

Child Health and



**Early Child Development Program:
Hong Kong's Experience**



Dr Patrick Ip

**Clinical Associate
Professor**

Paediatrics, HKU



兒童健康調查

**香港首個對兒童人口
進行的健康調查**

**The first population
health survey targeted
to H.K. children**

DEPARTMENT OF PAEDIATRICS AND ADOLESCENT MEDICINE



THE UNIVERSITY OF HONG KONG

香港大學兒童及青少年科學系



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SCHOOL OF PUBLIC HEALTH
THE UNIVERSITY OF HONG KONG
香港大學公共衛生學院

**Child Health Survey
2005-2006**

Commissioned by



Surveillance and Epidemiology Branch
Centre for Health Protection
Department of Health

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- The CHS revealed that our children population aged 0 to 14 had generally enjoyed good health prior to the study period

0 -14 兒童調查以前的健康令人滿意



- the relatively low prevalence of various chronic health conditions as compared with overseas survey¹

慢性疾病等的流程度相對低

¹. *World Health Organization. The Adolescent with a Chronic Condition. Available from http://www.who.int/child_adolescent_health/documents/9789241595704/en/*

- Top 5 chronic health conditions 頭五種慢性疾病 were visual problems, allergic rhinitis, eczema, food allergy and asthma

Indicator		Female	Male	Overall
Prevalence of top five chronic health conditions				
• Visual problems	視力的問題	28.1%	26.6%	27.3%
• Allergic rhinitis	過敏性鼻炎	20.6%	28.3%	24.5%
• Eczema	濕疹	12.7%	12.1%	12.4%
• Food allergy	食物過敏	4.6%	5.5%	5.1%
• Asthma	哮喘	3.6%	4.5%	4.1%

Areas of concern

使人不安的範圍

- Physical health 身體健康
- Diet and physical activities 飲食和體能活動
- Risk behaviours 風險行為
- Childhood injury and safety practices 兒童損傷及安全措施

Poverty & Child Health

貧窮及兒童健康

- More infections, Accidental injuries, Child abuse & neglect
- Inadequate nutrition, Instability of residence, Exposure to environmental toxins
- Inadequate parenting, Less access to services

JL Aber et al. *Annu. Rev. Public Health*. 1997. 18:463–83

JB Gunn & GJ Duncan. *The Future of Children*, Vol. 7, No. 2, *Children & Poverty*. 1997. p 55-71

Household income & Mental health

家庭收入及精神健康

- Children from low income families have higher levels of
 - **Depression**
 - **Anti-social behaviors**
 - Bullying, being cruel, breaking things, cheating or telling lies.
 - **Lower cognitive performance**
- Adolescents who experience poverty are more likely to
 - Engage in **drug and alcohol use** at earlier ages
 - Initiate **sexual activity** earlier
 - Have increased **mental health** problems
 - Lower levels of **academic** achievement

Kuruvilla et al. "Poverty, social stress & mental health" in *Indian J Med Res* 2007(126), P.273-8

Strohschein L. "Household income histories and child mental health trajectories" *J Health & Social Behavior* 2005(46), P.359-75

Poverty – Definition 貧窮定義

- Income Poverty – different definitions
- Living under a monthly income less than or equal to half of the median income of all other household of equal size

Household Size	Year 2005
1 person	HKD 3,000
2 persons	HKD 6,400
3 persons	HKD 8,000
4 persons	HKD 9,800

貧困的兒童 - 兒童健康調查

Children in Poverty - CHS

	Female	Male	Total
No Poverty	1812	1973	3785 (68.66%)
Poverty	862	866	1728 (31.34%)
Total	2674	2839	5513

p = 0.1748

Early Education 早期的教育

- Pre-School Educational Attainment (Age 2-5)



Poverty & Child Health

- Prematurity 早產
- Global Health 總體的健康



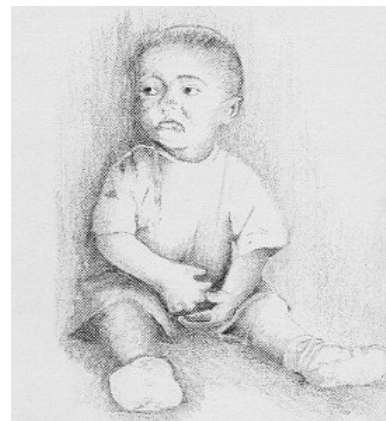
Poverty & Child Health

- **Mental Health** 精神健康
- **Role Limitation (social/physical)**
角色限制
- **Family Cohesion**
家庭凝聚力



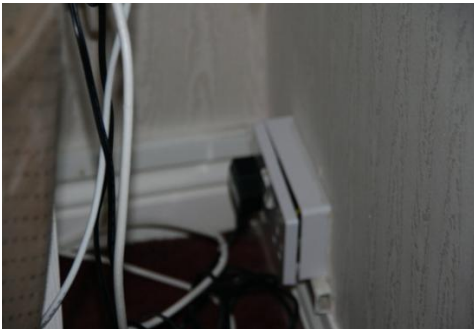
Poverty & Parenting 親職

- **Coping skills** 處理技巧
- **Frustration with children's behaviour**
對小孩行為產生挫敗
- **Spank children, to yell**
打屁股, 吼叫



Poverty & Child Safety 兒童安全

- Always being left alone at home
獨留兒童在家
- Child Safety Measures
兒童安全設施



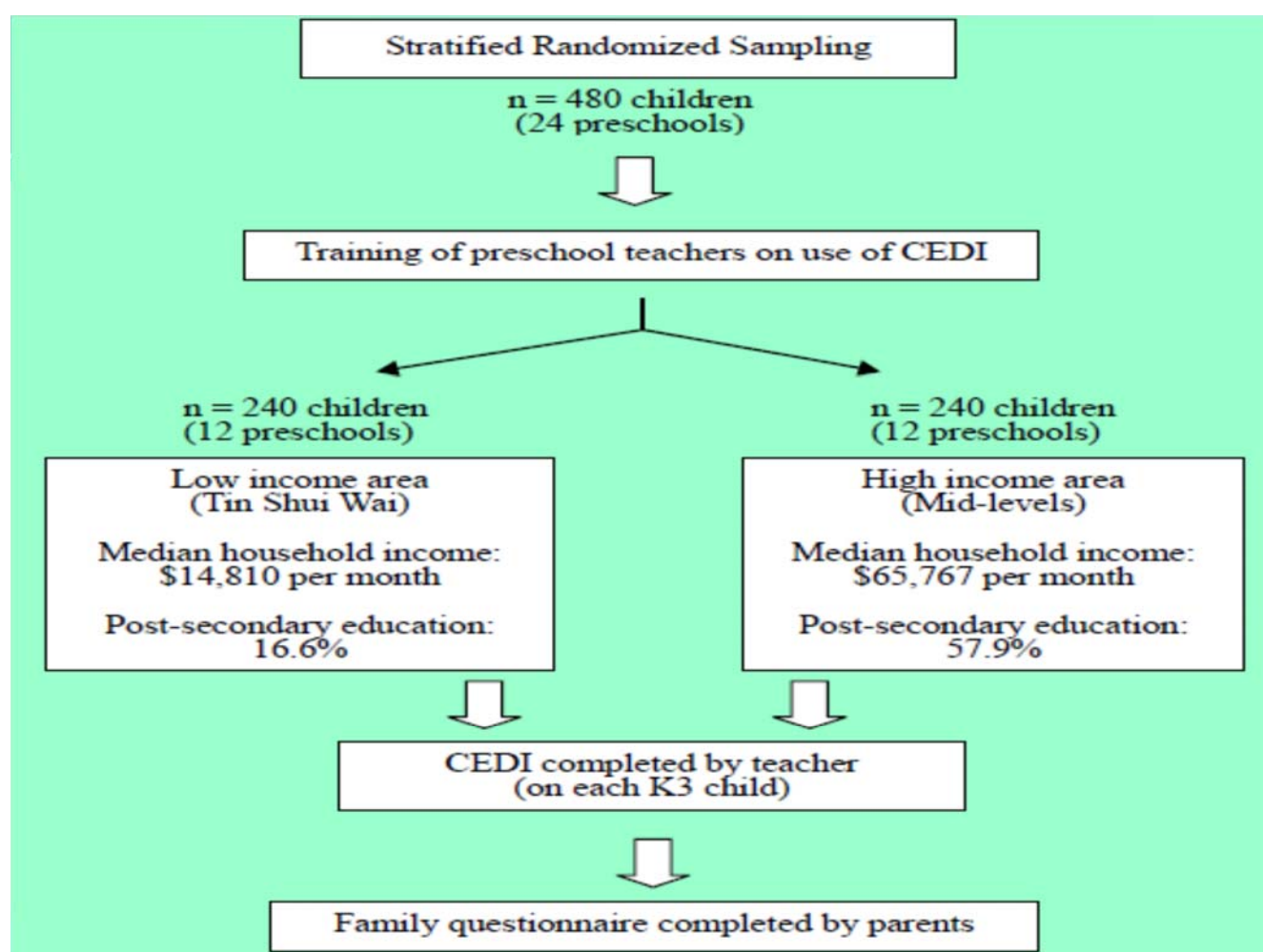
Early Development Instrument

- **Physical health and well-being:** physical readiness for school, physical independence, general health, gross and fine motor skills
- **Social competence :** responsibility and respect for others, approaches to learning, readiness to explore new things, sharing etc
- **Emotional maturity :** pro-social behaviour and helping behaviour, is able to concentrate, patience, lack of anxious, fearful or aggressive behaviour etc
- **Language and cognitive development :** basic literacy, interest in reading, recognition of numbers and shapes, awareness of time concepts, etc
- **Communication skills and general knowledge :** ability to clearly communicate one's own needs and understand others, active participation in story-telling, interest in general knowledge about the world etc

Early Development Instrument

早期發展的工具 (Chinese EDI)

