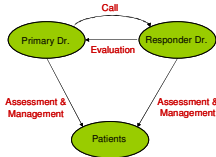


Clinical Alert System

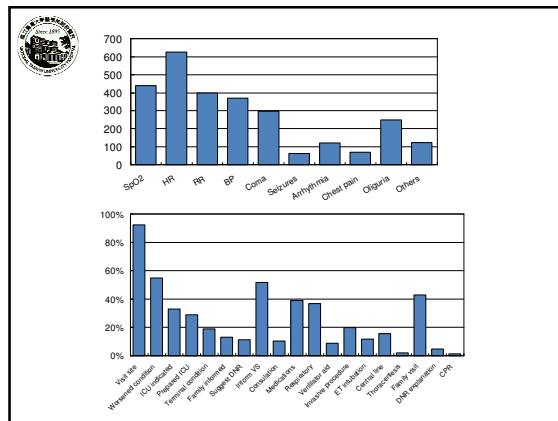

- Rapid response system
- Alert systems in NTUH
 - Clinical
 - Laboratory
 - Imaging
 - Pathology
- Established criteria
- Screened and reported by nurses and duty residents
- Attending physicians or senior residents are called

- 1) respiratory rate > 30/min
- 2) pulse rate <50/min or >120/min
- 3) pulse oximetry saturation (SpO₂) < 90%
- 4) systolic blood pressure < 90 mmHg or > 220mmHg
- 5) acute deterioration of mental status
- 6) oliguria (urine output < 0.5 ml/kg/hr)
- 7) any documented cardiac arrhythmia
- 8) acute chest pain
- 9) convulsion
- 10) other physician-determined worried condition of the patients.



```

    graph TD
      Patients((Patients)) -- Call --> PrimaryDr((Primary Dr.))
      Patients -- Call --> ResponderDr((Responder Dr.))
      PrimaryDr -- Evaluation --> ResponderDr
      PrimaryDr -- Assessment & Management --> Patients
      ResponderDr -- Assessment & Management --> Patients
    
```

Results & Conclusion

- The CAS calls were significantly increased from 3.34% to 2,724 of 70,128 admissions (3.88%) after implementation (p < 0.0001).
- After implementation, the incidence of CPR at the general wards was significantly decreased as compared with the incidence before implementation (0.17% vs. 0.22%, p< 0.05).
- **Early warning of acute physiologic changes decreases CPR in the general wards.**