Primary Health Care in Cuba: Applicable Lessons to The United States

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Internal Medicine/Pediatrics

PGY-4

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Acknowledgement

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Conflict of interest

Objectives

- Define Primary Health Care (PHC) as determined by the World Health Organization (WHO)

- Understand the structure of the Cuban health care system; the political, economic and foreign policy factors that helped shape it, including its relationship with the United States of America (U.S.)

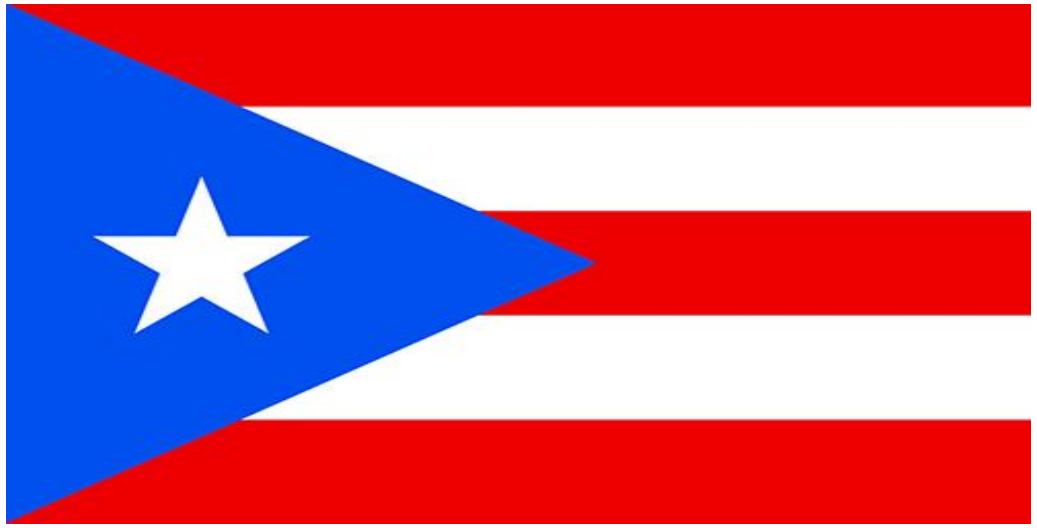
- Compare issues around access to health care, quality of care and cost of care in the U.S. and Cuba.


CUBA


Havana
Cienfuegos
Trinidad
Camaguey
Baracoa
Santiago de Cuba

Cuba Trivia

A. Mexico
B. Cuba
C. Argentina
D. Bolivia



A.

B.

Which of these is directly south of Florida

A. Haiti
B. Dominican Republic
C. Cuba
D. Puerto Rico

Introduction

Cuba’s health care revolution

- Cuba’s journey towards what is now a relatively efficient and effective health care system began, following the Cuban revolution in January 1959

- The journey came with many challenges and even with multiple measurable achievements, the Cuban health care system exists today in the face of visible contradictions

Significant changes in the Cuban health care system post-revolution

1st decade following the revolution

- Health care was declared a right for all Cubans; creation of *Ministerio de Salud Pública*
- Resources were focused on improving sanitation and provision of water
- 1961: Diplomatic relations with the United States (U.S.) deteriorated leading to the U.S. trade embargo which resulted in significant decrease in revenue
- Loss of health care professionals
- Investment in training programs for physician and nurses
- Establishment of hospitals, laboratories, research facilities

Significant changes in the Cuban health care system post-Revolution

2nd decade following the revolution

- Expansion of resources and services to extend focus on maternal/infant health care programs
- Health surveillance /data collection and consolidation efforts began
- New municipal polyclinics were created
- Shift in education policy to train teams in community centered medicine

Significant changes in the Cuban health care system post-revolution

3rd decade following the revolution

- The beginning of “medicine-in-the-community” with comprehensive delivery, universal coverage and decentralization

- Health care model focused on integration of preventive and curative care; coordination of care; continuity of care; community participation

- Accomplishments:
  - Successful immunization and surveillance campaign
  - 100% of rural populations receiving health care services
  - Increased number of health care professionals, facilities
  - Reduction in maternal mortality by 50% between 1975 & 1984
  - Increased life expectancy to 73.5 years from 58.8 years

Significant changes in the Cuban health care system post-revolution

4th decade following the revolution

- 1991: Dissolution of the U.S.S.R with subsequent loss of a primary trading partner leading to the "*period especial*"
- U.S. passes the Toricelli Bill preventing U.S. subsidiaries from trading with Cuba and limiting ships from docking in the U.S if Cuba has been visited in past 6 months
- Accomplishments
  - Increase in domestic innovation and production of medicine, vaccines, developing "green medicine"
  - Mass vaccination covering 90% of the population
  - Elimination of measles and rubella
  - 95% of population have health services
  - Cuba becomes a net exporter of physicians

Primary Health Care (PHC)

- In September 1978 the WHO assembled the International Conference on PHC in Alma-Ata

- The result of that conference was the Declaration of Alma-Ata
  - Need for urgent action to promote health of all people

- It identified PHC as the key to the attainment of the goal of Health for All

Primary Health Care (PHC)

- Primary health care is **essential health care** based on practical, scientifically sound and **socially acceptable** methods and technology **made universally accessible** to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self reliance and self-determination.

- It forms an **integral part** both of the country's health system, **of which it is the central function and main focus**, and of the **overall social and economic development** of the community.

- It is the **first level of contact** of individuals, the family and community **with the national health system** bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.

~ World Health Organization: Alma-Ata Declaration 1978

Outcomes

WHO region	Americas
Child health	
Diphtheria tetanus toxoid and pertussis (DTP3) immunization coverage among 1-year-olds (%) (2016)	95
Health systems	
Physicians density (per 1000 population) (2014)	2.568
Mortality and global health estimates	
Under-five mortality rate (probability of dying by age 5 per 1000 live births) (2016)	6.5
Maternal mortality ratio (per 100,000 live births) (2015)	14
Sustainable development goals	
Life expectancy at birth (years) (2015)	81.6 (Female) 76.9 (Male) 79.3 (Both sexes)

WHO region	Americas
Child health	
Diphtheria tetanus toxoid and pertussis (DTP3) immunization coverage among 1-year-olds (%) (2016)	99
Health systems	
Physicians density (per 1000 population) (2014)	7.519
Mortality and global health estimates	
Under-five mortality rate (probability of dying by age 5 per 1000 live births) (2016)	5.5
Maternal mortality ratio (per 100,000 live births) (2015)	39
Sustainable development goals	
Life expectancy at birth (years) (2015)	81.4 (Female) 76.9 (Male) 79.1 (Both sexes)

Retrieved from World Health Organization Key Country Indicators database.

Outcomes

Key Indicators: United States of America	
WHO region	Americas
Child health	
Diphtheria tetanus toxoid and pertussis (DTP3) immunization coverage among 1-year-olds (%) (2016)	95
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Retrieved from World Health Organization Key Country Indicators database.

Innovation in medicine such as development of medicines for treating ailments such as advanced diabetic foot ulcers (Heberprot-P), non-small cell lung cancer (CimaVax)

Exporter of health care personnel

First responder to disease out break

Contradictions

- Poorly equipped health care delivery centers
- Poorly equipped medical personnel
- An authoritarian and strict government with a strict control of the economy

How Cuba got to where it is today

- Health care system in Cuba is built on two equal and complementary foundations
  - Public health
  - Medicine

