



**ARAB REPUBLIC OF EGYPT**  
**MINISTRY OF HEALTH & POPULATION**  
**PRIMARY HEALTH CARE SECTOR**



World Health Organization  
Regional Office for the Eastern Mediterranean

# ***Child Health*** ***Situation Analysis***



**SEPTEMBER 2005**

## Chapter 1: INTRODUCTION

Childcare and protection are considered as the basis for future prosperity, and the means for economic development, social solidarity and political stability. Hence childcare stands as a high priority by the Egyptian government. Childhood is legally defined in Egypt up to 18 years of age. It is the stage during which the intellectual and physical capacity of the future generation is formulated. Child nurture is greatly influenced by environmental physical, socio-economic, political, legislative and other factors.

For more than 15 years, childcare received a lot of attention in all aspects; education, health, sporting...etc. The Health Council, presided by HE Minister of Health did a number of studies which showed that the child mortality rate is too high. Hence, the Ministry of Health and Population (MOHP) recognized child survival interventions as a high priority since the late 1970s and started to implement child care interventions in the early 1980s. Successes in such interventions, namely control of diarrhoeal diseases (CDD) and expanded programme of immunization (EPI) were one of the main factors, which triggered the high political commitment and support to child health care.

Political commitment and support is evidenced by:

- Egypt was one of the first 20 worldwide to ratify the “*Convention on the Rights of the Child*”, endorsed by the Peoples Assembly (the Egyptian parliament) in May 1990. The convention sets the basis for child’s rights.
- Egypt was one of the 6 initiator countries for the 1990 “*World Summit for children*”, targeting child’s welfare.
- A “*National Council for Childhood and Motherhood*” was established by a presidential decree in 1988, affiliated to the Prime Minister’s Office. The council’s mandate is to collaborate with respective social sector ministries and organizations for setting strategic directions in child care areas, setting 5-year and annual plans, and coordinating and monitoring sectors’ activities towards achieving set objectives and targets.
- In 1989 the president declared the 1990s as the “*Decade for Egyptian child protection and care*”. A second declaration for the decade 2000-2010 was issued in February 2000. The declarations are intended to improve comprehensive child development, including objectives for different sectors including health sector. Health objectives of the second decade are related to health insurance and immunization coverage, congenital diseases, injuries micronutrients, disabled & separated children, service equity & quality, and maternal care & mortality; in addition other articles for social welfare and legislations.
- The Peoples Assembly passed a special law for the child (Law 12 for the year 1996). The law does not just revised and compiled articles in previous scattered laws, but expanded scope in response to Child Rights Agreement. The law defines the childhood up to 18 years of age. It stipulates the child’s right for health care, and describes mandatory services e.g. immunization, nursery and school care, protection from injuries, care of disabled children, and limitations for child work; in addition to articles on other social areas.
- The “*National Woman Council*” was established in the year 1997, which mandate is related to women development and empowerment; reflected on child welfare.

- The government devoted a section in the 5-year plans for childhood component since the 1992-97 plan.
- Egypt signed and endorsed the UN declaration on “Millennium Development Goals” (MDGs). Four of the 10 goals are related to child health indicators
- MOHP has initiated integration of childhood illness programmes. The “*Health Sector Reform*” (HSR) programme, starting with Primary Health Care (PHC), specified one of 4 sections of the *Basic Benefit Package*” for childcare.
- Current MOHP strategies<sup>1</sup> clearly denote the high priority given to childcare. Pertinent Strategies focus on health promotion & disease prevention, introduction of new vaccines, provision of nutritional services, and eliminating discrimination for any reason.
- The First Lady takes a number of initiatives in the areas of childhood development, including child health development. Examples for the child health area are care of disability and immunization. Her efforts mobilized civil community organizations and provoked interest of concerned authorities.

Child health programmes achieved appreciable progress in terms of child survival, as well as building technical and management capacity. At present, MOHP is working towards integrating and complementing service provision. Childcare delivery, however, is still faced with some constraints, of which are:

- Most of these programmes are implemented as independent vertical programmes, with weak linkages; as each has its own mandate, guidelines, and management and financial rules.
- Some programmes were initiated as projects that were heavily dependent on external funding, jeopardizing sustainability of some activities.
- Multiplicity of health care organizations; each has its own interests, policies and directions, with inadequate coordination.
- Lack of a “single” and “comprehensive” child policy document, resulting in discrepancies in guidance for implementing childcare programmes by different parties, and threatened sustainability of some donor-supported innovations.

To address these problems, Egypt participated in EMRO “initiative” on development of a comprehensive “*child health policy*”.

The rationale for developing child health policy is:

- To bring all child health elements into a single national set of policies in support of improving childcare quality towards child welfare, maximizing use of resources, and enhancing commitment of all concerned parties to MOHP directives.
- To cover potential gaps for meeting child health needs and rights, particularly with changing environment and epidemiologic patterns.
- To meet commitments towards the Egyptian Child Decade Declaration, the MDG and the WHO Regional Committee resolution.
- To maximize the potential for sustainability of successful innovations.

The process of developing national child health policy entails the following 3 phases:

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<sup>1</sup> Achievements and future vision, MOHP, 2004 (in Arabic).

- Situation analysis, which is the subject of this report, where (a) available documents were collected and reviewed; (b) information was analyzed to identify strengths, weaknesses, and future perspectives; (c) policy gaps were extracted to facilitate assessment of the need for upgrading, and (d) the document was drafted and reviewed.
- Development of a single policy document that meets current and potential future child needs.
- Official endorsement and adoption of the policy document by all partners within and outside the MOHP.

It was decided that as a first step, the initiative will focus on developing a single policy document for children under 5 years of age, within PHC sector. The rationale for this decision is that under-5 children are a vulnerable group, a lot of information is already available, and commitments referred to above are primarily related to PHC. The experience to be gained would facilitate development, at a later time, of a policy for older age and at secondary health care level.

### Current MOHP Strategy<sup>1</sup>

The MOHP strategy landmarks, as defined by a recent document<sup>1</sup> are:

- 1) Implement the health sector reform (HSR) programme to achieve the highest return of health expenditure, based on the principles of total coverage, equity, effectiveness and efficiency, quality and service continuity; starting by a new PHC strategy and implementation of Family Medicine approach.
- 2) Focus on health promotion, disease prevention especially among children.
- 3) Conceptual shift from reaction to the event to its anticipation and moving towards its prevention, through expanding use of surveillance methods and risk indicators, introduction of new vaccines, and prioritizing infection control programme.
- 4) Control of population overgrowth problem through expanding use of family planning means, and improving women's intellectual and economic level.
- 5) Expanding the umbrella of health insurance to new population sectors and upgrading medical care system.
- 6) Generalizing the use of total quality by all health programmes.
- 7) Elimination of discrimination based on social, gender or geographic grounds, and prioritize those in special needs, and remote & underdeveloped regions.
- 8) Provision of maternal and child nutritional services, encouraging breast feeding and appropriate complementary feeding, and control of micronutrient deficiencies (iodine, iron, and vitamin A).
- 9) Implementing the initiative of "Healthy Egyptians 2010" in the areas of anti-smoking, reduction of injuries, improving environmental sanitation, and maternal & child care.

#### Conclusions:

- High political recognition of importance of child health care, particularly so during the last 2 decades, hence the strong commitment for child protection and care.
- MOHP strategies clearly address child health and development. These strategies are reflected on supporting ongoing PHC childcare programmes, and on specifying a special section for childcare in the “*Basic Benefit Package*” at PHC level set by the Health Sector Reform, in light of directions for complementary service provision.
- Availability of successful experiences in child health care, and hence the presence of policies for some child health programmes; though those policies are limited in scope, fragmented and not always documented.
- Clear anticipation of potential future environmental and socioeconomic changes; hence the need to early initiate policies to cope with expected changes.
- There is a strong rationale to review and upgrade existing child health care policies in light of analysis of present situation and potential future changes.

#### Policy Issues:

- The need to maintain political commitment and support at all levels.
- Inadequate coordination among child health care programmes and health care organizations.
- Some programmes were initiated as projects that were heavily dependent on external funding, needing to enhance utilization of national resources to ensure sustainability.
- Current child health policies are limited in scope and fragmented, needing to be expanded and tied together in a single comprehensive document. Developed policies need to be evidence-based, and should be endorsed and adhered to by all concerned partners to enhance achieving child welfare and meeting national commitments.

## Chapter 2: The NATIONAL CONTEXT

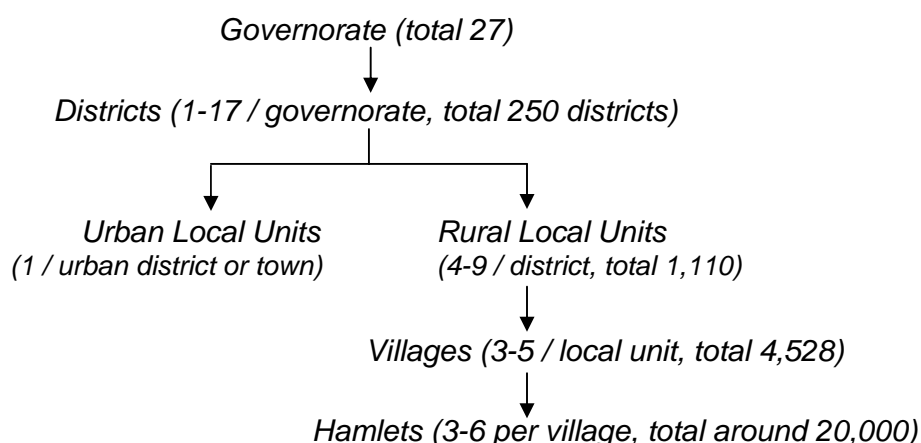
### Geographic context

Egypt is located in the northeast corner of Africa, bordered by the Mediterranean Sea in the north, the Red Sea in the west, Sudan in the south, and Libya on the west. The surface area reaches 1,002 million square kilometers; of which less than 6% is inhabited by around 98% of the population on the Nile strip and its delta.

Administratively, the country is divided into 27 governorates (see annexed map), divided into 4 categories:

- Governorates classified by the Central agency for Mobilization and Statistics (CAPMAS) as urban: these are Cairo, Alexandria, Port Said and Suez
- Lower Egypt i.e. the delta and around it, encompasses 9 other governorates,
- Upper Egypt in the south of Cairo encompasses 9 governorates.
- Frontier governorates: including 5 governorates located in desert at the east and west borders.

Administrative divisions are displayed in the following flowchart.



Each governorate is divided into districts. The total number of districts by the end of the year 2003 is 250. The number per governorate varies from 2 to 17, except for Port Said, which is formed of one district, and Cairo, which is divided into 33 districts. Each district is divided into an urban “local unit” and a number of rural local units. The office of each rural local unit is seated at a central village and covers 3-5 satellite villages (a total of 4,528 villages in 2001)<sup>2</sup> and surrounding hamlets i.e. village satellites (which total around 20,000). It is worth to mention that the term village in Egypt refers to the main economic sector, which is agriculture, irrespective of its population size; where some villages encompass more than 40,000 inhabitants. Except for frontier governorates, villages are generally close to each other. The transportation network covers all main roads that link towns and big villages, and subsidiary roads which link small village with hamlets. The effect of the geographic setup on child health is dual. The advantage is that communities are homogenous; and closeness of towns and villages facilitates service availability, accessibility and supervision. However, the disadvantage is that it creates overcrowding resulting in poor sanitary conditions, exposing children to morbidity risks.

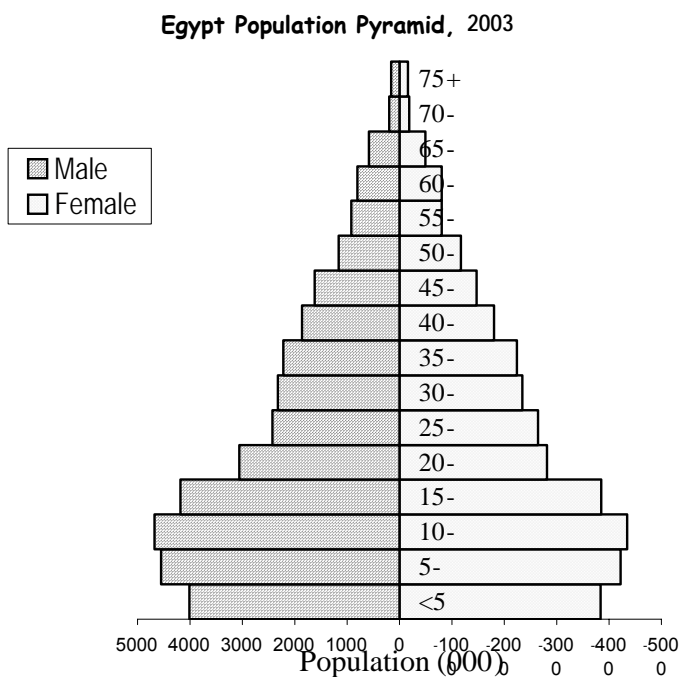
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2 Annual Statistical Report 1994-2001, CAPMAS, 2002 (in Arabic).

## Demographic context

Estimated Egypt population as of 1<sup>st</sup> January 2005 reached 71,897,547 citizens<sup>3</sup>, out of whom 69,997,318 are living in the country. The population density at present reaches 70 persons per km<sup>2</sup>, however, the de-facto population density in the inhabited land (6% of the total surface area) is 1,141 inhabitants per km<sup>2</sup>; one of the highest density in the world; negatively affecting environmental sanitation and consequently affect community health. The average family size that reached 5.1 persons at the 1996 census is estimated as of 1<sup>st</sup> January 2005<sup>3</sup> at 4.7 persons. Urban population represents 42% of the total population. Males constitute 51.2%; giving a sex ratio of 1.06.

The base of the population pyramid is shrinking (see next chart), as the proportion of under-5 children decreased from around 15% in previous decade, to 12.6%<sup>4</sup>. The proportion of under-5 children varies greatly among governorates; ranging between 8.6% and 16.8% (see annex 1). Children below 15 years reach 37.7% of the population (less than the 40% previous decade). Children up to 18 years of age constitute two fifths of the population, reflecting the importance of its size. One quarter (25.3%) of the population is females in reproductive age (15-49 years), of whom about two thirds are married. Population aged 65 years or more, though has increased, is only 2.6%.



## Political context

Changes in the political environment have their reflections on childcare. The 1971 constitution established a democratic presidential system, with the three main independent authorities; legislative, executive and judicial. At present, the system is a multiparty system.

3 CAPMAS President, press conference; Al-Ahram newspaper, Feb 16, 2005.

4 Annual statistics report as of 1/1/2004: Demographic statistics; National Information Center, MOHP, May 2004.

There are two legislative bodies at the national level. The “*Peoples’ Assembly*” is the actual legislative body, who passes laws, approves the general policy of the cabinet, and approves the budget and development plans. The “*Shoura Council*” is a consultative body, which provides advice and consultation, and proposes and reviews proposed laws before being passed by the Peoples’ Assembly. Members of both councils are elected from among candidates representing political parties, except for 10 members assigned by the president. Membership of both councils is for 4 years, however, half the Shoura Council is elected every 2 years.

The executive power rests in the head of the State. The government is the supreme executive and administrative body, headed by the prime Minister. Members of this authority are accountable in front of the “Peoples’ Assembly”.

The judicial authority is exercised through 4 categories of courts of justice. The Supreme Constitutional Court and the Supreme judicial Council control the judicial authority.

At each administrative level (governorate, district & local units), a “*local council*” similar to the “Peoples’ Assembly” is elected. This body has no legislative responsibility, but is authorized to take decisions on local matters and development plans. Also, an “*executive council*” is composed of heads of local executive departments and headed by the Governor, District Chief, or Village Chief respectively. Members are also accountable in front of the respective local elected council.

The local executive council is a venue for inter-sectoral coordination and support reflected on childcare. The elected local council takes decisions on developmental plans and activities. Both types of councils have a health committee, which could be used as venues for promotion of childcare, at both the health system and the community levels.

## Economic Context

Egypt adopted the “*socialistic*” theory, i.e. state-controlled economy, from the early 1960s up to mid 1970s, when an “*open door policy*” was adopted. In 1991, economic reform and structural adjustment was initiated towards the “*free market*” system. Following the initiation of economic reforms, a “*Social Fund for Development*” was established to mitigate the initial adverse effects of the reforms. It became active primarily in job creation through small scale and micro enterprises. The early years of the economic reforms witnessed shrinkage of overall public spending<sup>5</sup>; however the government has increased the expenditure on social services to absorb the negative effects of the reforms.

Several sectors contribute to the gross domestic product (GDP). The following chart displays the distribution of GDP by sector for the fiscal year 2000/01<sup>5</sup>.

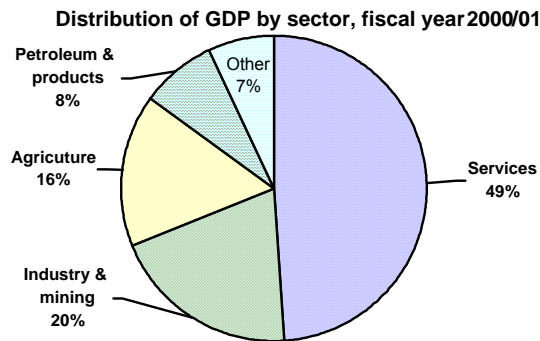
Data show that the services sector, including tourism and Suez Canal, is the prime sector contributing by almost half the GDP, while contribution of the historically critical sector, agriculture, gradually declined to 16%. The share of sectors other than those shown in the chart, including remittance of Egyptians working abroad is relatively low. Information indicates that GDP is fluctuating; it rose from US\$ 82.1 billions in 1998 to 98.5 billions in 2001, but got down to 89.9 billions in 2002<sup>6</sup>.

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5 The situation of Children & Women in Egypt: A rights-based analysis, UNICEF/Arab Republic of Egypt, Cairo, August 2002 (Arabic version Sep 2003).

6 World Development Indicators database, April 2004, World Bank





In spite that Egypt has a large economy size, the average per capita income increased from US\$ 639 for the year 1990, to \$ 1,390 in the year 2000<sup>7</sup>. As per WHO web site<sup>8</sup>, the per capita GDP in 2002 was much higher, at \$ 3,891. The increases, however, is mostly absorbed by inflation. In addition, distribution of wealth shows great differences.

Research shows that the “household income distribution” (based on consumption expenditure data) improved in both rural and urban communities between 1974/75 and 1981/82. The estimated proportion of poor families then increased in rural areas from 43.0% in 1981/82 to 47.2% in 1984; and increased in urban areas from 44.4% to 51.1% during the same period<sup>9</sup>. The same study showed that children receive little care in low-income families, a situation that has a negative impact on their mental & physical development. Based on this finding, the study concluded that any economic policy that increases the scale &/or the extent of poverty would have a negative impact on the country’s development on the long run; a recommendation that was highly considered by the government.

Poverty indicators got from different surveys in 1995/96 vary according to the definition. Results of one survey indicated that 7.4% of the population suffer of “*absolute*” poverty in terms of not meeting even the minimum need for food requirements, while 22.9% live below the poverty line; i.e. not able to meet food and other minimum basic needs such as health and education. The proportion reached 32.3% according to the “*human poverty indicator*” used by Egypt Human Development survey, which is a composite indicator composed of 4 measures of human deprivation; i.e. proportion of persons expected to die before age 40, adult illiteracy rate, proportion of population without access to safe water & health service, and proportion of underweight among under-5 children<sup>4</sup>. It is to be noted that 3 of the 4 measures are health indicators, implying the importance of health. Proportions of poverty dropped among urban and rural Lower Egypt population between the years 1995/96 and 2000 (see table below), but marginally increased among Upper Egypt population. The proportions vary by region; in the year 2000, the rate in Upper Egypt is 2-3 folds that of Lower Egypt. The proportion is higher among urban than rural population, though the difference in Upper Egypt is insignificant. Inflation, estimated at 7% (1990-2003)<sup>10</sup> aggravates problem of poverty.

7 Reporting on the Millennium Development Goals at the country level, Egypt, Public Administration Research & Consultation Centre, Cairo, August 2002.

8 Statistics by country and region, WHO web site

9 The impact of economic adjustment policies on the vulnerable families and children in Egypt, by Karima Korayem. The Third World Forum of Middle East Office, and UNICEF Cairo; April 1987.

