Maternal and Child Health in China

Wang Linhong, Deputy Director, Professor
National Center for Women and Children’s Health, China CDC
# National MCH Situation

## Population Status (2005)

<table>
<thead>
<tr>
<th>Population</th>
<th>Number</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population 1.3 billion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>631 million</td>
<td>48.5</td>
</tr>
<tr>
<td>Reproductive Age Female (15~49)</td>
<td>359 million</td>
<td>27.6</td>
</tr>
<tr>
<td>Adolescent (10~19)</td>
<td>215 million</td>
<td>16.5</td>
</tr>
<tr>
<td>Under 5-Year Children</td>
<td>69 million</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Great achievement in maternal and children’s health status during 1949 to 2005

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MMR (1:100 000)</td>
<td>1500</td>
<td>88.9</td>
<td>61.9</td>
<td>53.0</td>
<td>47.7</td>
</tr>
<tr>
<td>IMR (1/ 1000)</td>
<td>200</td>
<td>50.2</td>
<td>36.4</td>
<td>32.2</td>
<td>19.0</td>
</tr>
<tr>
<td>Life Expectancy (female)</td>
<td>37</td>
<td>70.5</td>
<td>--</td>
<td>73.0</td>
<td>74.0</td>
</tr>
</tbody>
</table>
Maternal Mortality Ratio in China from 1990 to 2005
Infant Mortality Rate in China from 1991 to 2005

- Total IMR:
  - 1991: 58.0‰
  - 1992: 50.2‰
  - 1993: 41.6‰
  - 1994: 36.4‰
  - 1995: 37.0‰
  - 1997: 32.2‰
  - 1998: 21.6‰
  - 1999: 19.0‰
  - 2000: 17.3‰
  - 2001: 14.2‰
  - 2002: 11.8‰
  - 2003: 9.1‰

- Urban IMR:
  - 1991: 17.3‰
  - 1992: 14.2‰
  - 1993: 11.8‰
  - 1994: 9.1‰

- Rural IMR:
  - 1991: 40.8‰
  - 1992: 36.4‰
  - 1993: 31.8‰
  - 1994: 22.5‰
  - 1995: 18.2‰
  - 1997: 12.6‰
  - 1998: 10.5‰
  - 1999: 8.9‰
  - 2000: 7.7‰
  - 2001: 6.9‰
  - 2002: 6.2‰
  - 2003: 5.2‰
  - 2004: 4.8‰
  - 2005: 4.4‰
Big gap between urban and rural, eastern and western areas in maternal and infant mortality.

<table>
<thead>
<tr>
<th></th>
<th>MMR</th>
<th>IMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big cities</td>
<td>10-20/100,000</td>
<td>Under 5/1,000</td>
</tr>
<tr>
<td>Average cities</td>
<td>30-40/100,000</td>
<td>5-15/1,000</td>
</tr>
<tr>
<td>Rural areas</td>
<td>50-100/100,000</td>
<td>15-25/1,000</td>
</tr>
<tr>
<td>Remote areas</td>
<td>Over 200/100,000</td>
<td>Over 30/1,000</td>
</tr>
</tbody>
</table>
MCH Resources

MCH Network in China

- MCC & CH Dept. MOH
- Provincial Health Department
- Municipal Health Bureau
- County Health Bureau
- Township Hospital
- Village Health Station

NCWCH, China CDC
- Provincial MCH Hospital
- Municipal MCH Hospital
- County MCH Hospital
- Community Health Center
### National MCH Institutes and Demands (2005)

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>MCH</th>
<th>Proportion for MCH (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No. of Institutions</strong></td>
<td>298,997</td>
<td>3132</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>No. of Diagnosis</strong></td>
<td>2.3 billion</td>
<td>97.0 million</td>
<td>4.2</td>
</tr>
<tr>
<td><strong>No. of In-patients</strong></td>
<td>71.8 million</td>
<td>3.5 million</td>
<td>4.9</td>
</tr>
</tbody>
</table>

Source: MOH, China, 2005
<table>
<thead>
<tr>
<th>Tier</th>
<th>No. of Institution</th>
<th>No. of Staff</th>
<th>No. of MCH Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>County MCH Hospital</td>
<td>1,526</td>
<td>66,665</td>
<td>55,316</td>
</tr>
<tr>
<td>Township Hospital</td>
<td>40,907</td>
<td>1,012,006</td>
<td>200,000</td>
</tr>
<tr>
<td>Village Health Station</td>
<td>583,209</td>
<td>916,532</td>
<td>300,000</td>
</tr>
</tbody>
</table>

