Equity & Utilization of Health Services

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بحث

- وزیرمحترم بهداشت، درمان وآموزش پزشکی در بازدید از دهرم (استان فارس)، به اتفاق چند نفر چشم پزشک اقدام به جراحی چشم بیش از ۳۰۰ نفر از اهالی دهرم در یک روز کردند!!!!!

(منبع: روابط عمومی دانشگاه)

Defining equity

It is important to distinguish between equality and equity:

- Equality – concerned with equal shares
- Equity – about fairness and it may be fair to be unequal

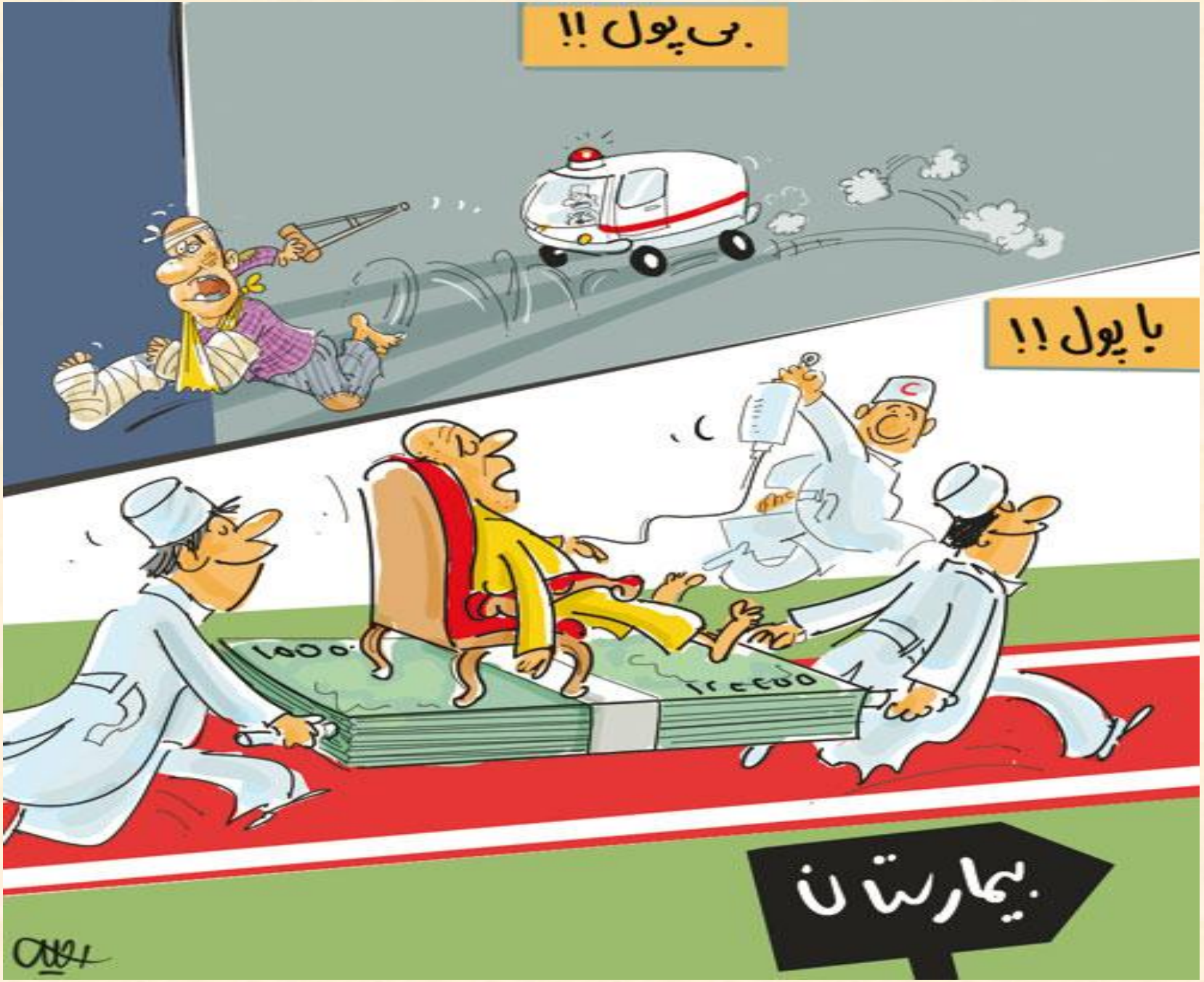
PRINCIPLES OF EQUITY

- Equal access to health care for those in equal need of health care.
- Equal utilization of health care for those in equal need of health care.
- Equal (or, rather, equitable) health outcomes

(as measured by, for example, quality adjusted life expectancy)

Equity in Health

- **Equity in delivery**
- **Equity in financing**


بی پول !!
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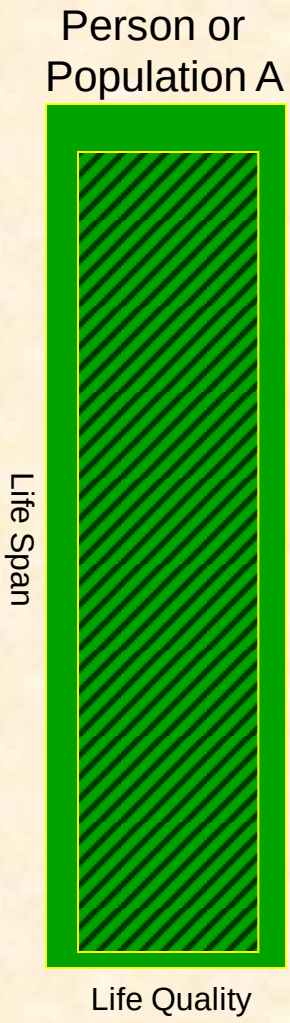
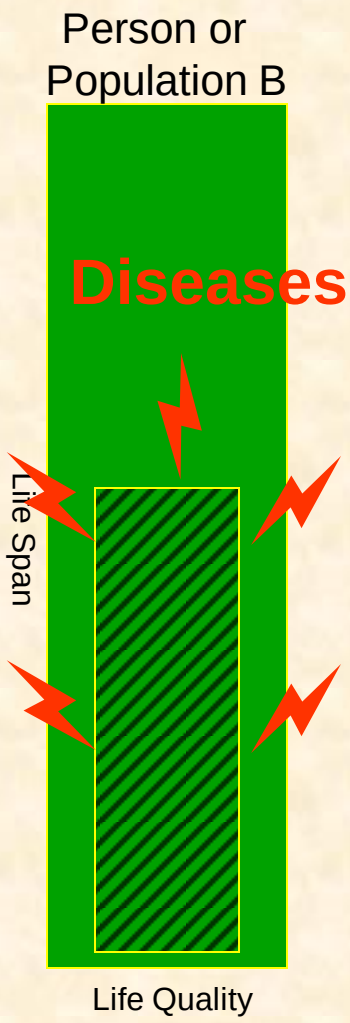
بیمارستان

Equity in Health

- **Delivery in relation to health need**
- **Financing in relation to ability to pay**

Health Inequality



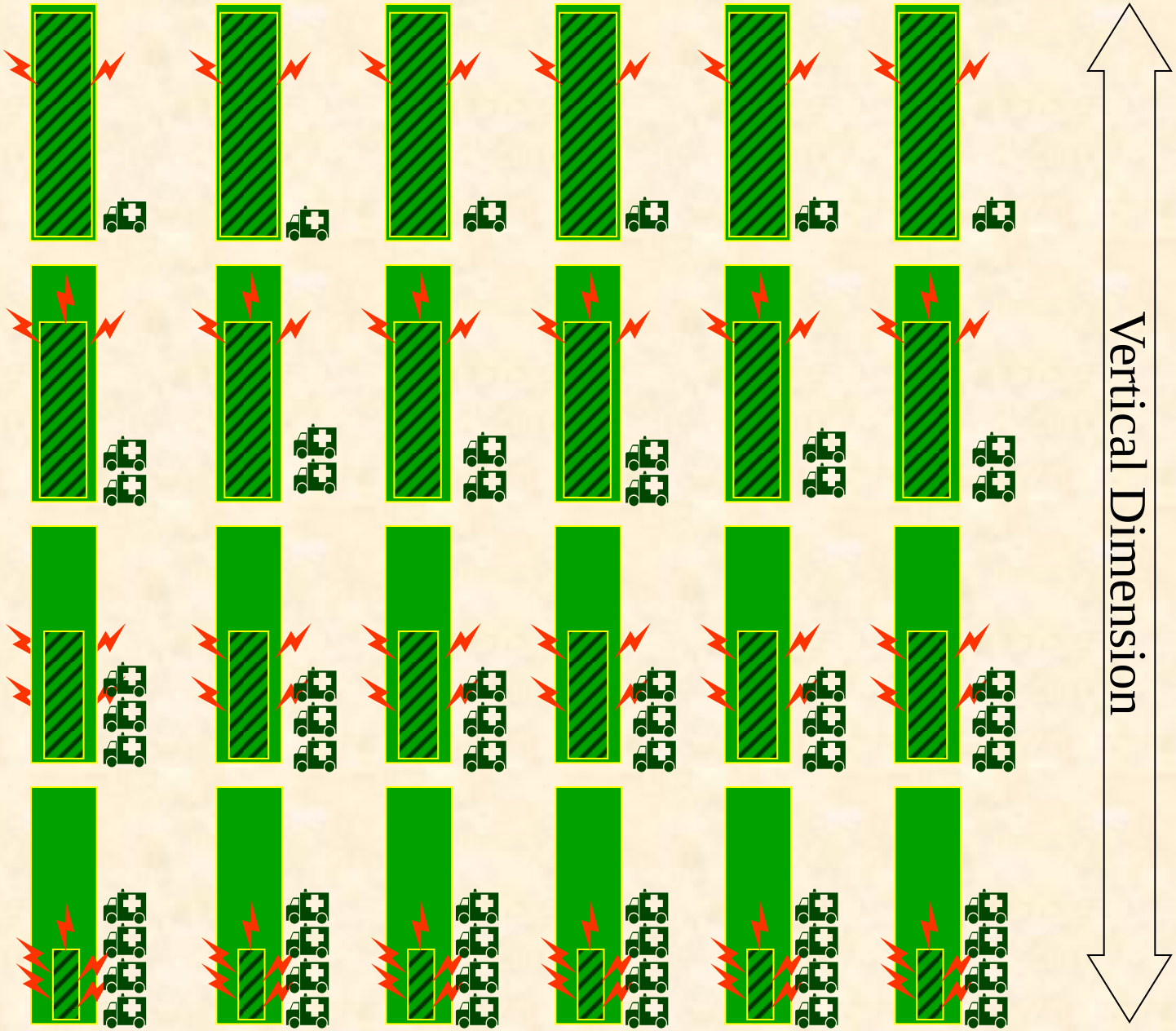


Genes
Family
Life Style
Nutrition
Education
Environment
Money
Health services

Equity in delivery

- **Horizontal equity**
  - Health care delivery system is horizontally equitable if all people with equal need for health care are equally likely to obtain the same type of health care.
  - "**Equal treatment of equals**"
- **Vertical equity**
  - "A health care delivery system is vertically equitable if people with greater need for health care are more likely to obtain care than those with a lower need."
  - "**More health care for those with more need**"

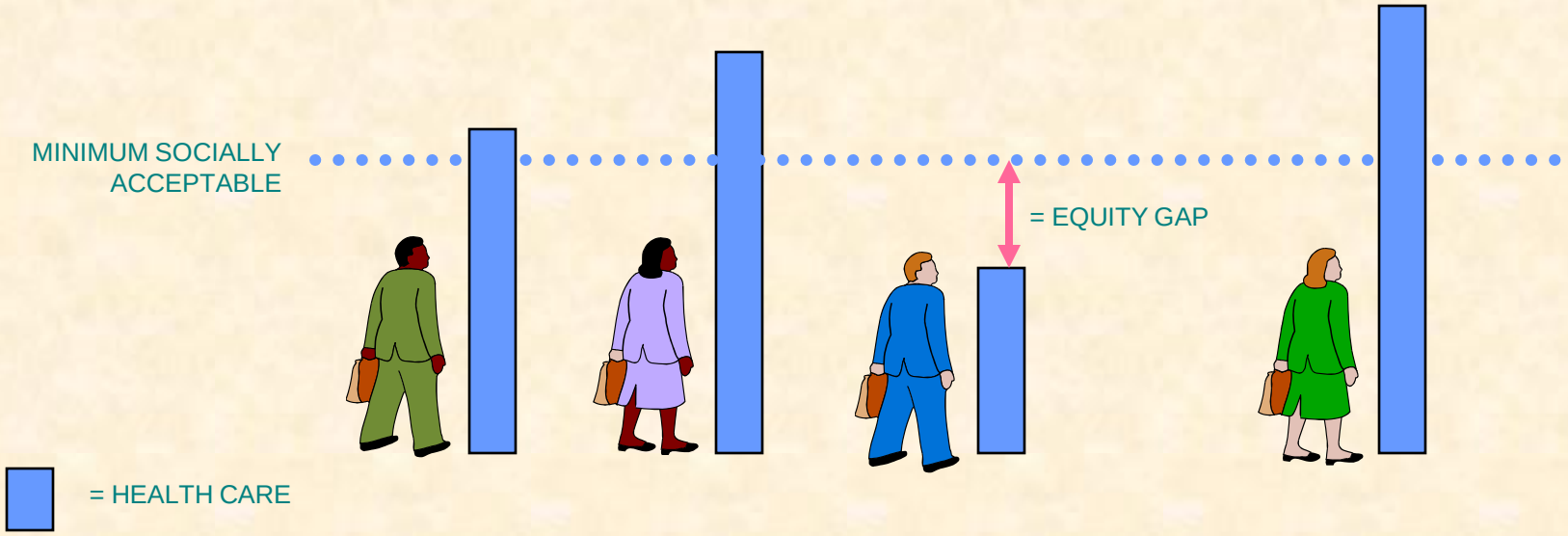
Horizontal and Vertical Equity



Are equity and equality synonymous?