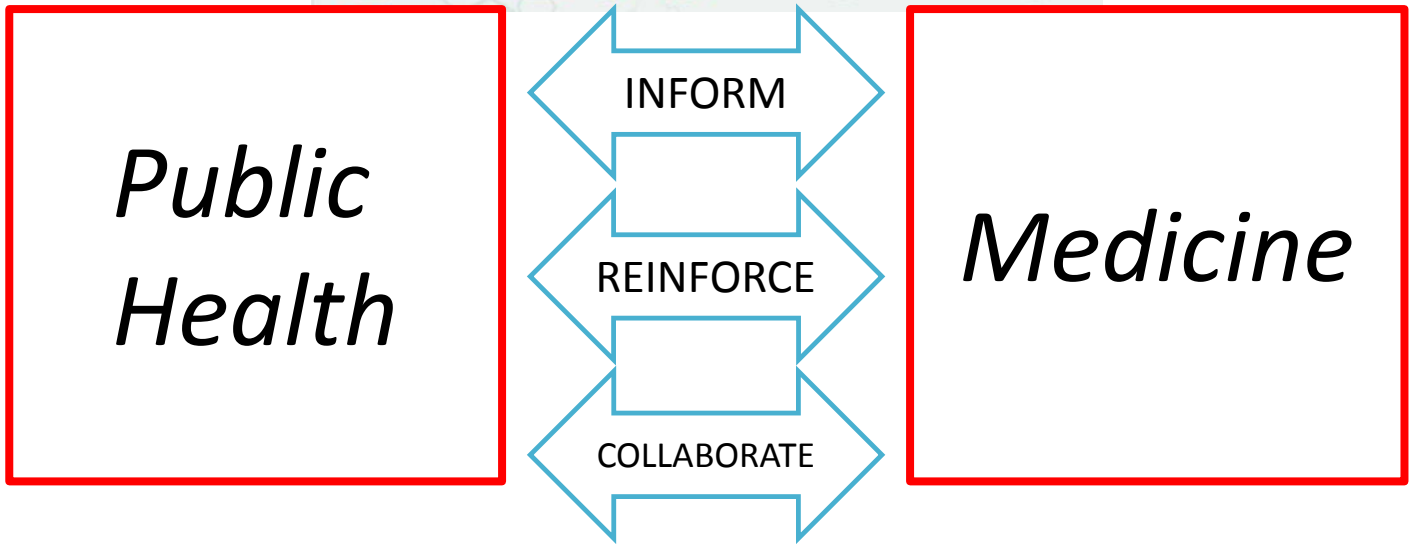
- Products of a judiciously planned scheme

- To understand it is necessary to appreciate health care delivery from 2 perspectives

- Health care delivery at the population level (Public health)

- Health care delivery at the individual-patient level (Medicine)

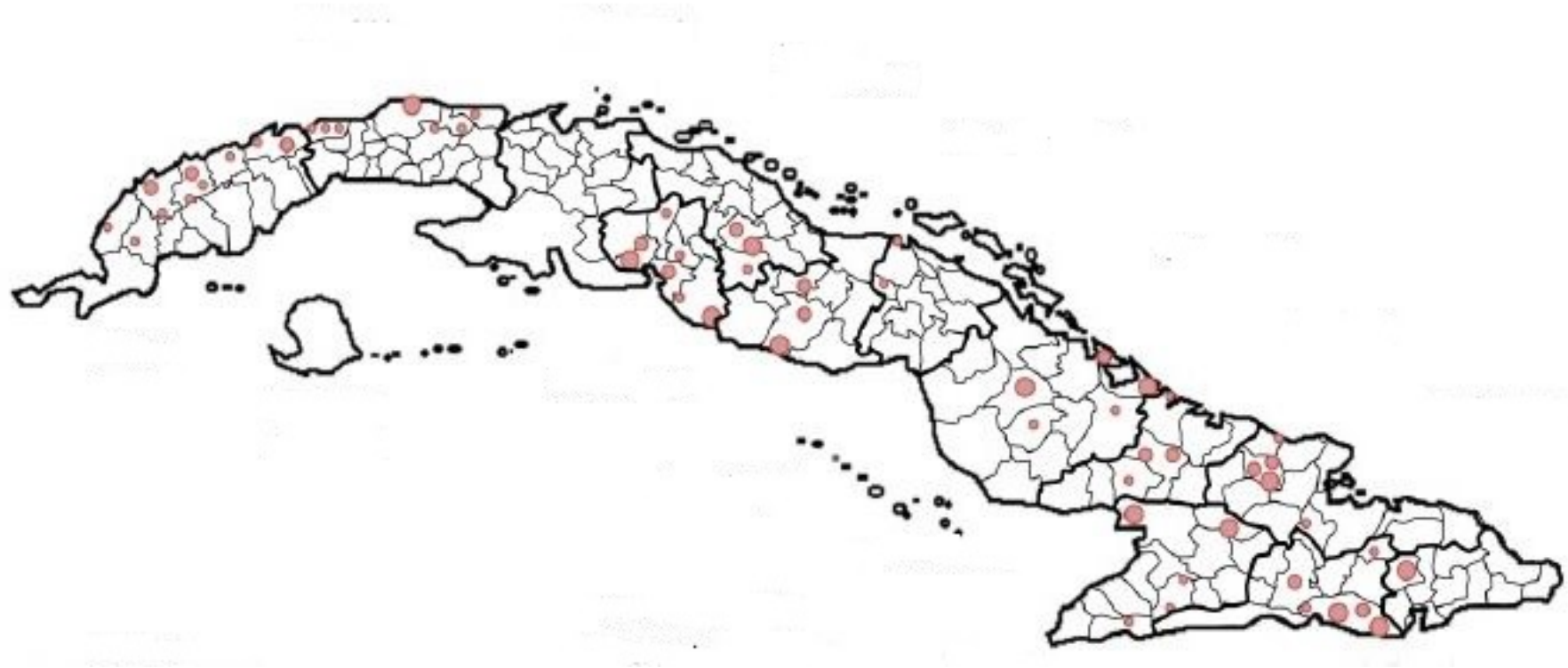
Courtesy: Ayers Career College



The political organization of Cuba: 16 provinces

Image courtesy of: pinterest

The political organization of Cuba: 168 municipalities



It is at the municipal level that the constituent dispensaries of primary care are arranged

Organization of the municipality to deliver health care

Beat

Individual patrol officers are assigned to

Individual health care personnel teams are assigned to

Manzana

Sector

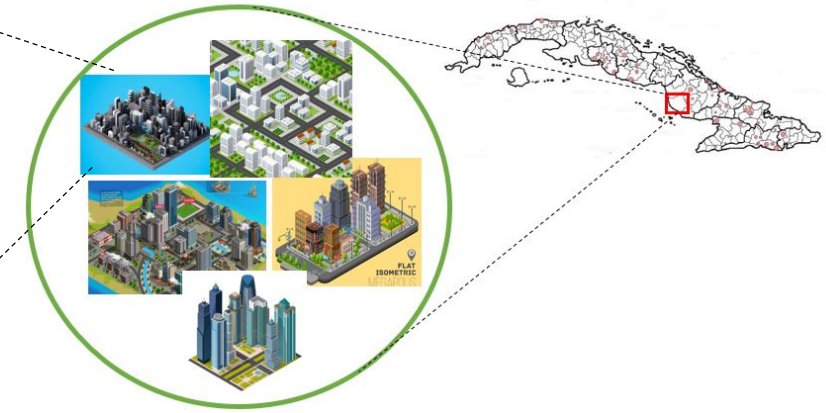
Served by neighborhood based police station

Served by neighborhood based community clinic

Universo

Precinct

Served by Police precinct X



Served by neighborhood based multispecialty clinic

Área de Salud

Health care delivery in Cuba: at the population level

Population centered care

From this perspective, health care is dispensed via 3 tiers

- One primary care via *Consultorios* and *Policlínicos*; these provide approximately 80% of care

- Two via *Hospitales*; these provide approximately 15% of care

- Three via *Hospitale Especialiazados* and research; these provide approximately 5% of care

Consultorio

- The backbone of community medicine in Cuba
- The entry point for patients into the healthcare system
- The first stop and in many instances the only necessary stop in the relationship between patients and the healthcare system.

Consultorio Numero 28 and 29

Consultorio

- Services provided are based on the framework of
  - Promotion
  - Prevention
  - Diagnosis
  - Treatment (and rehabilitation with the assistance of the *Policlínico*)

Consultorio Numero 17

Consultorios as dispensaries of health care

- Staffed by physician-nurse teams called *Equipo Basic De Salud* (EBS)
- These teams are delegated with the task of ensuring healthy communities through the provision of primary health care
- The nurses and doctors who constitute these teams ideally reside within the community, in many rural areas they reside in living quarters attached to the *Consultorios*
- The EBS and the *Consultorio* are the center responsible/primed to manage the health of the individual patients and the population at large.

