Usefulness and Challenges in Using WHO's Electronic EPI-IMCI Course for Training Mentors in Zambia

RAPID ASSESSMENT REPORT

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BACKGROUND

The Maternal and Child Survival Program (MCSP) is a global, $560 million, 5-year cooperative agreement funded by the United States Agency for International Development (USAID) to introduce and support scale-up of high-impact health interventions among USAID's 25 maternal and child health priority countries, as well as other countries. In November 2016, the USAID Mission in Zambia invited MCSP to begin providing technical assistance to the Reproductive, Maternal, Newborn, Child, and Adolescent Health and Nutrition Continuum of Care (CoC) Program. The CoC Program is led by the Government of the Republic of Zambia and funded by the Swedish International Development Cooperation Agency, Department for International Development, and USAID, through Government-to-Government support. Within the Government of the Republic of Zambia, the Ministry of Health leads the CoC Program, which aims to:

- Continue to improve reproductive, maternal, newborn, child, and adolescent health and nutrition services and outcomes
- Increase availability and readiness of quality health and nutrition services for mothers, newborns, children, and adolescents
- Increase demand and uptake of physically, culturally, and financially accessible services for mothers, newborns, children, and adolescents
- Strengthen health systems at national and subnational levels as necessary

MCSP was designated as a technical assistance partner to the CoC Program with the responsibility of advising on the planning, implementation, and monitoring of the CoC grants to help the CoC Program achieve its results. MCSP's technical assistance focused on Eastern, Luapula, Muchinga, and Southern provinces.

Despite Zambia's adaptation of Integrated Management of Childhood Illness (IMCI) as a strategy to reduce high child mortality, the country was facing implementation challenges due to gaps including lack of training and supportive supervision of health care workers. District-level mentoring teams were formed to improve clinical performance of facility-based health care workers. However, since the mentorship program was initiated primarily for emergency obstetric and newborn care and infectious diseases, mentors lacked knowledge and competency in the Expanded Programme on Immunization (EPI) and IMCI. Consequently, the mentors were not able to effectively mentor health care workers in immunization and IMCI. Therefore, MCSP took an initiative to orient the mentors on these subjects using an electronic EPI-IMCI (e-EPI-IMCI) course developed by the World Health Organization's (WHO's) Africa Regional Office.[1] The tool was piloted in one district in Zambia and was found useful, but was not rolled out beyond the pilot district due to limited resources. MCSP did however roll out the tool in other districts for mentors to complete as self-training.

OBJECTIVE

The purpose of this assessment was to understand the usefulness of the e-EPI-IMCI course for mentors and the challenges they faced in using the training tool.

APPROACH

To help address the gaps in Zambia's IMCI implementation, MCSP planned to facilitate EPI and IMCI trainings for district mentors. MCSP selected the WHO e-EPI-IMCI training course for its convenience and its low cost to increase the knowledge of district mentors (who were already trained in the mentoring process) on EPI and IMCI. The standard IMCI course is typically taught over 11 days in a classroom setting with six facilitators. It requires logistical support, a training venue, and funds for participant per diem and transportation. The standard EPI and IMCI courses are usually organized away from the participants' facilities, leaving facilities understaffed during the training.

1   Network for Education and Support in Immunisation (NESI). 2018. WHO/AFRO Regional capacity building workshop on the EPI/IMCI Interactive training and resource tool. NESI website. http://www.nesi.be/content/whoafro-regional-capacity-building-workshop-epiimci-interactive-training-and-resource-tool. Updated March 29. Accessed June 27, 2019.

The e-EPI-IMCI training course is a flexible self-learning tool. The contents of the course were drawn from existing WHO training materials, such as the Immunization in Practice guide[2] and IMCI computerized adaptation and training tool.[3] The primary target audience of this training resource is district supervisors and facility managers.

In Zambia, EPI and IMCI are integrated and managed by the same service providers in most facilities, thus, an integrated, electronic EPI-IMCI training tool seemed most appropriate. Mentors are district trainers drawn from the District Health Office, district hospital, and sometimes from other larger health facilities.

MCSP Child Health and Immunization technical officers installed the e-EPI-IMCI course on the District Health Office computer (districts have at least one desktop computer for multipurpose use) in every district in the four MCSP-supported provinces. The mentors were then informed and encouraged to take the course when they were available and when it was convenient. The course contents are broken down into different sections. Before and after each section, participants were asked a set of questions that they were required to answer correctly before advancing to the next section. However, the course did not include a post-test to assess the overall knowledge participants gained across all content areas. The course includes 17 sections and typically requires half a day to complete; however, the pace can depend on individual computer skills, reading comprehension, and previous knowledge of the course content. The course is designed to be flexible, allowing participants to complete it in one or more sittings. After successfully completing the course, each participant received a printed certificate of completion. In total, 35 mentors completed the EPI-IMCI course in 42 districts in Eastern, Luapula, Muchinga, and Southern provinces.