Some think that:

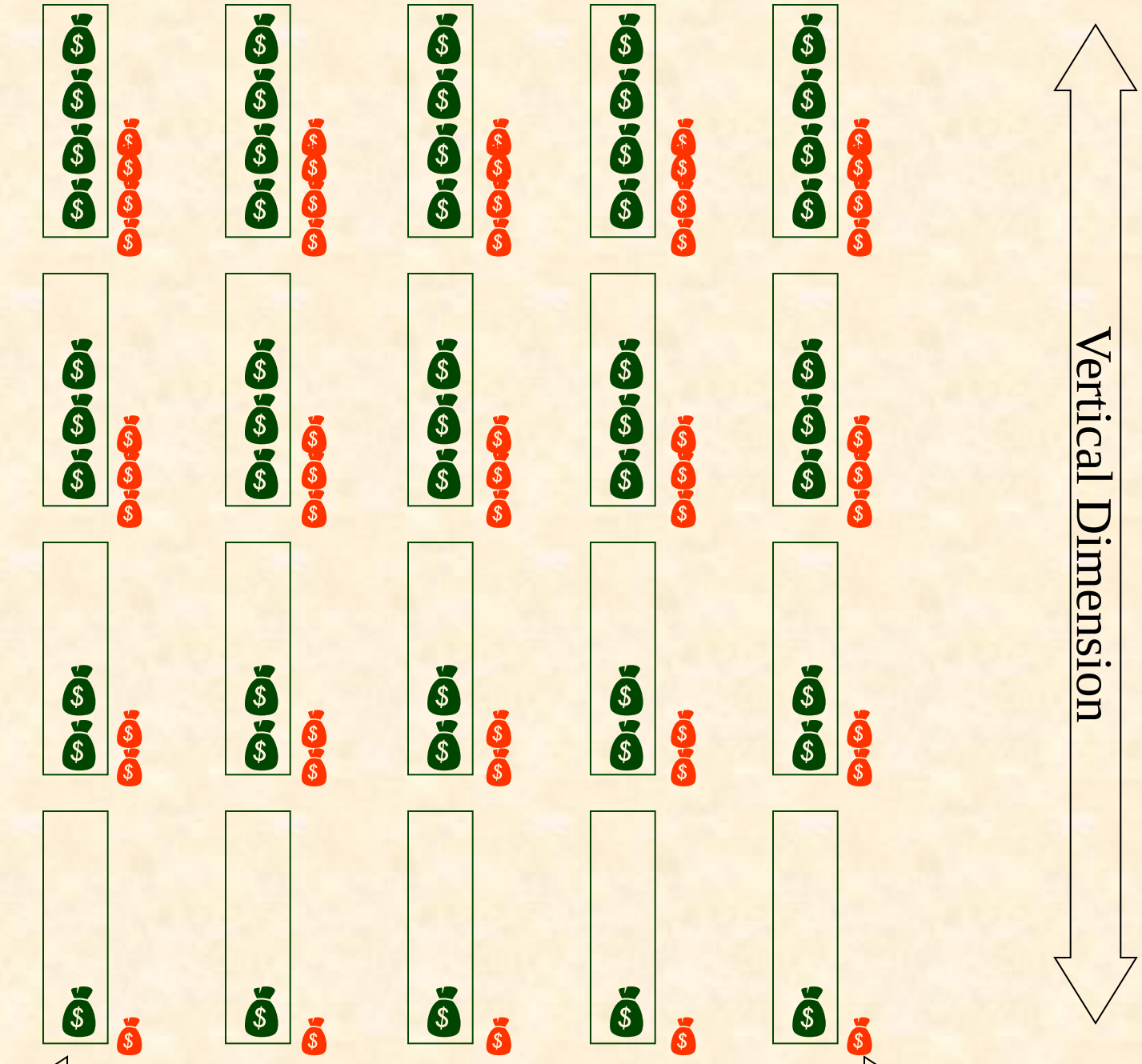
> "Inequity will not necessarily arise as a result of differences in consumption levels among individuals, but will always be present when consumption by any one individual or group is below a minimum socially acceptable"



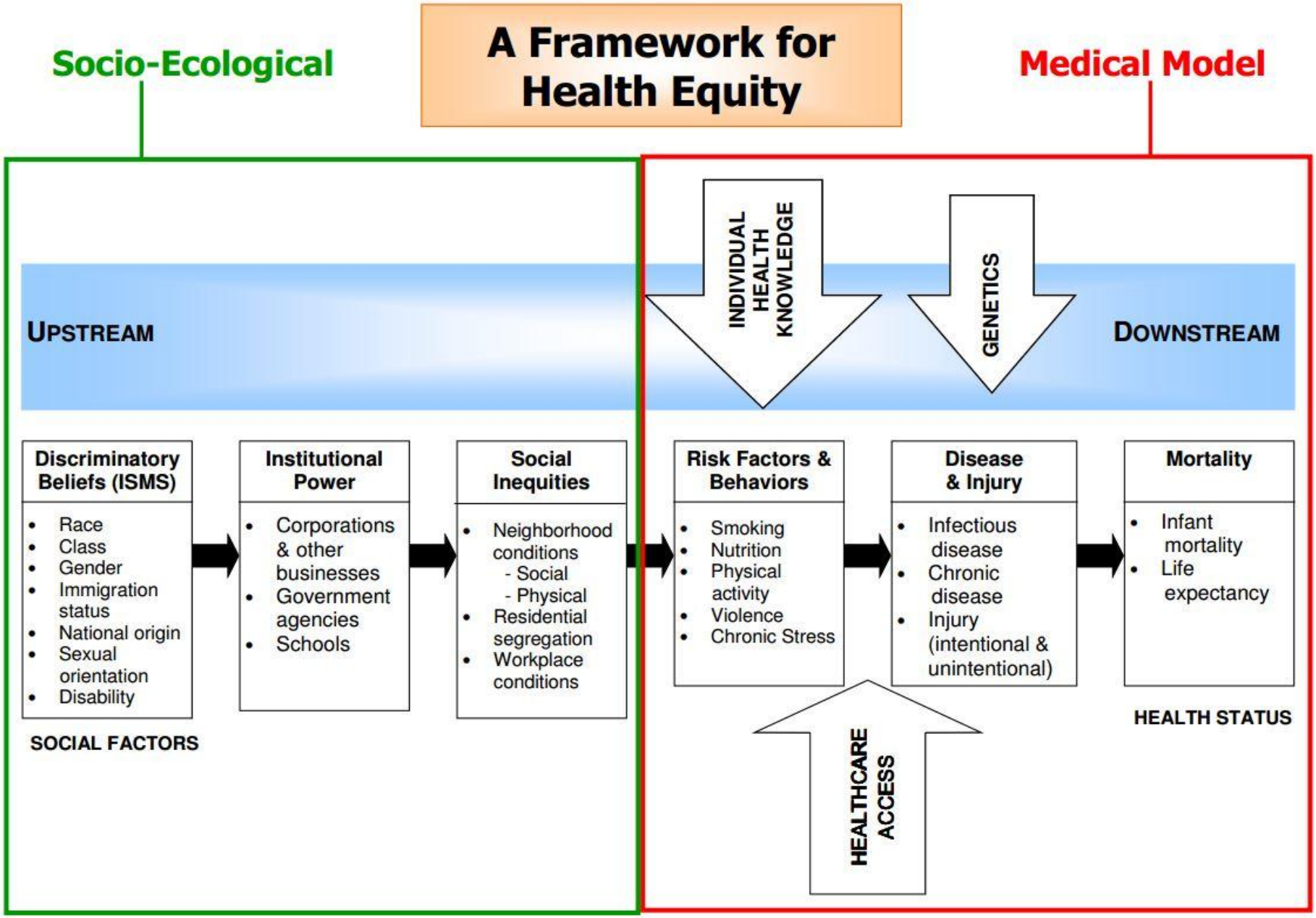
Equity in financing

- **Horizontal equity**
  - Horizontal equity in financing is when people with equal ability to pay make equal payments for health care
  - "**Equal payments by equals**"
- **Vertical equity**
  - A health system is vertically equitable when payment and ability to pay are positively correlated
  - "**Greater ability to pay→ higher payment**"
  - "**Smaller ability to pay → lower payment**"
  - To some, a financing system is considered to be vertically equitable if those with greater ability to pay contribute a greater share of their income to pay for health care ("**progressive**" financing.)

Vertical And Horizontal Equity in Finance



A Framework for Health Equity



- Adapted by ACPHD from the Bay Area Regional Health Inequities Initiative, Summer 2008

ACCESS…..

Defining Access

- Donabedian: **Fit** between need for services and services delivered (geographic, socio-organizational)
- Andersen: **Actual** use of personal health services and everything that facilitates or impedes the use of personal health services
- **Freedom** or ability to obtain or make use of services

Effective and efficient access

Effective – Using the health services improves health outcomes, including health status and satisfaction with care

Efficient - Health services use improves health outcomes at minimum cost

Potential and actual access

- ***Potential access***: presence of enabling resources (factors)
  - Physical accessibility
  - Availability of essential inputs
  - Service quality
  - Social accountability
- ***Actual or realized access***: actual use of services
  - Utilization
  - Continuity and timing
  - Technical quality

Access comprehensive: The "four" A's

- **Availability**: volume/type of services vs volume/type of needs; essential resources needed;
- **Accessibility**: location of supply and location of users (distance, cost, travel time, transportation resources, communication aspects)
- **Affordability**: prices of services, insurance or deposit requirements vs income, ability to pay, distinction between direct costs, indirect costs and opportunity costs;
- **Acceptability**: relates to social and cultural distance, characteristics of health provider, gender aspects, bureaucracy, organizational issues (convenience of opening hours).

Coverage

- ***Coverage*** is the proportion of the target population who can receive, or have received the service
- ***Potential Coverage*** is linked with the service capacity (quantity)
- ***Actual coverage*** is linked with service performance (quality)

What determines effective coverage?

- **Price** of intervention *j* offered by provider *k* – B_{jk}
- Disposable **income** of individual *i* - I_i
- **Geographic location** of a provider *k* offering intervention *j* in relation to individual *i* - Q_{ijk}
- Cultural and social **acceptability** of intervention *j* offered by provider *k* to individual *i* - Z_{jik}
- **Availability** of necessary technology to provider *k* for delivering intervention *j* - R_{jk}
- Expected **health gain** from intervention - HG_{ij}
- **Performance of provider** *k* in relation to intervention *j* - P_{jk}
- **Adherence** of individual *i* to intervention *j* - Y_{ij}

$$EC_{ijk} = f\left(B_{jk}, I_i, Q_{ijk}, Z_{jik}, R_j, HG_{ij}, P_{jk}, Y_{ij}\right)$$

DATA COLLECTION & MEASUREMENT !!!

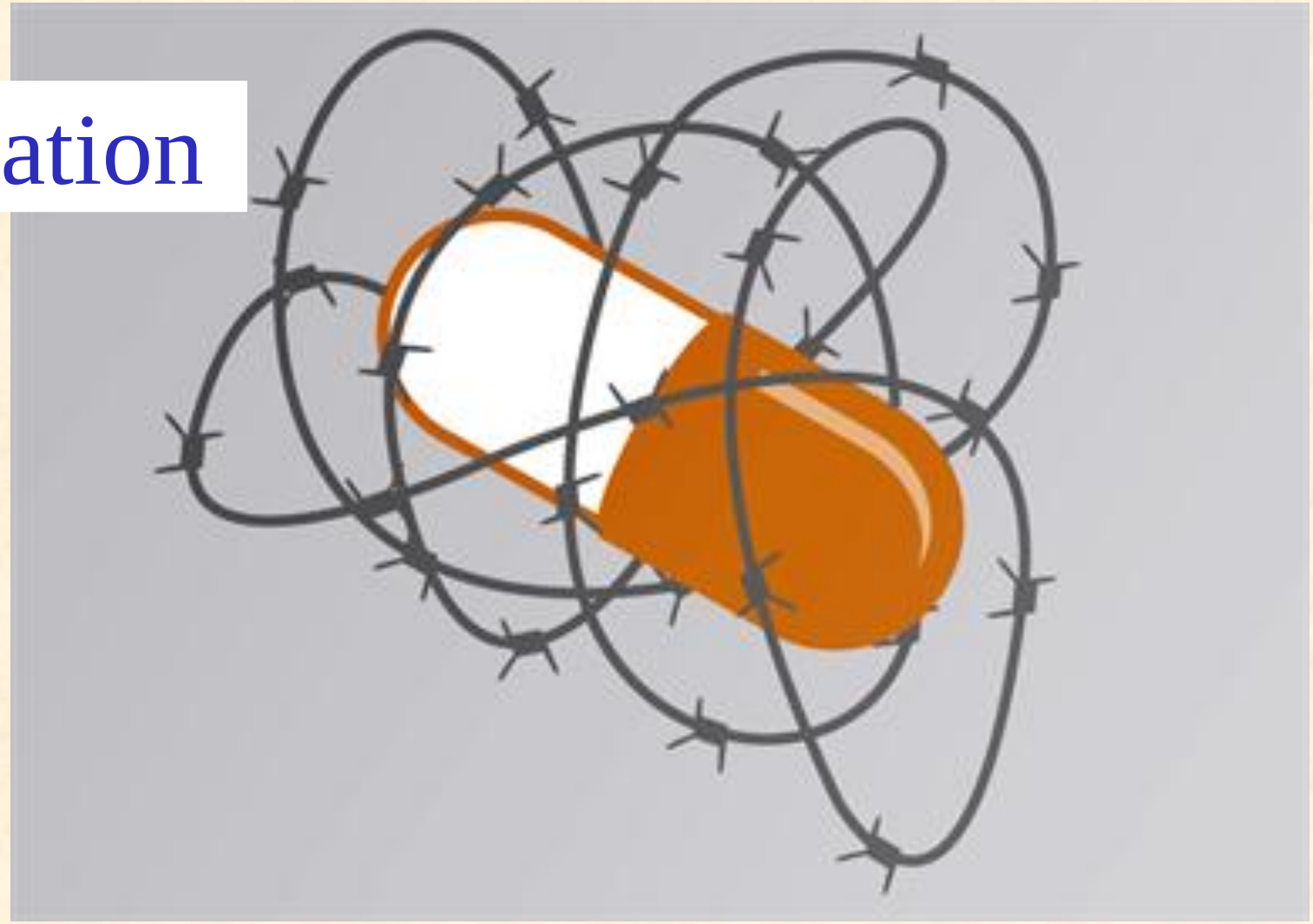
بحث

- ✓ خانم رحیمی ۴۵ ساله و دارای دو فرزند مدرسه رو است، همسر او معتاد است واز هم جدا شده اند.
- ✓ او دارای بیمه پایه ارزان از طرف یکی از ارگانهای حمایتی است.
- ✓ گرچه پزشک خانواده دارد ولی هر زمان که احساس بیماری می کند سراغ او می رود.
- ✓ در یکی از ویزیتها با خجالت به پزشک از مشکلی که در پستان خود احساس می کند صحبت می کند. پزشک او را مشکوک تشخیص می دهد وتوصیه می کند به متخصص مراجعه کند.
- ✓ بعد از جستجوی زیاد درنوبت ویزیت یک پزشک متخصص قرار می گیرد.
- ✓ بالاخره بعد از ۴ ماه از اولین مراجعه پزشک متخصص او را معاینه وبرای ماموگرافی ارجاع می دهد. زمانی که پاسخ را می آورد ۳ماه طول می کشد زیرا بیمه او پوشش مناسبی ندارد ولذا برای تامین پول مدتی او درگیر می شود.
- ✓ بالاخره با جواب مثبت سرطان پستان، مجبور به ماستوکتومی و استفاده از داروهای شیمی درمانی می شود، اما سرطان متاستازداده!!!!!

