

Non-Communicable Diseases in Fragile, Conflict, and Violence (FCV) Situations

Five key questions to be answered

SUMMARY

The global burden of disease has shifted from that of communicable to non-communicable diseases in many countries. This note highlights the need for investment, as well as best practices in designing, implementing and evaluating a project that includes an NCD focus or component within an FCV setting.



Q1 WHY invest in NCDs in FCV situations?

Non-Communicable Diseases (NCDs) such as cancer, cardiovascular diseases, diabetes, chronic respiratory diseases, and cerebrovascular diseases account for **over 70 percent of deaths**, annually, around the world. Low- and middle-income countries (LMICs) **disproportionately suffer** from NCDs in comparison to high-income countries (HICs), with **85 percent** of premature deaths occurring in LMICs.

Successful interventions in LMICs and FCV countries against NCD-related risk factors (tobacco and alcohol use, salt intake, obesity, elevated blood pressure and high blood glucose) can lead to substantial changes in reducing the probability of NCD-related death.

NCDs and risk factors incur high economic burden to countries, account for a high proportion of health expenditure, and correlate with a higher risk of household **catastrophic medical expenditure**.

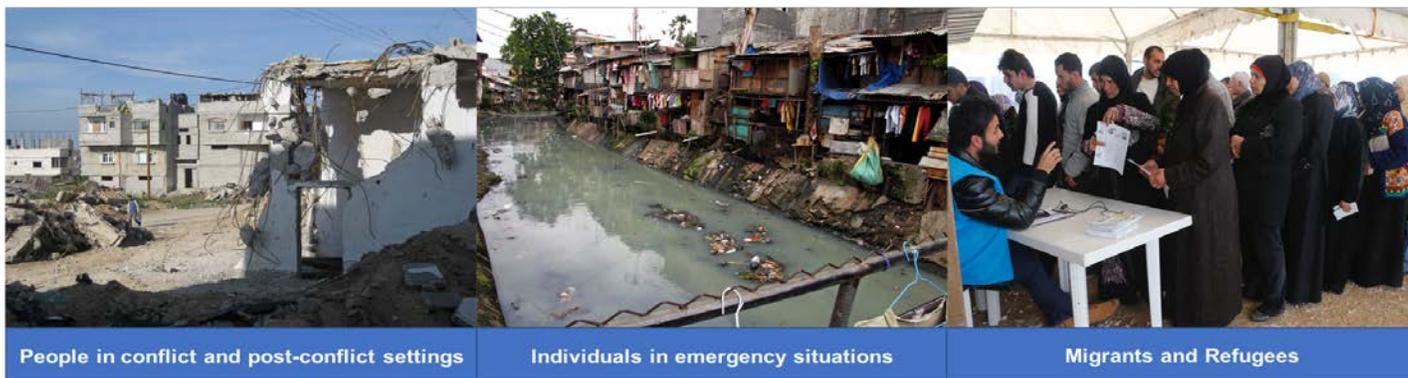
NCDs also have **high indirect costs** and adversely affect employment chances and working hours in both fragile and

conflict situations, as seen in Yemen, Mali and many [Pacific Island countries](#).

Total annual economic losses to LMICs from four major NCDs are estimated to be **approximately 4 percent of these countries' current annual output**, resulting in further poverty implications on already financially burdened countries. However, investing in NCD interventions has a good return on investment (**ROI=3** for ischemic heart disease and stroke reduction).

The economic burden of NCDs is particularly pronounced in the FCV countries of the East Asia and Pacific region where the average total years lost due to death and disability (DALYs) for diabetes is 5444 per 100,000 and the economic loss due to NCD mortality across 11 Pacific Island countries is estimated to be between **8.5 percent and 14.3 percent** of GDP.

The economic impact of NCDs is also high in FCV countries in the Middle East and North Africa regions where the average DALYs for ischemic heart disease is 4,999 per 100,000.



People in conflict and post-conflict settings

Individuals in emergency situations

Migrants and Refugees

Q2 WHO has NCDs in FCV situations?