In December 2018, MCSP conducted a rapid assessment to evaluate the usefulness and challenges experienced by participants using the e-EPI-IMCI course and to improve use in the future. The list of trained mentors was available at the district level. From the list of trained mentors, 40 mentors (10 in each province) were convenience sampled (based on availability of email address) for a survey. The selected mentors were requested by email to complete the 10-question survey using Google Forms. The survey was determined non-human subjects research by the Jhpiego institutional review board.

This report provides an overview of the responses from the trained mentors, including usefulness of the e-EPI-IMCI training tool, challenges they faced when using the tool, and their recommendations to improve future use of the e-EPI-IMCI course.

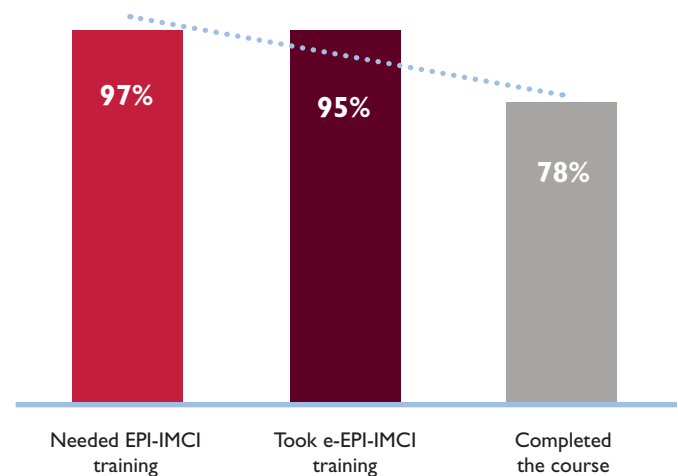## Figure 1. Percentage of mentors needing, taking, and completing EPI-IMCI training

- Needed EPI-IMCI training: 97%
- Took e-EPI-IMCI training: 95%
- Completed the course: 78%

Figure 2. Impressions of mentors on the e-EPI-IMCI course

Convenient for participants
- The course can be taken at a convenient time and completed at own pace
- User-friendly
- No cost required

Easy to understand content
- Designed with simple and basic concepts of EPI and IMCI for easy understanding
- Used a lesson format that is easy to follow
- Lessons taught before asking questions

Knowledge gained
- Gained knowledge and skills in IMCI and EPI
- Helped in self-assessment
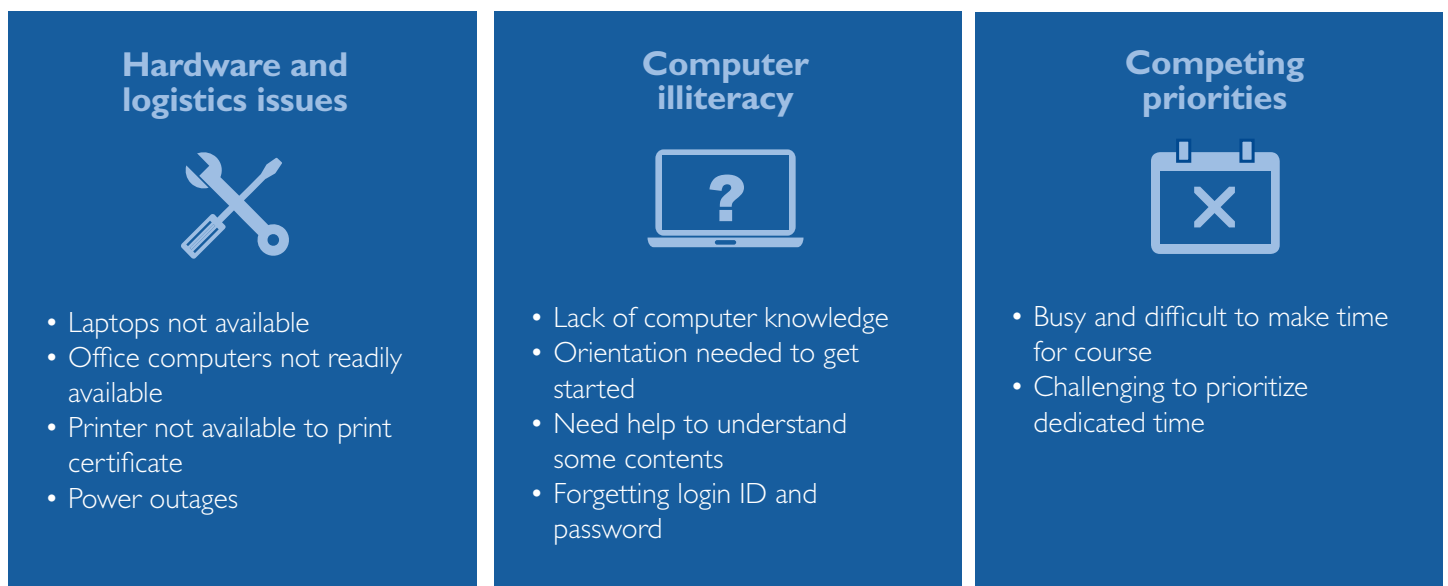- Helpful in offering mentorship in IMCI and EPI

2 World Health Organization (WHO). 2015. Immunization in Practice: A Practical Guide for Health Staff; 2015 Update. Geneva, Switzerland: WHO. https://apps.who.int/iris/bitstream/handle/10665/193412/9789241549097_eng.pdf;jsessionid=086AA51FCBFF97CEB7CD67CD2404AB80?sequence=1. Accessed June 27, 2019.

