

Pediatric Critical Care Transport

Experiences and Future Planning



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“Pediatric critical care transport”

**A Low-volume, High-cost,
High complexity specialty**

BMJ 1998; 316:1547–1548

Strengthening Population and Immigration Policies

Immigration Policy

Low Birth Rate

Population Aging

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> [Strengthening Population and Immigration Policies](#) > [Low Birth Rate](#)

Low Birth Rate



Social trends such as marrying later, not marrying, not having children, and having children later in life have caused the total fertility rate in Taiwan to become lower than 1.2 every year since 2003, except for the Year of the Dragon (2012). In 2022, the total fertility rate was 0.87.

As the total fertility rate and the number of women of childbearing age have decreased, the number of births also has fallen from 248 thousand in 2002 to 139 thousand in 2022.

Pediatric Chain of Survival

The 4th link:



Advanced Resuscitation by healthcare providers

Pediatric Critical Care

To link:

Availability



**Critical care
transport**

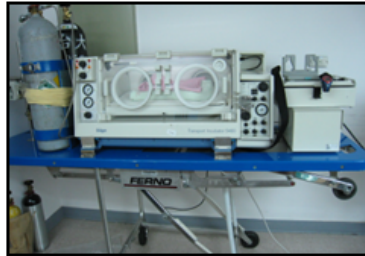
Centralization





Features of NICU Service

NTUH- Neonatal Transportation Service



NTUCH- Neonatal Transportation Service, QCC

Year	Total	In-Born	Out-born
2009	475	336 (70.7%)	139 (29.3%)
2010	445	363 (81.6%)	82 (18.4%)
2011	507	410 (80.9%)	97 (19.1%)
2012	639	524 (82.0%)	115 (18.0%)
2013	627	525 (83.7%)	102 (16.3%)
2014	587	495 (84.3%)	92 (15.7%)
2015	594	429 (72.2%)	165 (27.8%)



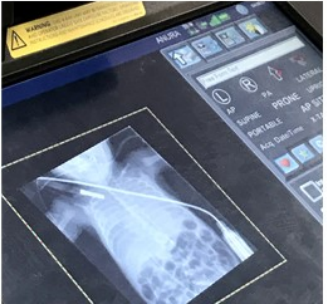
Pediatric Critical Care Transport Team, NTUCH



Insulin HCl (Pre-mixed 1 amp/30ml)	Vanil	Adrenaline (Adrenalin) 3mg/amp
Propofol (PGE1) 2.5ml	Epinephrine HCl (Adrenalin) 1 mg/0.5 amp 2.5ml	Adrenaline (Adrenalin) 3mg/amp
Sodium bicarbonate (Bofkas) 7% 20 ml/amp 5 AMP	Midazolam HCl (Dormicum) 15 mg/3 amp 5 AMP	Succinylcholine HCl (Brevital) 1.5ml
		Amiodarone (Cardaron) 150 mg/3ml/amp 2.5ml

