

Table 2 Early / first specialists

Board certified	Frank Hsu
Paediatricians	Erwin Huang
	CS Cheung
Government Specialist	SC Hu
Clinical genetics	Alice Chau
Gastro-enterology	Patrick Wei
Metabolism / Nephrology	YC Tsao
Cardiology	Grace Cheung
General Paediatrics	Robert Fung
Hematology / Oncology	Brian Luke
Neonatology	WY Zee
Paed Surgeon	Edmond Lee
BTUs (Been To U.K.)	Many

University Department of Medicine.³ Another paediatric ward was established within a medical unit in Kowloon Hospital; sick children were managed under the direction of an adult-physician.³ As the demand for proper child care was enormous, the few trained paediatricians tended to leave the public service for greener pastures in the private sector; one after another leaving the referral unit which was under-staffed and poorly equipped. As can be seen in Table 1, even in the university paediatric referral unit, there had been six headships over a period of twelve years. It was not until 1962 when the first professor of paediatrics was appointed when a concerted effort was made to develop the paediatric services as a distinct clinical discipline.

Changing Disease Pattern

In the immediate post 2nd World War years, the infant mortality of Hong Kong was around 100/1000 livebirths, this had declined dramatically to only 3.6 in the past years. (Figure 1)⁴ There had been dramatic changes in disease pattern⁵ also. Deaths from infectious diseases, like diphtheria and poliomyelitis (Figure 2) have completely disappeared for 20 years, and mortality from tuberculosis (Figure 3) in small infants and those beyond one year old had also shown dramatic decline following the introduction of BCG at birth.⁶

Apparently the most effective programme ever introduced into the Hong Kong child health services had been the maternal and child health centre (MCHC) – with its immunization and education programmes. These preventive programmes have helped to eradicate most of the highly fatal infectious illnesses of infancy and early childhood.⁷ These MCH Centres had also helped to improve health education for the parents enhancing the nutritional status of the children and sanitary conditions at home. There were also other developments in parallel like improved housing and portable water supply to the general public.⁸ Undoubtedly all these have contributed to the significant decline in the infant mortality and other important child health indices.

The British Government also introduced a student health service in the immediate post second war world period. It had helped to enhance the nutritional status by offering supplemental foods like milk feeds in all the schools besides providing various immunizations through

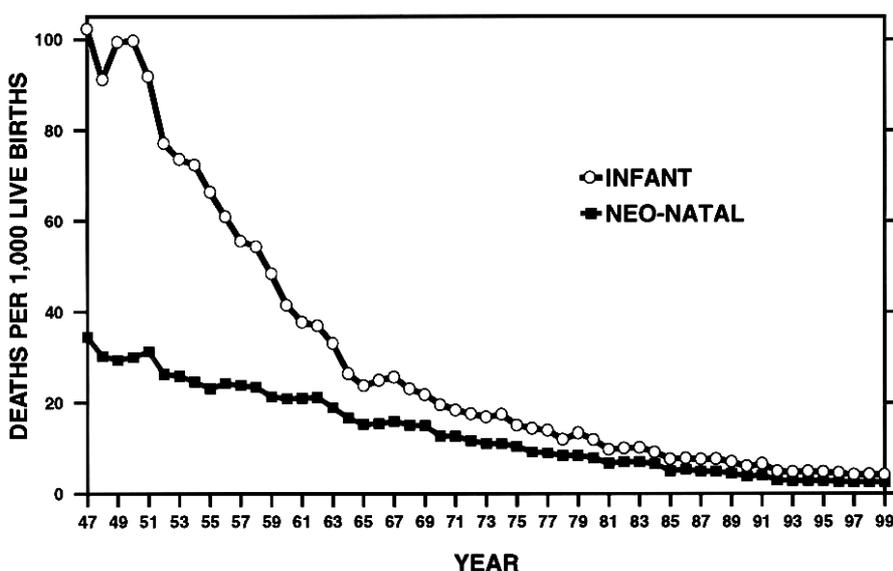


Figure 1 Infant and neo-natal mortality rate of Hong Kong. Note the marked decline of infant mortality over the 50 years.

