

## Effective Coverage as a New Metric for Monitoring Progress towards Universal Health Coverage

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#### Dear Editor

Monitoring the progress towards Universal Health Coverage (UHC) is among the major challenges in health systems. Strengthening health systems, ensuring affordability of care, improving access to quality services, and building capacity are core tenets of (UHC) (1). Nevertheless, the main question is how the progress towards UHC should be monitored.

Many countries are using crude indicators to evaluate access to health services which cannot reflect the true story of improvement of population's health. But, in recent years, WHO has introduced effective coverage (EC) as a useful indicator to assess the performance of health system services. While normal or crude coverage represents simply the proportion of the population that could be covered by a health intervention, EC is defined as the fraction of potential health benefit that the health system can provide for individuals or

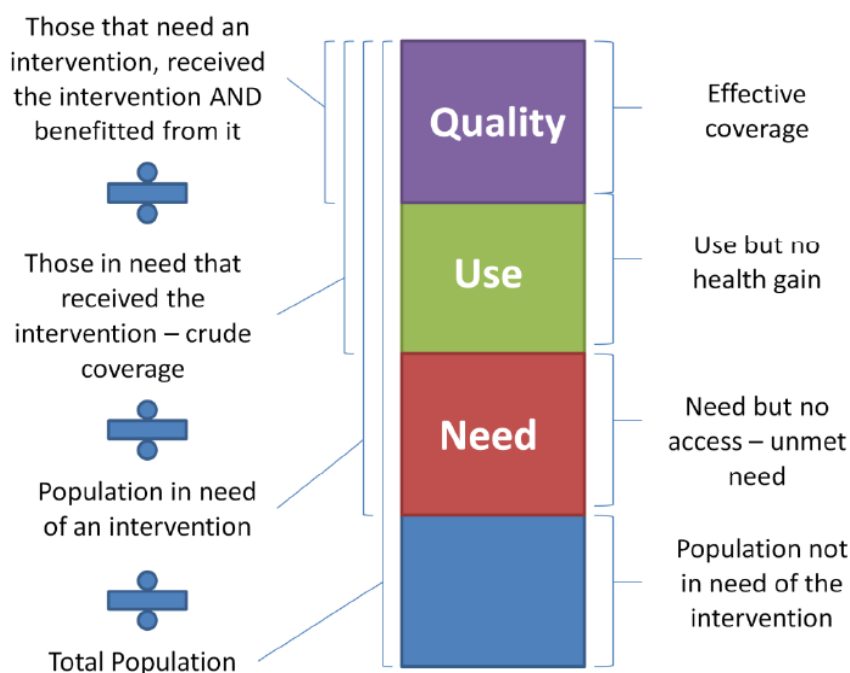
the population through an intervention and it is expressed as a percentage (2). It is crucial for a health performance metric to calculate not only the coverage but also the quality of services (1, 3). EC has three essential parts of quality (Q), need (N), and utilization (U) and it is calculated using the following formula:

$$EC_{ij} = (U_{ij}/N_{ij}) \times Q_{ij} = 1$$

Individuals need a health service if their expected health benefit from receiving it is greater than zero. Note that  $N_{ij}$  is defined as a dichotomous variable that can take on values 0 (no need) or 1 (presence of need). It will be better to define a variable of "probability of health care need",  $Pr(N_{ij}=1)$  (2). Need to an intervention is measured through research information, biomarkers or alternative methods like symptoms diagnosis (1). "Use" presents the probability of an individual receiving intervention; this is equivalent to crude coverage. Related information is derived from official dossier and households studies. "Quality" refers to the actual health

benefit gained from the service. Quality of intervention can be measured by different Approaches like statistical methods (4). EC level which is significantly lower than crude coverage shows the expected benefits have not been acquired and the

quality of the intervention is low. Lower difference between crude and EC in a population shows high quality of the interventional service (figure 1) (3).



**Figure1.** Illustration of the concepts of need, use and quality and how they relate to each other

For EC applications, there are three key recommendations. These include first, highlighting disease burden, affordable interventions and selecting which health services to include in estimating EC. This consideration runs with first, estimating evidence on health need preferences, assessing cost-effectiveness of health services and noticing problems of equity. Second, developing strategies to calculate indicators including need, use, and quality of intervention and third, building system capacity for continuous monitoring of measuring EC in health system are required (1).

We recommend practical considerations to develop effective services coverage in Iran:

- Human resource training and education for evaluation of effective health services coverage.
- Developing appropriate circumstance to criticize and review findings about health services coverage assessments.
- Creating a website for information release and access to required data for effective health services coverage calculation.
- Allocating financial resources for collecting the required data.
- Building the culture for applying effective health services coverage in the country.

- Providing an encouragement mechanism for universities and organizations that manage information in the field of effective health services coverage.
- Creating integrated substructures for data collection at health ministry level.
- Developing the revision of national health indicators using effective health coverage approach.
- Reviewing the situation and experiences of other countries about health system monitoring indicators.

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## Ethical issues

Not applicable.

## Competing interests

Authors declare that they have no competing interests.

## Authors' contributions

The first author wrote the original manuscript. All authors contributed equally to the preparing final manuscript.