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MEDICAL EDUCATION AND TRAINING FOR
DIARRHOEAL DISEASE IN JORDAN
AND THE PROSPECT OF INCORPORATING
THE PRITECH/WHO TRAINING MATERIALS

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**REPORT TO PRITECH ON MEDICAL EDUCATION AND TRAINING
FOR DIARRHOEAL DISEASE IN JORDAN AND THE PROSPECTS OF
INCORPORATING THE PRITECH-WHO TRAINING MATERIALS**

1. Diarrhoeal Disease Perspective in Jordan

The under five mortality rate from diarrhoeal disease was said to be 5 per 1000 in late 1985 and came down to 1 per 1000 according to the June 1988 WHO programme review. The Professor of Community Medicine of the University of Jordan said that his children assure him that because of the television publicity no-one is afraid of diarrhoeal disease because "Aqualas" (the Al Hicks brand of ORS) is an effective treatment. Not everyone may be so well informed as the children of a professor of community medicine, but there is a general impression that diarrhoeal disease is no longer a serious problem in the Kingdom.

Dr Said Al Azeb the senior paediatrician at the Al Bashir Hospital in Amman undertook a survey on diarrhoeal disease in 1987. That year of the 43,783 paediatric patients attending the emergency services, 5,254 (12%) suffered from diarrhoeal disease. Of these only 376 (7%) were admitted. This implies that 93% were treated in the Emergency Services area and sent home. The average of about one admission for diarrhoeal disease per day is significantly less than it was 10 years before.

In 1989 the first three causes of death among paediatric in-patients in the hospital were:-

1. Neonatal problems.
2. Respiratory diseases.
3. Diarrhoeal disease.

Up until about 5 years ago diarrhoeal disease was the number one killer. In the 1970s 40% of all paediatric deaths were due to diarrhoeal disease. This had fallen to only 11% in 1987.

The age characteristics of the patients has also changed over the years. The average patient is now younger. In 1987 about 80% of the diarrhoeal disease admissions were under 1 year of age. The sex ratio was males:females, 45:55. There is a marked seasonality in diarrhoeal disease. Although there are a number of cases throughout the year, about half the total for the year were admitted between June and September. Microbiological services are limited and the identification of pathogens was incomplete. Non-typhoid salmonella organisms were isolated from 4% of the patients and shigella organisms from 2%.

Management of the patients has also changed over the years. In 1987 of the 376 admissions for diarrhoeal disease only 21% required IV infusion. 10% of these were due to complications which required IV antibiotics etc. and only 11% needed infusions because of uncontrolled dehydration. Of inpatients on whom electrolytes were measured, only 7% had hyernatraemia (Na^+ > 150 mmol/litre) and these were not associated with the use of ORS solution.

Many of the doctors I spoke to felt that diarrhoeal disease is no longer a problem or a priority in Jordan. Others admit that there are still many cases and that the management, particularly by the private practitioners, could be greatly improved.

2. The Medical Services, the Medical Profession and Medical Education in Jordan

In July 1988 there was a major re-organisation of medical services in the country. All the hospital curative services which were previously under three main authorities:-

The Ministry of Health (MOH)

The Royal (Military) Hospitals and

The University Hospitals

have all (except one Military Hospital) been brought together in a body called The National Medical Institute (NMI) with a strong and unified administration. The MOH retains responsibility for the preventive services and initial therapeutic care in the Primary Health Centres. Doctors in the MOH feel down graded without direct access to specialist diagnostic and therapeutic services. Readjustment of salary scales and career structures has caused alarm and distress to some groups. Many doctors feel that this re-organisation will rationalise and improve the standards of care all round. Others feel that the setting up of a new administrative structure, just at the time of an economic crisis in the country, is a luxury which the nation cannot afford.

Private practitioners, according to some authorities, make up 60-70% of the doctors in Jordan. They are independent of the MOH and the NMI, but all of them have to belong to the Jordan Medical Association (JMA). Private practitioners compete fiercely for patients in the urban areas and this leads to a number of abuses, including overmedication and an emphasis on spectacular therapies. Some University doctors felt that private practitioners should be obliged to undertake continuing medical education. This could possibly be organised and instituted by the JMA. At present any statutory training, let alone examination, is strongly resisted by most members of the profession.