Consultorios as dispensaries of health care

- The EBS are ideally the initial team as patients begin their interaction with the health care system

- Another group of providers to complement (and perhaps supplement) the care provided by the EBS and are known as the *Grupos Basicos de Trabajo* (GBT)
  - Pediatricians
  - Gynecologists
  - Psychiatrists
  - Internists
  - Social worker

Consultorios as centers of community health education

Implemented via

- Bulletin boards called *Mural*

- Pamphlets

- The information covered include information on
  - Preventive health
  - Services available to the community
  - Community/nationwide health campaigns
  - Nutrition
  - Exercise
  - Hygiene
  - Sanitation

Consultorios as centers of community health education

Consultorios as epidemiologic centers

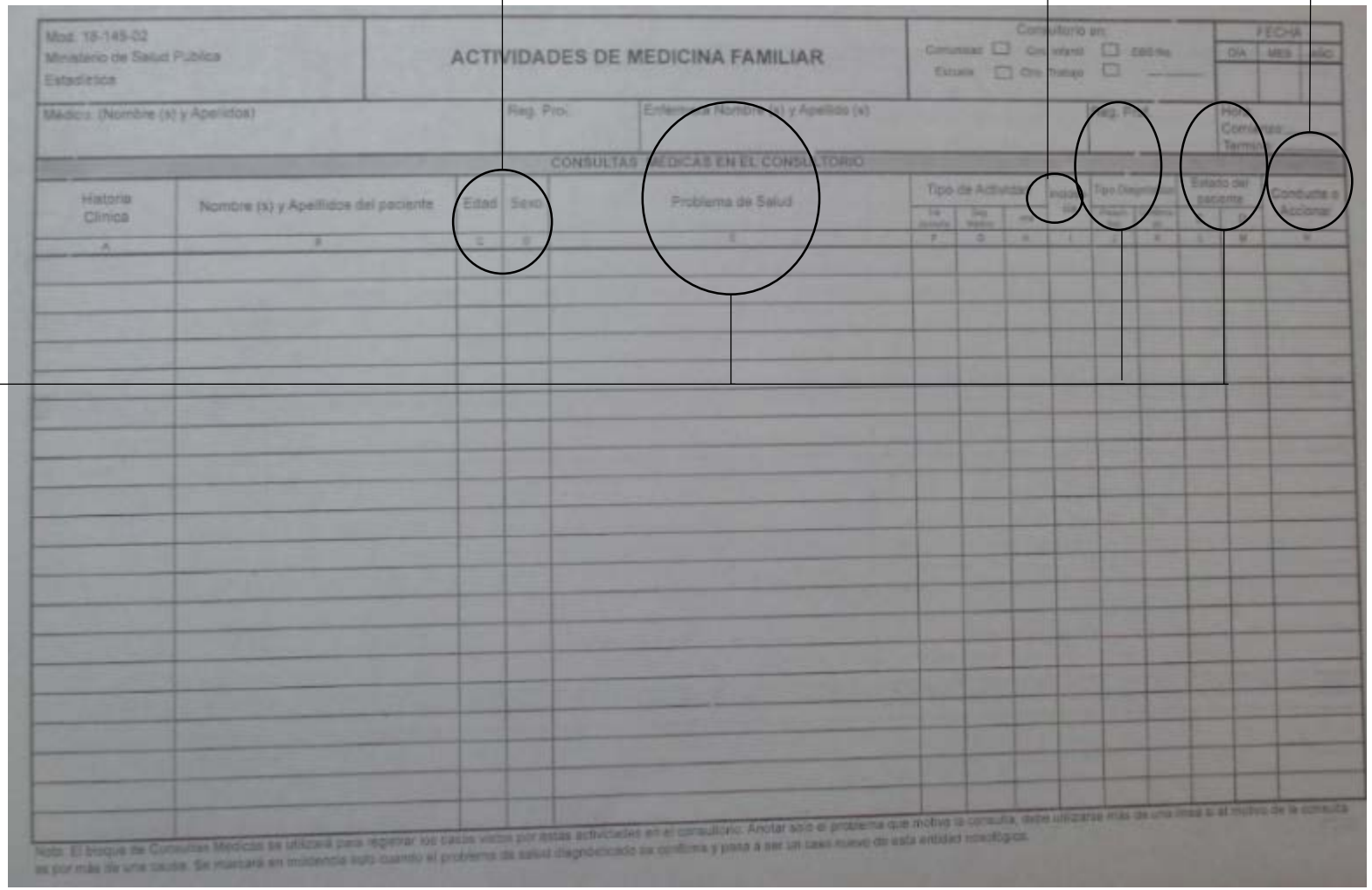
- Through mandatory, daily documentation of patient visit using an essentially unified template

- The following pieces of information are captured using this template
  - Demographic data
  - Diagnoses
  - Chronological aspect of visit (is it linked to prior visits for an acute illness or a chronic illness)
  - Incidence relative to the community

Demographic

Incidence

Chronology of visit



Principal diagnosis

Policlínico

- Multispecialty clinic that provides higher level of care, supportive and complementary care that cannot be provided at the level of the *Consultorio*.
- Diagnositics:
  - Basic laboratory evaluation
  - Microbiology
  - Basic medical imaging
  - Electrocardiography

Policlínico 30 de Novembre

Policlínico

- Epidemiologic: houses the department of epidemiology including its supporting departments such as statistics and vector control

- Urgent care (emergency) medicine

- Specialty clinics: ophthalmology, dermatology, podiatry (and an associated department focused on treatment of diabetes associated neuropathy and ulcers), etc.

- Rehabilitative/complementary medicine: physical therapy, occupational therapy, massage therapy, acupuncture (for pain management)

Policlínicos

- Access to care at the *Policlínico* is either via referral or as needed for urgent medical presentations

- Highest level at the primary tier of health care delivery; cases which cannot be managed at this level are transitioned to secondary tier of health care delivery


Consultorio
Policlínico
Ministerio de Salud Pública


Consultorio
Policlínico
Ministerio de Salud Pública


NEGO

Health care delivery in Cuba at the individual patient level

Individual-patient centered care

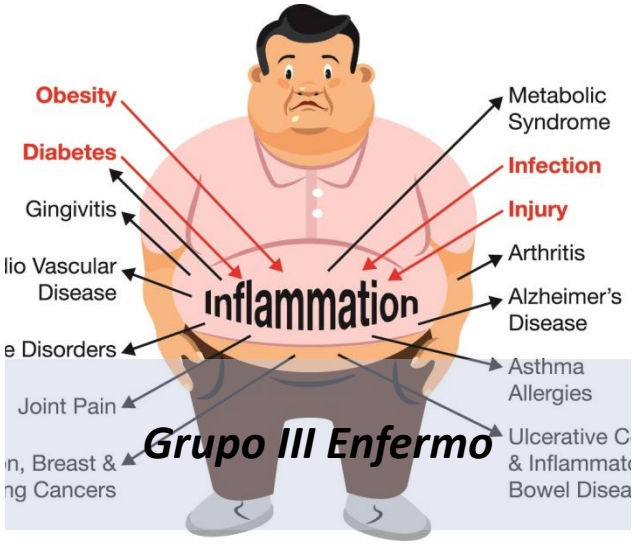
- The model of health care delivery at the individual-patient level is one that emphasizes prevention as a starting point

- As patients enter the health care system for the first time (from the pediatric to the geriatric population) they are risk stratified and placed into one of 4 groups

- This system is described as *dispensarizacion* (dispensation)

Dispensation

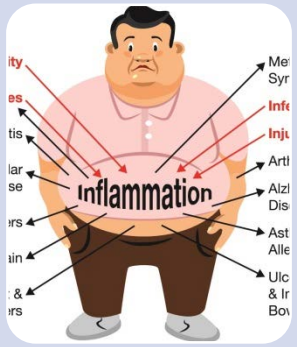
- *Grupo I Sano* (healthy)*:* no health problems
- *Grupo II Riesgos* (risk)*:* patients with risk factors that can predispose to chronic illness
- *Grupo III Enfermo* (sick)*:* patients with chronic health problems
- *Grupo IV Discapacitado o Deficiente* (disabled)*:* patients with some form of disability



Under this system resources are allocated to enable health promotion, surveillance and management

