

## Policies of the 1,000 days maternal and child care in Taiwan

Dr. Ran-Chou Chen  
Deputy Director General, Health Promotion  
Administration, Ministry of Health and Welfare,  
Taiwan, 2018.06.28

- The 1,000 days between a woman's pregnancy and her child's 2nd birthday offer a unique window of opportunity to build healthier and more prosperous futures.
- Nutrition during pregnancy and in the first years of a child's life provides the essential building blocks for brain development, healthy growth and a strong immune system.

## Outline

- Maternal and Child Health Profile In Taiwan
- Maternal Care and Services
- Prenatal and Child Care and Services
- Future perspectives

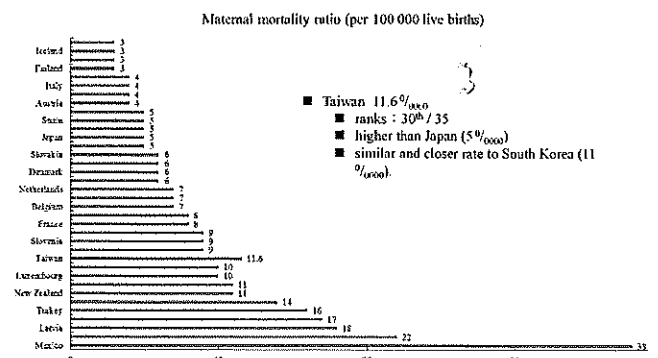
## Maternal and Child Health Profile In Taiwan

## Population and Health Profile

Main Items	Taiwan	Thailand
Total population	23.5 million (2016)	68.9 million (2016)
Population Density (Pop. Per km <sup>2</sup> )	650 (2016)	134.8 (2016)
GDP/capita, US\$	22,044 (2016)	5,911 (2016)
THE (Total Health Expenditure) as % of GDP	6.6 (2013)	3.8 (2016)
Illiterate rate, (%) >=15yr	1.4 (2015)	
LEO(, years)	80.0 (2016)	75.3 (2016)
Male	76.8 (2016)	71.6 (2016)
Female	83.4 (2016)	79.1 (2016)
Population age 65 and above (%)	13.2 (2016)	11 (2016)
Total Fertility Rate	1.17 (2016)	1.48 (2016)
Crude birth rate (‰)	8.9 (2016)	10.33 (2016)
Neonatal mortality rate (‰)	2.4 (2016)	7.3 (2016)
Infant mortality rate (‰)	3.9 (2016)	10.5 (2016)




## Maternal Mortality Rate, 2016 Taiwan vs. OECD countries





## Health Booklet for Newly Weds.

■ Provided through the Department of Household Registration




**新婚**

- Life course**: Marriage to pregnancy, prenatal and postnatal care, child care
- Evidence based**: Productive age, health examination and nutrition before and during pregnancy
- Versatility**: Marriage support, nutrition, pregnancy preparation
- Happiness**: Acquire knowledge to maintain personal and family health for next generation

Health booklet for newly weds

## Establish a comfortable pregnancy and childbirth environment

### Maternal Information Booklet for every pregnant woman



**孕婦健康手冊**

**Content**

- Health education
- Check-up for expectant mother
- Expectant mother's life
- Preparing for the birth
- Resources

Achieve health through good diet habits (folic acid, iodine, iron)...

## Maternal care consultation

- Free Maternal care hotline : 0800-870-870
- Pregnancy-care website and Cloud pregnancy app (android, iOS)

孕產諮詢專線  
0800-870-870

孕產諮詢服務時間  
08:00-18:00  
(週日及國定假日休息)



## Establish a comfortable pregnancy and childbirth environment

- HPA provides 10 free prenatal examinations (including 1 ultrasound examination, 1 Group B Streptococcus screening, and 2 health education guidance).
  - The frequency of utilization of 10 prenatal examination in 2016 was 18.77 million and the average utilization rate was 94.8%.
  - 1 ultrasound service and early fetal disorder diagnosis: a total of 195,823 services was used in 2016 and the utilization rate is 93.0%.
  - 1 Group B streptococcus examination to reduce perinatal infection: In 2016, a total of 182,032 people were subsidized and the screening rate was 87.3%.

