



Cámara de Comercio de Puerto Rico presenta



# CUMBRE EMPRESA PRIVADA GOBIERNO Y ACADEMIA

Neuro Surgery Section  
School of Medicine



University of Puerto Rico

**HEALTH ECOSYSTEM AND THEIR EVOLUTION**

**PAST, PRESENT AND FUTURE**



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# Puerto Rico Health Ecosystem

## Priorities

- Recognizing and understand the importance of public health.
- Collaborate to promote the health of the population.
- The importance of an equitable health system.

## Must Understand

- Historical background of Puerto Rico's health system.
- Organization of Puerto Rico's Health System.
- The Road after the Health Reform 1993.

# Puerto Rico Health System Facts

- Responsibility of the Government.
- Most of health care services rendered on the 20th century was through a public health system.
- Challenge is the increase of operational costs.
  - Professionals.
  - Diagnostic technology .
  - Population levels and demographics.
  - Emergence of health conditions that require intensive care and resources.
- Economic growth after 1960
  - Most employers offer health insurance coverage facilitating access to private health services.

Result...

**Puerto Rico health system is a dual system.**

# Puerto Rico Health System Facts



- 1820-1949 – The government was responsible for health care services.
- 1916-1919 - Headed by a commissioner who was part of the governor's cabinet the Department of Health was created.
- 1930-1939 - Every town had a public health.
- 1940-1949 - A regional health system and the School of Medicine of the University of Puerto Rico.
- 1950-1959 - all municipalities had a Diagnostic and Treatment Centers, known as CDTs, directed towards primary health care.
- 1960-1969 – Observed the prevalence of chronic and degenerative diseases in acute stage medical care requiring highly specialized hospitals.
- 1976-1979 - the government privatized the secondary level hospital care through a program called "democratization of medicine" with the objective of hiring private companies whose expertise allowed them to achieve greater efficiency in the operation of hospitals.

# Puerto Rico Health System Facts



- The public sector served approximately
  - ❑ 55% of the population with fewer beds, medical and diagnostic technology
- The private sector attend
  - ❑ 45% of the population with more beds, medical and diagnostic technology.
- Operation of the public system is extremely costly, without the necessary funds to;
  - Recruit health professionals.
  - Meet the infrastructure needs.
  - Lacks the necessary diagnostic technology to provide adequate health services.
- In 1992 the General Health Council, advisor to the Office of the Secretary of Health, concluded that it was necessary to integrate the two sectors of the country's health system. This led to the 1993 Health Reform.

# Modernization of a Healthcare System

- From 1954 to 1993, experienced 3 initiatives to transform the structure and operation of health care on the island .
- All shared similar goals;
  - ensuring access to quality health services to the entire population;
  - give greater emphasis to primary health care,
  - facilitate the integration of the levels of service delivery, and
  - promote efficiency in the operation of the health system.

# Reforms



## 1<sup>st</sup> Reform

- Led by Drs Guillermo Arbona and John B. Grant, (Rockefeller Foundation) .
- To structure health care based on preventive care and early intervention.
- Facilities located in each municipality, which facilitated the access of people to these services.

## 2<sup>nd</sup> Reform - Law 11, 1976, the Comprehensive Health Services Reform Act

- A comprehensive public health policy aimed at guaranteeing the population access to a health system (in 1976).
- Main strategy would be primary care.
- Kept as the official policy of Puerto Rico :
  - that the government will be responsible for providing the population with access to health services,
  - that primary health care should be the main priority in the health system, and
  - that the state should have the participation and collaboration of the private sector to address the health needs of the population.

**Law 11 recognizes that the state can use private strategies to fulfill its ministerial role to ensure the health of the people of Puerto Rico.**

# Reforms



## 3rd Reform

- To improve access and quality of health services received by the low-income population of the country.
- Address claims that there was a mismatch between the population of high socioeconomic status and poor people in terms of access to quality health services. Generally known's as “La Tarjeta de Salud”.
- based on two parallel strategies:
  - privatize the management of access to health services through the private health insurance market, and
  - private transfer to the provision of government health services through sale of public health facilities.

Both strategies pursued to achieve higher quality service at lower cost to the government.



