

THE ROLE OF LABORATORY MEDICINE
IN PRIMARY HEALTH CARE

A report from the programme on
Quality of Care and Technologies



WORLD HEALTH ORGANIZATION
Regional Office for Europe
COPENHAGEN



Nordic
Clinical Chemistry
Project

ECCLS

European Committee for
Clinical Laboratory
Standards

TARGET 31

Ensuring the quality of services

By 1990, all Member States should have built effective mechanisms for ensuring quality of patient care within their health care systems.

Index:

TECHNOLOGY, MEDICAL
PRIMARY HEALTH CARE
LABORATORIES

2625

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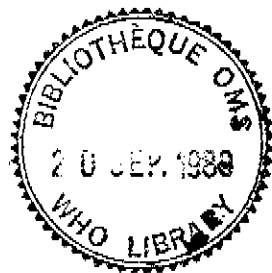
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THE ROLE OF LABORATORY MEDICINE
IN PRIMARY HEALTH CARE

Report on a Joint WHO/NORDKEM/ECCLS Workshop

Copenhagen
13-14 October 1988



Note

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Introduction

The Joint WHO/NORDKEM/ECCLS Workshop on the Role of Laboratory Medicine in Primary Health Care was held in Copenhagen on 13-14 October 1988. WHO organized the Workshop in collaboration with the Nordic Clinical Chemistry Project (NORDKEM) and the European Committee for Clinical Laboratory Standards (ECCLS). About 80 participants attended, representing the primary health care sector, laboratory medicine and health economics, as well as WHO, NORDKEM and ECCLS. These experts met to describe and discuss the organization, current status and future development of laboratory services in primary health care. The list of working papers comprises Annex 1, and Annex 2 lists the participants.

The main objectives of the Workshop were in line with two of the regional targets. They call for mechanisms to ensure the quality of patient care and to assess the appropriateness of the use of health technology.

The main theme of the Workshop was to review the optimal application of laboratory medicine to primary health care, using many of the ideas developed by NORDKEM, and to highlight areas in which improvements are needed. The NORDKEM project on laboratory medicine in primary health care was used as a basis for discussions of quality assurance in this area, and the use of diabetes, anaemia and hypercholesterolaemia as tracer conditions in developing appropriate laboratory services.

Conclusions and recommendations

Needs for laboratory medicine in primary health care

1. The role of laboratory medicine in primary health care is changing rapidly. Not only is primary health

care becoming more important and requiring more laboratory investigations, but new technology is creating both opportunities and problems. As in all branches of medicine, the need for cost-effectiveness is paramount.

2. The demands of primary health care on laboratory medicine differ from those of hospital medicine in many respects, such as the nature of clinical problems, the prevalence of certain diseases and needs for urgent testing. The use of laboratory tests for screening, diagnosis, monitoring and research also differs. Demand is increasing for laboratory tests in occupational health, preventive medicine and health education programmes. Each of these requires different strategies and has different cost implications.

3. The numbers and types of laboratory test requested by general practitioners vary widely. The reasons for these differences, and their impact on patient care, need investigation. Better systems for the generation of base-line data are needed to assess the effect of introducing new technology and working practices.

The impact of new technology

4. New technology is beginning to have a major influence on the use of laboratory services by primary care. New methods of communication, such as computer links between primary health care and laboratory staff, can be used to transmit results rapidly and to widen access to files on patients and other information. An increasing number of tests can be performed rapidly in physicians' offices by staff such as nurses. Indeed, patients can perform a limited number of tests. Some are becoming increasingly important for patient management.

5. In addition to the glamour associated with new kinds of technology, there is often commercial pressure to use them more widely in primary health care. It is therefore essential that such technology be assessed for cost and

effectiveness, and compared with existing alternatives before being widely introduced. Both laboratory staff and primary care physicians will need to modify their methods of work to include routine evaluation of the outcome and costs of current practices, to make the best use of the new opportunities. Access to laboratory tests is no longer a major problem. The fundamental issue is not whether performing a test is possible, but whether it is worth while and, if so, by whom (laboratory or primary care staff, or patients) the test should be made. The answer to the last question determines the resources required and the time needed to receive the results.

Quality assurance

6. Ensuring the quality of laboratory services for primary care involves many different factors, including:

- the appropriateness of a certain test for a particular patient at a particular time;
- variations in the use of different types of test;
- where (by whom) the tests are made;
- their technical quality (which includes their accuracy and precision);
- determining the costs;
- the interpretation of test results; and
- the clinical action taken and the outcome.

7. So far, the technical aspects have received the most attention. Methods of quality control and assessment are widely used in laboratories, but may need modification before they can be applied in primary care. Other aspects, however, have received very little study. Data on rates of use are lacking, for example, and

laboratories rarely have any information on outcome. Closer cooperation between laboratory directors and primary health care physicians is needed to develop methods for evaluating these aspects of quality and to formulate agreed standards.

