The Utilisation of “Benchmarks” in the evaluation of health sector reforms in Cameroon.

Peter M Ndumbe, MD, PhD, Norman Daniels§, PhD, and John Bryant* MD  
Dean, Faculty of Medicine and Biomedical Sciences, University of Yaoundé I, Cameroon  
President, ACOSHED, Cameroon; § School of Public Health, University of Harvard;  
*Council for International Organizations of Medical Sciences

I. Background

Health care reform is the institution of a deliberate change in the functioning, health service financing and structures within the health system with the aim of providing a more efficient, effective and equitable service. The Cameroon health service system has gone through four major periods namely:

- the Colonial period,
- The Post-independence or Experimentation period,
- The Post-Alma Ata or Primary Health Care period,
- The period of Reorientation of Primary Health Care.

These periods were greatly influenced by both international and sub regional conferences on health sponsored by World Health Organization (WHO) and the United Nations Children Fund (UNICEF).

These conferences included:

- the Alma Ata conference of 1978,
- the Lusaka conference in 1985,
- the interregional conference, Harare 1987,
- the OAU Head of States summit on Health 1987, and
- the Bamako Initiative meeting of 1987.

The implementation of the recommendations of the Alma Ata conference based on Primary Health Care (PHC) was consolidated nationwide in Cameroon in 1982 as a vertical program with more emphasis being put on the training and deployment of Community health workers and traditional birth attendants. The system was evaluated in 1988 and found to be unsatisfactory as a means of achieving the social goal of ‘Health for all by the year 2000’. Therefore, there was an urgent need for health care reform in Cameroon if these goals were to be met at all.

The current reform in Cameroon was initiated in 1998 and formally adopted and launched in September 2001 as a document entitled ‘The Health Sector Strategy’. This document is meant to improve on the shortcomings of the Reorientation of PHC based on health sector policy
implemented in Cameroon since 1982. To evaluate this reform, a tool is needed and “the Benchmarks of fairness” is seen as an appropriate policy tool for this evaluation process.

II. The Benchmarks of fairness for health sector reform

The Benchmarks of fairness for health sector reform is a policy tool, or, more a flexible method for evaluating the overall fairness of health sector reforms. This concept of fairness is a broad one that includes concerns about equity, efficiency, accountability and empowerment. Indeed, fairness is perhaps best thought of as equivalent to the notion of social justice.

The Benchmarks method asks us to evaluate how much a proposed or recently implemented reform improves or worsens various aspects of the fairness of the health sector. The improvement (or worsening) is measured or estimated relative to a baseline. The baseline is taken to be the status quo at the time reforms are being considered or implemented. The multi-dimensional comparison of the status quo to projected or to measured changes allows for the evaluation of alternative reforms or alternative steps taken to implement reforms.

This policy tool contains nine benchmarks namely:

1- Intersectoral Public Health
2- Financial barriers to equitable access
3- Non-financial barriers to access
4- Comprehensiveness of benefits and tiering
5- Equitable financing
6- Efficacy, efficiency and quality of health care
7- Administrative efficiency
8- Democratic accountability and empowerment
9- Patient and provider autonomy

Each of the nine benchmarks delimits broad goals or requirements of a just or fair system. Within the scope of each benchmark, more specific criteria are set out for achieving these goals. To judge whether these criteria are met, or to judge the degree to which specific reforms satisfy these criteria, as compared to the pre-reform or baseline situation, relevant evidence must be identified. Specifically, teams using the benchmarks must agree on the selection of indicators or other measurable considerations that can be used to ‘score’ satisfaction of the criteria. In this way, the Benchmarks are evidenced-based and can stimulate deliberation of the effectiveness of reforms that is grounded on objective considerations.