# The 1993 Health Reform

Law 72 of 1993 created the Health Insurance Administration (known as ASES)

- ASES is a public corporation with autonomous powers to implement, manage, negotiate and contract medical cover for all residents of Puerto Rico, including participants Medical Assistance Program.
- responsible for providing quality health care and hospital services to the eligible population.
- an initiative to correct problems bedeviling the government health system, particularly in terms of unequal access to quality health services and the sharp increase in the government spending on health services.
- In December 1993, by a dispensation by the Federal Medicaid Program, ASES signed a contract with a private health plan to provide health coverage to approximately 60,500 eligible individuals through a managed care system.
- In charge of hiring insurance companies and establish control mechanisms to prevent unwarranted increases in the cost of health services. It should also examine the access, quality, cost and utilization of health services and protect the rights of beneficiaries and providers of services.
- The 1993 Health Care Reform was established with three main strategies:
  - privatize the management of access to health services;
  - privatize provision of services, and
  - implement a managed care model to guide the financing and management of the privatization process.

# A Regional System of Services



This Regional System includes three levels of care:

1. CDTs offered in each municipality,
2. A district hospital, and
3. secondary, tertiary or specialized supratertiary, offered in the regional hospitals and the Puerto Rico Medical Center.

## I. Primary level

Primary care in the CDTs was oriented toward health promotion, preventive services and management of outpatients with acute conditions. Primary preventive services for certain specific diseases and secondary preventive care for people with hypertension, diabetes and asthma. Also offered prenatal care and health services for healthy children.

The CDTs were the entry point to the health care system and served as the setting for the coordination and continuity of care.

## II. Secondary level

Strengthened by grouping area hospital beds and secondary health services in hospitals (Carolina area, Guayama, Humacao, Manati and Yauco) were located a short distance from the people they served and provided support to several CDTs.

Patients requiring secondary treatment were referred to these hospitals in the area. They offered access to specialists in internal medicine, pediatrics, surgery, gynecology and obstetrics. When necessary, area hospitals referred patients to regional hospitals for tertiary care.

# A Regional System of Services



## III. Tertiary level

Regional hospitals that offered tertiary care (in Arecibo, Bayamón, Caguas, Mayaguez, Ponce and San Juan and subsequently added Aguadilla and Fajardo).

At this level, attending patients with complex medical conditions requiring specialized personnel and sophisticated diagnostic technology.

The Rio Piedras Medical Center served as supraterciary level hospital care center for the whole island offering more specialized services.

# Facilities

- Puerto Rico have 69 general and special hospitals
  - 55 are private and
  - 14 are operated by the government.
- More than 100 health centers distributed in all municipalities.
  
- The Puerto Rico Medical Center in Rio Piedras.
  - An academic center for medical research and the training of doctors and other health professionals.
  - The main place to meet conditions traumatic disaster and other catastrophes.
  - Chronic and degenerative diseases in acute stage medical care requiring highly specialized hospital.

# Government Healthcare Ecosystem



ESTADO LIBRE ASOCIADO DE PUERTO RICO  
**centro de diabetes**  
PARA PUERTO RICO



# Healthcare Private Facilities

- **Pediatrics** – San Jorge Children’s Hospital and Puerto Rico Children Hospital
- **Robotic Surgery/Stroke** – Hima San Pablo
- **Liver Transplant** – Auxilio Mutuo
- **Cardio Vascular** – San Pablo, Ashford

# Puerto Rico Cardiovascular Center

- There is a Howard Johnson Hospitality Facilities in the premises
- Heart Transplant Program
- Adult and Pediatric Cardiology Services
- Adult and Pediatric Cardiac Surgery Services
- Latest Technology in Hybrid OR Suite



# MSC/ASEM Neuro-endovascular Surgery & Stroke Center

- Cerebral Aneurysms
- Cerebral Arteriovenous Malformations
- Strokes
- Carotid Cavernous Fistulas
- Tumors
- Trauma
- Carotid and Vertebral Stenosis
- Craniofacial Vascular Lesions
- Inferior Petrosal Sinus Sampling



2012 AHA Silver Award



# Comprehensive Cancer Center

- New Radiotherapy Facilities at Oncologic Hospital
- Cancer Research
- Stem Cells Research
- MOU MD Anderson Cancer Center



# Puerto Rico Diabetes Center

- Diabetes prevalence has been increasing in most countries of the Region of the Americas.
- In Puerto Rico diabetes is one of the leading cause of death.
- Telemedicine is a promising technology to provide case management services to patients with chronic conditions who experience barriers in access to adequate care or a high burden of illness.



ESTADO LIBRE ASOCIADO DE PUERTO RICO  
**centro de diabetes**  
PARA PUERTO RICO

# University Pediatric Hospital

A video-conferencing stations that allow doctors to exchange children’s diagnoses and treatment plans with specialist children's doctors in Los Angeles, USA.