Her care failed on several reasons;

- Safe
- Effective
- Timely
- Patient centered
- Efficiency
- Equitable

Utilization



Utilization

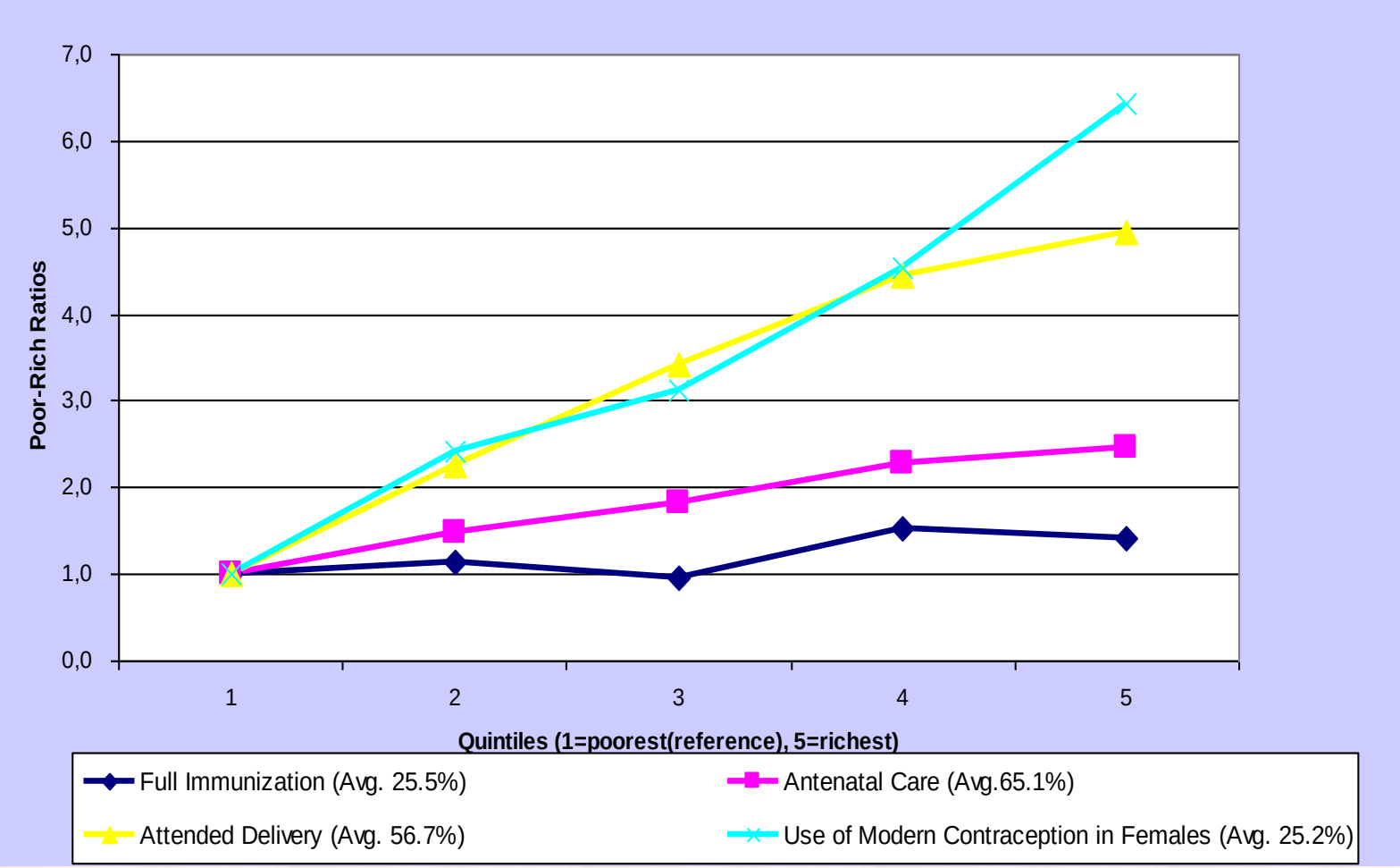
Utilization is

a) the ratio output/capacity (rate of output);

b) similar to actual coverage: % of people in need of a service who actually receive it in a given period (e.g a year).

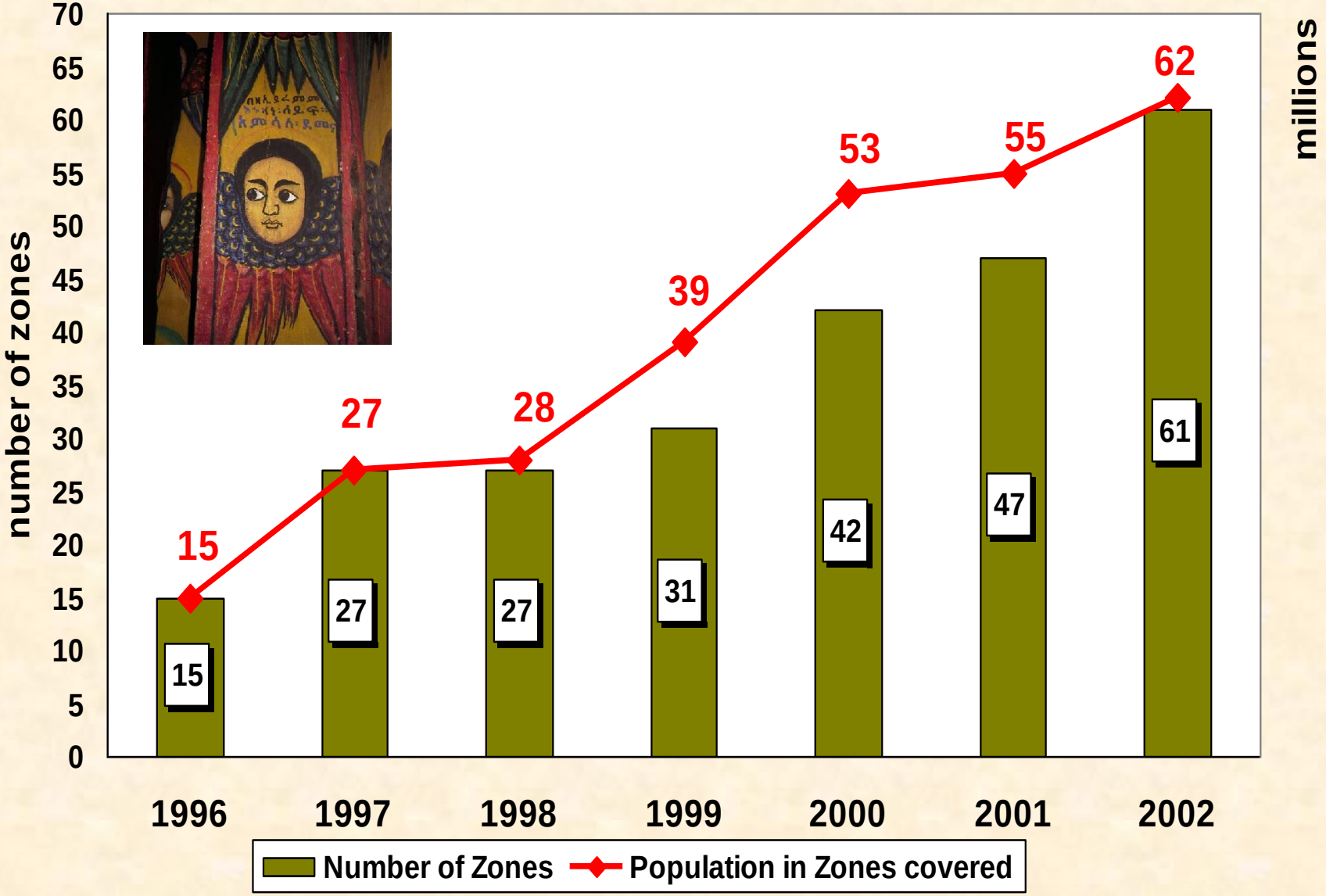
Specific groups: age, sex (!), urban/rural, poverty status (quintiles) (!PRSPs).

Use of Selected Health Services in Bolivia: Poor-Rich Differences



DOTS Expansion TLCP Ethiopia 2002

Total Zones: 69 Total Population 65 million



Inequality in Maternal Mortality in Iran; Independent variables of the study by provinces (2008)

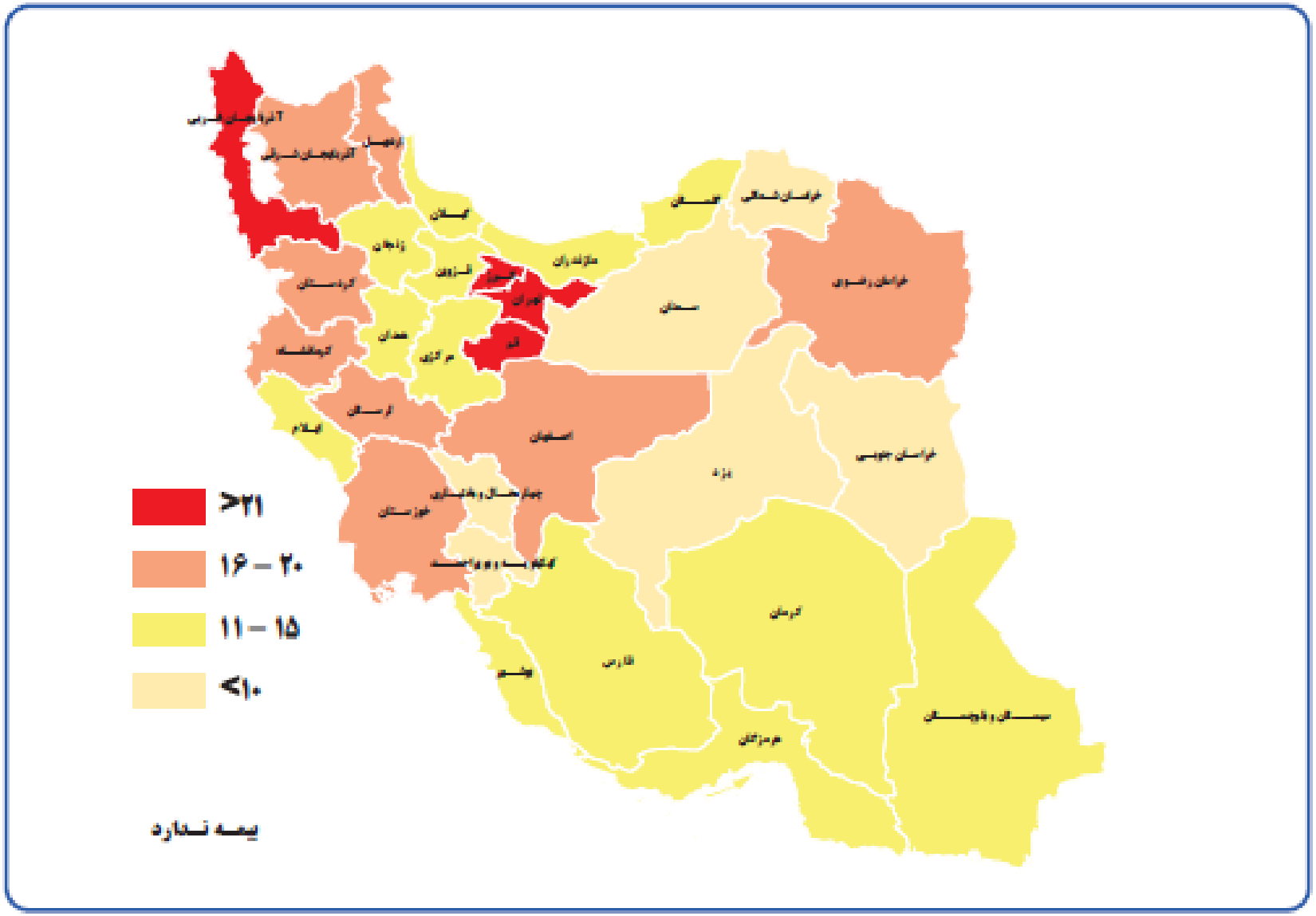
Province	Illiteracy-women	Illiteracy-men	Gini	HDI	Province	Illiteracy-women	Illiteracy-men	Gini	HDI
Ardebil	24.43	12.29	0.44	0.66	Kermanshah	21.2	11.84	0.36	0.68
Bushehr	15.92	8.82	0.36	0.72	Khorasan	17.27	10.05	0.42	0.7
Chahrmahal Bakhtiari	20.97	10.89	0.38	0.69	Khusestan	18.8	10.7	0.41	0.71
Eastern Azarbaiijan	22.45	11.9	0.39	0.69	Kohgiluie Buierahmad	21.76	11.54	0.39	0.67
Fars	15.26	9.2	0.35	0.73	Kordestan	27.41	14.23	0.36	0.63
Gazvin	16.95	9.47	0.35	0.73	Lorestan	21.76	12.82	0.34	0.67
Ghom	16.22	8.89	0.35	0.71	Markazi	19.32	10.65	0.39	0.71
Gilan	19.92	11.56	0.41	0.73	Mazandaran	17.63	10.22	0.37	0.73
Golestan	21.18	11.24	0.45	0.7	Semnan	13.37	8.09	0.35	0.72
Hamadan	20.73	11.47	0.48	0.68	Sistan Baluchestan	32.77	22.01	0.43	0.58
Hormozgan	19.21	12.57	0.46	0.69	Tehran	10.23	5.9	0.35	0.78
Ilam	20.73	12.41	0.37	0.69	Western Azarbaiijan	27.15	13.4	0.38	0.66
Isfahan	14.51	8.62	0.39	0.75	Yazd	13.82	8.456	0.38	0.72
Kerman	18.16	13.05	0.44	0.69	Zanjan	21.89	12.02	0.36	0.68