People in conflict and post-conflict settings are often more vulnerable to NCDs because of an [increase in negative coping mechanisms](#), which are often NCD risk factors, such as smoking and alcohol consumption. This is compounded by healthcare systems that are weakened as a result of the conflict. Furthermore, NCD management, particularly in conflict settings, is often disrupted, as healthcare facilities are [damaged](#) and even [targeted](#) in these situations. Additionally, an increasing amount of conflict situations are occurring in middle income countries, such as Libya and Syria, where historically, NCD prevalence was often [higher](#) than lower income countries.

Individuals in **emergency situations**, which extends to circumstances beyond conflict, such as natural disasters and famine, are two to three times more likely to experience [stroke and heart attack](#).

Migrants and refugees also have an [increased vulnerability](#) to experiencing NCDs due the disruption of regular treatment and medical care during travel, in addition to other factors.

Due to changing disease epidemiology, many **FCV countries** now have higher NCD mortality rates than that of communicable, maternal, perinatal and nutrition related conditions. Countries like Haiti, Myanmar, Solomon Islands, Iraq and Lebanon are examples of this [epidemiological shift](#).

FCV countries in the Middle East and North Africa (MENA) region have particularly high NCD rates. The percentage of total deaths in this region due to NCDs, ranges from [43 percent in Djibouti to 89 percent in Lebanon](#).

FCV countries in the East Asia Pacific (EAP) region also suffer disproportionately from high rates of NCDs. It is

estimated that [60 to 80 percent of deaths](#) in most countries in this region are caused by the four leading NCDs.

Sub-Saharan Africa is facing a [double burden of disease](#) as the changing disease epidemiology in the region will result in NCDs being the most common cause of death by 2030.

Q3 WHAT interventions could be considered when addressing NCDs in FCV contexts?

While some guidelines have been developed for implementing NCD interventions, [serious gaps exist](#) with particular reference to addressing the FCV and refugee context.

Because of the movement of NCD patients that often takes place in the FCV context, **mobile service delivery with the use of community health workers** has emerged as an [intervention](#) used for Syrian refugee populations in Lebanon with the potential for scale up in other refugee and forced displacement settings.

BOX 1.1 WHO's guidelines for providing NCD interventions

- [“Package of Essential Noncommunicable \(PEN\) Disease Interventions for Primary Health Care in Low-Resource Settings”](#) is a set of protocols, medicines and equipment for NCDs management, with focus on integration into primary health care.
- [“Best Buys”](#) provides cost effective interventions, by risk factor or disease, which cost less than USD 1.00 in low-income countries.
- [“Noncommunicable diseases in emergencies”](#) which provides minimum standards and priorities related to NCDs in emergency situations.

It is important to note that **treatment for different populations may differ**. For example, treatment for Syrian refugees may be [more expensive](#) than that of populations in Sub-Saharan Africa since the Syrian population is older and tends to suffer from more chronic disease.

Further, it is important to consider that **not all NCD treatments are financially equal**. Treatments such as renal dialysis and [cancer treatments](#) are far more expensive than treatments for other NCDs.

The current international guidelines recommend **cost effective interventions** that focus on providing care within the limitations of available limited resources.

[Empirical evidence](#) shows “price” and “non-price” interventions can reduce risk factors for NCDs (Figure 1.1). The “price” approach includes taxation and subsidies, while “non-price” mechanisms are based on legislation, substitute provision and behavioral change (for example, information and education campaigns). Among “non-price” interventions, legislation (for example, tax) may be more effective to reduce risky behaviors, but behavioral change interventions may have longer impacts if successful.

In FCV settings, [appropriate interventions](#) may differ depending on the type of crisis (Figure 1.2). Prior to implementing the interventions, existing health service delivery structures, targeted NCDs or risk factors, and population should be assessed.