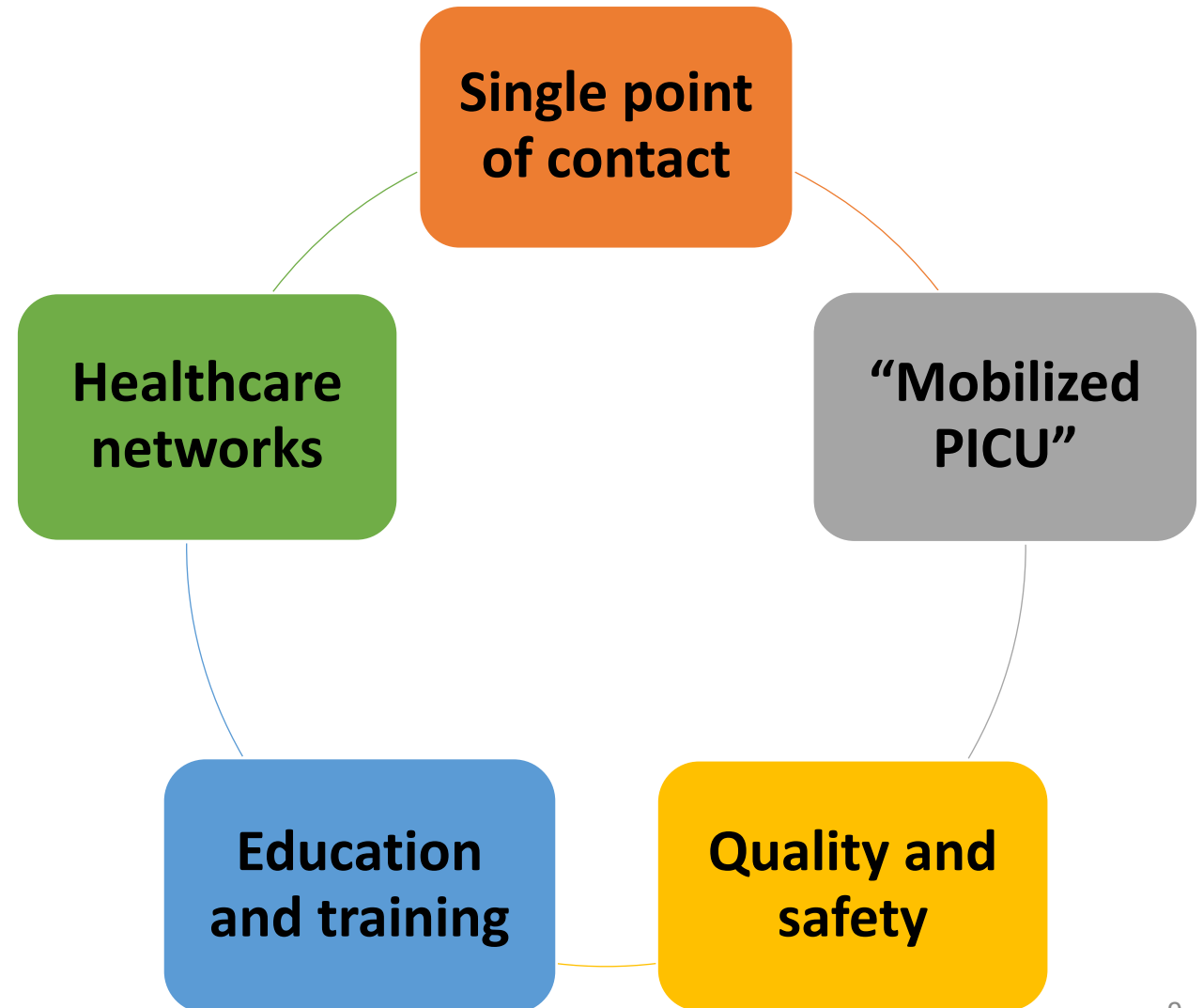
2018.12
救護班藥品 (藥名+日期)
Cristina D

Acute Care Transport Training Program, SickKids, Toronto



Highlights of Pediatric Critical Care Transport

- Healthcare networks
- Single point of contact,
 - Connection & Communication
- “Mobilized PICU”
 - Specialized staffs
 - Child-specific equipment
- Quality and safety
 - Operational details
 - Safety events
- Education and training
 - Outreach program
 - Internal program



Educational Programs

Medical Knowledge

Transport physiology
Special diseases: NB, CV...

