USE OF COMMUNITY HEALTH DATA
BEST PRACTICES AT THE COMMUNITY LEVEL
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The importance of data use, in general and at the community level

The goal of this concept paper is to highlight the importance and feasibility of using Community Health Information System (CHIS) data for decision-making at the community level and to share best practices to encourage community health workers (CHWs) to use the data they produce – either directly or with their supervisors, peers and their community, as highlighted in the guidance on CHIS (UNICEF et al., 2021).

Build from Foreit, Moreland and LaFond (2006), the goal of a well-functioning information system is to have stakeholders use the information it generates to inform decisions at all levels of the system, and this includes the community level for a CHIS. Data-informed decision-making refers to the proactive and interactive process that considers data during programme monitoring, review, planning and improvement; advocacy; and policy development and review.

In this paper, data use for decision-making at the community level (but also relevant at other levels of the health system) were defined as:

Using data turned into facts and information to guide CHWs, their supervisors and community leaders to better tackle health issues present in their communities.

Data use is an important and vital rationale and milestone for a CHIS: there is no need to collect data if they are not going to be used. As the HIS expands to include CHIS, there is an increasing potential for data use it produces. Nevertheless, there tends to be more focus on data use at higher levels (districts, regions, national), but CHIS data should be useful and used at the more peripheral levels. The possibility of a prompt and more focused action on CHIS data is being missed. Additionally, there is a need for more ownership at the peripheral level: “See something, say something”. The data are for everyone and even more for the ones that produce and use them. The ability to use data for decision-making is influenced by governance structures, human capacity and commitment (Nutley, T., 2012).

The CHIS is created to track and trigger action on individual programme-based needs such as disease surveillance, routine care provision, follow-up visits, referrals to facilities and tracking basic targets related to morbidity and mortality (UNICEF et al., 2021, p. 3). Use of CHIS data at the community level can be categorized as:

- **Health service provision**: using data to improve care for individuals that need prevention, promotion or curative care;
- **Surveillance and response**: using data to identify outbreaks in the community and organizing the response;
- **Programme management (monitoring, evaluation and learning) at the community level**: using CHIS data to identify issues with community coverage, logistics, equity and access.
It is important to note that there are different sources and types of community engagements with data. Use of CHIS data at the community level is both independent and related to the community because the CHIS is health-system driven. The guidance on CHIS speaks of community involvement in CHIS data use to assess inequities, underserved populations and human rights and gender-related barriers to services (UNICEF et al., 2021, p. xix). There are many parallel efforts involved in community-led monitoring (or community-based monitoring) that are community driven: these terms refer generally to monitoring mechanisms that service users and/or local communities use to select, gather, analyse and use information on an ongoing basis to improve access, quality and impact of services, and to hold service providers and decision makers to account. It is specifically designed, informed and implemented by and for communities themselves and the organizations, groups and networks that represent them to improve their health. Use of CHIS data at the community level and community-led monitoring have some overlaps and some differences (see Figure 1).

Figure 1. Overlap between community programme monitoring and community-based monitoring

Regardless of whether we talk about use of CHIS data at the community level or community-based monitoring, the cycle of data use is similar: data collection, analysis and translation in actionable insights; engagement and dissemination where insights are brought to the attention of key stakeholders; advocacy for change in policy or practices; and monitoring of implementation of promised changes (PEPFAR, 2020).
Purpose of the document and audience

There is limited experience on using CHIS data at the community level. This paper highlights some emerging practices in three countries and discusses some other examples of models being tested. It focuses on strategies and decision-making processes at the peripheral level, including community engagement, because these areas have received little attention and action. The hope is that this paper can be used as a tool to generate more political and technical attention to expanding the use of CHIS data at the community level.

