Workshop activity: costs of implementation

The following activity is based on the study reported by Dalaba et al, 2015:

**Costs Associated with Implementation of Computer-Assisted Clinical Decision Support System for Antenatal and Delivery Care: Case Study of Kassena-Nankana District of Northern Ghana**

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0106416>

**Activity:**

Refer to Table 3 from the paper (included below). This presents the capital and recurrent financial costs of computer-assisted CDSS implementation. Key extracts from the paper have also been included below.

**Table

Description automatically generatedTable 3. Financial costs distribution of computer-assisted CDSS implementation (US$).**

**Personnel:** *“A technical officer with knowledge in information technology (IT) provided trainings and technical support to the computer-assisted CDSS users. The officer visited the computer-assisted CDSS users fortnightly to monitor and supervise them. The technical officer also downloaded data captured in the computer-assisted CDSS and updated antivirus during the monitoring visits. In addition, whenever a computer-assisted CDSS user moves (transfer, study leave), the officer trains a new user to continue the use of the computer-assisted CDSS.”*

*“For the period, 22 computer-assisted CDSS users were trained (16 midwives, and 6 nurses). The government of Ghana pays on average US$626 per month to a midwife, and US$ 404 per month to a community health nurse. We did not include these salary costs in our personnel cost, since this cost was already incurred by the government and the focus was on additional costs. However, in order to motivate the computer-assisted CDSS users to use the system, a token (allowance) of US$31 was given per month to each CDSS user. Cost of computer-assisted CDSS users was therefore calculated by multiplying the number of months worked by the computer-assisted CDSS users by the monthly allowance*

**Meeting and training:** *“Training costs included all costs incurred during the various training sessions. For the period, a total of six major meetings/training sessions were held. The first meeting was a one day stakeholder meeting, in which the directors of health services, district public health nurses, midwives and other key stakeholders participated. During the meeting, the computer-assisted CDSS concept was discussed and approval and support by the stakeholders were established.”*

*“Five training sessions for the computer-assisted CDSS users were held. Each training session lasted two days. The training sessions were facilitated by a technical officer and four support staff (medical officer, midwife and two research officers). The computer-assisted CDSS users were first introduced to basic computer training sessions, as most of them were using computers for the first time. Further specific trainings on computer-assisted CDSS usage (2 trainings: pre-intervention period) and refresher trainings (2 trainings: intervention period) took place.”*

**Transportation:** *“Transportation costs were calculated as hired costs (US$0.45 per km) per vehicle rented for visiting the health centres for monitoring and supervision”*

**Equipment:** *“Equipment costs included all the equipment bought for the computer-assisted CDSS implementation and the associated costs. Six dell laptop computers (specification: 2 GB RAM, 250 GB hard disk drive, Duo core) were purchased and the computer-assisted CDSS software was installed on each of them. These laptops were distributed to each of the six health centres. One additional laptop was bought and the software installed on it, and it served as a backup laptop. In addition, six computer tables and chairs were bought and distributed to the six computer-assisted CDSS health facilities to support computer-assisted CDSS users’ work.”*

**Questions:**

1. Which of the costs in Table 3 above represent implementation costs, and which are intervention costs?

2. Allocate the various implementation costs described in Table 3 above into the ERIC framework categories using the table provided below.

3. Are there any additional costs described in the paper (or the extracts above) that are not captured in Table 3?

**For discussion:**

What costs did you have difficulty classifying? Why?

**Identifying implementation costs using ERIC categorises**

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| **ERIC Categories** | **DALABA 2014** |
| **Engage Consumers** |  |
| **Use evaluative & iterative strategies** |  |
| **Change infrastructure** |  |
| **Adapt & tailor to the context** |  |
| **Develop stakeholder interrelationships** |  |
| **Utilize financial strategies** |  |
| **Support clinicians** |  |
| **Train & educate stakeholders** |  |
| **Provide interactive assistance** |  |