10 World Situation of Children: Threatened Children, UNICEF. Arabic version by UNICEF Regional Office, Dec 2004.

### Proportion of people below the poverty line by residence, 1995/96<sup>7</sup>

| Year    | Metropolitan | Lower Egypt |       | Upper Egypt |       |
|---------|--------------|-------------|-------|-------------|-------|
|         |              | Urban       | Rural | Urban       | Rural |
| 1995/96 | 16%          | 22%         | 15%   | 35%         | 34%   |
| 2000    | 9%           | 18%         | 11%   | 36%         | 35%   |

### Health expenditure

Associated with the appreciable increase of government spending on social services during the 1990s, *public* health expenditure remained almost constant at 1.7% of GDP<sup>5</sup>, which is a relatively low rate. The World Bank estimate of *public* health expenditure for the year 2001 is at 1.9% of GDP. World Bank estimates of *total* health expenditure are 3.7% and 3.9% of GDP for the years 1995 and 2001 respectively<sup>6</sup>. These data denote that *public* health expenditure is almost half the *total* health expenditures.

WHO site gives the following information on health expenditure for the year 2002:

- Total expenditure on health: 4.9% of GDP. The proportion reflects real increase in 2002 than in 2001 though GDP showed reduction.
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- Per capita total expenditure on health: \$ 192.
- General government expenditure on health: 36.6% of total expenditure on health.
- External resources for health: 1.6% of total expenditure on health.
- General government expenditure on health: 6% of total government expenditure. This proportion is much higher than those during the 1990s, and probably increased more after 2002.
- Social security expenditure on health: 22% of general government expenditure on health.

It should be noted that general public expenditure covers expenditures by all health system organization.

However, detailed information is not accessible at present. Also, exact proportion of expenditure on U5 children care is not available, as the budgets are allocated to line items not to programmes.

### Social Context

The educational level has appreciably improved over the last decades. Illiteracy rate dropped from 56.2% of the population 10 years and above in 1976 census, to 39.4% in 1996 census<sup>2</sup>. However, illiteracy rate is still high and varies by gender and residence (see table below). It also varies by governorate (lowest at 22% in Port Said governorate, and highest at 60% in Fayoum Governorate<sup>7</sup>).

### Illiteracy rates (10+ years) by sex and residence, 1996 census<sup>2</sup>

| Sex    | Urban | Rural | Total | Grand total |
|--------|-------|-------|-------|-------------|
| Male   | 19.8% | 36.4% | 29.0% | 39.4%       |
| Female | 33.8% | 63.2% | 50.2% |             |

Though enrollment in basic education is obligatory, yet enrollment rates indicate that great efforts are needed to achieve universal enrolment. The following table shows disparities by region and gender with regard to enrolment in primary education. Several studies showed the relationship between the educational level of parents, particularly the mother and family practices, thus has an effect on child health.

Net Enrollment in Primary Education by region and gender<sup>7</sup>

| Year | Sex    | Urban governorates | Lower Egypt | Upper Egypt | Frontier governorates | Total |
|------|--------|--------------------|-------------|-------------|-----------------------|-------|
| 1990 | Male   | 93                 | 88          | 81          | 80                    | 88    |
|      | Female | 95                 | 86          | 64          | 74                    | 81    |
| 2000 | Male   | 100                | 91          | 92          | 78                    | 93    |
|      | Female | 100                | 92          | 84          | 78                    | 91    |

A great number of non-governmental organizations (NGOs) do exist all over the country, for specified mandates. The concept of voluntary work was highly practiced between the 1920s and 1960s. With adoption of socialism, the “paternal” attitude prevailed, creating some kind of community dependence on the government. Since the early 1990, the role of NGOs was highly considered and re-vitalized by the government. However, still there are some administrative limitations on NGO work, and limitations in the scope of the concept of voluntary work. At present, several organization are active in medical care provision and do participate in national events for child health care.

Egypt has the privilege of having a wide net of mass media. Several daily and weekly newspapers are issued expressing different political view at national level, and 1-2 papers at each governorate. There are several audiovisual general channels (radio and TV) at national and regional levels. In addition, there are several specialized channels among which two channels are devoted for both public and continuing professional education. Previous studies showed that TV ownership is almost universal, and exposure rates are too high. The recent results of the Demographic and Health survey (DHS) 2003<sup>11</sup> showed that among married women in reproductive age, the proportion of watching TV is 93%, higher than that of listening to radio of 64%. Past experience of child health programmes (CDD and EPI) using the “*social marketing approach*”, indicated that TV is a powerful tool to improve audience knowledge and behaviours.

As of 1996 census, electricity<sup>2</sup> is available in 87.1% of residential buildings from a public source, and in 2.3% from a private source. The proportions were respectively 93.0% & 1.4% in urban areas, compared to 84.7% & 2.7% in rural dwellings. In the year 1999/2000, there were 74 domestic telephones per 1000 inhabitants (i.e. 378 per 1000 families)<sup>2</sup>. In addition, there are more than 3 million mobile lines, at a rate of 44 per 1000 persons. There are differences for all these variables among regions and urban / rural residence disfavours rural Upper Egypt.

### Environmental Sanitation Context

The government of Egypt has, and still directs a lot of investments over the last three decades in the areas of infrastructure. The following table displays DHS 03 survey findings, as compared to 1996 census data.

11 DHS 2003, F. Elzanati, National Population Council, January 2004.

Proportion of households with selected environmental factors<sup>11 & 2</sup>

| Item                                     | DHS 2003       |             |       |             |       |       | 1996 census |       |       |
|--|----------------|-------------|-------|-------------|-------|-------|-------------|-------|-------|
|  | Urban Gov'ates | Lower Egypt |       | Upper Egypt |       | Total | Urban       | Rural | Total |
|  |                | Urban       | Rural | Urban       | Rural |       |             |       |       |
| Water source: - Public net inside home   | 99.3           | 98.7        | 75.2  | 79.1        | 71.   | 86.   | 83.5        | 49.4  | 59.3  |
| - Public net outside home                | 0.5            | 1.2         | 1.9   | 2.3         | 9.    | 3.    | 6.5         | 22.5  | 17.8  |
| - Covered well (pump)                    | 0.1            | 0.1         | 17.5  | 0.4         | 14.   | 8.    |             |       |       |
| Sanitary disposal: - Public sewer system | 96.6           | 90.0        | 35.1  | 56.4        | 4.    | 53.   | 53.8        | 9.1   | 22.7  |
| - Cesspool                               | 1.9            | 0.9         | 9.0   | 27.8        | 46.   | 16.   | NA          | NA    | NA    |
| Kitchen garbage: - Collected from home   | 51.6           | 49.9        | 22.3  | 53.6        | 11.   | 34.   | NA          | NA    | NA    |
| - Collected from street box              | 39.2           | 19.0        | 3.6   | 13.4        | 2.    | 15.   | NA          | NA    | NA    |

Results indicated that water supply from a public system is accessible to 90% of surveyed households. However, 30% of families do store water as a result of flow interruption or getting water from outside home, where a good proportion of those families do not cover all storage utensils (reported by observation), exposing them to pollution. Results show that though sanitary disposal of human waste to a public sewer system has improved, still is low, and there are problems with getting rid of kitchen remnants and garbage.

### Conclusions:

The Egyptian context has several factors that are supportive to child health, but there are other factors that negatively influence child health.

- The supportive factors are:
  - Political stability.
  - Change in population composition in terms of reduction in proportion of under-5 children and change in the population pyramid toward the barrel shape.
  - Noticeable improvement of educational level, particularly among females.
  - Existence of community-based structures.
  - Absolute increase of average per capita income.
  - Appreciable increase of percentages of general public expenditure on health out of both GDP and total government expenditures.
  - Noticeable improvement in water supply and sanitary disposal of human waste accessibility.
  - High exposure to mass media channels, which have great intuition effect on audience.
  - A fairly good communication network (road network and telephone lines).
  
- The negative influential factors are:
  - Illiteracy rate is still high, particularly among mothers, and in rural areas, especially in Upper Egypt.
  - Significant discrepancy in per capita income, and a relatively high rate of poverty.
  - The relatively poor environmental sanitation; aggravated by population density and unsanitary practices, particularly in peri-urban areas.
  - Though resources appropriated to public health out of government budget are increasing in absolute terms, they are not enough to cope with increasing population, inflation, public expectations and escalating costs of medical care.
  - Difficulties to obtain information on expenditure of programmes, as the Government budgets are allocated to line items rather than to programmes.

### Policy Issues:

- The high illiteracy rate among mothers, requiring greater attention to community education, particularly with home and personal environmental sanitation, getting use of the resources of existing community civil organizations.
- The differential in economic status of families and the high rate of poverty, leading to higher risks for children, needing to be highly addressed.
- The need to develop a programme-based budgeting and accounting system.

## Chapter 3: CHILD HEALTH INDICATORS

Egypt is passing through an epidemiological transition phase. In addition to relatively prevalent communicable diseases among children, civilization epidemiological pattern is ever evolving, e.g. diabetes and injuries. In addition, new problems such as street children and tumors are emerging. This chapter presents targets for the year 2010, and current situation and trends of child health indicators and other related indicators.

### TARGETS

The “*Healthy Egyptians by 2010 Initiative*” developed in the year 2000 set the following targets to achieve by the year 2010.

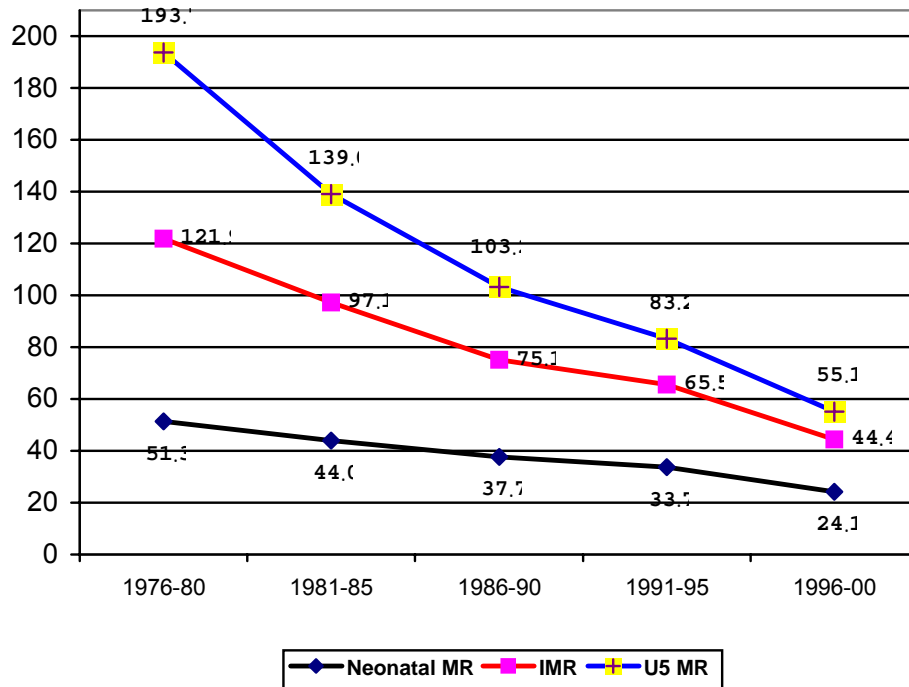
- Reduction of neonatal mortality to 10‰ live births, IMR to 20‰ live births and Under-5 death rate to 25‰ live births.
- Reduction of maternal mortality to 50 per 100,000 live births.
- Reduction of ARI morbidity to 22% of Under-5 children, proportion of pneumonia to 7% of ARI cases, and irrational use of antibiotics (for ARI) to 8%.
- Reduction of diarrhoeal diseases morbidity to 15% of Under-5 children.
- Reduction of low birth weight (<2500 gm) to 8.5% and very low birth weight (1500 gm) to 1% of live births.
- Reduction of anaemia among pregnant and lactating mothers to less than 10%.
- Increase of exclusive BF to 65% at 4 months, and to more than 40% at 6 months.
- Increase proportion of infants who receive complementary feeding after the age of 6 months to 90%.
- Increase proportion of pregnant women who receive 4 or more antenatal care visits to 80%.
- Increase childbirth at health facility by a trained provider for high-risk pregnancy to 90%, and for low-risk pregnancy to 70%; and increase the proportion of attended delivery to more than 80%.
- Reach 90% coverage of early detection of hereditary & congenital diseases which cause mental retardation (Thyroid gland hormone, ketonuria & galactosemia).
- Maintain child vaccination coverage by all essential antigens at *district level* at more than 95%. Introduce new vaccines against Haemophilus influenza and ROTA virus, and expand the EPI surveillance system to the diseases related to the new antigens.
- Adopt the policy of elimination of Measles towards its eradication.

### CURRENT SITUATION and TRENDS

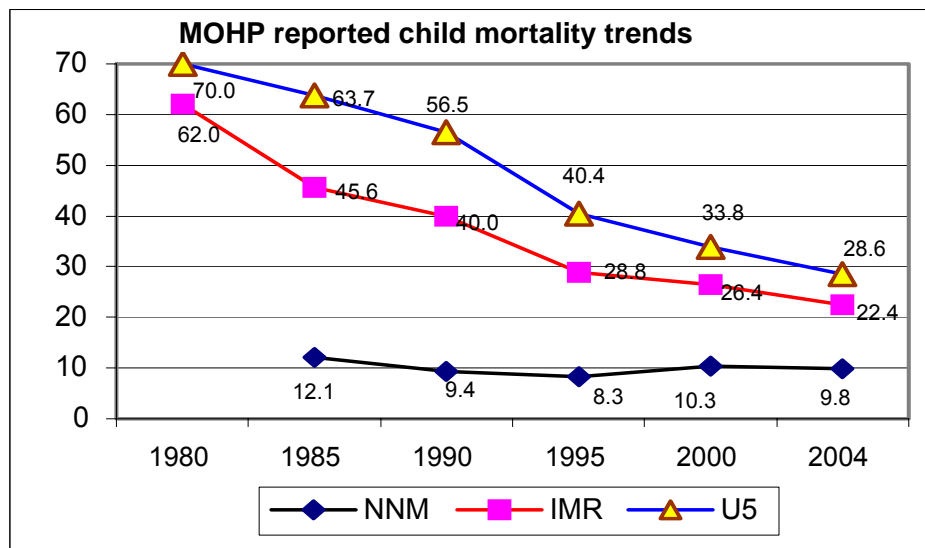
#### A) Trends of child mortality:

- The following chart derived of DHS results<sup>5</sup>, indicates marked reduction of child mortality over the last quarter of the past century. During the period, the reduction of under-5 death rate dropped by 71.6%, and IMR dropped by 63.8% while neonatal mortality by 53%, meaning that the drop was higher with older ages. The proportion of neonatal mortality increased from 26.5% of total under-5 mortality in the period 1976-80, to 44.9% in the period.

**DHS Child Mortality Trends**



- On the other hand, MOHP infant and under-5 rates for the period 1995-2004<sup>12</sup> are lower than DHS data, but show the same trend (see next chart). The differences could be attributed to a degree of under reporting by MOHP specifically during the first week, and to the length of the DHS recall “*period*” that covers up to 5 years prior to the survey. Data by year show that with a plateau phase during the 2<sup>nd</sup> half of 1990s, which called for new strategies, and thus was a rationale for adopting a holistic childcare approach through the “Integrated Management of Childhood Illness” (IMCI) strategy, and intensive perinatal care strategy. The rise of neonatal mortality rate in 2000 is a result of better reporting with introduction of neonatal care units.



12 Annual statistical report: vital statistics Jun 2005, National Information Centre, MOHP (in Arabic)

- ARI specific infant mortality rate appreciably declined from 8.43‰ in the year 1994 to 6.34‰ in the year 2004. Diarrhoeal diseases specific infant mortality rate also declined from 6.94‰ to 2.50‰ during the same period<sup>13</sup>. Both diseases, however, still represent the main causes of infant death, ARI (26.8%) and diarrhoea (15.8%). Perinatal problems are responsible for 15.0% of infant mortality<sup>12</sup>.
- Planners & policy makers emphasized the importance of studying levels, trends, differentials, and associated socio-economic factors of child mortality. It has been subjected to many studies, which followed different approaches in estimating mortality, yielding different results for the same period. Overall, a declining trend in infant and child mortality is observed. The policy implication is that deeper understanding of the differentials and the relationship between child mortality and socio-economic development will help to establish effective programme strategies
- Disparities in infant and child mortality do exist. DHS and MOHP data show disparities among regions where mortality rates are generally higher in Upper Egypt region. However, MOHP data show that the national rates are generally higher in urban than in rural areas, and marginally higher among females than among males. MOHP data also show wide variations among governorates, where IMR ranges between 12.1‰ and 41.0‰, and under-5 death rate ranges between 16.6‰ and 50.4‰ per 1000 live births (see annex 2). Several studies showed a multiplicity of factors resulting in infant and child disparities. Demographic factors are mother's age at birth, parity, spacing, birth order and previous birth survivorship. Socio-economic factors are parents' education and work status particularly of the mother, provision of electricity, water supply, and persons per room<sup>14 & 15</sup>.

#### B) Levels of child morbidity:

- Routine information on morbidity among children seeking outpatient care from health facilities is only available for CDD, ARI and IMCI programmes, and for communicable diseases subject to a surveillance system. Periodic reporting indicated that diarrhoeal diseases are responsible for around 20% and ARI for 39% of attendants at PHC outpatient clinics. ARI diseases constitute 50% of hospital outpatient departments, and a high proportion of hospital admission<sup>13</sup>. There are geographic and seasonal variations for both diseases. Periodic information also shows that the percentage of pneumonia of ARI cases, and percentages of severe and some dehydration of diarrhoea cases are decreasing over years.
- MOHP information indicates that reasons for admission to neonatal units in 2003 might be multiple. The main reasons<sup>13</sup> are: difficult breathing (50.7%), low birth weight (47.2%), prematurity (29.8%), jaundice (32.3%), septicaemia (10.9%) and births to diabetic mothers (2.2%).
- IMCI baseline survey in 3 districts in<sup>16</sup> revealed that 73% of under-5 children were suffering of a disease condition during the 2 weeks prior to the survey, a really high proportion with minor differences by residence. Results show that the commonest mothers' complaints are cough/difficult breathing (57.5%), fever (46.3%), diarrhea (24.0%), eye infection (18.8%) and throat problem (15.3%).

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13 Reports of child health programmes

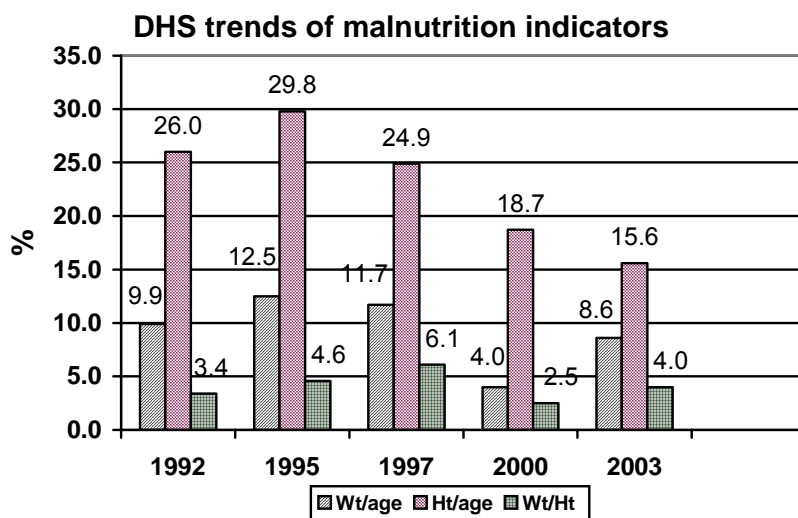
14 Infant and child mortality in Egypt, Population Studies and Research Centre, CAPMAS; March 1986.

15 Maternal health and infant mortality in Egypt, Population Studies and Research Centre, CAPMAS; March 1987.

16 Baseline Survey, Sep 1999, IMCI, June 2000.



- The following chart represents trend of malnutrition derived from DHS results. The data refer to the high prevalence of stunting (low height for age) and that the nutritional status worsened between 1992 & 95 surveys; coinciding with the time of inflation associated with implementation of the economic reforms. Then after, the nutritional status improved, most likely with stability of the economic market. It is, however, difficult to explain the discrepancy in results of the 2000 survey.



