ps/documentsShow.aspx?ATT_ID=5360 (last accessed 7 May 2012).
- 85 Interview with director of the Ministry of Health's pharmacy in Gaza, February 2011. 86 WHO, "Shortages of Drugs and Medical Disposables in Gaza", June 2011, available online at <http://unispal.un.org/UNISPAL.nsf/47D4E277B48D9D3685256DDC00612265/B35E9E3AC0BFF630852578B5004B9C43>, (last accessed 25 April 2012).
- 87 Ibid and WHO, "Access to essential drugs and disposables in Gaza Strip, 2011", January 2012, available online at http://www.emro.who.int/palestine/reports/WHO_Zero_stock_drugs_disposables_Jan_012.pdf (last accessed 10 February 2012).
- 88 WHO, "Shortages of Drugs and Medical Disposables in Gaza", June 2011.
- 89 See, for example, Jan McGirk, "Norway investigates Gaza's drug crisis", in *The Lancet*, Volume 377, Issue 9773, Pages 1225 - 1226, 9 April 2011, available online at <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2811%2960484-4/fulltext> (last accessed 23 March 2012) and IRIN, "Cancer care crisis in Gaza", 9 March 2011, available online at <http://www.irinnews.org/Report/92143/OPT-Cancer-care-crisis-in-Gaza> (last accessed on 23 March 2012).
- 90 December 2010 interview.
- 91 See for example WHO, "Press statement - Unimpeded access of medical supplies needed for Gaza", 1 June 2010, available online at http://www.emro.who.int/palestine/reports/advocacy_HR/advocacy/WHO%20-Press%20statement-June2010.pdf (last accessed on 23 March 2012).
- 92 WHO communication on "Maternal and neonatal health", via Silvia Pivetta, 15 December 2011.
- 93 Amnesty International et al, "The Gaza Strip: A Humanitarian Implosion", March 2010 (?), available online at <http://www.medecinsdumonde.org/gb/Publications/Publications/Reports/AI-international/The-Gaza-Strip-AHumanitarian-Implosion-The-Gaza-Strip-A-Humanitarian-Implosion> (last accessed 16 October 2011).
- 94 Communication from Jenny Oskarsson, WHO advocacy assistant, 25 April, 2012, concerning upcoming report.
- 95 April 2011 interview.
- 96 PCBS, "Statistical Yearbook of Palestine 2011", December 2011, available online at http://www.pcbs.gov.ps/Portals/_PCBS/Downloads/book1814.pdf (last accessed 10 February 2012).
- 97 PCBS, "On the Eve of the International Population Day", 11 July 2011, available online at <http://www.pcbs.gov.ps/DesktopModules/Articles/ArticlesView.aspx?tabID=0&lang=en&ItemID=1841&mid=12235> (last accessed on 16 October 2011).
- 98 Tokyo's city limits include 4,000 people to every square kilometre. Demographia, World Urban Areas, available online at <http://www.demographia.com/db-worldua.pdf> (last accessed 10 February 2012).
- 99 Ibid.
- 100 PCBS, "Preliminary Report on the 2010 Family Survey," May 2011. Egypt's fertility rate was 3 in 2008, Jordan's 3.8 in 2009. See www.measuredhs.com (last accessed 14 December 2011).
- 101 Israel's military began levelling Gaza land, including fields and orchards, near the border fence in 2000, but expanded the practice after Operation Cast Lead. OCHA, "Special Focus: Between the Fence and a Hard Place", August 2010, available online at http://www.ochaopt.org/documents/ocha_opt_special_focus_2010_08_19_english.pdf (last accessed on 23 March 2012).
- 102 United Nations Environment Programme (UNEP), "Environmental Assessment of the Gaza Strip following the escalation of hostilities in December 2008 – January 2009", September 2009, available online at http://www.unep.org/PDF/dmb/UNEP_Gaza_EA.pdf (last accessed 23 March 2012).
- 103 Ibid.
- 104 At the height of the Gazan labour flow into Israel in 1987, 129,500 workers crossed daily at Erez. By 1992 and the impact of the first intifada and movement restrictions, 60-70,000 labourers from Gaza were working in Israel. See United Nations Conference on Trade and Development (UNCTAD), Review of Labour and Employment Trends in the West Bank and Gaza Strip, 27 January 1995, available online at <http://www.unctad.org/en/docs/poecdseud9.en.pdf> (last accessed 10 February 2012).
- 105 Reports suggest that these cases could be in the thousands. See Al Mezan Centre for Human Rights, "Al Mezan Calls on Fayyad and Haniyeh to Take Procedures to Ensure that Palestinians Obtain their Passports and Enjoy their Rights to Free Movement", 6 July 2010, available online at http://www.mezan.org/en/details.php?id=10421&ddname=movement&id_dept=9&p=center (last accessed 10 February 2012) and Maan News, "Gazans denied passports despite reconciliation", 5 February 2012, available online at <http://www.maannews.net/eng/ViewDetails.aspx?ID=457981> (last accessed 10 February 2012).
- 106 UNICEF, "Protecting Children from Unsafe Water in Gaza", March 2011, available online at http://www.unicef.org/oPt/FINAL_Summary_Protecting_Children_from_unsafe_Water_in_Gaza_4_March_2011.pdf (last accessed 23 March 2012).
- 107 WHO, "Health conditions in the occupied Palestinian territory, including east Jerusalem, and in the occupied Syrian Golan", 16 May 2011, available online at https://apps.who.int/gb/ebwha/pdf_files/A61/A61_18Rev1-en.pdf (last accessed 23 March 2012).

