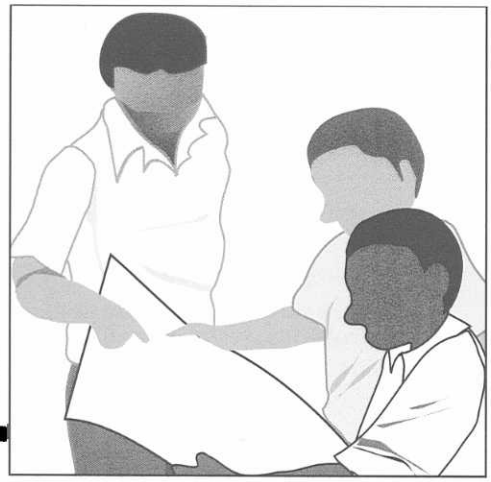


10. PROJECT EVALUATION

THE NEED FOR FEEDBACK

Each project has a cycle. once the building has become a functioning health facility, the process starts all over again with a new planning cycle. At the start of each project it is important to take account of lessons learned from previous projects. What worked well? What went wrong? How can improvements be made in the project initiation, organisation, design, commissioning? Were the results intended really achieved? Did the staffing of the new facilities go according to plan? Are the users satisfied with the facility? Does the facility respond to the expressed needs of the community? Each aspect has to be reviewed during the evaluation. Receiving such feedback can also be important when making the necessary adjustments in the present facility. Without this feedback, planners and architects will make the same mistakes over and over again.

HOW TO ORGANISE AN EVALUATION

Here we give an outline for the evaluation of the building component of a health programme Please note that this is not the overall evaluation of the programme, which has to look at all inputs, outputs and outcomes in the sector. Evaluation of the building component can be part of such an overall evaluation

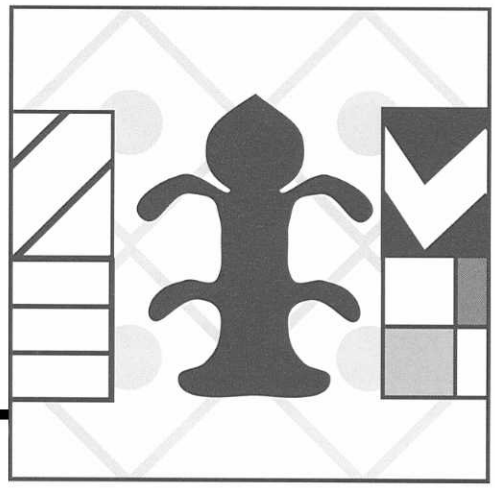
Evaluation of the building component can be organised according to two methods, which complement each other. The first is the evaluation done during regular supervision visits to the facility; the second is a more extensive study. In regular visits to the facility, a supervisor/planner needs, among many other things, to receive feedback from the health workers about the conditions in which they work, including the condition of the actual facility Two aspects of the facility deserve particular attention: its condition and its suitability. Leakage, breakdowns of equipment, poor ventilation, and broken windows all need to be reported to the appropriate level; the supervisor needs to note where the building as a whole or certain parts of it do not well suit their function. Working spaces may be too small, too dark, poorly located in the facility, and so on. Only when such issues are systematically registered, can these be taken into account in the next planning cycle for civil works.

Before embarking on large construction and rehabilitation projects, a more thorough evaluation of previous experiences is needed. This will often require more time than regular staff has available. Because of this the sector tends to resort to consultants. It is important that the evaluators (consultants or others) are independent, to prevent biased results, and that they are well skilled in their task, to give their conclusions and recommendations the necessary weight in discussions with officials of the Ministries. The investigative part of such an evaluation may well have two components: analysis of the data with regard to the facilities, and site visits in which interviews with those immediately involved are included.

This analysis of the data includes a review of the supervisor's reports, a review of evaluation reports of other programs of the health sector in which the facility is enrolled, and a calculation of the recurrent costs of the facilities. It further includes an analysis of the documents which registered the whole process of the construction/rehabilitation and a comparison of the original plans with their actual implementation. Three aspects deserve particular attention during such a analysis: time, costs, and the role of each partner. Were there delays? Were some steps unexpectedly rapidly implemented? Were there cost overruns? Were some steps cheaper than expected? Did each partner fulfil his obligations? Were there conflicts during the building process? A description of the causes of any discrepancies between the plan and the actual implementation will then lead to recommendations for improvements in the next project cycle.

An evaluation is incomplete without a survey of the people who use the facilities. The main users are the health workers and the patients/clients. Such a survey is of special interest because of gender issues. While the world of constructors, architects is still very much a man's world, most users of health facilities are female nurses, and women and children. It would be appropriate to look at the working conditions for staff, and at the improvements in comfort which the new facility means to them and to the patients. One would look for improved efficiency in the delivery of services and for general user satisfaction with the new facility. The data can be gathered from interviews and should be complemented by actual statistics. To economise, the data could be gathered as part of a more general survey which studies the quality of care. Such an approach puts the data about the building in the context of the general delivery of services. These data will give health planners indications of particular (felt) needs and the interests of the workers and clients.