Figure 1.1 Price vs. Non-price approach (de Walque and Pande 2013)

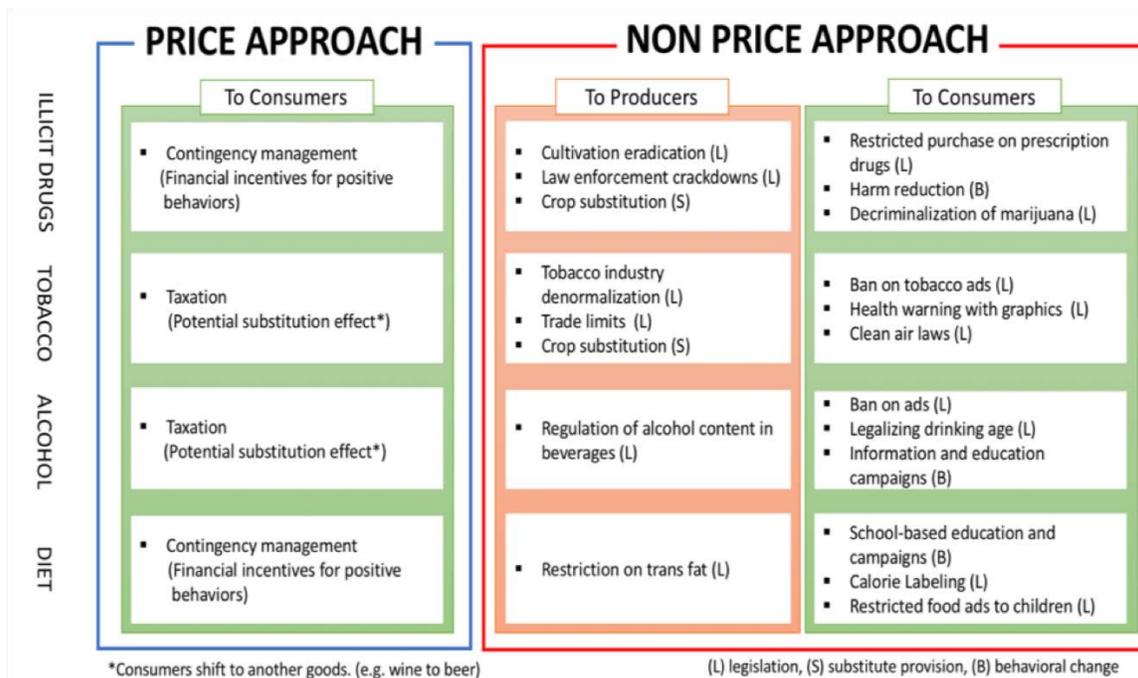


Figure 1.2 Level of crisis and type of intervention (Perone et al. 2017)

	Emerging crisis	Acute crisis	Chronic crisis	Post crisis
Screening	No			
Prevention	Nutrition			Nutrition, healthy lifestyle promotion through the community, schools.
Treatment	Care for life-threatening complications, treatment of symptomatic conditions and complications, provision of treatment for persons already diagnosed and treated, education in self-care, detection and treatment of complications			
Rehabilitation	Physical rehabilitation	No	Physical rehabilitation, social support, support groups, surgical procedures...	

WHAT has been done at the World Bank? What are the challenges and lessons learned?

32 World Bank [projects](#) with an NCD component

- 21 Health, Nutrition and Population Global Practice operational projects.
- 5 out of 31 Health, Nutrition and Population FCV projects.

43 World Bank reports and papers on NCDs since 2010, including:

- [Effective Responses to Non-communicable Diseases: Embracing Action Beyond the Health Sector](#) (2011) Montserrat Meiro-Lorenzo, Tonya L. Villafana, Margaret N. Harrit.
- [The Challenge of Non-Communicable Diseases and Road Traffic Injuries in Sub-Saharan Africa](#) (2013) Patricio V. Marquez, Jill L. Farrington.
- [Health in All Policies as a Strategic Policy Response to NCDs](#) (2014) Vivian Lin, Catherine Jones, Shiyong Wang, Enis Baris.
- [Setting the Stage to Address the Dual Challenge of MDGs and NCDs](#) (2014) Anne Maryse Pierre-Louis, Katharina Ferl, Christina Dinh Wadhvani, Neesha Harnam, Montserrat Meiro-Lorenzo.
- [Cancer Care and Control: South-South Knowledge Exchange](#) (2015) Miriam Schneidman, Joanne Jeffers, Kalina Duncan.
- [Health and Noncommunicable Diseases: Bending the Noncommunicable Disease Cost Curve in the Pacific](#) (2017) Xiaohui Hou, Ian Anderson, Ethan-John Burton-Mckenzie.