## Prenatal Care Services

- Provide to all pregnant women including new immigrants
- Funded by Government Budget, and Tobacco Health and Welfare Surcharge

10 Free prenatal examinations									
1	2	3	4	5	6	7	8	9	10
Pre to 12 weeks	16 weeks	20 weeks	28 weeks	32 weeks	34 weeks	36 weeks	38 weeks	39 weeks	40 weeks
1 <sup>st</sup> trimester			2 <sup>nd</sup> trimester			3 <sup>rd</sup> trimester			
Includes Anemia test (Hb • Hct • MCV)									
Routine prenatal examination (Includes Pregnancy and Medical Hx, Physical examination, Lab tests)									
1 prenatal health education		1 ultrasound examination				1 Group B Streptococcus Screening			
1 prenatal health education									

## Prenatal genetic diagnosis for high risk pregnant

- 34 years or above, history of genetic disorder or child with abnormality, serum screening of pregnant women suspected with risk of chromosomal abnormality greater than 1/270, Ultrasound indicating fetus with abnormality, Fetus suspected with genetic disorder) of pregnant women, will be subsidized for amniocentesis (fully subsidy for low income and residents of 80 districts lacking in medical resources on genetic measures).



- Cases with abnormality results are referred to Health Bureaus for follow up, genetic information services or proper medical treatment in medical institutions.

## Prenatal Health Education

2次孕產前健康諮詢指導紀錄表

1st (Under 17 weeks)

- Nutrient supplement: calcium, iron.
- The importance of Vitamin B12 supplementation for vegetarians.

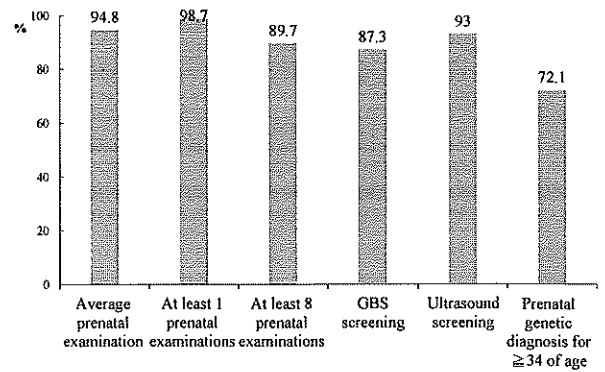
2次孕產前健康諮詢指導紀錄表

2nd (from weeks 29 to 40)

- Weight control: adjusted according to the weight before gestation. It is proper to gain 10-14 kg of weight and to keep increasing rate in check.
- Balanced diet. Understand that natural food has the priority.
- Breast-feeding: provide newborns and infants with the best nutrition.

國民健康署 192

## Utilization Rate of Prenatal Examination in 2016



## To establish a comfortable pregnancy and childbirth environment

- Creating a national "good pregnancy emblem"
  - To create a unified national "good pregnancy emblem" for a better pregnancy environment.
- Implementation of High risk maternal health care pilot program.
  - Six counties were selected to provide the integrate services, providing health education, follow up care and referral services to high risk pregnant women with health risk factors and socio-economic factors.



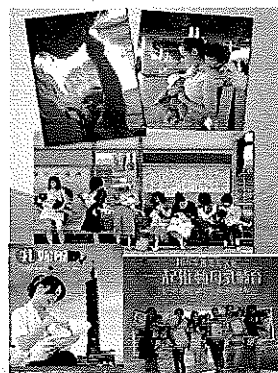
## New Immigrant Women Healthcare

- Providing comprehensive reproductive health consultation and inspection card management
  - For new immigrant women married to national spouses, we provide health education that includes new immigrant women and family related reproductive program, prenatal, postnatal and reproductive health services. In 2016, inspection card management rate reached 99.5%.
- Providing Maternal and child health booklet in multiple languages
  - The booklets are published in English, Vietnamese, Indonesian, Thai and Cambodian languages, which are distributed to medical institutions via health bureaus. The booklets are provided to new immigrant women for use during pregnancy tests and child preventive healthcare services.



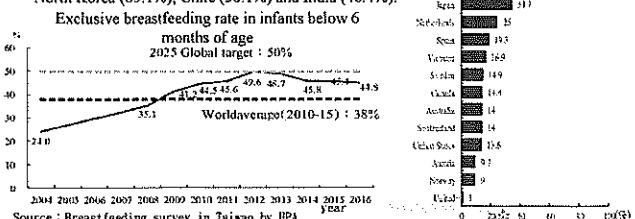
## Promoting breastfeeding

- Implement breastfeeding-related Regulations (Governing the Management of Infant and Follow-up Formula Advertisement and Sales of Promotion, 2014).
- Proactive implementation of accrediting baby-friendly institutions (2001)
- Establish breastfeeding-support network
- Construct breastfeeding environment at workplace
- Strengthen the knowledge and skills of breastfeeding for medical personnel
- Strengthen the public's breastfeeding concept (Public Breastfeeding Act, 2010).



