HKUMed joins *Lancet* Commission to call for international collaboration and multidisciplinary action to reduce sudden cardiac deaths

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THE LANCET COMMISSION FOR SUDDEN CARDIAC DEATH



Lead Commissioner

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HUNG-FAT TSE Hong Kong, China



ZIAN TSENG San Francisco, USA



CHRISTIAN VAN DER WERF Amsterdam, Netherlands

Tackling SCD requires a clinical multidisciplinary approach with international research collaboration





A Major Public Health Issue



Structural Non-Ischaemic (dilatation, hypertrophy, scar replacement) Genetic (HCM, DCM, ARVC, laminopathies) or acquired (myocarditis)



A MODE OF DEATH – NOT A DISEASE!!!

Empana JP, et al. JACC 2022



No Significant Temporal Changes in SCD Burden



Empana JP, et al. JACC 2022

Clinical Medicine







HKL Med









School of Clinical Medicine Department of Medicine



Hai JJ, Tse HF. Unpublished data







Hai JJ, Tse HF. Unpublished data







Age Groups (years)

Hai JJ, Tse HF. Unpublished data

Strengthening current autopsy practices in suspected SCDs can provide crucial data needed for at-risk families.





Majority of SCD Occurs in "Apparent Healthy Subjects"



Although it's known the majority of SCDs are caused by coronary artery disease, there are major gaps in our ability to predict people's risk of coronary artery disease and SCD.

 \rightarrow More researches (genetic, big data and Als) are required to identify potential indicators of high-risk individuals.





A Very Particular Mode of Death



Marijon E, ESC 2023





To Decrease SCD Burden



Marijon E, ESC 2023







Modifiable Risk Factors for CAD

Population-attributable fractions of 10-year CVD for single risk factors and geographic region



Overall cardiovascular disease prevention and emphasis on a healthy lifestyle (healthy diet, exercise, and quitting smoking) and risk factors control (blood pressure and lipid) would lead to reductions in SCD incidence.





A Call for Changing the Paradigm of SCD Prevention



Survival from sudden cardiac arrest depends on a time-sensitive sequence called "the chain of survival".

This involves (1) immediate recognition of SCA and activation of an emergency response, (2) high-quality CPR, (3) rapid defibrillation, (4) advanced resuscitation, (5) post cardiac-arrest care and (6) rehabilitation and recovery.





Technological Solutions for Improved Resuscitation



- Frequency community CPR training using innovative strategies like apps, social media, large group-based events, virtual skills practice can improve community awareness and response.
- Redesigning delivery of automatic external defibrillators (AEDs) will improve of defibrillation success in the community.





Risk and Benefit of Sport Activity