Methodological approach

This paper is based on a literature review and data collected directly from several countries that have robust CHW programmes and have a CHIS. Countries were recruited during the Nairobi Community Health Summit in November 2022. After their agreement to participate, a questionnaire (see Annex) was distributed to the UNICEF country office and the Ministry of Health to be completed. The questionnaire focused on the CHW service package; the evolution of the CHIS, the roles of the Ministry of Health, community leaders and CHWs; and the strategies for fostering community-level data use. To build out the data, additional information was collected through meetings with select stakeholders to provide clarification, unpacking or further discussion. The final versions of these case studies were reviewed and vetted by each country.

How to facilitate data use at the community level?

While under the impression that there would be many examples of countries implementing strategies for CHIS data use at the community level, most countries were in fact very interested in data use at the community level, but few countries have gone far into implementing strategies to foster this use. This paper includes examples from three countries that have, in different ways, experimented with operationalizing community health policies and guidelines and have a keen interest in data use at the community level: Burundi, Eswatini and Zambia.

In these three countries, significant efforts on data collection and analysis of data quality were made, and some examples of analysis to develop actionable insights in a range of data use categories, such as facilitating service delivery, disease control and surveillance, and planning and management at the community level, are given in this paper. Not all three countries had mechanisms in place for effective engagement with and dissemination of these insights to community-level actors, and those that have are early on in their roll-out. From these early examples, emerging evidence of actors engaged in the use of CHIS data at the community level, along with CHWs and health clinic staff, includes community structures such as community health committees, religious leaders and community-based organizations. A variety of platforms and data presentation were used to foster dialogue and interaction for decision-making, and early examples of data use for advocacy, planning and improvement in practices, including CHW performance.

Routine meetings involving the different partners in the health system, community leaders and organizations appear to be the most important channels to engage in discussions on different health priorities perceived by the community, using information flowing from the data.
Health system structure and community health

The health pyramid in Burundi contains three levels: the central level, the intermediate level and the peripheral level.

**The central level** is mainly responsible for sectoral policy formulation, strategic planning, coordination, resource mobilization and allocation, and monitoring and evaluation. It performs the function of regulation and standardization.

**The intermediate level** consists of 18 provincial health offices and 5 regional hospitals. The provincial health offices are responsible for coordinating all health activities in the province, supporting health districts and ensuring good intersectoral collaboration.

**The peripheral level** is composed of 46 health districts covering 88 hospitals and 1,080 public, religious and private health centres spread over the 119 municipalities of the country. The health district is the operational unit of the health-care system. It brings together the community level, health centres and the district hospital, which is the first referral hospital.
Communities are involved in the health-care system through the management of health centres via the establishment of community health committees and health centre management committees. They are also represented by CHWs who act as an interface between the health centre and the community through awareness-raising messages, care, follow-up and support for patients. CHWs are grouped into community health groups.

The CHW activity package is based on the following axes:

- Integrated reproductive health: antenatal care counselling and referral, and provision of contraceptives including condoms;
- Tuberculosis support services;
- HIV: counselling, testing and referral as well as home-based care;
- Patient care services: integrated community case management (iCCM) of child illnesses;
- Environmental health services: vector control, especially indoor residual spraying;
- Community based-surveillance services.

**CHIS history and current status**

The CHIS is an integral part of District Health Information Software (DHIS2), the HMIS platform, that operates throughout Burundi. CHWs have tools that they are required to fill out regularly, such as logs and cards. The report of community activities is compiled within the community health group and the president of the community health group forwards this compiled report to the health centre each month. It is then up to the health centre to enter this report into DHIS2. These CWHs are supervised by a health-care provider during the compilation of their report. During this compilation session, the supervisor:

- Checks completeness and promptness
- Analyses/verifies the existence or not of outliers and proceeds to correction
- Analyses trends in key community health indicators by comparing time periods and entities with each other
- Identifies actions to be taken according to the different situations revealed by the data.

CHWs do not have separate training on CHIS but data collection is included in the training on the community activities package. In addition, during supervision or meetings, there are discussions about data quality, which is essential for the use of data.