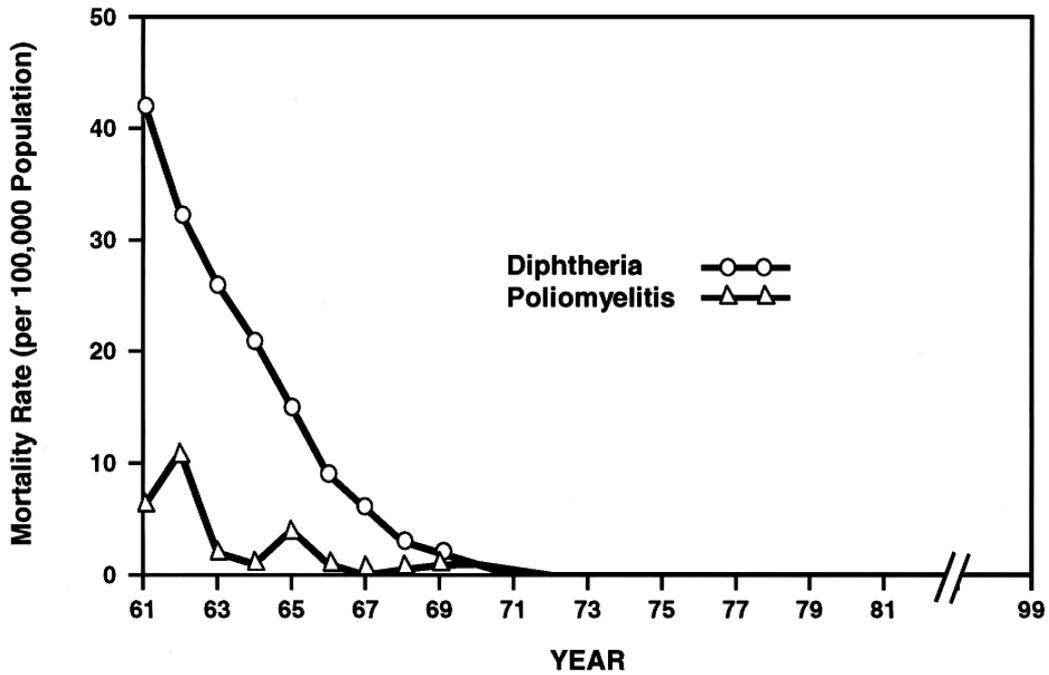


Figure 2 Deaths from infectious diseases in Hong Kong.

