

## CASE STUDY

# PROTECTING THE ELDERLY FROM HEAT AND COLD STRESS IN HONG KONG: USING CLIMATE INFORMATION AND CLIENT-FRIENDLY COMMUNICATION TECHNOLOGY

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## CONTEXT

Previous studies suggest that thermal stress under cold and hot weather conditions is strongly linked with higher mortality and hospitalization rates in Hong Kong, particularly among the elderly (6–8). In Asia, Hong Kong is second only to Japan in terms of population ageing. Moreover, in the past few decades, increasing numbers of senior citizens now live on their own after their children have grown up and moved out to start their own families. There is a significant need, therefore, to provide more care for the elderly in the city. In September 1996, the Senior Citizen Home Safety Association (SCHSA) was founded as a self-financing, not-for-profit organization providing 24-hour personal emergency support and caring service to elderly citizens in Hong Kong.<sup>e</sup>

## NEW APPROACHES

The climate data of Hong Kong Observatory (HKO) was used to study the effect of weather on the health of elderly people and their help-seeking behavior. The number of users activating SCHSA's personal emergency and caring service requiring hospitalization was analysed. The results showed that the number of hospitalized users increased when the minimum temperature dropped below 22°C and when the maximum temperature was higher than 30°C. Dry weather (relative humidity at 70% or below) had a greater impact on the elderly in the cool season (9). Furthermore, elderly women, older elderly and users who do not live alone were more sensitive to extremely hot and cold weather conditions (10). These findings helped SCHSA to formulate appropriate response actions under cold and hot weather conditions based on the 9-day weather forecast and the experimental monthly climate forecast provided by HKO. For example, SCHSA would remind the elderly to prepare for impending wintry weather through its Call and Care Centre, so as to minimize the health impact of weather changes on them. SCHSA also worked with the media to remind the public to take the initiative of providing care and assistance to elderly people living alone or in need. Strengthening of the manpower of the Call and Care Centre was also planned in anticipation of such weather conditions.

<sup>e</sup> Whenever in need, subscribing users simply press a 'safety button' on a custom-made, home-based or mobile device. A call will be triggered to SCHSA 24-hour Call and Care Centre that offers immediate assistance by calling ambulances, reporting to the police, and informing family members in emergency cases.

## ACKNOWLEDGEMENTS



Recently, HKO and SCHSA also committed to: (a) develop a new version of HKO's Weather Information for Senior Citizens website (<http://elderly.weather.gov.hk/socare.htm>) with ideas and suggestions from the elderly volunteers of SCHSA incorporated; (b) enhance the SCHSA e-See Find service<sup>f</sup> with the provision of real-time weather information (temperature and humidity) in different parts of Hong Kong, weather warnings (e.g. tropical cyclone, rainstorm, very hot/cold) and special weather tips on significant weather changes and impending severe weather; and (c) host press conferences to promote public awareness on the impacts of weather on the elderly when a major cold surge is expected. The new version of the *Weather Information for Senior Citizens* website was well received with over 3 million page views each year in 2013 and 2014, about 100 times more than the previous version. With enhanced awareness on the caring of the elderly, incoming calls increased by 15% during colder/hotter days in comparison to average days. Also, as outdoor assistance and support are essential for senior citizens taking part in outdoor activities, the number of outdoor safety service users has increased over recent years.

## BENEFITS AND LESSONS

The close collaboration between SCHSA and HKO highlighted the importance of partnership and stakeholder engagement in improving the delivery and communication of useful weather and climate information to the health sector and promoting public awareness on the care of elderly people.

**Figure 3.6** HKO's Weather Information for Senior Citizens website with ideas and suggestions from the elderly volunteers of SCHSA incorporated.



**Figure 3.7** Dr Cheng Cho-ming, Assistant Director of HKO (far right), and Ms Irene Leung, Chief Executive Officer of SCHSA (far left), jointly hosted a press conference on 13 December 2013 to remind the public to be prepared for an impending cold spell.



<sup>f</sup> 'e-See Find' is a service for family members/care-givers to locate the whereabouts of elderly users.

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## HONG KONG

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