- 第一部分 體格狀況 -----
(Physical Well-being)
- 第二部分 語言和認知技能 -----
(Language and Cognitive Skills)
- 第三部分 社會和情緒發展-----
(Social and Emotional Development)
- 第四部分 特殊關注 -----
(Special Concerns)
- 第五部分 額外的問題 -----
(Additional Questions)



Vulnerable children & SES gradient

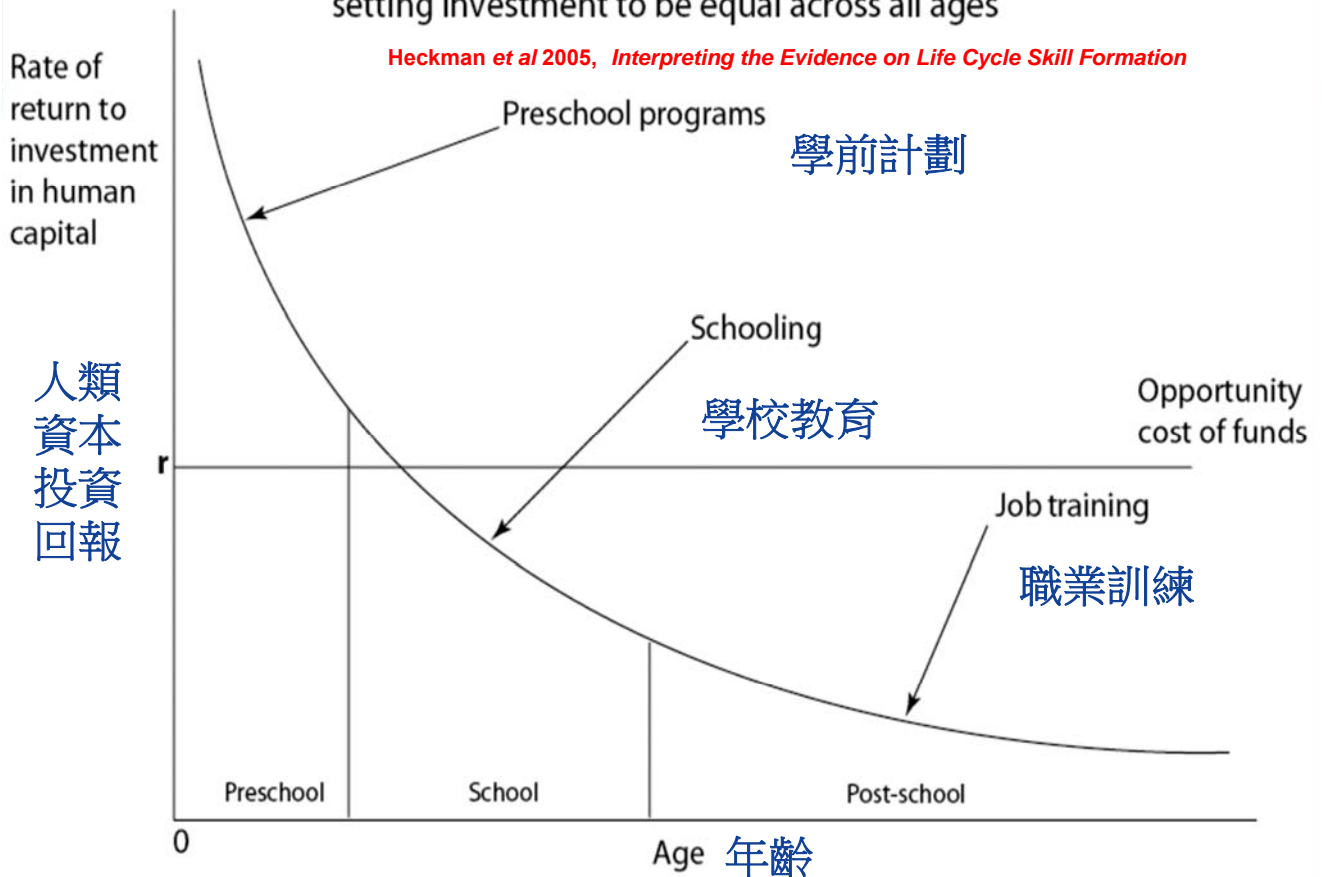
- **“Vulnerable”** children:
Scoring below the lowest 10th percentile on one or more domains of EDI
- A decreasing gradient of **vulnerability** based on total family income and mother’s level of education
- A significant different in EDI score between children in the poor and wealthy area of Hong Kong

Background of CCDS service

- 2005 Policy Address - Hong Kong Government
Child Development Pilot Project
 - (1) Platform – **Maternity & Child Health Centres**
 - (2) Community-based Integrated Children & Family Service Model
 - (3) Pilot sites – Sham Shui Po, Tuen Mun, Tin Shui Wai & Tseung Kwan O

(a) Rates of return to human capital investment initially setting investment to be equal across all ages

Heckman et al 2005, *Interpreting the Evidence on Life Cycle Skill Formation*

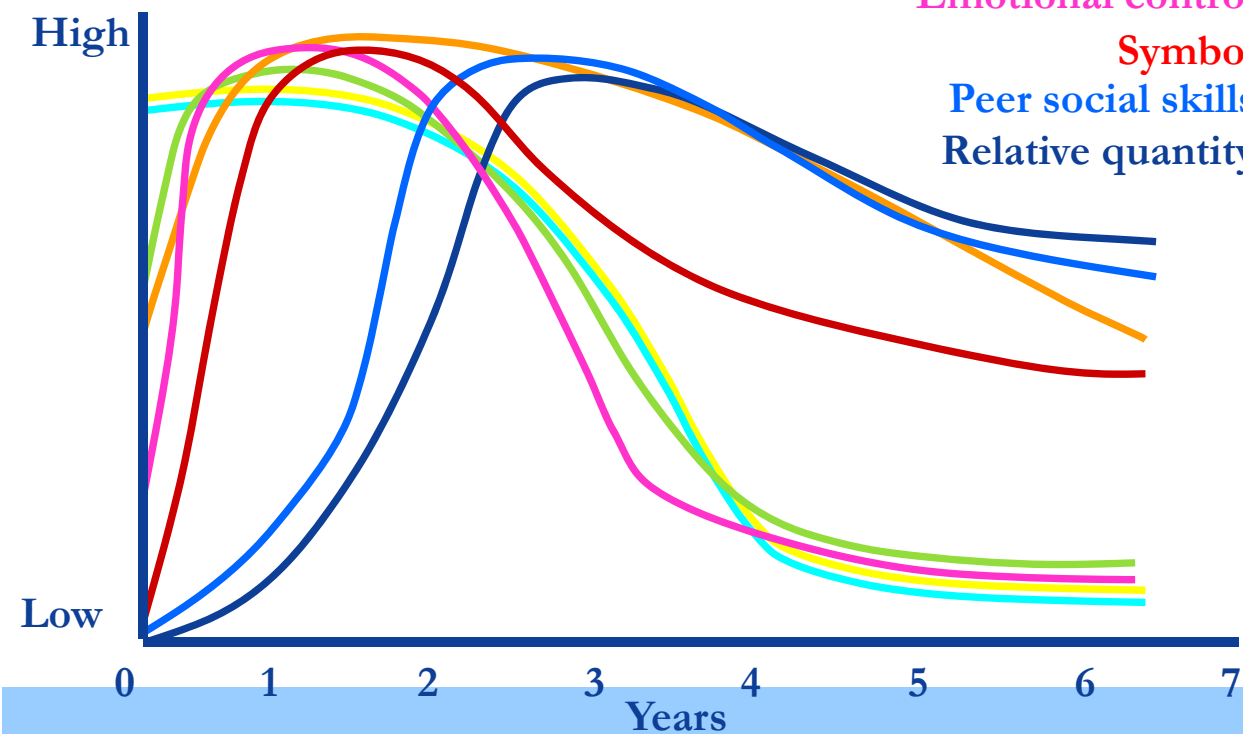


Rates of return to human capital investment initially setting investment to be equal across all ages

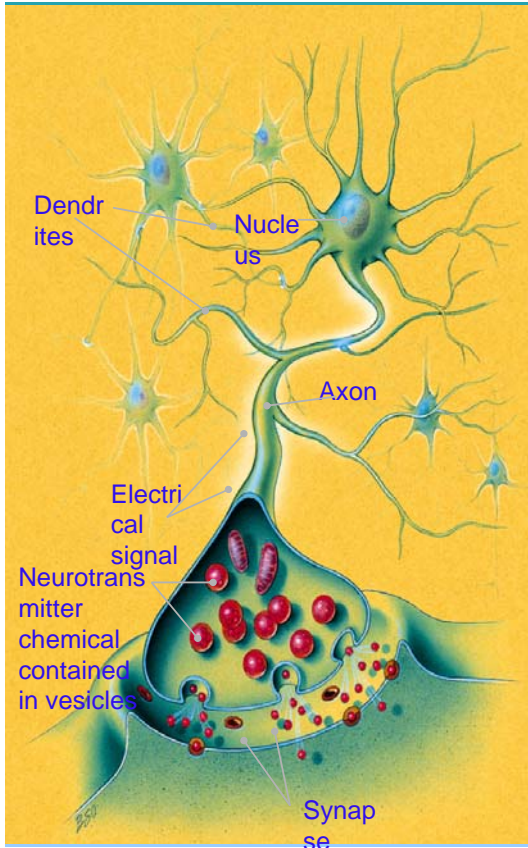
'Sensitive Periods' in Early Brain Development

Binocular vision
Central auditory system
Habitual ways of responding

Language
Emotional control
Symbol
Peer social skills
Relative quantity



What science is telling us ?