As CHWs prepare their reports on paper before being entered into DHIS2 by the health centre, the Ministry of Public Health has begun a pilot test for digitized reporting in five health districts. The Ministry of Public Health started with RapidPro, a programming tool, for integrated community case management (iCCM) inputs, and the vision is to extend this beyond iCCM to other parts of the community health package and in additional geographic areas.

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Strategies for data use at the community level

To encourage the use of community data, there are two regular platforms where data-driven analysis and decision-making can take place.

1. On a monthly basis, CHWs and their supervisors meet to analyse data collected by CHWs to verify data quality and analyse trends in key community health indicators by comparing time periods and entities with each other. CHWs collaborate with health-care providers for this analysis, in a joint manner, with a particular focus on key monitoring indicators (tool: data reporting template).

2. Decision-making based on these data is also made during biannual planning at several levels – community, health centre, health district and national. At the community level, community health supervisors, CHWs and community leaders are involved (tool: semi-annual business planning template).

Two examples demonstrate data usage at the peripheral level:

- As part of surveillance: CHWs report daily at the health centre level some data on diseases under surveillance, such as malaria, cholera, measles and poliomyelitis. Depending on the disease, the number of cases and the number of deaths are analysed. As a concrete example of feedback, if a case of measles or poliomyelitis is suspected, the CHWs warn the administrative staff (head of the hill) in addition to alerting the health centre.

- As part of planning: The selection of inputs is made based on the data produced and/or the cases processed, because the inputs are granted according to the children treated and by disease, and the requisitions are accompanied by activity reports.

Implementation

In principle, this strategy of monthly and semi-annual platforms is implemented throughout the national territory. Nevertheless, not all CHWs/supervisors do this on a regular basis, nor do all levels do semi-annual data-driven planning.

Conclusion and lessons learned

In Burundi, although there are platforms for discussions of data, there is no structured process or format for data use. In addition, there is a strong need for a change in culture at all levels of the health pyramid so that the use of data is part of the daily lives of health care providers and CHWs. It is necessary that CHWs go beyond being data collectors but become data-based decision makers, in collaboration with communities and supervisors.

Community health programme managers feel an urgent need for general guidance (in the form of a document or guide) to refer to and raise awareness among these providers.

The key factors required to ensure data usage at the peripheral level are:

- Continuous capacity-building of community actors
- Motivation for regular peripheral data analysis:
  - Regularly monitor planned activities at the peripheral level
  - Provide feedback at the peripheral level
  - The digitalization of the circuit of inputs used in care should be at the entire care system or even of the entire community health system.
Health system structure and community health

Eswatini is divided into 4 administrative regions, 59 Tinkhundla and about 360 chiefdoms. Eswatini is governed under a dual system that fuses traditional and Western systems.

The Eswatini health-care delivery system is divided into four tiers with community being the lowest level. The community health volunteer (CHV) programme began with rural health motivators (RMHs) in 1976 with the aim of addressing key health challenges that were most prevalent at that time. These challenges included high under-five mortality, high prevalence of communicable diseases, high maternal mortality and poor hygiene and health-seeking behaviour. At the community level, there are also other community-based health volunteers, faith-based organizations, non-governmental organizations and many other players who collectively facilitate the delivery of primary health-care services country-wide, including in hard-to-reach areas, and further link patients to the treatments offered at the facility level.

CHIS history and current status

The CHIS was rolled out in 2012, and CHVs and/or RMHs report monthly. The system is paper based at the community level, with CHVs using daily registers and then aggregating the data into monthly reports that they send to the regional Health Management Information System (HMIS) offices. When the paper-based summaries arrive at the regional HMIS offices, the data are entered into an electronic system that is linked to the national servers where data can be extracted for analysis. Table 1 shows the indicators that CHVs report on monthly through this system.