HDI: Human Development Index

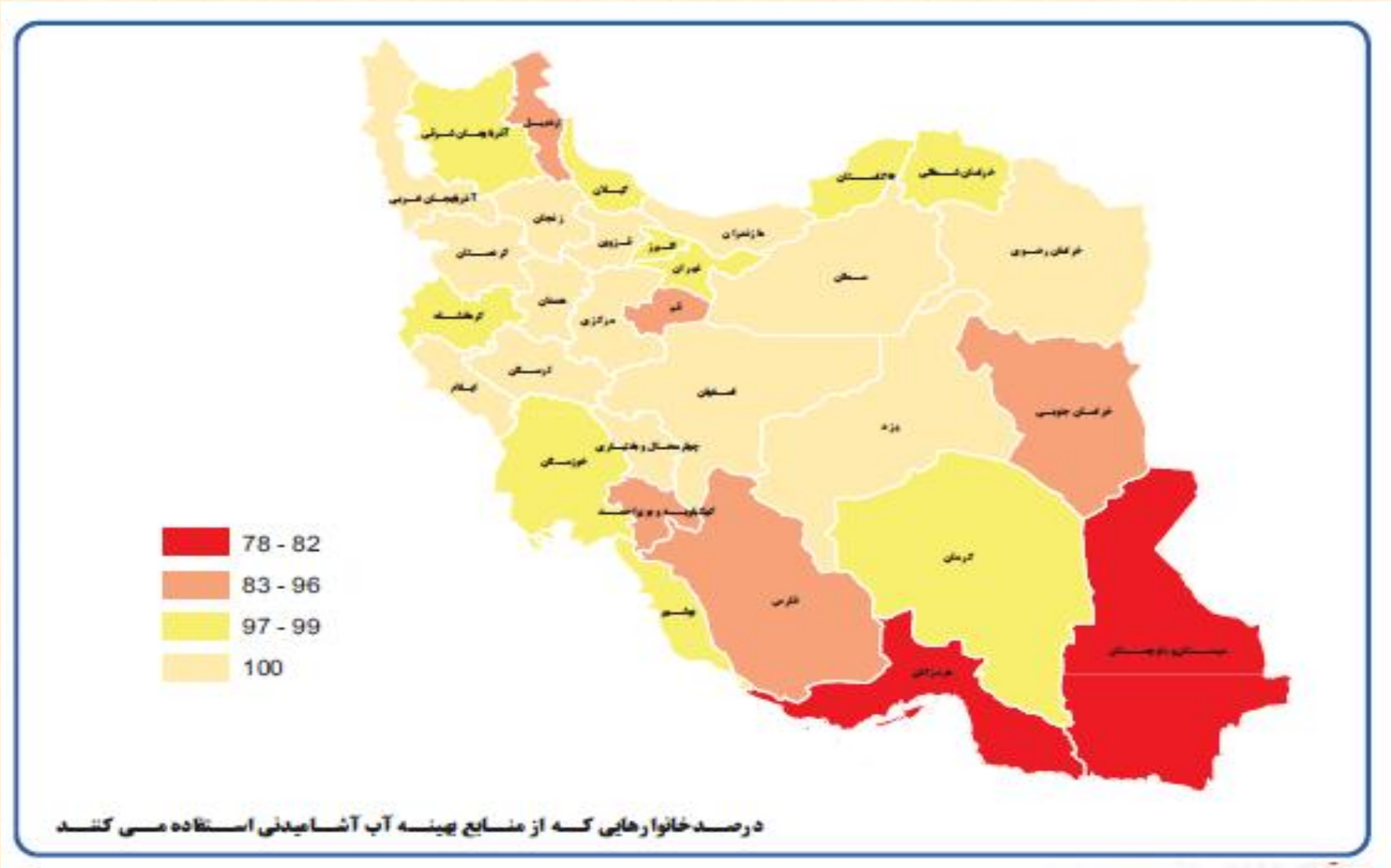
Distribution of the study variables in 28 provinces of Iran

	Maximum	Minimum	Mean
Maternal mortality ratio	61.3	6.3	24.7
Percentage of total illiteracy	32.6	8.7	17.1
Illiteracy rate in women	38.9	11.2	21.8
Illiteracy rate in men	26.3	6.4	12.5
Gini coefficient	0.48	0.34	0.39
Human development index	0.78	0.58	0.70

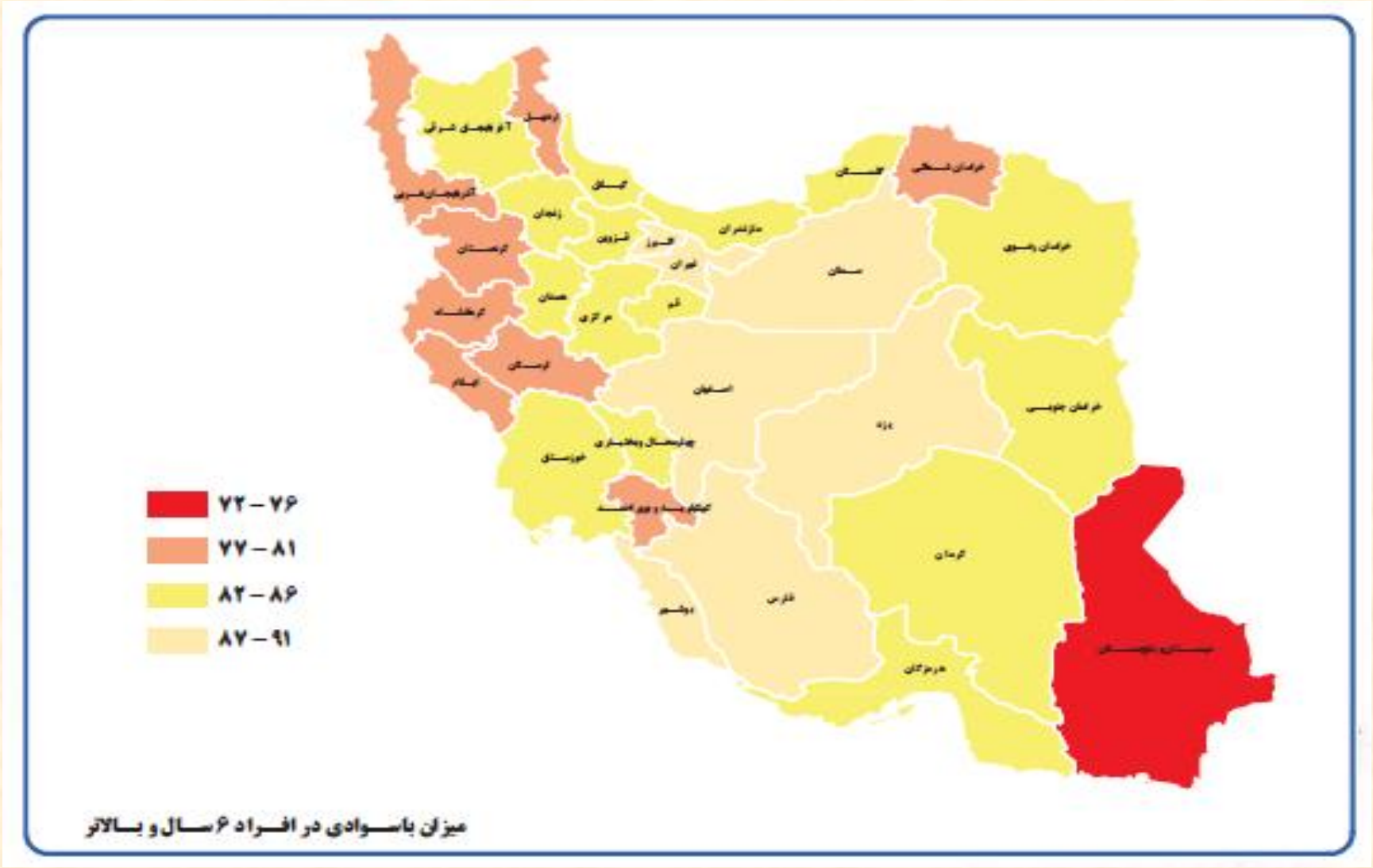
Percentage of Uninsured population (IrMIDHS 2011)



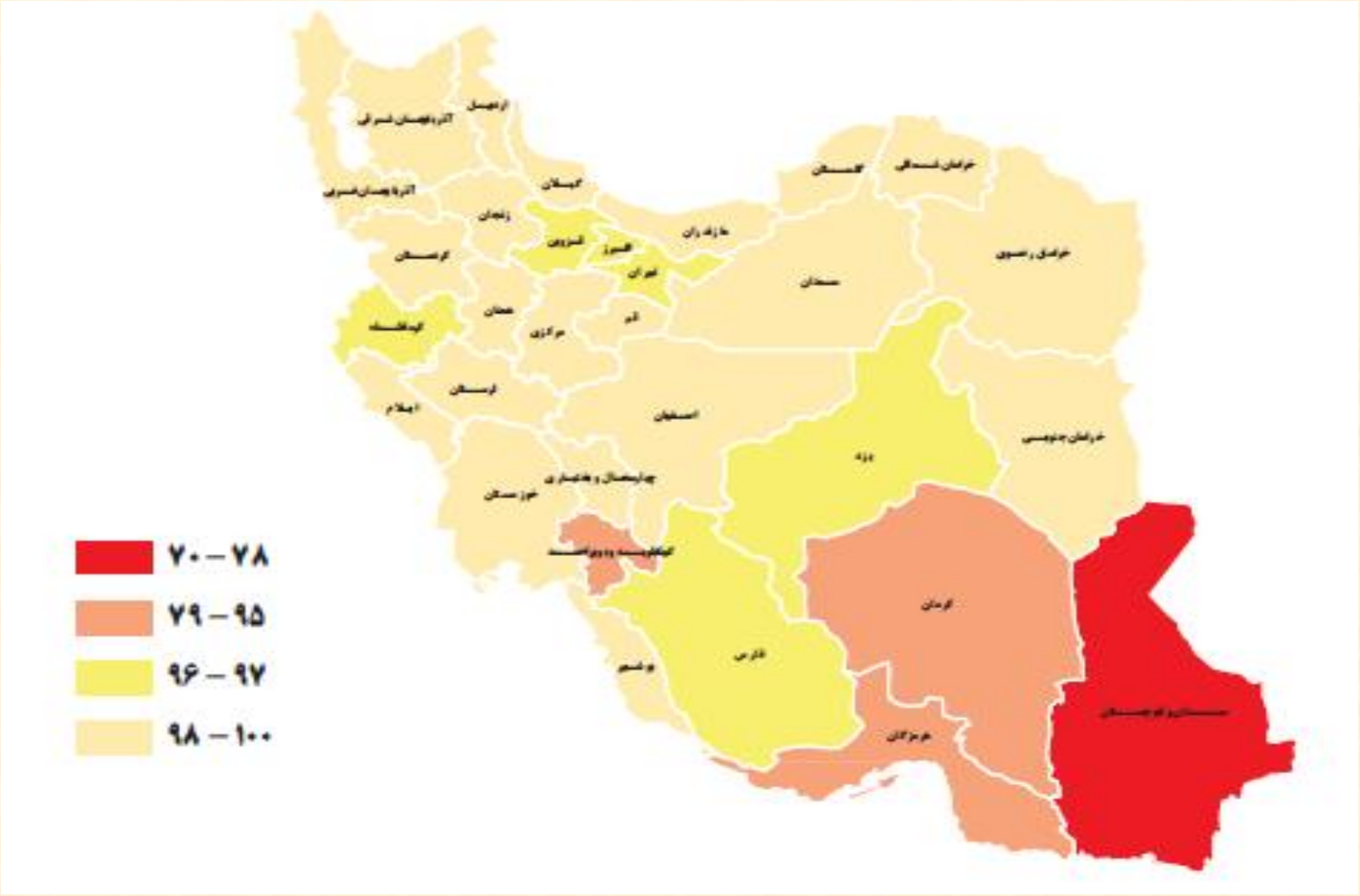
Percentage of population who have access to sanitary water (IrMIDHS 2011)



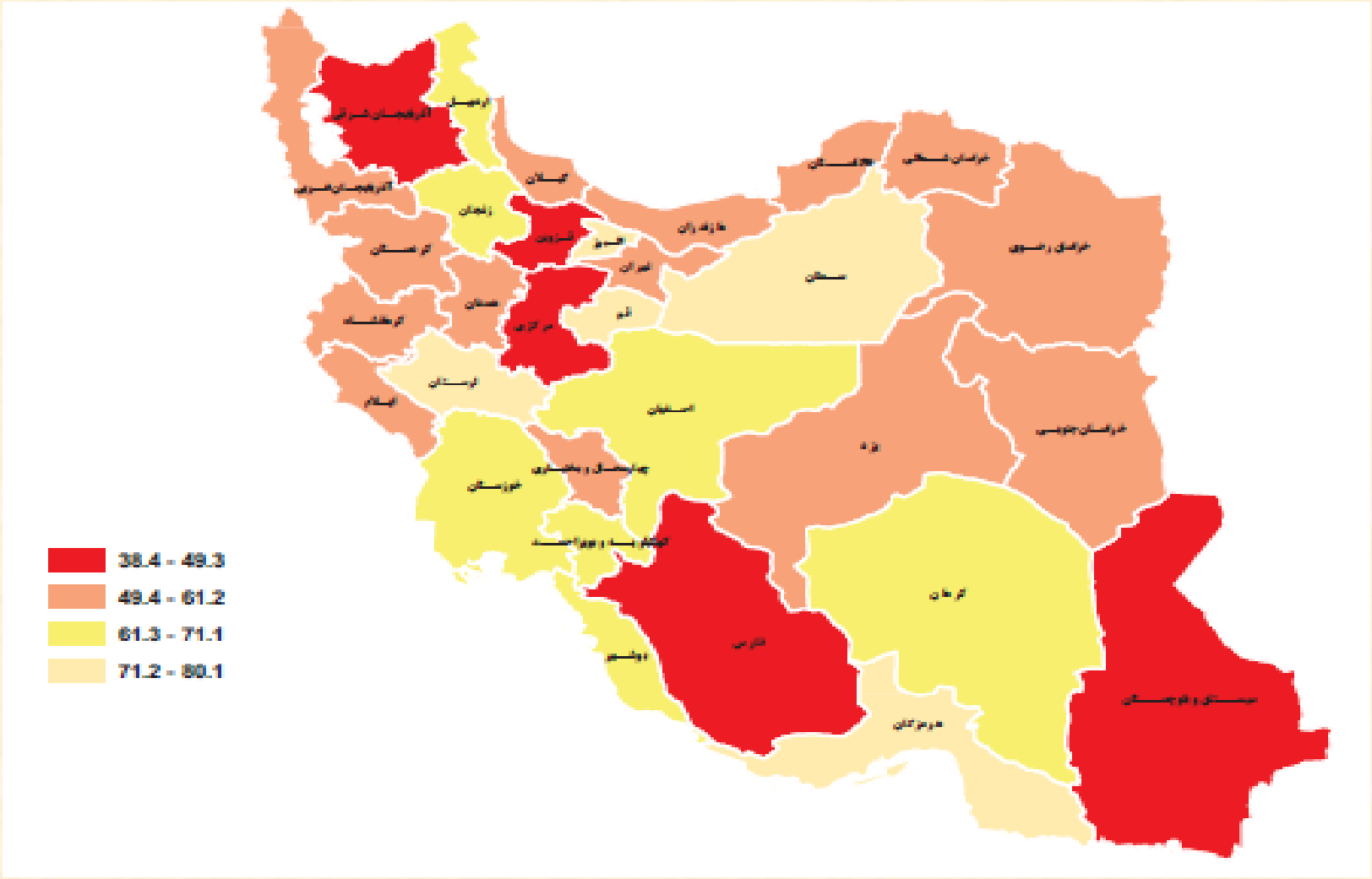
Literacy rate (IrMIDHS 2011)



