



Mortality Rate among Pediatric Inpatients with Central Line-associated Bloodstream Infection, and Its Risk Factors at Phramongkutklo Hospital



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Background

- **Catheter related associated blood stream infection** is a part of nosocomial infection.
- Central lines are increasingly prevalent and complications (intravascular catheter-related infection, suppurative thrombophlebitis, endocarditis or osteomyelitis). There will be increase mortality rates.¹
- **Mortality rate in United states was 12-25 %.**² Previous study from Indian Catheter related blood stream infections in **the pediatric intensive care unit was 19.5 %.**³
- Nevertheless, in Ministry of Public Health Thailand, **no study have explored the mortality rate and its risk factors.**

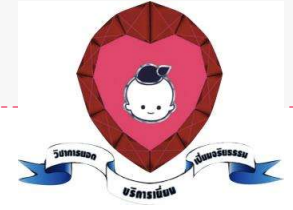
1. Leonard RM et al. 2009.

2. CDC MMWR 2011.

3. Yiyue Z et al. 2019.



Objectives

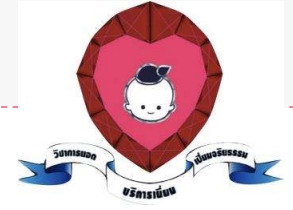


Primary objective

To determine mortality rate of pediatric with Central line associated bloodstream infection

Secondary objective

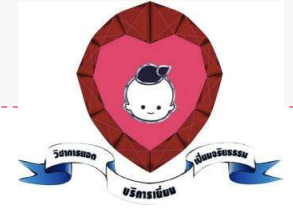
To evaluate the association between risk factors and mortality of pediatric with Central line associated bloodstream infection



Methods

Study designs

- **A retrospective cohort study** using data from 2002 to 2020.
- **Population:** Pediatric inpatients aged 1 month to 18 years with acquired CLABSI
- **Study sites:** Phramongkutklao hospital, Bangkok, Thailand
- **Sample size calculation**
 - It is estimated that from study Diana Thomas 2013, mortality rate of pediatric 19.5%
 - Using estimation of an infinite population proportion calculation, the sample size will be 242 participants of network members



Methods

Data collection

- Medical record was created using a standardized form literature reviews to obtain demographic characteristics, comorbidity and risk factors
- **3 Parts were collected**
 - Process of care: Day diagnosis of CLABSI, Location, Type, Duration of central line insertion and organism
 - Death or Discharge data: death date or date of discharge from hospital, cause of death
 - Clinical signs & Laboratory data at date of diagnosis: Body temperature, Pulse rate, Respiratory rate, Blood pressure, complete blood count, inflammatory markers, etc.