

Developing a Sudden Cardiac Death Review System: Approaches and Collaborations

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Introduction

The Michigan Department of Community Health (MDCH) Genomics Unit has identified sudden cardiac death (SCD) of the young (age 1-39 years) as a potentially preventable condition, due to the heritable nature of certain cardiac disorders, and has begun to explore development of a SCD review system.

SCD is a death due to cardiac disease that occurred out of hospital or in an emergency department, or one in which the decedent was reported dead on arrival.¹



- In Michigan, SCD represents about 67.8% of all cardiac deaths¹
- Specific causes of SCD of the young are *more likely to have genetic determinants* than similar conditions in older persons
 - As much as 40% of families with a young SCD victim have been identified as having heritable disease²

Purpose

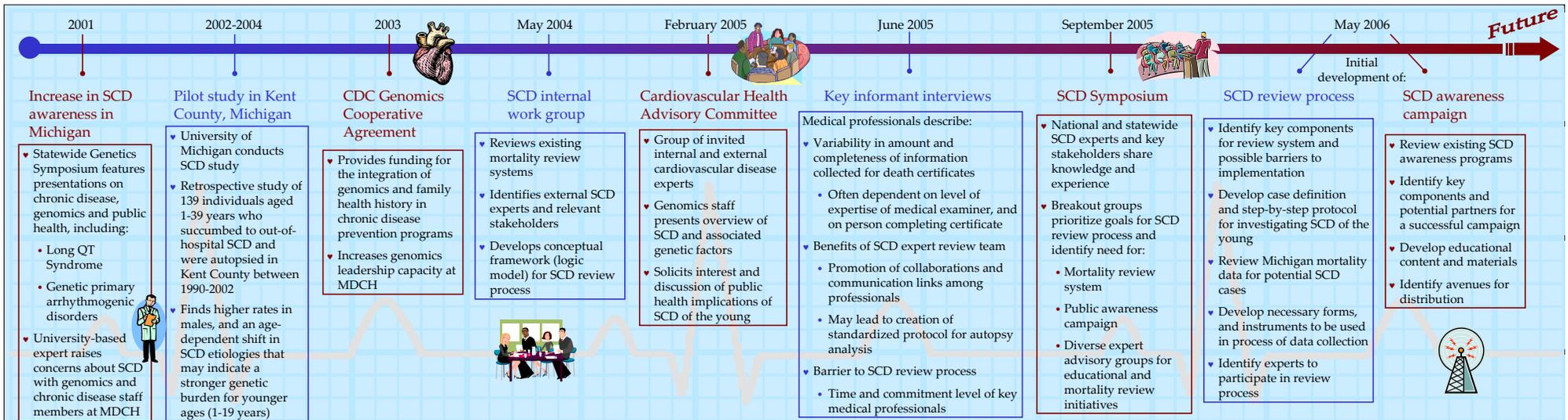
To develop a more comprehensive understanding of the factors that contribute to SCD of the young in Michigan.



Objectives

- Increase public and professional awareness of the burden of SCD of the young in Michigan
- Develop a process to facilitate collection and review of demographic and medical data, as well as other information regarding the circumstances of SCDs in Michigan residents aged 1-39 years
- Develop evidenced-based public health recommendations for prevention of SCD of the young
- Identify family members of deceased young SCD victims who may potentially be at increased risk of SCD, and refer for medical and/or genetic evaluation

Methods & Results: Historical Timeline



Discussion

Our approach to development of a public health SCD review system has been described. Progress has been made in:

- Increasing interest in SCD among colleagues and other health professionals
- Building internal and external collaborations with SCD experts and key stakeholders
- Laying foundation for future implementation of SCD case review process

Public Health Implications

- A thorough investigation of SCD of the young in Michigan is crucial to the development of preventive measures.
- Since young-onset SCD may have a heritable component, identifying at-risk family members of a young SCD victim for referral to medical and/or genetic services should be a priority in prevention efforts. Additionally, this highlights the importance of family health history and inclusion of family history of SCD of the young in routine health care practices.
- A limitation of the SCD review process is the variability and inconsistency of coding cause of death (ICD codes) on death certificates. There is a need to standardize medical examiner reports and databases for data completeness and comparability across the state of Michigan and nationally.

Future Directions

- Review of MDCH Vital Records data identified about **300 potential cases** of young-onset SCD in Michigan in 2003 that may require further investigation
- The MDCH Genomics Unit and SCD internal work group will continue to review progress and identify next steps for implementing a SCD review system
- Additional funding opportunities to implement a formal SCD review process will be explored in 2006-2007

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