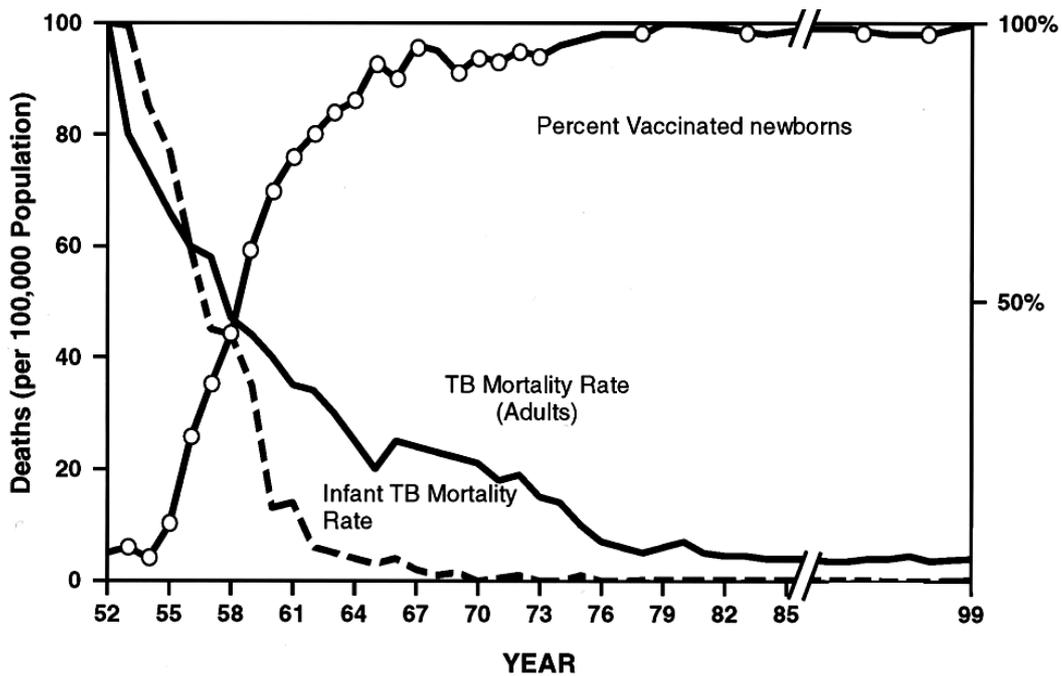


Figure 3 Tuberculosis in Hong Kong. Figure shows the dramatic decline of deaths due to TB upon improved compliance to take BCG at birth. The effect was first noted in infant mortality, followed a few years later by reduction of deaths in the older age group also.

a health nurse system. In 1951, a colony-wide BCG vaccination programme was implemented for the early teenagers who were found to be tuberculin skin test negative, this had further enhanced the herd immunity against the rampant spread of pulmonary tuberculosis locally. With compulsory education introduced in 1972,

the public became better informed of various happenings including awareness of their own and their children's health. All these (Table 3) have made major contributions to the enhancement of the health status not only of the children but of the population at large in Hong Kong.

Table 3 Important child health services introduced in Hong Kong

1945	Student Health – Supplemental foods
1950	MCH – vaccines Health Education
1951	Tuberculin Skin Test – BCG
1972	Compulsory education
1990	Managed COST ? Don't CARE

Development of Special Services

The earliest special services provided for children was probably the "Isolation and Rehabilitation facilities" for children with tuberculosis where most children with tuberculous meningitis and complications of pulmonary tuberculosis were accommodated. The hospital known as Ruttonjee Hospital (Table 4) was not specially built for children but for adults affected by this highly prevalent disease. Hong Kong had been lucky to have two highly devoted ladies, the late Sister Aquinas and Sister Gabriel who had demonstrated tremendous love and devotion to look after children with various tuberculosis diseases. By 1956, the first special hospital for children was set up at Sandy Bay to provide convalescent care to children suffering from the sequelae of poliomyelitis and spinal tuberculosis, the latter condition made Hong Kong world famous for its "anterior spinal fusion" for TB spine. This hospital was later named after the Duchess of Kent (DKH).³

The arrival of the first Professor of Paediatrics in 1962 who had special interest in children with cerebral palsy and mental handicap resulted in the establishment of Non-Government Organisations (NGOs) such as the Spastics Association, and the Association for the Mentally Handicapped to organize special educational and training facilities for these children. At the first developmental assessment clinic to identify potentially educable cerebral palsied children, nearly 80% of the children selected to enter the first special school in 1965, namely the John F Kennedy Centre were the survivors of kernicterus. This phenomenon illustrates the magnitude of severe neonatal jaundice as a problem in Hong Kong in those days.

Increasing Sub-specialty Development

Table 2 shows some of the specialists practicing in public hospitals in Hong Kong in the early days. Table 5 shows some of the early sub-specialty paediatric services

ever developed within the referral hospitals. It must be noted that early cardiopulmonary surgeries on children ever done in Hong Kong were performed by general surgeons with special cardiopulmonary interests; such names as the late Dr Kenneth Hui and Dr Morgan Lu were among the few of the highly respected and well-remembered even till these days. Admirable results of "hare-lip repair" were achieved by a missionary general surgeon, Dr Paterson of the Nethersole Hospital.