- **Our earliest experiences are resp for literally wiring the brain for future use, therefore building its basic architecture**
- **During its period of greatest growth - from before birth to ~ three - the cerebral cortex is adding an astounding 40,000 synaptic connections every sec**

CCDS – Objective & Strategy

- Early Identification of children & families in-need
- Appropriate Intervention
- Based on existing MCHC & child-care services
- Integration of medical & health, education and social service sectors
- 4 Pilot sites

	NTW	NTE	KW	KC	KE	HKE	HKW	Total
No. of delivered mother (1.6.06 - 31.5.07)	5488	6567	9653	5545	4434	3654	3943	39,284
No. of delivered mothers treated at Psy SOPD	3475	3152	5160	1449	1813	1043	1240	17,332
NEP delivery by OBS units (after NEP Fee Increase (Sep 05 - Aug 06))	1876	2159	3430	1245	1689	934	593	11,926
Teenage mothers	235	202	251	139	146	77	149	1,199
Women pop. (Reprod. Age)	319 409	389 276	530 339	145 863	275 244	247 336	164 680	2 081 146

Sham Shui Po Community

- 13 023 domestic households with children 0 – 5 (2001 Census)
 - Household monthly income < 19,999 – 53% (2)
 - New immigrant parents – 1863 (7)
 - Lone parent families – 476 (4)
 - Child abuse – 33 (3) (2003)
- Total number of registered cases (0 to 5 years) = 17000
- Number of IFSCs – 4

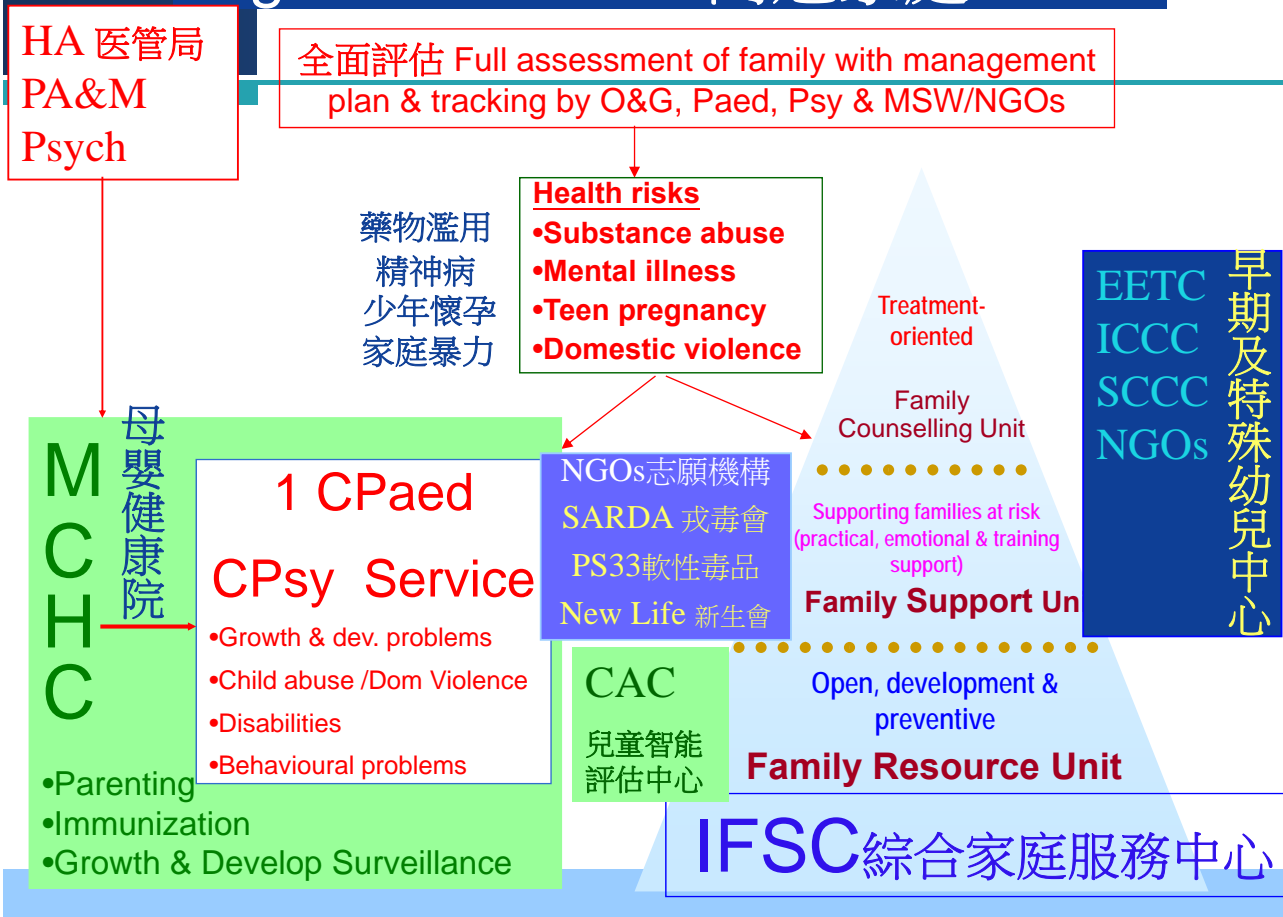
Tuen Mun Community

- 23 187 domestic households with children 0 – 5 (2001 Census)
 - Household monthly income < 19,999 – 55% (1)
 - New immigrant parents – 1 769 (7)
 - Lone parent families – 599 (4)
 - Child abuse – 59 (2) (2003)
- Total number of registered cases 23 000
- Number of IFSCs – 4

Yuen Long (TSW) Community

- 23 949 domestic households with children 0 – 5 (2001 Census)
 - Household monthly income < 19,999 – 52% (3)
 - New immigrant parents – 2527 (10.6%) (2)
 - Lone parent families – 890 (3.7%) (1)
 - Child abuse – 133 (1) (2005)
- Total number of registered cases (0 to 5 years) = 16 793 (TSW MCHC: 7 390, Madam YFS: 9 403)
- Number of IFSCs – 5 (TSW: 3, YL: 2)

High risk families 高危家庭



Drug abuse in pregnancy

- National Pregnancy and Health Survey (92)
 - 5.5% of pregnant women had SA
 - Cannabis: 2.9%
 - Amphetamines, sedatives, analgesics 1.5%
 - Cocaine 1.1%
 - Alcohol 18.4%
 - Smoking 20.1%
- Other studies:
 - 0.4-27%

Narcotic addiction in pregnancy with adverse maternal & perinatal outcome Aust N Z J Obstet Gynaecol. 1992 Aug;32(3):216-21

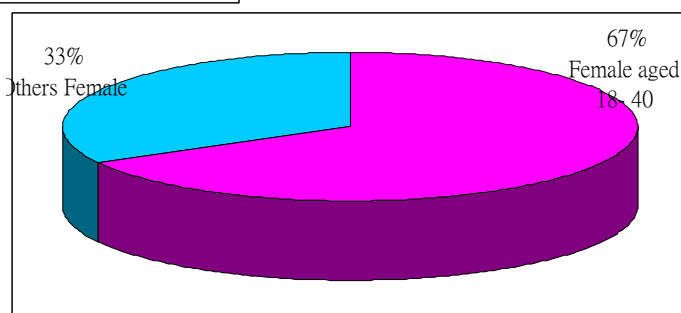
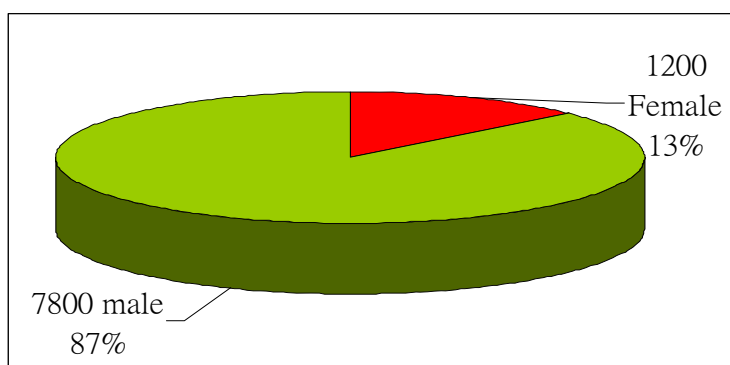
- **51 Chinese gravidas abused narcotics in Tsan Yuk Hospital (H.K.)**
- **Heroin was the most commonly abused drug.**
- **The major antenatal complications were**
 - late antenatal booking (average 28 weeks),
 - **prematurity** (41%), **small for gestational age baby** (27.5%), antepartum haemorrhage (13.7%)
 - high prevalence of **venereal disease** (23.5%).
 - The babies born to drug addicted mothers were on average 629 g lighter at birth, 5 cm smaller in head circumference and 7 cm shorter in body length.
 - **Neonatal withdrawal symptoms** occurred in 83% of all drug exposed neonates.
 - The **perinatal mortality** rate was 19.6 per 1,000 total birth which was 2.5 times that of the control group.
 - There was one **maternal death** in our series. Drug addiction in pregnancy poses a major risk to both mother and child.