There is a concern to provide a new group of specialists to be called "Primary Care Specialists". They would be the equivalent of family or general practitioners and would run the outpatient services of the NMI Hospitals and the Primary Health Centres. The MOH is carefully planning a 3 year training and full career ladder for such specialists up to Consultant status in 15 years. At present the MOH appears to be leading the training preparation for this group and have asked USAID for a Consultant to help them draw up a training curriculum. Because preparations for this training is at a critical stage, and the MOH is enthusiastic about any educational inputs, it seems likely that the PRITECH-WHO diarrhoeal disease training materials would be welcomed, modified and incorporated in part of this programme.

The competition, nervousness and suspicion between the different groups of doctors in Jordan is obvious at this time and is an unhealthy state of affairs. The position was exaggerated during my visit because of the resignation of the previous cabinet and the lack of a Minister for Health.

There are two medical colleges in Jordan. The Medical Faculty of the University of Jordan, Amman, is a well established and widely recognised medical institution. According to some opinions the training here is up to the highest standards available in any country in this part of the world. There is good use of modern teaching techniques and facilities. Another opinion suggested that senior clinical teachers are set in their ways and resistant to change in either teaching methods or medical practice. In reality there are probably both excellent and indifferent teachers within the staff faculty.

The second medical college is the Faculty of Medicine of the University of Science and Technology at Irbid in the north of the country. This College has yet to graduate its first batches of students. It is said to have a more modern and community health approach to training and health services. Naturally it is very much the junior partner in medical training but may be receptive to ideas and material.

3. Meetings of Dr W.A.M. Cutting, PRITECH Consultant with Faculty members of the University of Jordan Medical College and the Centre for Educational Development of Health Personnel (CEDHP)

I had two meetings with Dr Kandil Shaker Subair, Director of CEDHP and my Counterpart designated by PRITECH. The first was on Sunday 23.04.1989 when I was the only PRITECH-USAID representative. The second was on Tuesday 25.04.1989 when I was accompanied by Dr W. Jansen and Ms Doris El-Khazen of USAID.

The first meeting was essentially an inquisition for which I was quite unprepared. I thought the agenda was the interest of the University of Jordan in the PRITECH-WHO diarrhoeal diseases training package. Professor Kandil Shaker and Professor Adnan Abbas thought the agenda was about a programme of training with financial support over many months. Professor Kandil's opening statement was followed by a series of questions:-

- o How much money is available for this project?
- o How long is the programme to last?
- o How many Technical Aid Consultants will be available and for how long?
(They definitely had the idea that a consultant would be coming to work with them in the CEDHP for 6 months)
- o How many Jordanian counterparts should be designated?
- o How much money will be available for:
 - secretarial and supporting services?
 - team training activities?
- o Will the money made available for the programme come directly from USA in dollars or from local USAID funds in Jordanian dinars?

I tried to explain that I understood the agenda was not a large or long-term programme, but the sharing of a training package for medical students and one or more short workshops to introduce this. Regarding resources I only had Dr Peter Spain's verbal comment over the telephone, that "PRITECH intended a modest involvement, a Technical Consultant for 1-2 months and some local

funds" (amount not stated). The CEDHP team asked me to consult with USAID and bring specific answers to a meeting 2 days later. The second meeting was crucial to the contact with the University of Jordan Medical College. Therefore it is reported fully in Appendix 1.

The conclusion was that, in the eyes of the two Professors representing the University of Jordan Medical College, the PRITECH-WHO teaching material was not required for medical students whose training regarding diarrhoeal diseases was quite adequate. They saw Primary Care doctors, and private practitioners in particular, as the priority target for training and retraining in this subject. This would require a completely different and properly funded approach.

4. The Al Bashir Hospital of the NMI in Amman

This is the biggest and busiest of the public hospitals in the country. The senior paediatrician, Dr Said M. Al Azeb, head of the paediatric department kindly permitted Dr Cutting to visit the inpatient and emergency paediatric services.

