

Health Information System Strengthening: Standards and Best Practices for Data Sources

MODULE 11:

Collective Intervention Records



This module is one of 12 HIS data source modules in *Health Information System Strengthening: Standards and Best Practices for Data Sources*. The full series of modules (available at <https://www.measureevaluation.org/resources/publications/tr-17-225>) is intended to provide health authorities and other health information stakeholders with a reference guide that, along with other sources, can help align the HIS data sources with international standards and best practices.

Type of Data Generated: Community-Level Interventions and Interventions Targeted at the Health System

Description

Healthcare interventions generally entail a mix of personalized services and goods that an individual consumes when coming into contact with the health system. These interventions require an individual's action to acquire the good or service from a provider, and they can be recorded in an individual record (see, Module 1: Individual Records) (Rychetnik, et al., 2002; McLeroy, et al., 2003). Collective services, on the other hand, target the general population or the entire health system rather than individual users.

Collective interventions include diverse services at the community-level whose common purpose is to improve or maintain overall health and safety of everyone in the target population simultaneously (OECD, Eurostat, & WHO, 2011; Institute of Medicine, 2002; McLeroy, et al., 2003; ICHI Alpha, 2016). Community-level services promote or protect health, or prevent ill health, in communities or populations. They comprise programs, for example, that promote healthy living conditions, halt the onset of disease, diminish the number of cases, and/or lessen the severity of disease (OECD, Eurostat, & WHO, 2011). Collective services also include interventions on the governance and administration of the whole healthcare system with the aim to improve its effectiveness, efficiency and equity for the benefit of all users (OECD, Eurostat, & WHO, 2011). These health system interventions relate to policy formulation, standards setting, information systems strengthening, monitoring and evaluation, and financial management.

Community-level interventions are carried out by a wide variety of public and private actors in the health sector as well as in other sectors. In the health sector, it is common in low- and middle-income countries to train community health workers to carry out a range of activities to facilitate healthcare, conduct education and advocacy campaigns, and collect data (WHO, 2007).²¹ Establishing a community health worker (CHW) program, including the recruiting, training, and deploying of CHWs in communities, is in itself a community-level health intervention that governments might wish to track. In addition, CHWs carry out individual-level interventions on behalf of the health facility, such as notifying vital events in the community, visiting patients in their home to supervise various treatment regimes, and referring patients to the appropriate care provider. These individual-level interventions carried out by the CHW contribute to other data sources, including individual records and civil registration and vital statistics system (see, Module 1: Individual Records and Modules 9a and 9b: Civil Registration and Vital Statistics System).

Objectively defined data on collective interventions are rarely readily available, yet the information is important for two main reasons. One, the expenditures linked to these interventions are necessary for producing health accounts. Second, for research, the information provides potentially significant explanatory power when evaluating factors influencing health outcomes. The lack of data in this domain can be explained in part by: (1) the definition of community is ambiguous as a unit of analysis; (2) community-level indicators are associated with outputs from a project, program, or public health initiative, and, therefore, information is scattered in various mid-term or end-term reports produced by the project; and (3) community-level indicators lack definition that make them SMART.²²

²¹ Mobile phones are an increasingly used for recording health interventions that take place in the community, outside of a health facility. This is called mobile health, or mHealth, and it refers to the use of mobile communication devices in health promotion, including both community-based and individual-level initiatives in the community (WHO, 2011). However, although the interventions take place in the community, such as the ones carried out by CHWs, they are likely to be individual-level interventions rather than collective interventions.

²² SMART = specific, measurable, attainable, relevant, time bound

Evaluating Community Interventions

Collective interventions are implemented at community level, and the community is the level of analysis. Indicators of collective interventions can provide important inputs into evaluation studies to ascertain the impact of projects and initiatives on population health outcomes. Below are examples of their use:

- A community-level information campaign on the benefits of needle exchange implemented in Community A is associated with a significantly higher rate of needle exchange among most at-risk populations compared to Community B, where there was not an information campaign.
- The deployment of a larger number of CHWs per capita in Community A is associated with significantly higher birth registration coverage rates in compared to Community B.
- The implementation of a substance abuse program in Community A has a significant effect on reducing the number of single vehicle nighttime crashes (Community Toolbox, 2016).