- Anaemia prevalence among children and mothers is high. DHS 2000 survey showed a prevalence of 29.9% among children 6-59 months, almost 2/3 of it is mild. The proportion ranges between 17% in urban governorates to 38% in rural Upper Egypt and Frontier Governorates. The rate is directly proportionate to childbirth order. Among mothers, the rate is 29.3%, ranges between 24.9% in urban Lower Egypt to 36.5% in Frontier Governorates. The rate is higher among pregnant mothers than lactating mothers, in rural than in urban areas, and among housewives than among mothers working for cash.
- MOHP and DHS data show that the high coverage of child immunization is maintained above 95% for individual antigens, including Hepatis B vaccine, over years, implying reduction in targeted communicable diseases. The proportion of fully immunized children, however, reached 88% in DHS-2003. Measles immunization coverage, as one of the MDG indicators, reached 95.6% as reported by DHS-2003, with insignificant difference by sex, residence or working status of the mother, but slightly low for poor or non-educated mothers.

### The potential for achieving the MDGs:

- Extrapolation of “recent” mortality trends indicates that the millennium goals of reducing under-5 and infant mortality rates by the year 2015 is potentially achievable, though requires additional efforts particularly during the neonatal period.
- The trend of reduction of malnutrition denotes that the potential for reducing under-5 malnutrition seems to be somewhat difficult in light of the effects of globalization and privatization policies, affecting the poverty level, needing a vigorous intervention.
- Data on measles immunization indicates that there will be no problems in achieving the millennium goal for measles immunization.

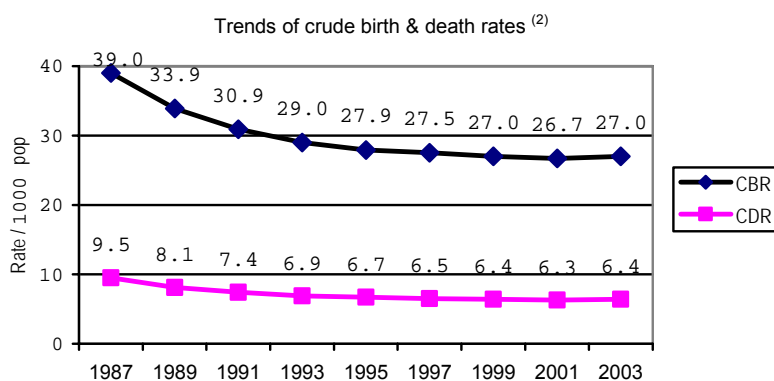
C) Other child health related indicators:

- Reduction of child mortality resulted in increase of life expectancy at birth over the last 3 national censuses and the years 2001<sup>12</sup> and 2004<sup>3</sup> as displayed in the following table. 68.4 years for males, and 72.8 for females.

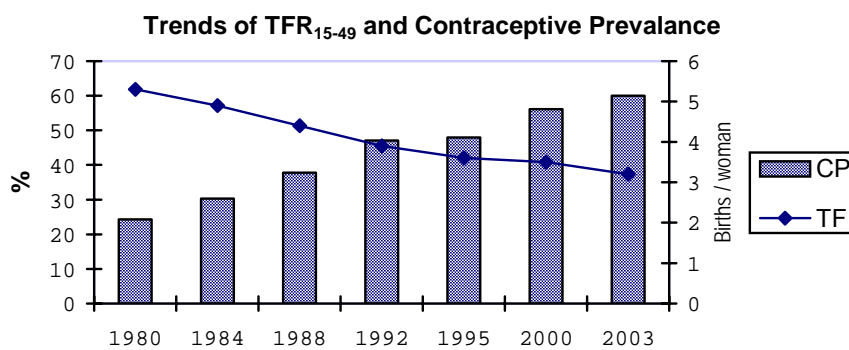
Trend of live expectancy at birth, 1976

| Year   | 1976 | 1986 | 1996 | 2001 | 2004 |
|--------|------|------|------|------|------|
| Male   | 52.7 | 60.5 | 65.1 | 67.1 | 68.4 |
| Female | 57.7 | 63.5 | 69.0 | 71.5 | 72.8 |

- Over the past 15 years, the reported crude birth and death rates (CBR & CDR) appreciably decreased as shown in the following graph<sup>2</sup>. In the year 1960, the CBR was as high as 43.0‰ and the CDR was 16.9‰. Over the 4 decades (1960 – 1999) the CDR is reduced by 62%, most of the reduction is attributed to reduction of child mortality. On the other hand, the reduction of the CBR reached 37% during the same period. However, then after the level started a plateau phase.



- The slow reduction in CBR as compared to CDR widened the *rate of natural increase* during the last 15 years of the past century. CBR is contingent on the relatively slow changes in *contraceptive prevalence* (CP) and *total fertility rate* for women aged 15-9 years (TFR<sub>15-49</sub>). DHS survey<sup>(8)</sup> show that CP increased from 24% in the year 1980 to 60% in the year 2003. TFR<sub>15-49</sub> has decreased from 5.3 to 3.2 births per woman aged 15-49 years during the same period.



- MOHP information on *maternal mortality* suffered of shortcomings in determining the actual rate due to inaccuracy of recording cause of death. In 1992-93, MOHP launched the first national study on maternal mortality. The study showed a high rate

of 174 per 100,000 live births (LBs), with great discrepancies among governorates where it reached more than double the national rate in the governorates of Suez, Sohag, Quena and Assiut. It also examined the contributing factors and the avoidable factor. A follow-up study in 2000 revealed a rate of 84 / 100,000 LBs. A recommendation of this study<sup>13</sup> was to establish a maternal mortality surveillance system. MOHP established such a surveillance investigative system since the year 2002. The surveillance reported rates for the years 2002 and 2003 are 75 and 68 per 100,000 LBs respectively; indicating appreciable reduction. The system also resulted in improving reporting of maternal mortality as compared to previously inaccurate reported rate of 11 / 100,000 LBs in 1997.

#### Conclusions:

- Egypt has achieved a lot in health care over the past decades. At present, the country is passing the transitional stage in epidemiologic and demographic terms. However, the levels of child mortality are still relatively high though declining trends are observed. The overall burden of child morbidity is also high. In addition, new problems are emerging, which have their implications on child health in the future.
- Reduction in child mortality was significant, but reached a plateau phase in the mid 1990s. Reduction is slower in younger ages; almost half child mortality toll occurs during the first month of life; and one third occurs during the post-neonatal period.
- Information shows disparities in child mortality by governorate and urban-rural residence. Disparities are dependent on socio-economic factors disfavoring rural Upper Egypt.
- Though a lot of information is available, no trend information is available to indicate reduction in DD, & ARI *morbidity* levels. However, programmes' data show reduction in severity of illness, which is evidenced by reduction in specific mortality rates.
- Prevalence of malnutrition and anaemia is still high among children and mothers. As expected, disparities are clear by urban-rural residence and by governorate, disfavoring rural Upper Egypt.
- Reduction of both under-5 mortality and total fertility rates over the past two decades resulted in reduction of both crude death and birth rates.
- The potential for achieving child-health MDGs is high for reduction of under-5 and infant mortality, no problem for achieving measles immunization coverage indicator if the current rate is maintained, but the malnutrition indicator seems to be unachievable unless poverty is reduced and community practices are improved.

#### Policy Issues:

- Reduction of neonatal mortality is relatively slower than mortality among older ages; hence its proportion of under-5 mortality is increasing overtime, requiring more and sustained investments.
- Geographic differentials in child mortality rates are still observed, needing more attention to underserved communities.
- The limited information available on child morbidity indicates no appreciable change in morbidity levels. However, toll of infectious diseases and malnutrition is high, mostly attributed to socio-economic factors, environmental factors, lack of knowledge and poor family practices, needing vigorous preventive measures, functional interaction with other sectors, and behavioural changes.

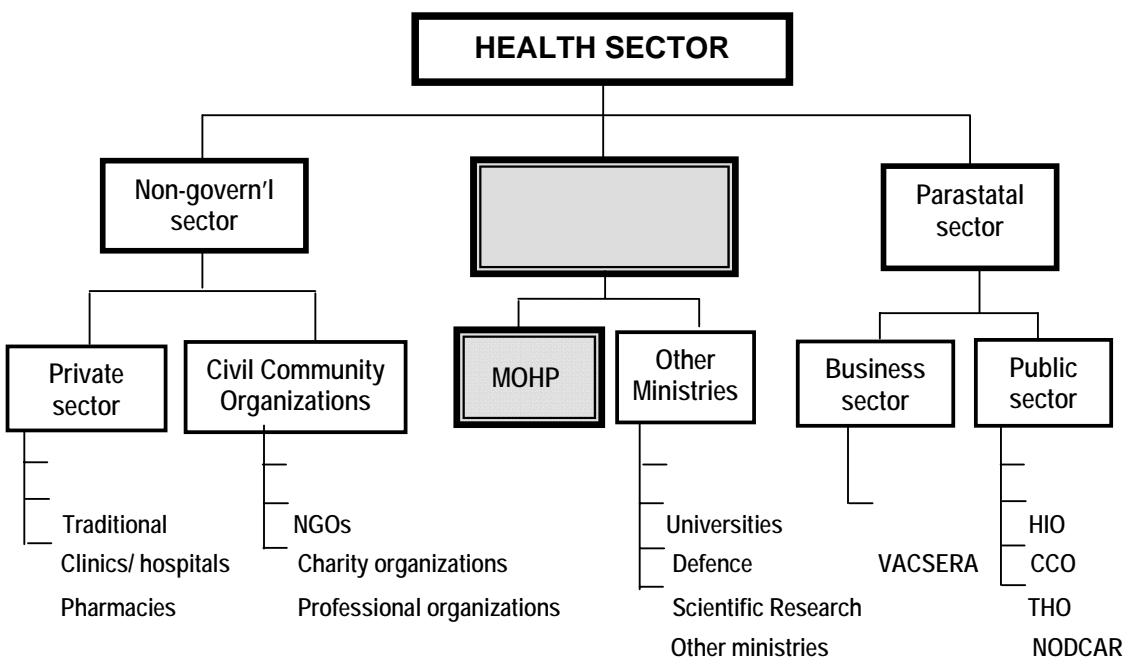
## Chapter 4: The NATIONAL HEALTH SYSTEM

### Health System Structure

The Egyptian constitution stipulates that health care is a right for every citizen without any constraints. Health care is a shared responsibility of all organizations active in socio-economic development, the community and the individual. The health system in Egypt is a complicated one. The system is characterized by multiplicity of organizations / entities in charge of care (29 entities), multiplicity of sources of financial resources, multiplicity of management structures, and multiplicity of types of service outlets. However, constitutionally, MOHP is the responsible entity, and subsequently is responsible for setting health policies, however, mechanisms to ensure compliance of all partners to MOHP policies is weak, even with the legally mandatory activities such as notification of communicable diseases, particularly so with the private sector. In addition, MOHP is responsible for service provision, and control of sanitary environment, in collaboration with other concerned authorities.

The health system involves the 3 main sectors (see chart):

1. The governmental Sector including MOHP and some other ministries.
2. Parastatal organizations
3. Non-governmental Sector including civil-community organizations (NGOs) and the private health service outlets.



A “health council” was established by a presidential decree in the early 1970s, chaired by Minister of Health and is composed of representative of all concerned organizations, including universities and Ministry of Defense, as well as professional syndicates representing the private sector. The mandate of the council is to conduct research on policy issues, set health system policies, and coordinate activities among partners.

## Governmental Sector

This sector represents the main backbone of the health system. Short description of its entities will follow.

### Ministry of Health & Population

MOHP is the prime player in the health sector at national and sub-national levels; providing all levels of care (primary, secondary and tertiary). MOHP is the single provider of preventive services for civil communities. Medical care is provided through all types of health facilities other than “*Health Bureaus*”. As of the 1<sup>st</sup> of January 2005, a total of 1150 health facilities provide inpatient care (including some PHC facilities) encompassing 52.8% of total beds in the country<sup>17</sup>.

MOHP care is provided through the 3 levels:

- Primary level through an extensive PHC network in urban and rural areas. By the 1<sup>st</sup> of January of 2004, the network was comprised of 4206 PHC health facilities (HFs); of which 597 are in urban areas and 3609 are rural HFs. This level represents the first line contact of the system with communities with regard to PHC and other preventive services, and thus is in charge of child health programmes. The average population served by HF varies among governorates (see annex 3 for HF distribution).
- Secondary level through 229 general and district hospitals, and different specialized hospitals, including 12 paediatrics, 101 fever, 36 chest, 29 ophthalmology and 8 endemic diseases hospitals. Paediatricians work in 342 of these hospitals, thus are targeted for childcare programmes.
- Tertiary level provides highly specialized medical care through 40 hospitals<sup>13</sup> located at capitals of some governorates.

MOHP organization at different levels<sup>18</sup> is summarized as follows:

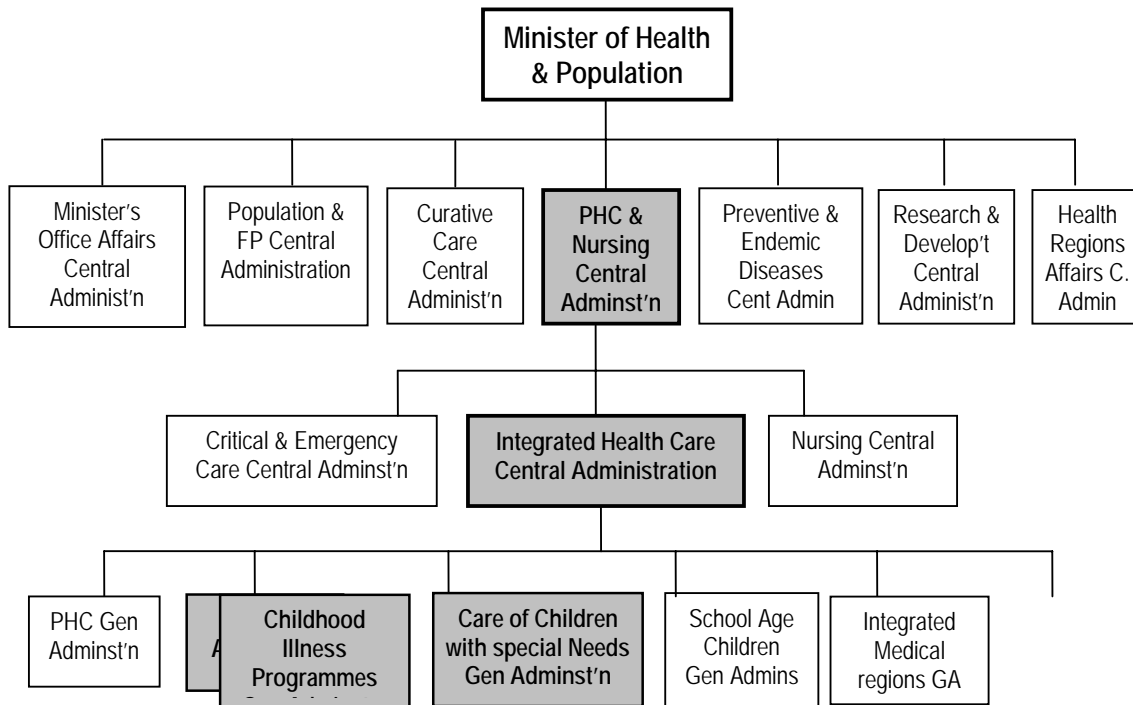
- At the central level, the organizational chart revised in 1999 created 7 sectors, each is divided into 2-4 central administrations (CA). The latter is divided into General Administrations (GA), each is divided into a number of sections. The structure is symbolically represented by the following diagram to show the place of childcare responsibilities (shaded boxes). Responsibilities of some organizational units are purely central in nature, e.g. Foreign Relations, Administrative & Financial Affairs. Responsibilities of some others are related to services provided at health facilities (HFs), such as PHC or MCH. These units are responsible for setting policies and plans, giving technical directions, and monitoring; and are represented at governorate level.

Child care responsibilities lay primarily within 3 GAs under the CA for PHC, namely Maternal & Child Health (MCH), Childhood illness programmes, and Care of children with special needs (disabled). However, other GAs within or outside PHC are responsible for some aspects of care, e.g. GA Integrated Medical Regions under PHC CA in charge of referral system, EPI under CA for Preventive Affairs, GA for hospitals under Curative Care CA responsible for medical care, CA for Manpower Development in charge of training, CA for Nursing ...etc.

<sup>17</sup> Annual Statistical report: Health Facilities manual, National Information Center, MOHP, May 2004 (in Arabic). The total number of bed is 142,953, at a ratio of 2.1 beds per 1000 population.

<sup>18</sup> Work Manual for PHC, PHC sector, MOHP, 2<sup>nd</sup> edition 2002 (in Arabic)

Child Health Care Position in MOHP Organizational Chart<sup>18</sup>



- ❑ At the governorate level, MOHP is represented by a “*Governorate Health and Population Directorate*” of one of 3 categorical levels (based on size of the governorate), with some-what different organizational charts. As a senior post, the governorate health director is appointed by the Minister of Health after consulting the concerned governor. He is administratively accountable to the governor, and technically to Minister of Health. Accordingly, the ministry has no administrative authority on local levels. According to the Local Administration law, the governorate health director has genuine authority. The organizational chart at this level is divided into technical and administrative units. Governorate Health Directorates execute the national policies and plans in their area through the technical units parallel to the central level service organizational units. Child care at this level lies within MCH unit under PHC Section.
- ❑ At the district level, MOHP is represented by the “*District Health Office*”. This level is considered the most important level as it is the direct supervisory level on service organization and delivery; however, it is the weakest ring of the chain. District Health Officers are assigned by the governor on recommendation of the governorate health director. They are administratively responsible to the Local Government District Head. They have no genuine authority, and their authorities are delegated by either the District Heads or by the governorate health director. Consequently, the scope and degree of delegated authorities vary among governorates. According to the Local Administration Law, general or specialized district hospitals are affiliated to the district health office; however, in some governorates, hospitals are directly affiliated to the technical unit at the Health Directorate. The organizational chart and staffing pattern at this level varies according to the level of the Health Directorate, and the number of affiliated HFs. The minimum structure entails 2 posts assisting the District Health Officer, one for

family planning, and the other for MCH. The latter is responsible for supervising childcare programmes at HFs.

MOHP PHC service outlets are solely responsible for executing a package of PHC services including health education, immunizations (for children & adults), MCH, family planning, control of communicable & endemic diseases, control of basic environmental elements (water, waste disposal, food & food handlers, cemeteries ...etc.). However, corrective actions of sanitary problems mostly lie within the domain of other ministries. Service integration of MCH and reproductive health is in its way. PHC facilities also provide medical care at the level of a general practitioner, and in some facilities at the level of a specialist. PHC medical care is provided against a fixed fee for drug package of LE 1. Emergency care and preventive services are exempted of such fee.

Hospitals provide secondary level medical care against LE 1 fee during morning hours, and LE 3 at evening times. Also emergency care, provided over the 24 hours, is exempted of any fee. A proportion (10-30%) of hospital beds (depending on hospital size and economic environment) are devoted to collection of nominal fees for service and lodging.

Collected fees at PHC facilities and hospitals pour into a "treasury fund" for service improvement. The HF board decides on spending from the treasury fund within the regulations issued by both Ministers of Health and Local Administration. Governors are delegated to make any changes in the spending items within their domain.

#### MOHP support systems:

The central MOHP has a GA for applied research under the CA for Research and Development. The GA runs 3 field research centers in the governorates of Giza, Qualiubiya and Sharquiya. The main center in Giza is equipped with necessary laboratories (including an animal laboratory) and data processing facilities. In addition, other MOHP units and projects conduct health system research projects. However, research projects are almost exclusively dependent on either internal sources, mainly the "Academy of Scientific Research", or external sources. Results of some researches are shared with concerned decision takers and some of which are published in local or international journals. However, many results are not shared, and are not reported to the library of "Academy for Scientific Research and Technology". As a result, access to research results are limited, and use of results is even more limited.

MOHP has a comprehensive information system. The system covers service statistics of all programmes, vital statistics, infrastructure at national level (facilities by type and bed capacity) human resources and demographic data. In some situations, quality of collected data is poor and data from different sources might be inconsistent. The system is automated down to district health offices, hospitals & some PHC health facilities. At each of these levels, data are exposed to simple analysis, with limited interpretation. Through the MIS network, in-depth analysis of data is run at central level on an annual basis, and on aggregate level, thus obscuring differences at the district level, never the less the micro-level. Again, degree of interpretation of results varies among different programmes. Use of information is unfortunately limited at all levels.

