The Role and Engagement of CSOs in Multisectoral Cancer Prevention and Treatment Interventions: A Systematic Review

Yang Pei, Siran Luo, Xiaoyu Duan, Fengnan Li, Sydney Chen, Charlie Zong, Meifang Chen PhD, MPH
1. Duke Kunshan University, Jiangsu, China; 2. Duke University, Durham NC, US

Introduction/Objectives
Cancer poses significant disease burden to the global population, with an estimation of 18.1 million cancer cases and accounting for nearly 10 million deaths in 2020. Collaboration and engagement of all stakeholders, both government and non-governmental agencies, is essential for successful combating the cancer crisis. Although WHO and many countries have encouraged the engagement of civil society organizations (CSOs) in addressing cancer issues, CSOs’ engagement in multi-sector collaborations in cancer prevention and control is still rare. This systematic review aims to describe the engagement of and challenges faced by CSOs in multisectoral cancer prevention and treatment interventions.

Methods
Six databases (PubMed, Embase, Ovid, Web of Science, CNKI, Wanfang) were systematically searched up to Dec. 8, 2022. There was no limitation on the study design. Articles published in English and Chinese from 1990 to 2022 were eligible if they (1) described cancer-related programs involving collaborations between CSO and other agencies and (2) analyzed the strengths, weaknesses, opportunities, and challenges of such multi-sector collaboration. COVidence was used to screen and extract information. Key information would be extracted from the articles, including (1) characteristics of the CSOs, (2) collaboration mechanisms of these cancer-related programs, and (3) challenges faced by the collaborative stakeholders.

Results
Twenty-five articles were included in this review. The search and screening process is shown in Figure 1.

- Characteristics of CSOs that engaged in cancer MSCs:
  - **CSO types**: Among the reviewed studies, non-governmental organizations (NGOs) or non-profit organizations (NPOs) and community-based health organizations were two most common CSOs, mentioned in 6 and 6 articles, respectively. Eighteen articles included only 1 or 2 CSO(s), with the rest of them mentioning at least 3 CSOs.

- **Geospatial coverage**: China and the US were commonly seen in the included articles, each mentioned in 8 and 7 articles. Other countries and regions include Chile, India, UK, Sweden, Guatemala, Malawi, Asia, Europe, Latin America, and East and Southern Africa.

- **Cancer types**: Most of the cancer-related programs targeted all types of cancer (n=16), and the rest of them focused on specific cancer types such as breast cancer, cervical cancer, pediatric cancer, leukemia, gastrointestinal cancer and colorectal cancer.

- **Cooperative partners**: Among the reviewed CSO-engaged multisectoral collaborations, governments, researchers/scholars and hospitals were the most common collaborators, mentioned in 12, 10 and 6 articles, respectively.

- **Collaboration forms**: Eleven reviewed programs used mutual agreement when sectors established collaborations, and the other three indicated forms of contract to guarantee the cooperation.

- **Target populations**: Thirteen programs included patients as the service targets, while 12 programs tailored their services to healthcare workers.

Figure 1. The PRISMA diagram of Literature Search and Screening

- **Studies included in this review (n=25)**

- **Identifications of studies via databases and registers**
  - Records identified from PubMed (n=459)
  - Medline (Ovid) (n=445)
  - Embase (n=1,426)
  - CAN (n=295)
  - Web of Science (n=465)
  - Total (n=6,169)

- **Records removed before screening**
  - Duplicate records removed (n=2,096)

- **Records screened (n=4,073)**

- **Records assessed for eligibility (n=225)**

- **Records excluded (n=184)**
  - No access to full texts
  - Not related to cancer
  - Not related to CSO
  - Not related to collaboration
  - Wrong genres/episodes (n=12)
  - Repeated programs/episodes (n=1)

- **Studies included in this review (n=25)**

Conclusion
Although MSCs around the world mostly proved effective in cancer prevention and treatment, the CSOs involved in the process still had many challenges to tackle. Finding the underlying mechanisms of these obstacles can help researchers, policymakers and these CSOs better improve the accessibility and quality of cancer-related services.