- 108 "Consolidated Appeal 2012-2013: Needs Assessment Framework (NAF) for Water, Sanitation and Hygiene in the occupied Palestinian territory", 19 October 2011.
- 109 According to a 2009 UNICEF and Palestinian Hydrology Group study, 75-90% of Gazans depend upon private water vendors for their drinking water and over half rely completely or in part on this commercial water for cooking purposes. *Ibid.*
- 110 *Ibid.*
- 111 *Ibid.*
- 112 WHO, "Nitrate and Nitrite in Drinking Water", 2007, available online at http://www.who.int/water_sanitation_health/dwq/chemicals/nitratenitrite2ndadd.pdf (last accessed on 16 October 2011).
- 113 UNICEF, "Protecting Children from Unsafe Water in Gaza", March 2011, available online at http://www.unicef.org/oPt/FINAL_Summary_Protecting_Children_from_unsafe_Water_in_Gaza_4_March_2011.pdf (last accessed 23 March 2012).
- 114 *Ibid.*
- 115 UNEP, Environmental Assessment of the Gaza Strip Following the Escalation of Hostilities in December 2008 - January 2009, September 2009, available online at http://www.unep.org/PDF/dmb/UNEP_Gaza_EA.pdf (last accessed 23 March 2012).
- 116 Coastal Municipalities Water Utility (CMWU) "Waste Water Treatment Operational Status", August 2011.
- 117 As of August 2011, the amount of the dumping had increased to 89 million litres a day. *Ibid.*
- 118 UNICEF, "Protecting Children from Unsafe Water in Gaza", March 2011, available online at http://www.unicef.org/oPt/FINAL_Summary_Protecting_Children_from_unsafe_Water_in_Gaza_4_March_2011.pdf (last accessed 23 March 2012).
- 119 *Ibid.*
- 120 UN OCHA, "Protection of Civilians Weekly Report", 8-14 February 2012, available online at http://www.ochaopt.org/documents/ocha_opt_protection_of_civilians_weekly_report_2012_02_17_english.pdf (last accessed 23 March 2012).
- 121 EWASH, "Down the drain: Israeli restrictions on the WASH sector in the Occupied Palestinian Territory and their impact on vulnerable communities", February 2012, available online at <http://www.ewash.org/files/library/Down%20the%20Drain%20-%20Israeli%20restrictions%20on%20the%20WASH%20sector%20in%20the%20Occupied%20Palestinian%20Territory%20and%20their%20impact%20on%20vulnerable%20communities.pdf> (last accessed 23 March 2012).
- 122 OCHA, "Special Focus: Easing the Blockade", March 2011.
- 123 UNRWA Epidemiological Bulletin, Issue 12, Volume 2, 10 January 2011.
- 124 Numbers provided originated with UNRWA epidemiological centre staff in the Gaza Strip.
- 125 These figures include the years 2007-2011. Additional child deaths occurred indirectly from the conflict or in unclear circumstances. OCHA, Protection of Civilians Casualties Database, available online at <http://www.ochaopt.org/poc.aspx?id=1010002> (last accessed 10 February 2012).
- 126 Communication from UNICEF Child Protection Specialist, Katherine M. Cocco, 23 March 2012.
- 127 *Ibid.*
- 128 *Ibid.*
- 129 *Ibid.*
- 130 *Ibid.* The schools were closed in 2011 on 23 March (Be'er Sheva) and 27 October and 30 October (Ashdod, Ashkelon, Kiryat Gat and Be'er Sheva).
- 131 Cited in Save the Children UK Education Fact Sheet, October 2011. United Nations Educational Scientific and Cultural Organisation (UNESCO), Psychosocial Assessment of Education in Gaza and Recommendations for Response, report on the findings of an assessment conducted by Kathleen Kostelný, PhD and Michael Wessells, PhD of the Columbia Group for Children in Adversity, September 2010.
- 132 Cited in *Ibid.* Data provided by UNESCO, Crisis-Disaster Risk Reduction Project in Gaza, 2010.
- 133 EWASH, "Down the drain: Israeli restrictions on the WASH sector in the Occupied Palestinian Territory and their impact on vulnerable communities", February 2012, available online at <http://www.ewash.org/files/library/Down%20the%20Drain%20-%20Israeli%20restrictions%20on%20the%20WASH%20sector%20in%20the%20Occupied%20Palestinian%20Territory%20and%20their%20impact%20on%20vulnerable%20communities.pdf> (last accessed 23 March 2012).
- 134 Between 1991 and 2008, Egypt's infant mortality rate declined from 60 to 23/1,000 live births. Jordan, too, decreased its infant mortality rate from 36.8 to 23/1,000 live births over the same period. "Egypt: Demographic and Health Survey", 2008, <http://www.measuredhs.com/pubs/pdf/FR220/FR220.pdf> (last accessed 13 December 2011) and "Jordan: Population and Family Health Survey", 2009, <http://www.measuredhs.com/pubs/pdf/FR238/FR238.pdf> (last accessed 13 December 2011).
- 135 Abdul Rahim H. et al., "Maternal and Child Health in the Occupied Palestinian Territory", *The Lancet*, Vol. 373, 2009, pp. 837-49, available online at <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2809%2960108-2/abstract> (last accessed 23 March 2012).