Timely dissemination of the results of the evaluation and an open discussion of the recommendations of the evaluation report among all the people involved in the planning process for new facilities is extremely important. Most mistakes in the planning of new facilities are made because of poor communication between the partners involved. Lack of co-operation between the partners often stems from limited understanding of all the aspects involved in making a building a functioning health facility.



11. EPILOGUE

MISTAKES—AND HOW TO GUARD AGAINST THEM

There is nothing exceptional about making mistakes. Most progress is made by people who risk making mistakes. The important point is to learn from the mistakes that we and others have made. Making a first mistake can be an expression of over-ambition, excusable perhaps through lack of experience. Making the same mistake again may demonstrate inability to learn or unwillingness to change.

This concluding chapter describes some of the mistakes we have seen during our work with health construction projects in the southern Africa region. The idea is to stimulate a discussion about how the mistakes came about, what could have been done then to avoid them, and what can be done now to avoid repeating them.

We have camouflaged the location and concealed the identities of those involved because we would like to keep the discussion not on uselessly placing blame, but on the important issues that we can do something about.

COUNTRY A

No maintenance has been carried out on hospital air-conditioning systems for the last ten years but architects still design operating theatres without windows and with high tech air-conditioning filter systems

The country has 14 hospitals. In every single operating theatre the air-conditioning system was in bad repair. If the systems worked at all it was usually the filters which gave the biggest problems (dirt and fungi sometimes 1 cm deep on both sides of the unwashed filters) In the best situation, the plant did not work at all and the staff opened the windows to reduce the temperature.

"Technical suicide" says chief matron
"We must plan for the future" says minister of health

No-one was employed to maintain the air-conditioning systems; consequently these were becoming absolutely dangerous.

When a hospital was constructed in City X, the operating theatre suite design was taken straight out of European Hospital Building Notes, so providing theatres without windows and with very advanced air conditioning plants with expensive non-washable filters (not with split-units as in other hospitals in the country).

Within a year, these filters were destroyed and hanging in the air-boxes. At about the same time, the plant was turned off because of a lack of spare parts

The hospital is situated in a very hot area on the edge of the desert. With no air-conditioning or ventilation plant working, and no windows, conditions in the theatre, only one year after commissioning, can be imagined

COUNTRY B

"That liquid falling on your head is urine" *says head of operating theatre department*

A 600-bed hospital requires refurbishment for USD 8.5 millions only 10 years after official opening

- This high-prestige project obviously suffered during its development from a serious round of cost-cutting That is a charitable explanation
- Ten years after completion, the building is in a very bad state of repair.
- Flats roofs of building paper are leaking very badly, and much equipment in the floors below has been destroyed.
- Thermoplastic floor tiles, expanded polystyrene ceiling tiles, softwood doors and windows (completely inappropriate when installed) now require 90% replacement.
- Seventy percent of all sanitary fittings are damaged and useless.
- Waste pipes are in PVC and leak badly, allowing urine to fall through the ceiling to the clean corridor to the Operating Theatre Department (and to nearly everywhere else).
- The steam reticulation leaks badly. Is a central steam plant really required in African hospitals?
- The medical gas reticulation leaks. The hospital uses 296,000 cubic metres of oxygen in a year, although the British standard for a hospital of the same size would be about 42,000 cubic metres It is unlikely that Britons require less oxygen.

COUNTRIES C and D

"We have a different social structure to Eastern Europe" *says observer*

Donor-funded psychiatric hospitals are completed but there are no patients

A consultant sent out by WHO to southern African countries to advise on psychiatric health services quickly established that in Countries C and D an increased number of in-patient beds was required. This finding did not take into account modern methods of psychiatry or the fact that social and family structures in Africa differ significantly from those in his own country.

As a consequence of his recommendation, in both countries significant investments were made by donors in building psychiatric hospitals and setting-up psychiatric departments in existing hospitals. These are today appropriately staffed but very much under-utilised.

In the next country he visited, the same consultant established a need for over 350 acute psychiatric beds at central level, plus several smaller psychiatric departments at district level There was to be a total of over 600 new beds

'Then luckily' (said an official) 'the man died'. He was replaced by a younger consultant, who helped to establish an efficient district psychiatry care service in the country by mobilising the village health workers, and restricting the need for new beds at central level for dangerous and chronic patients to a total of 80, the appropriate provision.

COUNTRY E

Impossible to achieve correct hygienic conditions in new maternity hospital

- The hospital staff complain that very little attempt was made by the designers to find out about the procedures used in the country. They say that important activities, particularly around the sterilising process, can in no way function satisfactorily.

"The donor never asked about our work procedures" says member of staff

- This indicates problems of communication with local users at two different points of time:
  - During formulation of the Brief, too little attempt was made to understand local practices.
  - During handing-over and commissioning, too little was done to explain to the users the ideas on which the project was based.

- It seems that no-one really bothered to relate the project to the traditions and practices of country in which the project was situated.