In the past, referral was based on personal decision of the physician without support or guidelines. There was no feedback, except for the obligatorily referral of communicable diseases to fever hospitals. HIO set and is implementing a system requiring referral from general practitioner to specialist. Overtime, some projects tried to implement a system, but trials were not sustained. To complement PHC services, MOHP is



concerned of “functionality” of the referral system. In mid 1990s, MOHP established a functional system, based on the following 4 criteria: (i) limiting the role of the hospital outpatient department (OPD) to deal only with referred cases; (ii) referral notes and registers are provided; (iii) regular written feedback, and (iv) setting a mechanism for collecting feedback notes from the hospital, and their timely distribution to referring facilities. This process required having guidelines for referral, and redefining the role of the hospital. Not all programmes have referral guidelines. To achieve re-defining the hospital role, political support of the governor is mandatory, orientation of community leaders about the rationale and benefits is supportive, and in-depth orientation of concerned staff is necessary. The rationale for this system are mainly improvement of care, release of hospital staff of the OPD burden so they have more time for care of inpatients & emergencies, building supportive relationship between referring physicians & hospital staff, and the value of feedback as a mean for training PHC physicians. However, in practice, the system encountered a number of constraints, the important of which are: dissatisfaction of communities surrounding the referral hospital who used to get primary medical care from a nearby hospital, shortcomings in feedback in terms of regularity and level of information, over or under-referral for programmes which do not have referral guidelines, and loss of income for hospital “Treasury Fund” as the number of OPD cases gets much fewer. At present, additional guidelines have been developed, though not widely disseminated yet, and the system is mostly functionalized at only facilities accredited for the HSR.

As a prerequisite to HSR, MOHP is paying much attention to “quality improvement”. Structurally, a general administration (GA) for quality was established in the year 1998 at the central level. The GA has worked with concerned partners to develop protocols in different specialties. It also developed a system for accreditation of PHC facilities, and developed and tested accreditation tools. Last year, a ministerial decree established a national accreditation council involving representatives of all governmental and private health system organizations. So far, more than 100 facilities within and outside HSR areas are accredited. The GA has compiled performance quality standards and assessment tools developed by PHC programmes, and in the process of developing a unified package. At present, the GA:

- Has established a high level accreditation committee at the national level.
- Is planning to establish an organizational structure at the governorate level.
- Has developed guidelines (including criteria of basic PHC programmes) for accreditation of health facilities, and accredited a good number of MOHP Family Medicine facilities, and few number of private sector facilities in the governorates targeted by HSR.
- Coordinates with other concerned organizations and educational institutes to advocate creation of a quality-oriented environment.
- Is planning to raise beneficiaries’ awareness to create demand.
- Planning to continue improvement through use of information and development of clinical protocols.

With regard to the “supervisory system”, unfortunately the inherited policing “inspection” concept, rather than supportive supervision, is still prevailing. Though several projects have tried to change the concept, the change is not maintained as a result of limited geographic coverage and turn over of supervisors. At present family planning, MCH and IMCI programmes are implementing a supportive supervisory system at the district level. The root problems of the system lay on the facts of hiring supervisors on basis of

seniority or social circumstances rather than competence, with no chance for pre-assignment training, in addition to insufficient motivation.

Service accessibility and utilization:

PHC services are *accessible* (within 5 Km or half an hour) to 95% of the population. Available information on *service utilization* suggests that MOHP services are under-utilized. Supervisory reports show that the average daily caseload per physicians is too modest in some health facilities, primarily in rural areas. DHS 2003 data on source of care for CDD and ARI generally indicate low utilization of public facilities, 17.6% for diarrhoea & 23.3% for ARI, versus 28.3% and 47.6% respectively from private providers. Antenatal care coverage is improving, DHS 2000 found about half interviewed women received antenatal care compared by two thirds in 2003. The source of antenatal care increased from 39% from private sector and 13% from governmental sources in DHS-2000 to 44.9% and 23.4% respectively in DHS-2003. Antenatal care coverage is higher in urban area, and among educated mothers and mothers working for cash; implying the relationship of seeking antenatal care and mother's educational level and contact with others. On the other hand, MOHP reported data shows that hospital bed utilization is generally low. The average bed utilization at general and district hospitals is 53.8%. The rate at the Teaching hospitals ranges between 32 - 102%, with an average of 68%<sup>1</sup>. These results clearly indicate the low utilization rate of the public sector, resulting in some degree of waste of available resources. These results are most likely a result of poor quality of care, particularly in the areas of providers' attitudes and communication with consumers.

**Other Ministries:**

Some ministries other than MOHP provide health care as a part of social care of its employees, or in light of its mandate. The most prominent ministries are:

- Universities** provide medical care to the public at 40 university hospitals (15.4% of national bed capacity<sup>17</sup> to serve the educational and academic research mandates. It worth mention that:
  - Cairo and Alexandria Universities have paediatric hospital.
  - Services of university hospitals are not limited to tertiary care.
  - Suez Canal, Assiut and Zagazig Universities run a PHC center for defined catchments similar to MOHP centers and in coordination with MOHP local authorities.

It also provides care to university students through the "medical commission" of each university, which is also responsible for assessing medical fitness for university entrance, and approving sick leaves.

The research role of universities is almost academic in nature to fulfill the staff promotion requirements. Topics of research for Master or Doctorate degree by MOHP candidates are identified by university supervisors, without consultation of the MOHP concerned department. Even results of the health system research conducted by universities are uncommonly shared with MOHP decision takers.

- Ministry of Defense** provides medical and preventive care for the armed forces. It also runs a number of relatively big hospitals in some governorates to serve its military and civil workers and their families free of charge, and the public for cost.

This ministry is keen to develop its medical staff, particularly hospital physicians. However, information is neither published nor exchanged with MOHP, resulting in lacks of information on capacity, human resources and service statistics.

- ❑ Ministry of Scientific Research supervises 3 specialized medical institutes, such as Tudor Bilharz Institute; for the purpose of supporting scientific research in health and health-related fields. Little information is available at MOHP, though MOHP is represented in the boards of some institutes.
- ❑ Other ministries including Ministry of Interior, which runs 20 hospitals to serve prisoners or policemen. The bed capacity is only 0.8% of national capacity<sup>13</sup>. The Railway Organization affiliated to Ministry of Transportation & Communication runs 3 hospitals in 3 governorates. Services of those hospitals are limited to railway employees. In other governorates, the organization contracts public or private practitioners on an outpatient level.

## Para-statal Sector

This sector represents a group of health organizations under the Minister of Health & Population. They are governmental organizations with managerial and economic self-autonomy through management boards. Minister of Health endorses the boards' decisions. Each organization has its own policies, regulations, and guidelines with no formal link or coordination. There are 5 of such organizations; viz:

1. Health Insurance Organization (HIO).
2. Curative Care Organizations.
3. Teaching Hospitals & Institutes Organization (THI).
4. National Organization for Drug Control and Research (NODCAR).
5. General Organization for Sera and Vaccines (VACSERA).

The first 4 are referred to as “*parastatal sector*” organizations, and the last (VACSERA) is under what is called “*Business Sector*” as will be explained later.

### ❑ *Health Insurance Organization (HIO)*<sup>1</sup>:

HIO was established in 1964 to provide medical care for the work force at government and industrial sectors at Alexandria in collaboration with the General Organization for Insurance and Pensions. Then it was geographically expanded to all other governorates in the late 1960s and to cover other population sectors during the 1990s. HIO is run through 6 regional branches; each is divided into governorate offices. It is claimed that directors of branches and offices have full authority to take decisions at respective level. Branches also participate in planning and in supervision of lower levels.

- HIO mandate:
  - Medical care of entitled patients, periodic check-up for entitled workers exposed to occupational diseases. Since 2 decades ago, FP services are added.
  - Medical committees for assessing need for abroad medical care (on expense of HIO), sick leaves, assessing medical fitness for employment, and estimating proportion of infirmity in work-related accidents ...etc.
- Means of medical care provision:

- At the HIO facilities; outpatient clinics and inpatient care at 40 hospitals encompassing 6.3% of total beds in the country<sup>17</sup>.
  - Contracting other medical care organizations, including MOHP, for inpatient or outpatient care, and private pharmacies for dispensing drugs to outpatients.
- HIO runs different insurance schemes for 6 target groups as shown in the following table.

Health insurance systems and target coverage as of June 2003<sup>(1)</sup>

| SN | Target                                | No. (000)<br>June 03 | Legislative<br>base        | Value of premium & other financing system  | Coverage<br>(2003) |
|----|---------------------------------------|----------------------|----------------------------|--|--------------------|
| 1  | Government employees                  | 3,737                | Law 32/1975                | 1% of salary from beneficiary + 3% by employer. Nominal fees up to LE 1.   | 96%                |
| 2  | Industrial workers (public & private) | 3,286                | Law 79/1975                | 0.5% of salary from beneficiary + 1.5% by employer. No other fees.   | 26% (*)            |
| 3  | Retired                               | 1,394                | Law 79/1975                | Optional. 1% of pension. No other fees.  | 65%                |
| 4  | Widows                                | 0,354                | Law 79/1975                | Optional. 2% of pension. No other fees.  | 23%                |
| 5  | School children                       | 16,888               | Law 99/1992                | LE 4 annually + LE 12 / student government contribution + 1/3 outpatient drug costs (chronic diseases exempted) + LE 0.1 tax per cigarette box | 100%               |
| 6  | Preschool children                    | 9,139                | Ministerial decree 82/1982 | Optional. LE 5 annual + government support for once at birth + 1/3 outpatient drug costs (chronic diseases exempted)                           | 70%                |

(\*) Ministerial decrees were issued in the year 2003 to cover other agencies and companies.

During the year 2003, the number of beneficiaries reached 34.8 millions, nearly half the population. However, coverage of target categories varies according to the insurance scheme, and among governorates. Insurance on preschool children is obligatory for the first year of life, however, a good percentage of guardians opt not to subscribe for the following years. The small percentage of government employees not covered by HIO is mostly covered by a private insurance scheme through their professional organizations. Most remainders of industrial workers have a medical care system through direct contracts of their employers with semi-governmental or private health care institutions.

- HIO run a good referral system. It has a defined list of drugs for each service level. It covers medical care costs of beneficiaries who are authorized to care abroad.
- HIO at present faces a number of problems, primarily:
  - Multiplicity of insurance schemes with different systems of contribution by beneficiaries.
  - Contribution systems for adults have been set since decades and are not based on equatorial measures, i.e. not based on potential risks among each target category. The organization failed to legally change the system to cover the ever increasing medical costs. As a result, HIO is facing increasing financial deficits over time.
  - The poor image perceived by some beneficiaries, as a result of poor provider-patient interaction and at times the quality of care.

At this point, it worth mention that:

- An objective of the child's decade is to expand health insurance to 90% of children by 2010.
- With implementation of HSR; HIO role will be limited to financing and purchasing the service from qualified sources, rather than providing it.

#### *□ Curative Care Institutions<sup>1</sup>:*

The Cairo and Alexandria organizations were established in the year 1964 through "nationalization" (تأميم) some charity and private hospitals. During the last 2 decades, 4 more organizations were established in 4 Lower Egypt governorates. Each organization is managed by a board of trustees appointed by Minister of Health. Their mandate is to sell medical care at 21 hospitals encompassing 1.5% of national bed capacity<sup>13</sup>. Service clients are mostly HIO, other intensive-labour production or commercial organizations, and some professional associations through contracts. The Cairo organization is the biggest one, and is continuously establishing highly specialized units, e.g. oncology, and open-heart surgery. It is also keen to organize training courses for staff including nurses, nutritionists, maintenance engineers, information specialists & administrative staff. There is no functional link between the organization and MOHP programmes.

#### *□ General Organization for Teaching Hospitals and Institutes (THI)<sup>1</sup>:*

The organization has been established in 1975 in Cairo, as a "scientific" institution (a special employment cadre). It is managed by a board headed by Minister of Health & Population, with membership of deans of medical schools and president of the medical syndicate. Nine hospitals and an infection control unit are affiliated to the organization (4 in Cairo, 3 in Lower Egypt and 2 in Upper Egypt), which encompass 3.7% of the national bed capacity<sup>17</sup>. Also 9 highly specialized national institutes are affiliated to the organization and located in Cairo. Examples of these institutes are the nutrition institute, Cardiology institute, physical rehabilitation institute, and hearing & speech institute. The organization's mandate is:

- To provide medical and rehabilitative care at national and regional levels.
- To provide chances for medical training for new generations of physicians.
- To conduct applied research, cope with the world's research developments for contributing to improving and upgrading health and medical care.
- To provide institutional and community-based rehabilitation (CBR).
- To implement the most recent public health systems in the areas of prevention, pollution control and maintaining healthy environment.

Other activities of the organization are organizing, in collaboration with MOHP, medical missions to different governorates, particularly remote ones, aiming at providing advanced medical care and training MOHP hospitals' medical staff (primarily physicians and nurses). It also organizes several annual scientific conferences. The organization started to develop standard case management protocols in all medical specialties, and a book titled "*Medical Code in Egypt*".

Financial resources come through government budget, donations accepted by the board, and generated income against service. Slightly more than one quarter of hospital beds are devoted for full or reduced fee payment through contracts with HIO or referred patients who have treatment regimen on the expense of the state.

□ *National Organization for Drug Control and Research (NODCAR)<sup>19</sup>:*

The organization was initially established as a *center* for drug control and research in January 1963. In May 1976, the center was changed into a national organization considered as a “scientific” institution. A board appointed by Minister of Health manages it. Its mandate includes:

- Control of pharmaceutical and esthetic (beauty) raw materials and preparations, as well as medicinal plants, insecticidals, medical foods, sera and vaccines, which samples come from different agencies. Control aims at ensuring quality, effectiveness, purity, and safety of all pharmaceutical forms for local human and veterinary consumption or for importation or exportation purposes.
- Analysis, examination and study of new preparations prior to licensing, or of preparations that require reevaluation or reassessment to ensure compliance to specifications, effectiveness and safety use.
- Setting specifications for pharmaceutical and biological control and research to upgrade preparations or develop raw drug materials, and assisting drug companies for synthesis of drug raw materials.
- Conduct clinical studies in collaboration with specialized research institutes to evaluate drug effects on humans prior to licensing, and provide technical advice.
- Provide opinion on scientific contents of drug pamphlets, and public advertisement of therapeutic and esthetic preparations.

□ *General Organization for Sera and Vaccines (VACSERA)<sup>1</sup>:*

The organization originated with the MOHP central laboratories. Then in 1972, it became an autonomous entity and given a scientific institution status (with a special employment cadre) under the Minister of Health. Its mandate is to:

- Prepare, import and package vaccines of all forms, and sera (anti-tetanic, anti-scorpion and anti-snake sera).
- Conduct research and publish scientific papers in the field of vaccines and sera.

Minster of Health appoints the board, which manages the organization. In the year 2002, the organization has been changed into a business institution under Minister of Health (not Minister of Business Sector). Being an economic producing entity, the organization was allowed to produce insulin drug to cover the local market needs during an era of critical shortage.

## **Non-Governmental Sector**

This sector includes a big number of civil-community and private organizations and institutions.

□ *Civil Community Organizations*

These organizations primarily provide medical care through a number of NGO polyclinics and hospitals; most of which provide medical care including investigations for a nominal or reduced fee. Few of them provide care on a charity basis, especially those run by institutions of religious civil communities, whether annexed to worship facilities or

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<sup>19</sup> National Organization for Drug Control & Research, information booklet, Cairo, 2000 (in Arabic)

not. The role of this sector is expanding overtime in light of escalating costs of medical care and economic regression for a large population sector.

This sector also includes a number of medical facilities run by civil community organizations such as professional associations or other organizations such as Suez Canal Authority and Arab Contractors Company. These institutions provide medical care for either full cost (similar to or at times higher than the private sector) or reduced fee according to its mission.

#### □ *Private sector*

The private sector is ever growing, involving diversity of qualified and non-qualified practitioners. Traditional practitioners include traditional birth attendants and bone-settlers of unknown numbers. Qualified practitioners include physicians, pharmacists and nurse midwives. It provides medical care for profit. Few paediatricians, however, provide child immunization. It occupies the second rank in terms of size after MOHP; involving more than half registered physicians of all specialties, more than half pharmacists at around 12,000 pharmacies. The private and NGO sectors involve 17.9% of bed capacity at 1,307 hospitals<sup>17</sup> with different sizes, never the less the huge number of clinics and polyclinics. A study in the early 1990s showed that around 65% of outpatients and one third of inpatients got medical care from the private sector.

Since there is no regulation to prevent physicians of dual practice, a high proportion of private physicians are working with MOHP. The proportion varies by governorate. The proportion reaches 45%, in Cairo, 66% & 76% in urban & rural Lower Egypt respectively, and 63% & 89% in Urban & rural Upper Egypt respectively. Though the provider in both sectors is the same, perceptions indicate that practices are different especially with doctor-patient interaction. This phenomenon promotes seeking care from the private sector over the governmental sector. This sector also involves private insurance scheme, though limited in target, scope and coverage.

It worth mention that MOHP has no authority on other governmental organizations. As for NGO and private sectors, the ministry is responsible for licensing service facilities, and monitoring the set-up of facilities as well as safety measures especially in hazardous sites such as blood banks and dialysis units. On the other hand, investigation of complaints related to performance of providers at these facilities is the responsibility of the concerned professional syndicate.

The following table reflects the relative (%) share of different organizations in secondary medical care, as reflected by their bed capacity. The total bed capacity by the end of 2003 reached 142,800 beds, at the ratio of 2.1 beds / 1000 population.

Distribution of national bed capacity by health system organizations<sup>17</sup>

| Organization                    | %    |
|---------------------------------|------|
| Ministry of Health & population | 52.2 |
| Health Insurance Organization   | 6.3  |
| Teaching Hospitals & Institutes | 3.7  |
| Curative Care Organizations     | 1.5  |
| University hospitals            | 15.4 |
| Ministry of Interior            | 0.8  |
| Private and NGO sectors         | 17.9 |
| Others                          | 2.2  |

#### Conclusions:

- The health system is complex. Constitutionally, MOHP is the body responsible for setting policies and monitoring its implementation. However, MOHP control over governmental organizations is absent, and over NGO and private sectors is limited to licensing and monitoring facility setup and safety measures.
- Multiplicity of health care organizations which have own policies, regulations, and protocols ... etc. Though there are chances for coordination and communication in certain activities, policy coordination is limited, plans are mostly uncoordinated, exchange of information is uncommon, and use of high tech equipment is infrequent.
- Child PHC responsibilities within central MOHP are scattered among 3 organizational units. The ministry is keen to unify policies and directions.
- The health sector focuses on medical care through different payment schemes. Preventive services are basically provided by PHC facilities of MOHP free of charge.
- Health care is easily accessible to 95% of the population. The PHC network is fairly extensive. Yet, geographic disparity in distribution of governmental specialized facilities, particularly highly specialized hospitals, do exist.
- Though MOHP has successful experience in some management areas, some others are still problematic. The referral system mostly lacks guidelines and feedback, drug quantification is commonly not-based on needs, quality of information system is poor in some areas and limited use of research results.
- HIO is envisioned as a corner stone as the funding agency for implementing the HSR. HIO has well-established systems such as referral and drug lists per level of provider. However, financial systems are multiple, of which some are optional. Beneficiary contribution for adults was set since a long time and not based on equatorial measures, i.e. the probability of sickness, and do not consider the change in epidemiologic picture and escalating medical care costs. All these factors resulted in financial deficit, poor provider-patient interaction, and beneficiary dissatisfaction.
- Governmental service utilization is generally low, and rate of bed occupancy in most hospitals is modest.

#### Policy Issues:

- Multiplicity of organizations and policies, requiring resuming the meetings of the existing "*Health Council*" which is a high-level policy setting and coordination body.
- Childcare responsibilities are distributed among three PHC organizational units, needing a mechanism for stronger coordination to complement coverage of children by all programmes.
- Assignment of district supervisors on basis of seniority or social factors, rather than competence, with no pre-assignment training, needing to adopt a mandatory system for hiring supervisors on basis of defined capacities, pre-assignment training and an objective rewarding system.