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- 136 Gaza's Ministry of Health, in its 2010 annual report, estimated the 2009 infant mortality rate (21.5 per 1,000 live births) based on infant death certificates at health facilities, mainly hospitals. UNRWA's estimation of infant mortality at 20.2/1,000 live births in 2008 among Gaza refugees was based on the number of registered refugees and reported deaths among refugee infants. (See UNRWA Infant Mortality Survey, "Causes and determinants of infant death among Palestine Refugees in the Near East", 2009.) The Palestinian Central Bureau of Statistics Family Survey of 2010 estimated infant mortality at 23 in Gaza based on its survey of households.
- 137 Since 2006, there has been little fluctuation: 18.6 (2006), 21.1. (2007), 18.9 (2008), 21.5 (2009). Ministry of Health (MOH-PHIU), "Mortality: Health Status in Gaza Strip", 2009.
- 138 An unpublished UNFPA and Ministry of Health survey put the maternal mortality rate in 2008 and 2009 at 29/100,000 live births. WHO communication on "Maternal and neonatal health", via Silvia Pivetta, 15 December 2011.
- 139 The Ad Hoc Liaison Committee (AHLC) was established on 1 October 1993 by the Multilateral Steering Group of the Washington Conference which followed the signing of the Declaration of Principles in Oslo in 1993. It is a 15-member committee that serves as the principal policy-level coordination mechanism for development assistance to the Palestinian people. See <http://www.lacs.ps/article.aspx?id=6>.

ABOUT SAVE THE CHILDREN

Save the Children has worked with Palestinian children since the 1930s. There are 3.9 million Palestinians in the occupied Palestinian territory (oPt), of which 49.4% or 1.9 million are children. Nearly half of children in the oPt are refugees.

Save the Children in the oPt works with local partners and stakeholders on providing quality education, protection for children, and employment opportunities for youth at risk, and those whose rights are most infringed. Save the Children also works to strengthen the capacities of civil society organisations and local partners promoting child rights issues.



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ABOUT MAP

MAP works for the health and dignity of Palestinians living under occupation and as refugees.

Established in the aftermath of the massacre at Sabra and Shatila, MAP delivers health and medical care to those worst affected by conflict, occupation and displacement. Working in partnership with local health providers and hospitals, MAP addresses a wide range of health issues and challenges faced by the Palestinian people. With offices located in Beirut, Ramallah and Gaza City, MAP responds rapidly in times of crisis, and works directly with communities in the longer term on health development.



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