2 RMHs are a broad category, while CHVs are the RMHs for the health sector.
In 2016, the Ministry of Health started to generate annual reports. Nevertheless, some challenges with the community-level data were observed, including no age or sex disaggregation. So, with support from UNICEF, the RHM programme, in collaboration with other departments, revised and piloted the community data collection tool to include disaggregated data in some communities. As a result of this pilot, a decision was taken to digitalize the Community-based Information System (CBIS) to improve data quality and access, and the RHM programme has been piloting a digital system at the community level in 2023.

CHWs are trained on the registers they use for reporting before they are deployed, and those who were to use the revised data collection tools were also trained on these. The training is conducted by health information officers from the HMIS unit of the Ministry of Health who are responsible for all data collection tools of the Ministry of Health.

**Table 1. Community-based indicators included in the RHM monthly summary in Eswatini**

<table>
<thead>
<tr>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number clients with acute illnesses</td>
</tr>
<tr>
<td>Number of babies who have died during delivery or within seven days postpartum</td>
</tr>
<tr>
<td>Number of children grossly underweight</td>
</tr>
<tr>
<td>Number of children overweight</td>
</tr>
<tr>
<td>Number of children underweight</td>
</tr>
<tr>
<td>Number of children with normal weight</td>
</tr>
<tr>
<td>Number of clients counselled</td>
</tr>
<tr>
<td>Number of clients enrolled on home-based care</td>
</tr>
<tr>
<td>Number of clients on antiretroviral therapy</td>
</tr>
<tr>
<td>Number of clients on both antiretroviral therapy and tuberculosis treatment</td>
</tr>
<tr>
<td>Number of clients on home-based care</td>
</tr>
<tr>
<td>Number of clients on pre-antiretroviral therapy</td>
</tr>
<tr>
<td>Number of clients on tuberculosis treatment</td>
</tr>
<tr>
<td>Number of clients sleeping inside mosquito nets daily</td>
</tr>
<tr>
<td>Number of clients visited</td>
</tr>
<tr>
<td>Number of clients who have been discharged from the home-based programme</td>
</tr>
<tr>
<td>Number of clients who have received basic nursing care</td>
</tr>
<tr>
<td>Number of deaths in home-based care clients</td>
</tr>
<tr>
<td>Number of health education sessions</td>
</tr>
<tr>
<td>Number of home deliveries</td>
</tr>
<tr>
<td>Number of households visited</td>
</tr>
<tr>
<td>Number of pregnant women who have died during pregnancy and within 42 days postpartum</td>
</tr>
<tr>
<td>Number of pregnant women</td>
</tr>
<tr>
<td>Number of reporting rural health motivators (RHMs)</td>
</tr>
</tbody>
</table>
Strategies for data use at the community level

To support data use at the peripheral level, the Ministry of Health is implementing community data reviews where community leaders also participate. CHV data (monthly summaries) are shared with chiefdoms, health-care facilities and constituency centres. This is currently being piloted under a UK AID project organized by the Ministry of Health in collaboration with UNICEF, and it needs to be rolled out.

During these data review meetings, CHVs receive feedback on their performance based on the data on households and people reached. For sustainability and effectiveness of the review meetings, CHVs first review their performance data at the chiefdom (Umphakatsi) and constituency (Inkhundla) levels through community meetings before the reports reach the health-care facility level. In this pilot, the review at the constituency level is focused on CHV performance and on data quality. It has the potential to inform the community about how they can improve their behaviour in a more positive way to achieve better health outcomes.

Once these data reach the primary health-care facility level, the primary health-care facility gains its vision of the data, informing of the need for possible outreach and any outbreaks into the community.

A concrete example of data use is that the data inform the development of chiefdom development by promoting value for data utilization in decision-making, informing resource allocation and efficiency, improving programming, collaboration and coordination, promoting learning and harmonization of best practices and indicators, and encouraging ownership of performance data.

There are national data reviews conducted by the Ministry of Health, and community data are also presented in these meetings so that health-care facilities may appreciate how community services feed into their activities.

