

Prince of Wales Hospital announces root cause analysis report of previous serious untoward event

The following is issued on behalf of the Hospital Authority:

The spokesman for Prince of Wales Hospital (PWH) today (August 11) announces the root cause analysis report of a previous serious untoward event:

An infant born in PWH on June 12 with a maturity of less than 28 weeks was admitted to the Neonatal Intensive Care Unit (NICU) for close monitoring and treatment due to premature birth and congenital heart problems. The infant required ventilator support and inotropes infusion. Healthcare staff adjusted the prescription of inotropes in the early morning of June 13. The alarm of the syringe pump was triggered, and it found that the 3-way stopcock of the infusion tube was not opened, obstructing the drug infusion. Healthcare staff promptly resumed the inotropes infusion to the infant. The infant's condition continued deteriorating, eventually succumbing at around 4pm on the same day.

PWH announced the incident afterwards and established a Root Cause Analysis Panel to analyse the causes. The panel considered that multiple factors existed simultaneously, including the baby having multiple infusion lines and being surrounded by advanced medical equipment and an incubator; the healthcare staff focused on adjusting the drug dose and infusion rate. The healthcare staff might experience inattention blindness to a closed 3-way stopcock. Furthermore, the alarm system of syringe pumps could not generate a timely occlusion alarm, which resulted in the healthcare staff being unable to detect the occlusion early. And the design of the 3-way stopcock may not facilitate healthcare staff in checking the infusion flow directions in patients with multiple stopcocks.

The panel made the following follow-up and recommendations:

1. To revise the clinical guideline and stipulate tactile checking of infusion line patency, including the 3-way stopcock, if any.
2. To include infusion line patency checking during independent double check of high alert medications in the NICU.
3. To explore improvement measures with the syringe pump manufacturers and alert staff on the limitations of the syringe pump in triggering a timely occlusion alarm.
4. To explore different means of reducing the occlusion detection time of the syringe pump used in the NICU.
5. To explore the 3-way stopcock with a better design.

The hospital will implement the relevant recommendations to improve the safety of infusion procedures in the NICU. The hospital has met with family members to explain the report's findings. PWH once again apologises and expresses its deep condolences for the incident. The hospital will maintain communication with family members and provide necessary assistance.

PWH has submitted the report to the Hospital Authority Head Office. The hospital also expressed gratitude to the panel Chairperson, Professor Fok Tai-fai and the panel members. Membership of the panel is as follows:

Chairperson:

Professor Fok Tai-fai

Former Dean of the Faculty of Medicine, Emeritus Professor and Honorary Clinical Professor, Department of Paediatrics, the Chinese University of Hong Kong

Members:

Professor Chair Sek-ying

Vice-Director of Research, the Nethersole School of Nursing, Faculty of Medicine, the Chinese University of Hong Kong

Mr Peter Mok Kwok-woo

Member, Subcommittee on Quality and Safety, Hospital Governing Committee, Prince of Wales Hospital

Dr Lee Kwok-piu

Chairperson, Hospital Authority Coordinating Committee (Paediatrics) / Chief of Service, Department of Paediatrics & Adolescent Medicine, Pamela Youde Nethersole Eastern Hospital

Dr Sara Ho Yuen-ha

Chief Manager (Patient Safety & Risk Management), Hospital Authority

Ms Chan Lai-hung

Cluster General Manager (Nursing), Hong Kong West Cluster, Hospital Authority

Ms Chan Man-yi

Nurse Consultant (Neonatal Care), Kowloon West Cluster, Hospital Authority