TELECOMMUNICATION DEVELOPMENT BUREAU

ITU-D STUDY GROUPS

SECOND MEETING OF STUDY GROUP 1: GENEVA, 30 AUGUST - 3 SEPTEMBER 1999
SECOND MEETING OF STUDY GROUP 2: GENEVA, 6 - 10 SEPTEMBER 1999

FOR INFORMATION

Question 14/2:   Fostering the application of telecommunication in health care. Identifying and documenting success factors for implementing telemedicine

STUDY GROUP 2

SOURCE: RAPPORTEUR FOR QUESTION 14/2

TITLE: REPORT OF THE RAPPORTEUR'S GROUP MEETING IN DAKAR, 6-7 MAY 1999

_____

Abstract:

This documents provides an account of the meeting, in which the following items were discussed: Sustainability, Standards, ITU projects, Pilot projects, Global directory of telemedicine suppliers, Preparation of the Second World Telemedicine Symposium, and Work Plan.

_____

Contact point: Mr. David Wright, Inmarsat, London, Tel. 44 171 7281203/Fax: +44 171 7281778/ e-mail: *david_wright@inmarsat.org*

1. Introduction

The Rapporteurs Group meeting was held in Dakar at the kind invitation of Sonatel and the Conseil de l'Industrie. The meeting was attended by representatives from the Burkina Faso, Côte d'Ivoire, Guinée, Inmarsat, Senegal, Tanzania, Thomson CSF, as well as ITU BDT Secretariat Geneva and the ITU office in Dakar. The work of the group benefited from the presence of Dr Mamadou Gueye, co-ordinator of telemedicine in Senegal, as well as from visits to the Hopital CHU Fann and to two rural health care clinics.

2. Agenda

The Agenda (Doc 001) was adopted without amendment.

3. Sustainability

After an introduction and presentation on document 002, "Sustainability of telemedicine in developing countries", the group agreed it should be further amended taking into account the following:

3.1 Factors affecting sustainability

The group noted that among the factors affecting the sustainability were:

* the different types of telemedicine applications and which applications were most appropriate in particular countries;

* the need for support from governments, telecom operators, manufacturers;

* the trend towards privatisation of telecom operators meant that they would tend to be less interested in supporting telemedicine projects unless they contributed to bottom line profits. Even support for telecentres could be problematic;

* the need for improved health care, especially in remote and rural areas;

* the increase in traffic generated by telemedicine. One telemedicine application could generate interest in other applications and generate more traffic than originally foreseen;

* training, which was necessary for and crucial to the success of telemedicine projects;

* the ability of users to pay for the services;

* sensitisation of policy-makers. The group agreed that it was important to raise the awareness of decision-makers and public authorities about the benefits of telemedicine.

Telemedicine should be the subject of national policy and strategy. The implementation of telemedicine services should be as cost-effective as possible, with the aim of making access to quality health care as affordable as possible, comparable to the provision of health care in urban areas. People in rural areas should not be disadvantaged by the cost of health care.

The group considered whether telemedicine services should be given special tariffs. Telecom operators should not be constrained by undue obligations. They had to make a profit to survive. It was necessary to look at the real costs of implementing telemedicine projects and providing

telemedicine services. There were differing views about government support for telemedicine. One view was that government subsidies should be avoided. Another was that a subsidy could be given for the initial capital costs.

The group considered who was the user of telemedicine services. Ultimately it was the patient and he or she (or perhaps his or her insurance company) should pay. However, in some instances, telemedicine involved distant training, in which case the hospital or university should pay for the service.

Telemedicine should not be seen as some sort of appendix or add-on to the provision of health care. It should be regarded as a tool which could help overcome the shortage of medical competencies in rural areas. An integrated approach to health care was necessary. Currently there were several university hospitals in Senegal, each with particular specialities. Telemedicine techniques could help optimise the use of scarce resources and avoid duplication of resource.

3. 2 Benefits

The group considered the benefits of telemedicine and, especially, whether there were some benefits that were particular to developing countries.

The representative from Thomson CSF presented three slides which he had prepared regarding the benefit/cost ratio of different telemedicine applications.