Implementation

Currently, this community-level review meetings are taking place in 14 (of 57) constituencies in 2 (of 4) regions. The roll-out is in its early phases. One of the main lessons is that CHVs and/or RHMs find it difficult to summarize data using the paper-based system. Processes are under way for the Ministry of Health to pilot an electronic CHIS, with support from UNICEF.

Conclusion and lessons learned

While CHIS is moving ahead country-wide and piloting is taking place to make it electronic, data use at the community level is in its infancy. Eswatini has piloted and is looking to roll out a strategy to engage communities actively in using CHV data at their level. This approach has led to increased community interest in making decisions at their level, and there is growing interest in using data for decision-making. Certainly, this process needs to be supported and nurtured.

Key factors to ensure data use at the peripheral level are:

- Access to complete and quality data
- Community leadership participation
- Ownership of the community-based health services data quality issues, such as accuracy, completeness, consistency, timeliness, validity and uniqueness
- Adequate funds to roll out the community review meetings nationwide.
The health-care system in Zambia is organized into primary, secondary and tertiary levels. At the primary level, the population is served by sub-centres and primary health-care centres. At the secondary level, there are community health centres and smaller sub-district hospitals. There are 10 provinces and 116 districts, and the CHWs are attached to over 4,000 primary-level health-care facilities in their zones, which could amount to at least 10 health-care facilities.

Zambia has two types of CHWs: community health assistants (CHAs) and community-based volunteers (CBVs).

- CHAs are formally employed by the Government of Zambia and other partners. This Cadre is registered and regulated by the Health Professions Council of Zambia. They provide promotive, preventive, curative and rehabilitative health-care services. There are currently almost 3,000 CHAs deployed in health posts across the country.

- CBVs form the biggest informal community health workforce. CBVs are considered as an essential component of the primary health-care system as they predominantly act as a liaison between local communities and the primary health-care facilities. CBVs deliver a wide range of care services, mainly promotive and minor, curative services with referral services emphasized. There are currently almost 100,000 CBVs.

While CHWs have been part of the health system for decades, an updated community health service package was launched in March 2023 to harmonize all programmes at the community level, and CHWs will be trained in this comprehensive package.
**Health system structure and community health**

The services that CHWs have been and will continue to be responsible for include:

- Child health: growth monitoring promotion, early childhood development and nutrition support;
- Integrated reproductive health: antenatal care counselling and referral, and provision of contraceptives including condoms;
- Tuberculosis support services;
- HIV: counselling, testing and referral as well as home-based care;
- Patient care services: iCCM of child illnesses and treatment of malaria;
- Environmental health services: vector control through indoor residual spraying;
- Community based-surveillance services.

The HMIS has many components that are at different stages of development and integration. The main components include:

- Health centre HMIS: this is fully developed and has been operational since the inception of the HMIS in 1996;
- Hospital HMIS: this has been integrated to the DHIS2 but is still in the development phase;
- Community HMIS: this was fully developed starting in 2012 but has faced logistical challenges, some related to overall HMIS challenges, such as computer availability and internet access for data entry from reporting tools (paper forms) and related specifically to the community component, including health information aggregation (HIA) forms such as HIAa and HIAb.

**CHIS history and current status**

The community HMIS has two data sets, one for the CHAs and one for the CBVs. In 2012, the HIA4a form was developed to aggregate data collected by the CHAs, while in 2016 the HIA4b form was developed to aggregate CBV data collection.

The community-level information is still paper-based. When CHAs and CHVs provide health services, the interaction data are captured in a paper-based register, where it is stored and only retrieved when a monthly report is aggregated for submission to the health-care facility. Facility in-charges are also involved with community-level information, since they are CHA supervisors and responsible for collecting all community data from the CHAs and CBVs for scrutiny, verification and upward submission to be entered on CHIS.