Common problems

<i>Infancy (0 to 15 Months)</i>	<i>Toddlerhood (15 to 36 Months)</i>	<i>Preschool Years (3 to 5 Yr)</i>
Unpredictable sleeping patterns	Atypical social interactions Exaggerated separation anxiety	Auditory processing of spoken words
Feeding difficulties	Delayed receptive and expressive language	Visual processing of visual materials
Irritability Tremors when stacking	Minimal play strategies	Attachment and social interaction problem
Atypical social interactions – unresponsive to caregiver	Inability to adjust to new surroundings	Hyperactive, disruptive behaviours
Delayed motor or language development	Trouble to follow directions Unable to end activities	Behavioural problems Express wants by temper
Increased tone and poor fine motor development	Short attention span Poor inner control	Withdraws and seems to daydream
Heightened response to stimuli	Ignores limit setting	Frequent temper tantrum

Methadone centres 2005

美沙酮服務對象



SSP Methadone Centre Oct 2005

Total 1800 registered (**20%** of HK cases)

Female: ~ 200 registered

125 regular attendance

~100 of reproductive age

74 have children

CCDS Service –

Sham Shui Po



Characteristics of female pts

Drugs usage

- Only methadone 54%
- Also other drugs 46%

With addicted partners 71%

On CSSA 73%

Full time worker 9%

Housewife 38%

Unemployed 46%

Student 2%

Marital status

- Married 48%
- Cohabit 20%
- Single 20%
- Divorced 20%
- Widow 2%

With Psychosis 15%

**The Society for the Aid & Rehabilitation of Drug Abusers
Methadone Counseling Program**



***Integrated Services for Methadone
Female with pregnancy and children***



醫院管理局
HOSPITAL
AUTHORITY



Integrated 醫院管理局 瑪嘉烈醫院 Program - 香港戒毒會 美沙酮輔導服務

「兒童早期發展計劃」服務流程

合資格服務對象包括 a) 有濫用海洛英問題，並已登記服用美沙酮，及於PMH & KWH 進行產檢之孕婦； b) 12個月以下嬰兒，其母親已登記服用美沙酮，嬰兒並由西九龍 母嬰健康院跟進者。
Drug abused Pregnant women

第一部份 --- 本計劃產前服務內容

工作階段	服務流程	跟進事項
1. 個案來源及招募 Recruitment	<ul style="list-style-type: none"> 自我轉介； 美沙酮診所招募； 由政府醫院(PMH & KWH)及母嬰健康院(W.Kln. Center)轉介； 由其他社會服務單位轉介。 	<ul style="list-style-type: none"> 由美沙酮診所社工接見，進行初步評估； 社工招募懷孕婦女為輔導個案。
2. 初步評估 Early Assessment	<ul style="list-style-type: none"> 由美沙酮診所醫生及社工接見 	<ul style="list-style-type: none"> 由政府醫生或私家醫生確診懷孕； 由美沙酮醫生寫轉介信往瑪嘉烈醫院婦產科(PMH)； 美沙酮社工取病人同意書及填寫「懷孕婦女初次評估表」；
3. 懷孕初期輔導 Early Counselling	<ul style="list-style-type: none"> 由美沙酮診所醫生及社工接見 	<ul style="list-style-type: none"> 由美沙酮醫生講解濫藥對懷孕的不良影響及懷孕婦女服用美沙酮的知； 案主接受輔導後，決定繼續懷孕者，將由美沙酮醫生寫轉介信往 PMH，作產前檢查； 若案主決定終止懷孕者，亦由美沙酮醫生寫轉介信往 PMH，接受進一步檢查； 產前檢查或申請終止懷孕，均由美沙酮社工傳真有關文件往 PMH 安排登記事宜，並陪同案主往首次產檢。
4. 懷孕中期輔導	<p>深化評估</p> <p>由美沙酮診所社工，每二星期接見案主一次，並進行以下評估：</p>	<ul style="list-style-type: none"> 美沙酮社工填寫「懷孕婦女及幼兒需要評估問卷」； 有需要下，美沙酮社工將作進深輔導服務跟進及適切服務轉介。
5. 懷孕中期輔導 個人輔導 (I)	<p>個人輔導跟進(I)</p> <ul style="list-style-type: none"> 一般問題及 濫藥問題； 服用美沙酮相關問題。 	<ul style="list-style-type: none"> 濫用海洛英情況； 濫用其他物質狀況 財政狀況； 家庭關係； 情緒、精神狀況； 其他問題評估。
6. 懷孕中期輔導 小組輔導 (II)	<p>小組輔導跟進(II)</p> <ul style="list-style-type: none"> 案主將被邀請參加美沙酮小組輔導 	<ul style="list-style-type: none"> 美沙酮婦女自助組； 美沙酮婦女健康講座； 美沙酮飲藥講座； 幼兒健康講座等。
7. 懷孕中期輔導 轉介服務 (III)	<p>轉介服務(III)</p> <ul style="list-style-type: none"> 濫用海洛英問題； 濫用其他物質問題； 居住問題及財政困難； 家庭問題； 情緒困擾及精神病； 其他問題評估。 	<ul style="list-style-type: none"> 鼓勵接受美沙酮治療計劃； 或轉介住其他門診式或住院式戒毒治療；或轉介往葵涌醫院； 轉介往社會福利署； 轉介往社會福利署； 轉介往葵涌醫院； 轉介往其他適切服務。 <p>(各轉介服務，社工均須取得案主同意書)</p>
8. 臨產前跟進 Case Conference	<ul style="list-style-type: none"> 產前四至八週，美沙酮社工及女同輩輔導員往家訪； 商討家庭計劃。 	<ul style="list-style-type: none"> 贈送物資； 過來人分享服用美沙酮心得； 社工評估家居狀況及協助案主及其家人迎接新生兒； 商討日後家庭計劃 e.g. 轉介產後避孕服務。
9. 產前個案會議	<ul style="list-style-type: none"> 在產前 30-32 週，由產科醫生、精神科醫生、兒科醫生、社會福利署家庭服務中心及美沙酮社工召開個案會議 	<ul style="list-style-type: none"> 商討產婦情況，嬰兒福利； 嬰兒出院生活安排(由母親帶返家；或由其他親友照料；或寄往托兒所；或交由社會福利署照顧。)

第二部份 --- 本計劃產後服務內容

工作階段	服務流程	跟進事項
10. 母親生產後嬰兒出院前	<ul style="list-style-type: none"> 美沙酮社工陪同案主探望初生嬰兒 嬰兒出院安排 <p>Perinatal support</p>	<ul style="list-style-type: none"> 美沙酮社工協助案主商討日後嬰兒養育計劃及制訂嬰兒出院安排；
11. 產後個案會議	<ul style="list-style-type: none"> 在嬰兒出院前 1-2 週，由兒科醫生、精神科醫生、社會福利署家庭服務中心、醫務社工及美沙酮社工召開個案會議。 Postnatal conference 	<ul style="list-style-type: none"> 商討嬰兒福利； 嬰兒出院生活安排(由母親帶返家；或由其他親友照料；或寄往托兒所；或交由社會福利署照顧。)
12. 母子返家(首四星期)	<ul style="list-style-type: none"> 若母親獲安排嬰兒出院帶返家一同生活，在嬰兒返家一至四週內，美沙酮社工及女同輩輔導員往家訪； 案主每星期接受美沙酮個人輔導服務。 <p>Home visitation by SW & volunteer</p>	<ul style="list-style-type: none"> 過來人分享育嬰心得； 贈送物資； 協助案主穩定服用美沙酮； 社工與案主重整戒毒計劃，提升戒毒動機，商討合適治療方案，如美沙酮門診股服務或其他住院模式戒毒服務，以作轉介。 協助案主定期帶同嬰兒往母嬰健康院作體檢。
13. 嬰兒滿一歲前	<ul style="list-style-type: none"> 戒毒輔導跟進； 嬰兒保健及育兒困難支援跟進； 每月定期接受美沙酮個人輔導。 <p>Postnatal support – Mother & baby</p>	<ul style="list-style-type: none"> 協助案主定期帶同嬰兒往母嬰健康院作體檢。 跟進家庭計劃 e.g. 轉介避孕服務； 過來人分享育嬰心得； 協助案主穩定服用美沙酮； 邀請案主參加育嬰講座； 美沙酮婦女自助組； 美沙酮婦女健康講座； 美沙酮飲藥講座； 贈送物資。

專業摩登陪
月計劃

##嬰兒滿週歲後，母親及嬰兒均推薦接受美沙酮輔導服務部推行之另一計劃，名為「美沙酮 1-5 歲兒童早期發展計劃」，以繼續接受適切跟進。

Name of Baby:

Name of Mother:

ID No:

Tel:

MCHC No:

Gestation/age	24	28	32	36	Birth	1m	2 m	4 m	6 m	9 m	12 m	15 m	18 m	24 m	30 m	36 m	40 m	48 m	52 m	60 m	Remarks	
DATE																						
MCHC							PND															
Immunization																						
Growth & dev survey					PE Gr M	? DSS	DSS	DSS	DSS GrM		DSS		DSS GrM	PE		DSS GrM		DSS Vision		PE GrM		
Triple P																PPP						
CPaP	CPaP				CPaP		CPaP	CPaP	CPaP	CPaP	CPaP	CPaP	CPaP	CPaP	CPaP	CPaP	CPaP	CPaP	CPaP	CPaP	CPaP	
Others																						
HA OB																						
HA Paed					Plan	FU	FU	FU	FU	FU	FU	FU	FU	FU	FU							
HA Psychi																						
Psy nurse																						
IFSC																						
Counseling																						
Group																						
Edu/Dev P																						
Others																						
SARDA			Plan		Plan	Home	C	C	Gp	C	C											
PS33																						
NewLife																						
Others																						

Community Paediatrician in MCHC

- Assessment of physical condition, growth & development
- Counselling – Child-care, Nutrition, Emotion, Common infancy problems
- Strategies to enhance growth & to promote Development & Maternal-infant bonding



Promotion of Development & Bonding

- **2-month-old:**
 - 1) pay extra patience to baby
 - 2) comfort baby in quiet & peaceful environment, sings to baby
 - 3) avoid anger & emotional lability, place baby in safe environment & seek for help in difficulty
- **4-month- old:**
 - 1) talk more to baby
 - 2) let baby to meet more different people
 - 3) plays more with toys of sharp color and with sound
- **6-month-old:**
 - 1) accompany and play more with baby
 - 2) let baby to explore more different objects put in hands
 - 3) read picture book together
 - 4) pay attention to home safety and cleanliness

Promotion of Development & Bonding

- **9-month-old:**
 - 1) use consistent facial/emotional appearance with verbal instruction
 - 2) spend sufficient time to play with child
 - 3) be careful of small objects causing suffocation
- **12-month- old:**
 - 1) allow more independant play but accompanying child
 - 2) offer assistance when asked to
 - 3) maintain home safety measures

Close monitoring in MCHC

Motivate and Facilitate:

- Detoxification (counselling & assistance)
- Modification of high-risk behaviour (smoking, drinking)

Monitoring:

- Vaccination schedule
- Child welfare issue

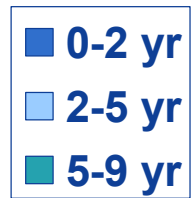
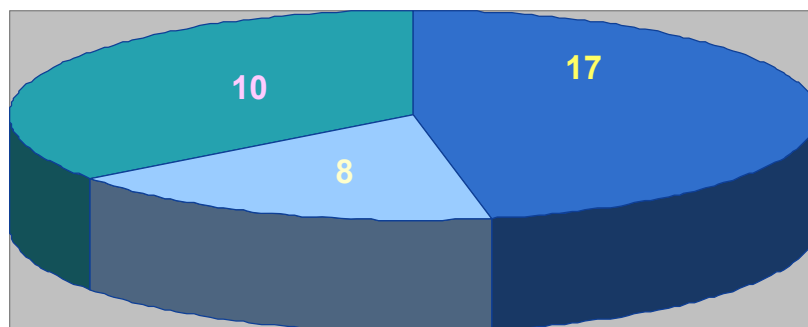
Health & Developmental Surveillance –

美沙酮戒毒中心兒童
健康及發展監察

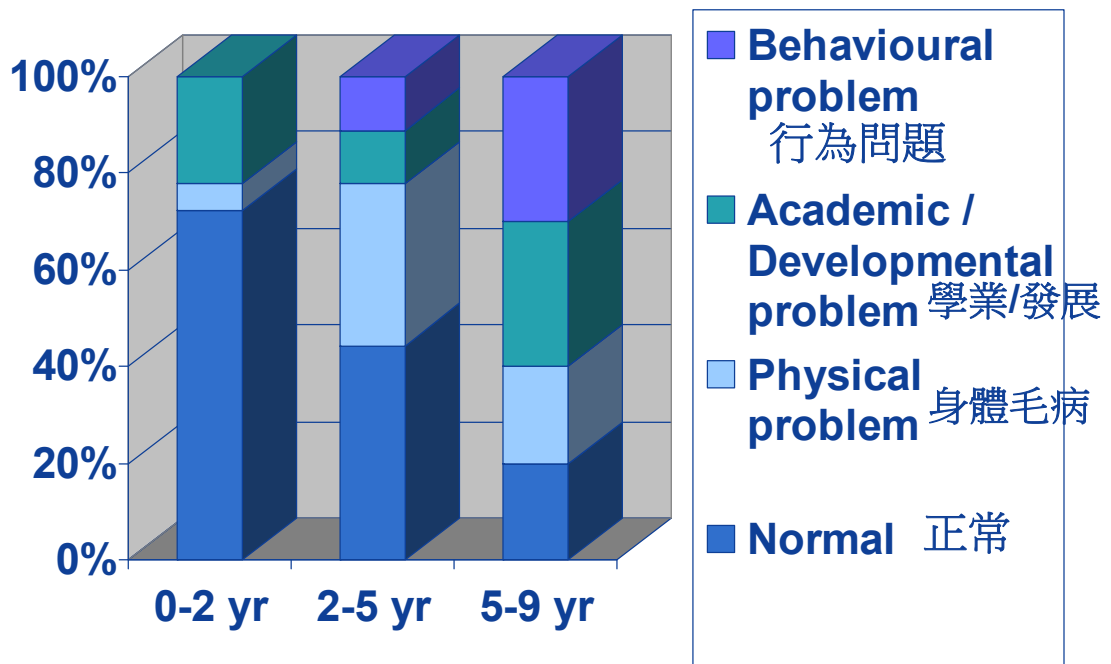




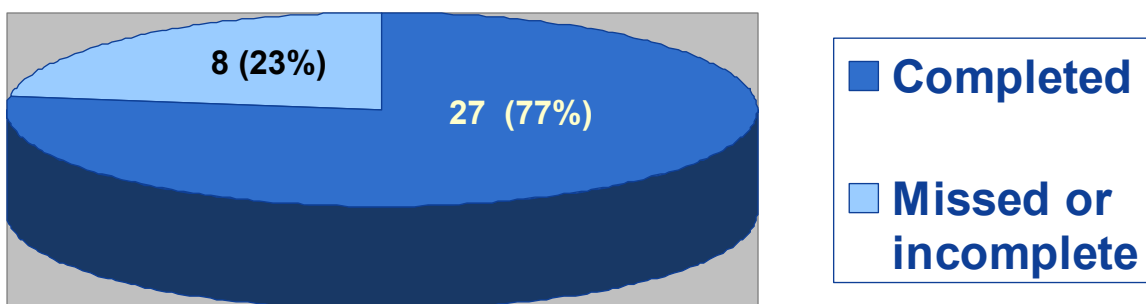
Age Distribution 年齡分佈



Main Problems 主要問題



Vaccination rate



West Kowloon Cluster – CCDS

Community Paediatrician 兒科社區工作

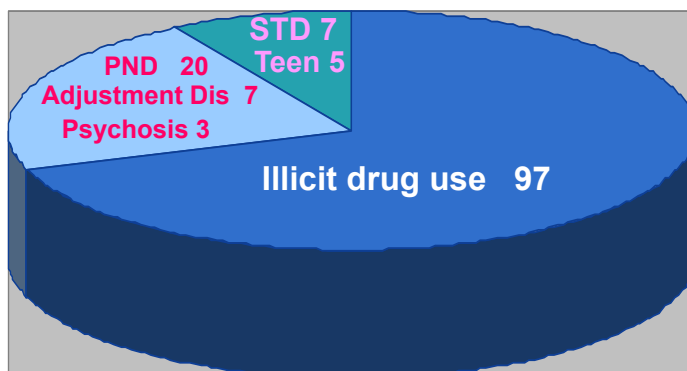
- Educational lecture 教育講座 to ~ 300 audience from SARDA :
 - Sham Shui Po Polyclinic
 - Lai Chi Kok Community Hall
 - SSP Methadone Centre



West Kowloon High-risk cases (0-5 yr)

高危類別 – 母親問題 139 cases

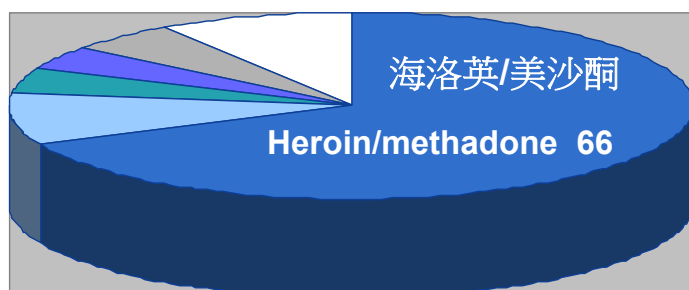
Case assessments & FU in WK MCH



- Illicit drug use
- Mental illness
- Others

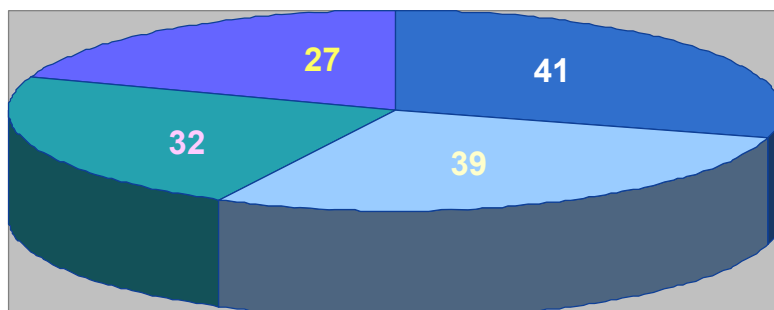
Mothers with Illicit drug use

濫用藥物個案 - 97



- Heroin/methadone
- Cocaine
- Cough mixture
- Amphetamine
- Ketamine
- Polydrugs

Age Distribution 年齡分佈



- < 6m
- 6-12 m
- 12-18 m
- > 18m

Detoxification

- After counseling & active encouragement, 8 heroin/methadone user mothers (**17%** out of the 53 families) had been detoxified successfully (vs **7%** in previous study)
- Stable methadone user- **64%** (**14%** before prog)
- 14 out of the 31 mothers using soft drugs (45 %) stopped using soft drugs after being recruited in CCDS program