III. Methodological Approach in Cameroon

To introduce this policy tool in Cameroon, a workshop was organized by the Faculty of Medicine and Biomedical Sciences, University of Yaounde1 in partnership with Tufts University, USA and the Rockefeller Foundation in Ombe, Southwest province from 29 to 31 May 2002. Participants were drawn locally from the Ministry of Public Health (MOPH), World Health Organization (WHO), UNICEF (United Nations Children’s Fund), UNFPA (United Nations Fund for Population), FEMEC (Federation of Protestant churches in Cameroon), The civil society, The University of Buea, Faculty of Medicine and Biomedical Sciences (FMBS) Yaounde. International participants came from CHESTRAD (Center for Health Sciences Training, Research and Development) in Ibadan, Nigeria and South Africa.
Facilitators at the workshop were Professor Norman Daniels of Tufts University, Professor Jack Bryant of the Council for international Organizations of Medical Sciences (CIOMS) USA, and Professor Peter Ndumbe, Dean of the Faculty of Medicine, Yaounde.

As a follow up of the Ombe workshop, another one was organized from 30 09-2002 to 04-10-2002 at the FMBS Yaounde. Participants came from the MOPH represented by three DMOs from the Southwest province, GTZ, Harvard University of Public Health (Professor Norman Daniels), the Council for international Organizations of Medical Sciences (CIOMS) USA (Professor Jack Bryant) and the FMBS Yaounde. The purpose of this workshop was to train medical students in the use of benchmarks so as to permit evaluation of at least 14 health districts during their field postings. These evaluations would form the basis of further refinement of the tool to permit its eventual use nationwide.

During the Yaounde workshop, a committee reviewed each Benchmark and came out with possible feasible indicators. Plenary sessions were then organized with the sixth-year medical students. Professor Daniels presented the nine Benchmarks, their background and how they can be adapted to evaluate the health care reform of a country. Together with the students, indicators for each Benchmark were selected. Sources of information on the field and how to measure these indicators were identified. A total of 73 indicators was arrived at (see annex). Two sets of students would carry out the evaluations and their experiences reviewed in plenary sessions to determine the:

- accuracy,
- ease of use
- ease of obtaining data,
- ease of conducting the scoring process, and
- relevance regarding the use of the benchmarks as a policy tool

Because of the envisaged difficulties and data collection by small units, Benchmarks 4 (comprehensiveness of benefits and tiering) and 9 (patient and provider autonomy) were left out of this evaluation exercise. Data concerning these benchmarks would be collected through ad hoc surveys.

IV. Results

Health Districts

Data from the following 8 health districts (produced by the first set of students) have so far been analyzed:

- Bangangte: West
- Cité de Palmier (Douala): Littoral Province
- Ebolowa: South
- Edea: Littoral
- Loum: Littoral
- Mbouda: Western Province
- Nkongsamba: Littoral
- Pouma: Centre
Collection of data regarding the benchmarks

**Benchmark 1: Inter-sectoral public health**
This benchmark has 17 indicators (see annex). Difficulties were obtained in getting information from districts for non-medical data such as “% of districts with iodised salt in the market” or indeed “literacy by gender”. Most health centre or district hospital-related data could be collected from the district or provincial services concerned.

**Benchmark 2: Financial barriers to equitable access**
This was considered a very sensitive benchmark and many health units were not ready to give information concerning finances. However they all provided data which contained the information required for the filling in the questionnaires. There was a difference in the readiness of the data from public, private for profit and private non-profit institutions (confessional): the private for profit were the most opaque, in general.

**Benchmark 3: Non-financial barriers to access**
The data for the indicators in this benchmark were fairly easy to obtain. However, it was difficult to get some data which required the measurement of distances because these were generally approximate (see ratio of coverage by outreach vs. fixed posts)

**Benchmark 4: Comprehensiveness of benefits and tiering**
This benchmark was not evaluated.

**Benchmark 5: Equitable financing**
The data for the indicator contained in this benchmark was found difficult to collect because health units do not respect the instructions of the Minister of Health regarding payments for services. Most health units did not cooperate in providing this data to the students.

**Benchmark 6: Efficacy, Efficiency and Quality of Health Care**
The data for the indicators of this benchmark were easy to obtain, where they existed. There was little controversy except in the case of indicators which inquire after practices that may not be currently carried out in a health district, for example, the accreditation of health units.

