



HeartRescue Global

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Improving Systems of Care for Acute
Cardiovascular Disease and Related
Noncommunicable Diseases:
A Call to Action to Save More
Lives Globally



ACKNOWLEDGEMENTS

This analysis was produced by RTI International in partnership with the Medtronic Foundation. For over 50 years, RTI has been committed to improving the human condition by turning knowledge into practice. The Medtronic Foundation focuses on expanding access to quality health care among underserved populations worldwide, as well as supporting health initiatives in communities where Medtronic employees live and give.

BACKGROUND

Globally, deaths caused by cardiovascular disease (CVD) and related noncommunicable diseases (NCDs)—including chronic coronary artery disease, high blood pressure diabetes, and stroke—remain unacceptably high and continue to rise in most countries around the world.

In 2015
17.9
MILLION PEOPLE
DIED FROM CVD
WORLDWIDE¹



INCLUDING
8.9 MILLION
FROM ISCHEMIC HEART DISEASE.¹

This is also called coronary artery disease or coronary heart disease, and describes heart problems caused by narrowed heart arteries, with less blood and oxygen reaching the heart. This can lead to a heart attack.

6.3
MILLION PEOPLE
DIED FROM STROKES
(when blood flow to an area
of the brain is cut off)¹

1.0
MILLION PEOPLE
DIED FROM HYPERTENSIVE
HEART DISEASE
(heart conditions caused by
high blood pressure).¹

1.5
MILLION PEOPLE
DIED FROM DIABETES,
a related NCD.¹



Many of these deaths are preventable if governments, healthcare systems, and communities implement basic measures to improve emergency care for acute CVD and stroke and to improve responses to risk factors for chronic CVD and other NCDs. Local and national healthcare systems must be empowered to intervene in proactive and coordinated ways.

CVD and related NCD responses remain underfunded, fragmented, and unmeasured in many countries. This is particularly true in socioeconomically disadvantaged areas.

CVD and other NCDs were once labeled “affluence diseases” because they mostly affected high-income countries. However, it is now evident that they represent major burdens of disease for low- and middle-income countries as well.



A CALL TO ACTION

This call to action focuses on enhancing local systems for acute CVD and related NCD care and continuous measurement of community and health system process indicators and patient outcomes for quality improvement. The overarching goal is to implement best practices for community-based and integrated care referred to as a “system of care.”

Historically, these responses have focused on emergency systems for acute care such as:

- Cardiopulmonary resuscitation (CPR) for cardiac arrest (cardiac arrest is often caused by CVD although it can have other causes)
- Rapid access to emergency medical services (EMS)
- Hospital care for heart attack and stroke victims

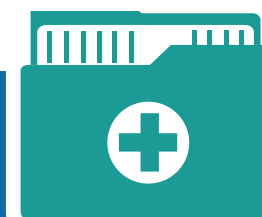
Additionally, this system of care involves separate interventions for NCD chronic disease management, risk screening, and prevention.

This system seeks to integrate prevention, chronic disease management and acute care across the community, EMS, and hospitals. However, in most countries, healthcare systems operate in silos fragmented between the community, EMS, and hospital settings. They are also fragmented across other communities, adjacent EMS systems, and neighboring hospitals. This means a lack of shared information, data systems, planning, and patient outcomes evaluation.

Because NCDs tend to cluster in at-risk neighborhood “hotspots,” integrating process of care and outcome data provides critical information to target interventions.

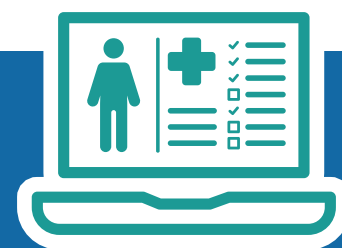
ACTION STEPS TO IMPROVE ACUTE CVD SURVIVAL AND RELATED NCD OUTCOMES

STEP 1: Establish a Patient Data Registry



- First, it will be important to establish a patient data registry that includes data on the incidence of diseases and the processes of care for acute CVD and related NCDs.
- The registry should be used for data sharing with one overall community health system report card that includes benchmarks to set achievable targets for each community and its healthcare system.
- This report card can then be used by community members, healthcare providers, government officials, and others to empower collaborative action for sustainable partnerships across the community, EMS, and hospitals.

STEP 2: Develop a Graphical Health Visualization Tool



- Use the patient data registry to develop a graphical health visualization tool to spark increased interest in community-specific health information.
- These graphics should combine acute and chronic care data where possible to develop comprehensive and actionable community health report cards.
- Disease risk factor data—such as smoking, obesity, high blood pressure—can be added to highlight these challenges.

STEP 3: Promote Public Engagement



- In most countries, the public remains an incredibly untapped and low-cost resource for improving CVD and related NCD outcomes.
- Consequently, it is important to conduct widespread public training on NCD risk factors—such as smoking, high blood pressure, blood sugar management, diet, and exercise—and how to address them at the family and community levels.
- It is also important to conduct widespread training on the symptoms of life-threatening acute CVD emergencies—including cardiac arrest, heart attack, and stroke—and how families and individuals can respond quickly to save lives.

STEP 4: Promote Public Success Stories



- Heart attack and stroke survivors can be powerful messengers when seen with their children, grandchildren, and friends who almost lost them forever.
- They can spread the messages of prevention and rapid response to emergencies that will save lives and protect loved ones.

STEP 5: Develop Local Discussions Around Action and Results



- Foster local discussion around actions and results for improving NCD risk factors.
- Mobilize school children and community groups to hold discussions and track progress.
- Publicize annual reports presented to the community, including achievements and specific challenges highlighted for the coming year.

STEP 6:

Develop Successful Community NCD Programs²



- Select a program to implement that has clear evidence for its effectiveness.
- Form a team or an advisory board.
- Consider a pilot program and determine how to make it happen in your community.
- Achieve buy-in from government agencies, healthcare providers, and other stakeholders.
- Set specific goals.
- Establish performance standards and measure progress.
- Communicate progress.
- Openly discuss barriers and challenges, and how to address them.
- Support, advocate, and celebrate!

STEP 7:

Select Specific Goals and Targets for Public Reporting for Acute CVD Emergencies



- Measure EMS response time performance for calls reporting symptoms of heart attacks.
- Require ongoing EMS staff training for high-performance CPR with scorecards and continuous quality improvement.
- Train emergency dispatchers to recognize acute CVD events and send the closest emergency response vehicle while gathering additional patient information.
- Use social media and smartphone technologies to alert volunteer rescuers to acute CVD emergencies to perform CPR and the use of an automated external defibrillator (AED).

STEP 8: Create a Culture of Excellence



- Achieving measurable goals for acute CVD treatment and outcomes and for prevention and treatment of related NCDs.

REFERENCES

¹GBD 2015 Mortality and Causes of Death Collaborators. Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980-2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet* 2016; 388: 1459-1544.

²Adapted from: Eisenberg E, Lippert F, Shin S, Bobrow B, Castren S, Moore F, Ong M, Rea T, Steen P, Walker T. (2016). Improving Survival from Out-of-Hospital Cardiac Arrest: A Call to Establish a Global Resuscitation Alliance. Stavanger, Norway: Global Resuscitation Alliance.

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