- The referral system is not as functional as planned, and has to be re-evaluated with the department in charge of hospitals and redesigned through wide dissemination of the developed guidelines and promotion of regular informative feedback.
- The HIS suffers of problems with regard to data validity, and interpretation and use of generated information, needing to be strengthened through promoting “*information culture*” at the grass root level and higher levels.

## Chapter 5: DEVELOPMENT OF HUMAN RESOURCES FOR HEALTH

It is well known that health care is a human-intensive industry. Human resources for health (HRH) come from greatly diversified educational background, and are required to work together as a team. They are considered the precious resource for a number of reasons. It is them who control the use of other resources. The cost of their preparation is high. They are human beings who have their needs and aspirations. Their competency and practices are crucial in shaping the efficiency & effectiveness of health services and subsequently the community health level.

The process of HRH development entails 3 components; policy and planning; production; and management. Following is a brief description of the situation with regard to the important elements of each component with special reference to MOHP.

### □ HRH policy and planning:

HRH policy aims at deciding on types of HRH disciplines, appropriate mix, and level of training. HRH policy is basically dependent on country-specific factors; such as degree of development, political system, health system structure and resources, epidemiologic pattern, and prevailing culture.

The purpose of HRH planning to estimate the numbers and qualities of each category to meet the health system needs. A plan to be set at present time has to address a long time horizon, i.e. deciding on numbers to be enrolled in professional education, who would be employed after graduation. Unfortunately this process is difficult for a number of constraints, mainly:

- Lack of knowledge on long-term investments, i.e. expansion of the system, including all partner organizations. In other words, the chances for employment.
- Dynamic changes in epidemiological pattern and consequently probable changes in appropriate qualifications and mix.
- Difficulties associated with assessing turnover of human resources due to retirement, migration, death ... etc at different sectors; excepting the size of retirement among governmental workers.

Review of the situation reveals that:

- Current policies were developed overtime in response to developments in the health system. The basic documented (by law) policy is the obligation on the side of all health-related educational graduates to serve the government for 2 years.
- Difficulties in estimating quantitative needs of categories for the future, due to unavailable information on long-term investments of the diversified organizations, and enrollment to HRH education is based on a political decision and goes much beyond envisioned employment chances.
- The current body size of human resources is huge, but there is mal-distribution by discipline, by sector and by geographic area.
- Quality of human resources over the few past decades has been a matter of complaint.
- The PHC sector has set an optimum staffing pattern for different types of health facilities based on population size<sup>18</sup>, but not always followed as a result of problems with HRH management.

## □ HRH Production:

It is supposed that production of human resources has to cope with the future needs, in terms of qualifications and numbers. The learning objectives should be based on detailed job descriptions set by HRH employers, and curricula should address community needs. Training should focus on acquiring skills rather than on imparting knowledge.

The situation in Egypt indicates that:

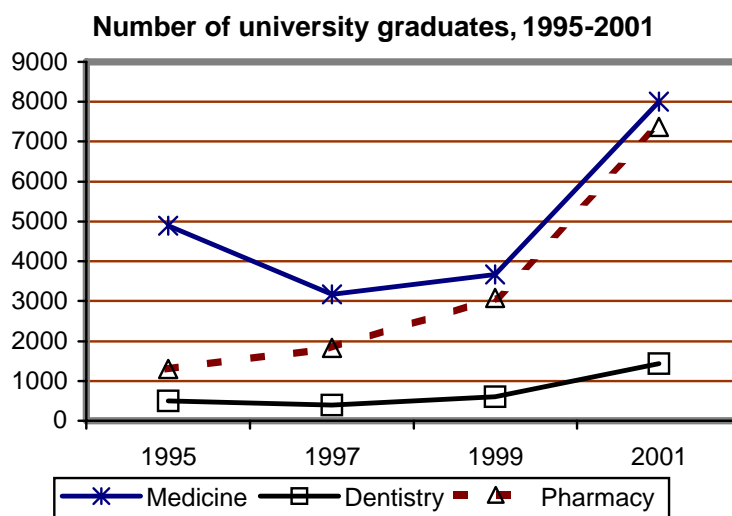
- ***Infrastructure:*** HRH production takes place at diversified educational institutions affiliated to different organizations such as universities, MOHP, Ministry of Higher Education, armed forces, and private institutions; with limited coordination.
  - At present, university education is run by 18 universities; 14 civil, 3 private and Al-Azhar universities. These universities encompass 20 medical schools (of which 2 are private), 13 dentistry schools (of which 2 are private), 17 pharmacy schools (of which 2 are private), 11 graduate nurse schools, and 1 school for physiotherapists. Study duration of medicine is 6 years plus 1-year internship, dentistry is 5 years plus 1 year internship, pharmacy is 5 years (of which the first year is at school of Sciences), and graduate nurses for 5 years plus 1 year internship.
  - There are 12 technical institutes for training technicians in 8 disciplines i.e. radiology, laboratory, sanitarians, medical records, dental orthodontics, equipment maintenance, general nursing, and midwifery. In addition, Cairo University runs a technical institute for dental orthodontics. Study duration is 2 years after secondary school matriculation.
  - There are 3 levels of nursing education. The university level, technical institutes, and secondary nursing schools. The secondary level is for 3 years after 8 years of basic education<sup>(\*)</sup>). In addition to 12 nursing and 8 midwifery branches at MOHP technical institutes, there are 2 schools of this level for nursing at Armed Forces, and one at Cairo University. The armed forces added one year to the technical institute level (by adding military and other subjects such as computer) for employment career consideration. Nursing education was confined to females. Culturally enrollment of females in nursing education in south governorates is not encouraged. Hence the MOHP resorted to establishing a secondary nursing school for males in these governorates since about 2 decades. Afterwards, a secondary school for males has been established in each of the other governorates. The decision was taken to contribute to absorbing the unemployment problem after graduation. There are a total of 255 secondary nursing schools (of which 28 are for males). A sum of 195 schools is at MOHP hospitals, 37 at parastatal organizations, 16 at university hospitals, and 7 at other organizations.
  - At a time and for the reason of contributing to overcome the unemployment problem, MOHP hired & trained a good number of female graduates of secondary commerce schools to assist nurses or pharmacists in non-technical tasks.
  - The number of educational institutions is expanding over time. Coordination among different organizations is limited, though venues of coordination exist, where MOHP is represented in the medical commission of the Supreme Council for Universities. In addition, distribution of educational institutions, particularly nursing schools is dependent on distribution of hospitals, and consequently is not

<sup>(\*)</sup> The 9 years of basic education was reduced to 8 years in the late 1980s, and has been returned back to 9 years from the scholastic year 2004/05.

equally geographically distributed, disfavoring Upper Egypt. Establishment of new university institutions is not based on study of community needs or population size, for example while Assiut city hosts 2 medical schools (affiliated to both Assiut and AL-Azhar universities), the 3 southern governorates have one school.

- Management of HRH production:

- Defining numbers of student enrollment in university institutions is primarily a political decision, irrespective of the health system needs or the capacity and requirements of the educational process, particularly the practical training. As a result, there is implicit (hidden or embedded) unemployment among medicine and pharmacy graduates. The following chart shows the trend of number university graduates, 1995 –2001<sup>2&20</sup>. Data show that the number for medicine was dropping but increased by 60% in the year 2001. The number for dentistry almost tripled, and jumped to more than 5 times for pharmacy.



- Admission into university schools and technical institutes is run through the “*University Enrollment Coordination Office*” on basis of scholastic achievement in secondary school matriculation.
- Students are physically examined according to employment physical fitness criteria.
- Universities are responsible for certifying their graduates. Ministry of Higher Education is the responsible body for certifying graduation from technical institutes, and Ministry of Education is responsible for certifying graduation from nursing secondary schools affiliated to all organizations.
- Features of pre-service training:
  - *Authorities of approving curricula:* The medical commission of the “Supreme Council for Universities” approves university curricula. Ministers of Health and High Education approve technical Institutes curricula. Ministers of Health and Education approve secondary nursing school curricula.

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20 Source of 2001 data is MOHP departments in charge of HRH distribution.

- Most curricula are traditional, infrequently reviewed and upgraded, and most likely do not meet community needs except in limited fields such as CDD, ARI, Breast Feeding, IMCI and family planning, adopting MOHP standard case management guidelines. The experience of introducing the protocols of some programmes into medical and nursing curricula was successful, as a result of involving university staff in development of respective guidelines, rather than institutionally-based. As a result, the level of strength of some of those experiences is not maintained. Early this year, the Medical Commission decided to include IMCI into both paediatric and community medicine curricula. Most curricula are free of subjects supporting professional practice such as communication, sociology and psychology. Curricula commonly do not pay enough attention to health promotion and disease prevention.
- Training methodologies in most institutions pay much attention to imparting knowledge than acquiring skills. Classroom training is more or less of a dictation type, without encouraging neither self-learning nor problem-solving approaches; associated with limited use of instructional means. In addition, clinical training takes place at tertiary level hospitals excepting the 2 community-based medical schools of Suez Canal and Menoufiya Universities, and partially at Assiut University, which runs a PHC centre.
- Lack of standard unified means for assessing university students.

## □ HRH Management

HRH management aims at ensuring the best use of available resources. The basic elements are equity in employment and distribution; clear job descriptions; retaining (maintaining employment with the organization), defined career structure, motivation, improved work environment; and means for objective assessment of performance. Other important elements are HRH development (which takes place through a structured continuing education system) and a supportive supervisory system, and its relation to re-licensure and promotion.

Findings related to the most important elements are:

- Organizationally, within the Ministry headquarters, the department of “Manpower Development” has been upgraded from a general administration to a central administration. The department is only responsible for the 2 functions of HRH production with regard to technicians and nurses, and HRH development. Other HRH management functions are the responsibility of the personnel department. At the governorate level, the manpower development department is represented by a “training unit” responsible for managing secondary nursing schools and staff training. There is no training structure at the district level.
- Employment policies:
  - The government policy stipulates that graduates of health educational institutions should serve the “government” for 2 years. Afterwards, employers have the option of continuing or quitting. Ensuring employment after graduation dictated by this policy is a factor that motivates the public to apply to pre-university education. Subsequently the number of graduates of some institutions in many governorates surpasses the actual needs. At the same time, firing a worker is a complicated and tedious process, which practically does not occur except in rare occasions. About two fifths of registered physicians, dentists and nurses are employed by MOHP,

while only one tenth of registered pharmacists serve MOHP. It worth mention that the numbers of registered HRH are cumulative and not updated for some time, thus the proportions of those working with the Ministry are somewhat underestimated. The table also shows that at the national level, there are 1.25 nurses per physician/dentist. The ratio is slightly higher, 1.34 among those employed by MOHP. Because turnover of physicians is higher than for nurses, in reality the ratio is even higher, 1.89. However the ratio is less than optimum. On the other hand, The table also shows that a high proportion of human resources employed by MOHP are in a long leave; either sabbatical, maternity or study leave. The rate is higher for physicians and lowest for nurses.

Proportion of registered HRH employed by MOHP as of 1/1/2004<sup>21</sup>

| Category      | Registered number | Ratio per 1000 pop | Employed by MOHP |      |             |      |
|---------------|-------------------|--------------------|------------------|------|-------------|------|
|               |                   |                    | Total            | %    | Not on duty | %    |
| Physicians    | 153,489           | 2.26               | 60,877           | 39.7 | 18,929      | 31.1 |
| Dentists      | 21,262            | 0.31               | 8,193            | 38.5 | 2,03        | 24.9 |
| Pharmacists   | 71,158            | 1.05               | 7,179            | 10.0 | 1,218       | 17.0 |
| Nursing staff | 218,599           | 3.22               | 100,725          | 46.1 | 9,909       | 9.8  |

- There is a law to prevent dual employment with the government; however dual assignment is allowed. A proportion of physicians working with governmental organizations do have assignments or contracts with parastatal organizations. On the other hand, there is no policy to disallow private practice of professionals employed by the government, thus the majority do have practice in the private &/or NGO sectors. The size of physicians purely working on private basis is too limited.
- Distribution of HRH by the central level is based on a set of criteria, but mostly results in mal-distribution among governorates (see annex 4). Mal-distribution also exists among districts and facilities mostly due to local political and social pressures at the local level. Mal-distribution of physicians exist service level, where the curative care sector continues to attract HRH particularly physicians; about two thirds of MOHP physicians and half nurses work in curative care services. This situation led to the phenomenon of inverted staffing pyramid in hospitals; i.e. a wide base of senior staff as compared to junior staff. To overcome this problem, trials to limit the number of hospital residents created some problems. In addition, there is mal-distribution by HRH discipline and specialty, where there apparent shortage in some specialties.
- Job descriptions for health providers have been developed by the “Central Agency for Organization and Administration in consultation with governorate health directorates, which are basically administrative in nature. Infrequently staff has a copy or has a chance to read it. Some MOHP Central Administrations, e.g. the nursing sector, family planning, MCH, IMCI, and EPI programmes have developed detailed technical job descriptions at different service levels. Staff gets familiar with their job descriptions during training courses of the concerned programmes. Otherwise, technical responsibilities are assumed by intuition.
- Retaining and motivation for the purpose of service continuity and improvement have some shortcomings. Career structure is unclear for some staff categories particularly technicians. Promotion is based on seniority. Environment of work and residence

<sup>21</sup> Annual statistical report: Manpower situation 1/1/2004, National Information Centre, MOHP (in Arabic)

(provided to physicians and nurses) in many places is neither appropriate nor safe. Creativity, innovation and team spirit are mostly unappreciated. Low salaries cannot meet appropriate living needs of staff unless compensated by another job. Annual staff appraisal is generic for the government, and mostly subjective; hence appraisal lacks credibility. Moral and monetary incentives may not be linked to performance or competency. In general, these factors collectively lead to staff dissatisfaction, reflected on disciplinary problems, low productivity, seeking dual job, and instability. Quitting MOHP service is particularly pronounced among pharmacists and PHC physicians, as the public sector cannot compete with the private sector.

- Staff development has appreciably increased over the past 2 decades, especially through donor-supported projects. However, current efforts are activities, rather than a system for continuing education. Examples of these activities and problems encountered are:
  - A TV continuing education programme for doctors is present, but airing time is not always appropriate and the content is generally knowledge-based.
  - The Ministry supports participation in national conferences not based on actual needs, but most participants are from governorates nearby the conference venue, mostly in Cairo.
  - There is a line-item budget for in-service training at HQs and Governorate health directorates. However, training faces several problems. Government budgets appropriated for training vary much among governorates, as budgeting annual training plans is contingent on approval of the Central Agency for Organization and Administration. The central level of health projects commonly organizes training away from training units at the local level. District health offices mostly have no role in assessing training needs. In most situations, training is limited to classroom subjects with exceptional chances for skill practice; particularly so with IMCI, midwifery courses, and to family planning. On the other hand, overseas training has been dependent on availability of foreign financial support through projects or scholarships, but the MOHP supported overseas training for some years on family medicine. A high committee selects candidates for overseas training, but announcements may not reach the target at an appropriate time.
  - Other organization has their plans for in-service training, but information is not shared.
  - The ministry just initiated a network for consultation and self-learning at some specialized hospitals.
  - The Ministry failed some years ago to apply an accreditation system for continuing education; subsequently service quality and utilization are relatively low.
  - With few exceptions, the supervisory system is inadequate; focusing on administrative matters rather than technical performance. Supervisors are mostly appointed for reasons other than competency with no pre-appointment training.
  - Last, but not least, licensing for professional practice is granted once after graduation, where trials to admit re-licensing were strongly resisted by some senior professionals. Subsequently, the link to HRH development is lost.

**Conclusion:**

- Identifying quantitative and qualitative needs has to address the time after enrollment and graduation of professional education. The process is difficult due to lack of information on long-term investments and the dynamic changes of the epidemiological pattern.
- Health educational institutions are distributed all over the country, but unevenly. The expanding educational system and the ever-increasing student enrollment are influenced by political decisions, and mostly beyond institutional training capacity and service needs, affecting quality of training.
- The rate of expansion of the educational system surpasses the rate of investment, creating implicit unemployment. University educational curricula fall short behind meeting community needs and requirements of potential employers, excepting the examples of introducing protocols of few MOHP programmes. Even these exceptions mostly were not institutionally based; thus the same level of commitment might not be maintained. Curricula mostly lack supporting subjects e.g. psychology, sociology and communication. These situations put a great burden on graduate-users for primarily PHC in-service training.
- Curricula of nursing schools and technical health institutes are infrequently revised to cope with changing needs and technological developments.
- Training methods at educational institutions are mostly traditional, focusing on imparting knowledge rather acquiring skills.
- Shortcomings in HRH management systems at MOHP, primarily supervision, poorly stated job descriptions, shortage in work protocols, inappropriate staff appraisal, limitations in motivation, low salaries, and poor working environment; result in low morale, dual job, and instability particularly at rural areas, and consequently high turnover or non-compliance to work requirements and quality standards.
- Mal-distribution of HRH among service levels, geographic areas and disciplines / specialties.
- Dual assignment of governmental professionals is frequent. Engagement in private practice creates vested interest (probable personal benefit) and leads to non-compliance to professional ethics and to quality standards.
- There are continuing education activities (focusing on physicians), but not a system. Both the failure to adopt an accreditation system, and resistance against re-licensing of professionals result in basing promotion on seniority rather than competence, resulting in in-appropriate performance and thus poor image and low utilization of governmental services.



**Policy Issues:**

- The policy of hiring graduates of all health educational institutions resulting in mal-distribution of human resources need to be revised. The HSR suggestion of decentralized hiring on basis of needs has to be generalized.
- The policy of dual assignment and combination of public and private practice need to be reconsidered.
- Production of HRH exceeds demand and the gap is widening over time, needing to work towards a high political decision to limit enrollment &/or increase investments.
- The shortcomings in preparation of HRH, coupled with the high turnover rate at PHC level, put a great burden, in terms of cost and effort, on graduate-employers for in-service training. The latest example of institutionalized introduction of IMCI guidelines need to be generalized to ensure sustainability through maintaining the same level of commitment.
- Low morale of health professionals needing provision of an incentive package appropriate for each governorate/district.
- There are continuing education activities, but no “system”, needing development of an accredited system, acceleration of developing standardized guidelines for some programmes, and designing objective staff appraisal tools to upgrade staff competence and improve quality of service. The continuing education system needs to seek all possible means for capacity building, including decentralized training, and support of self-learning channels.

## Chapter 6: CHILD HEALTH PROGRAMMES

Egypt adopted an organized MCH programme in 1927 that was comprehensive by the state-of-art at that time. Since the 1980s, MOH adopted a CDD, ARI and EPI programmes; which significantly reduced child mortality and morbidity caused by common preventive diseases. This success encouraged the Ministry to continue upgrading child programmes and developing new interventions. Some of the current programmes are exclusively promotional (e.g. breastfeeding), others are purely preventive (e.g. EPI), some are curative (e.g. ARI), but some combine more than one aspect (e.g. IMCI combines the 3 fields, and Care of children with special needs works on early detection, prevention, treatment and rehabilitation. Current childcare programmes are coordinated at the central level as they fall under PHC undersecretary. At district level, they are under the supervision of one DHO assistant. At the PHC facility level, the same health provider implements all programmes. Most of the programmes already have their protocols, and others are under way. These current programmes are:

### Child Care Programmes:

- Monitoring under-5 child growth and development programme.
- Neonatal care programme.
- Promotion and support of breastfeeding.
- Micronutrient supplementation programme.
- Expanded programme of immunization (EPI).
- Control of diarrhoeal diseases programme (CDD).
- Control of acute respiratory infections programme (ARI).
- Integrated management of childhood illness programme (IMCI).
- Care of children with special needs.

### Child-related Programmes:

- Maternal care programmes.
- Injury protection programme.
- Tuberculosis control programme.
- Endemic parasitic diseases programmes.

Follows is a brief description and analysis of these programmes<sup>13</sup>.

## Child Care Programmes

### *Monitoring under-5 child growth and development programme:*

The programme has been established on a regular basis with the development of “*Child Health Card*” in September 1996 for the purpose of detecting deviation in growth and development, and early detection of ill health &/or disability. It articulates on 3 activities:

- Monitoring weight and height for age to assess protein-energy malnutrition.
- Measuring the blood haemoglobin level to assess anaemia.
- Monitoring mobility development, hearing & speech, and social behaviour, using Denver II developmental scale.