3 World Health Organization (WHO). 2019. Maternal, newborn, child and adolescent health: Integrated Management of Childhood Illness computerized training tool. WHO website. https://www.who.int/maternal_child_adolescent/documents/icatt/en/. Accessed June 27.

> "The e-EPI-IMCI course has helped me in my mentorship because the health facility staff used to ask questions like, 'Should we open a vial of vaccine if there is only one child to vaccinate at the outreach session?' I have learnt a lot of things and the training also reminded me things I forgot. Thanks for arranging for the training."
>
> —Mentor trained using the e-EPI-IMCI course

Figure 3. Common challenges mentors encountered while taking the e-EPI-IMCI Course

Hardware and logistics issues	Computer illiteracy	Competing priorities
• Laptops not available • Office computers not readily available • Printer not available to print certificate • Power outages	• Lack of computer knowledge • Orientation needed to get started • Need help to understand some contents • Forgetting login ID and password	• Busy and difficult to make time for course • Challenging to prioritize dedicated time

RESULTS

Participation in the e-EPI-IMCI Course

Thirty-seven out of 40 mentors (93%) completed the survey. Out of the 37 mentors, 36 (97%) indicated they needed the e-EPI-IMCI course because they had not received any previous training on EPI or IMCI and were not prepared to mentor health workers on these topics. Thirty-five (95%) of them undertook the e-EPI-IMCI training course and 29 (78%) printed a certificate after completion of the course (Figure 1). Twenty-eight of the 35 mentors (85%) who completed the e-training course thought that the knowledge they gained was adequate for mentoring facility-based health workers. Five of the 35 mentors (14%) who completed the course thought it was inadequate, citing reasons such as lack of practical training and lack of early child development content in the IMCI portion of the module.

Common Impressions after Taking the e-EPI-IMCI Course

The most common impressions from mentors after taking the e-EPI-IMCI course can be categorized into three groups: conve-nient for participants, easy to understand content, and knowl-edge gained. More detailed responses from mentors are summa-rized in Figure 2.

Challenges after Taking the e-EPI-IMCI Course

While mentors noted that the course design was convenient, the content was easy to understand, and they found it useful in build-ing their own knowledge in both EPI and IMCI, they also noted challenges. These challenges revolved primarily around hardware issues with computers and other equipment, computer illiteracy, and competing priorities. Common challenges faced by mentors are highlighted in Figure 3.

Suggestions to Improve the e-EPI-IMCI Course

The participants' main suggestions to improve the e-EPI-IMCI training course fell into three categories: course content, com-puter availability and use, and additional training needed in order to use the tool effectively. Key suggestions for improvements are highlighted in Figure 4.

Figure 4. Key suggestions from mentors to improve the e-EPI-IMCI training course

COURSE CONTENT

- Add a section in the e-EPI-IMCI course on how to use this training tool
- Add video demonstrations on how to build participants' skills
- Add early childhood development/milestones in IMCI contents
- Simplify login system

COMPUTER AVAILABILITY AND USE

- District needs to make more computers available
- Arrange orientation on computer use before starting the course
- Make hard copies of the course available as an alternative option

ADDITIONAL CUSTOMIZED SUPPORT

- Plan for practical training to follow the theoretical e-EPI-IMCI course
- Translate e-EPI-IMCI course into local language
- Follow up with participants who did not successfully complete the course

CONCLUSION AND RECOMMENDATIONS

When resources were not available to train mentors on EPI or IMCI in an offsite traditional classroom setting, the e-EPI-IMCI training tool was helpful and appropriate for building the capacity of mentors to help them mentor their facility-based health care workers and strengthen their own skills. Mentors found the e-EPI-IMCI training course convenient and easy to understand and they gained knowledge from the course. Nevertheless, some mentors needed additional skills and additional support that were not part of the electronic course, including post-training follow-up to assess knowledge retention and its usefulness for mentoring. For future e-EPI-IMCI trainings, MCSP suggests offering a hands-on practical training at a nearby health facility, immediately after participants' completion of the electronic course, to complement the electronic course. In addition, District Health Offices need to try to ensure that computers and printers are available and trainees have some basic computer knowledge to help navigate the electronic course. An in-person, brief overall orientation of the course and how to navigate it would be beneficial. The e-EPI-IMCI training course is an effective and useful alternative to a traditional classroom course, but also needs improvement to increase more health workers' knowledge of EPI and IMCI.