At the health-care facility level, depending on equipment availability, these data are entered on to DHIS2, the Ministry of Health’s digital platform. Where computer equipment is not available, or where the personnel is not present, paper-based reports are sent to district health offices where it is uploaded to the DHIS2. At the district level, this information is aggregated and captured electronically before being sent to the provincial level and, ultimately, to the national level. The indicators CHWs report on align with the list of the responsibilities (see above).

The CHIS training targets information officers, facility in-charges, CHWs and neighbourhood health committee members. The Ministry of Health, through the Community Health Unit, has developed a training module.
The CHW training on data use relies on the community action planning and the CHIS modules that have a topic on uses of data. These modules help to highlight the importance of the data that the CHWs generate to all the levels of the health system. Training started in 2018 when CHIS was launched. In 2020, training for selected supervisors of CHAs started with one of the modules explaining the uses of data at the community level.

The CHIS in Zambia is at the scale-up/roll-out phase. All the provinces have been reached and up to 90 of the 116 districts have been oriented in CHIS. Nevertheless, there is marked variations on the number of health-care facilities and their neighbourhood health committees that have been trained in data collection and reporting.

CHA programme data reported to HMIS via the DHIS2 system are accessible to all relevant persons at the Ministry of Health. Partners outside of the Ministry of Health and the Government of Zambia receive access upon approval by the Ministry of Health.

Currently, for the CBVs, completeness stands at 12 per cent of the reports submitted in the DHIS2, and about 21 per cent of all CBV reports are reported on time. This can be attributed to a number of factors, among them:

- Season: during the rainy season, most of the CBVs attend to their fields most of the time;
- Availability of CHIS data recording and reporting tools: there have been challenges in sustaining the availability of these supplies;
- Orientation in CHIS: as stated earlier, fewer facilities and its neighbourhood health committees have been trained and/or oriented in CHIS attrition; the CBV space is volatile. CBVs are highly mobile, especially the out-of-school and young adults. They move in and out of their localities to pursue other opportunities in towns and cities. The older ones are quite stable and reliable, but these too are easily recruited in programmes that are funded and those implemented by non-governmental organizations.

### Strategies for data use at the community level

The main strategy to stimulate the use of data at the community level is the community scorecard (see Table 2). The community score cards have been implemented in various contexts as an to enhance social accountability (Monga and Shanklin, 2018). It brings together various stakeholders to analyse trends and identify challenges and gaps in service delivery and utilization (Kiracho et al., 2020). In Zambia, the community gathers to conduct scoring sessions every quarter as a way of proving feedback on the quality of services they receive, after which action plans are developed. The community votes (or ranks) the areas that are most urgently needing action. The facility staff provide the necessary data for the community meeting so they can use them in the development of action plans. These community engagement meetings with influential leaders can include the clergy, politicians and traditional leaders, supplemented at times with written communication or a one-on-one approach. The community scorecard is used to trigger community contribution and/or action towards an activity or project that is beneficial to all and in lobbying activities.
As an example, during the implementation of the community scorecard and community ranking of issues, feedback from the community has led to the following improvements:

- In Mbala District, the lack of adequate and safe water at health-care facilities was ranked highest, and the community prioritized drilling of a borehole at the health-care facility.
- In Choma District, infrastructure issues were ranked highest, and the community prioritized the renovation of a block of wards at the health-care facility.

Additionally, the CHAs and CBVs sit with their supervisors to discuss the monthly performance as shown in their monthly report, including the most common causes of morbidity in that month and which parts of the catchment area are reporting those diseases most. Using their data, they draw action plans to try to solve the issues identified from their reports.

**Implementation**

The Zambia community scorecard has now been pilot tested, and a corresponding training of trainers module has been rolled out in all 10 provinces. Nevertheless, there have been challenges to scale up the scorecard owing to a lack of motivation of CHW supervisors and resources to roll it out to additional health-care facilities.

