Enhancing Equal Opportunities and Benefits for Women and Men in Implementing Hospital Management Information Systems

AfyaC4C | Tanzania

| INTRODUCTION

This case study presents the work of a Tanzanian NGO specialised in the implementation of electronic Hospital Management Information Systems (eHMIS) in Tanzania's Lake Zone region.

The study shares good practices derived from the lessons learnt after implementing eHMIS systems at three different hospitals. It also outlines the conditions that are required to implement the good practices effectively. The study ends with suggestions on how to further enhance equitable participation and benefits for women and men alike.

1.1 The context

Afya Connect4Change Lake Zone (AfyaC4C) is a local Tanzanian NGO established in 2010. It provides ICT services to 20 health facilities situated along the Lake Zone in the northern part of the country. These facilities are run either independently by faith based organisations (FBOs), or in partnership with the government of Tanzania.

Thus far, the bulk of AfyaC4C's work has been in software installation, user training, monitoring progress, and system maintenance and upgrades. These processes have been guided by a change management plan that was developed based on AfyaC4C's and IICD's experience in implementing eHMIS systems. Individual change management plans are tailored to the needs of a particular health facility together with the facility's management. Capacity building interventions in the health facility are provided for the staff in each of the outpatient and inpatient departments, separating the different hierarchical levels to avoid sentiments of superiority and inferiority[1].

In 2006 in response to local needs, Tanzanian IT specialists with the support of IICD developed *AfyaPro* - an electronic Hospital Management Information System (eHMIS). This eHMIS is a software package that offers patient and health records management as well as hospital administration features and is based on the Tanzanian Ministry of Health guidelines. The different modules in the system enable staff to register patients, record examination results and diagnoses, bill patients, dispense drugs, monitor stock, manage laboratory requests, manage results and costs, generate reports at all levels (including administration), and manage projects. The system is fully interlinked from the moment the patient comes into hospital up to the time he or she is discharged - both for outpatients and inpatients. Successful use of this eHMIS results in offering more efficient and effective health care as well as increasing finances available to the facility through reducing fraud and increasing income. AfyaPro can be used by small, medium, and large hospitals.

The good practices and conditions for success found below were identified through interviews and focus group discussions held with 20 women and 23 men who directly used or managed the HMIS and who belong to different departments in three selected health facilities. One small health facility was located at the outskirts of Mwanza City and two were district hospitals in two different districts in the Mwanza region. Additionally, the practices and conditions build on the experiences of AfyaC4C staff, of which 4 women and 5 men participated as respondents in the study.

1: Not all facilities included in the study had both outpatient and inpatient departments, and modules installed at particular facilities reflect their organisational set-up.

2. GOOD PRACTICES THAT PROMOTED EQUITABLE PARTICIPATION AND BENEFITS OF BOTH WOMEN AND MEN

This case study identified three main good practices, all regarding AfyaC4C's working approach in the health facilities. They are presented below with the gender-related changes that can be attributed to the implementation and use of the eHMIS.

💬 Good Practice: designing inclusive capacity building processes and creating a safe environment in which both women and men can participate

In order to implement the eHMIS successfully, training of key users amongst staff is the first requirement. AfyaC4C's main focus is to ensure that each member of the department is equipped with the necessary skills to enable them to use the system effectively regardless of their age, experience, or sex. Building on a needs assessment, AfyaC4C designs the content of the training to address the individual job function requirements as well as the needs of the specific department, taking account of the department's role within the overall context of the health facility. This approach was highlighted by case study respondents as ensuring that both women and men were included in the training from the start based on their individual job functions and responsibilities.

Participation in training does not automatically mean that trainees learn or become willing to use a system. AfyaC4C created a friendly learning environment by joining colleagues and co-workers of the same department in the same training session. This caused the participants to see each other as peers in learning to adopt and integrate the ICT solution, starting from the ground level and with a joint goal to improve. The AfyaC4C staff approached the training participants in a supportive and tailored way as they were very familiar with the inner workings of Tanzanian heath facilities and the roles and tasks of individual facility staff. AfyaC4C's Executive Director had trained his staff in basic facilitation skills to support their delivery of training sessions focusing on, for example, how to support people who had little previous engagement with ICT and basing training design and delivery on the belief that everyone is capable of learning regardless of their age, sex, or experience.[2]

Both male and female staff who were interviewed in the hospitals felt that the 'safe' environment and respectful support helped them to participate without inhibition, ask questions, and challenge and support each other. It also created a supportive environment for those who had never seen or touched a computer, of which many were women of all ages and older male staff. With this environment, even they were able to become more comfortable, gain courage, and learn. According to AfyaC4C employees, female staff (both young and old) participated more actively during the basic ICT and eHMIS training activities than men did. They also more commonly expressed their excitement and enthusiasm for learning IT-related skills. This was contrary to the initial expectations of the AfyaC4C team. The possible reasons given for this were:

I. Women felt relaxed and comfortable to express themselves and learn. As one middle-aged female staff member said **"I was learning with people I knew so I was not afraid to ask for their help whenever I got stuck"**.

