

Appendix 1 The Group Information of Chinese Neonatal Network

Group Information of the Chinese Neonatal Network: Chairmen: Shoo K. Lee, MBBS, Mount Sinai Hospital, University of Toronto; Chao Chen, MD, Children's Hospital of Fudan University. Vice-Chairmen: Lizhong Du, MD, Children's Hospital of Zhejiang University School of Medicine; Wenhao Zhou, Children's Hospital of Fudan University. Site investigators of the Chinese Neonatal Network: Children's Hospital of Fudan University: Yun Cao, MD; The Third Affiliated Hospital of Zhengzhou University: Falin Xu, MD; Tianjin Obstetrics & Gynecology Hospital: Xiuying Tian, MD; Guangzhou Women and Children's Medical Center: Huayan Zhang, MD; Children's Hospital of Shanxi: Yong Ji, MD; Northwest Women's and Children's Hospital: Zhankui Li, MD; Gansu Provincial Maternity and Child Care Hospital: Bin Yi, MD; Shengjing Hospital of China Medical University: Xindong Xue, MD; Shenzhen Maternity and Child Health Care Hospital: Chuanzhong Yang, MD; Quanzhou Women and Children's Hospital: Dongmei Chen, MD; Suzhou Municipal Hospital affiliated to Nanjing Medical University: Sannan Wang, MD; Guizhou Women and Children's Hospital/Guiyang Children's Hospital: Ling Liu, MD; Hunan Children's Hospital: Xirong Gao, MD; The First Bethune Hospital of Jilin University: Hui Wu, MD; Fujian Maternity and Child Health Hospital, Affiliated Hospital of Fujian Medical University: Changyi Yang, MD; Nanjing Maternity and Child Health Care Hospital: Shuping Han, MD; Qingdao Women and Children's Hospital: Ruobing Shan, MD; The Affiliated Hospital of Qingdao University: Hong Jiang, MD; Children's Hospital of Shanghai: Gang Qiu, MD; Maternity and Child Health Care of Guangxi Zhuang Autonomous Region: Qiufen Wei, MD; Children's Hospital of Nanjing Medical University: Youyan Zhao, MD; Henan Children's Hospital: Wenqing Kang, MD; The First Affiliated Hospital of Xinjiang Medical University: Mingxia Li, MD; Foshan Women and Children's Hospital: Xuqiang Ye, MD; The First Affiliated Hospital of Anhui Medical University: Lili Wang, MD; Shanghai First Maternity and Infant Hospital: Jiangqin Liu MD; Yuying Children's Hospital Affiliated to Wenzhou Medical University: Zhenlang Lin, MD; Children's Hospital of Chongqing Medical University: Yuan Shi, MD; The First Affiliated Hospital of Zhengzhou University: Xiuyong Cheng, MD; The First Affiliated Hospital of USTC, Division of Life Sciences and Medicine, University of Science and Technology of China: Jiahua Pan, MD; Shaanxi Provincial People's Hospital: Qin Zhang, MD; Children's Hospital of Soochow University: Xing Feng, MD; Wuxi Maternity and Child Healthcare Hospital: Qin Zhou, MD; People's Hospital of Xinjiang Uygur Autonomous Region: Long Li, MD; The Second Xiangya Hospital of Central South University: Pingyang Chen, MD; Qilu Children's Hospital of Shandong University: Xiaoying Li, MD; Hainan Women and Children's Hospital: Ling Yang, MD; Xiamen Children's Hospital: Deyi Zhuang, MD; Xinhua Hospital affiliated to Shanghai Jiao Tong University School of Medicine: Yongjun Zhang, MD; Shanghai Children's Medical Center, Shanghai Jiao Tong University School of Medicine: Jianhua Sun, MD; Shenzhen Children's Hospital: Jinxing Feng, MD; Children's Hospital Affiliated to Capital Institute of Pediatrics: Li Li, MD; Women and Children's Hospital, School of Medicine, Xiamen university: Xinzhu Lin, MD; General Hospital of Ningxia Medical University: Yinping Qiu, MD; First Affiliated Hospital of Kunming Medical University: Kun Liang, MD; Hebei Provincial Children's Hospital: Li Ma, MD; Jiangxi Provincial Children's Hospital: Liping Chen, MD; Fuzhou Children's Hospital of Fujian Province: Liyan Zhang, MD; First Affiliated Hospital of Xian Jiao Tong University: Hongxia Song, MD; Dehong people's Hospital of Yunnan Province: Zhaoqing Yin, MD; Beijing Children's Hospital, Capital Medical University: Mingyan Hei, MD; Zhuhai Center for Maternal and Child Health Care: Huiwen Huang, MD; Guangdong Women and Children's Hospital: Jie Yang, MD; Dalian Municipal Women and Children's Medical Center: Dong Li, MD; Peking Union Medical College Hospital: Guofang Ding, MD; Obstetrics & Gynecology Hospital of Fudan University: Jimei Wang, MD; Shenzhen Hospital of Hongkong University: Qianshen Zhang, MD; Children's Hospital of Zhejiang University School of Medicine: Xiaolu Ma, MD; Advisor: Joseph Y. Ting, University of Alberta.