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**Table 2. Zambia community scorecard (quarter 2 of 2022)**

<table>
<thead>
<tr>
<th>Region</th>
<th>Behaviour and attitude of health service provider</th>
<th>Waiting time for provision of health care services</th>
<th>Availability of essential drugs, supplies and services</th>
<th>Water, sanitation and hygiene</th>
<th>Availability of transport services for emergencie and referrals</th>
<th>Infrastructure</th>
<th>Total score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zambia</td>
<td>↓82</td>
<td>88</td>
<td>↓70</td>
<td>↑167</td>
<td>84</td>
<td>↓67</td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td>↑100</td>
<td>↓83</td>
<td>↓67</td>
<td>↓50</td>
<td>↑67</td>
<td>↓50</td>
<td></td>
</tr>
<tr>
<td>Copperbelt</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Eastern</td>
<td>89</td>
<td>89</td>
<td>↑167</td>
<td>↑167</td>
<td>↓83</td>
<td>↓67</td>
<td></td>
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<tr>
<td>Luapula</td>
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<tr>
<td>Lusaka</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Muchinga</td>
<td>67</td>
<td>67</td>
<td>↓33</td>
<td>↓67</td>
<td>100</td>
<td>↓33</td>
<td></td>
</tr>
<tr>
<td>North Western</td>
<td></td>
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</tr>
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<td>Northern</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Southern</td>
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</tr>
<tr>
<td>Source</td>
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<td>DHIMS</td>
<td>DHIMS</td>
<td>DHIMS</td>
<td>DHIMS</td>
<td>DHIS2</td>
<td></td>
</tr>
</tbody>
</table>

Source: Zambia Community Health Management Information System.
Conclusion and lessons learned

The community scorecard provides a concrete platform for visualizing and interpreting data, and lays bare the importance of a focused dialogue on the so-called ‘red flags’ and the actions to be taken. While pilot testing and training of trainers are available, scaling up this strategy requires further support at multiple levels.

The lessons learned include:

- Strengthening oversight role of neighbourhood health committees to be responsible for the data generated from their zones and come up with action plans;
- Capacity-building: both CHWs and their supervisors should train to use the data they generate for decision-making and not merely submitting data to the next level;
- Supporting data collection by providing tools such as registers as well as data reporting forms;
- Enhancing service delivery as a means of generating data because data cannot be generated without service provision;
- Incentivizing CBVs.
Other promising examples of data use at the community level

In addition to these three examples that reflect national level efforts, there is also evidence from more limited implementation (pilots or testing) of some additional models of data use at the community level. These efforts are attempting to increase the coverage of specific health interventions (e.g., related to HIV) and coverage of the population within the catchment area.

The Care Group: The Care Group is a peer-based health promotion strategy for expanding coverage of maternal and child health services using volunteer CHWs (Pieterse et al., 2020). The Care Group is usually a group of 10–15 volunteers, mostly women, selected by the community and coached by a paid worker. They cover around 100 households. The Care Group model has been applied to tuberculosis control with excellent results on the different aspects of tuberculosis control.

Proactive community case management (ProCCM): ProCCM was developed to address the issue of low utilization of iCCM services (Ratovoson et al., 2022). In ProCCM, the CHWs, instead of waiting for the sick child to visit them, undertake daily door-to-door proactive case detection searching for and identifying of patients who need care.

These models have embedded the community data use, as they have an explicit decision-making process in the planning phase.

Conclusions and recommendations

The data from this exercise indicate that use of CHIS data at the community level is in its early stages but represents vibrant efforts to empower CHWs and their communities in the decision-making process. These efforts facilitate the perception of CHWs not only as data collectors, but also as influential actors in their own communities, with the benefits of raising their profile and credibility.

Nevertheless, these efforts are still at their nascent stage and will require more structure and accountability if these early efforts are to prove scalable and durable.

From this exercise, there is an appetite to continue these efforts and a desire for additional support. Possible initial support at the global level for increasing use of CHIS data at the community level include:

- Adding data use in the CHIS training module.
- Developing guidelines or guidance for data use at the community level.