The group noted that telemedicine could

- be used to broaden and improve the quality of health care;

- improve the motivation of health care professionals who might otherwise feel isolated from others in his profession or discipline; the high turnover of health care professionals in rural areas was noted;

- provide distant training;

- help with research;

- contribute to regional development

- stimulate not only North-South collaboration, but also South-South collaboration;

- improve sharing of resources;

- improve diagnosis and transfer of information; some information was specific to developing countries, for example, traditional medicine;

- help in the creation of epidemiological databases and in particular early warning systems to help deal with the break-out of new and unexpected diseases (e.g., the Ebola break-out in the former Zaire)

- help improve the motivation of paramedics; providing telemedicine services would give a higher social status to paramedics;

While telemedicine had important benefits for the health care sector, it also had benefits in the telecom sector, notably, it could

- generate new traffic and revenues for operators;

- stimulate the upgrading of telecom networks in order to accommodate new, broadband data networks;

- stimulate the creation of information technology jobs;

- serve as a catalyst for the creation of new markets.

3.3 Sources of financing

The group considered the sources of financing identified in doc. 002. Other possible sources could include:

- pharmaceutical companies, who might wish to provide some training or information to doctors in regard to their products

- insurance companies, which might be able to avoid the costs of unnecessarily transporting ill or injured clients in some cases

- private hospitals in developing countries as well as those in developed countries which might want to provide a service to developing countries. The "rich" hospital might provide the capital investment for some equipment in exchange for use of their service

- local communities

- privatisation of telecom operators, where some of the proceeds could be used to finance telemedicine projects

- social security and health ministries – in the case of the former, some social security costs could be avoided if patients did not need to be transported to distant hospitals; the case of the latter, construction and funding of at least some additional hospitals might be unnecessary if telemedicine services were provided;

- multilateral sources, such as the ITU, the World Bank, the International Development Research Centre (IDRC, Canada), etc.

The group agreed that full "outside" financing of a telemedicine project was not desirable, that local financing was necessary, otherwise viability of a project was not likely.

3. 4 Sustainability

Training was important; the telemedicine system should work.

Local people had to be committed. A telemedicine project had to evolve from local needs. The telemedicine project should not be parachuted into a community.

Supporting infrastructural needs had to be taken into account. For example, unless there was an electricity grid, perhaps power from solar panels might be necessary for the telemedicine equipment.

User costs had to be kept as low as possible. Sharing a telecentre might be necessary to ensure sustainability.

The group considered whether telemedicine should be part of a universal service obligation (USO) imposed on telecom operators and concluded that it should not be. Access to telecom services was what mattered the most. There were several reasons for not including telemedicine as part of a USO. There were different telemedicine applications. Which should be funded by a USO? Telemedicine should be included in national policy, but it did not need to be part of a USO. The challenge was to show decision-makers the benefits of telemedicine, to raise awareness in the Ministries of Health and Communications.

Special tariffs could be made for telemedicine. These tariffs could be volume-based, not distance-based. Providing telemedicine through the use of telecentres would seem to be a promising way of achieving sustainability. Private telecentres have been permitted in Senegal since 1992 and have proved to be very successful. They have provided telephone, fax, and photocopying services. Phone cards have helped stimulate their use. The Senegalese experience suggests that private telecentres should be encouraged in other countries. The telecentre operator need not be a health care professional, simply someone who can assist the patient to use telemedicine equipment. The local midwife could also be trained in the use of telemedicine equipment and could assist.

Telecentres are not the only means of telemedicine delivery. Telemedicine service may be between two hospitals.

4. Standards

There are different types of standards as made clear in document 004, which was prepared by Thomson CSF. There are medical and telecom standards. Encryption and electronic signature standards are also likely to become important in telemedicine deployment. Compression algorithm standards are still under discussion.

There is a need to be able to authenticate the provision of telemedicine service by a recognised doctor and to authenticate the information which is being transmitted. Confidentiality and security of information are major issues. Under normal circumstances, a patient sees a doctor in the privacy of the doctor's office, but in telemedicine the information transmitted between doctor and patient may be mediated by others, for example, the telecentre operator. With the openness of the TCP IP Internet protocol, anyone could pass themselves off as a doctor. Some assurance needs to be given to the user.

The group recalled that the task was not to develop standards, rather it was to *promote* the establishment of standards.

The group agreed on a for ethical standards. Liability is also an issue. Safeguard measures were needed. These issues should be raised with WHO under the MoU with ITU. We should also have a liaison statement with ITU-R and -T.