To ensure highest coverage, the programme policy links the periodicity of monitoring children with immunization visits (see schedule later) in addition to the first contact at birth or within 15 days, and the end of each year of age, as well as any visit for medical care. HIO shares in implementing this programme. At the time of birth notification, a child's health card is given to parents. Data generated during each visit, is recorded in the child's card, in addition to data generated during visits for medical and dental care. The service covers all PHC facilities at national level. No doubt that tying the monitoring occasions with EPI schedule is useful in increasing coverage.

The 2 main constraints are:

- The issue of service quality, given that the day of immunization session is generally a busy day.
- The use of the child's health card, which is mostly limited to immunization sessions

The programme plans to extend use of the newly developed growth curves up to age 21 years, and expands measures to include head circumference, and body mass. It also plans to increase public awareness about assessing child development, and training providers on the Denever II developmental scale. Ho

#### ❑ *Neonatal Care Programme:*

The programme was initiated in 1992 in light of the high proportion of neonatal deaths. It started with 30 hospitals by providing a limited number of incubators. At present, the programme is implemented at national level; where hospital-based neonatal care units are classified into 3 categories according to level of care, and skills and equipment needed. These are basic care, intensive care and tertiary care units. A defined referral system from each level up is in place. Each level is equipped with the relevant equipment, as well as an ambulance equipped at least with an incubator. Though the programme is hospital-based, it is established and coordinated by the PHC sector.

The programme is run through the following activities:

- Establishing and renovating neonatal units according to standard specifications.
- Expanding the list of equipment in light of study of the common causes of neonatal death. Classifying units into 3 levels, and equipping the units of each level according to standard equipment list for each level. Provision of ambulances equipped with a mobile incubator.
- Developing and printing evidence-based protocols for physicians and nurses.
- Implementing an infection control programme required for accreditation, and developing a protocol for hand washing, sterilization of equipment and preparation of solutions (for injection).
- Competency-based training of neonatal units' staff on these protocols, with assistance of university staff.
- Follow-up through field visits using a monitoring checklist, and a set periodic reporting system.
- Establishing an information network, and developing a consultation programme that could be used for continuing education.

By the end of 200 there are 211 neonatal units covering all governorates. The neonatal units are equipped with 1900 incubators, 100 artificial respiration apparatuses, 700 resuscitation units, 1200 phototherapy units, 380 pulse and respiratory monitors, 500 apparatuses to measure oxygen, 168 jaundice meter units through skin, 100 units for jaundice meters capillary blood, 200 blood glucose, and 200 ambulatory kits.

As a result the case fatality rate in neonatal care units dropped from 23.0% in 1995 to 12.2% in 2004. The top cause of death is *respiratory distress syndrome* particularly among the “very” low birth weight children (<1.5 kg).

The important constraints are:

- Shortage in financial resources to cover the high costs of care, where in “some” governorates HIO does not cover the costs of needed ancillary services e.g. laboratory tests, blood transfusion, and radiography.
- Some units need renovation to control pollution and infection.
- Geographic distribution of neonatal units and of qualified staff is unequal.
- The need to maintain some equipment and shortage of some supplies, given the limited allocated budget.
- Other causes of neonatal deaths according to ICD 10 are not reported.
- Limited local capacity for supportive supervision.

□ *Breastfeeding Programme:*

Promotion of breastfeeding (BF) started in early 1980s through CDD project before implementing the “friendly-baby hospitals” initiative in collaboration with UNICEF. In the year 1992, a supreme committee to set programme policies was formulated. The committee endorsed the “Egyptian Code for promoting infant and young child milk formulae and foods” in September 1993.

The programme policies are:

- Promotion of early initiation of BF during the first hour of childbirth.
- Promotion of exclusive BF for the first 6 months, continuing BF up to 2 years and starting complementary feeding after the 6<sup>th</sup> months.
- Limiting use of bottles and pacifiers.
- Putting into effect the Egyptian code for breast milk substitutes.

The programme covers all of Egypt in collaboration with national partners, particularly mass media and NGOs, as well as international partners namely WHO and UNICEF.

Programme achievements are:

- Adapted tools of the baby-friendly initiative, and implementation of the initiative in 121 hospitals, and expansion to a number of urban health facilities.
- Organized a yearly BF week, and printing & disseminating educational materials.
- *BF indicators* improved between DHS-1995 and 2000, but declined again in 2003 (see next table) most probably a result of change in definition, and of slowing down of BF activities. The median duration of BF however did not change, most likely as a result of slowing down some of the donor-supported activities.

Breastfeeding indicators as reported by DHS<sup>11</sup>

| Indicator                                    | DHS 1995    | DHS 2000    | DHS 2003    |
|--|-------------|-------------|-------------|
| Initiation of BF during 1 <sup>st</sup> hour | 41.2%       | 57.0%       | 52.4%       |
| Initiation of BF during 1 <sup>st</sup> day  | 74.7%       | 88.1%       | 87.0%       |
| Exclusive BF at 0-3 months                   | 67.6%       | 67.8%       | 45.7%       |
| Exclusive BF at 4-6 months                   | 24.1%       | 27.5%       | 6.6%        |
| Median duration of exclusive BF              | 2.9 months  | 3.0 months  | 1.5 months  |
| Median duration of BF                        | 18.9 months | 18.4 months | 18.8 months |

The programme constraints are:

- Changes of definition of exclusive BF in terms of timing (up to months versus 6 months), giving plain water in hot weather, and
- Inappropriate advice given by some health providers to mothers who suffer of a breast feeding problem during the early months of lactation<sup>16</sup>.
- Frequent interruptions in promoting BF due to changes in personnel in charge and in donors' interests, and due to competing new programmatic developments.

□ *Micronutrient Supplementation Programme:*

As micronutrient deficiencies have an effect on body functions and resistance, MOHP is implementing a supplementation programme

• ***Iodine:***

The 1992 nutritional survey showed that the iodine deficiency rate surpasses the recommended rate of 5% for different age groups in all governorates. MOHP studied iodization of table salt with the principal salt production company. MOHP provided a loan to the company to replenish the production line. Production started in the year 1996. UNICEF supported the supply of potassium iodate up to the year 2001, then after, MOHP takes the responsibility of supply from its own budget.

Iodized salt was legally allowed to be the single salt commercially marketed since the year 2000. By that time, MOHP generalized the application of iodine detector in the course of the "food control programme". Results showed that the proportion of its availability in the market reached 94%. MOHP added observing and testing iodine content of table salt available at households to DHS since the 2000. The survey results showed that the rate of households using iodized salt was low (55.9%) most probably because its price was up to 10 folds of the non-iodized salt. The rate sharply increased to 79.1% in DHS-2003. The rate was as high as 92.1% in urban areas, compared to 66.1% in rural areas. It was also almost universal in urban governorates, and higher in Upper Egypt than in Lower Egypt governorates (77.0% and 71.3% respectively). Results imply that non-iodized salt is still available in remote areas, or directly at places producing sea or rocky salts. In addition, it is believed that its actual use is limited to the freshly prepared foods rather than other used such as pickling. So far, no surveys were conducted to measure the effect of this programme.

• ***Vitamin "A"***

The 1995 nutritional survey found that the rate of sub-clinical deficiency (plasma retinol <10/100 ml) was 11.9% among children and 10.2 among mothers. In light of these results, MOHP nationally started vitamin "A" supplementation for children from January 1999, and for mother one year later. The scheme is to give 2 doses for children along with EPI sessions, a dose of 100,000 units at 9 months and 200,000 units at 18 months, with at least 4 months apart. Mothers are given a single dose of 200,000 units within 4 weeks of childbirth. Programme data show that coverage reached 97% of children and 84% of mothers in 2003. DHS data showed that the rate increased among children from 22.7% in 2000 to 64.8% in 2003, and among mothers from 10.9% to 33.7% during the same period. The difference between the 2 sources could be attributed to the fact that DHS covers births and mothers over 5 years prior to the survey. Of interest is that DHS showed a higher rate of vitamin "A" supplementation for children in urban than in rural areas, and vice versa for mothers. The impact of the programme is not yet measured.

• **Iron:**

The issue of iron deficiency was raised in Egypt since a long time, as different surveys found that anaemia is highly prevalent among children and pregnant and lactating women; reaching around 30%. The rates vary by social class and residence, higher among the low class and in South Egypt. It was found that anaemia is primarily a result of iron-folic acid deficiency. Until present, there is no consensus on the 1<sup>st</sup> intervention thought of; i.e. bread fortification, where objection was based on the prevalence of thalathemia. However, bread fortification is being piloted at Fayoum Governorate.

As a result of the arguments on bread fortification, MOPH initiated a supplementation programme in January 1999. The programme policy requires giving a weekly dose of iron preparation for children aged 6-30 months. Initially, the preparation was in the form of drops provided by UNICEF, but later on is being provided by MOHP in the form of syrup. Pregnant and lactating women who receive care from MOHP facilities are given iron-folic acid supplementation. The programme is implemented at all PHC facilities the national level. MOH 2003 data shows that coverage reached 85% of pregnant and lactating women. Unfortunately, child coverage is not reported, but may not be high as a result of shortage supply at a good proportion of health facilities. On the other hand, general information indicates that child foods fortified with iron &/or vitamin "A" are available in the market, but only accessible to the minority who can afford its cost.

□ **Expanded Programme for Immunization (EPI):**

The immunization programme is one of the oldest programmes in Egypt; initiated in 1891 with vaccination against smallpox. Egypt was a pioneer country in eradicating smallpox long before initiation of the global campaign for its eradication. BCG vaccination was introduced in 1956 some years after introduction of DPT vaccination, and polio vaccination in 1968. The programme was evaluated in 1984, and upgraded to EPI in 1985, with special focus on the cold chain. Then after, two more vaccines were added, hepatitis B in 1992, and a MMR in 1999. The programme thus addresses 9 diseases, including the 6 globally targeted diseases.

The programme purposes are:

- Reduction of incidence and specific mortality from targeted diseases.
- Eradication of poliomyelitis.
- Elimination of neonatal tetanus and measles diseases.

The programme strategies are:

- Immunizing all children against the 9 diseases.
- Organizing national and limited campaigns against polio, tetanus neonatorum and measles, implemented in collaboration with WHO, UNICEF and Rotary Club.
- Carrying out a surveillance system for the 3 diseases. Coverage of polio surveillance for the years 2002 and 2003 indicates the following results. No cases were reported in the year 2004.

Results of polio surveillance activities

| Area                       |                         | 2002     | 2003    |
|----------------------------|-------------------------|----------|---------|
| Cases surveillance         | Flaccid paralysis cases | 577      | 608     |
|                            | Confirmed cases         | 7        | 1       |
| Environmental surveillance | Total samples           | 163      | 280     |
|                            | Positive number (%)     | 26 (16%) | 12 (4%) |

Child vaccination is the responsibility of government PHC facilities, but it also takes place at a limited number of private paediatric clinics. Child immunization schedule is as follows:

Child Immunization Schedule

| Child age     | Antigens                | Site of injections                                   |
|---------------|-------------------------|--|
| Up to 15 days | OPV zero dose + BCG     | BCG: left shoulder                                   |
| 2 months      | OPV1 + DPT1 + HB1       | DPT: front of left thigh<br>HB: front of right thigh |
| 4 months      | OPV2 + DPT2 + HB2       |  |
| 6 months      | OPV3 + DPT3 + HB3       |  |
| 9 months      | OPV4 + Measles          | Measles: right arm                                   |
| 18 months     | Booster OPV & DPT + MMR |  |

Vaccines are supplied to urban health facilities on a monthly basis, and to rural facilities on a weekly basis. The problem of interruption of electric currency for the cold chain at most rural facilities is overcome by providing HFs by a gas or solar refrigerators, or by supplying the vaccines the day before or in the morning of the session day. So far, potency tests in the field revealed no problems.

The programme policies are:

- No contradiction to immunization except if the child's illness requires admission into hospital, or for BCG if the child is born to HIV mother.
- The child who suffers of diarrhoea is given the polio vaccine without counting the dose, and asking the child to come back after a month.
- Follow-up children who missed any shot through home visit (primarily in rural areas), and get use of missed opportunities through child contact with the HF. In this case, the minimum intervening duration for polio or DPT could be one month, but for HB is 2 months.
- Open a bottle of vaccine even for one child, either during the session or if it were a missed opportunity. However, this policy is not strictly followed, as providers feel accountable to the government-auditing agency.

Coverage for individual antigens is continuing to be over 95% over the past 15 years. However, as reported by DHS, the proportion of fully immunized children dropped from 92.2% in 2000 to 87.5% in 2003. It should be noted that DHS is dependent on interviewee ability to identify the different shots, and to recall information about children in their second year over a 5-year period prior to the survey. Data indicate that there will be no problems in achieving the millennium goal.

Over the past few years, two problems caused confusion of the field staff, these were

- Importation of 2 strengths of BCG vaccine.
- Combining HB and DPT vaccines in one vial.

□ *Control of Diarrhoeal Diseases (CDD) Programme:*

The field study of the "Strengthening Rural Health Project" in 1980/81 found that oral rehydration, using oral rehydration solutions (packaged or not) cut specific mortality into half. This result leads the MOHP to establish with USAID assistance a national CDD project (NCCDP) in 1983. After a pilot in Alexandria in 1984, the programme reached national coverage by year 1985. Due to its success at global level, Egypt NCCDP was honored the "flagship carrier" title, and to its institutionalization in 1991 within the MOHP organization chart.

The NCDDP relied on the following strategies:

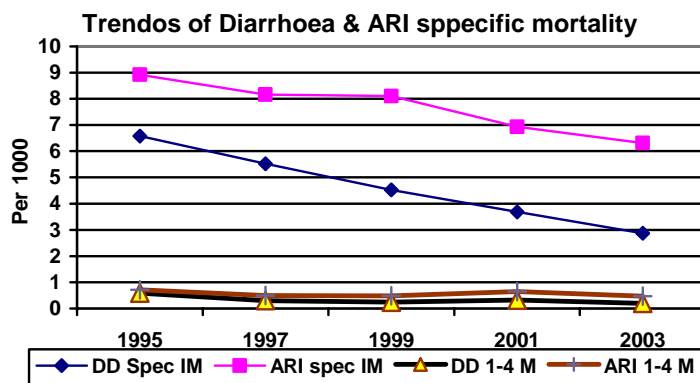
- Provision of ORS at governmental service outlets and private pharmacies.
- In-service training of different categories of staff, and introduction of guidelines in medical & nursing education curricula.
- Establishment of diarrhoea treatment corners (DTC).
- Intensive community education campaign.
- Support of medical, pharmaceutical, laboratory and anthropologic research.

NCDDP successes are:

- Reduction child mortality and severity of the illness.
- Improving caretakers' knowledge and practices on a wide scale.
- Giving the example of a comprehensive scientific approach for planning.
- Building managerial capacity at local levels, many of its governorate coordinators were selected for higher management post over the past years.

A major input in such success was the community education strategy, which involved 2 activities. First, the mass media campaign that employed a motherly actress using the "social marketing" approach. The second was community mobilization through involving and training workers in community organizations such as nursery schools, and boy scouts, as well as community volunteers.

The following chart displays the trend of reduction of specific infant and 1-4 years mortality rates for each of diarrhoeal and ARI diseases.



However, there are some problems:

- Since NCDDP was a donor-supported project, it was looked at as a campaign. With cessation of external funding, basic activities continued from government budget especially provision of ORS and IV solution; while training slowed down; and the media campaign and research were discontinued.
- Focus was more on proper case management while disease prevention was almost limited to theoretical training of providers and community educational.
- Training did not give "enough" focus on skill acquisition.

Learned lessons from the CDD programme are viz:

- Synchronization of activities; i.e. ORS production & distribution, training and airing educational messages is crucial for balancing the supply-demand formula.
- Early involvement of universities and scientific associations, and support of research were helpful in facing initial resistance, and introducing CDD into medical curricula.



- Introduction of CDD case management guidelines into medical and nursing curricula is a helpful approach for reducing in-service training needs.
- TV is a powerful tool for public education, particularly with selection of a motherly respected actress; particularly for using the “social marketing” approach.
- Design of baseline information is a prerequisite to scientifically evaluate effects.

□ *Acute Respiratory Infection (ARI) Programme:*

The two field studies conducted by of the “*Strengthening Rural Health Project*” in 1982 and 1983 directed the attention to the importance of an ARI intervention for child survival. Following the success of CDD, ARI stepped as the commonest cause of child mortality. Most deaths are due to pneumonia caused by bacterial infections, which can be treated with low-cost antibiotics. MOH initiated a national program to control ARI since 1989 within the USAID supported “*Child Survival Project*”, then transformed as a programme in 1995. The WHO strategy of Standard Case Management (SCM) for early detection and proper management of the different forms of ARI particularly pneumonia has been strongly pursued. The programme objectives are to reduce related child mortality; incidence, severity and complications; and inappropriate use of antibiotics and other drugs.

The programme strategies are:

- Upgrading Health provider’s performance.
- Improving service quality through supply of essential drugs and basic equipment; improving laboratory services; and establishing an information system.
- Conducting applied clinical, health system and basically ethnographic research.
- Increasing community awareness though face to face and mass media education.

The strengths of the programme are:

- Reduction of specific child mortality (displayed in the above graph). The programme reporting system shows decline in proportion of pneumonia over time.
- Increasing caretakers’ awareness and improving their early care seeking practices.
- Setting standards for quality, and improving some of the health system elements mainly through provision of basic equipment (timers and oxygen concentrators) and the appropriate antibiotic.
- Developing a sentinel information system.

The main problems were:

- As with CDD, some of the project activities continued, but others slowed down or stopped.
- Provision of the antibiotic for treating pneumonia created a sense of dependence on the side of the governorates.
- The limited role assigned to nurses, which role was limited to registration.

Yet, the following lessons learned were useful:

- Developing service standards, supervision tools and ARI case registration became driving factors in establishing SCM.
- Increasing public awareness results in early referrals of very sick children.
- As with CDD, introduction of SCM guidelines into medical curricula helped to reduce in-service training needs.

□ *Integrated Management of Childhood Illness (IMCI) Programme:*

IMCI is a strategy rather than a programme, however Egypt dealt with it as a programme in MOHP structure. It is based on both CDD and ARI programmes. The strategy is characterized by:

- Being a holistic approach, integrating SCM of the common diseases into one protocol, requiring full examination of the sick child irrespective of the caretaker's complaint.
- Combining preventive aspects with case management; such as immunization, breast-feeding, child feeding and other factors influencing child health and development.
- Emphasizing child home care to complement the care provided at health facility during health and illness.

The rationale for adopting IMCI strategy in Egypt is:

- To overcome the plateau phases in infant and under-5 child mortality rates.
- To maximize use of scanty resources by improving efficiency and cost effectiveness of child care services.
- To respond to MOHP directions towards service integration and quality improvement.
- To pave the road for HSR efforts implemented through the family medicine approach.
- To improve healthy growth and physical and psychosocial development of children.

IMCI is implemented within 3 components:

1. Improving health providers' skills through hands-on training in a clinical setting, and inclusion of IMCI into medical and nursing undergraduate curricula.
2. Improving the basic elements of the health system at health facility (HF) and district levels. This component includes provision of the standard lists of basic equipment, essential drugs & other supplies by districts; work organization at HF (redefinition of providers' responsibilities, smooth patient flow guided by a flowchart); functional referral system; and district capacity building in the areas of planning, information, and supportive supervision);
3. Empowering communities and families to adopt key family practices for caring of their children during health and illness; through involvement of local organizations, formal & informal leaders and volunteers.

HE the Minister endorsed adoption of IMCI strategy under the umbrella of PHC in February 1997. One district in each of 3 regional-representative governorates were selected for the early implementation phase (EIP). During EIP, WHO generic training materials were adapted, a situation analysis of targeted health facilities and districts was conducted, and a vision of the community component was set. A baseline survey (BLS) suggested during a district-planning workshop was conducted in the 3 EIP districts just prior to field implementation in October 1999. In April 2000, review of the EIP and planning for expansion anticipated covering 40% of districts by the year 2005.

The programme policies are:

- Gradual expansion to 3-4 new governorates each year, in addition to new districts in acting governorates.
- Selection of 2-3 districts in each targeted governorate on basis of set criteria, basically child health indicators. Selection of more than a district is to avoid disruption of service delivery at HFs and training sites, and to reduce the burden for preparations during the fairly long duration of physicians training.