Finally, this should not understate the positive ‘side effect’ of the use of these tools on the impact of communities’ abilities to become more active in their areas in health and beyond.
References


Annex: Questionnaire for country interviews

Questionnaire: Community-level data us

Who should complete this questionnaire? The person who has leadership, responsibility and knowledge of your country’s Community Health Information System (CHIS) and how your country is promoting data use at the community level.

Note: Text in blue indicates documents to share with us.

Country: 

Name and role of person completing the form: 

1. Please describe the current level of functionality of your Community Health Information System (CHIS) or Community-based Information System (CBIS). Please note whether it is being designed, tested or rolled out. Also, please describe completeness, timeliness and the quality of reporting.

2. Is there a CHIS (CBIS) training curriculum?

☐ Yes Please share the training curriculum
Who did the training target: 

☐ No

3. Have community health workers (CHWs) been trained in how to use the data they produce?

☐ Yes Please share the training curriculum
When did the training programme start? 

4. Have CHW supervisors been trained in how to use the data they produce?

☐ Yes Please share the training curriculum
When did the training programme start? 

5. Is CHIS (CBIS):

☐ fully digitalized?
☐ partially digitalized?
☐ solely paper-based?

Any additional comments: 

6. Please provide the package of services that CHWs are responsible for and the list of indicators to be reported on.
7. Of the indicators related to the CHW package, which specific indicators are being used by the CHW programme to track progress and make decisions at the community, health centre and district levels?

List:____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

8. Who is responsible for collecting these data/indicators?

☐ CHW
☐ District level
☐ All Please explain: ________________________________________________________________
☐ Others Please specify: ______________________________________________________________

9. Who is responsible for compiling the data for these indicators?

☐ CHW
☐ Health worker at the health-care facility
☐ District level
☐ Others Please specify: ______________________________________________________________

10. Besides sending the data to the higher level, what actions or analysis are done to facilitate decision-making at the community level:

<table>
<thead>
<tr>
<th>Actions/analysis</th>
<th>District level</th>
<th>Health-care facility level</th>
<th>Community level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who specifically is involved?</td>
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<tr>
<td>What analysis do they complete?</td>
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<tr>
<td>How frequently is the analysis done?</td>
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<tr>
<td>Are all data reviewed or only tracer indicators?</td>
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<tr>
<td>In what format are the data presented (paper, flipchart, electronic)?</td>
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<tr>
<td>Who is involved in making decisions based on the data (CHW, CHW supervisor, community leaders, etc.)?</td>
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<tr>
<td>How is the supervisor involved?</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>How is the district involved?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. In what ways is the community engaged with these data?

Please explain __________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

Which specific groups are involved (for example women’s group, youth group, etc.)?

Please list __________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
How are they engaged in community health in general and specifically in data use?

Please explain


12. What strategies do you use to support data use/decision-making/progress tracking at the peripheral level?

Please explain


13. What resource material or tools do you use to support decision-making at the community level or to enhance social accountability?

Resource material and/or guidance: 

Tools: 

Please share the resource materials and tools. Explain the process by which decision-making or social accountability is enhanced to support the community programmes.

14. Please provide some concrete examples of data use at the peripheral level (CHWs and supervisors at health-care facility):

________________________________________________________________________________________________________

________________________________________________________________________________________________________

________________________________________________________________________________________________________

________________________________________________________________________________________________________

15. From your experience, what are key factors required to ensure data are used at the peripheral level for decision-making and programme improvement?

________________________________________________________________________________________________________

________________________________________________________________________________________________________

________________________________________________________________________________________________________

________________________________________________________________________________________________________

16. Is there anything else we should know about how you are supporting and promoting use of CHIS (CBIS) data at the health centre and community levels?

________________________________________________________________________________________________________

________________________________________________________________________________________________________

________________________________________________________________________________________________________

________________________________________________________________________________________________________

Thank you.