*“Our objective is to help doctors provide better medical care and improve the health and care of children,”*

*– Jennifer Lopez*



# Gamma Knife

Surgery with a Gamma Knife, ensures patient comfort and can be used to treat lesions that were previously inaccessible, or who were treated unsuccessfully with conventional surgery, chemotherapy and/or radiation.

The treatment focuses radiation in one place allowing the precise treatment of Brain AVM'S and tumors in deep areas of the brain; without exposing the healthy surrounding tissue to dangerous level of radiation.





NATHAN RIFKINSON  
**GAMMA KNIFE CENTER**  
PUERTO RICO AND THE CARIBBEAN



***GAMMA KNIFE- 4C***

# A 21<sup>st</sup> Century Leader in Health



# Recent Legislation

## **Law 91 from 2012**

To authorize the Puerto Rico & Caribbean Cerebral-vascular Center, that is subordinated to the of Puerto Rico Medical Services Administration (ASEM), to establish it's the administrative structure, necessary to run effective, agile, efficient and economic feasible Telemedicine facilities.

## **Law 544 of 2004**

To establish and develop an integrated Trauma and Medical Emergency Network.

# Pieces of the Health Care Puzzle

## Metamorfosis del sistema de salud

**La Comisión Evaluadora del Sistema de Salud se dividirá en diez comités:**

**Acceso universal** Se discutirán posibles fuentes de financiamiento, el fortalecimiento de la Administración de Seguros de Salud y la transformación del rol de las aseguradoras.

**Sistema integrado para el cuidado de la salud** Evaluará a los grupos médicos primarios y el sistema de atención de traumas.

**Se fortalecerá el Health Information Exchange** Trabaja en lograr la integración de los proveedores (médicos, hospitales, etc.) a este sistema electrónico central.

**Programa de Prevención y Promoción de la Salud** Dará prioridad a varias enfermedades: asma, hipertensión, fallo congestivo, diabetes, obesidad y embarazos de alto riesgo.

**Transformar el sistema de salud** para integrar y fortalecer los servicios de salud mental. Establecerán indicadores de calidad para medir los servicios.

**Fortalecimiento de la educación médica graduada** y otras profesiones de la salud. Pretende vitalizar los centros médicos académicos.

**Estrategias para lograr economías en los medicamentos** Evaluará la creación de inventarios virtuales (con los fármacos más recetados) para adquirirlos a precios reducidos.

**Buscar soluciones para atender la impericia médica** desde el punto de vista de los profesionales de la salud y de los pacientes. Se convocará a una cumbre multisectorial.

**Se evaluará el desempeño del sistema de salud** y sus resultados se usarán para la planificación y toma de decisiones. La evaluación será continua por grupos externos.

**Transformación y fortalecimiento del Centro Médico** Se unificarán varios componentes del sistema.





# Considered Health Care Models

## 1. Montefiore

- A Network of Academic Medical Centers
- Low income population
- 100% Government responsibility

## 2. Vermont

- Universal System
- Government – Sole Payee (start 2017)
- Savings on Administrative Costs

## 3. Canada

- A Sole Payee
- Socialized Medical Insurance Plans
- Administered at the Province (Regional)

## 4. Connecticut

- Medicaid Beneficiaries (600,000 )
- Private ACO and Private sector manage the and Customer Service
- State manage claims



# Economic Impact of Healthcare

## Lead the Evolution

The healthcare industry is projected to grow by 5.6 million jobs between now and 2020, the most of any other industry, with health informatics the 8th largest share of those postings.



Job growth projection between now and 2020

Job growth projection between now and 2020

# 21<sup>st</sup> Century Challenges

- Private Sector
  - By 1992 provide medical care to more than one third of the population.
  - Was and still operates, through independent institutions.
  - Has not formally delineated a structured networks of providers and health care facilities
  - Health services in the private sector are funded largely by health insurance companies
  - Private insurance companies has done it share.
- Public Sector
  - A sustained increase in government spending on health services accounted in 2006 for 16.7% of GDP, the highest of all countries of the world.
  - Providers claim that insurance companies do not pay appropriate fees
  - An estimated of 400,000 people do not have a private health plan.
    - employers do not provide health plan
    - do not qualify for government health plan.
  - Lack of education to beneficiaries about the responsibilities associated with the privileges they receive through the government health plan

# 21<sup>st</sup> Century Challenges

- With the launch the most recent transformation of the health system in Puerto Rico,
- Population was 3.6 million people.
- About 1.9 million people were insured.
  - about 1.4 million had private health insurance,
  - 314,000 Medicare Parts A and B and
  - 185,000 public employees were partially subsidized by the government.
- 1.7 million persons not participating in the market health insurance.
  - 300,000 are uninsured population in Puerto Rico.
  - The remaining 1.4 million people were receiving services from the Department of Health of Puerto Rico
    - 900,000 who were eligible for Title XIX of the Social Security Act of the United States of 1935, known as the Federal Medicaid Program and
    - 500,000 participating Assistance Program

*“Telemedicine can be an effective method to provide expert Healthcare to patients.”*



# What is Telemedicine?

Telemedicine is a method, where a patient receives medical care services and/or treatment from medical professional (Doctor, therapist, etc) which are not in the same place. Is considered identical to a medical traditional visit, except that the doctor and the patient are not in the same place.