1 physician visit/year

2 physician visits/year



3 physician visits/year

2 physician visits/year

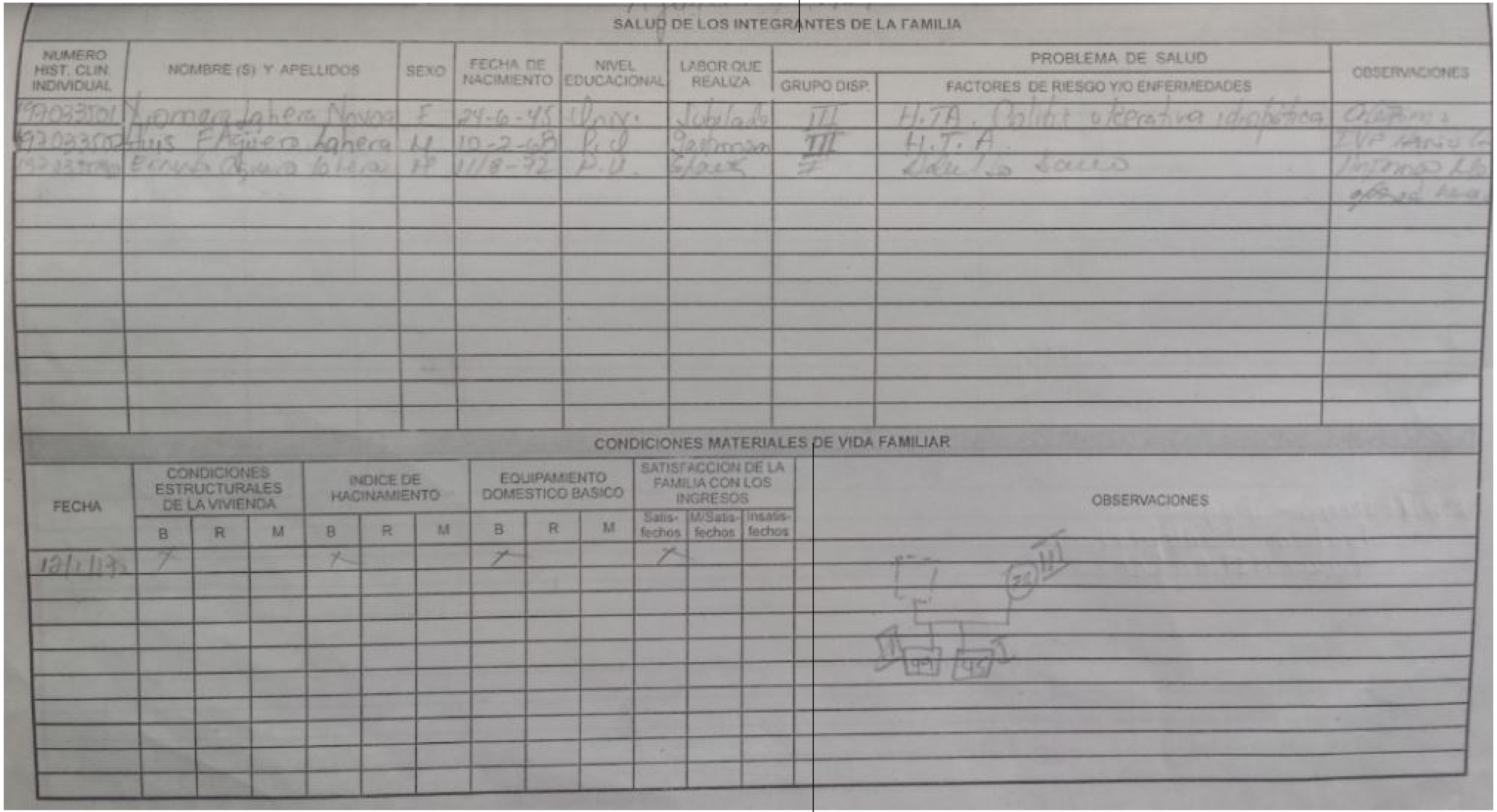
Individual-patient centered care

The family-doctor approach to dispensing care is one that emphasizes a holistic appreciation of the patient

Physicians are trained to always take into consideration the other major factors beyond the presenting symptoms and objective clinical evaluation that determine health

It is the responsibility of the family-doctor to document and maintain a profile of each patient within the context of their environment/social situation, with an emphasis on the living situation/family

Health of the members of the family



SALUD DE LOS INTEGRANTES DE LA FAMILIA

NUMERO HIST. CLIN. INDIVIDUAL	NOMBRE (S) Y APELLIDOS	SEXO	FECHA DE NACIMIENTO	NIVEL EDUCACIONAL	LABOR QUE REALIZA	PROBLEMA DE SALUD		OBSERVACIONES
						GRUPO DISP.	FACTORES DE RIESGO Y/O ENFERMEDADES	
97033501	Xiomara Lahera Novoa	F	24-6-45	Univ.	Jubilado	III	H.TA. Colitis ulcerativa idiopática	[illegible]
97033502	Luis E. Agüero Lahera	M	10-2-68	P.U.	[illegible]	III	H.T.A.	[illegible]
[illegible]	[illegible]	M	1/1/8-72	P.U.	[illegible]	I	[illegible]	[illegible]

CONDICIONES MATERIALES DE VIDA FAMILIAR

FECHA	CONDICIONES ESTRUCTURALES DE LA VIVIENDA			INDICE DE HACINAMIENTO			EQUIPAMIENTO DOMESTICO BASICO			SATISFACCIÓN DE LA FAMILIA CON LOS INGRESOS			OBSERVACIONES
	B	R	M	B	R	M	B	R	M	Satis-fechos	M/Satis-fechos	Insatis-fechos	
12/1/17	X			X			X			X			

Material conditions of family life

Summary of strengths of this system

Adequate resources invested in building strong PHC infrastructure

System built with an emphasis on equity and effort to ensure no citizen is neglected

Built on efficiency

Medicine and public health inform, reinforce and collaborate

Primary Care And Prevention In The United States

A comprehensive approach to primary care

- In March 2010 the affordable care act (ACA) was signed into law by President Barack Obama.

- A comprehensive approach to the use of primary care and prevention, as tools to improve the health of the American people.

Title IV of the ACA

- Title IV of the ACA – Prevention of Chronic Disease and Improving Public Health
- This segment of the law has specific provisions with regards to Primary care and preventive health
- Covered under 4 main subtitles (A-D)

Subtitle A

“Modernization of Disease Prevention and Public Health System” via

- Council at the national level to coordinate efforts and provide recommendations
- Develop task force
- Increased funding
- Community education and outreach through media, providers, Information technology

Subtitle B

“Increasing Access to Clinical Preventive Services,” via

- Support of school-based health centers
- Coverage of annual wellness visits with individualized prevention plan that risk stratifies
- Providing grants to states to develop programs that give Medicaid beneficiaries incentives to prevent chronic diseases: tobacco use cessation, weight management, cholesterol reduction, blood pressure reduction, diabetes prevention
- Medicaid students

Subtitle C

“Creating Healthier Communities” via

- Grants to support community preventive health efforts; 20% to rural and frontier communities
- Grants for support of interventions, screening , referrals for individuals 55-64 to encourage “healthy ageing and living well”
- Improving access for individuals with disabilities
- Improving provision of recommended immunizations for children, adolescents and adults
- Nutrition labeling of menu items at chain restaurants
- Break time and private space for nursing mothers