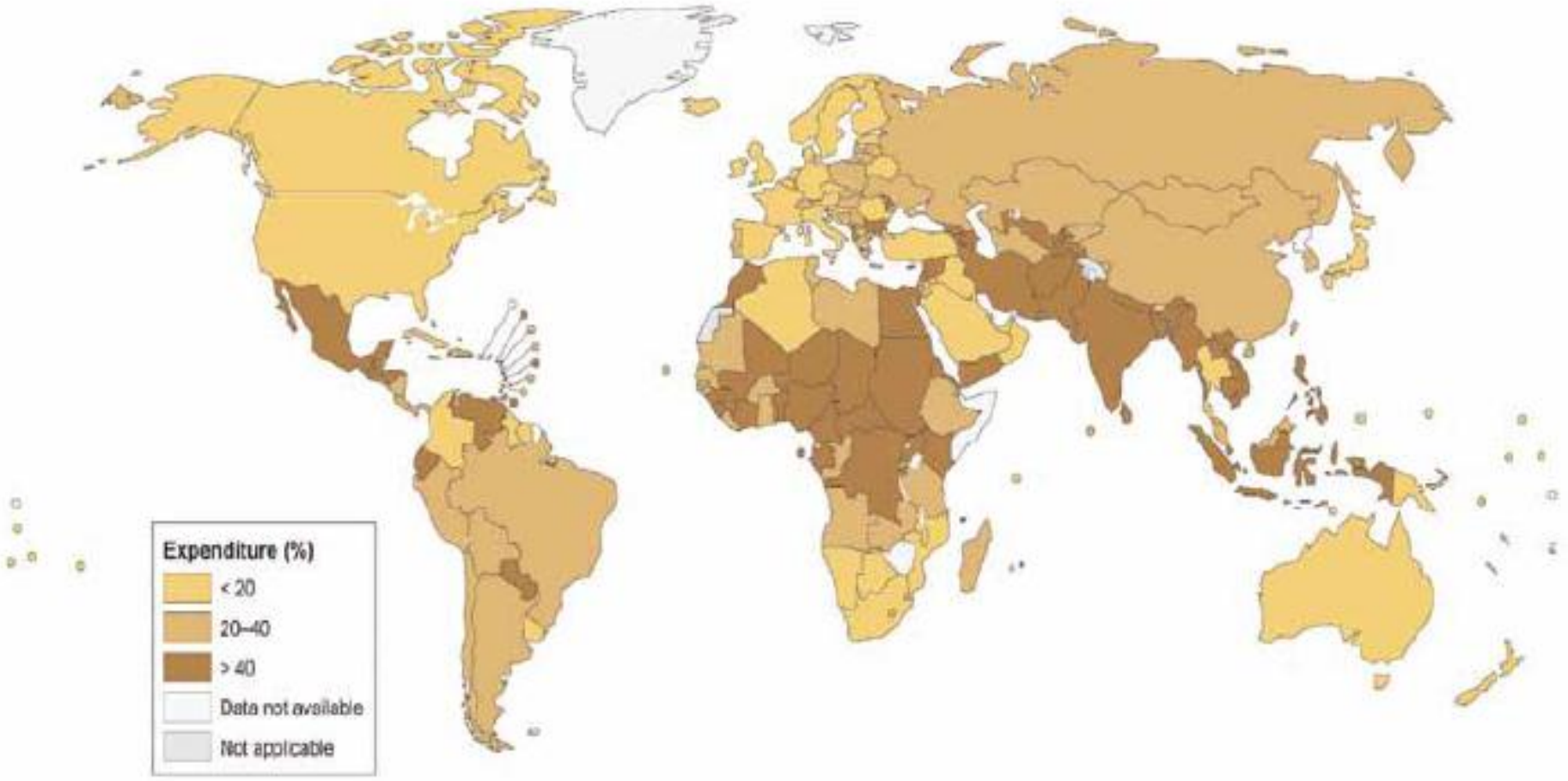
Percentage of deliveries conducted by trained midwife (IrMIDHS 2011)



Percentage of referrals to the clinics for treatment of children with diarrhea (IrMIDHS 2011)



Out of pocket expenditures on health as a percentage of total expenditure on health, 2013



Note: Based on WHO data February 2013.

Utilization of Health services in Iran

- In a study conducted by Mohammadbeigi and et al. *sex, household wealth index and in-patient need are the significant determinants of HCU* when adjustment has been done for other covariates (1).

- In other study *job and location of residence* were significant determinants (2).

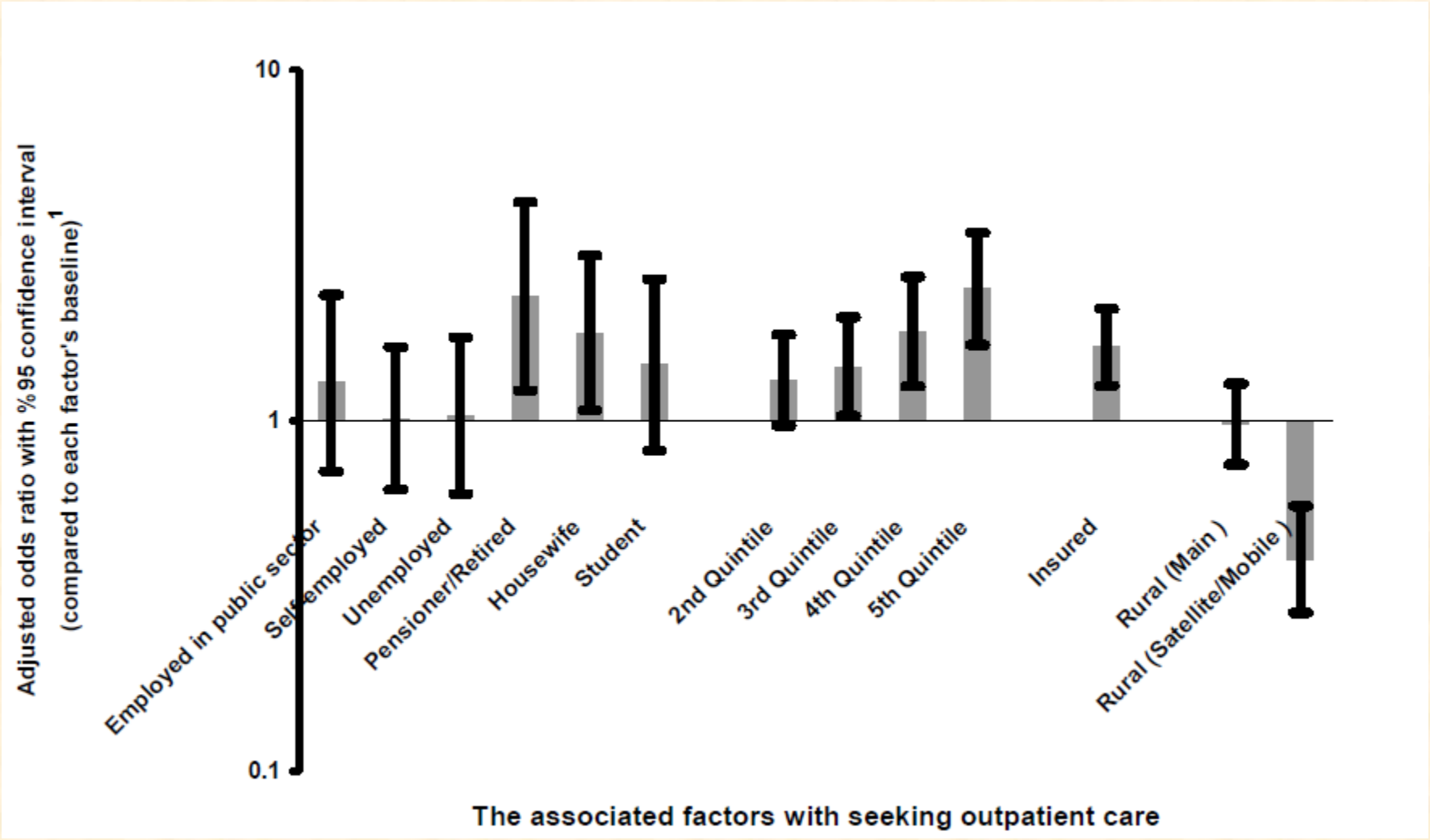
- Findings of another study showed: *accessibility, availability, speed, quality, and complete package of services* are the most important factors for choosing public or private hospitals (3).

Utilization of Health services in Iran

- According to a study was done in Shiraz; The most common barriers to service use were *logistic, especially the cost of and inconvenient access to services*. Barriers related to *perceptions of mental health services* were also important, such as lack of trust and perceptions of friends/family (4).

- Approximately 21.6% of households had no *access to health centers*. The coverage rate of family planning programs for safe methods was 51.4%, vaccination coverage among children under 5 year was 98% and 34% of pregnant women had not received standard healthcare due to *lack of access to health centers* (5).

The factors associated with seeking outpatient care, Iran, 2003 (6).

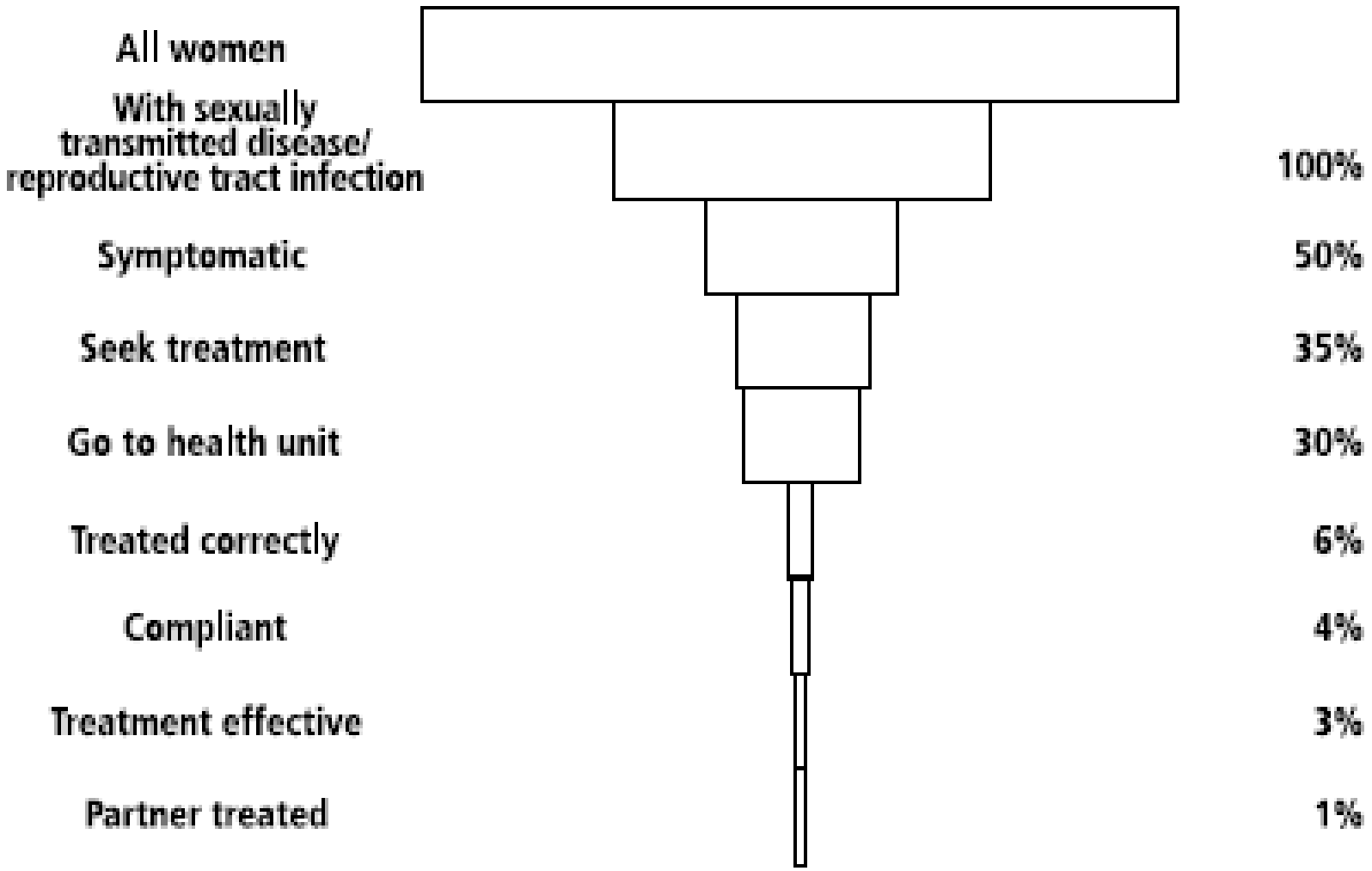


Health-seeking behaviour

The individual's or a population's interaction with the health system: composite factors that enable people or prevent them from making "healthy choices" in either their lifestyle behaviour or their use of health care:

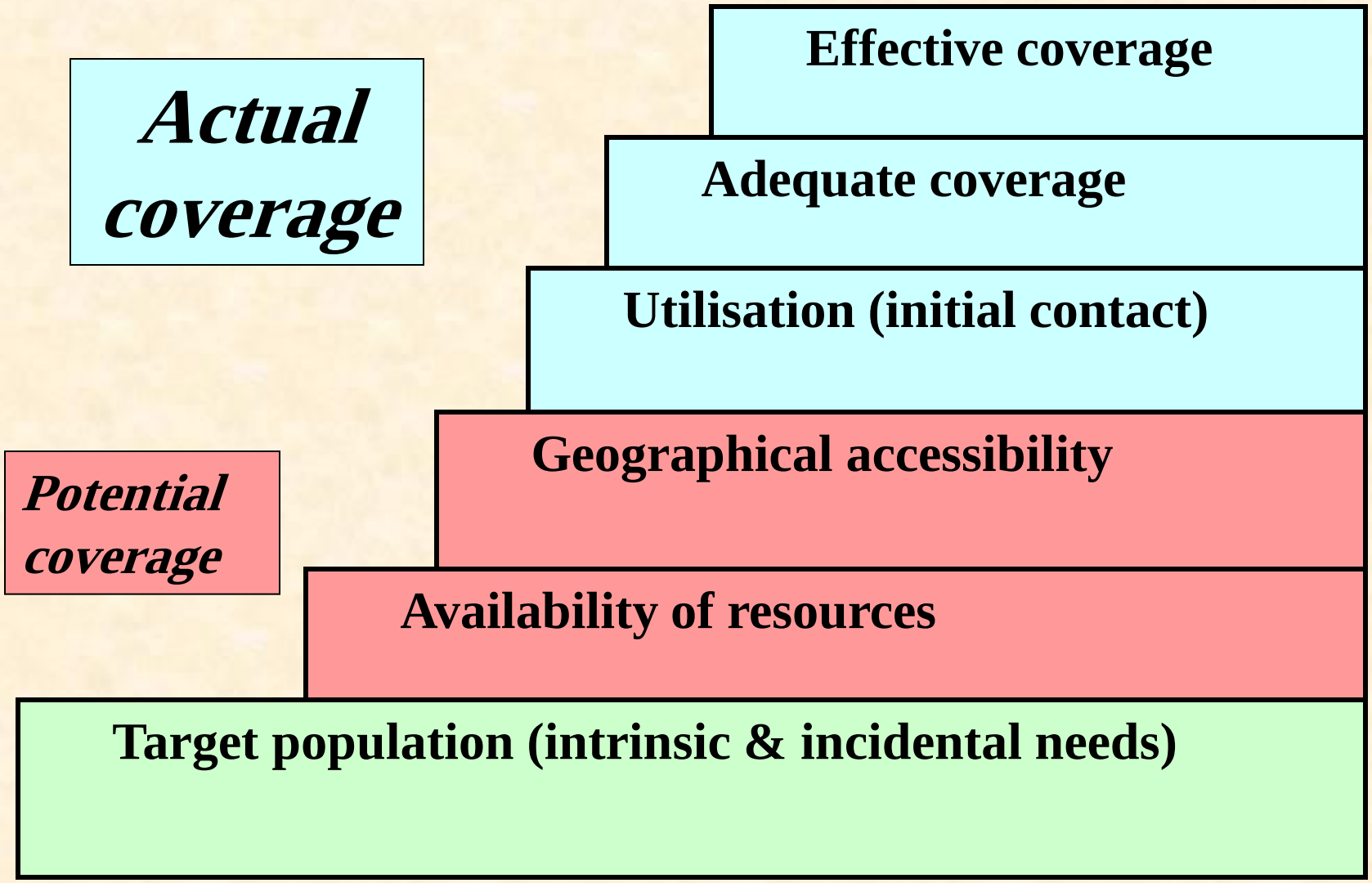
- **Preventive health behaviour**
- **Therapy choice** (including self-treatment, or choosing traditional/alternative/complementary care systems)
- **Reasons for delay**
- **Adherence to treatment**

Piot – Fransen Model for STI



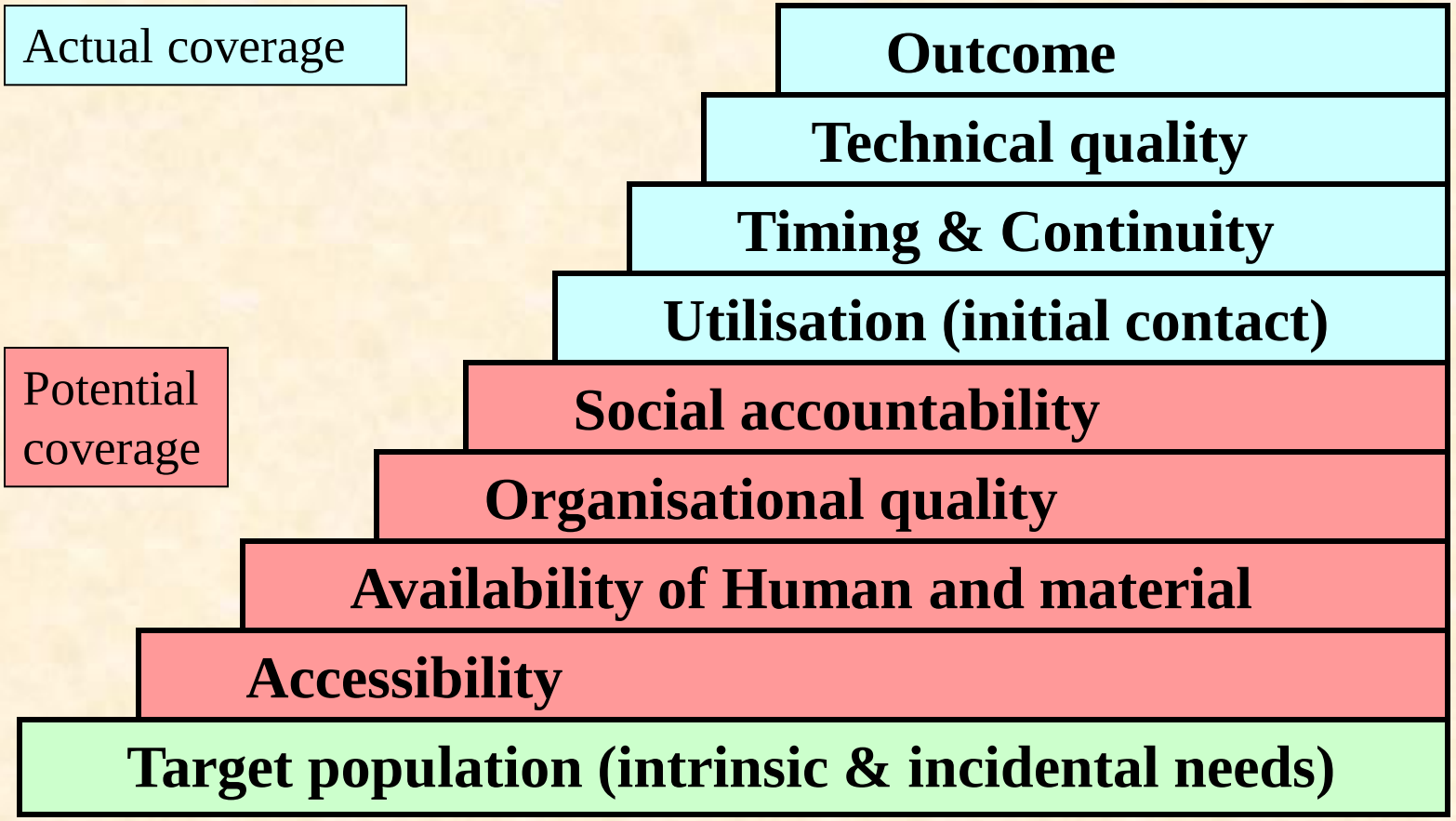
Source: C.P. Hudson. Bulletin of the World Health Organization, 2001, 79 (1)

Tanahashi/Knippenberg model

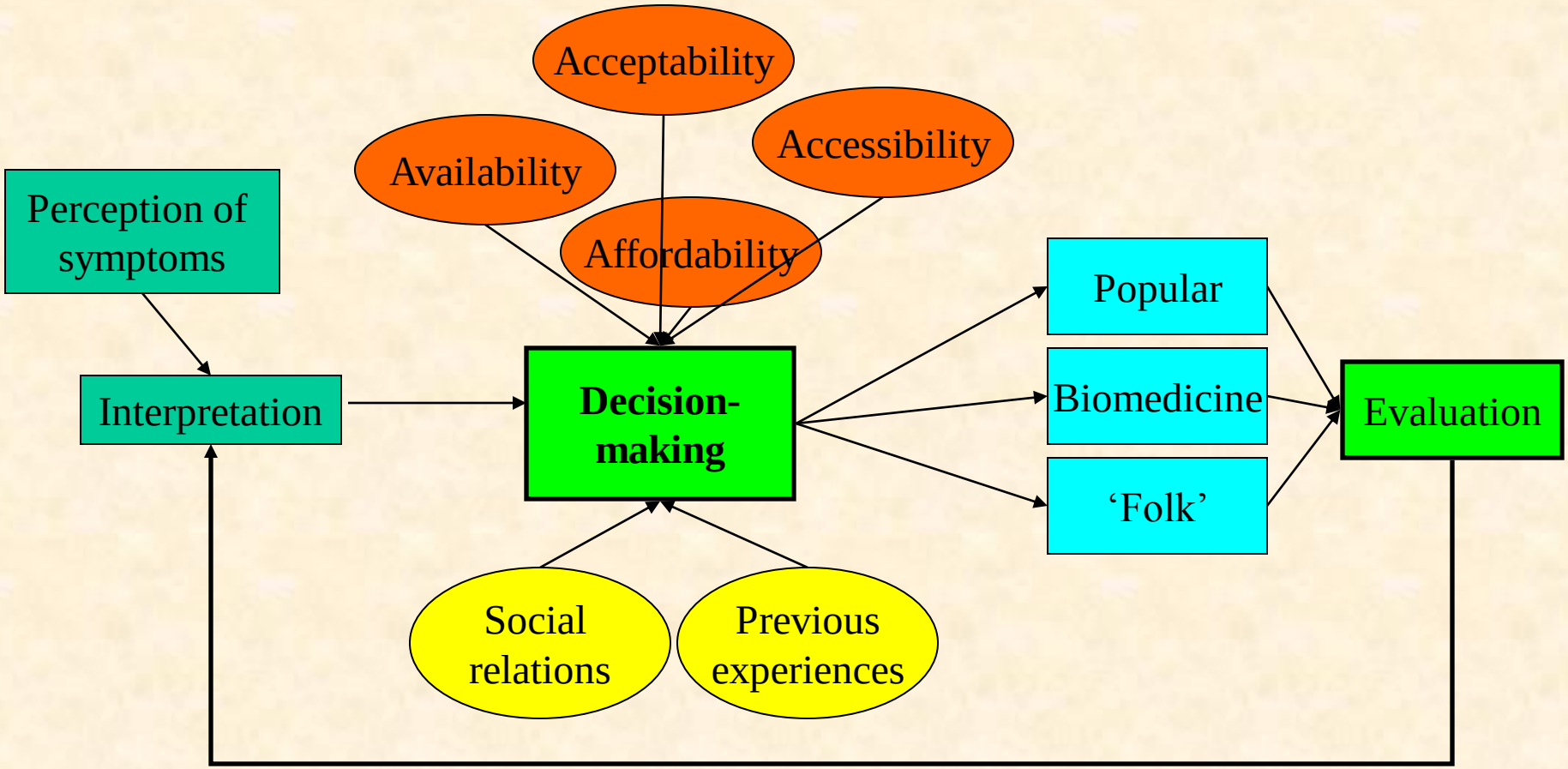


Source: Tanahashi T. Bulletin of the World Health Organization, 1978, 56 (2)

PRSP model

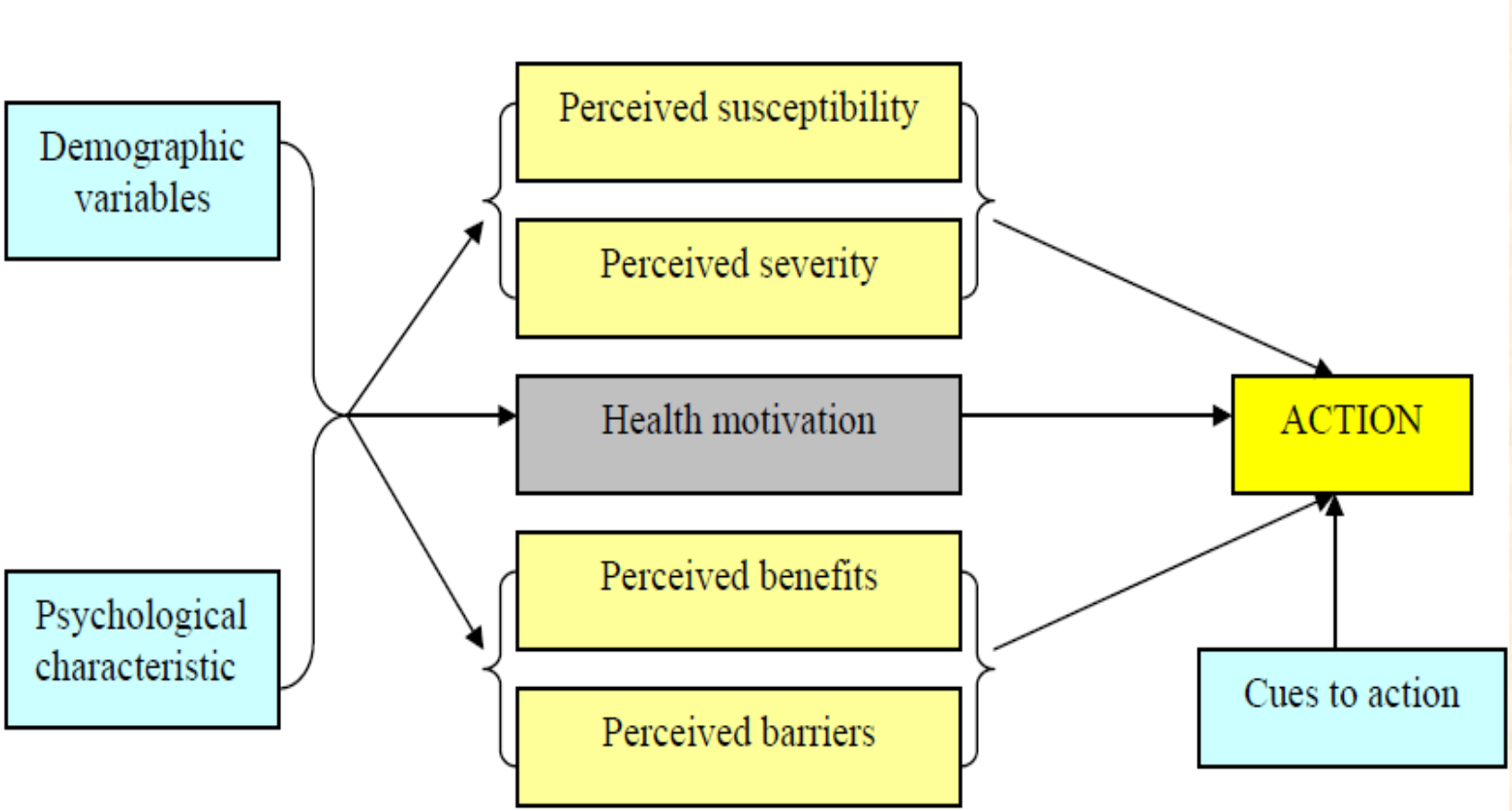

Actual coverage
Potential coverage
Outcome
Technical quality
Timing & Continuity
Utilisation (initial contact)
Social accountability
Organisational quality
Availability of Human and material
Accessibility
Target population (intrinsic & incidental needs)