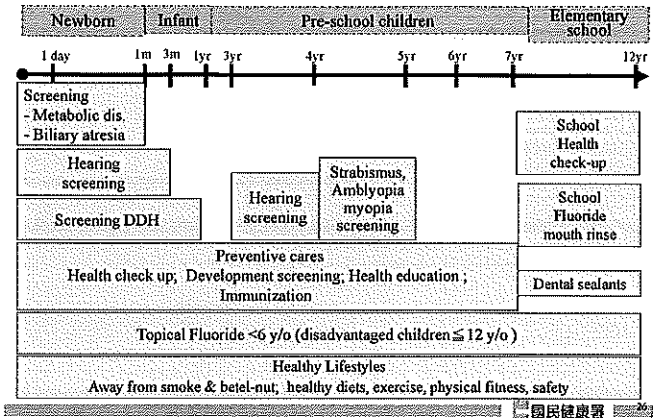
## The trend of exclusive breastfeeding rate and International Comparison

- The exclusive breastfeeding rate for infants under 6 months of age has increased from 24% in 2004 to 44.8% in 2016, which has exceeded the global average of 38% and is approaching the goal of 50% by 2025 set by WHO.
- Globally, Taiwan's exclusive breastfeeding rate for infants under 6 months of age is below in comparison to North Korea (65.1%), Chile (58.1%) and India (46.4%).



## Child Care and Services

## Comprehensive Child Care



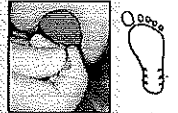
## Neonatal Screening for Metabolic Disorders

### Screened diseases (11)

- ✓ Congenital hypothyroidism
- ✓ Phenylketonuria
- ✓ Homocystinuria
- ✓ Galactosemia
- ✓ Glucose-6-phosphate dehydrogenase deficiency (favism)
- ✓ Congenital adrenal hyperplasia
- ✓ Maple syrup urine disease
- ✓ Glutaric aciduria type I
- ✓ Medium chain Acyl-CoA dehydrogenase deficiency
- ✓ Isovaleric acidemia
- ✓ Methylmalonic acidemia

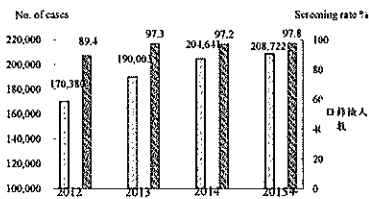
### System

1. Specimen Collecting System *within 48 hours of birth*
2. Screening and Examination System
3. Follow-up and Re-examination System
4. Diagnosis and Treatment System



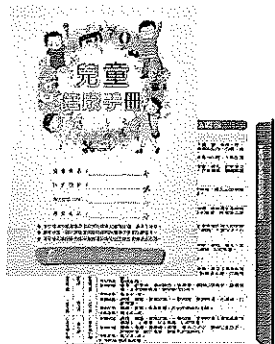
## Newborn Hearing Screening

- Newborn infants will undergo primary hearing screening in 24-36 hrs after birth in specialized institutions; if tested positive, will undergo re-screening before discharge (36-60 hrs.).
- In 2015, a total of 208,722 cases were subsidized with a screening coverage of 97.8% and 795 newborns were diagnosed with hearing defect.



## Preventive Health services for Children

- Child Health Booklet
- Provides 7 times preventive healthcare services to children <math>< 7\text{ y/o}</math>.
- The services includes: physical examination (height, weight, head circumference, nutritional status, general health check, hip screening, cryptorchidism, eye examination, heart murmur, oral examination etc.) and developmental examination.