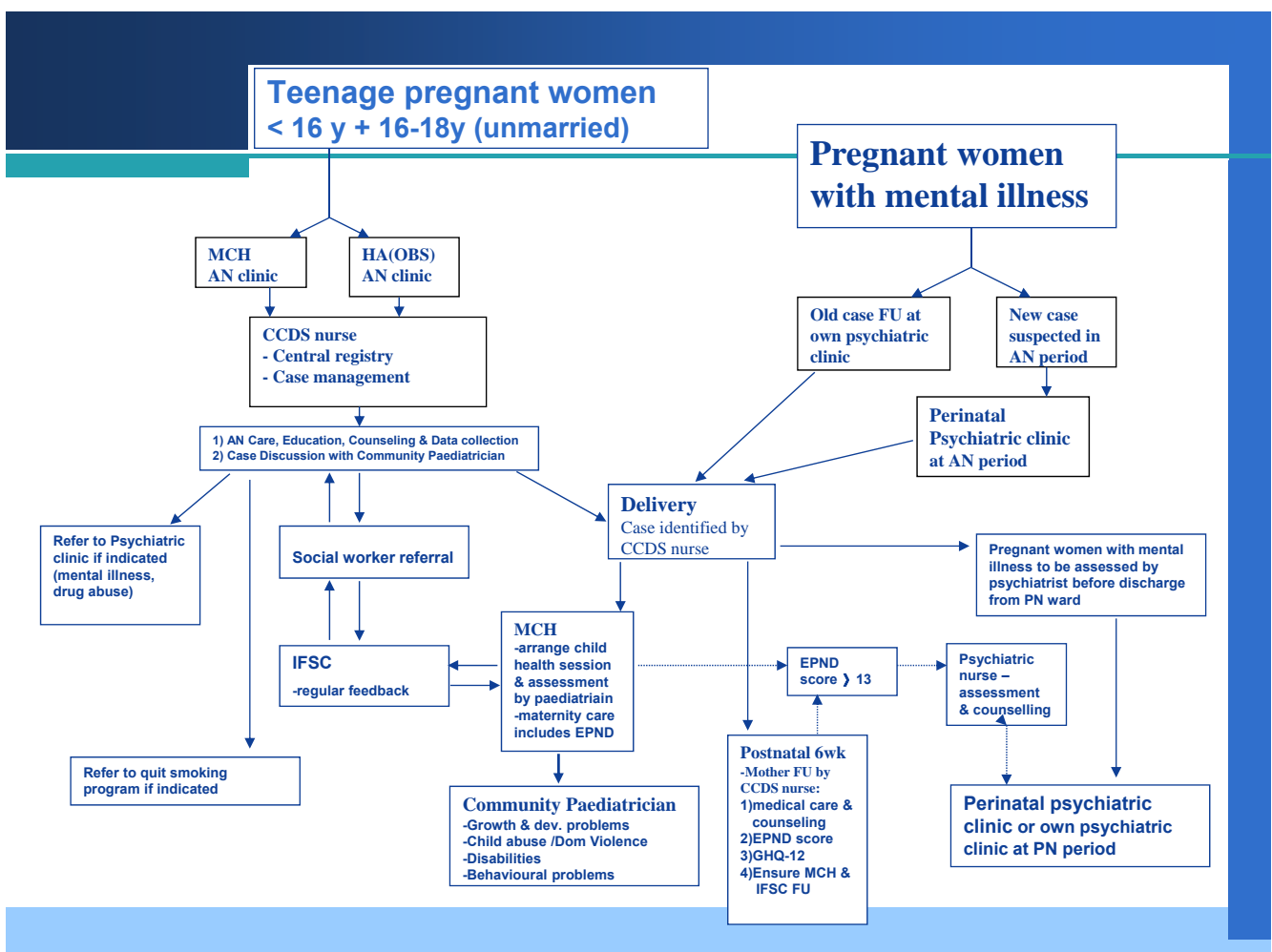
Vaccination

In contrast to the **77% vaccination rate** (23% either missed vaccination or with schedule incomplete) found in surveillance study in methadone centre previously, the vaccination rate had improved to **94%** in children of drug-abused mother after recruiting in CCDS



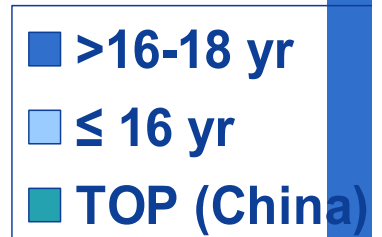
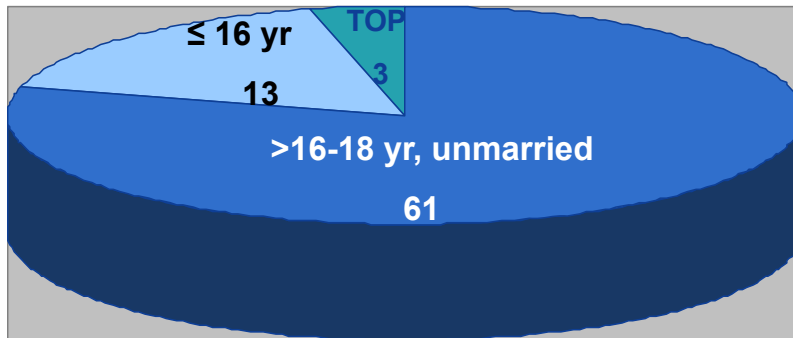
Child Abuse & Child Protection

- 15 out of the 97 cases (16%) with drug-abused mother were found to have either established **child abuse** or high-risk of **child neglect** requiring subsequent joint Case conference with FCPSU, IFSC & SARDA social workers, police, school teacher & medical staff for formulation of welfare plan & arrangement of close monitoring & placement into institution or foster home



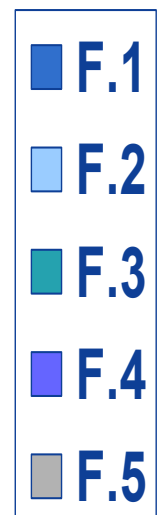
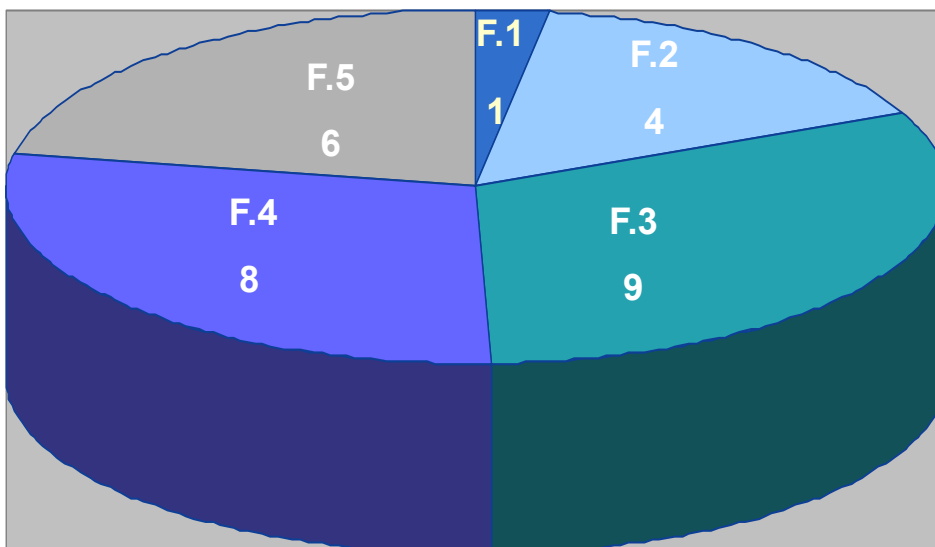
Teenage pregnancy – NTW

77 Cases - Age Group

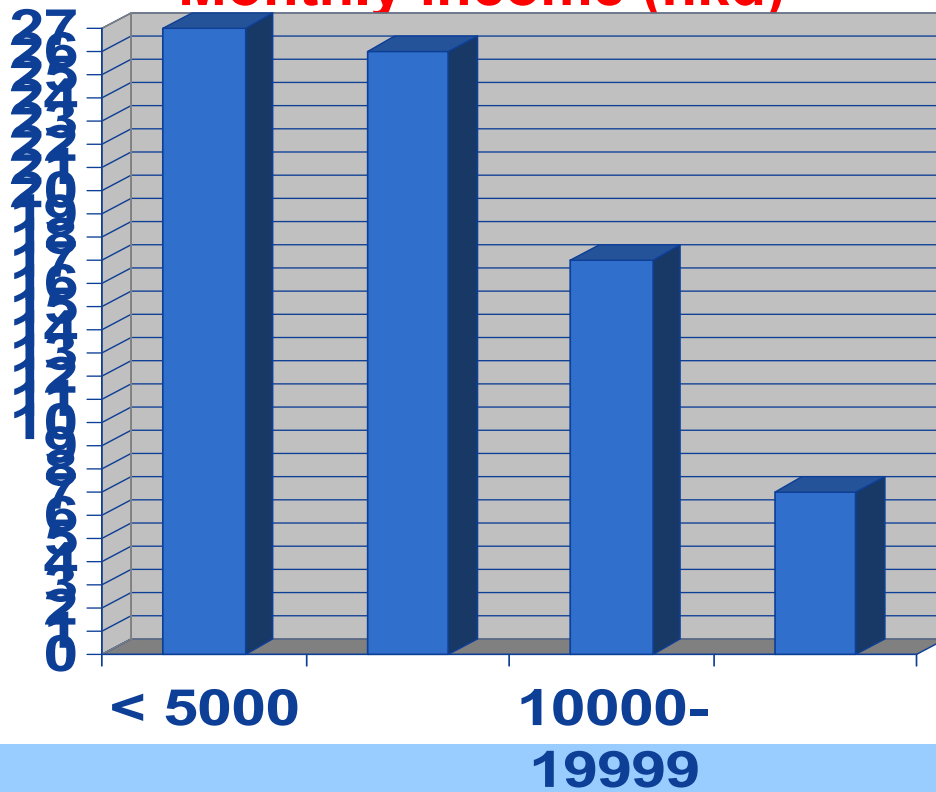


Teenage pregnancy

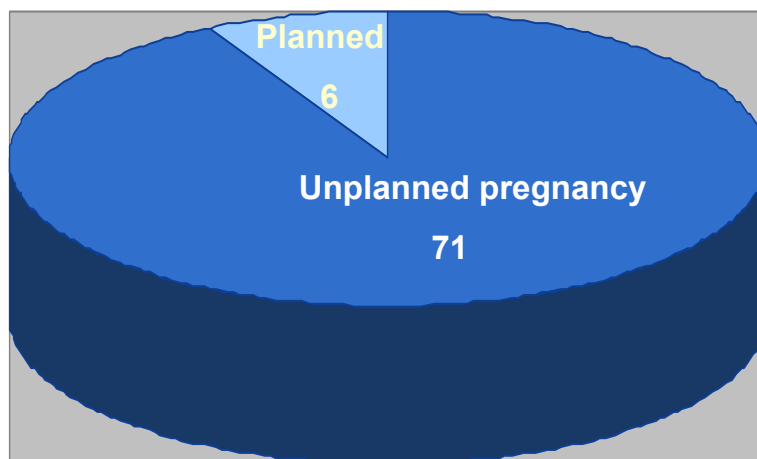
Education level



Teenage pregnancy - Monthly income (hkd)