COUNTRY F

The 300-bed high-tech orthopaedics tower block in a 2,500-bed low-tech single-storey hospital is not sustainable says government

"We thought that if we showed how things are done in Europe, people would want to follow suit" says donor

The central hospital is made up of 60 bed wards The sides of the rooms are open above cill level. The environment is pleasant and cool, and certainly very easy for the nurses to supervise. This is very different to the experience of Northern Europe.

The multi-storey orthopaedics surgery block built by the donor agency had maximum 6 beds to a ward, and consequently required a 4 times higher ratio of staff to patients.

This new block used a lot of imported high technology. Even the lamp sockets came from Europe and were not compatible with those locally made Consequently a separate technical service department with its own workshops had to be established for the new block. (It now had a larger technical staff than the rest of the entire hospital).

After the donors withdraw from the project there is no chance that these higher levels of provision can be sustained.

COUNTRY G

All x-ray machines were useless within two years of delivery due to lack of spare parts

"Even the installation instructions and parts lists are untranslatable" says chief engineer

This is self-explanatory. The country had for many years satisfactorily used well known brands of X-ray equipment. Service and spare parts were readily available and local technicians could easily keep the machines in operation. It would have been reasonable to continue with the same policy. Donors thought otherwise.

COUNTRIES G, H, J, K AND L

"The water quality in Africa should be improved" says European Technical Adviser

Mains water clogs up hi-tech autoclaves so that within 6 months most are destroyed and useless

Generally the water supply in most African countries is hard and muddy and quickly clogs the narrow copper pipes used in the steam-generation section of modern autoclaves. These expensive machines then become disposable items

Simpler units do not have this problem. However, it is very difficult to get donors to supply these. Donors, like politicians and senior doctors, believe that the degree of sterilisation is higher in the expensive machines. In reality these very soon make sterilisation impossible

COUNTRY M

"We have a lot of unemployed pharmacists in Europe" says donor representative

Pharmaceutical stores and production units designed for a staff complement of 35 even though the national norm is only 4 workers

This was a huge department with very special facilities (sterile production room with laminar flow air-conditioning, staff room and change rooms for 35 people). The Government is now trying to convert these buildings into other hospital departments such as OPD and Physiotherapy.

COUNTRY N

"We have also a lot of unemployed technicians" says donor
"That figure is more than the total number of technicians employed in the whole of the country's health services" says government official

Newly-completed 350-bed hospital must have 25 technical service staff or correct conditions will not be sustained, claims donor

Since this hospital was built by a donor, everything was imported from Europe, even the thermoplastic floor tiles (different dimensions from locally-produced tiles). All spare parts and service had to come from Europe.

Two specially-trained technicians were looking after the autoclaves. Even after the provision of water softeners, the autoclaves still broke down regularly

CAUSES OF MISTAKES

These mistakes —and others like them— can be collected in three different groups:

1 Inappropriate materials and technologies have been used

2 Interventions do not relate to local traditions and customs

3 Lack of professionalism in project design and implementation

From this we may deduce that:

- The designers did not bother to find out which materials and technologies were appropriate
- Dialogue with the users has not been adequate
  - lack of time
  - language problems
  - no respect for local expertise
- Local politicians and chief doctors want the technology, appropriate or not
  - high level of political ambition
  - cannot accept "second-best"
  - prefer technical to human solutions
- Donors often have their own agenda such as to export their own technology (usually high-tech)
- Donors don't always spend enough time thinking about local traditions and customs
- Governments are not always able to influence donors
- Donor government aid officials prefer not to work with professionals because they are difficult to supervise
- Aid activities are a competitive business for specialist aid contractor organisations and professionals are too costly
- Recipient governments are weak in demanding proper standards, and in carrying-out supervision
- Professionals are not always interested in working in or dealing with difficult conditions

These lists are a good start. What about the possible consequences of these mistakes? These are again wide-ranging.

CONSEQUENCES OF THE MISTAKES

- The desired results are not obtained
  The project does not answer acknowledged needs
  Population does not utilize the facility
  The users do not understand how to utilise the project results
  The users do not understand the technology included in the project
  The project is not completed because of costs overruns
- The results are obtained but are not sustained

  Breakdowns caused by :
  Problems in maintenance
  Absence of spare parts
  Irregular water and electricity supplies
  Users not trained to use

  Sustaining the results require resources which are not available
  Manpower
  Finance

Other conditions for sustaining results are not available:
No functioning referral system
No political interest in using the results

- The results are sustained but require too many recurrent costs
  Number of staff required
  Need for raw materials
  Need for fuel
  Increased utilisation by population
  Increased needs

For now, the most important issue is to discuss how to avoid these mistakes in future.

RECOMMENDATIONS FOR AVOIDING MISTAKES

- Involve the users at all levels in project design
- Be aware of the implications of using inappropriate technology
- Make detailed feasibility evaluations and investigate the recurrent costs implications of the project proposals
- Reasonable sustainability of the project results should be a prerequisite for project consideration
- Insist on total professionalism from everyone at all times.