Assessments

Pediatric assessments
POCUS

Technical skills

Equipment
PALS & APLS, NRP

Simulation

Communication & cooperation

Operational protocols
Run reviews

“Telemedicine” in Pediatric Critical Care Transport

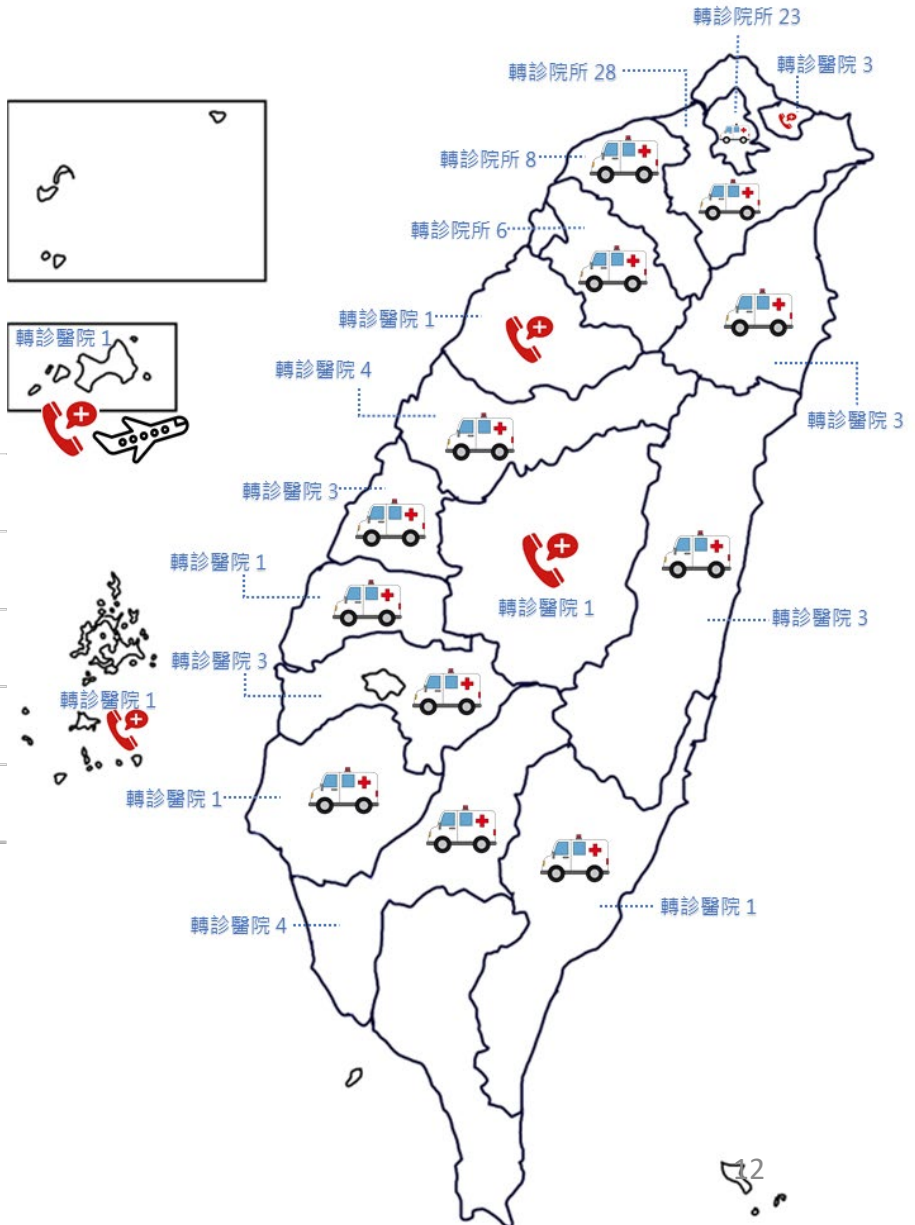
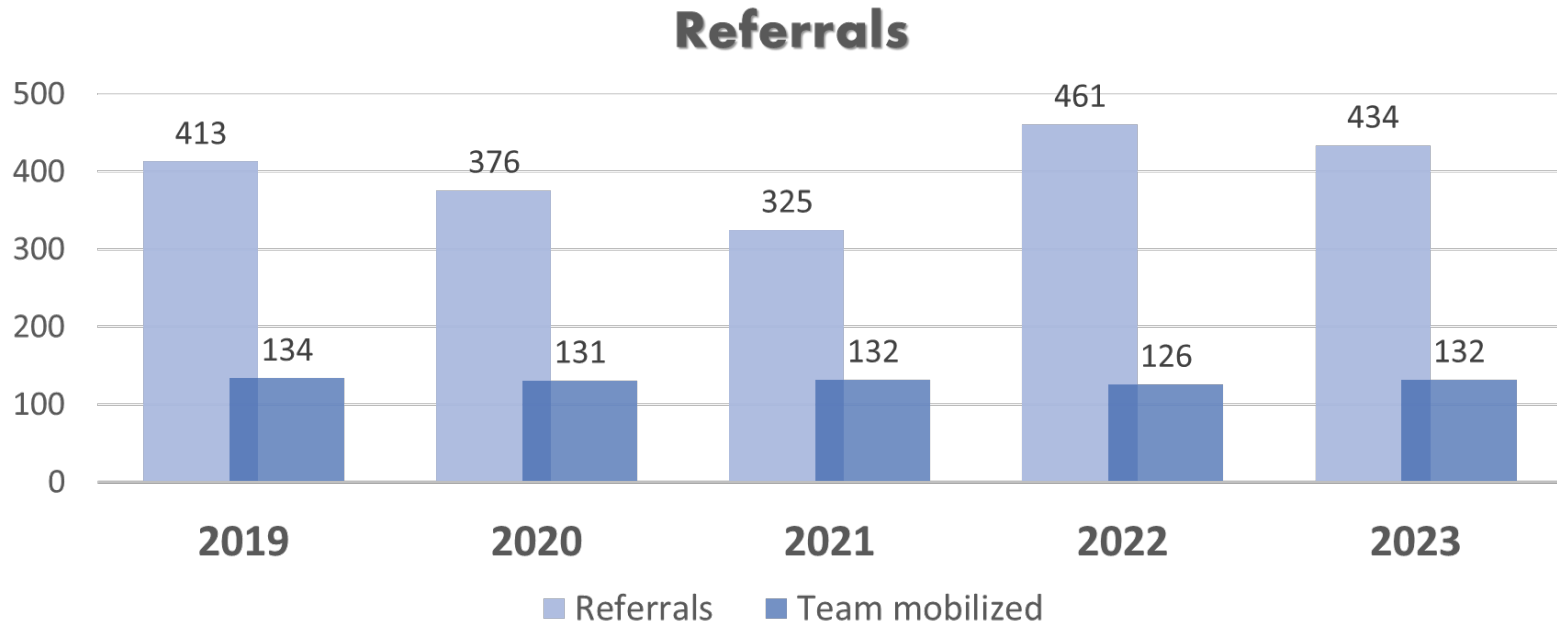
Online medical control & guidance