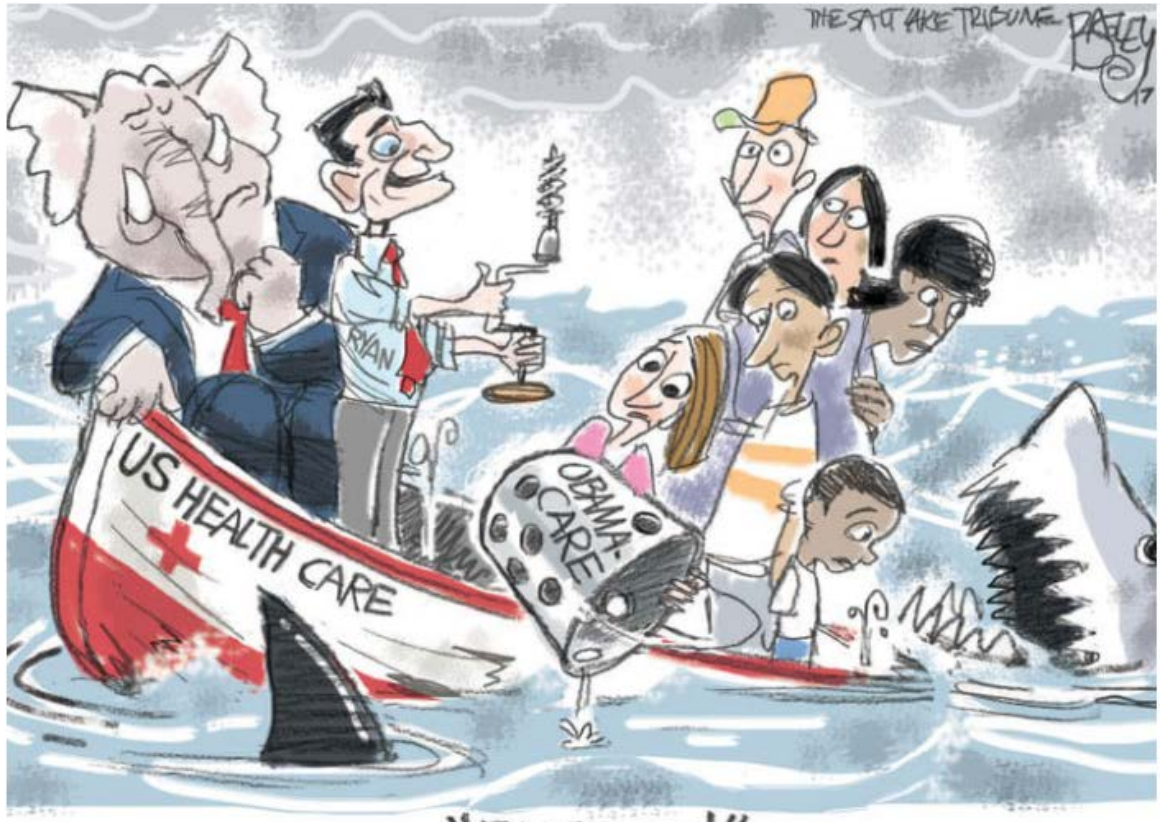
Subtitle D

“Support for Prevention and Public Health Innovation” via

- Research optimizing delivery of public health services
- Understanding of health disparities through collection and analysis of data
- Support for employer based wellness programs
- Assistance to improve public health surveillance systems
- Advancing research in pain care management
- Funding for childhood obesity

Shortcomings of the ACA

- Attempt to create a system with greater emphasis on primary care and prevention without a clear pathway to achieve this
- It has policy thrusts that go in too many different directions
- Framework is largely experimental, littered with proposals as well as language that expresses possibility and intention
- An appearance of responsibilities abdicated, where in multiple instances, a good portion of the work to develop a solid health care program focused on primary care is outsourced to third party community organizations