- Targeting all PHC HFs in the district, including district and fever hospital PPDs.
- Changing the WHO “training target” of 60%, to training a number of providers to cover all children by IMCI guidelines per facility, and at least one physician and one nurse from the district supervisory team.
- On-the-job follow-up of trained health providers within 4-6 weeks after training by a qualified team, followed by a debriefing session for key staff at the governorate health directorate and concerned districts. During this session, results are presented, and problems are discussed and solved.
- Building district capacity in areas of planning, supervision and interpretation of service indicators.

The Egyptian experience is characterized by:

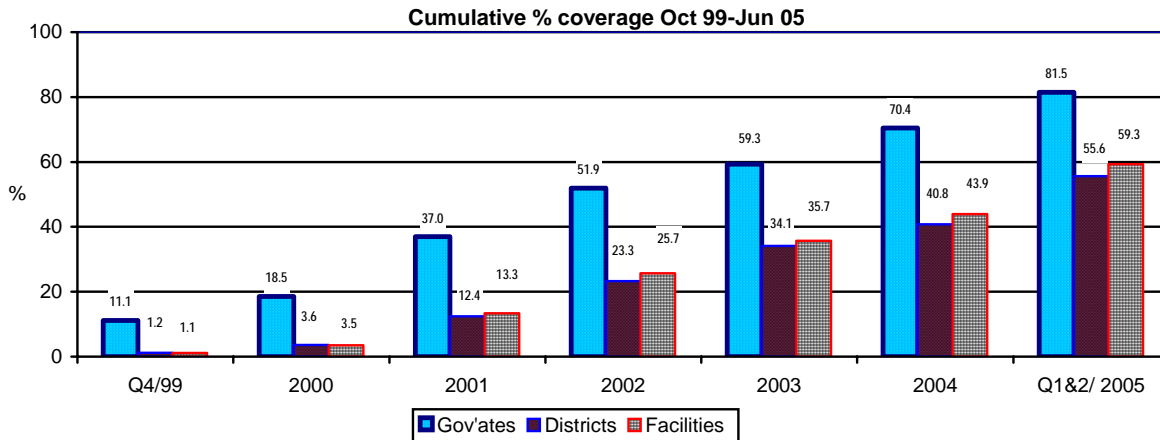
- Rapid pace of expansion as reflected by the coverage data (see table below).
- Setting a systematic approach for expansion.
- Giving consideration for sustainability through: introducing the guidelines into medical curricula, and provision of basic equipment, drugs and supplies by the districts.
- Development of a number of innovations, such as:
  - Training materials for nurses including a manual, chart booklet, and facilitator guide.
  - Two drug management manuals at HF & district levels. The district manual includes a chapter on supervisory skills.
  - Competency-based district and central supervisory package.
  - Information system linked to the national Health Information System (HIS) ... etc.
- Existence of a formal structure to host the programme, the General Administration for Childhood Illness Programmes.

Main achievements include:

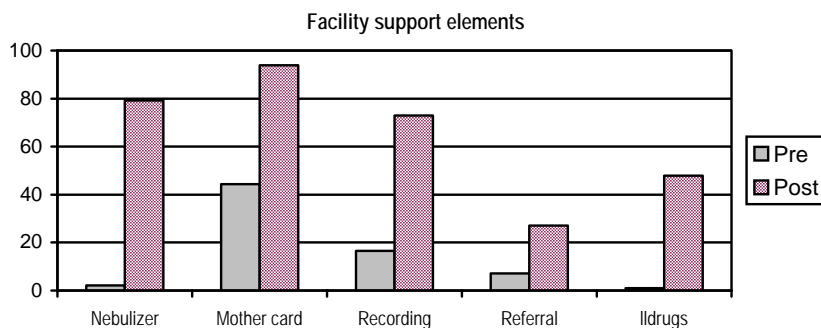
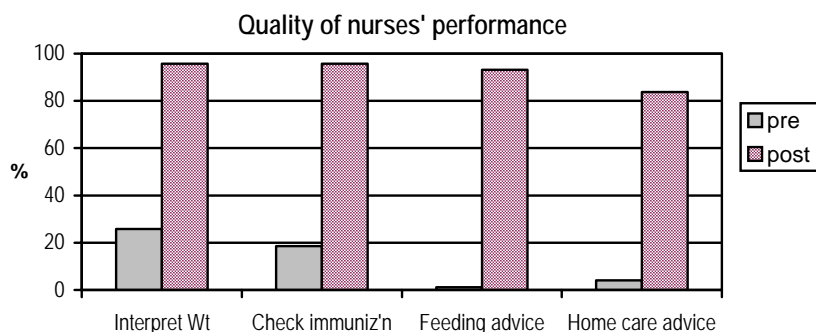
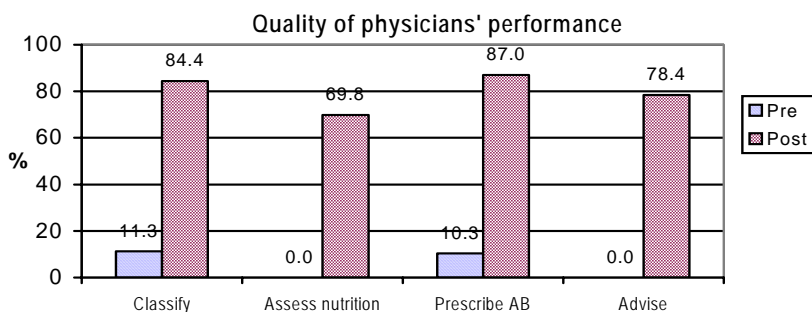
- Acceleration of expansion much faster than has been initially planned. It is planned to have complete coverage by 2007 if inputs continued at the same rate. The following table and graph display the annual and cumulative implementation coverage reached from inception through June 2004.

IMCI implementation coverage by year, October 1999 – June 2005

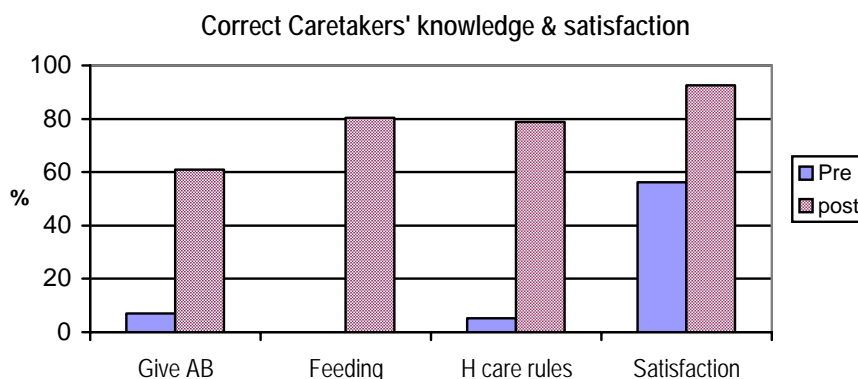
| Administrative level | Total No. in 2004 | Year      |      |      |      |      |           |            | Cumulative coverage |       |
|----------------------|-------------------|-----------|------|------|------|------|-----------|------------|---------------------|-------|
|                      |                   | Q 4, 1999 | 2000 | 2001 | 2002 | 2003 | 2004      | Q 1-2 2005 | Number              | %     |
| Governorates         | 27                | 3         | 2    | 5    | 4    | 2    | 4         | 2          | 22                  | 81.5% |
| Districts            | 250               | 3         | 6    | 22   | 27   | 28   | 33        | 20         | 139                 | 55.6% |
| Hospital OPDs        | 350               | 4         | 7    | 31   | 43   | 43   | 56        | 19         | 203                 | 58.0% |
| Urban PHC HFs        | 597               | 7         | 14   | 32   | 72   | 75   | 104       | 43         | 358                 | 60.0% |
| Rural PHC HFs        | 3,609             | 17        | 101  | 370  | 444  | 418  | 519       | 272        | 2,141               | 59.3% |
| Sum HFs              | 4,556             | 28        | 122  | 433  | 559  | 536  | 684       | 334        | 2,702               | 59.3% |
| U5 children          | 8,863,305         | 3,680,759 |      |      |      |      | 1,315,981 | 911,718    | 5,908,458           | 66.7% |



- A pre-post IMCI training study showed absolute improvements of service quality in terms of correct child case management and availability of basic requirements. Examples are displayed in the following graphs.



- Improved caretakers' knowledge and satisfaction as evidenced by the following chart.



The main problems encountered are:

- Relatively high turnover of trained providers, increasing the training load.
- The obligation to stop fieldwork during the preparations and conduct of the frequent immunization campaigns.
- Reliance on donors support for selected activities e.g. training, printing of training materials, design of developmental activities and research.

The lessons learned are:

- Decentralization of management tasks towards district is prerequisite to help local capacity building, enhance expansion and maximizes potential for sustainability.
- Early involvement of universities in IMCI approach endorsed the scientific basis of CM, helped in training & follow-up after training, paved the road for including IMCI in undergraduate curricula, and triggered applied research.
- Hands on training and systematic procedures for CM raised trainees' interest.
- Improving the work organization at HF level improves work environment, and quality of service delivery, subsequently improved caretakers' knowledge and satisfaction.
- Conducting follow-up after training proved to be a good mean to reinforce providers' skills and timely solving facility problems.

#### *Care of children with special needs*<sup>13 & 22</sup>:

The following discussion basically covers four subtopics, focusing on disability.

#### • **Disabled Children:**

Historically, the programme was organizationally established with the reorganization of MOHP in 1999. However, formal recognition of disability in Egypt came through passing the law number 116 in 1950, which limited the concept to physical disabilities incapacitating the person from work. Law 39 in the year 1975 defined disability as "decreased physical, sensory and mental impairment, which impede the person from coping with his society or environment and prevents his success in life". The definition, however, focuses on adult males.

22 Drs. Alaa Shukrallah, Ibrahim Elnekhely & Randa Raouf. Situation Analysis of Childhood Disability in Egypt, June 04

Being a multi-dimensional, and despite the initiatives over the past 5 years, the programme faces the problem of wide discrepancy among different organization in defining the problem, categorizing disabilities, and consequently measuring it. These problems, in addition to lack of a national registration system, resulted in disparities in information from different sources. According to estimations to population census and local or national studies, gross disabilities range between 3-5%, i.e. 1-1.65 million children. Data show variations by social class, highly reported by middle class & lesser by high class; by sex, highly reported for males; and by residence, less reported in rural communities and in Upper Egypt.

Partners for care include several sectors acting in the fields of health, education and social services, run by governmental, NGO and private sectors.

MOHP care is provided by extensive PHC network, while tertiary care is provided by urban-based hospitals, affiliated to universities and THO. HIO also plays a major role, particularly in providing technical aids for disabled children. The Ministry established a general directorate for children with special needs (hosting the programme), which developed early disability-detection tools.

Inputs of Ministry of education (MOE) include providing special education for different groups of disabled children; training and certification of special education teachers; developing and designing the curricula; and finally setting standards and supervising curricula given by other bodies such as NGOs. The special educational areas are for visually impaired, hearing impaired, mentally retarded and physically handicapped (e.g. rheumatic heart) children. So far, MOE coverage is too low, at only 4%.

Ministry of Social Affairs (MOSA) is the body in charge of setting policies & strategies, preparation of legislations, and supervision of NGOs.

The role of NGOs is of great importance. By the year 1997, 254 organizations working in the disability field were registered. Aside from educational facilities, the bulk of other services particularly in the areas of care, social support, training, vocational, advocacy and rights of disabled, provision of aids and appliances, certifying disability ... etc. are in the hands of NGO sector.

At the policy level, disabilities were not a priority until the First Lady childcare initiative. The workshop organized by the Childhood & Motherhood council in January 1995 is the significant milestone in this direction. The programme strategies are:

- Emphasizing preventive and early detection programmes, and setting an integrated system for treatment and rehabilitation.
- Active participation of local communities, and promotion of community-based rehabilitation (**CBR**).
- Geographic equity in distribution of preventive and curative services.
- Coordination among governmental, nongovernmental and international partners.

MOHP 5-year plan articulates on 4 dimensions:

1. Integrated system for treatment and rehabilitation, through:

- Establishment of “registry system”. The system is dependent on a surveillance system, based on data collection and analysis from all available sources; registration of detected disabilities by type, cause & personal attributes; setting a system for flow of information; and accordingly, design of disability control programmes.
- Formulation of a national committee from different sectors.
- Activation of the GA.

- Mapping treatment & rehabilitation facilities & their distribution by governorate.
  - Training and setting a referral guide.
2. Prevention and early detection, through:
- Pre-marital examination and genetic counseling programme, so far there are 7 clinics in 5 governorates for this purpose. The programme is based on determining a set of information taken by history, clinical examination and several laboratory investigations.
  - Safe motherhood programme which covers antenatal care, childbirth care, neonatal care and post-natal care (focusing on congenital malformations, jaundice and early detection of causes of mental retardation).
  - National programme of Neonatal Screening for Congenital Hypothyroidism, as will be discussed later.
  - Monitoring child growth and development, immunization, nutrition and care of school age.
3. Rehabilitation through supporting rehabilitation centers and introduction of CBR.
4. Information, Education and Communication (IEC), through:
- Study community perceptions, attitudes and practices.
  - Prepare and test IEC materials on prevention, sites for early detection, treatment and rehabilitation, and interaction with the disabled.
  - Dissemination of IEC messages by all means and evaluating their effects.

The programme achievements are:

- Political interest of the problems of disability among children triggered NGO and public awareness.
- Institutionalizing the programme at central MOHP through establishment of a General Administration.

The main constraints are:

- Varied definitions and classifications of disabilities by organizations depending on their domain interests, resulting in disparities of information by source.
- Lack of a national registry resulting in limited availability of information.
- Childcare of many classifications, particularly mental disabilities, requires highly skilled caretakers, for a long time frame.

• **Neonatal screening for congenital hypothyroidism:**

It is basically a preventive public health programme. MOHP started to implement the programme in the year 2000 in five governorates, gradually expanded, and by 2003, it covered all governorates.

The programme objective is to reduce incidence of mental retardation caused by congenital hypothyroidism, through:

- Early detection of hypothyroidism, by analyzing a prick heel capillary blood sample of neonates from 3<sup>rd</sup> to 7<sup>th</sup> day of life.
- Confirmation of suspected positive cases through measurement of neonatal TSH in dry blood spot on filter paper followed by serum TSH and free T4.
- Managing positive cases in specialized hospitals through HIO.

At present, the programme covers all governorates and is run through in-facility and outreach service by 2230 PHC facilities. Overall, newborn coverage rate is 85%, but the

rate varies among governorates, ranging between 70% in Cairo to 100% in each of Qualiubiya and Damietta governorates. The incidence rate is 1 case per 2273 neonates, i.e. 4.4 cases per 10,000 neonates. Positive cases are treated on the expense of HIO. The programme is conducting field research to study the environmental factors of positive cases and their relation to iodine deficiency, as well as personal characteristics of positive newborns and their mothers to identify the direct causes.

The constraints are primarily:

- The difficulties in covering all newborns in some communities.
- The high cost of treatment of positive cases.

The lesson learned is that if parents are aware of the benefit of the programme, they do not object the blood sampling procedure.

• **Abandoned Children:**

These are newborns who are accidentally found, mostly illegal. The child law<sup>23</sup> defined the responsibilities for concerned ministries; MOHP, MOSA and Ministry of interior. MOHP is responsible for giving the baby a name, registering him/her in birth record and providing medical and nutritional care up to 2 years of age. MOSA is responsible for psychosocial care after 2 years. Ministry of interior is in charge of taking formalities in the form of a police event-report. Before 1997, the incident was initially reported to nearest police station, which refers the baby to the nearest MCH unit to examine him/her, give him/her a triple name, and writes a medical report. The baby then gets back to the police station to investigate the event and complete the event-report. Lastly, the baby is received by the MCH center to give/her to a mother (called "alternative" mother) against a nominal fee &/or supplying her with powdered milk. The alternative mother cares of the baby up to 2 years of age for breast feeding, and seeking the MCH for immunization and medical care. Some alternative mothers were not so keen to appropriately nurture the child. MOSA units then receive the child, however it is not clear how far is the quality of care.

In the year 1997, MOHP has revised and simplified all procedures. The event is initially notified to the nearest hospital, an ambulance transfers the baby to the hospital for the needed care, then transferred to the nearest specialized unit designated by MOHP under care of a social worker at the district or governorate health office.

The important procedures that deserve mention are:

- MOHP designated 43 specialized units at selected MCH centers for lodging and caring of these babies.
- Ensured continuing supply of residential and working needs to these units.
- Covered those babies with an insurance scheme.
- Agreed with Ministry of interior to carry out the legal formalities while babies are lodged and cared of in the designated units. This procedure resulted in saving the lives of many babies who did not receive any care except after finishing the legal formalities.
- Continued improving quality of care in these units. As a result, case fatality in these units dropped from 14% in the year 1997 to 4.8% in the year 2004.

The lesson learned is that the humanitarian, rather than bureaucratic management approach is crucial for saving children's life.

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23 Law 12/96, Child Law, 1996 (in Arabic)



- **Street Children:**

It is an emerging problem resulting from economic constraints. Though the problem is not common among under-5 children, yet there are cases that involve children in such age group, who are vulnerable to many undesired consequences. MOHP is acting to contain the problem and provide health care for these children in collaboration with Ministry of Interior, MOSA, **EIC?** Organizations, NGOs and the public. MOHP strategies for this component are:

- Giving these children priority at public health institutions.
- Providing health care at NGO & MOSA centers for these children.
- Coordinating with other concerned partners to protect and rehabilitate these children.

The constraint of the programme is lack of documentation of the experience, and thus information on achievements is scanty.

## Child health related programmes

These programmes indirectly affect children. The maternal care programmes (except for the inter-conceptual care) are run by PHC sector, while others are run by other sectors.

### Maternal care programmes:

The goals of these programmes are to promote maternal health, to reduce maternal morbidity and mortality, and to ensure favourable outcome of pregnancy. Maternal care covers pre-marital, antenatal, safe & clean delivery, post-partum, maternal mortality surveillance, and inter-conceptual care <sup>13 & 18</sup>.

- Pre-marital screening is an intervention to protect future families against hereditary diseases and sexually transmitted diseases. The programme has been initiated since 1977 with the following policies:
  - Taking personal and family history about targeted diseases.
  - Examining the potential couple and carrying required medical investigations.
  - Counseling the potential couple about the importance of the examination, and referring any positive case to the specialized hospital.
  - Confidentiality of generated information.

DHS-2003 shows that knowledge of pre-marital examination is as high as 81.7% of ever-married women in reproductive age. The rate is higher among younger women, in urban areas, women with secondary or higher education, and women in families with high wealth index. Practice, however, was too poor, reaching only 1.5%.

The main constraints are:

- Service outlets are still limited, thus coverage is limited.
  - Public acceptance is not measured, but is probably affected, as some possible results might be embarrassing.
- Antenatal care is the tool to early detect risk pregnancies and eventually early recognition of dangerous signs. The programme policies call for:

- Adopting the high-risk approach through (i) personal, menstrual, pregnancy and family history, (ii) clinical (medical & dental) examination; (iii) laboratory investigations including albumin and sugar in urine, RH factor and haemoglobin; and (iv) measuring weight and height.
- The pregnant woman should seek care for at least 5 check-up visits.
- Immunization against tetanus as per the EPI schedule.
- Management of anaemia and supplementation of iron & folic acid.
- Counseling the pregnant woman in the fields of personal hygiene, behaviours, warning signs, nutrition, safe delivery, post-partum care and family planning.
- Conducting home visits in 3 occasions; (i) at the 38<sup>th</sup> week of pregnancy to psychologically calm the pregnant woman, prepare her and the family for childbirth, and check appropriateness of the home for childbirth; (ii) to call the pregnant woman who experiences delays in seeking care, and (iii) to check pregnant women in remote areas.
- Referring a pregnant woman who suffers of any risk factor to the nearest specialist for necessary intervention.