These services are provided through :



- Real time video Conference and;
- By the submission of clinical information and/or images to a specialist for assessment, consultation or treatment via secure telecommunications.

# A Health Solutions in Action

- Doctors can examine and treat faraway patients.
- Care can be extended to underserved, remote and rural areas.
- Patients can be referred to other doctors, no matter where they are.
- A single doctor or provider can scale service to many more patients.



# Telemedicine is Here



AMD-2500 General Examination Camera



AMD-3700 Telephonic Stethoscope



AMD-2015 ENT Scope

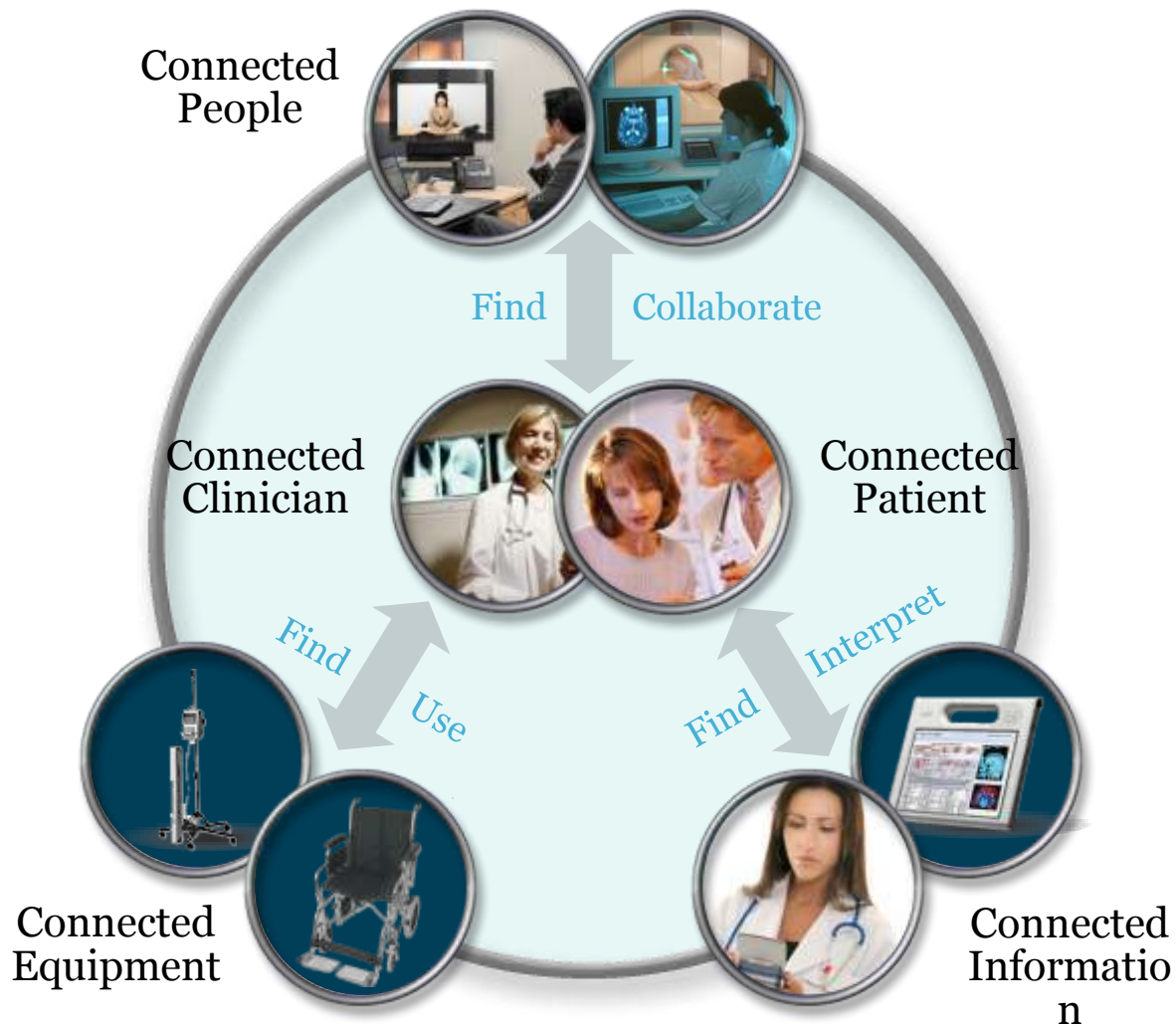


Welch Allyn Spot Vital Signs Lxi (Blood Pressure, Temperature, Pulse Rate, Pulse Oximetry)