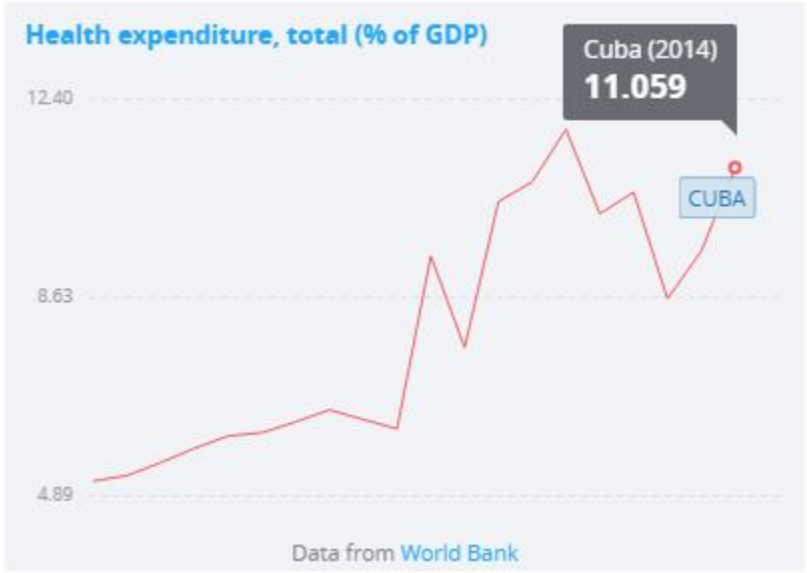


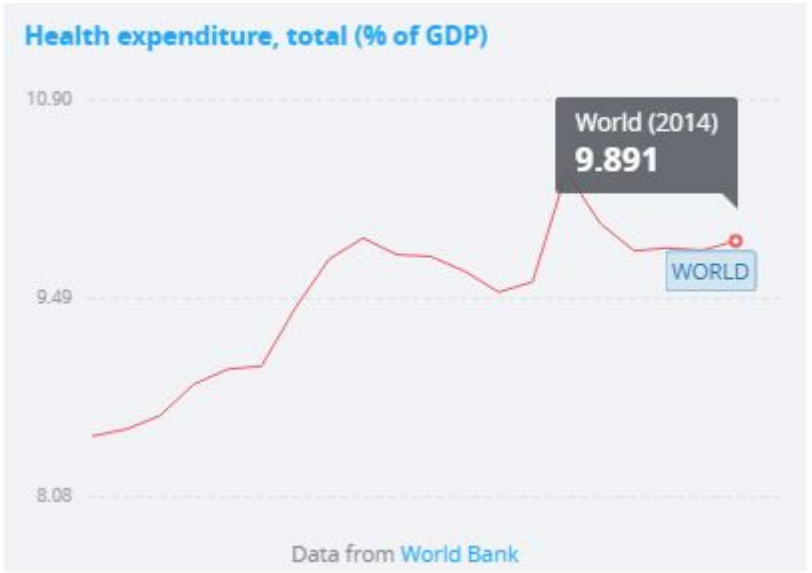
Courtesy of LA Progressive

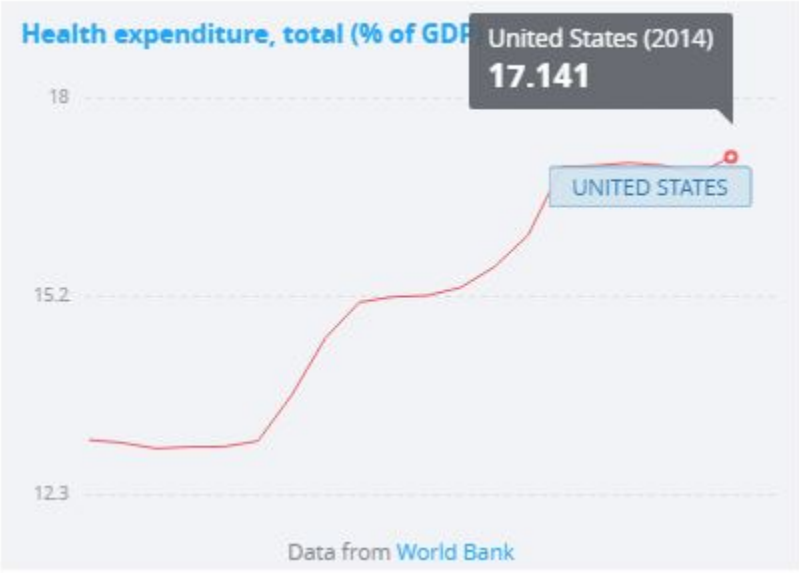
Comparison of The Two Nations

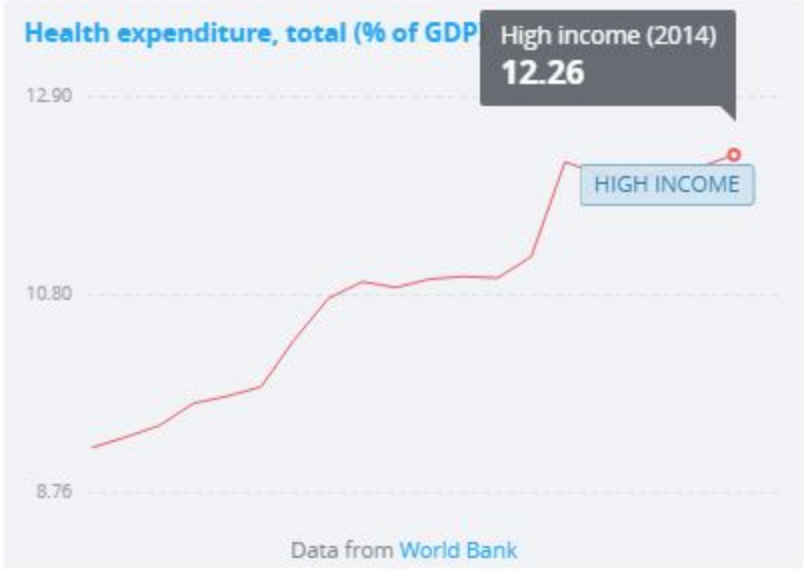
Cost of Care

Total Health Expenditure as Percent of GDP







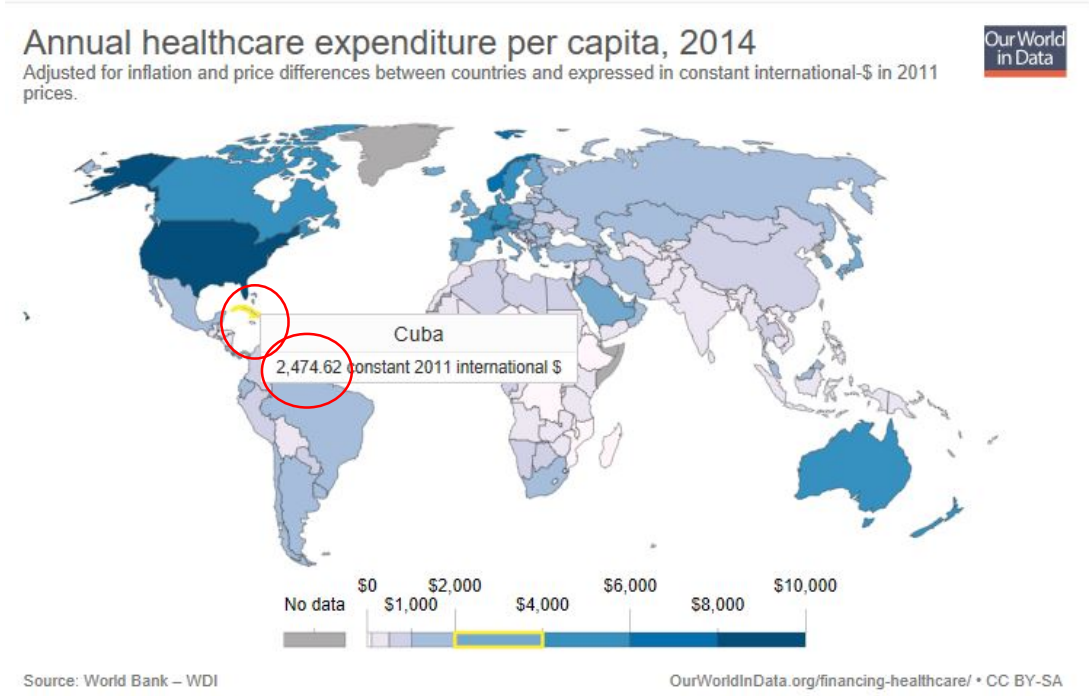


1995 - 2014

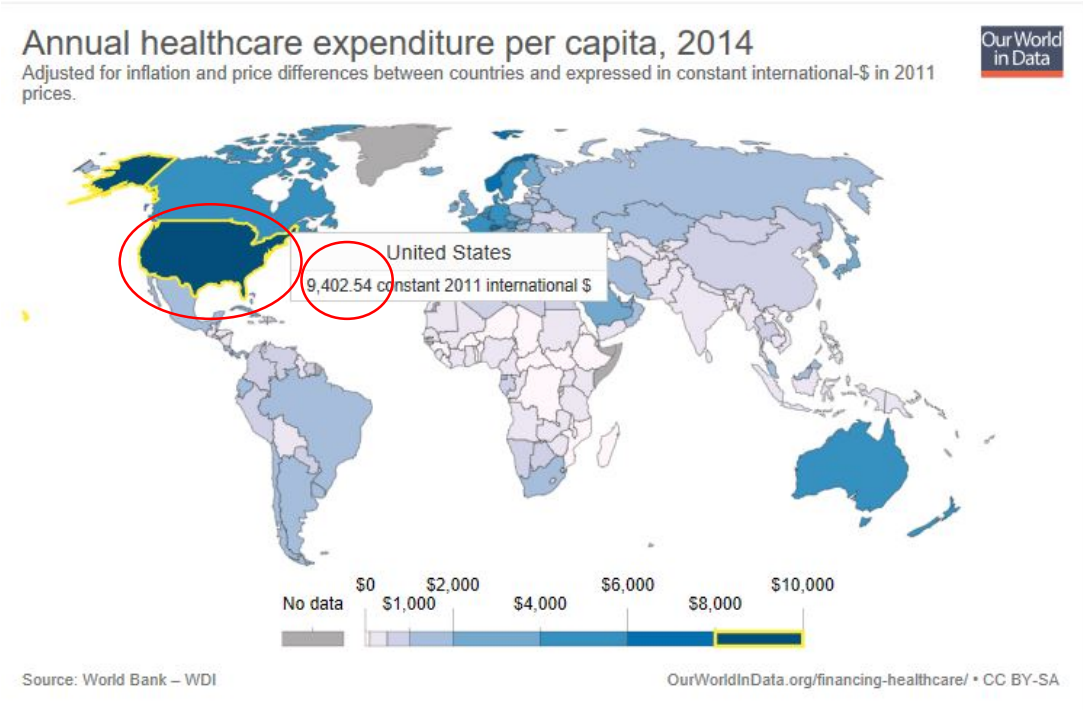
Health expenditure, total (% of GDP). (n.d.). Retrieved from World Health Organization Global Health Expenditure database.

Health Care Cost Per Person

Cuba



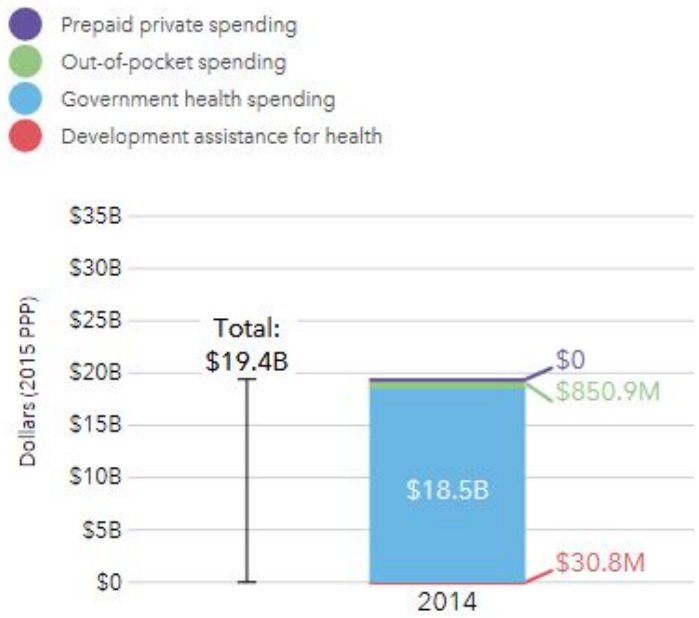
United States



Ortiz-Ospina, E., & Roser, M. (2017). Financing Healthcare. Retrieved December 3, 2017, from Our World in Data website: https://ourworldindata.org/financing-healthcare/