**Benchmark 7: Administrative efficiency**
The data for the indicators in this benchmark were easy to obtain where they exist, although it was difficult to measure the “drugs not bought from CENAME”.

**Benchmark 8: Democratic accountability and empowerment**
The data required were easy to obtain where they exist.

**Benchmark 9: Patient and provider autonomy**
This benchmark was not evaluated

V. Discussion

Context of the utilization of benchmarks at the Faculty of Medicine

The primary purpose of the utilization of benchmarks at the Faculty of Medicine is to help in the conduct of its triple mission of training, service delivery and research.
Within the context of training, the benchmarks have made it easy to reinforce training of medical students in public health. The indicators cover a broad range of activities and issues which need to be taken into consideration at the district level by all members of the health team. As the students go through each of these benchmarks and their indicators, they are reminded of the necessity to make their health service delivery system equitable, efficient, efficacious, intersectoral and population oriented. We have found it an excellent tool in this respect. Indeed, through some twist of fate, the district officers with whom the students worked, also learned a great deal. They will benefit from the subsequent and finalized document.

Regarding service delivery, the benchmarks have helped the final year students in their “integrated medicine postings” to orientate the district hospitals where they have been sent to look “community-wards” in the circumstances where this happened not to be the case. The repetition of the process by two teams of medical students makes this point even more clearly. Although the data so far collected cannot all be used in their present form, certain pointers regarding the collection of data have been made. The finalized consolidated documents will surely be helpful tools in the hands of district medical officers that should positively influence service delivery and the evaluation of district activity in the very near future (indeed the medical students will be out in the field in less than ten months should be able to use them).

Concerning research, and community based research in particular, the students have used the benchmarks to learn about the difficulties one may encounter when one engages in community based research. The recommendations from them regarding the appropriate prior information of the authorities, the verification of data provided, the utilization of alternative sources of data, have convinced us that they have understood the process.

The above will be reinforced in the final workshop with the students on the benchmarks.

The secondary purpose of the “benchmarks” project is to provide health workers (and the Minister of Health) with a policy tool for the evaluation of the overall fairness of the health sector reforms. Although the health sector reform is ongoing, it would be necessary even at this stage to have an evidence-based knowledge of the baseline. The benchmarks will facilitate that process.

Selection of districts

The results from the field exercises conducted by the students would be more useful if they covered as many of the existing districts as possible. However, we were still able to have a fairly good mix of public, private, rural and urban districts. The districts were selected based on three criteria:

1. the presence of an accredited district hospital with staff that are used to working with medical students
2. the conduct of outreach activities by the district hospitals
3. to provide a mix of excellent, fair and poor health cover as determined by the last results of the vaccination coverage.

These would not have a significant impact on the purpose of the exercise as outlined in the section “Context” above.
Data collection using the indicators

Reviewer comments on the indicators
Comments have been made regarding the indicators in the following areas: aggregated data, adapting the indicators to the local context and the methodological approach for data collection.

Concerning the collection of aggregated data, it would not permit the identification of what and where primary actions and interventions would be needed. Although this is theoretically correct, the data so far collected makes it possible for us to identify where primary actions would be needed. Indeed, most of our community based health interventions are directed at three levels, viz. health centre attendants, community actions (people are provided health related information at a certain location, school children are given information, information is given to specific community groups etc) or through house visits. The last is the least common method of interventions, although it is carried out when it is judged necessary. We concede that household surveys will be the best way of getting the information that is disaggregated, and this may need to be done in problem districts, but it is not conceivable that for the purpose of evaluating our reforms, all households are visited nationwide. The training offered the medical students permits them to make that discrimination. Also, in the examples of iodised salt, vitamin A, breast milk, and literacy, there are biannual studies carried out by the World Bank, UNDP, UNICEF and UNFPA that give us rather accurate information. Indeed in the case of iodised salt, there is a law that all salt sold in Cameroon should be iodised. The Ministry of Trade and Industry is required to ensure that this law is upheld.

