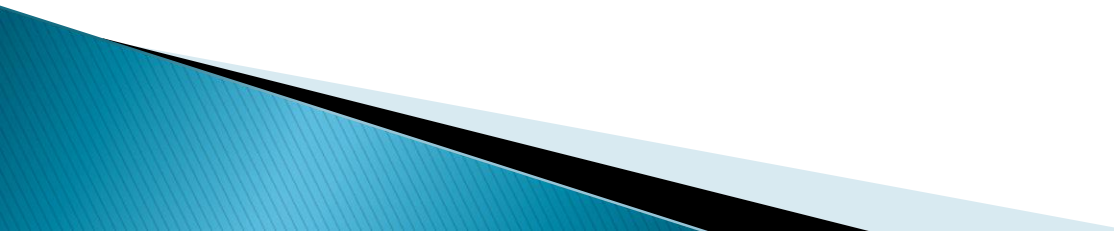


A 10-year comprehensive study on the effects of meteorological variables on emergency hospital admissions during winter in Hong Kong

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Objective

- ▶ To explore how changes in meteorological variables would affect emergency hospital admissions in winter and identify pressure areas for better health service planning.
 - ▶ A generalized additive model was constructed with 10-year data retrieved from the Hong Kong Observatory and Hospital Authority.
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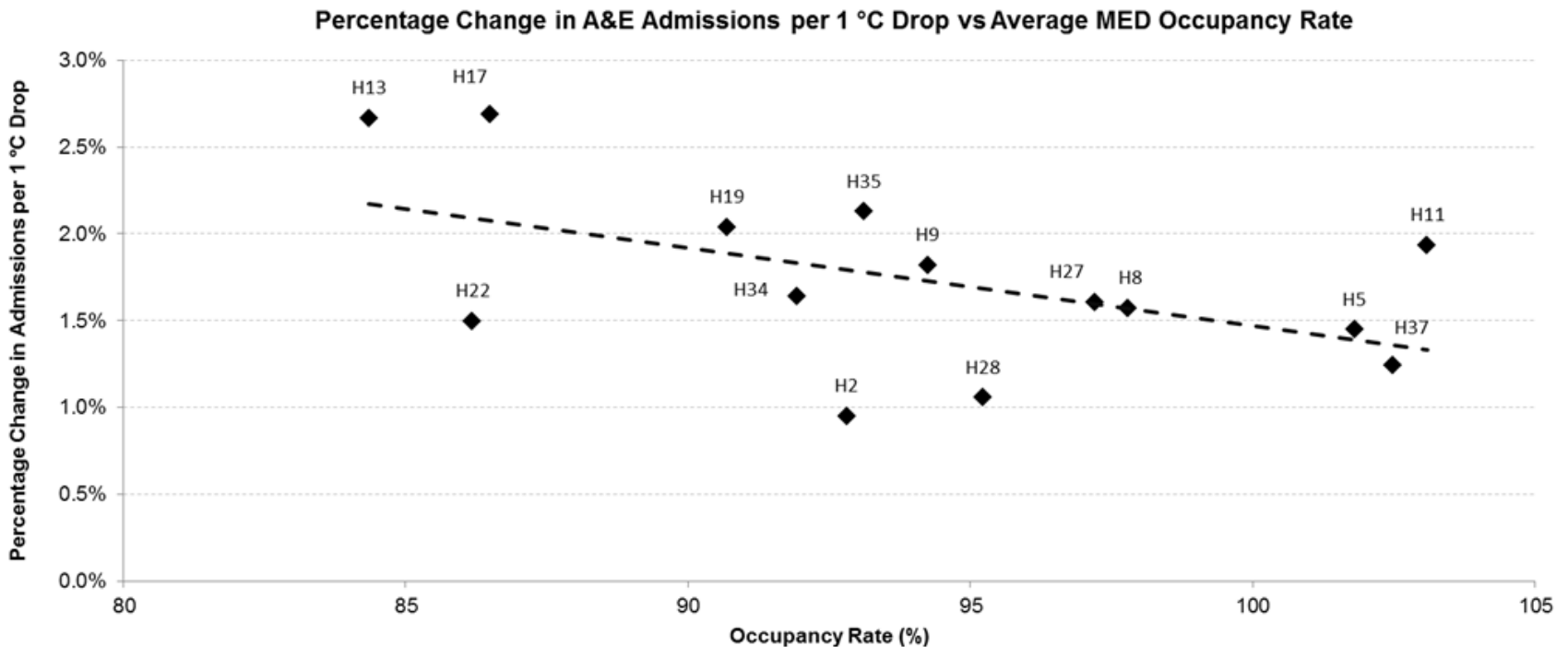
Results

- ▶ Surge in emergency admission is associated with changes in meteorological variables in the cold season.
 - Every 1 °C drop in mean daily temperature results in a 1.01% increase in total inpatient admissions and a 1.78% increase in A&E admissions.

The major age subgroup being affected is 75+

- Infectious, respiratory, circulatory, and digestive diseases: +4.98%, +4.92%, +5.53%, and +1.52% respectively for every 1 °C drop
- Orthopaedics: +4.46% for every 1 °C drop

Changes in Admissions vs. Occupancy



Higher pre-existing medical ward occupancy rate is associated with lower A&E admissions, which may have adverse health impact on patients with clinical needs.

Summary

- ▶ New knowledge added by this study
 - Changes in meteorological variables would not only affect Medical emergency hospital admissions, but Orthopaedic ones as well.
 - Weather's effect on emergency admission is shown to be negatively associated with individual healthcare institution's pre-existing occupancy rate, which may have adverse health impact on patients with clinical needs.

- ▶ Implications for clinical practice or policy
 - It is important for healthcare institutions to manage patient flow during winter, so as to avoid turning away patients who needs to be admitted should ward space is not an issue.
 - Findings of this study will equip health services administrators with information to devise adequate institution- and specialty-level winter surge response plans.

Thank you