Report on activities in the Paediatric Emergency Services from 19.00-23.00, 26.04.1989. The paediatric staff on duty were one Resident (in the final of his 4 years of paediatric training) and one Intern, one Nurse in the observation area and one in the consultation room. About 15 new paediatric patients were seen in the 4 hour period. Five had some degree of diarrhoea and one had signs of severe dehydration. Other complaints included abdominal pain, respiratory infections, feeding problems, urticarial reactions, tonsillitis, stomatitis, pyrexia of uncertain origin and failure to thrive. In the preceding 4 hour shift 3 out of the 8 patients who were seen had diarrhoeal disease. Two of these were receiving ORT in the observation area when I arrived and were discharged home later in the evening. The most severely dehydrated child who was also vomiting, was given ORT for half an hour, continued to vomit, did not improve and was put on an IV infusion. Most of the diarrhoea patients who had the disease for more than 2 days had already received antidiarrhoeals and antibiotics. Several of them had also been given some ORT.

The consultation room had a WHO diarrhoea treatment chart on the wall (I am uncertain if this was placed there in honour of my visit) and there were certainly plenty of "Aqualax" packets available. There was also a weighing scale which worked and an observation ward with a nurse supervising. In conclusion there are adequate facilities for designating this as a "Diarrhoea Training Unit" (DTU).

5. The MOH Medical Education Unit and Training of Primary Care (PC) Specialists

Dr Mahdi Abou Dahab director of Medical Education for the Ministry of Health was an enthusiastic and active man who was eager to have ideas and materials which could be incorporated into the training programme of the PC Specialists.

As mentioned above he has already requested USAID for a Consultant to help prepare a curriculum and training programme in conjunction with their own team. It seems likely that the Consultant has been selected from the staff of the University of California, Los Angeles (UCLA) and may come to take up this task sometime in July to September 1989. It would seem appropriate that this person should visit PRITECH in Washington, and possibly Dr Cutting in Edinburgh en route for Jordan. In this way appropriate elements of the PRITECH-WHO training package could be incorporated in the training plan. Dr Abou Dahab certainly welcomed this proposal.

He would also welcome adaptation of the PRITECH-WHO material for some of the MOH nurse training courses.

6. Co-ordinating Committee for PC Specialist Training

The MOH is not the only body concerned with the training of the PC Specialists, though at present they appear to have taken the initiative. The NMI will not only provide the hospital clinical basis for parts of the training, but will also utilise a proportion of these specialists in their outpatient services. It is suggested that the Co-ordinating Committee responsible for the PC Specialists' training programme should be approached. They could be offered the PRITECH-WHO material, though it might require adaptation. DTUs can be designated in the Al Bashir Hospital Emergency Service area and possibly in one or more of the Primary Health Centres which will be strengthened for training.

7. The Medical College at the University of Science and Technology, Irbid, Jordan

The PRITECH-WHO diarrhoeal disease training materials have been specifically targeted for medical students. Since they are not required at the University of Jordan Medical College it is possible that they would be acceptable at the other Medical College which does not have the wealth of teaching experience and the CEDHP adjacent to it. The Dean of this Medical School, Dr Saad Hijaji, is a paediatrician and may be receptive to the offer of the material and a workshop at which to introduce it to hospital and faculty members. Unfortunately there was not time in this one week consultancy, because of initial delays etc., to set up a meeting with Dr Hijaji at Irbid.

8. Al Hickma Pharmaceutical Company and Promotion of 'Aqusal'

I enquired about progress with the promotion of Aqusal for the forthcoming diarrhoea season, June-September 1989. Preparation of materials are said to be in hand, though possibly behind schedule. I heard different opinions about Aqusal from a variety of sources. Obviously many people in the public are now aware of Aqusal and the concept of oral rehydration. Some felt that Aqusal has the image of 'the poor man's treatment for diarrhoea'. Some private practitioners are at least beginning to prescribe oral rehydration fluids, but feel that they need to recommend something different from Aqusal. The ready-mixed and more expensive fluids 'Pedialyte' and 'Hydralyte', which both have a WHO formulation and also a half strength formulation, are readily available on the market. It would appear that the promotion of Aqusal has made the public and the medical profession aware of the need for oral rehydration, even though it is not being used as much as it should be.