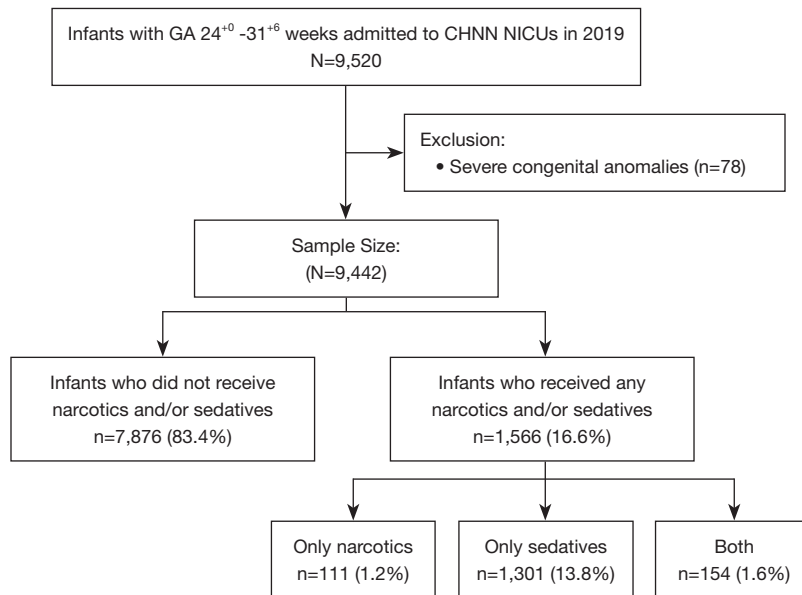


Figure S1 Diagram showing the flow of participants through each stage of the study.

Table S1 Use of narcotics and sedatives by gestational age

Gestational age (weeks)	Total number of VPIs	Unventilated (n=5270)	Ventilated (n=4,172)		
			Number of VPIs	N/S, n (%)	Non-N/S, n (%)
24	92	13	79	21 (26.58)	58 (73.42)
25	228	47	181	52 (28.73)	129 (71.27)
26	449	118	331	98 (29.61)	233 (70.39)
27	837	299	538	143 (26.58)	395 (73.42)
28	1415	632	783	210 (26.82)	573 (73.18)
29	1763	1000	763	200 (26.21)	563 (73.79)
30	2153	1365	788	208 (26.40)	580 (73.60)
31	2505	1796	709	185 (26.09)	524 (73.91)
Total	9442	5270	4172	1117 (26.77)	3055 (73.23)

Table S2 Duration of narcotics and sedatives use concurrent with invasive mechanical ventilation (days)

Gestational age (weeks)	Number of infants	Duration of narcotics and sedatives use in the period of invasive mechanical ventilation (days), median (IQR)			
		All	Only narcotics	Only sedatives	Narcotics and sedatives
24	79	2.0 (1.0-6.0)	1.0 (1.0-8.0)	2.0 (1.0-5.5)	27.0 (17.0-37.0)
25	181	6.0 (2.5-12.0)	19.0 (12.0-21.0)	6.0 (2.0-9.5)	12.0 (3.0-20.0)
26	331	6.0 (3.0-11.0)	9.5 (6.5-22.0)	4.0 (2.0-7.0)	9.0 (6.0-31.0)
27	538	4.0 (2.0-7.0)	5.0 (4.0-6.0)	3.0 (1.0-7.0)	7.0 (2.0-17.0)
28	783	3.0 (1.0-7.0)	5.0 (3.0-10.0)	2.0 (1.0-5.0)	11.0 (4.0-19.0)
29	763	3.0 (1.0-5.0)	2.0 (1.0-6.0)	2.0 (1.0-5.0)	6.0 (4.0-23.0)
30	788	2.0 (1.0-5.0)	3.0 (1.0-4.0)	2.0 (1.0-4.0)	5.0 (4.0-12.0)
31	709	2.0 (1.0-5.0)	2.5 (1.5-4.5)	2.0 (1.0-4.0)	7.0 (4.0-10.0)
Total	4172	3.0 (1.0-6.0)	4.0 (2.0-8.0)	2.0 (1.0-5.0)	8.0 (4.0-17.0)

IQR, interquartile range.