The comments about the adaptation of indicators to the local context are also accepted. However, these indicators were actually selected by DMOs, Faculty staff, and residents in public health and not imposed on any of the groups as far as we know. The example of the ethical committees cited is a good one, and the comments justified. However, the MOH is in the process of ensuring that ethical committees are indeed created and made functional at the district level. The terms of reference of these committees are still being discussed, although some districts do have ethical committees.

Concerning the problems with data collection mentioned, the idea is not a test, retest situation but a continuous learning process by the medical students. The process is not yet finalized and we will go three steps further:

1. discuss the different indicators again based on the experience in the field, and refine them further taking into consideration indicators for which one should suggest disaggregated data
2. make suggestion on possible action to be taken regarding the results of each of the indicators (it is obvious for some of them)
3. hold a consensual meeting with as many partners as possible for the finalization of the indicators.

Quality of data collected
The overall quality of the data so far collected is very good. However, the districts still need to make an effort in the collection, analysis, storage and use of data for management. This should be the object of continuing education for the district hospitals in order to ensure that basic information is collected and that management decisions are evidence-based. It will be necessary to go a step further to suggest how data could be transformed to information and how this information could be exploited.
Scoring
This was the least executed part of the exercise. We will need to discuss it further with the students so that they understand how it ought to be done.

Interpretation of data obtained

Benchmark 1: Inter-sectoral public health
The overall conclusion from the reports on this benchmark is that intersectoral cooperation is only put to practice during big events like vaccination campaigns. There is no institutionalized forum at the district level to bring this to happen. At the provincial (regional) level, there are regular coordination meetings of all sectors. These are chaired by the governor. The same could be instituted at the district level by the DMO to discuss health matters. Indeed, data on iodized salt which was missing from certain health units could have been obtained from other ministries such as the Ministry of Trade and Industry. The data regarding “literacy by gender” could have been obtained from the Ministry of Social Welfare. Data collection, analysis and storage concerning health matters is very weak at the district level. Surveillance mechanisms need to be reinforced overall.

Benchmark 2: Financial barriers to equitable access
Since health units now keep all of the money recovered from their services, they are rather hesitant about making known how much money they actually make. This is a source of discord with the different dialogue structures. The financial aspects of the running of health units need to be made more transparent for the good of all.
Financial barriers still exist in all of the health districts concerned because emergency services are paid for 100% in advance! Data on the extra charges of practitioners will need to be obtained indirectly. There was evidence in at least two districts that charges were made higher than stated for herniorrhaphies.

Benchmark 3: Non-financial barriers to access
These also exist. They are related to the numbers of personnel, the lack of infrastructure and the organization of the health care system. It is important that government make an inventory of what obtains in each of the 150 odd districts in Cameroon. This could be done by the medical school for the MOH. The lack of intersectoral collaboration was equally evident here because data on distances could have been collected from the Ministry of Public Works.

Benchmark 4: Comprehensiveness of benefits and tiering
A study should be commissioned to obtain the data required for this benchmark before the July meetings!

Benchmark 5: Equitable financing
The earlier comment on the opacity of financial transactions in the health unit applies here. This may also translate a weakness in the financial planning of the health units and should be studied more carefully. There is evidence from group discussions conducted by some teams that people only go to health centers when they are financially viable.

Benchmark 6: Efficacy, Efficiency and Quality of Health Care
In general quality is assured in the health units but the levels of efficacy and efficiency leave a lot to be desired in several districts. There is generally a very poor referral and counter-
referral system. This is partly due to the poor infrastructure in some of the district hospitals and to an inadequate continuing professional development scheme in some.

**Benchmark 7: Administrative efficiency**  
Administrative norms need to be defined, disseminated and implemented in the health units in order to permit objective follow-up of health units.

**Benchmark 8: Democratic accountability and empowerment**  
In general, health facilities look after patients who come to them. Both the district, and health area management structures do not function as they ought. Communities should participate more efficiently in the running of health units.