Health-seeking pathways

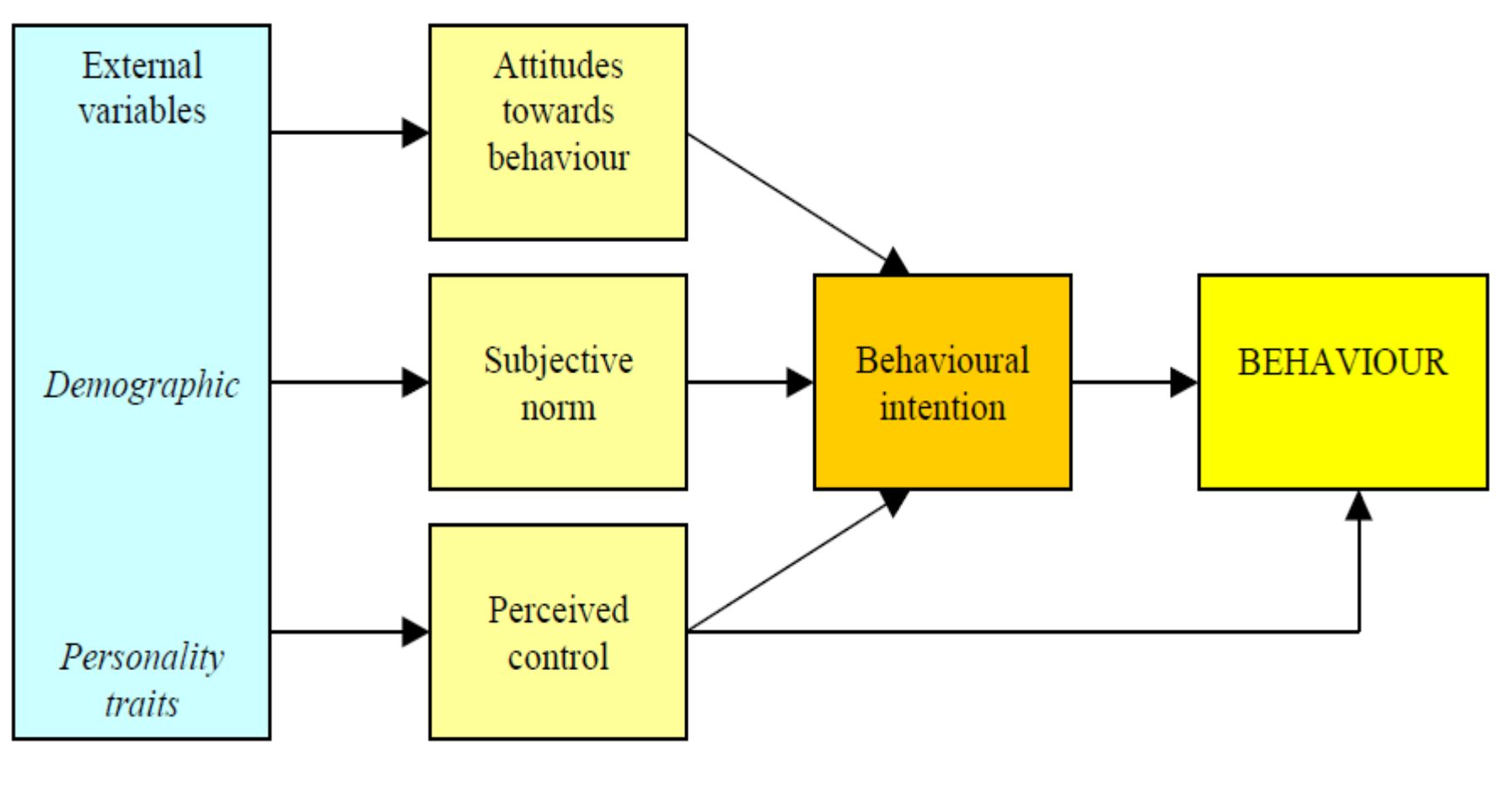


Muela & Hausmann

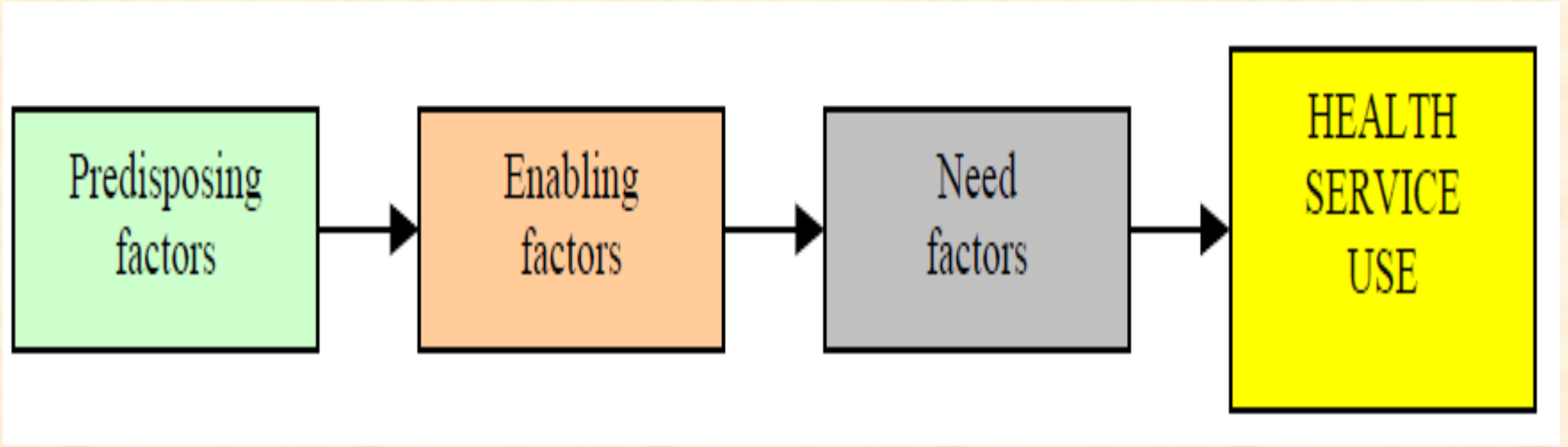
The Health Belief Model, Sheeran & Abraham, 1995



Theory of Planned Behavior



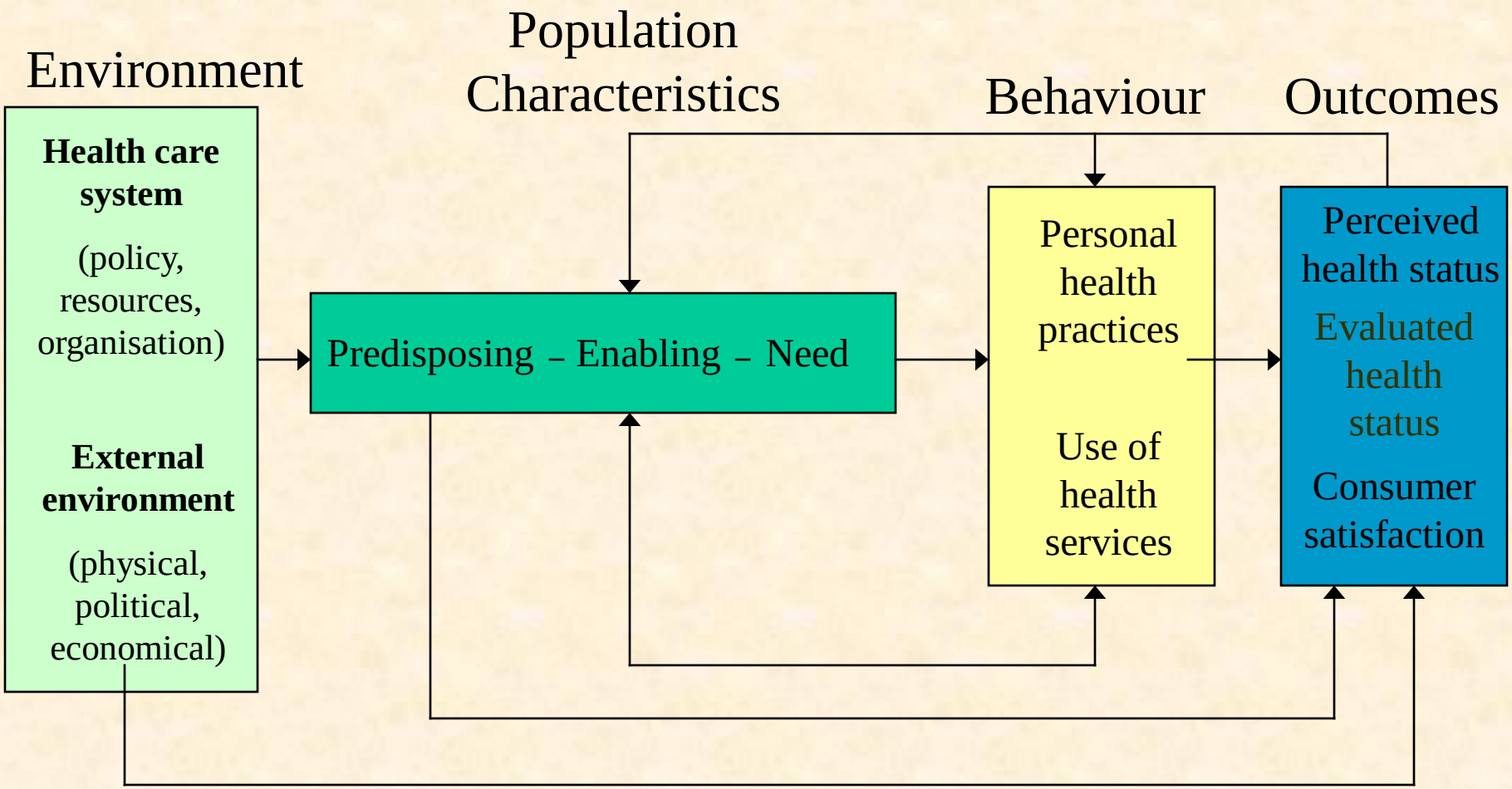
Health Care Utilization Model

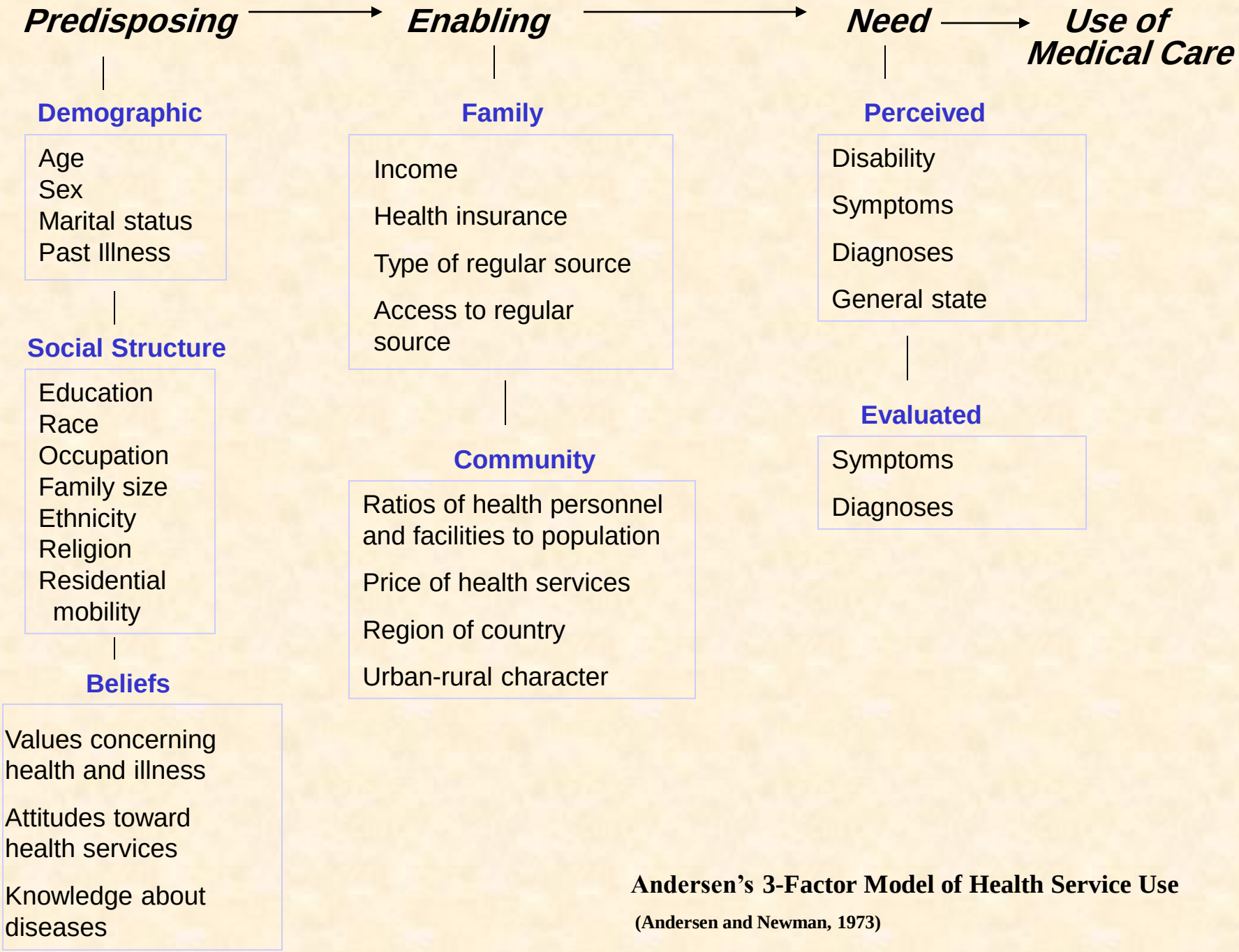


Health Care Utilization Model

- **Predisposing factors**: *age, gender, religion, prior experiences, education, general attitudes, knowledge about the illness etc.*
- **Enabling factors**: *availability of services, financial resources to purchase services, health insurance, social network support etc.*
- **Need factors**: *perception of severity, total number of sick days, total number of days in bed, help from outside for caring etc.*
- **Treatment actions**: *home remedies (herbal, pharmaceuticals), pharmacy, OTC drugs, injectionists, traditional healers, private medical facilities, public health services etc.*

Andersen's Behavioral Model





Andersen's 3-Factor Model of Health Service Use

(Andersen and Newman, 1973)

Models to study utilisation and coverage

Piot (originally TB)

- Awareness
- Motivation
- Selection
- Examination
- Sensitivity
- Prescription
- Treatment
- Regularity
- Effectiveness