II. The fact that some of the women were using a computer for the first time whilst men (mostly the younger ones) were more likely to have at least used one before.

III. Stereotypes around typical behaviours of women and men in the region where women are known to be more expressive than men.

Broadly speaking, when this all-inclusive approach to designing and conducting training was coupled with the creation of a safe learning environment, improvements were made in the equitable participation and benefits-taking for staff of both genders. The training approach not only resulted in staff being skilled in using the ICT tools related to their work, but also led to changes in organisational culture at the health facilities. More specifically, it contributed to enhancing shared values and cooperation amongst staff which in turn positively influenced gender relations on the

work floor. Such changes in organisational culture and staff relations are evidenced by the following points that came forward during the case study focus group discussions and interviews:

1. The training at the department level seems to have enhanced a sense of ownership from the staff of each department and a desire to play their part so that the entire system works well. Staff see problems that arise from using the system as departmental ones, not as problems of particular employees.

2. Building on this sense of common ownership, both female and male staff said that they support one another whenever they face challenges. Contrary to the manual system, the eHMIS requires staff to consult others when they are stuck or not sure how to record something. It has increased teamwork and mutual respect for each other as one male respondent said: **"whenever I struggle with something, I can approach my colleagues-even female ones for help because they may have an idea on how to solve the issue"**. Requesting help from the other gender shows a change in the attitude of men towards women, because traditionally, the respondents reported, men in this area are 'supposed to know everything' or 'not show

that they do not know something'.

3. The overall effect of this inclusive approach to training on the eHMIS and other ICT skills and creating a safe space for participants to learn together is that the facility staff are more confident about their work. All staff members that were interviewed reported that the eHMIS system has made their work easier and more exciting.

4. In one health facility at least, decision-making in the regular departmental meetings is more consultative than it was before the eHMIS-related training activities took place.

5. The facility administrators, both male and female, shared that they are able to keep the facility operating efficiently by **"observing what is going on from the computers in their offices"**, and that the facility revenue has increased greatly. The changes are seen to have boosted the image of facilities as community members have, more than previously, expressed their trust in the hospitals. Staff from two of the three facilities reported that patients and community members openly express admiration for the female staff who work with computers. Such acknowledgement is rare and thus made them happy, particularly the older female staff members.

Good Practice: encouraging health facilities to institute on-going learning opportunities and sustainability mechanisms

A key component of the change management plans developed by the health facility and AfyaC4C was to have each facility introduce and implement internal mechanisms to enhance sustained use of IT without external support. The precise mechanisms selected differ to fit the particular context and resources of each health facility. Where these mechanisms were in place, they were also seen as an avenue to enable staff who displayed interest and the ability to get more exposure to IT and to develop more technology-related skills that are put to use within the facility. According to one hospital administrator, it was realised during the process that such exposure was benefitting women more and that women seemed to be taking more advantage of the opportunities provided.

The internal mechanisms for learning and embedding the use of ICT that worked well in the facilities studied were the following:

- Designation of an individual in each facility who supports the eHMIS system and works with the AfyaC4C team. Staff who were trained or had prior knowledge about the *AfyaPro* system took up the role – in the three facilities this IT support role was taken up by two male and one female staff member. The three IT staff highlighted that these roles were a big responsibility but that taking them on has strengthened their self-confidence and they feel valued in the facility.
- Inter-departmental peer learning and support: although the initial training included staff on a departmental basis, subsequent learning and support mechanisms were set-up on an interdepartmental basis bringing together all key users of the eHMIS system to exchange experiences and provide peer support. Facilities that already had internal meetings in place included the open eHMIS/IT experience sharing structurally on the agenda thereby ensuring that the experiences of both male and female staff were brought forward and included in the reflection.

- One facility made a provision for further IT skills development after the initial training by encouraging those who were interested in approaching the staff in charge of IT for further support.