Source: MOH, China, 2005
MCH Resources

Health Service Capabilities in MCH Hospitals, 2005

x 1000

- Beds
- Professional
- Doctors
- Nurses

1990
1995
2000
2005

- 94.1
- 153.2
- 73.3
- 44.9
MCH management

Laws and Regulation Support (1)

- Constitution: protect for women and children’s rights and interests
- Regulation on Labor Protection of Women Employees (1988)
- Law for the Protection of Women’s Legal Rights and Interests (1992)
- Law for the Protection of Minors
MCH management

Laws and Regulation Support (2)

- National Plan for Child Development
- National Plan for Women Development
- Implementation Plan for Law on Maternal and Infant Health Care
MCH management

Indicators for Maternal Health (2001~2010)

- Maternal Mortality Ratio: reduce by one quarter
- Rate of hospital delivery in rural area: 65%
- Rate of clean delivery in rural area: 95%
- Provide maternal health care to:
  - 90% maternities in urban area
  - 60% maternities in rural area
- Rate of maternal anemia: reduce by one third
- Prevent birth defects
**MCH management**

*Indicators for Children’s Health (2001~2010)*

- Rate of infant and under five deaths: reduce by one fifth
- Reduce the mortality rates of neonatal asphyxia, pneumonia and diarrhea under five
- Reduce the incidence of neonatal tetanus
- Reduce the incidence of serious malnutrition under 5
- Expand Plan for Immunity
- Reduce the incidence of low birth weight (LBW) into 5%
MCH management

- National MCH services guideline and criteria (1)
  - Byelaw of women and children’s health (1986)
  - Principle for human resources in different tier MCH institutions (1986)
  - Responsibilities for managers and professionals of different levels in MCH institutions (1986)
  - Requirements for urban and rural child health care (1986)
  - Management of perinatal care in urban area (1987)
MCH management

National MCH services guideline and criteria (2)

- Systematic maternal care management in rural area (1989)
- Essential equipments for hospital delivery in county health institution (1989)
- Regulation for female employees’ health care (1993)
- Management for children health care in nurseries and kindergartens (1994)
MCH management

National MCH services guideline and criteria (3)

- Essential criteria for MCH specialized services (1995)
- Regulation for antemarital medical care (2002)
**MCH management**

- National MCH services guideline and criteria (4)
  - National program for health education and health promotion (2005)
MCH management

National MCH services guideline and criteria (5)

- Management of MCH institutions (2006)
- Criteria for screening technology of neonatal diseases (2006)
- Guideline for pre-pregnancy health care (2007)
MCH Management

Generalization of appropriate technology (1)

Methods:

- Cascade trainings: from national, provincial, municipal, to county and township levels
- Short-term trainings
- Clinical advanced studies
- Long-term technical guidance
**MCH Management**

**Generalization of appropriate technology (2)**

**Knowledge:**

- Essential perinatal and obstetric services
- Emergency obstetric care
- Assessment, use of a partograph
- Neonatal resuscitation
- ALSO (advanced life support in obstetrics)
- PMTCT
- ......
Regular MCH Information System (1)

- Maternal health annual reporting
  - including numbers of live births, hospital delivery, antenatal care, postpartum care

- Children’s health annual reporting
  - including numbers of infant, child under 5 years old, child who received regular health care, IMCI, breastfeed
MCH Management

Regular MCH Information System (2)

- Antemarital medical care annual reporting
  - including numbers of marriages, cases of certain diseases

- Gynecological diseases screening annual reporting
  - including numbers of screening population, incidences of certain diseases

- MCH institutions annual reporting
  - including numbers of staffs, in-patients and out-patients
MCH Management

MCH Surveillance System

- Monitoring Maternal Deaths
- Monitoring Deaths of Children Under 5 years of age
- Monitoring Birth Defects

Covering 30 provinces

Hospital-based to population-based
Quality control for routine MCH services

- Review for maternal deaths cases
- Review for perinatal deaths (fetal deaths, still births and early neonatal deaths)
- Audit for obstetrics services
- Supervision
MCH Services

 Regular MCH Services

- Pediatrics and Children Health Care
- Adolescent Health Care
- Antemarital Medical Care
- Maternal health care and Hospital delivery
- Screening for common gynecology diseases (Pap smear, cervical cancer)
- Family planning (contraceptive skill)
- Menopausal Health
- Prevention and Control of RTIs/STDs/AIDS
- Health Education
Targets of maternal health

- High risk screening and management
- Prevention of birth defects
- Nutrition support
- Fetal growth monitoring
- Prevention of complication
MCH Services