Evaluation of technical quality

8. Several studies have shown that the technical quality of laboratory tests performed in primary care is often poor. This is not only wasteful but hinders the evaluation of the clinical benefits of decentralized testing. Primary care physicians need better information on the advantages and disadvantages of this type of testing, including the accuracy of the results. Many laboratory workers are reluctant to encourage decentralized testing because they believe that they can achieve results of higher quality. These workers are more likely to collaborate effectively if they are involved at an early stage.

9. Laboratory staff must become more involved in decentralized testing. They should evaluate and help to select new equipment for use in primary care and advise on training, quality assurance and safety aspects (particularly microbiological hazards).

Education of primary health care personnel

10. Physicians in primary health care need help and advice on how to make the best use of laboratory medicine. The issues involved include:

- the selection of appropriate tests for each clinical situation;
- the possible need for safety precautions (in suspected cases of hepatitis or AIDS, for example);

- whether tests should be performed in the primary care or laboratory setting, and when the results would be available;
- the interpretation of results, including reference values (which may differ from those for hospitalized patients);
- the possible need for confirmatory or supplementary testing; and
- the need for staff to monitor and evaluate their work, which should include comparisons of the outcome and costs of different practices.

11. Educational programmes and refresher courses on these topics should be organized by laboratory staff, and supplemented by additional written material on how the primary care physician can make the best use of the local laboratory. Particular attention should be given to the effectiveness of new tests and technology.

12. These needs become more important when tests are made in the primary care setting; the physician must take responsibility for the quality of the results, even if another staff member performs the tests. Responsibilities must be clearly defined, and the legal and social (as well as clinical) implications understood by all concerned. All staff who perform tests must be trained, and quality assurance procedures must be applied. A local laboratory should be asked to help in these tasks, and to consider issuing certificates of competence to operators who have passed simple, practical tests demonstrating that their results are reliable.

13. Different problems arise when patients perform tests as part of their medical care (examples include blood glucose measurements made by people with diabetes). The physicians concerned must ensure that such tests serve their intended purpose.

Education of laboratory personnel

14. Laboratory staff working in hospitals are often unaware of the needs and problems of primary health care. Although familiar with the quality assurance techniques used for laboratory analyses, such staff may not appreciate the difficulties of applying these to testing in the physician's office or the wider aspects of quality assurance. Laboratory personnel need education on all these issues.

Incentives to improvement

15. Proposals for improving cost-effectiveness will be useless unless they are implemented. Incentives are needed to encourage both laboratory and primary health care staff to improve the cost-effectiveness of laboratory medicine.

16. Reimbursement policies can be used to influence the quality and sometimes the quantity of analytical work. For example, reimbursement can be made conditional on participation in approved quality control programmes. This should include the feeding back of certain outcome data and other kinds of review.

Improved communication and collaboration

17. Collaboration and communication between primary health care and laboratory personnel must be improved. This is essential not only to improve patient care but also to ensure the optimal use of resources and to achieve an integrated health care system.

18. Ultimately, this communication must take place locally, and will depend on the initiative and goodwill of individuals. The relevant professional organizations should promote communication at both national and international levels. All countries face similar problems of cost-effectiveness in laboratory medicine,

and regular monitoring and exchanges of experience would enable everyone to learn from others' mistakes and successes.

19. In-depth discussion on the following issues should take place at a subsequent meeting: professional accountability; and the influence on health planning of economic factors, evaluation methods and priorities in and decisions on laboratory services.

20. Collaboration between primary health care and laboratory medicine must be improved to secure:

- better information systems for use in selecting laboratory tests and discovering their implications (as such systems are particularly valuable in primary health care);
- assistance from laboratory departments in hospitals to ensure the optimum quality, cost and outcome of laboratory procedures in primary health care;
- improved access for primary health care personnel to relevant information from laboratories in hospitals;
- the education of primary health care personnel on laboratory medicine; and
- education of laboratory personnel on the needs and problems in primary health care.

Annex 1

WORKING PAPERS^a

- ICP/CLR 048/5 Is there a role for laboratory medicine in primary health care?, by P. Fugelli
- ICP/CLR 048/6 Problems seen and managed by the primary health care doctors, by L. Øvesen
- ICP/CLR 048/7 Management and control (diabetes mellitus), by B. Scherstén
- ICP/CLR 048/8 Diagnosis (anaemia), by I. Romslo
- ICP/CLR 048/9 Screening for risk and disease (hypercholesterolaemia), by F. Olesen
- ICP/CLR 048/10 Service from the hospital laboratories to primary health care, by S. Landaas
- ICP/CLR 048/11 Quality assurance in primary health care laboratories, by P. Grinsted
- ICP/CLR 048/12 Education and information concerning clinical chemistry in primary health care, by N. Trydning
- ICP/CLR 048/13 Cholesterol assays in the community: how the laboratory can help, by P.M.G. Broughton

^a Copies are available from the Quality of Care and Technologies unit, WHO Regional Office for Europe, 8 Scherfigsvej, DK-2100 Copenhagen O.

- ICP/CLR 048/14 Cost-effectiveness and rational use of health technologies: the relation to medical information systems, by K. Staehr Johansen
- ICP/CLR 048/15 World Health Organization programme on quality of care and technologies: views on appropriate use of laboratories in primary health care, by K. Staehr Johansen

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