It is also interesting to note that the first successful attempt to ventilate a newborn with severe RDS was on a borrowed ventilator from adult respiratory physicians in 1968. The concept of paediatric intensive care was first coined-in in 1969 at Queen Mary Hospital by Dr YC Tsao. However it was not until 1982 when the proper set up for neonatal intensive care was instituted. In the less well equipped hospitals, such as the newly commissioned Queen Elizabeth Hospital where resources were scarce, human intermittent ventilation (HIV) was introduced by Dr Johnson Lee with the helping-hands of junior nurses in 1970. The first genetic counseling service was set up by Dr Alice Chau in 1981; this was coupled with the setting up of prenatal diagnosis laboratory introducing DNA technology for accurate diagnosis of thalassaemia syndromes at Tsan Yuk Hospital.

The political decision of handing Hong Kong back to the sovereignty of China in early 1980s had lead to generous Government spending on demand to improve various paediatric services. These have included the first ever planned improved paediatric accommodations at Queen Mary Hospital in 1980, known subsequently as

Table 4 Special child care services

1950	Ruttonjee – for Tuberculosis
1956	Sandy bay (DKH) – orthopaedics, – polio, TB spine
1963	Spastic Association
1965	Ass for Mentally Handicapped John F Kennedy School Developmental Assessment Clinic
1975	Child Assessment Centre

Table 5 Hospital paediatric services

1959	Cardio-pulmonary surgeries Exchange transfusion
1968	Ventilator R for RDS
1969	Intensive care concept
1970	HIV – manual ventilation
1980	Neonatal ICU setup
1981	Genetic Counselling Prenatal Diagnosis for Thalassaemia

HIV=Human Intermittent Ventilation

Table 6 Paediatric services at QMH clusters

1959	Cardio-pulmonary surgeries Exchange transfusion
1968	Ventilator R for RDS
1969	Intensive care concept
1970	HIV – manual ventilation
1980	Neonatal ICU setup
1981	Genetic Counselling Prenatal Diagnosis for Thalassaemia
82/84	Combined ICU
1982	CAPD/Renal transplant
1982	Paediatric cardiology
1987	Neuro-developmental Paediatrics
1990	Child-friendly environment (Play-areas, beds for accompanying persons, ...)
1990	Bone marrow transplant
1993	Adolescence service
1995	Liver transplant

the K-Block (Table 6). A major combined ICU to include both newborn infants and older children was set up in 1982. CAPD and renal transplantation were introduced in 1982, a well-planned paediatric cardiology programme was established at Grantham Hospital also in 1982, and a new neuro-developmental paediatric service at DKH in 1985, etc.⁹

Attempts to introduce child-centred clinical services to Queen Mary Hospital had met with varying degree of resistance. Through various negotiations and persistent efforts, a number of changes were introduced and a few new services implemented. These have included the highly successful parent support group for children with thalassaemia major known as the Cooley's Anaemia Association in 1981, the introduction of free visitations of sick children in hospital in 1983, introduction of clinical psychological support for critically ill children and their parents in 1990, and a more properly organised "Play Therapy Program" in 1990.⁹ Most of these activities however were not funded by the government but through the support of voluntary agencies or organised under the disguise of research projects. It is gratifying to note that similar activities had subsequently sprung up in other hospitals and supported in principle by the newly established Hospital Authority which had replaced the previous Government Medical and Health Department.

Landmark Child Health Development

Table 7 shows what I regard as landmark child health developments. The first and foremost must be the introduction of vaccinations against infectious diseases, the first of which was Cow pox vaccination against small

pox, discovered by Edward Jenner in 1800. As indicated earlier, the subsequent development of immunization programmes have contributed significantly to the dramatic decline of infant mortality in Hong Kong and in most other developing communities. Other development which may be particularly relevant for our community appears to be antimicrobial therapies which had helped to control many childhood infections including various forms of tuberculosis. Tuberculosis was so prevalent that coughing up blood before death (probably due to reactivation of pulmonary tuberculosis) was an extremely common scene which has kept on re-appearing in all "old style Cantonese movies". The disease appears much under control now.