Real-time video device



NTUCH Pediatric Critical Care Transport Team Report 2019-2023





Program for Excellence in Child Health Care (優化兒童照護計畫 2021-2024)

Integrate the perinatal,
critical and intensive
medical services

Strengthen primary
prevention and health
promotion

Reduce preventable
deaths and disabilities
in newborns and
children

優化兒童醫療照護體系的8大策略

1 完備周產期醫療照護

2 建立分級分區急醫療網絡

3 提升重難罕症照護品質

4 發展兒童重症運送專業團隊

5 規劃兒童困難診斷疾病平臺

6 培訓兒科醫療照護人力

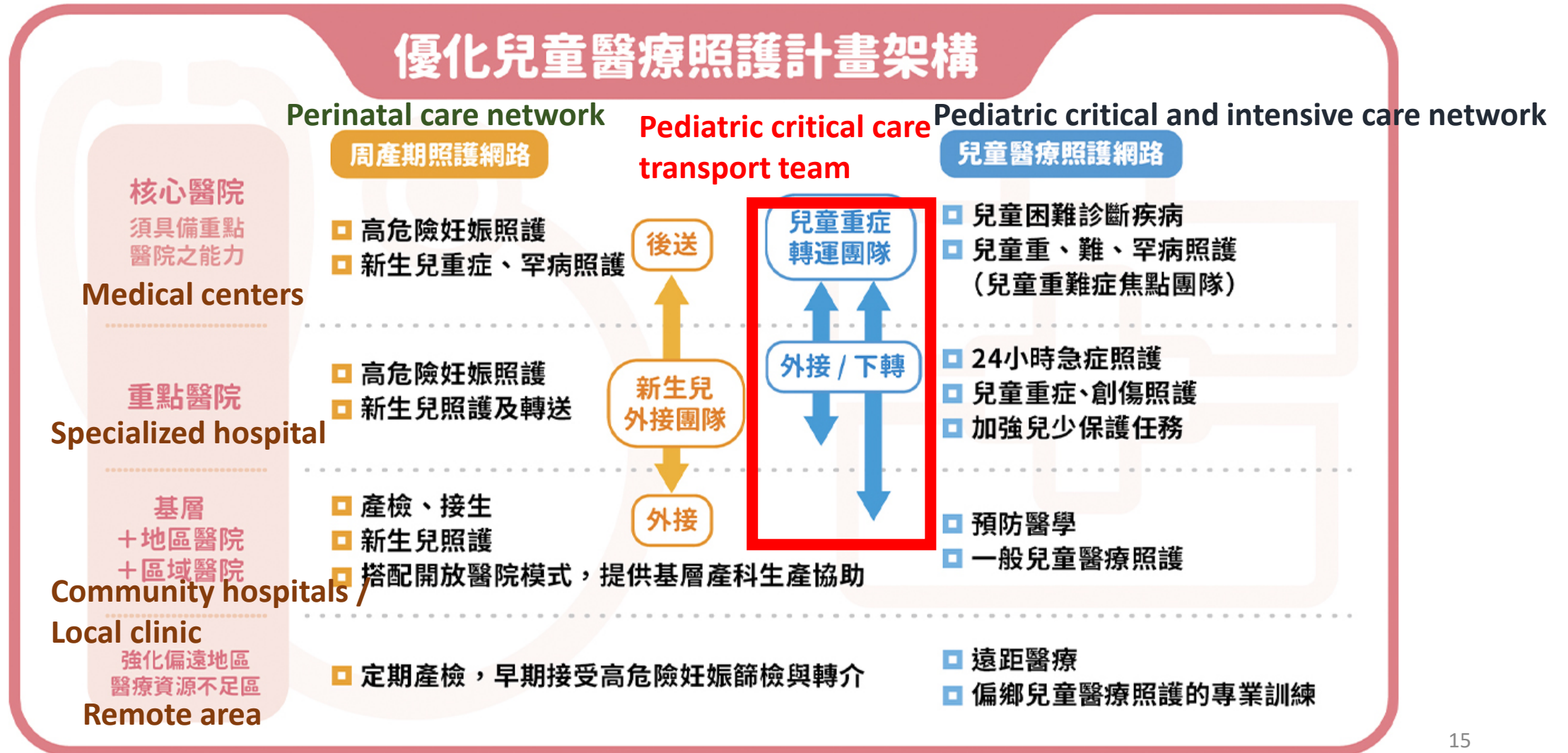
7 發展幼兒專責醫師制度

8 推展脆弱家庭育兒指導服務

Build up pediatric