Sources of Health Care Expenditure

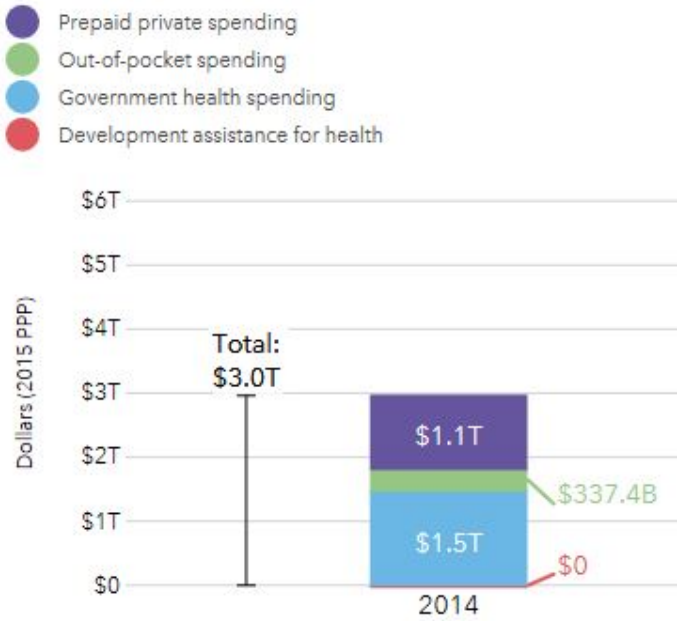
Cuba



Source: Financing Global Health Database 2016

PPP = purchasing power parity

USA

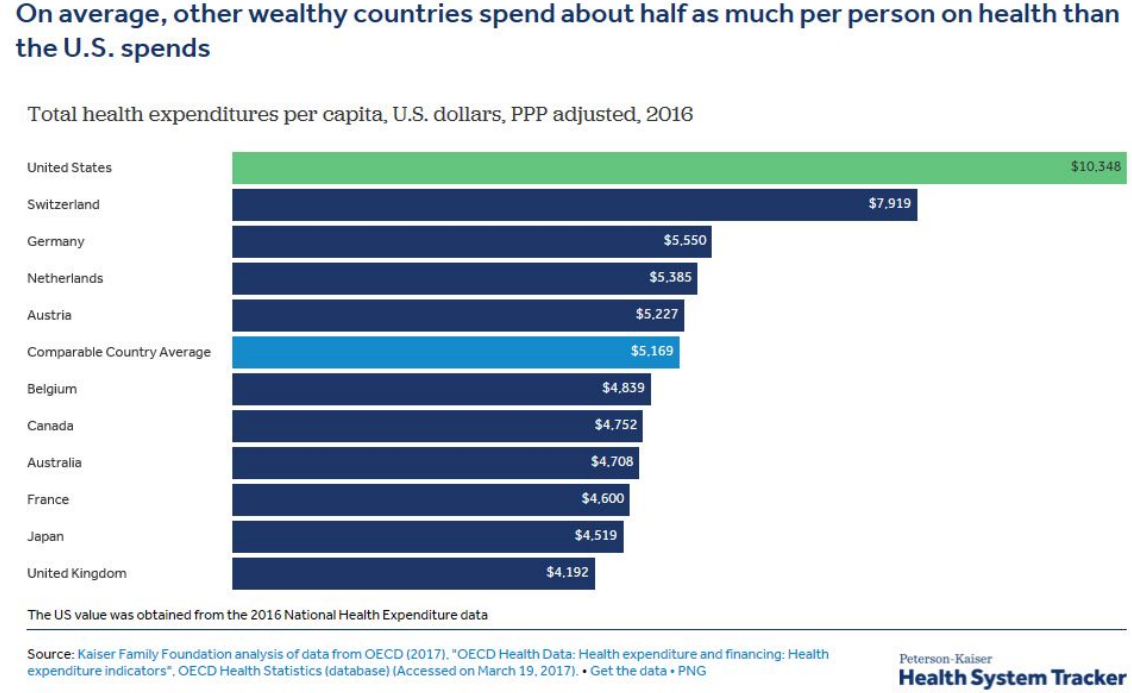


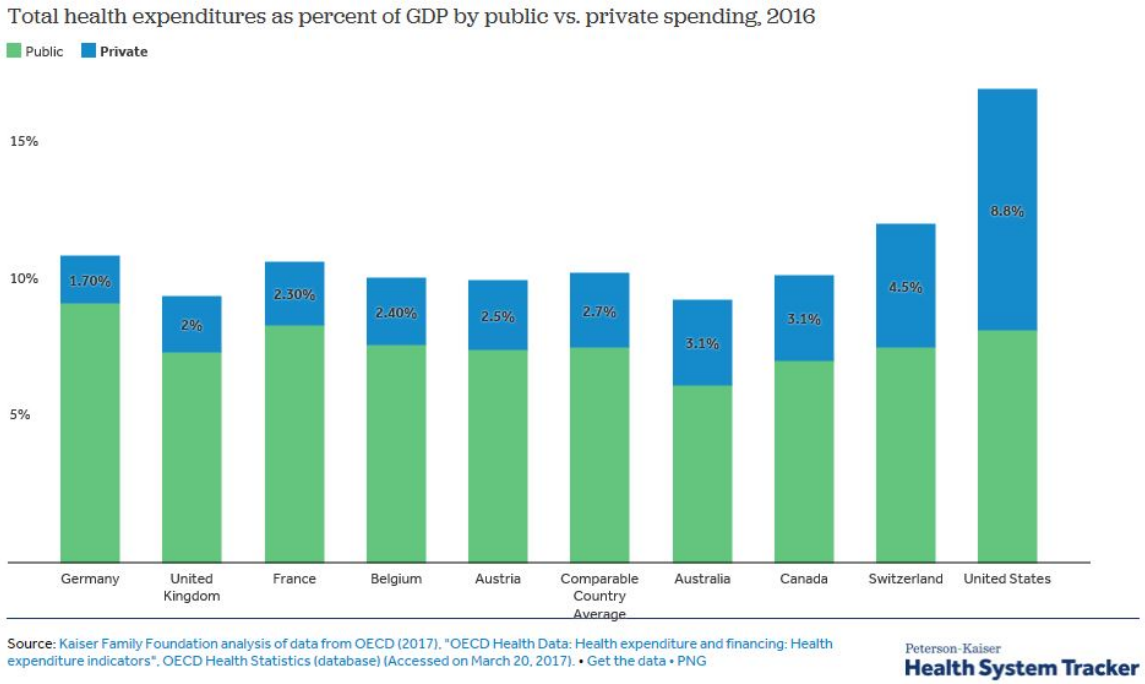
Source: Financing Global Health Database 2016

PPP = purchasing power parity

Retrieved from Institute for Health Metrics and Evaluation website: http://www.healthdata.org

Spending Relative to other Wealthy Countries





Source: https://www.pulseheadlines.com/bolt-wins-gold-rio-remains-worlds-fastest-man/46135/

USA Bolts like USAin Bolt

Factors Contributing to Difference in Expenditure

Health care services are priced differently based on varying factors

- Payer
- Place of residence
- Final destination of the health care dollars
  - Primary care
  - Secondary
  - Tertiary care.

Return on investment

Healthcare Access and Quality Index based on mortality from causes amenable to personal health care in 195 countries and territories, 1990–2015: a novel analysis from the Global Burden of Disease Study 2015

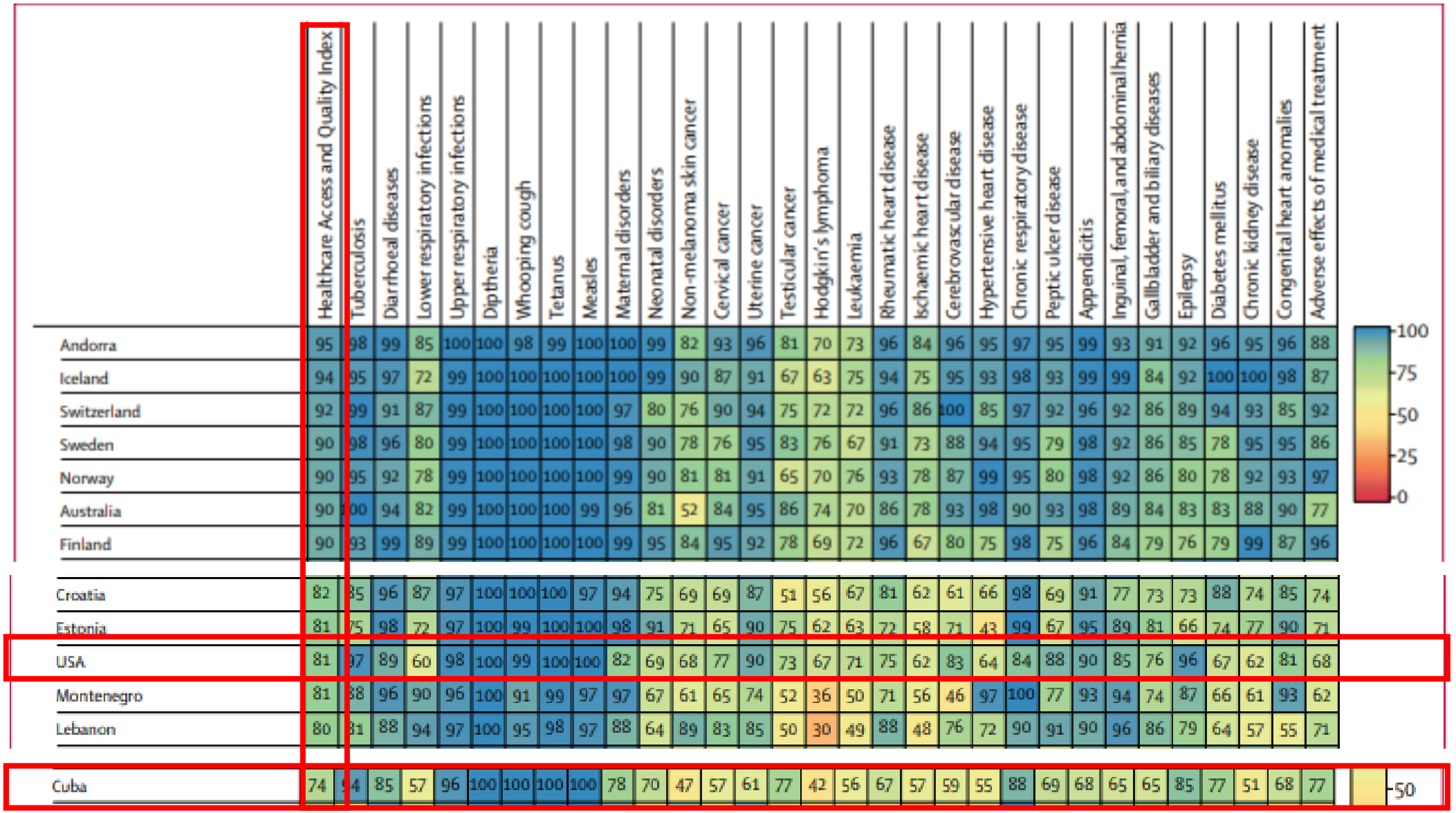
*GBD 2015 Healthcare Access and Quality Collaborators**