Conclusions and Proposals for Action

1. Copies of the PRITECH-WHO Diarrhoeal Diseases Training Package should be made available through USAID, Amman, Jordan to

- a) The MOH Medical Education Unit (MEU)
(Dr Mahdi Abou Dahab) (3 copies)
- b) The Faculty of Medicine, University of Science and Technology, Irbid, Jordan.
(Dr Hijaji, after appropriate initial approaches)
- c) The Al Bashir Hospital Paediatric Emergency Service
(Dr Said M. Al-Azeb)
- d) The library of the University of Jordan Medical College, Amman, Jordan.

2. The USAID Consultant who will be going to Jordan later in 1989 to work with the MOH, MEU to help prepare the curriculum and training for the Primary Care (PC) Specialists should spend:-

- One day in PRITECH, Washington, to have the Diarrhoea Training Package demonstrated in detail, and
- One day in Edinburgh (if possible) for briefing with Dr Cutting.

The aim is that significant components of the Training Package can be incorporated into the practical training programme for the Specialists.

3. The Co-ordinating Committee for PC Specialist Training should be approached about support for incorporation of the Diarrhoea Training Package materials in their training programme. (Dr Abou Dahab is already enthusiastic, but trainers from the NMI units should also be convinced about the value of this.)

4. Diarrhoea Management Training Units (DTUs) be designated at
 - a) The Al Bashir Hospital (Paediatric Emergency Service)
 - b) One or more of the Primary Health Care Centres used for training Primary Care Specialists, after appropriate development.
 - [c) Possibly the Paediatric Emergency Service of the Medical College at Irbid - after review and strengthening if necessary.]

5. Carefully planned approaches should be made to the heads of the following institutions with a view to incorporating the Diarrhoea Training Package material in their training programmes:-
 - a) Faculty of Medicine, University of Science and Technology, Irbid, Jordan.
 - b) Faculty of Pharmacy, University of Jordan, Amman.
 - c) Nursing Training Colleges.

6. Workshops should be planned to demonstrate and initiate the use of the training materials in whichever of the institutions mentioned in items 1, 4 and 5 show genuine interest in using them.

7. Consultancies will be necessary for:-
 - a) Review and strengthening of DTUs (No. 4)
 - b) Approaches to and incorporation of material into training courses. (No. 5) (The USAID Consultant mentioned in No. 2 may be able to assist with this component.)
 - c) Plan and participate in introductory workshops with local counterparts. (No. 6)

Probably at least 2 consultancies for 2-3 weeks would be required.

8. All the above components should be carefully planned with
 - a) Aims clearly set out for all parties to see.
 - b) Preliminary correspondence to obtain general agreement.
 - c) Initial meetings arranged, and
 - d) Co-ordination with USAID staff in Amman.

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**REPORT ON MEETING OF STAFF OF CENTRE FOR EDUCATIONAL DEVELOPMENT
FOR HEALTH PERSONNEL AND REPRESENTATIVES OF USAID/PRITECH**

Date and Time 25 April 1989 1300 - 1400 hours

Place Centre for Educational Development for Health Personnel
of University of Jordan, Amman, Jordan

Participants Dr Kandil Shaker Shubair (CEDHP, UJ)
Dr Adnan Abbas (UJ, Dept. of Community Medicine)
Mr Mahmoud Alkam (CEDHP, UJ)
Ms Ikram Rida Tawfig (CEDHP, UJ)
Dr W. Jansen (USAID, Amman)
Ms Doris El-Khazen (USAID, Amman)
Dr W.A.M. Cutting (PRITECH Consultant)

Centre for Educational Development for Health Personnel

This is an independent unit within the University dedicated to developing the teaching skills of the various health faculty members. It encourages objective-directed education using modern audio-visual aids. The centre is not only well recognised nationally, but also internationally and is used by WHO, UNICEF etc. Unfortunately it is largely dependent on "soft money" and it is necessary for the staff to be alert for suitable sources to maintain the centre and its staff.