5. ITU projects

Documents 5 and 6 were noted. These documents indicate that ITU is providing support to projects in Bhutan, Cameroon, Ethiopia, Georgia, Malta, Mozambique, Myanmar and Senegal. It has also sent telemedicine experts on mission to all of these countries, as well as to Mongolia, Tanzania, Thailand, Uganda, Uzbekistan, and Viet Nam.

According to document 5, the ITU-BDT plans to provide a much more detailed document in regard to the projects to which it is contributing in time for the next meeting of ITU-D Study Group 2 in September.

The delegates from Senegal provided a briefing and some additional documentation about the telemedicine project planned for their country. Everything was ready for the project. It only needed the equipment. Senegal had one of the highest maternal mortality rates in the world. It was hoped this project would help cut the rate by 50 per cent. Training, research and collaboration were also important aspects. The equipment could also be used for other applications. Sonatel has contributed some $30,000 to the project. About $100,000 was being sought from the ITU. A tender for the equipment has been issued and bidding selection is underway. Internet access was planned as part of

the project. It was envisaged that the cost to the end user of the telemedicine service would be the same as in a face-to-face consultation.

The delegate from Guinée said they had several sites in mind for telemedicine deployment in his country.

6. Report on pilot projects

It was agreed that the report on pilot projects (document 003) could include other projects not funded by the ITU. The key criterion was whether the pilot project provided a useful learning experience for other developing countries interested in establishing telemedicine services.

The telemedicine experience in Tunisia would provide a useful case study. Telemedicine had high level support, including the President and Minister of Communications, there was a steering committee, which had a plan with milestones for deployment of telemedicine service to 30 hospitals in the country. The group agreed it would be useful to contact experts in Tunisia in order to get an input for the report on pilot projects.

Senegal had done the same as Tunisia. It had established a steering committee which analysed the health needs and conditions to be met, and the applications to be developed. The steering committee reflected the multidisciplinary nature of telemedicine. Representatives from Tunisia were going to attend the Rapporteurs Group meeting, but at the last minute they were unable to come. Senegal and Tunisia had established a memorandum of understanding to share information.

There were projects in Malaysia and Bangalore which could be included in the report. The rapporteurs group agreed that it would be useful to contact still other countries, such as Burkina Faso and Uganda where telemedicine activities were underway.

IDRC and US AID should be contacted because they might have suggestions for projects which could be included in the report.

The report was not intended to be comprehensive in terms of the telemedicine experience in all countries, but it could select up to 15 or 20 projects which offered useful experience. It was suggested the report group projects by region.

A new chapter on conclusions could be added, that would provide a summary of the key points learned from the various pilot projects.

The group considered how the report on pilot projects could be made more accessible to others. The group was of the view that simply sending the report to Ministries of Health was no guarantee it would reach the persons most concerned with telemedicine. It would be useful to send the report to those most active in telemedicine. Subregional organisations might also provide useful contacts.

The report, even in draft form, should be put on the ITU web site, together with the paper on sustainability, in order to elicit views and comments from others who might be able to make a useful contribution to either document. In addition, contacts could be made with the WHO and World Bank to see if they had suggestions for pilot projects which could be included in the report.

7. Global directory of telemedicine suppliers

The Rapporteur informed the group that he had created a database using Microsoft Access but some additional work was needed before it would be ready to be put on the web site. The Questionnaire for suppliers was however available and on the web site of both the ITU BDT and Inmarsat and had already been completed by quite a few companies. He hoped that the work on the database could be

completed in the next month or so and then some more intense efforts could be made to gather information from suppliers of products and services appropriate for developing countries.

8. Preparations for the Second World Telemedicine Symposium

Preparations were at an advanced stage for the Symposium. A meeting of the steering group was to have taken place earlier this week in Buenos Aires to review proposals for presentations. While additional proposals could still be considered, the Rapporteur urged that proposals be sent either to him or to Jaime Herrera of the BDT as quickly as possible.

The group noted that a proposal about the experience in Tunisia was under preparation and should be given consideration once it was ready as an input for Buenos Aires.

9. Work plan

The Rapporteur provided a copy of the amended draft work plan which he had previously circulated by e-mail. The Rapporteurs Group reviewed the draft work plan. The group agreed that some additional items could be added, for example, contact with WHO with regard to ethical aspects of telemedicine.