Looking at its effects, we can call this institutionalisation of learning opportunities and support in the health facilities a good practice to enhance equal opportunities and benefits for men and women. These benefits go beyond developing new skills only and were reported to affect staff members' sense of personal worth positively. The effects that were highlighted included:

1. The female IT staff member (a nurse by profession) who was appointed in one of the facilities, visibly developed more interest than other staff and was able to receive more training about the IT systems beyond her department's needs. Currently, in addition to her role as a senior nurse, she provides support to her colleagues on managing the eHMIS. The role she now plays has been recognised by all her colleagues including the management who refer to her as "*our expert*".
2. The inter-departmental peer learning and support has offered both male and female staff the opportunity to practice further, learn from each other, and gain more knowledge and skills in using IT tools. Such mechanisms seem to have benefitted especially the women, particularly the older female staff because they previously had the least amount of exposure to IT. In contrast, several male staff, particularly the younger ones, did not feel a need to learn more and stated that **"work and private life should not be mixed, therefore all we are required to do with computers in the facility is use AfyaPro to facilitate the work"**. It is also possible that men could have taken advantage of the provision and benefitted but were not willing to share this openly. As mentioned earlier, culturally, men in this region do not want to show that they have had to learn something new.
3. The peer support further fostered better working relationships and respect for each other. Male staff said they could rely on female colleagues for support and vice versa. The IT staff in one of the facilities shared: **"sometimes when I am overwhelmed with work, I find it easier to call on some of my female colleagues for support because they provide it willingly and I know they are capable of managing the issues."**
4. The provision for continued learning seems to have given women in the facilities an

opportunity to gain more skills and exposure to IT, which they feel they otherwise would not have had. Some spoke excitedly of the benefits in their personal lives such as the ways they had diversified their knowledge, skills, and use of IT beyond AfyaPro. These benefits, they maintain, generated respect and admiration from other people and increased their confidence and self-esteem. One young woman shared; **"I did not learn computer, and I was not here when the staff were trained. When I came to this facility I was helped to learn AfyaPro, but I also noticed I could learn more from the IT staff and he helped me. Now am able to help my younger brother with his assignments and a doctor in my neighbourhood. This doctor used to ask for support from the IT staff but now he asks for me to help because I am nearer and capable. My friends envy me, but in a supportive way, they say I am lucky."** For some of the women, particularly the older ones, the AfyaPro training demystified the

computer for them and inspired them to improve their skills in using one. One elderly nurse shared with confidence: **"I learned how to use computer at my old age and I am proud of it. I knew about computers and had a desire to learn, but I thought it was only for those who have studied in recent times and that it is very difficult to learn. Now I have the basics and I am very proud of myself, I have brought my family, my children and husband, to the hospital to see how I can do it."** The administrator of the facility in which this female staff engagement was particularly prominent also stated that he had observed an increase in the number of female nurses who enrolled for further studies after the AfyaPro related training. According to him, they seem to have a sense of self-belief and more confidence that they can comfortably use the computer in their studies, as now it has become a requirement in education at their level.

Good Practice: ensuring management buy-in, ownership, and accompaniment of the implementation strategy and process

Since the successful implementation of the eHMIS in the different health facilities hinged on a change management plan, the AfyaC4C team began by creating awareness within the facility's management team and provided opportunities for them to share their questions and needs. The plan's main components included preparing and designing the infrastructure according to the needs and resources of the institution, capacity building for all the key users, and regular update meetings between the management and AfyaC4C. These update meetings enabled joint monitoring of the process and change of implementation plans where needed. They also included feedback and joint reflection between the AfyaC4C team and management about the progress and performance of the different users and departments. This approach, which stressed advice giving and coaching, gave management a sense of ownership and enabled them to make decisions about how the facility uses and benefits from the system. Prior to this, management might not have felt qualified to take on such a role.

This building of ownership and promotion of management's active role in the implementation process is also a good practice that contributed to enhancing equal opportunities for both genders. The manner in which the management of each facility oversaw the implementation process and adhered to or adapted the change management plan influenced whether and how the staff (of both genders) was able to participate and

benefit actively from the use of the ICT tools. Examples from the study include the links that were made to staff placement and opportunities for further exposure and skill building for both men and women. Only with management's close involvement in the implementation process were they able to note (together with AfyaC4C) how individual staff performed and which staff could benefit further or could be promoted to support the facility better in the use of the eHMIS. In one facility for example, a male staff member was promoted from keeping stock in the pharmacy to being in charge of IT. Another example was of a woman who was a laboratory attendant when she received the training and was then promoted to managing the IT system because of her exemplary performance. Eventually, with the support of the management team and AfyaC4C, she was trained as a 'trainer of trainers' to also support the implementation of eHMIS systems in other facilities. She went on to do a degree course and is now on the management team of the facility as the head of quality control.