Expectations of PRITECH and USAID in this collaboration

1. PRITECH would make available to any faculty or training group, but particularly the University of Jordan Medical College, the package of educational materials developed by them at the request of WHO, CDD for training medical students and interns.

2. One or more Technical Assistance Consultants familiar with the package and experienced in teaching about diarrhoeal disease should

- o Review the present diarrhoeal disease teaching programme, especially the practical treatment areas (potential DTUs).
- o Explain and demonstrate the PRITECH package and how it might be adapted to the local situation.
- o Assist local teachers with one or more workshops in which the materials are introduced to the teaching staff of the medical, nursing and pharmacy faculties.

The duration of such a consultants work would be 1-2 months. USAID staff in Amman knew of no special funding for this work.

Expectations of the CED team, particularly Dr Kandil Shaker and Dr Adnan Abbas of the Department of Community Medicine with regard to the collaboration.

- 1. It was expecting a Technical Assistance Consultant for six months who would work with local counterparts to prepare diarrhoeal disease training priorities, objectives and methodologies. Curriculum development and modification might be one component of this.
- 2. A programme of collaboration with sufficient financial support from PRITECH and USAID for local costs, supporting services, counterparts etc., preferably available in US dollars.

Comments by Dr Kandil Shaker and Dr Adnan Abbas regarding the training of medical and other health personnel in the management and prevention of diarrhoeal disease.

- 1. The priority groups for training were:-
 - a) Primary health care physicians, both those working for the MOH and particularly those in private practice. (This latter group indulges in maximum polypharmacy with antibiotics and antidiarrhoeal drugs and neglects oral rehydration therapy.)
 - b) Hospital interns - an important group for the future, but difficult to reach because they were under the senior teaching physicians and paediatrics who were alleged to be a rigid group resistant to education and change.
- 2. Primary care training for medical students in the management of diarrhoeal disease is
 - a) According to Dr Adnan Abbas being carried out effectively using modern teaching methods by the staff of the Community Health Department in the Primary Health Centres.
 - b) According to Dr Najwa Khoury (a paediatrician who spoke to us outside of the meeting) is provided by three lectures on the subject given by her as part of the paediatric training. (She invited me to visit the paediatric services with her and her senior colleague, Dr Faris Madaanat, at a mutually convenient time. Dr Kandil Shaker was definitely against me meeting with the senior clinicians who he felt would be disinterested and inappropriate. I felt it might make matters worse if I pushed to see the University clinicians against the wishes of Dr Kandil.)
- 3. When it was suggested that Dr Mahdi Abou Dahab and his team in the MOH, who were preparing the Primary Health Care Specialists training programme, might be interested in the PRITECH training package, Dr Adnan Abbas said that they were not yet ready to accept such material. (This is very different from the enthusiasm expressed by Dr Mahdi Abou Dahab for contributions to the PHC specialists training.)

4. Since both Dr Kandil and Dr Adnan identified the large group of Private Practitioners as the most important target audience for appropriate training or retraining in the modern and scientific management of diarrhoeal disease they would consider helping with a project aimed at that group.

The project should have

- a) Clear objectives.
- b) Appropriate methodology and
- c) Sufficient resources.

They proposed an organising committee for such a project should be comprised of

- a) The CED - (ie Dr Kandil)
- b) The Department of Community Medicine (ie Dr Adnan)
- c) Representatives from the Jordan Medical Association
(Essentially themselves, but not anyone from the MOH, NMI,
or clinical teachers)

If PRITECH was to invite them to prepare a protocol for such a proposal they would consider taking it up.

5. Dr Adnan proposed that the PRITECH diarrhoea training material should be placed in the University Library as a resource for teachers rather than students. Both he and Dr Kandil felt there was no need for a workshop to introduce these materials to medical school teachers. They are already conversant with such methods and have an adequate supply of their own teaching materials.