BOX 1.2 Voices from the Field

Common Challenges Emerged from Task Team Leader Interviews

- **Governments** in many FCV countries do not prioritize NCDs because the burden of communicable and nutrition related diseases are often high.
- In conflict situations, **security** is a concern since patients are not able to safely travel to providers. Similarly, providers are not able to safely travel to work.
- Treatment of NCDs often requires **specialists**, who are often better paid and tend to relocate. Often, there are shortages in other health related human resources in FCV settings.
- **Low literacy rates** and **cultural norms** may contribute to a lack of understanding of risk factors leading to NCDs.
- It is **difficult to identify immediate, measurable results** when implementing NCD interventions.
- Focusing specific components on NCDs is difficult due to the **broad** nature of the topic.
- **Out of pocket expenditures** are much higher, because of lack of regulations and governance, in addition to pharmaceutical shortages that are present in many FCV settings.

- Deaths from NCDs are not always **properly categorized** and attributed to NCDs.
- There is a need on the **institutional level** to define what level of service (primary, secondary, tertiary) will be supported when addressing NCDs.

Key Lessons Learned

- **Build a consensus** among all stakeholders prior to beginning project (key government ministries, department partners, organizations, etc.).
- Ensure **close monitoring** of interventions; particularly those related to policy changes.
- Interventions, such as policy change, in **sectors outside of health**, are important in addressing the issue.
- The focus should be on **primary care** for early detection versus late stage treatments.
- Working with **community health workers** can ease the strain on human resources.
- Utilize the country's **existing health resources** instead of developing new platforms, where possible.
- Make NCD operations **simple and basic**.
- **Strategic partnerships** (CSOs, NGOs, UN agencies, etc.) are essential to success.

Q5 HOW should we evaluate NCD interventions?

While [evidence](#) on evaluating various NCD interventions exists on a global scale, there is very limited literature on evaluating NCD programs in FCV or humanitarian contexts. Though NCDs are generally not seen as a priority for interventions in these contexts, good evaluation studies are required to demonstrate the outcome and make a case for NCD investment. A [systematic review](#) of empirical literature also highlighted several emerging trends in the practices of evaluating NCD programs in FCV contexts.

Study Design	Dimensions to Measure	Measurement Instruments
<ul style="list-style-type: none"> ▪ Study design methods that have multiple measurements over time to evaluate the intermediate and long-term effects. ▪ Before and after (e.g. RCT, case control) ▪ Longitudinal (e.g. cohort, interrupted time series) ▪ Sex and age disaggregated evaluation 	<ul style="list-style-type: none"> ▪ Compliance with protocols and guidelines ▪ Implementation of interventions of guidelines in specific contexts ▪ Intermediate and long-term outcomes 	<ul style="list-style-type: none"> • A set of standardized instruments validated in FCV settings



The FCV Health Knowledge Notes Series highlights operational tips to resolve health issues in FCV situations. These Notes are supported by the Middle East and North Africa Multi Donor Trust Fund and The State and Peacebuilding Fund (SPF). The SPF is a global fund to finance critical development operations and analysis in situations of fragility, conflict, and violence. The SPF is kindly supported by: Australia, Denmark, Germany, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom, as well as IBRD.

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For more information on other HNP topics, go to www.worldbank.org/health

Appendix – Current HNP FCV and Forced Displacement Operations with NCD components

Country	Project	Project Size (million \$)	Year of Effectiveness	TTL / Key Contact Person
Bosnia & Herzegovina	Reducing Health Risk Factors (P160512)	1.41	2017	Ana Holt
Congo, Democratic Republic of	Health System Strengthening for Better Maternal and Child Health Results (P147555)	346.5	2016	Hadia Nazem Samaha
Kenya	Case Study on Integrated Delivery of Selected Non-Communicable Diseases in Kenya (P164301)	2.5	2017	GNV Ramana, Miriam Schneidman
Kosovo	Kosovo Health Project (P147402)	25.5	2015	Dorothee Chen, Lorena Kostallari
Lebanon	Emergency Primary Healthcare Restoration Project (P152646)	21.0	2015	Nadwa Rafeh
Lebanon	Lebanon Health Resilience Project (P163476)	95.8	2017	Nadwa Rafeh