Although community-level interventions are often used as simple, categorical variables, as in the examples above, they can be used as group-level inputs in more sophisticated analyses, for example, in a multi-level analysis, to determine their effect on health outcomes (Diez-Roux, 2000).

Types of Indicators

Indicators of collective interventions can be expressed as the number of targeted communities in which specified public health interventions are implemented in a certain reference period. The following are examples of community-level services:

- Assessment and purification of source water
- Modification of public entrances for accessibility
- Preparation for disasters
- Anti-smoking campaigns
- Promotion of healthy transportation behavior, e.g. wearing a helmet
- School lunch programs
- Public health surveillance and screenings
- Fortification of food products
- Community mosquito control
- Media or advocacy campaigns on healthy lifestyles
- Immunization program operations

Community-level services can target most-at-risk populations and reach out to vulnerable groups of people. For example, for persons at risk of AIDS or living with AIDS, providers can launch specially designed educational campaigns to reduce barriers for voluntary testing and treatment, implement needle exchange programs, and install syringe drop boxes in public places.

Public health intervention indicators do not feature among internationally agreed-on indicators, but they do appear as part of the inventory of healthcare evidence in some countries. The Saskatchewan Population Health and Evaluation Research Unit, for example, has presented a range of community health indicators as well as a conceptual framework for their evaluation (Jeffery, et al., 2006).

Alternative Data Sources

The primary data sources and their format will vary widely, depending on the community-level indicator and the sector that records the indicator.

Standards

Two standards exist for classifying collective interventions. The International Classification for Health Accounts (ICHA), used in standard health accounts, classifies collective interventions under program code HC.6, Preventive & public health services and HC.7, Governance, and health system and financing administration (OECD, Eurostat, & WHO, 2011).

HC.6 program codes distinguish collective interventions to benefit a population, prior to individual diagnoses being made, from individual curative and rehabilitative interventions. These include:

- HC.6.1 Information, education and counselling programs
- HC.6.2 Immunization programs
- HC.6.3 Early disease detection programs
- HC.6.4 Healthy condition monitoring programs
- HC.6.5 Epidemiological surveillance and risk and disease control programs
- HC.6.6 Preparing for disaster and emergency response programs

HC.7 program codes define collective services that focus on the health system, aimed to benefit users of the health system, versus direct care services.

- HC.7.1 Governance and health system administration
- HC.7.2 Administration of health financing

In addition to the ICHA classification, the ICHI is a statistical classification used for health interventions, including public health interventions at the population level (ICHI Alpha, 2016). Although still in alpha version, ICHI has the potential to produce comparable data on collective public health interventions across countries.

International Classification of Health Interventions classifies collective interventions around three axes: target, action, and means. A few examples are the following:

- The ICHI code for “Media campaign about immunizations” is VAF PM QA, indicating health-related behavior, immunization (target), education (action), and media campaign (means).
- The ICHI code for “Education about alcohol use by providing instruction materials” is VAA PM QC, indicating health-related behavior (target), education (action), and instructional materials (means).
- The ICHI code for “Capacity building interventions targeting drug use” is VAC VA ZZ, indicating illicit drug use (target), capacity building (action), and intervention using other method, without approach, or not otherwise specified (means).

Best Practices

- The health information unit **maintains a repository** of collective public health interventions and classifies these by the type of activity, implementation date, target communities or at-risk populations, and responsible party.
- The health information unit **reports on community-level interventions** regularly to raise awareness and elicit demand for and use of these data, and to make them available for further analysis of their effectiveness and cost-efficiency on health outcomes.

References: Module 11

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