Systematic maternal health

- Antenatal care begin in the first trimester
- High risk screening and management
- Antenatal care once a month in 2\textsuperscript{nd} trimester
- Antenatal care every 2 weeks in 3\textsuperscript{rd} trimester
- Hospital delivery in urban area
  - or clean delivery in rural area
- Postpartum visit
Clean Delivery Rate & Hospital Delivery Rate

- **Clean Delivery Rate**: 72.9% in 2000, 96.6% in 2005
- **Hospital Delivery Rate**: 85.9% in 2000, 97.5% in 2005

**Yearly Trend:**
- 2000: 72.9%
- 2001: 80.0%
- 2002: 85.9%
- 2003: 92.9%
- 2004: 94.9%
- 2005: 97.5%

**Graph Notes:**
- Clean delivery rate shown in yellow.
- Hospital delivery rate shown in blue.
- Y-axis: Rate (%)
Maternal health

Pre-pregnancy care

- Health education and counseling (information for bearing, influence from nutrition and environment, prevention for birth defects and hereditary diseases)
- Medical care (physical exam)
- Health instruction
Maternal health

Antenatal care in the first trimester

- Diagnosis for pregnancy
- Register with maternal health management card
- Screening for high risk
- Prevention for birth defects (avoidance for contact of noxious materials, virus infection)
- Abortion prevention
- Health care guidance
Antenatal care in the second trimester

- General physical exam
- Nutrition counseling
- Fetal growth monitoring: pregnogram
- Antenatal screening and diagnosis
  - Body congenital defects
  - Down’s syndrome
  - NTD (Neural Tube Defects)
  - Screening for GDM (Gestational diabetes mellitus)
  - Others (Hemoglobin diseases ...)
- Self monitoring for fetal movement
Maternal health

Antenatal care in the third trimester

- General physical exam
- Prevention for preterm birth
- Fetal growth monitoring: pregnogram
- Prevention for complication
- Self monitoring for fetal movement
- Promoting breastfeeding
- Promoting hospital delivery
Maternal health

Hospital delivery or clean delivery
  - Neonatal resuscitation

Postpartum care
  - Screening for Neonatal Diseases
    - PKU (Phenylketonuria)
    - CH (congenital hypothyroidism)
    - Audio screening
  - Prevention for postpartum hemorrhage
  - Promoting breastfeeding
  - Infant care
The postpartum visit

Systematic management of postpartum visits, in China

3 times for home visit
- 3rd day after delivery
- 2nd week after delivery
- 4th week after delivery

Postpartum Check-up
- 6 weeks after birth
- Both mother and infant
- Back to the hospital which the mother delivered
Systematic management of Child’s Health

- 3 times home visit in first month
- 4 times check-up in first year
- 2 times check-up in second year
- Once each year over 3 years old
Systematic management of Child’s Health

Regular MCH Information System, China
National Programs in MCH

Population health education:

- Promoting hospital delivery / clean delivery
- The major symptoms of pregnant complications
- Where and when to seek care for MCH
- Exclusive breastfeeding
- STD/HIV/AIDS prevention
- Family planning
National Programs

National Project of Reducing Maternal Mortality Ratio & Eliminating Tetanus in Newborn (China Government)

- Started up in 2000, covered with 12 provinces
- In 2005, expanded to 23 provinces, 1000 counties
- RMB 440 million Yuan in financial support
  - RMB 164 million Yuan to improve facilities
- 730,000 poverty maternities
- 1,200 professional experts involved
- MMR reduced 25.8%
- Hospital delivery rate increased 28.4%
National Programs

- Health education project during pregnancy
- Promoting utilization of perinatal care service for migrants in big cities
- Integrated prevention for mother to child transmission of HIV/AIDS
- Establishing audit system for maternal “near-miss” cases
- National plan for prevention of cervical cancer
- Development of risk evaluation system for breast cancer
National Programs

- Screening for neonatal diseases
- Neonatal resuscitation program
- China’s action plan for infant and young child feeding
- Program of integrated management of childhood illness
- Prevention of injury in preschool children
- Nutrition intervention
- Integrated early childhood development
Reproductive Health/Family Planning (RH/FP) 6th Country Program. (UNFPA)
- 30 counties (cities) in 30 provinces

Piloting of the Mother and Baby package (UNICEF)
- 46 counties (cities) in 12 provinces

MCH Project IX in China (World Bank)
- 106 counties in 5 provinces

Severe Maternal Morbidities Audits. (WHO)
- 3 counties in 3 provinces
Thank You!