Progress in coverage indicators as shown by programme information are as follows:

| Indicator                   | 1998 | 2000 | 2002 | 2004 |
|-----------------------------|------|------|------|------|
| Antenatal care coverage, %  | 56.4 | 67.3 | 70.0 | 70.5 |
| Average number of AN visits | 2.3  | 3.0  | 3.5  | 3.6  |

On the other hand, interview of mothers who gave birth during the 5 years prior to DHS 2003 show more or less similar value for coverage, and a relatively higher rate of number of visits:

- Coverage by antenatal care is 68.7%.
  - Coverage of women who paid 4 or more antenatal visits reached 55.6%, with a median of 6.9 visits.
  - Coverage of tetanus toxoid vaccination during pregnancy is 78%.
  - Coverage of receiving iron supplementation during pregnancy is relatively low, 45.1%.
  - Coverage women told about signs of complications during pregnancy is only 31.8%.
- Safe and clean delivery care aims at ensuring favourable childbirth outcomes. The programme policies call for:
    - Attending safe and clean delivery by trained medical staff.
    - Promoting immediate (within half an hour) and exclusive breastfeeding.
    - Providing needed resuscitation and care for the newborn, measuring Apgar score, and caring of the mother.
    - Urgent referral to the nearest hospital of risky deliveries including high risk pregnancy, prenatal bleeding, eclampsia, prolapsed umbilical cord and any elongated stage of delivery.

The programme activities include:

- Upgrading and equipping maternities at MCH centers and providing them with vehicles for referring critical cases to hospitals.

- Designing unified protocols for training nurses on safe and clean normal delivery, and providing them with normal delivery kits.
- Expanding in training PHC nurses on safe and clean deliveries (five months course) and granting them a midwifery license after they pass the exam.
- Training dayas (Traditional Birth Attendants) on clean and safe delivery, identifying risk signs and referring critical cases.
- Following up the performance of midwives through local district and governmental supervisors.
- Designing unified protocols for management risky deliveries referred to hospitals and training obstetrics and gynecology residents and specialists on emergency obstetric care.
- Setting standard structural and equipping specifications for maternities and obstetrics and gynecology departments at general and central hospitals.
- Upgrading and equipping obstetrics and gynecology departments at general and central hospitals according to these specifications.
- Activating the role of safe motherhood committees to follow up maternal deaths at hospitals, identify the cause of death and make assess that correct case management was applied.

Progress in coverage indicators as shown by programme information are as follows:

| Indicator                            | 1998 | 2000 | 2002 | 2004 |
|--------------------------------------|------|------|------|------|
| % of deliveries at health facilities | 27.6 | 37.8 | 5.8  | 52.7 |
| % of deliveries medically attended   | 56.5 | 61.5 | 66.5 | 71.7 |

On the other hand, interview of mothers who gave birth during the 5 years prior to DHS 2003 show more or less similar values:

- The rate of deliveries assisted by a trained provider is 69.4%.
  - Almost 3 fifths of women gave birth at a public or private health facility.
- Post-partum care aims at avoiding any postnatal problem for the newborn and his mother, and is provided by the nurse. The programme policies call for:
    - Each parturient mother should get 6 post-partum contacts.
    - Providing the mother with vitamin A capsules (200,000 IU) within 4 weeks, and supplementary iron.
    - Screening newborns for congenital hypothyroidism.
    - Providing the zero dose of polio vaccine (other vaccines are administered during the baby's visits to the health facility according EPI schedule).

The programme activities are:

- Carrying out the post-partum contacts at home (at the 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, 14<sup>th</sup>, and 21<sup>st</sup> days), then at the health facility at the 6<sup>th</sup> week of age.
- Examining, measuring birth weight (if not has been measured) and providing time-relevant care to the newborn and mother.
- Following up the mother and the newborn and carrying out the necessary medical check ups.
- Supplementing the mother with vitamin A and iron supplementation.
- Taking a blood sample from the newborn for congenital hypothyroidism screening.

- Providing counseling to promote breastfeeding and child spacing
- Counseling the mother about breast feeding, personal hygiene, nutrition and child spacing. Encouraging mothers to seek family planning services through home visits carried out by nurses, raidat and social workers.
  
- **Maternal mortality surveillance system:**
  - A national safe motherhood steering committee headed by his Excellency Minister of Health and Population and encompassing professors of obstetrics and gynecology and MOHP expertise from different sectors was formed to follow up the applied maternal mortality surveillance system. A similar committee is formulated at governorate level headed by the undersecretary of health.
  - A parallel committee at governorate level, headed by Undersecretary for Health.
  - As a result of these efforts maternal mortality rates decline from 174 per 100,000 live births in 1993 to 67.7 per 100,000 live births in 2004.
  
- **Counseling and Community Mobilization:**
  - Rising community awareness to participate in identifying health problems, suggesting solutions and implementing them with the assistance of local governorate leaderships in coordination with NGOs.
  - Forming health councils at governorates to design local plans and strategies complying with the framework of the national goals.
  - Designing IEC materials and TV spots addressing maternal and child health problems to raise community awareness.
  
- **Supporting activities:**

In addition to maternal care services described above, a number of supporting activities for maternal and child care, the important activities are:

  - Developing quality assurance standards for antenatal, natal, postnatal and neonatal health services.
  - Upgrading the existing local and central supervisory system.
  - Developing health information system by increasing the utilization of health cards for mothers and children, upgrading primary health care registers, establishing HIS units at governorate and some of the health districts and linking them with the central HIS unit at MOHP, MCH department, in addition to training the HIS team at central and local level for better performance and capacity building.
  - Specifying indicators to evaluate provided health services and recognize health problems facing pregnant women and children under five to assist in decision making and designing national health strategies to reduce morbidity and mortality rates among these vulnerable categories.
  - Cooperation and coordination with local and international organizations and NGOs in all governorates to provide support and encourage community participation.
  
- Inter-conceptual care is the intervention that addresses reproductive health issues, primarily family planning. Though the concept of reproductive health is wider, the discussion here is limited to maternal care during the periods between pregnancies. Earlier studies showed that not only maternal mortality is high, but also maternal morbidity is too high. A field study in 2 villages in Giza showed that 64% of women in

reproductive age suffer of health problems related to maternity, and that more than half of them suffer of more than one problem<sup>24</sup>. A good proportion of those problems were “*silent*”, i.e. with no complaint. The programme aims at ensuring safe motherhood through controlling contributing factors; primarily pregnancy spacing, number and order of births, mother’s age, and exposure to genitor-urinary infections. Within this domain, a number of screening tests are introduced in the service; however, the focus is still directed towards family planning to overcome the first national problem of overgrowth.

Results of DHS 2003 interview of women in reproductive age indicate that:

- Knowledge of pills, IUD and injections is universal; the rate is slightly lower for implants 93.9%, but much lower for other modern family planning methods.
- The rate of ever use of any method is 81.0%, and of any modern method is 78.5%, mostly IUDs and pills.
- The rate of current use of any method is 60.0%, and of any modern method is 56.6%, mostly pills and injection.

Allover, these programmes are nationally implemented and are markedly progressing over time. However, the major constraints are:

- Though coverage is expanding, it is still below expectations.
- Though quality of services is improving, but quality is not always maintained, particularly in remote areas.

#### □ *Injury protection programme:*

Injury problems threaten all age categories. They are an MOHP priority on basis of:

- Widening the scope of occurrence beyond work environment to home, street, farm, school, tourism & recreation locations ...etc.
- High cost involved in emergency medical care of victims, in terms of efforts, and human and financial resources, which could be saved for other health problems.
- Commonly increase the rate of disabled, whose physical, psychological, social and vocational rehabilitation require many resources.
- Control of such problems is within the scope of several organizations, needing effective coordination efforts.

The programme aims at reducing and controlling the problem through the following strategies:

- Improvement of health infrastructure to efficiently deal with injuries, through:
  - Standardizing injury classifications and reporting.
  - Training of health providers at PHC and hospital levels.
  - Studying epidemiology of risk factors.
- Coordination with other organizations, through:
  - Improving exchange of information.
  - Studying incidence of the different injuries, the costs of disability and death, and the economic returns of preventive interventions, to provide information for promoting understanding of decision makers of the problem size and rationale for its prioritization.

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24 Prof Ahmed Younes: The silent patient, (World) Population Council, Egypt Office, 1991.

- Upgrading preventive interventions to reduce injuries, through:
  - Developing educational materials; e.g. TV spots, radio drama, posters and leaflets.
  - Conducting national campaigns for public education.

Injuries are the 6<sup>th</sup> cause of death, and cause more than half deaths among youth aged 15-18. One tenth (9.8%) of total injuries in 2003 occurred among <5 children. The important causes of under-5 injuries are burns, chemical & drug poisoning, falling down from height, nail prick, and swallowing foreign body.

The strength of the programme is that it directs the attention to the problem. However, the constraints are:

- The programme is not limited to child age, so information about children is scanty.
- Most attention is directed toward road accidents with limited attention to childhood injuries.

#### ☐ *Tuberculosis control Programme:*

The programme established under the umbrella of General Administration for Chest Diseases, which at present supervises 40 hospitals and 114 outpatient centers. The programme was reorganized in 1979, aiming at reducing the disease prevalence through detection and treatment. The programme has adopted since 1997 the “*Directly observed short treatment*” (DOTS). Based on a 3-year survey (1995-97), the department found that the annual risk rate (among all ages) is 28 per 100,000 population. The World Bank estimated the disease incidence at 38.0/100,000 population in 2001, and at 29/100,000 population in 2002<sup>6</sup>. According to the same source, case detection under DOTS for the year 2002 is 53.1%. According to the programme, 2.2% of discovered cases in the year 2003 are among under-5 children. Information on proportion of bronchial asthma is unavailable, as age category is not reported. Mostly the source of child infection is a family adult sputum-positive, especially the mother. In most cases, the primary focus occurs without any symptoms and is self-resolving. If not resolved, complication spread to lungs, trachea and lymph nodes. Since infection may affect any organ, pulmonary infection is commonly unassociated with spit cough, and tuberculin test among vaccinated children is reliable only if negative, diagnosis of the case is mostly presumptive based on clinical and radiological examinations. Treatment problems are longevity of the course, limited drug options, and limitations of child treatment.

The programme future prospects are:

- Reaching universal targets of discovering at least 70% of cases, and 85% treatment success rate.
- Epidemiologic surveillance through establishment of new diagnostic laboratories to reach the global target of a lab for every 200,000 inhabitants.
- Focus on training health teams on DOTS, on supportive supervision, and on public education.

The programme strength is the application of DOTS strategy, thus widening of case treatment points, and ensuring intake of the drug dosage. However, the main problems are focusing on pulmonary TB, and the exact age is not reported; thus information on childhood problems is not complete.

#### □ *Endemic parasitic diseases programmes:*

The common parasitic diseases in Egypt are Shistosomiasis and intestinal parasites.

However these diseases are rare among under 5-year children, excepting Entrobium vermicularis (Oxyuris) but it does not constitute a public health problem.

As far as blood parasitic diseases are concerned, Filariasis is endemic among adults in certain locations in Lower Egypt Governorates. Malaria is present in a sporadic form in just one district (in Fayoum), no cases have reported among under-5 children. Leshmaniasis outbreak had been reported about 2 decades ago in certain areas in the west part of the Mediterranean coast. The outbreak had been contained, and the disease does not constitute a public health problem.

### COMMON PROGRAMME CONSTRAINTS

- Limited coordination and exchange of information among health care organizations and programmes, and limited interest of some organizations to actively respond to some childcare programme needs.
- Relatively rapid turnover of trained providers, corrected by “replacement training” courses.
- Lack of some information (e.g. age is not recorded in some places) resulting in difficulties to calculate related indicators, and multiplicity of records at grass root facilities creating problems with reliability of some kinds of information.
- Drug abuse, particularly antibiotics, resulting in shortage of drug supply.
- The concept of “supportive” supervision is not prevailing.
- The referral system set by MOHP is not generalized yet, and is not fully functional mostly because of lack or irregularity of feedback from referral hospitals.
- Limited financial resources to cover the escalating costs of some interventions, creating dependence on donors’ support.
- The under-5 children insurance scheme is optional, resulting in varied coverage among governorates.
- The potential effects of HSR payment policy on childcare service utilization.
- Lack of SCM guidelines for some programmes, and subsequently quality of care is not always maintained.
- Competitive commitments to different programmes, depending on interest of decision takers.

### FUTURE PERSPECTIVE

With developments of means for communicable disease prevention, upgrading maternal and child health, and expected social, economic and environmental changes that are reflected on child’s health and development; it is anticipated that:

- Causes of under-5 mortality will change, while causes of communicable diseases will get less, causes of accidents, congenital diseases and malformations, and tumors will increase.
- Morbidity pattern will change as a result of changes of the natural history of some diseases such as TB and pneumonia, as well as potentially emerging diseases.

- Appearance of problems, which were not so evident, or were not considered before as public health problems, such as female child problems, handicapping conditions and blood diseases.
- Increasing size of adolescents as a result of changes in population pyramid, and the effects of communication and information technologies on their behaviours.
- The ever increasing needs for upgrading life styles, feeding patterns, development of talents, and changes towards desired behaviours; based on changing aspirations and improving education.
- Mandatory obligation to cope with other sectors to fully meet child's rights.

Hence the need to invest the Ministry strategies in the direction of these future perspectives, focusing especially on:

- Giving priority to areas in greater need, and to ensuring service equity, quality, comprehensiveness, continuity and affordability, within the HSR programme.
- Acting towards ensuring health insurance coverage of all children including those with special needs, and women in child bearing age to provide hereditary counseling, pre-marital examination and safe motherhood.
- Giving consideration to service integration and to the social dimension through expanding in implementing the "*family medicine*" approach, outreach, and empowering families and strengthening civil society organizations to play their role child care and protection.
- Focus on chronic problems such as the population overgrowth and perinatal and neonatal medical problems; and renewed problems such as injuries, disabilities, female child and adolescence problems.
- Studying size and epidemiology of emerging problems such as blood and oncology diseases.
- Leading advocacy for improving the child's physical and psychosocial environment.
- Acting towards increasing self-financial resources and scaling out external resources.

**Conclusions:**

- Based on clear vision of perspectives, child health programmes are continuously upgraded to meet changing needs.
- Directions towards integrated implementation of programmes are clear. The experience of the past few years showed that relating programmes together resulted in mutual support; e.g. support of growth monitoring and vitamin "A" supplementation when combined with EPI, introduction of early detection of thyroid hormone increased coverage of poliomyelitis zero dose vaccination, and introduction of IMCI supported nutritional & EPI programmes.
- MOHP is concerned about sustainability of programme funded by external support, hence the inclination to phase out or limit such financial support.
- Most departments welcome results of evaluative research and surveys conducted by MOHP and other agencies, thus corrective actions are taken as deems necessary.



- MOHP started to adopt a holistic programmatic approach addressing health promotion, disease prevention and proper case management focusing on common causes of mortality, morbidity and disability.
- Importance of home-based care during health and illness started to be emphasized as complementary to institutional care.
- A number of maternal care interventions have been introduced, however, some of such interventions are still limited in scope and coverage; i.e. there is still a room for more emphasis on peri- and neonatal care at PHC level.
- There are some general constraints, notably problems with the health system elements (e.g. availability of reliable information, non-supportive supervision, non-functional referral, and shortage in drug supply), abuse in drug prescription, and rapid turnover of health providers particularly in rural facilities.
- Effective coordination among most programmes still needs to be strengthened.
- Rapid turnover of trained providers, with no documented policy for obligations on the side of providers who participate in training, created extra load for PHC programmes.
- The task of psychosocial development is almost absent in childcare programmes.

#### Policy Issues:

- Most programmes direct their efforts towards health problems without paying *enough* attentions to environmental, psychosocial and community educational aspects.
- Though child health is a part of the “*Basic Benefit Package*” of the HSR to be implemented through the “family health” approach, the approach is foreseen as a vertical programme, not “fully” coordinated with child health programmes.
- Though the issue of HSR fee payment for examination and dispensing drugs has been lately partially solved, there is a need for further coordination.
- Perceptions about some childcare programmes as vertical projects or programmes dependent on external support, jeopardizing their sustainability.
- Incomplete information about under-5 children within child-related programmes and data inconsistency hinder appropriate monitoring of childcare services.
- Child health care is not isolated from maternal care. The “Safe Motherhood Committee” at national and governorate levels is an excellent forum for promoting safe motherhood. There is a need to expand the mandate of the Safe Motherhood Committees to cover the maternal and child health care package.
- The verticality of information of some programmes limits exchange of information among child health care partners.
- Verticality and capacity building of the supervisory system on childcare programmes needs to be reconsidered.

## Chapter 7: PARTNERS

### *Introduction*

The health status, in any country, is determined by several factors that are grouped under 3 categories.

- Cultural factors including values, norms, beliefs, traditions and taboos.
- Environment factors; physical, chemical, social, economic, political, legislative ...etc.
- Health care availability, accessibility, adequacy (adequate to address community problems), appropriateness (use of sound technologies appropriate to the prevailing culture), and affordability (to individuals, communities and country).

On this basis, health care almost includes every body. Child health partners are described hereafter under two categories, active and resource partners. In addition, the role of two other categories is crucial for child health development, and their role should be in mind all through the process of child policy development. These are:

- 1) Mothers, families, both formal and informal community leaders, and community-based organizations active in any field of development.
- 2) Organizations which mandate has activities that positively &/or negatively affect health, such as Ministries of Agriculture, Education, Information, Housing, Environmental Affairs, the parliament ...etc.

### *Active partners:*

- 1) The Task Force formulated of MOHP Undersecretary for PHC (chairperson), heads of MOHP General Administrations for Childhood Illness Programmes (focal point), MCH, Care of Children with special Needs, and ARI. WHO consultant to IMCI (reporter) shares the Task Force. Duties of the Task Force are:
  - To collect and review available documents.
  - To draft and revise the situation analysis report.
  - To extract policy issues and identify policy gaps.
  - To propose policies with assistant of representatives of concerned partners, and finalize the policy document on basis of comments of partners.
  - To manage circulation of documents, organize and prepare for meetings of partners, and present pertinent information to the steering committee and other meetings.
- 2) Steering Committee formulated by HE Minister of Health & Population, of First Undersecretary (chairperson), MOHP Undersecretaries for PHC, Population, Pharmaceutical Affairs, and Development & Research, and heads of Health Insurance Organization and Teaching Hospitals Organization. Responsibilities are:
  - Approval of working steps of the Task Force.
  - Review and endorsement of documents prepared by the Task Force.
  - Providing needed support and coordination among concerned organizations.
  - Presentation of the final policy document to HE The Minister of Health and Population for official endorsement.
  - Advocating final policies among concerned partners, and persuading compliance of all institutions to the set policies.
- 3) Concerned MOHP Central and General Administrations. Their role is to provide information needed by the Task Force, review and comment on the situation

analysis report, and participate in relevant working group(s) to draft the policy document. Entities include:

- PHC Sector: Departments of Integrated Medical Zones and PHC.
  - Preventive Sector: EPI, Communicable Diseases Control, Environmental Health, and Occupational Health (in charge of injury protection programme).
  - Population Sector: Unit in charge of community-based interventions.
  - Ministers Office Sector: Health Information Center, IEC department.
  - Development & Research Sector: Human resources Development.
  - Nursing Sector: PHC Nursing Department.
- 4) Other Health System organizations: Role of representatives of these organizations is provide information needed by the Task Force, review and comment on the situation analysis report, and participate in relevant working group(s) to draft the policy document. Entities include:
- Health Insurance Organization: Persons in charge of under-5 insurance scheme and of preventive services.
  - Teaching Hospitals Organization: Head of training section / General secretariat, National Nutrition Institute, National Locomotive Rehabilitation Institute.
- 5) Other organizations: National Council for Childhood & Motherhood. As has been referred to in chapter 1, the councils mandate is to set, in collaboration with respective ministries and organization, strategic directions, setting coordinated 5-year plans, coordinating and monitoring sectors' activities towards achieving set objectives and targets. The purpose of its involvement is to get use of its mandate. Within this mandate, the role of the council is:
- To participate and adopt in setting the policies.
  - To advocate the policies.
  - To provide a venue for coordination of other sectors.
- 6) International partners: EMRO/WHO, UNICEF and USAID representatives. Their role is to review and comment on the developed documents, participate in relevant meetings, and provide technical/financial support as deems necessary.

### *Resource partners:*

Resource partners are those bodies or individuals that have the talents, influence &/or power to shape the health services in the country. Their role is to

- 1) Universities: Professors of paediatric, obstetrics and public health at medical schools; school of childhood studies at Ain-Shams University and medical education commission at the supreme council of universities.
- 2) Medical and nursing syndicates, and professional associations, primarily paediatric and obstetrics medical associations.
- 3) Medical services at army forces and Ministry of Interior.
- 4) NGOs professional associations active in the health field such as Egyptian Community Health Association, Egyptian Nursing Scientific Association, Nutrition Association ... etc
- 5) Other NGOs active in community-based interventions.

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