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JOHNS HOPKINS
BLOOMBERG
SCHOOL of PUBLIC HEALTH

# Section C

## Performance

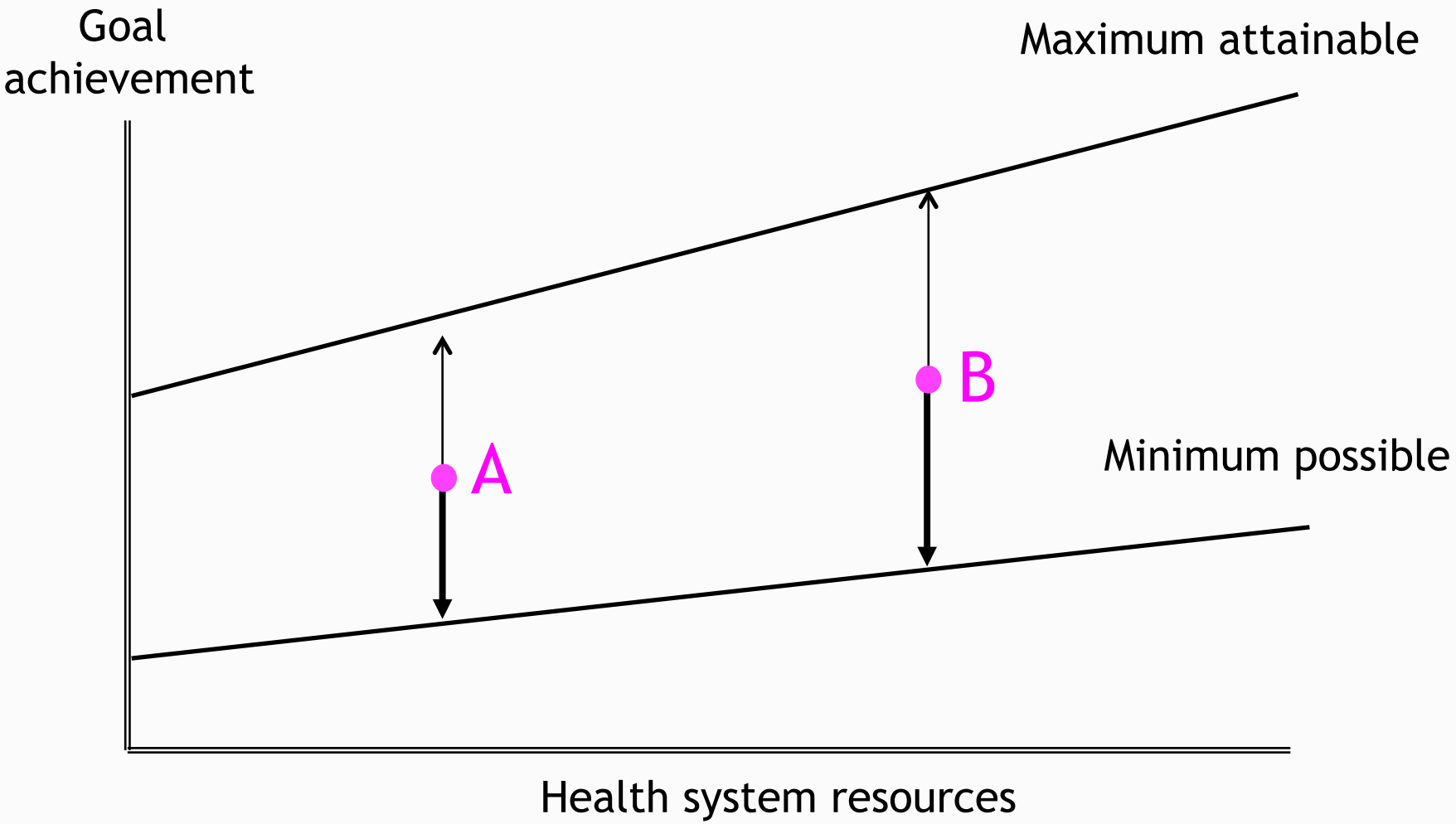
# Performance?

- Achievement of goals

- However, the achievement of goals needs to be related to two "denominators":
  - Resources available, and
  - Other non-health system determinants of health

- This approach can apply to health system, sub-components, specific institutions, and individual providers

# Performance



# Attainment and Performance

- Measurement (population health) of what is

  ***and***

- Measurement of what should be (three measures)
  - A = actual attainment
  - N = no health system
  - M = maximum if health system fully fulfilled
- Performance index = (A-N)/(M-N)