critical care
transport team

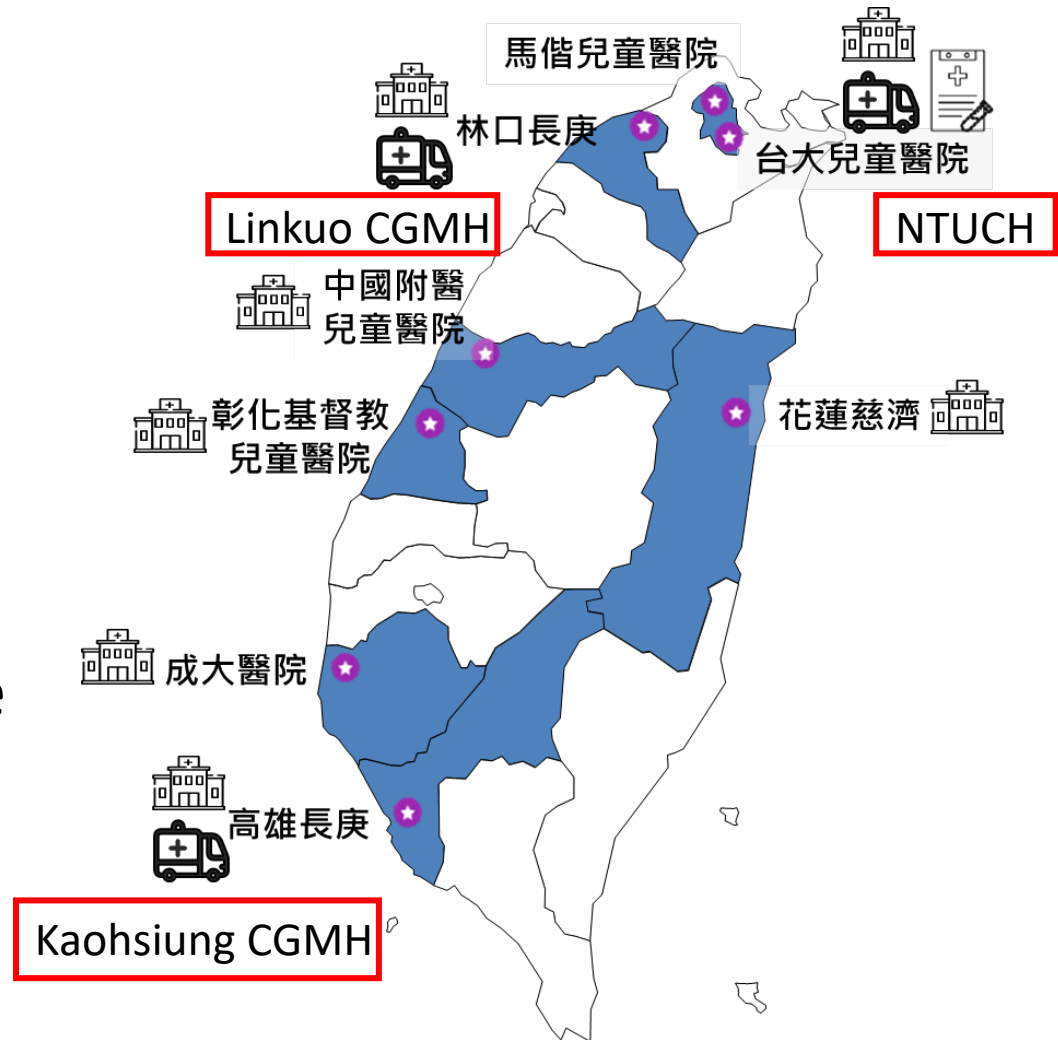


Framework of Program for Excellence in Child Health Care




Pediatric critical care transport team

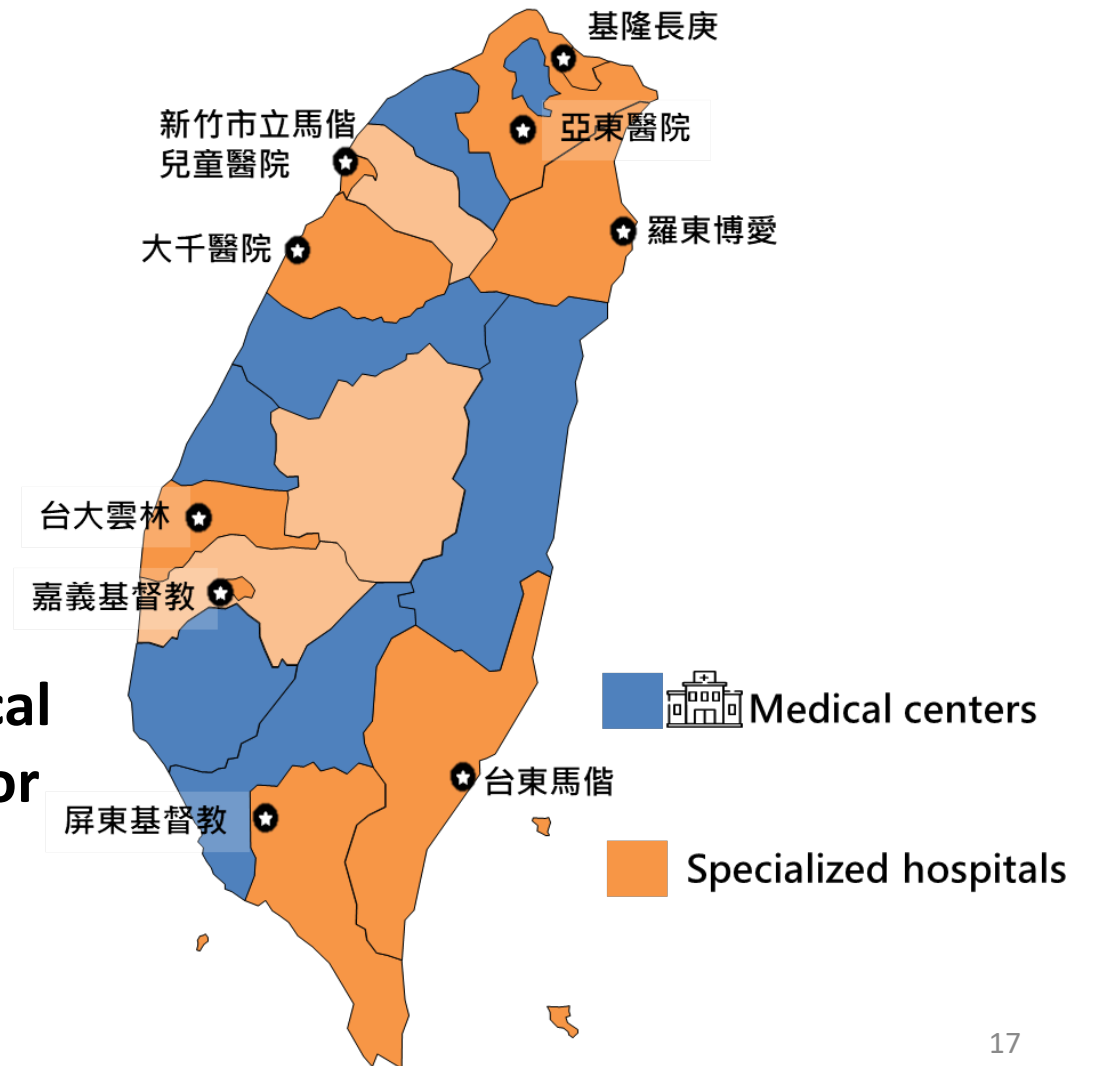
- Establishing a specialized team for pediatric critical care transport
 - Pediatric critical care transport professional training course
 - appropriate hardware and software equipment
- Establishing networks to provide safe and appropriate transfer services for critically ill children



The integration of the Perinatal Care Network and the Pediatric Critical and Intensive Care Network

- Perinatal care network
- Prenatal referral mechanism for high-risk pregnancy
- Specialized neonatal transport team and referral process

 Collaboration between two networks and transport teams to strengthen perinatal critical care, collectively providing referral services for newborns and critically ill children across Taiwan!



越難到達 越要到達

To Reach the Impossible to Reach

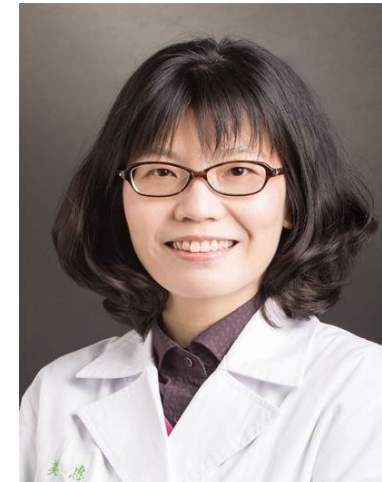


Acknowledgement



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