Differences in the management style and IT-related vision of hospital leadership was seen to translate into the extent to which real opportunities existed for staff's further development in the use of ICT. The management team of one facility noted the need for staff to gain more exposure to the use of ICT and in addition to providing them with an opportunity for further IT exposure internally, they instituted

a loan scheme through which staff could buy and own personal laptops. Both men and women were reported to have bought personal laptops through the scheme. Owning the laptops again had an additional influence on the personal lives and confidence of the staff, as one young female nurse shared; **"I learnt AfyaPro after I had my computer certificate training though I had not practised much. AfyaPro inspired me to learn more - I realised I could do it, I bought my own laptop, and now I am able to use the internet to find information, exchange ideas with others, and even play music in my home where we have no electricity. My family is very proud of the fact that we have a computer in the home"**. One elderly nurse also highlighted; **"After exposure to the computer through AfyaPro, I decided to learn more and so I bought my own laptop. My children and husband respect me because I have learnt to use a computer at my advanced age. We use the laptop at home and I am able to help my children with the basics"**.

The AfyaC4C change management plans did not include considerations to address gender gaps or specific gender needs of women or men. However, during implementation, some management teams became aware of emerging inhibiting factors or positive triggers and acted on them. In one of the facilities for example, male participation and attendance in eHMIS training was poor. Some of the male staff complained about the length of the training sessions and the lack of allowance. After AfyaC4C had shared this challenge with the management during a feedback meeting, the management decided to '*re-envision*' the men about the need for the training in the context of the institution and took a strong stance by writing official letters urging them to attend the training. When asked what prompted them to do this, the facility administrator answered that **"sometimes men in this area respond best when there is an order from above, they respect that more than being encouraged and convinced to do something."**

3. CONDITIONS AND PROCESSES THAT FACILITATE THE GOOD PRACTICES

In relation to the good practices described above, the case study showed two factors to be critical for success. Both factors related to organisational aspects of the health facilities that were involved.

Critical factor: Committed leadership that inspires a shared vision and ownership of the ICT solutions

Leadership commitment to the entire process was a key driving factor in enabling equal opportunities for male and female staff to participate in and benefit from the integration of the eHMIS and other ICT related tools. In the hospital where equitable opportunities and benefits were especially prominent, the (male) leadership had held special sessions with all staff in which they sold the vision of how the ICT tools would benefit the facility and staff's professional and personal lives. It appears that if the leadership style with staff is more participatory, issues related to ICT are better addressed and more ideas for improvement are brought forward. An example of this would be weekly meetings in which the experiences and challenges of staff relating to the use of the eHMIS and ICT in general are openly discussed. The same leadership also reached out to the community and other key stakeholders through local radio talk shows when they were about to introduce the eHMIS. Female and male staff employed in that facility both shared that this public announcement challenged them to commit themselves to the process and hold one another accountable. It also inspired them to encourage and support each other particularly during the training sessions, although women attested to this more than men. The leadership in this facility continues to play a very active role in the on-going monitoring of staff progress as they use the eHMIS and works closely with the IT department on addressing arising issues. This close involvement also allows them to know who is doing well and who is encountering challenges.

One hospital's leadership highlighted that **"many of the female nurses' performance is impressive and we find ways of encouraging them even more"**.

On the contrary, in situations where the leadership role in managing the eHMIS did not stand out as strongly, it appeared to be difficult to inspire staff ownership and commitment. In one such facility it appears that staff members are simply fulfilling a task, as both men and women stated **"we only use the computers for AfyaPro, and that is it"**. Organisational development changes, such as increases in peer cooperation or staff development, are much less prominent. Where the leadership seemed to be focused only on what the eHMIS has done for the institution in terms of efficiency gains, there was an apparent lack of awareness on how individual staff of both genders could be participating in or benefitting from exposure to ICT in general.