**Benchmark 9: Patient and provider autonomy**  
This benchmark needs to be evaluated before the July 2003 meeting.

**Governance in the health system**

How to involve the community in policy making is at the core of discussions over modernizing governance and building a stronger civil society. The Cameroon health system is not assuming as effective a part in community involvement as it ought. It is expected that multiple routes for representation and participation do exist and remain one of the strengths of a liberal democracy.

Four types of reform may be envisaged:  
- the first is for improving the existing dialogue structures and developing institutionalized mechanisms for funding citizen involvement  
- the second is to create a new structure for promoting dialogue such as a civic forum whose visibility could be the kind of signal necessary to inform the provinces and districts of the government’s desire to engage all in the decision making process  
- the need for the change in culture within government so that citizen/community involvement is seen as an integral part of the policy processes  
- investment in civil society by the promotion of strong associational networks and the support of capacity building in voluntary organizations.

**VI. The way forward**

Cameroon, through the advocacy of the Faculty of Medicine and Biomedical Sciences of the University of Yaounde, is in the process of adapting the “benchmarks” for use both for the initial and continuing training of its health manpower in community health, and for the evaluation of the overall fairness of the health sector reforms.

The present process of the field testing of the indicators of Cameroon will culminate in the following:  
- Faculty workshop to refine the criteria  
- National workshop to present and adopt the indicators by all stakeholders  
- Use of the benchmarks to collect baseline data for all health centres nationwide  
- Use of benchmarks by DMOs as a management tool
Faculty workshop to refine the criteria

A workshop will be held in July wherein both sets of final year medical students, residents, faculty staff, some UN agency staff and the faculty staff will go through the indicators of the benchmarks again. This will lead to the adoption of the criteria at this level, and provide room for further teaching.

National workshop to present and adopt the indicators by all stakeholders

This will be organized sometime in September 2003. This process is crucial for the eventual use of the indicators by all practitioners in Cameroon.

Use of benchmarks to collect baseline data for all health centres nationwide

This will be done by the district health team (headed by the DMO), including other health-related sectors, development partners and medical students. Data collection will be preceded by a training session of at least one-week.

Use of benchmarks by DMOs as a management tool

This follows logically from the previous one.

Conclusions

The Faculty of Medicine in the University of Yaounde I, has engaged in the “benchmarks” project in order to enhance its triple mission of teaching, high quality service delivery, and research.

The Faculty will use its comparative advantage and advocacy role, working with NGOs such as ACOSHED, to facilitate the use of the benchmarks nationwide both for the evaluation of the health sector reforms and as a management tool.
ANNEX: Indicators for the different benchmarks

1. Intersectoral public health
   a. Basic nutrition
      i. % of districts with iodised salt in the market
      ii. % of health units administering vit A
      iii. % of children fed exclusively with breast milk until 4 months
      iv. proportion of children monitored using the road to health chart
   b. Environment
      i. Prevalence of waterborne diseases
      ii. Population sanitary technician ratio
   c. Education and health education
      i. % of health units carrying out outreach activities on priority diseases within and without the H/C
      ii. proportion of health promotion activities carried out within and without the H/C
   d. Public safety and violence reduction
      i. % of health units or public security posts doing alcohol level tests
      ii. injury and mortality rate over the past 12 months
      iii. No of meetings coordinating road safety
   e. Provision for regular measurement of health status
      i. Health personnel to population ratio
      ii. Vaccination coverage in urban compared to rural setting
      iii. Morbidity and mortality rates (children <5 y) in urban HC compared to rural HC over the past 12 m.
      iv. Is death registration taking into account the gender, income, and educational parameters
   f. Degree to which reforms have actively engaged inter sector efforts
      i. % of meetings coordinating MOH, agriculture, etc over the past 12 months

2. Financial barriers to equitable access
   a. Financial barriers to equitable access:
      i. % not repaying emergency care for the past 12 months
      ii. % of cost recovery actually recovered for curative consultations for the past 12 months
   b. Informal sector coverage
      i. % of practitioners/institutions charging extra charges for consultations