# Health System Attainment and Performance

**Annex Table 1 Health system attainment and performance in all Member States, ranked by eight measures, estimates for 1997**

| Member State | ATTAINMENT OF GOALS | | | | | | Health expenditure per capita in international dollars | PERFORMANCE | |
|---|---|---|---|---|---|---|---|---|---|
| | Health | | Responsiveness | | Fairness in financial contribution | Overall goal attainment | | On level of health | Overall health system performance |
| | Level (DALE) | Distribution | Level | Distribution | | | | | |
| Brazil | 111 | 108 | 130-131 | 84-85 | 189 | 125 | 54 | 78 | 125 |
| Canada | 12 | 18 | 7-8 | 3-38 | 17-19 | 7 | 10 | 35 | 30 |
| Colombia | 74 | 44 | 82 | 93-94 | 1 | 41 | 49 | 51 | 22 |
| France | 3 | 12 | 16-17 | 3-38 | 26-29 | 6 | 4 | 4 | 1 |
| Ghana | 149 | 149 | 132-135 | 146 | 74-75 | 139 | 166 | 158 | 135 |
| Japan | 1 | 3 | 6 | 3-38 | 8-11 | 1 | 13 | 9 | 10 |
| Mexico | 55 | 65 | 53-54 | 108-109 | 144 | 51 | 55 | 63 | 61 |
| Nigeria | 163 | 188 | 149 | 177 | 180 | 184 | 176 | 175 | 187 |
| Norway | 15 | 4 | 7-8 | 3-38 | 8-11 | 3 | 16 | 18 | 11 |
| Oman | 72 | 59 | 83 | 49 | 56-57 | 59 | 62 | 1 | 8 |
| Russian Federation | 91 | 69 | 69-72 | 86-87 | 185 | 100 | 75 | 127 | 130 |
| Saudi Arabia | 58 | 70 | 67 | 50-52 | 37 | 61 | 63 | 10 | 26 |
| Singapore | 30 | 29 | 20-21 | 3-38 | 101-102 | 27 | 38 | 14 | 6 |
| Spain | 5 | 11 | 34 | 3-38 | 26-29 | 19 | 24 | 6 | 7 |
| Sweden | 4 | 28 | 10 | 3-38 | 12-15 | 4 | 7 | 21 | 23 |
| Uganda | 186 | 138 | 187-188 | 165 | 128-130 | 162 | 168 | 179 | 149 |
| United States of America | 24 | 32 | 1 | 3-38 | 54-55 | 15 | 1 | 72 | 37 |

Source: WHO: World Health Report 2000.

# Health System Performance

**Annex Table 10 Health system performance in all Member States, WHO indexes, estimates for 1997**

| Performance on health level (DALE) | | | | | Overall performance | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Rank | Uncertainty interval | Member State | Index | Uncertainty interval | Rank | Uncertainty interval | Member State | Index | Uncertainty interval |
| 1 | 1 - 5 | Oman | 0.992 | 0.975 - 1.000 | 1 | 1 - 5 | France | 0.994 | 0.982 - 1.000 |
| 2 | 1 - 4 | Malta | 0.989 | 0.968 - 1.000 | 2 | 1 - 5 | Italy | 0.991 | 0.978 - 1.000 |
| 3 | 2 - 7 | Italy | 0.976 | 0.957 - 0.994 | 3 | 1 - 6 | San Marino | 0.988 | 0.973 - 1.000 |
| 4 | 2 - 7 | France | 0.974 | 0.953 - 0.994 | 4 | 2 - 7 | Andorra | 0.982 | 0.966 - 0.997 |
| 5 | 2 - 7 | San Marino | 0.971 | 0.949 - 0.988 | 5 | 3 - 7 | Malta | 0.978 | 0.965 - 0.993 |
| 6 | 3 - 8 | Spain | 0.968 | 0.948 - 0.989 | 6 | 2 - 11 | Singapore | 0.973 | 0.947 - 0.998 |
| 7 | 4 - 9 | Andorra | 0.964 | 0.942 - 0.980 | 7 | 4 - 8 | Spain | 0.972 | 0.959 - 0.985 |
| 8 | 3 - 12 | Jamaica | 0.956 | 0.928 - 0.986 | 8 | 4 - 14 | Oman | 0.961 | 0.938 - 0.985 |
| 9 | 7 - 11 | Japan | 0.945 | 0.926 - 0.963 | 9 | 7 - 12 | Austria | 0.959 | 0.946 - 0.972 |
| 10 | 8 - 15 | Saudi Arabia | 0.936 | 0.915 - 0.959 | 10 | 8 - 11 | Japan | 0.957 | 0.948 - 0.965 |
| 11 | 9 - 13 | Greece | 0.936 | 0.920 - 0.951 | 11 | 8 - 12 | Norway | 0.955 | 0.947 - 0.964 |
| 12 | 9 - 16 | Monaco | 0.930 | 0.908 - 0.948 | 12 | 10 - 15 | Portugal | 0.945 | 0.931 - 0.958 |
| 13 | 10 - 15 | Portugal | 0.929 | 0.911 - 0.945 | 13 | 10 - 16 | Monaco | 0.943 | 0.929 - 0.957 |
| 14 | 10 - 15 | Singapore | 0.929 | 0.909 - 0.942 | 14 | 13 - 19 | Greece | 0.933 | 0.921 - 0.945 |
| 15 | 13 - 17 | Austria | 0.914 | 0.896 - 0.931 | 15 | 12 - 20 | Iceland | 0.932 | 0.917 - 0.948 |
| 16 | 13 - 23 | United Arab Emirates | 0.907 | 0.883 - 0.932 | 16 | 14 - 21 | Luxembourg | 0.928 | 0.914 - 0.942 |
| 17 | 14 - 22 | Morocco | 0.906 | 0.886 - 0.925 | 17 | 14 - 21 | Netherlands | 0.928 | 0.914 - 0.942 |
| 18 | 16 - 23 | Norway | 0.897 | 0.878 - 0.914 | 18 | 16 - 21 | United Kingdom | 0.925 | 0.913 - 0.937 |
| 19 | 17 - 24 | Netherlands | 0.893 | 0.875 - 0.911 | 19 | 14 - 22 | Ireland | 0.924 | 0.909 - 0.939 |
| 20 | 15 - 31 | Solomon Islands | 0.892 | 0.863 - 0.920 | 20 | 17 - 24 | Switzerland | 0.916 | 0.903 - 0.930 |
| 21 | 18 - 26 | Sweden | 0.890 | 0.870 - 0.907 | 21 | 18 - 24 | Belgium | 0.915 | 0.903 - 0.926 |
| 22 | 19 - 28 | Cyprus | 0.885 | 0.865 - 0.898 | 22 | 14 - 29 | Colombia | 0.910 | 0.881 - 0.939 |
| 23 | 19 - 30 | Chile | 0.884 | 0.864 - 0.903 | 23 | 20 - 26 | Sweden | 0.908 | 0.893 - 0.921 |
| 24 | 21 - 28 | United Kingdom | 0.883 | 0.866 - 0.900 | 24 | 16 - 30 | Cyprus | 0.906 | 0.879 - 0.932 |
| 25 | 18 - 32 | Costa Rica | 0.882 | 0.859 - 0.898 | 25 | 22 - 27 | Germany | 0.902 | 0.890 - 0.914 |