The schedule of activities would be further amended. The next Study Group meeting was in September 1999. Dates for the Study Group meeting in the year 2000 had already been identified. They were 18-22 September 2000. The Rapporteur said he thought the bulk of the work tasked to the Group could be completed by September 2000. A revision of the report on pilot projects would be made for the September 1999 Study Group meeting. Additional pilot projects could be added, but they should be known by the end of this year. Probably the report could be more or less finalised by September 2000.

The Buenos Aires symposium could very well provide a source of additional information for the report.

Question 14.2 also tasked the Rapporteurs Group with defining a policy and strategy for implementation of telemedicine in developing countries. The group agreed this was a complex matter and more detailed discussion of the matter should be held at the September Study Group meeting. The Group had discussed a number of points which could form the outline for recommendations with regard to a national policy and strategy. These recommendations could be included in the report on pilot projects, either in the chapter on conclusions or as a new chapter.

10. Draft report

The Rapporteurs Group agreed this report.

11. Any other business

Dr Gueye said that Senegal intended to initiate telemedicine at three different sites, which would in due course be linked with other projects at the subregional level. An African telemedicine network was envisaged. IDRC of Canada was providing some support.

The representative of Guinée said he had requested the ITU to arrange for a visit by a telemedicine expert. The government of Guinée had made a budgetary provision for telemedicine but advice about suppliers, costs, potential donors, etc., was needed in order to initiate a telemedicine project.

The ITU Secretariat said they would ensure that a response would be given to the delegate of Guinée.

Dr Gueye said he had been to Conakry and spoken to the Minister of Health about telemedicine. A telemedicine workshop for countries in the region was planned for the end of the year and the workshop would consider the modalities for establishing the African telemedicine network.

The Rapporteur thanked the interpreters for the excellent job they had done. He also thanked Mactar Seck for the invitation to the Rapporteurs Group and the ITU for the work they had done to ensure the success of the meeting. He thanked all of the participants for the contributions they made and looked forward to continuing collaboration in the months ahead.

Telemedicine : Potential savings
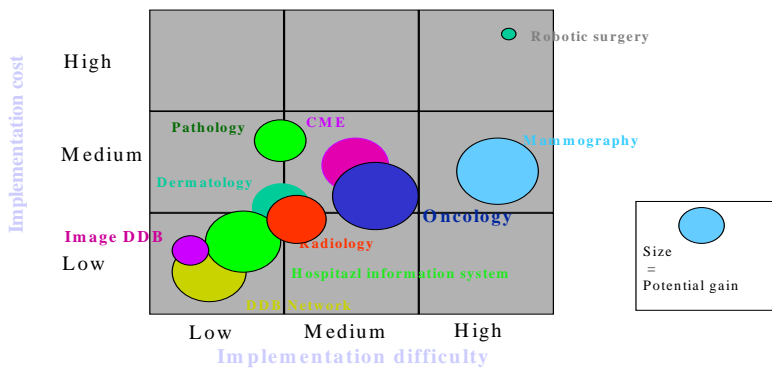
Specialised applications of telemedicine
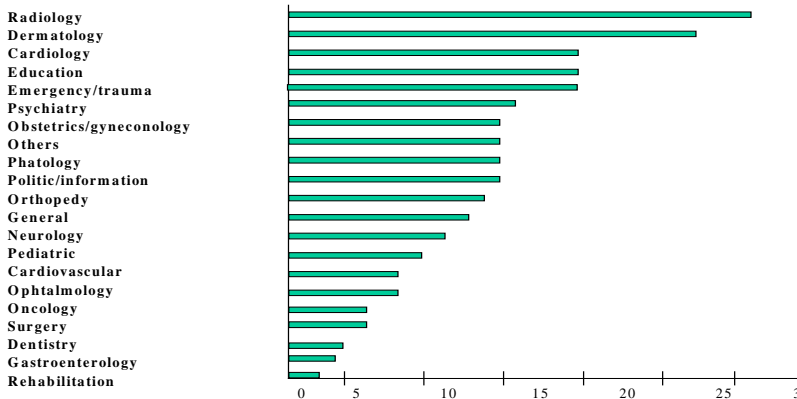
Telemedicine : Challenges

They are not at the technology level but :

- Social
    – Change in the behaviour of health personnel
    – Acceptability by patient
- Financial
    – How is a telemedicine expertise paid
- Legal
    – Risks and responsibilities

_____