Critical factor: a conducive internal working environment in the health facility

The effectiveness of implementing an eHMIS in a health facility, especially as a process that is gender-responsive, is greatly influenced by internal factors within the facility which need to be recognised and addressed. AfyaC4C noticed, for instance, the hindering influence of conflictual relationships that exist amongst the staff, including tension between higher and lower cadre staff or apathy and a lack of conviction amongst some staff about the work they do and the facility as a whole. In instances where the internal working environment was relatively healthy, the situation was seemingly the opposite allowing opportunities for noticing differences in needs amongst different genders. Having experienced such differences in organisational working environments, AfyaC4C states **"We now know that implementing an eHMIS is not a mathematical formula, it is not what you see on the surface. There are deeper issues in the facilities, especially around relationships that affect its success and one has to make time for them."**

4. RECOMMENDATIONS TO FURTHER ENHANCE EQUITABLE PARTICIPATION AND BENEFITS FOR WOMEN AND MEN

Based on new or confirmed insight derived from their participation in the case study, AfyaC4C formulated some lessons learnt related to the implementation, use, and management of eHMIS by the health facilities that they feel will further enhance equitable participation and benefits for women and men. These include:

- ***Ensuring gender awareness at both the implementing organisation and its partners:*** an implementing organisation needs to be aware of the probable existence of different gender needs from the start of a programme. This must be reflected in its strategies and implementation and monitoring plans so that mechanisms and means to bring to light, analyse, and address such different needs and opportunities can be established. Although AfyaC4C implemented its support activities to health facilities on the basis of an all-inclusive approach, not all AfyaC4C staff were equally aware of such gender-related differences themselves. Gender issues that arose in the process were either not noticed or took them by surprise. Some examples include the eagerness and willingness of women to do as they were told compared to men who more often resisted eHMIS-induced changes, elderly women learning quickly, and women generally taking up an interest in learning computer skills beyond what was required to use the AfyaPro eHMIS. AfyaC4C staff appreciated that their own lack of gender awareness could have affected their ability to provide maximum support for both men and women in the facilities. This self-reflection by AfyaC4C indicates that such organisations would do well to improve further their own competence in gender-responsive programming. Ensuring that all staff have this competence will enable the organisation to support its partner facilities, facilitate meaningful conversations to bring gender issues to light, and jointly identify actions to address them. It will also be able to support the partner facilities to develop appropriate monitoring and evaluation tools that capture comprehensive gender-related data for analysis.

- ***Carrying out a participatory gender-sensitive assessment*** before starting to implement the eHMIS, exploring gender inequalities in the light of key facility processes, and associated roles and responsibilities. Such an assessment should look beyond the obvious including the quality of existing professional relationships at the health facilities, participation in decision-making processes, and access to facility organisational development activities including who benefits from such access and involvement. Conducting such an assessment initiated by the implementing organisation would enable the facility to surface and address areas that could potentially influence the implementation of the eHMIS. It would further provide a conducive environment to raise awareness on, and enable response to, gender issues throughout the implementation and change management process.

- ***Institutionalising organisation-wide gender-responsive learning processes within the implementing organisation and its partner facilities:*** such processes will enable the organisation to bring to light and address key issues (including gender issues) in a systematic and continuous manner. Having its own effective gender-sensitive learning systems, will enable the organisation to have the capacity to support its partner facilities to develop and institutionalise their own. Although AfyaC4C holds staff meetings every two weeks to share experiences from the field and to plan for follow-up activities, they acknowledged that if these meetings had been designed to include learning with gender lenses, their responses to some of the experiences would likely have been different. The learning processes would have enabled organisation-wide and deeper analysis of issues leading to yet more inclusive and sustainable solutions. For instance, when they experienced challenges with the level of male participation in some facilities, participatory reflection and learning around the issue would have provided an opportunity to bring to light underlying causes for this behaviour and could have brought out more appropriate and less directive behaviour change focused actions to take.

- *Inter-facility gender-focused learning interventions for the partner facilities* that regularly bring together key users and IT staff from different facilities implementing eHMIS systems in joint reflection sessions, will provide opportunities for collective responses to emerging gender issues. The learning forums would also be able to offer a positive challenge and motivation to staff involved with similar work in different hospitals and health facilities. AfyaC4C was not able to hold such shared learning forums consistently but they believe that the few that were held had an impact in terms of more widely sharing knowledge acquired through implementation. Purposefully including gender issues on the agenda of such learning forums and feeding such joint reflection with data from the work floor would ensure that gender issues are brought to light and discussed as an on-going aspect of change management.

ABOUT IICD

The International Institute for Communication and Development (IICD) was a non-profit foundation that specialised in Information and Communication Technology (ICT) as a tool for development. IICD was mainly active in sub-Saharan Africa and Latin America, where we brought about technical and social innovations that created and enhanced development opportunities in economic development, agriculture, education, governance, and health.

ABOUT GRF

The Gender Resource Facility (GRF) provides expert advice, technical assistance and knowledge services on gender equality and women's rights to the Dutch Ministry of Foreign Affairs, its embassies and partners.

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