Source: WHO: World Health Report 2000.

# WHR 2000—Methodological Concerns

- Data were unavailable to calculate measure reported for 70–89% of countries
- Although key informants came from only 35 countries, 191 countries were ranked on health-system responsiveness; informants were not representative even of the 35 countries
- The measure of health inequalities does not reflect concerns about equity
- The measure of fair financing does not reflect a conceptually sound or socially responsible view of fairness and does not differentiate among countries

Source: Almeida, C., et al. (2001). *Lancet*.

# WHR 2000—Methodological Concerns

- Important methodological limitations and controversies are not acknowledged

- Twenty-six of the 32 cited methodological references are non peer-reviewed internal WHO documents, and only two of the 32 references are by authors other than those of the World Health Report 2000

- The measures of health status have been widely criticized for their problematic implications for equity and under-valuing the lives of disabled people

Source: Almeida, C., et al. (2001). *Lancet*.

# WHR 2000—Methodological Concerns

- The multi-component indices are problematic conceptually and methodologically; they are not useful to guide policy, in part because of the opacity of their component measures

- Primary health care is declared a failure without examining adequate evidence, apparently based on the authors' ideological position

- The methodological issues are not only matters of technical and scientific concern, but are profoundly political and likely to have major social consequences

Source: Almeida, C., et al. (2001). *Lancet*.

# Measurement of Health Distribution

- The measure
  - Equality of child survival (an index of expected child survival to age of 5) based on distribution in small areas, e.g., census tracts
  - A “pure” number
    - Not based on socioeconomic nor vulnerable group basis
    - Not a measure of equity

# Measurement of Fair Financing

- The measure
  - Perfectly fair if all households pay the same fraction of their non-food spending on health services if the ratio of total health expenditure to total non-food spending is identical in all households, independent of their incomes, their health status, or their use of the health systems
  - $ for health expenditures / $ for discretionary (non-food) expenditures

# An Alternative: Assessing Performance of Health Systems

- To achieve improved health status of the population in accord with the annual health plan requires the following for each of the high-priority interventions:
  - The coverage of the population as planned
    - Coverage is defined as the proportion of the target population that receives the intervention
    - The target population consists of all those who will benefit from the intervention
  - The conduct of the intervention processes according to standard

# Assessing the Performance of Health Systems

- The epidemiological information needed for this is twofold: the first are measures of coverage for each intervention and the second are measures of performance of the intervention according to standards

- Although it is important to have data on all inputs to adequately plan programs, the critical factors are that interventions are performed on all those who will benefit, and are carried out according to evidence-based standards