PRSP-Toolkit

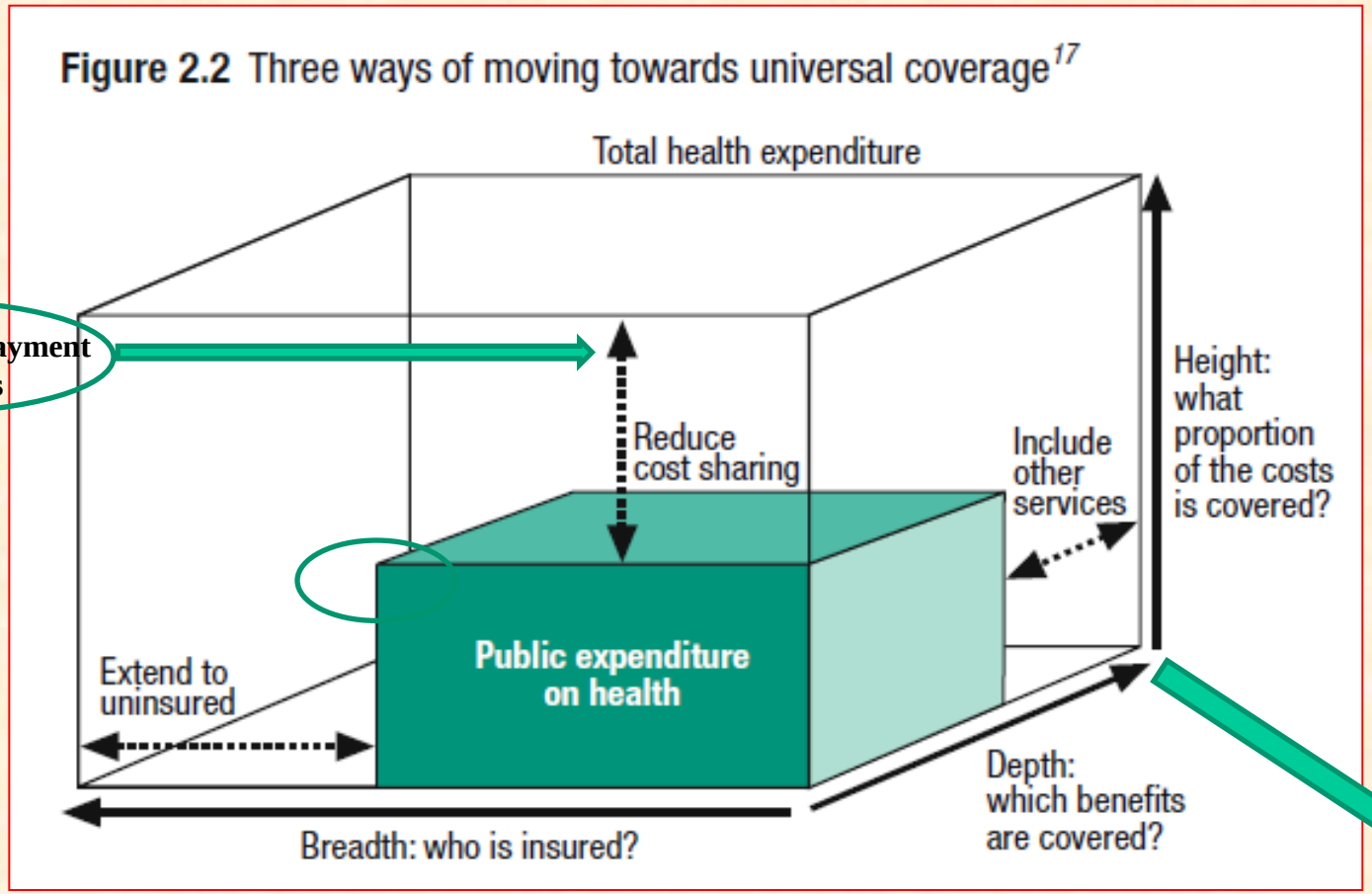
- Accessibility
- Availability
- Organizational quality
- Social accountability
- Utilisation
- Continuity
- Technical quality
- Effective coverage

Strategies

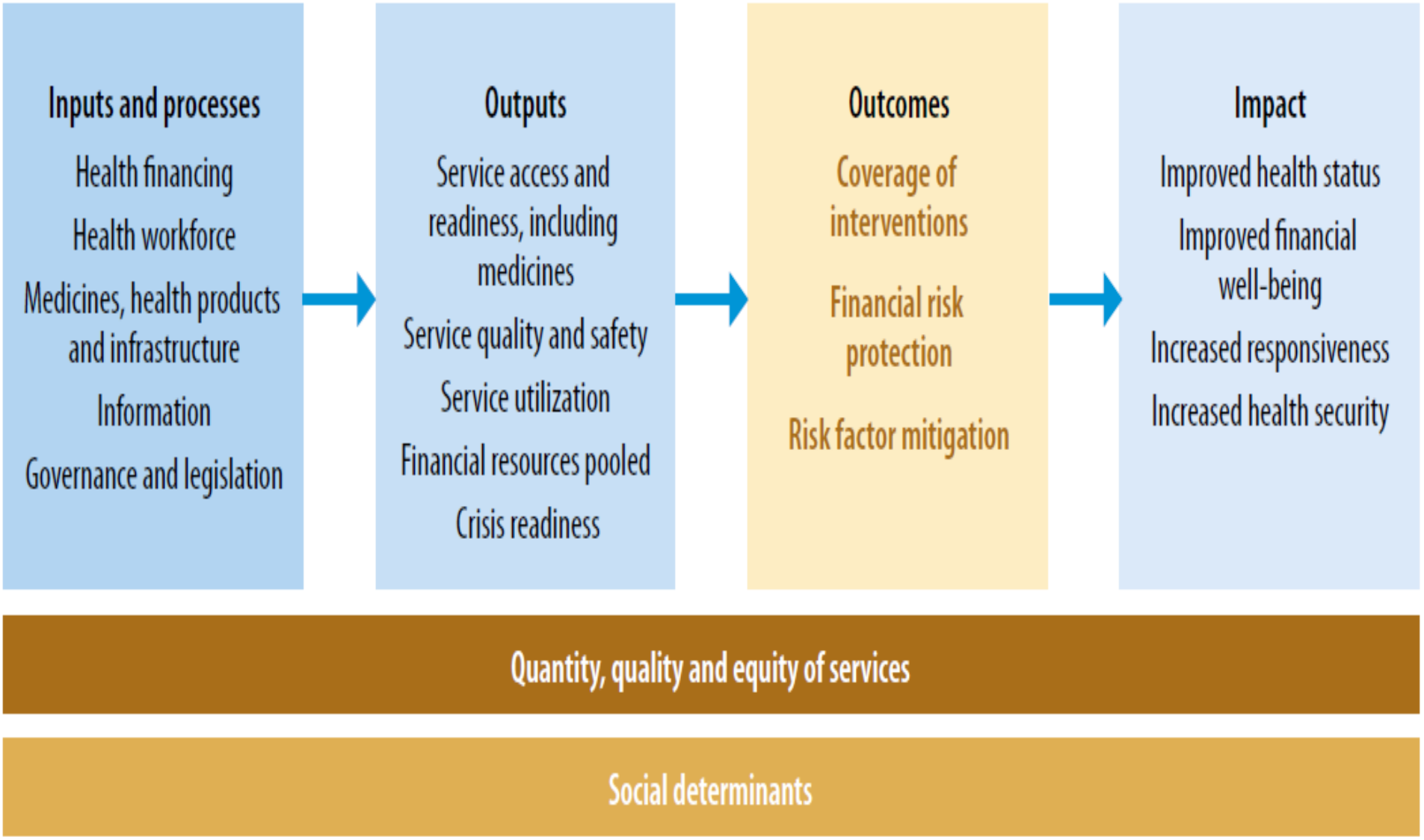
✓ UNIVERSAL HEALTH COVERAGE:

All people obtain the health services they need without; *suffering financial hardship to pay for them, a well run health system, a system for financing, access to essential medicines and technologies, and well trained health workers.*

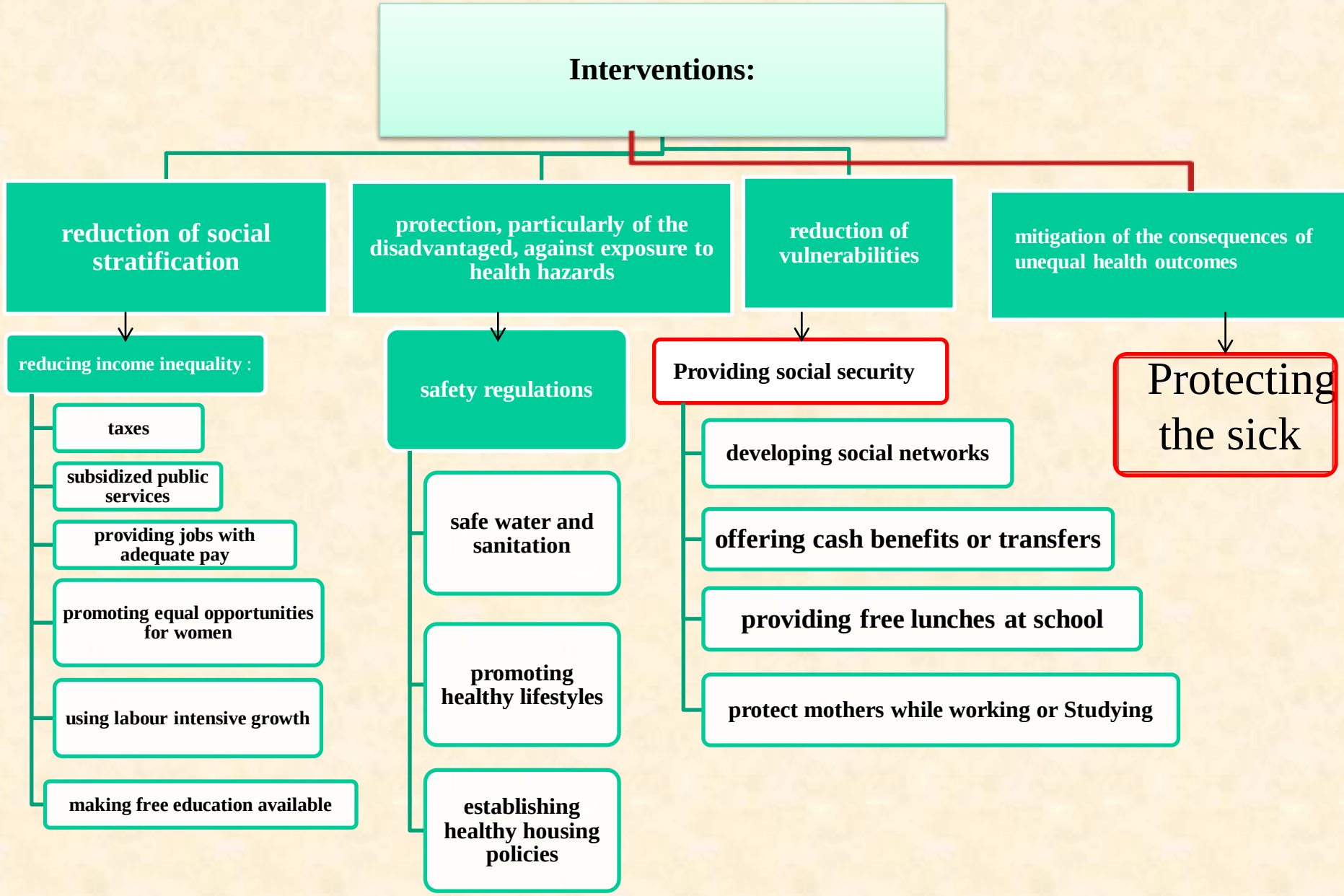
Moving towards universal coverage



A representation of the results chain for Universal Health Coverage, focusing on the outcomes



Advancing and sustaining universal Health Coverage



- ✓quality as well as quantity

✓**Building research systems for universal health coverage**

- It is important to distinguish between the **achievement and capability**, and the **facilities socially offered for that achievement.**
- To argue for health equity cannot be just a demand about how health care should be distributed, the factors that can contribute to health achievements and failures go well beyond health care, and include many influences of very different kinds, varying from genetics, S.E.S, and life styles, as well as epidemiological environment and work condition.
- *Health equity cannot be understood only in terms of the distribution of health care.*

✓ INCLUDE SOCIAL DETERMINANTS IN A MONITORING FRAMEWORK,

✓Primary Health Care:

Improvement of access to primary Health care is a worthy and necessary goal but, by itself, will not revolutionize global health, nor reduce large health inequalities. Action also needs to be taken to address the SDH

بحث

- وزیرمحترم بهداشت در بازدید ازساختمان در حال ساخت بیمارستان شهر کوار ضمن تاکید براتمام ساخت فرمودند شهر کوار به بیمارستان با تعداد تخت بیشتر(۳۲) نیاز دارد.

✓Health Sector Reform

References;

1. A. Sen, Why health equity? Health Econ. 11: 659–666 (2002) Published online in Wiley InterScience (www.interscience.wiley.com).

2. B. Shengeliaa, A. Tandonb, O.B. Adamsc, Ch.J.L. Murrayd. Access, utilization, quality, and effective coverage: An integrated conceptual framework and measurement strategy. Social Science & Medicine 61 (2005) 97–109

3. A. Oliver, E. Mossialos. Equity of access to health care: outlining the foundations for action. J Epidemiol Community Health 2004;58:655–658. doi: 10.1136/jech.2003.017731

4. S. Hausmann-Muela, J. Muela Ribera, I. Nyamongo. Health-seeking behavior and the health system response. DCPP Working Paper No. 14. August 2003

5. D.P. Rebhan, Health Care Utilization: Understanding and applying theories and models of health care seeking behavior Case Western Reserve University. 2010

References;

6. P. Tajik, S. Nedjat, N. Emami Afshar, N. Changizi, B. Yazdizadeh, A. Azemikhah, S. Aamrolalaei, R. Majdzadeh. Inequality in Maternal Mortality in Iran: An Ecologic Study. International Journal of Preventive Medicine, Vol 3, No 2, February 2012.

7. Hassanzadeh J, Mohammadbeigi A, Eshrati B, Rezaianzadeh A, Rajaeefard A. Determinants of Inequity in Health Care Services Utilization in Markazi Province, Center of Iran. *Iran Red Cres Med J.* 2013; **15**(5): in press. DOI: 10.5812/ircmj.3525

8. A. Nasiripour, G. Abedi. M. Tavana. Relationship of Services Utility with Patients Tending to Hospitals. Iranian journal of health sciences 2013; 1(2): 61—67

9. A. R. Hosseinpoor, M. Naghavi , M. Alavian, N. Speybroeck , H. Jamshidi , J.Vega . Determinants of Seeking Needed Outpatient Care in Iran: Results from a National Health Services Utilization Survey. Arch Iranian Med 2007; 10 (4): 439 – 445

10. T h e World Health Report 2013, Research for Universal Health Coverage. WHO Library Cataloguing-in-Publication Data.

Thank you for Your attention