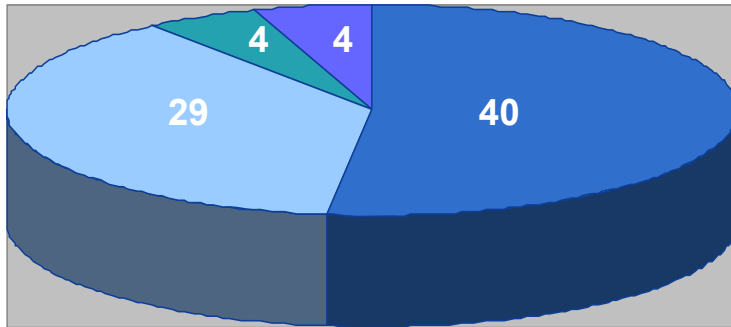


Teenage pregnancy Planned/ unplanned pregnancy



Teenage pregnancy

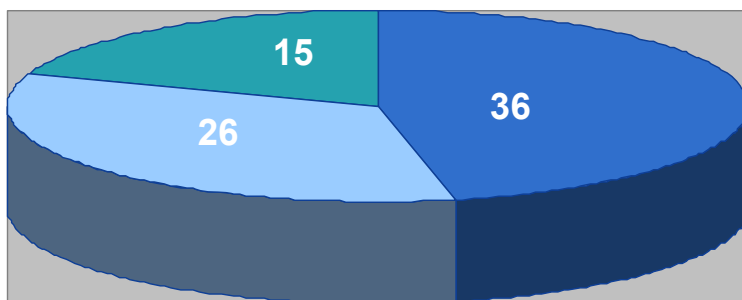
Contraception before pregnancy



- No contraception
- Male condom (improper)
- OC Pills (improper)
- Others

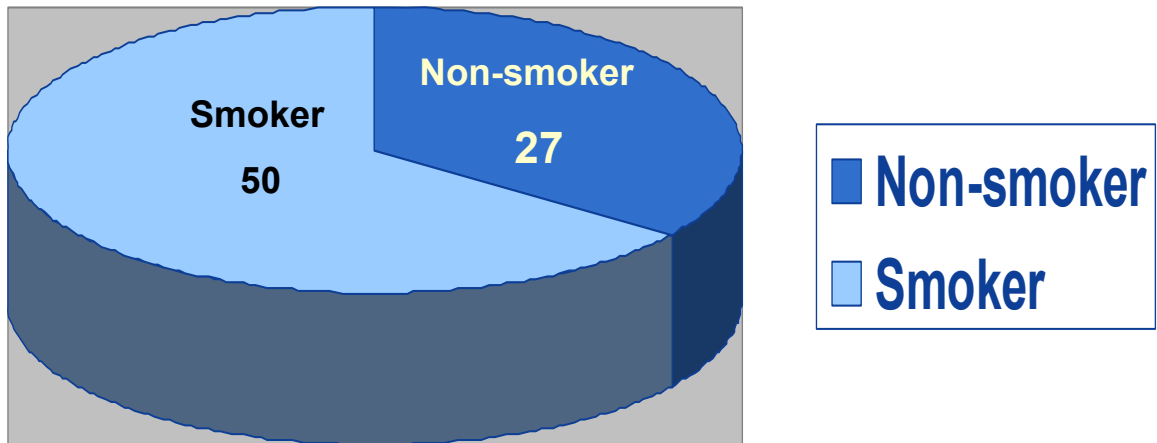
Teenage pregnancy

Planned method of contraception

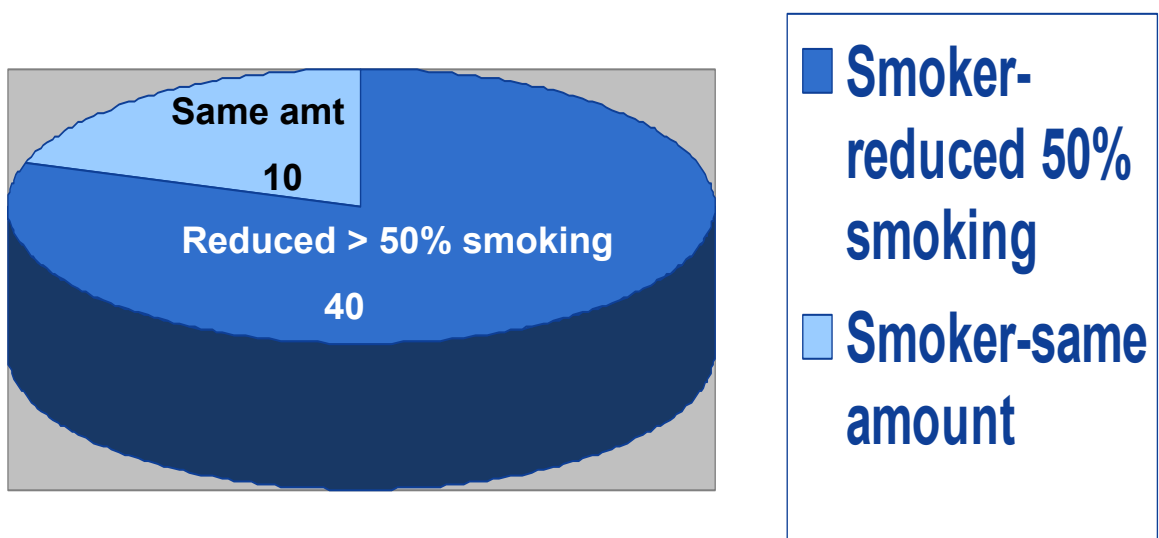


- Male condom
- OC pills
- Others

Teenage pregnancy Smoking during pregnancy

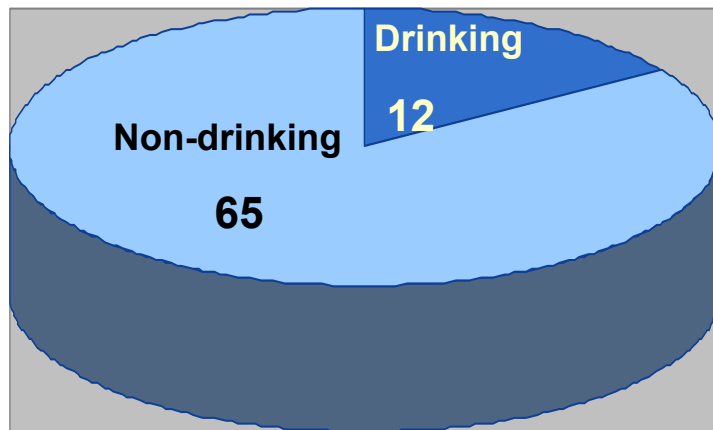


Teenage pregnancy Smoking during pregnancy



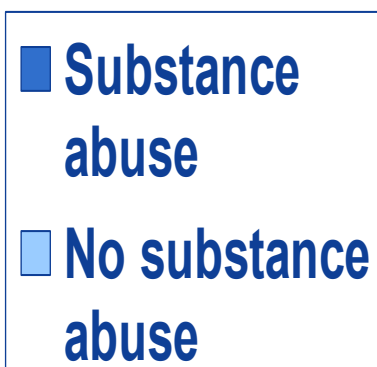
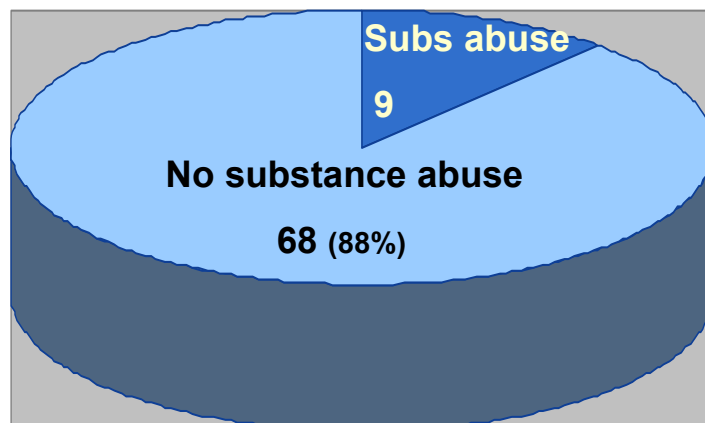
Teenage pregnancy

Alcoholism during pregnancy

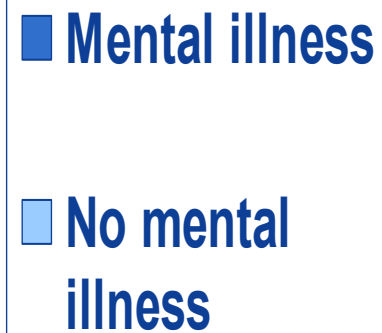
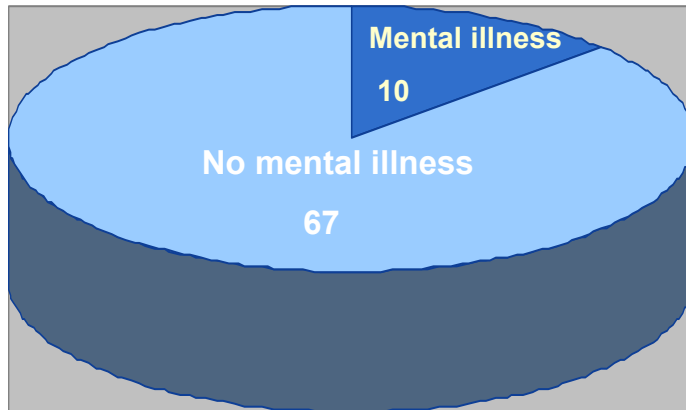


Teenage pregnancy

Substance abuse



Teenage pregnancy Maternal mental illness



Mental health of teenage mother

- How are the postpartum mental health of teenage pregnancy mothers ?
- EPDS score
- As compared to previous local report

Follow-up compliance

- Nil default
- 100 % follow-up

- Vaccination rate 100 %

Maternal-Child Bonding

- Elevated rates of **disorganised attachment** in infants have been reported in various high risk pregnant groups
- These **infants are at high risk** of maladaptive outcomes, including repetition of the dysfunctional relationship & parenting patterns (Karen R 1998)
- **Poor attachment** has been specifically linked to several adverse outcomes, including increased risk of **child abuse, poorer cognitive performance** at 18 mth, **poorer social interaction** and more aggressive behaviour and other **behavioural problems** at 5 yr (Murray *et al* 1999) & **withdrawal in school** (Mahony & Campbell 98)

Maternal Attachment Scale

- **Early maternal-infant interaction & attachment** could be measured by Maternal Attachment Scale (Condon & Corkindale 1998)
- 19-item questionnaire that identifies four constellations:
 - i) Pleasure in proximity
 - ii) Acceptance
 - iii) Tolerance
 - iv) Competence as parent