It is very gratifying to note that the thalassaemia genes which affect more than 8.5% of the southern Chinese population¹⁰ and the Cystic Fibrosis (CF) gene which is the most common chronic chest problem in children in the western world¹¹ were both discovered by reputed researchers of Hong Kong origin namely Professor Kan Yuet Wai¹² and Professor Tsui Lap Chee.¹³ It is important to note that at the close of this century, the human genome project would be completed which has now opened a totally new era for child health care. DNA and DNA technologies have now become the major investigatory and therapeutic agents which can determine the health status of the future. Of course, a major development towards the end of the century was the proclamation of "the rights of the child" by the United Nations in 1989,¹⁴ which aims at providing the best possible community environment to promote child health. The important points are summarised in Table 8.

Table 3 showed some major child health development

Table 7 Landmark child health indices

1800	Small pox vaccination (Jenner)
1941	Antimicrobial therapy (Fleming)
1948	First success R of pulm TB
1949	Skin test for Dx of TB
1952	Oral Rehydration Therapy
1953	DNA (Watson & Click)
1959	Surfactant Def identified for RDS
1967	Thalassaemia gene decoded (Kan Yuet Wai)
1989	CF gene decoded – (Tsui Lap-Chee) Rights of the Child (UN)

Table 8 UN rights of the child

Highest standard of health care
Freedom of expression
Basic education
Protection from abuses ...
Own culture, religion, language ...
Protected as disadvantaged children ...

in Hong Kong. These programs together with improved housing and educational standard which came much later have helped to dramatically reduce deaths and morbidities related to tuberculosis and other common infections, like infantile gastro-enteritis.

One cannot be too sure of what was happening when a new system of Health Administration was introduced in 1990 when a new concept of managing health costs was also introduced. The care of children has suddenly become more compartmentalised, with the Hospital Authority looking after sick children and a Department of Health to provide preventive care through the "Family Health Services". The hope to implement seamless comprehensive child care for Hong Kong has become shattered.

One cannot help wondering when most hospitals have now become so heavily involved in improvising their interior decorations and grandeur external appearances together with the increasing the number of high ranking and highly paid administrators, what other resources could be left for proper patient care. One can only hope that this new concept of "managed care" which was copied from other "developed communities" would not fall into the same trap that some of these countries have experienced, i.e. "managing costs but don't care".

If one looks at the development of hospital based paediatric services exemplified by Queen Mary Hospital, as shown in Table 6, one could more or less follow similar trend of development of paediatric units in other public hospitals of Hong Kong also. Generally speaking, attempts to develop subspecialties have become a popular phenomenon. The Hospital Authority had over the past 10 years seemed to allow such development running their own way, probably with the idea of evening out resource distribution. The result was escalation of health costs not only in the paediatric discipline but in hospital based services in general. Take tertiary neonatal intensive care as an example; instead of establishing only a limited number of such highly expensive services to support a network of hospitals, these units have sprung up like cauliflowers ever since the first one was established at the Queen Mary Hospital cluster in 1981. In recent couple of years, the Hospital Authority started to feel the pressure to consolidate. Hopefully more reasonable solution can be found to provide the essential and other important child health services that the children of our society deserve.

Summary

Significant improvements in child health-care facilities have occurred in Hong Kong especially over the past twenty years. Much of these seem to be related to the Government's determination to spend money on "out-cries for improvements". It was lamentable to recall that our unit at QMH was labelled as "extravagant" for such trivial

Table 9 Improvements in facilities

Patients –Doubling up before	1950
Proper isolation	1990
Doctors –call-beds in "boiler room",	1961
home purchase for juniors	1990
Air conditioners	
To filter-off pollutants (TYH)	1965
more environmental friendly	1990
Deficient hand-washing facilities	
Disposable paper hand towels	1981
Improved water supply & soap – dispensing units	1983

demand as using disposable paper hand-towels after hand-washing in the nurseries only 20 years ago. This contrasts the dramatic improvements as illustrated by several examples shown in Table 9. While some doctors on-call in hospitals had to lie on mattresses placed over boilers to keep warm in the early 60s, junior doctors in the early 90s were all encouraged to purchase very expensive homes, given "low interest home loans" besides being paid with probably the highest salaries for medical trainees in the world. Much is still needed to promote a comprehensive child health program, from conception to maturity into adulthood. I hope we do not need another major political shake-up before seeing further progress and advancement of child health care services in Hong Kong in the future.

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