A prolonged winter surge and an unusual summer surge in 2016/17: what could we do?

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Key findings

- Winter surge is a challenge to the HA service capacity, its profile and characteristics could be studied so as to strategically plan the manpower appropriately

- In 2016, the winter surge is characterized by a late and prolonged surge for Accident & Emergency Departments (AED) to have over 6,000 attendances, even over **7,000** patients a day, till as late as March

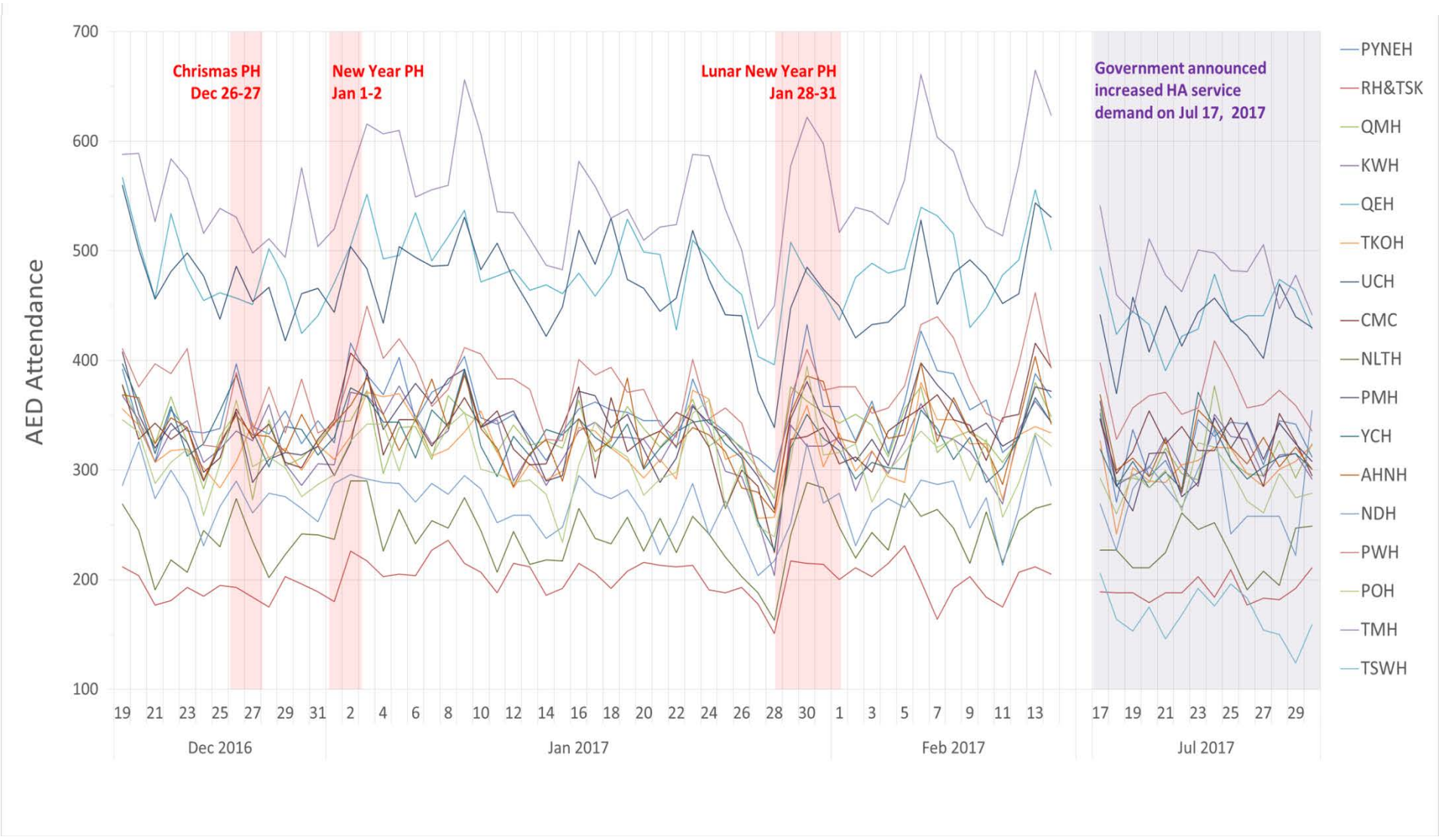
- The most drastic surge was observed on the **CNY Public Holiday** (PH) day 2 with a surge of total daily attendance from 5,860 to 7,613 (30% rise)

- The average number of daily attendance on **Mondays** (excluding the Lunar New Year PH) is 6,598, which is 6% more compared with the baseline average

- The **coldest** day in 2016 had 8% dip of total attendance compared with a day prior

- On the documented **rainy days**, the total daily attendance was 5,895, around 5% less compared with non-rainy day's total daily attendance

- For 2017, there was an unusual surge in the **summer**


AED Attendance
700
600
500
400
300
200
100
Chrismas PH
Dec 26-27
New Year PH
Jan 1-2
Lunar New Year PH
Jan 28-31
Government announced
increased HA service
demand on Jul 17, 2017
19 21 23 25 27 29 31 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 1 3 5 7 9 11 13 17 19 21 23 25 27 29
Dec 2016
Jan 2017
Feb 2017
Jul 2017
PYNEH
RH&TSK
QMH
KWH
QEH
TKOH
UCH
CMC
NLTH
PMH
YCH
AHNH
NDH
PWH
POH
TMH
TSWH

Age profile of daily average medical admissions

Aug 2016 – Jul 2017	Non-surge period (Aug – Nov 2016)	Winter Surge (Dec 2016 – May 2017)	Summer Surge (Jun-Jul 2017)
Age below 65	271	284 (4.5% rise)	300 (10.7% rise)
Age 65 or above	604	672 (11.3% rise)	706 (16.9% rise)
Age 80 or above	351	403 (**14.8%** rise)	425 (**21.1%** rise)
Total	1226	1359 (10.8% rise)	1431 (16.7% rise)

Weekly average of acute admissions by principal diagnosis

Aug 2016 - Jul 2017	Non-surge period (Aug – Nov 2016)	Winter Surge (Dec 2016 – May 2017)	Summer Surge (Jun-Jul 2017)
Pneumonia	627	787 (25.5% rise)	823 (**31.3%** rise)
COPD	404	505 (25.0% rise)	462 (14.4% rise)
Heart failure	244	343 (**40.5%** rise)	247 (1.23% rise)
Stroke	241	263 (9.13% rise)	244 (1.24% rise)

Discussion

- From the findings, extra primary care manpower allocation could be considered during the **long PH** and **Mondays** in a strategic manner
- Temperature dip and rainy days may be a factor leading to reduced attendance but they are **not reliable predictable factors in advance** for duty planning purpose
- Primary care administrators could try to allocate resources strategically in order to enhance service coverage to the ***anticipated* attendance surge period** efficiently to cope with an increased service demand, reducing the burden of AED and hospitals
- Development of **real-time manpower allocation** e.g. by use of technology and big-data during attendance surge period may be filling the gap of unpredictable factors affecting the service demand

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