3. Non-financial barriers to access
   a. Reduction in geographical misdistribution in facilities and services
      i. The proportion of health areas with integrated health centres
      ii. The proportion of health areas carved out according to norms
      iii. Proportion of health areas with <30% of the population living at more than 1 hour walking distance from HC
      iv. Proportion of integrated health centers delivering a minimum package of activities
      v. No of districts in the province without district referral hospitals
   b. Personnel
      i. Proportion of health units having personnel according to defined norms
   c. Supplies
      i. Proportion of health units having supplies according to defined norms
   d. Drugs
      i. Proportion of health units participating in the essential drugs programme
      ii. Proportion of health units reporting on stocks out of tracer drugs
   e. Clinic hours
      i. Proportion of health units with working schedules
   f. Transportation for medical purposes
      i. Proportion of health units with appropriate means of transport (4WD for districts, ambulance for hospital, motorcycle for HC)
   g. Gender
      i. Proportion of dialogue structures with female representatives in the executive
   h. Perception
      i. Ratio of coverage by outreach vs. fixed posts
      ii. Drop out rate from vaccination Jan to Jun 2002

4. Comprehensiveness of benefits and tiering

5. Equitable financing
   a. Is financing by ability to pay?
      i. The proportion of cost recovery to the total expenses

6. Efficacy, efficiency and quality of health care
   a. PHC training for community based delivery
      i. Proportion of training schools carrying out PHC training for community based delivery
ii. Proportion of health districts organizing seminars on PHC for community health delivery
iii. Number of health areas with trained staff on community-based PHC delivery

b. Incentives to practice PHC
   i. % of health units with incentives for re-imbursement for outreach
   ii. % of health unit budget set aside for outreach

c. Appropriate allocation of resources to PHC
   i. Proportion of health services planning by objectives

   d. Interactive community participation including vulnerable sub-groups
      i. Proportion of dialogue structures holding general assembly meetings
      ii. Proportion of health units with vulnerable groups represented in dialogue structures
      iii. Proportion of health units that involve communities in planning process

e. Referral mechanisms (over last 12 months)
   i. % of patients in the district hospital who have not been referred (past 12 months)
   ii. proportion of referred patients that are counter-referred in the past 12 months
   iii. % of patients referred to the hospital in the past 12 months

f. Implementation of evidence based practice in therapeutic interventions
   i. % of health units with personnel trained in the use of guidelines
   ii. % of health units with available clinical guidelines
   iii. % of health units sending complete reports (monthly = NHMIS & EPI; weekly = epidemiological reports) during the last 6 months
   iv. % of health units keeping copies of reports sent (last 6 months)

g. Regular assessment of quality, including satisfaction with surveys or community group involvement
   i. % of health units carrying out our medical audits
   ii. % of public health units receiving mandated number of supervisions

h. Accreditation
   i. % of accredited hospitals
   ii. % of physicians receiving continuing education accreditation

7. Administrative efficiency
   a. Administrative efficiency: minimization of administrative overheads
      i. % of health units with inventory of equipment
      ii. proportion of HU with a trained personnel responsible for maintenance of equipment
      iii. % of HU with equipment below or above norms
      iv. % of HU with functional equipment
      v. % of HU with coverage respecting health map
      vi. % of personnel leaving country within 2 years

   b. Cost reducing purchasing
      i. % of drugs expired at HU
      ii. % of drugs not bought from the National Central Purchasing Stores
      iii. % of drugs requested from National Stores but not supplied within the past 12 months

   c. Minimizing abuse and fraud and inappropriate incentives
      i. proportion of unauthorized providers (CIGs, NGOs)

8. Democratic accountability and empowerment
   a. Performance reports
      i. % of dialogue structures receiving monthly and technical reports through the dialogue structures
      ii. % of HU with budget by objectives approved by management committees

   b. Privacy
      i. % of HU with ethical committees

   c. Enforcement of regulations
      i. % of HU with internal regulations
      ii. % of HU enforcing regulations

   d. Civil society
      i. % of planned district advocacy activities carried out
      ii. proportion of advocacy meetings that involved vulnerable groups
      iii. % of advocacy meetings held in response to advocacy groups request

9. Patient and provider autonomy