## Child Health Education Guidance

- 7 times child health educations
- Child health guidance covers:
  - Breastfeeding and infant food
  - Infant Sudden Death Syndrome Prevention
  - Oral hygiene
  - Feeding habits and vision care
  - Accidental injury prevention
- Educated by doctors
- Subsidy by government

Session	Topic	Content
1	Breastfeeding and infant food	How to breastfeed, infant feeding, infant food, infant nutrition, infant growth and development.
2	Infant Sudden Death Syndrome Prevention	Infant Sudden Death Syndrome (SIDS) prevention, infant safety, infant care.
3	Oral hygiene	Infant oral hygiene, infant oral care, infant oral health.
4	Feeding habits and vision care	Infant feeding habits, infant vision care, infant vision health.
5	Accidental injury prevention	Infant accidental injury prevention, infant safety, infant care.
6	Oral hygiene	Infant oral hygiene, infant oral care, infant oral health.
7	Oral hygiene	Infant oral hygiene, infant oral care, infant oral health.

## Child Health Education for nutrition

**0 to 10 months Health education records**

Breastfeeding can be continued until your baby is 2 years old. After the baby is 6 months old, the mother has to add supplement food.

**10 to 18 months Health education records**

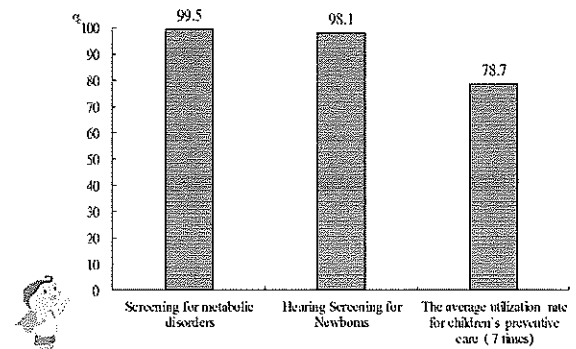
Gives attention to the introduction of other types of food, iodine supplement, edible kelp and seaweed, etc.

**Daily dietary nutrients in infants and children**

Consider food for balanced diets, and for iron supplement. Edible kelp and seaweed can be taken for iodine supplement.

Iron-rich food that are rich in iron include: dark color vegetables, red meat, liver and kidney organs, shellfish, etc.

## The Coverage of Child Health Services, 2016



## Preterm Child Care

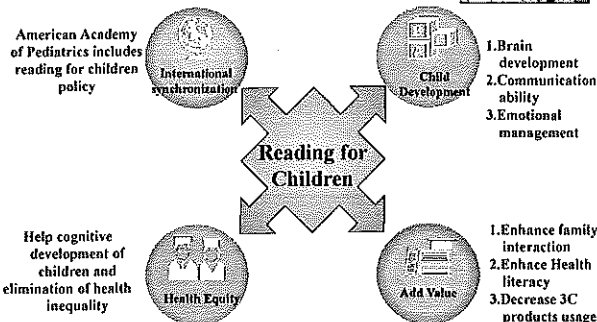
- Prenatal examination during 16-20 weeks: Provide "Preterm prevention health education", and preterm evaluation.
- Through birth notification system report gestational weeks and birth weight of preterm infants.
- Implement "Extremely low birth weight preterm child follow-up care pilot program" in 2017, which focuses on preterm infants with birth weight <1,500 g through phone interview to follow up and provide health education.
- Provides online training courses for medical personnel, 'Digital Preterm Health Booklet' to parents

## Children's Development Assessment Centers

- Implementing "Service Quality Upgrade Plan for Children's Development Assessment Centers" within Hospitals.
- In order to offer accurate, accessible and comprehensive services for developmentally delayed children, from 2010 onwards the HPA has established Child Development Assessment Centers.
- By 2016, Children's Development Assessment Centers have reached 51 distributed in all the 22 counties/cities.



## Reading for Children program

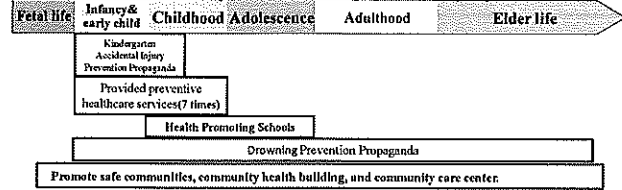


## 2016 Infant mortality rate and Cause of death

Dis-position	Cause of death	%
1	Congenital malformations, deformations and chromosomal abnormalities	20.5%
2	Respiratory and cardiovascular disorders specific to the perinatal period	14.4%
3	Disorders related to length of gestation and fetal growth	6.9%
4	Accidents	5.7%
5	Congenital viral diseases	5.2%