2015. (2017, July). Seattle, WA: Lancet.

HAQ Index

- Study evaluating 32 causes of disease and injury that should not be fatal if an individual has access to high-quality health care
- The outcome of this study was a new metric known as the Health Access and Quality Index (HAQ Index)
- 0 to 100 scale with an objective approach to assessing access and quality of health care
- Countries were grouped into quartiles based on overall level of development by looking at income per capita, average years of education and total fertility rates

Performance of HAQ-Index and 25 Individual Cases



Healthcare Access and Quality Index based on mortality from causes amenable to personal health care in 195 countries and territories, 1990–2015: a novel analysis from the Global Burden of Disease Study 2015. (2017, July). Seattle, WA: Lancet.

HAQ Index by Decile in 2015

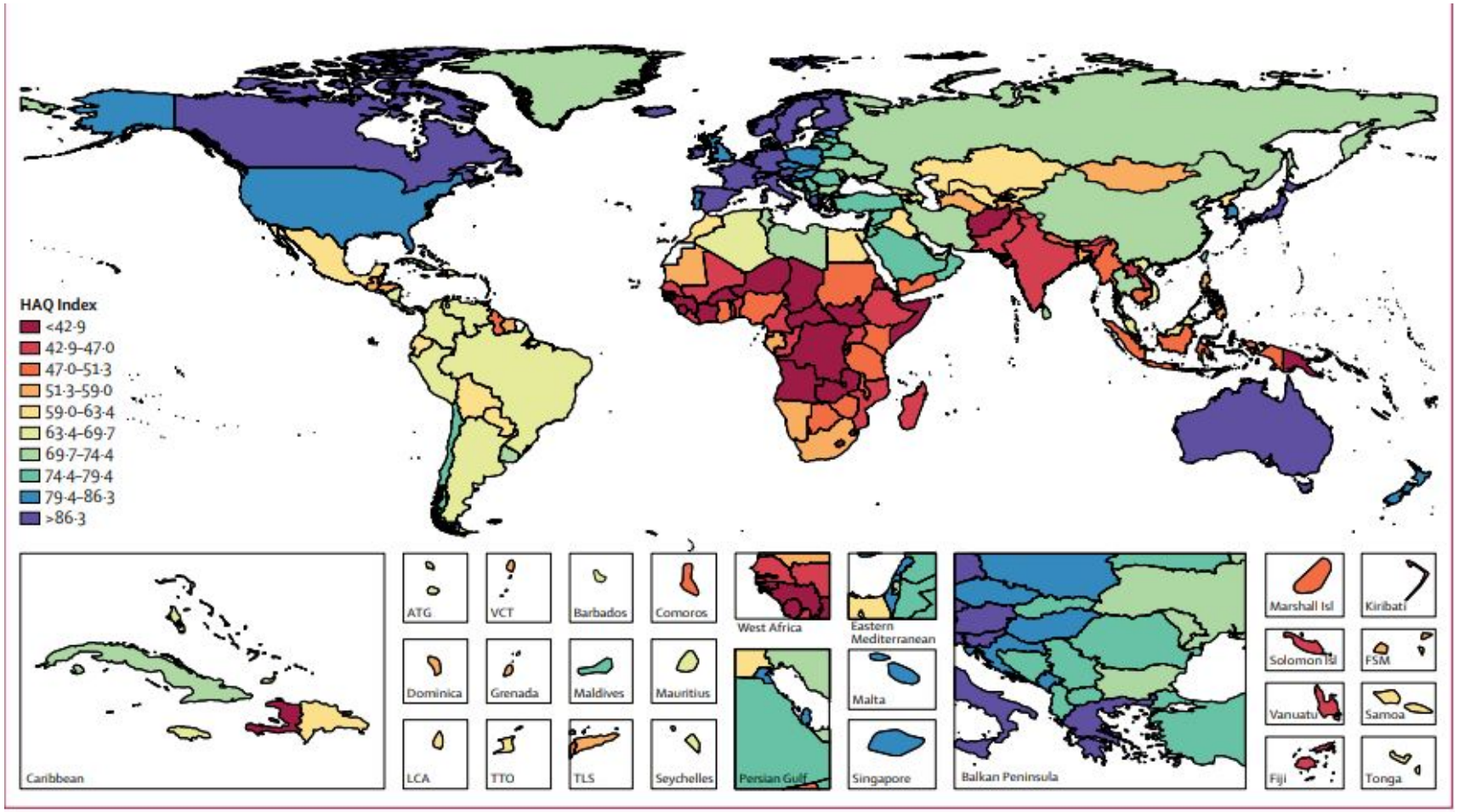


Figure 1: **Map of HAQ Index values, by decile, in 1990 (A) and 2015 (B)**
Deciles were based on the distribution of HAQ Index values in 2015 and then were applied for 1990. HAQ Index = Healthcare Access and Quality Index. ATG=Antigua and Barbuda. VCT=Saint Vincent and the Grenadines. LCA=Saint Lucia. TTO=Trinidad and Tobago. TLS=Timor-Leste. FSM=Federated States of Micronesia.

Healthcare Access and Quality Index based on mortality from causes amenable to personal health care in 195 countries and territories, 1990–2015: a novel analysis from the Global Burden of Disease Study 2015. (2017, July). Seattle, WA: Lancet.

Quality of Care

Quality based on health indicators

World Health Organization analyzes specific indicators which fall under the broad categories of

- Child health
- Health financing
- Health systems
- Mortality estimates
- Public health and environment
- Sustainable development goals
- Health statistics

Key Indicators: Cuba	
WHO region	Americas
Child health	
Diphtheria tetanus toxoid and pertussis (DTP3) immunization coverage among 1-year-olds (%) (2016)	99
Health systems	
Physicians density (per 1000 population) (2014)	7.519
Mortality and global health estimates	
Under-five mortality rate (probability of dying by age 5 per 1000 live births) (2016)	5.5
Maternal mortality ratio (per 100,000 live births) (2015)	39
Sustainable development goals	
Life expectancy at birth (years) (2015)	81.4 (Female) 76.9 (Male) 79.1 (Both sexes)

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Applicable Lessons

- Emphasis must be placed on preventive and primary health care
- Make medicine and public health equal and complementary foundations of the health care system
- Governmental Protection of the consumer
- Strong political will
- Building a system based on equity and equality

A Practitioner’s Perspective; Dr. Jyoti Patel

Conclusion

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