Maternal Attachment Scale

- i) **Pleasure in proximity: represents a desire for proximity, and enjoyment of interaction and includes items such as a desire to prolong time spent with the infant, sadness at separation, joy at reunion, and pleasant & freq preoccupation with baby during separations**
 - ii) **Acceptance: consists of a lack of resentment about the impact of baby upon parent's life-style & not experiencing baby as a burden**
 - iii) **Tolerance: absence of feelings of anger or hostility towards the infant**
 - iv) **Competence as parent: covers the sense of confidence, competence, and satisfaction at being the mother of the baby**
- **Good levels of internal consistency at 4 wk, 4 m and 8 m postpartum**

Maternal Attachment Scale

- Mean Total attachment Scores
(Teenage Mothers)
at 1 m (baseline): 67.5 (2 SD below ref mean)
(Reference norm- mean 82.9, SD 7.6)
- at 3-4 m (post intervention): 80.3 ($p < 0.05$)
(Reference norm- mean 84.6, SD 7.0)

Parents with mental illness

- US – 20-50% of adults known to mental health services have children
- Not all children of parents with mental illness will experience difficulties
- One-third to two-third will experience difficulties, dysfunctions or disorders c.f. 20% in general population
- Children with parents who screened positive on GHQ were 3X more likely to have mental disorder and incidence increases with increase in score

Facts and figures

- About **one-third of parents** of children referred to mental health services will have psychiatric disorders
- Care burden to parents with mental illness may affect greatly their illness, participation in social life, work or education
- **Problems in MI patients as parents**
 - Mother-child focus lacking
 - Parenting role ignored
 - Traditional programs do not address needs of parents with mental illness & their families

Effects of depression on children

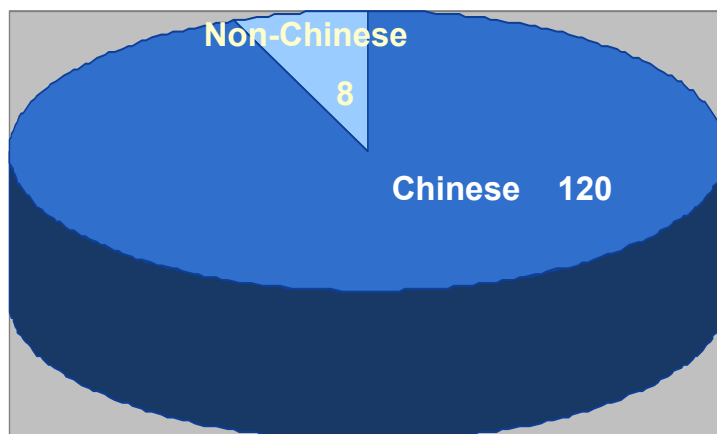
13-29 months	More communication difficulties , less mutually responsive patterns of interaction, insecure attachment with parents
2 year	More difficulty with emotional regulation
3-5 year	Lower self-esteem , more aggressive behaviour towards parents and peers, deficit in language development, problem-solving and attention
5-7 year	More negative affect towards others

Mechanisms

- Genetic factors
- Quality of child's early attachment
- Rearing environment and parenting
- Life events – child abuse, adversities
- Family discord
- Nature of psychiatric disorder and its associated manifestations
- Social and economic factors
- Effects of drugs
- **POVERTY – STIGMA – EXCLUSION - ABUSE**

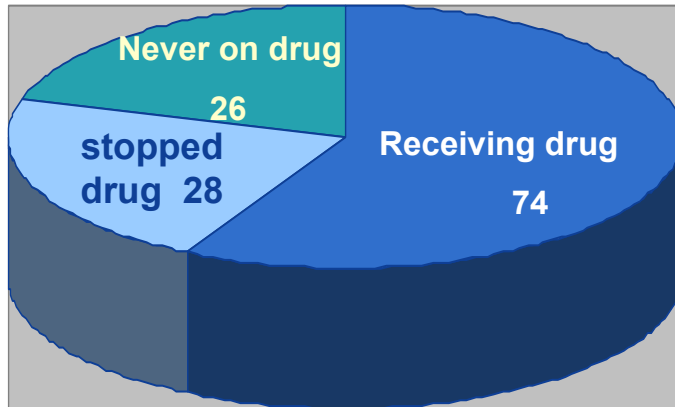
Maternal Mental illness

Mean maternal age 28 yr



Maternal Mental illness

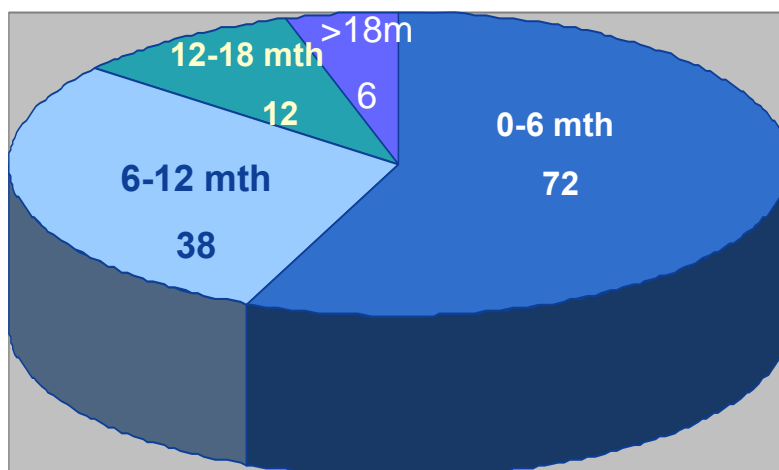
Use of psychiatric drug



- Receiving drug
- Stopped drug
- Never on drug

Maternal Mental illness

Age distribution of children



- 0-6 mth
- 6-12 mth
- 12-18 mth
- > 18 mth

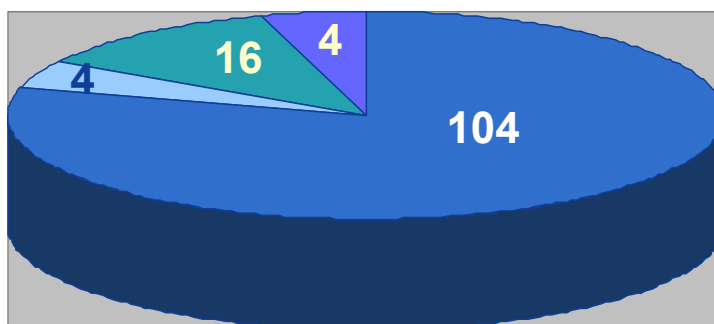
Maternal Mental health

- Assessed by EPDS score
- Baseline EPDS score at 6 wk post-partum
- Significant **improvement & drop in EPDS** score after care and intervention program

- Drop in EPDS score from **mean score of 14.4 at 6-8 wk post-delivery** to **mean score of 10.8 at 12 week post-delivery** after care & intervention provided at perinatal psychiatric clinic ($p < 0.05$)

Maternal Mental illness

Child's Development



■ Normal development

■ GM delay

■ Language delay

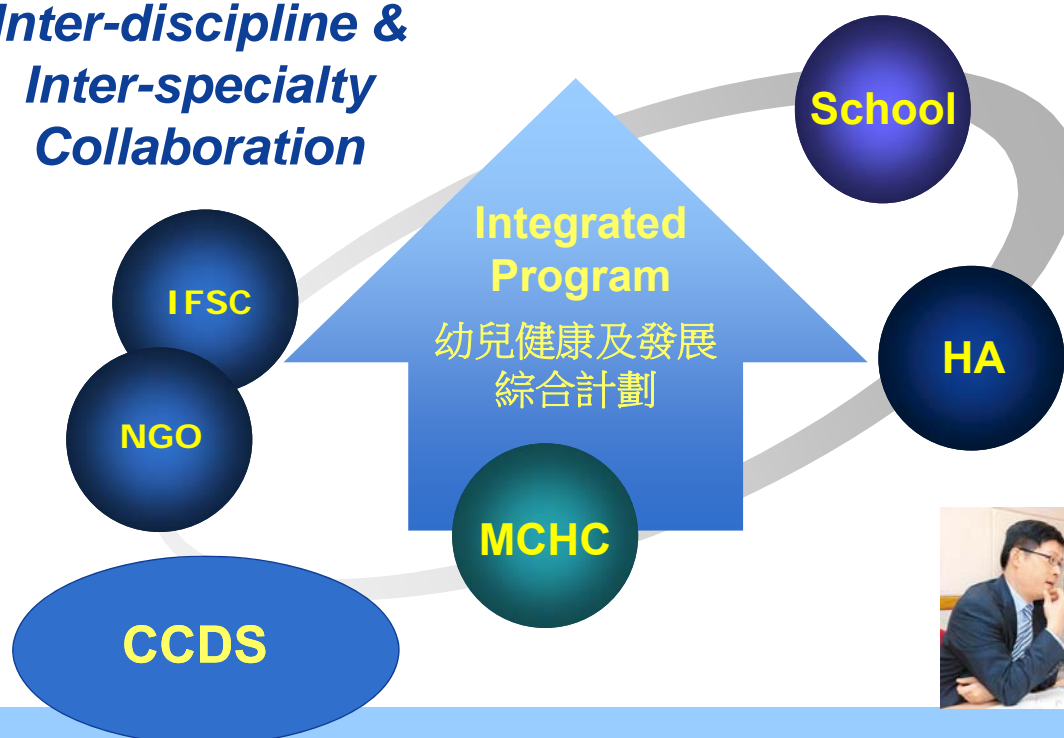
■ Language delay + hyperactive

Maternal Attachment Scale (maternal mental illness)

- Mean Total attachment Scores
(Mothers with mental illness)
at 1 m (baseline): 68.3 (2 SD below ref mean)
(Reference norm- mean 82.9, SD 7.6)
- at 3-4 m (post intervention): 82.8 ($p < 0.05$)
(Reference norm- mean 84.6, SD 7.0)

High-risk Families – Early Identification & Support

*Inter-discipline &
Inter-specialty
Collaboration*





Thank you !

***Comprehensive Child
Development Service***