## Accidental Injury Prevention

### 1. Ministry of Health and Welfare promote accidental injury prevention policy and measures

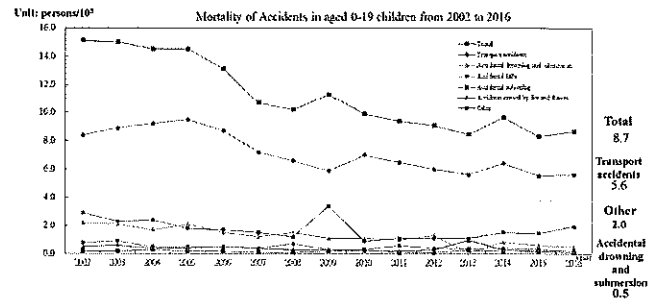


### 2. Inter-departmental co-operation for accidental injury prevention :

1. Ministry of Transportation and Communications R.O.C. : Promote the prevention of traffic accidental injury
2. The Council of Indigenous Peoples : Promote the prevention of accidental injury for safe tribal community
3. Ministry of Health and Welfare Children and Adolescents Injury Prevention Coordination Meeting : Promote Children and adolescent safety programs (Including security for individual, home, traffic, campus, game and other six areas)

## The long-term trends in mortality of accidents in 0-19 years old children and adolescents from 2002 to 2016

■ Mortality of accidents in 0-19 years old children and adolescents from 2002 to 2016 had decreased.  
(Mortality rate: 15.1 persons/10<sup>5</sup> in 2002, 8.7 persons/10<sup>5</sup> in 2016)



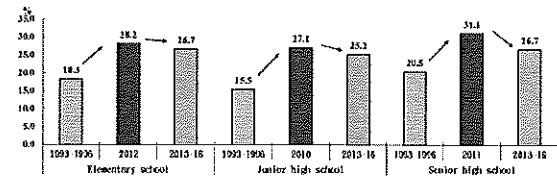
## Childhood Obesity Prevention and Managing Strategies

- Regulations Governing Advertisement and Promotion of Food Products Not Suitable for Long-term Consumption by Children.
- "Nutrition standards and food contents for school lunches", "Campus beverage and snack-selling policies" and "Nutrition standards, food contents, and recipe examples for kindergarten meal".
- Health promoting school program
  - All elementary and junior high schools are doing "healthy weight management".
- Promoting the "Population Nutrition Act (Draft)".
- Developing Child Empirical Guideline and Exercise Empirical Guideline.
- Create a comprehensive smart health city to live smart (ICT).
- Media & Website : <http://obesity.hpa.gov.tw>
  - Guidebooks for hospital, workplace, local health bureau and school
  - Handbooks and brochures for the public



## Prevalence of overweight and obesity in Taiwan

- The growth in the prevalence of over-weight and obesity in Taiwan has been slowing down.
- Set of 9 voluntary global NCD targets for 2025 (WHO 25 by 25) -- Obesity 0% increase



Note:  
1. Data source: Nutrition and Health Survey in Taiwan.  
2. Elementary, junior high and senior high school students' weight status is defined by "Definition of obesity in children and adolescents" based by Ministry of Health and Welfare in 2013.  
3. The WHO's overweight and obese: BMI ≥ 30 kg/m<sup>2</sup>

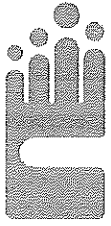
## Conclusion

- We provide comprehensive maternal and child health services and child health promotion, enhance health literacy, ensure prevention of accident and obesity.
- Decrease the disparities: Provide special programs for disadvantaged groups, such as: life skills education and guidance, Provide new residents with children's health booklet in different languages.
- However, the neonatal and infant mortality rate still ranks 19 and 24, respectively among the 35 OECD countries. The obesity of children ranks 6<sup>th</sup> among the Globe. There are still disparities among the different areas.

## Future perspective

- Expanded the "High Risk Pregnancy Health Management Program"
- Expanded preterm and low birth weight infant care.
- Establish "Pilot child death review program".
- Continue to promote injury prevention.
- Continue to promote maternal, child nutrition, breast-feeding, healthy diet, increase physical activity to decrease the obesity.
- Expand the field to promote parent-child reading program.
- Reduced the inequality.

Give every child the best start in child life



Taiwan  
Health  
Promotion  
Administration

**Promotion.  
Prevention.  
Protection.  
Participation.  
Partnership!**

Ministry of Health & Welfare