Medical Devices



# Healthcare Network



# Potential of Tele-health

*How much Potential do the Following Telehealth Approaches Have to Improve Health Services in Your Country Within the Next Five Years?*

## Access Video for Consultations

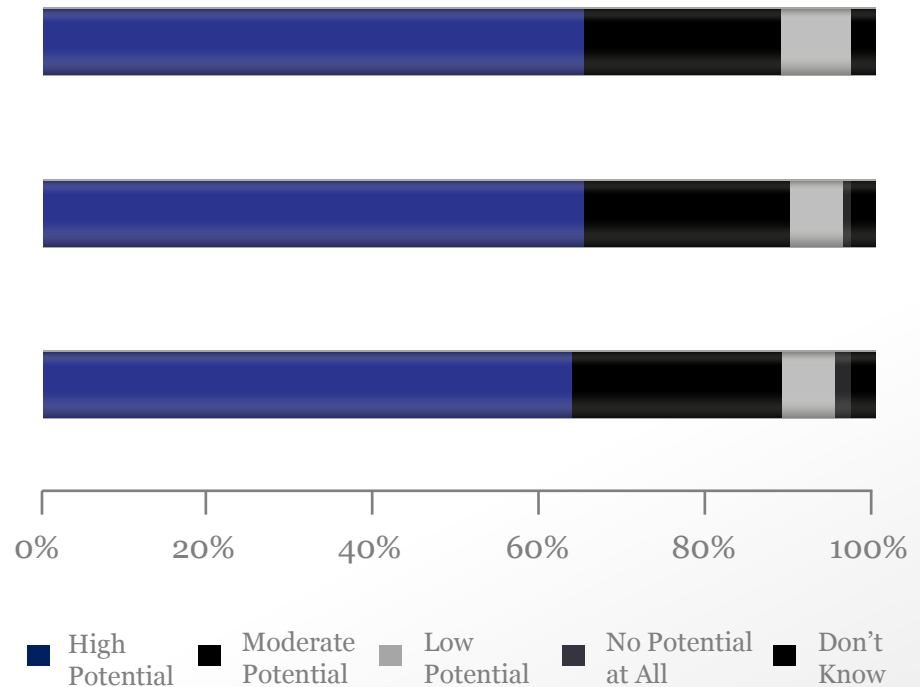
Electronically sharing or accessing diagnostic images, video, or patient data to consult on treatment

## Collaborate on Treatments

with other providers via IT (Video) technologies to diagnose and treat patients

## Providing Clinical Training

and references for Healthcare professionals using information and communications technologies



Source: Princeton Survey Research Associates International, 2010

# Summary

- ✓ The health system of Puerto Rico has experienced three initiatives to implement reforms conducive to transform the structure and operation of health care on the island, all sharing similar goals.
- ✓ At 1992 there was consensus about the integration between the public and private health sectors.
- ✓ The private health sector in Puerto Rico was and still operates essentially as a set of independent institutions.
- ✓ With 1993 a process of transformation of the role of government in the health care of low-income population in Puerto Rico began.
- ✓ Law 72 of 1993 created the Health Insurance Administration (ASES) as the entity responsible for managing the affairs of purchase and provide private health insurance to the eligible population in this program.
- ✓ The eligibility for this insurance program was determined by the Medical Assistance Program of the Department of Health.

# Conclusion

After all the reforms and initiatives; the obligatory questions are:

- ✓ *Is the health care now more cost efficient?*
- ✓ *Is there better access to health services?*
- ✓ *Has the quality of health services of the government health plan improved?*

Unfortunately,

**the answers to these questions are not very encouraging.**

# Conclusion

- ✓ Despite several reforms to the system of health services, there are still major disparities in the health area and many challenges to overcome.
- ✓ Puerto Rico requires a health system subject to their capabilities and resources as a country.
- ✓ The health of a people is a social good, a common good. A healthy nation is a country that enjoys a superb condition for social and economic development.
- ✓ Health contributes to social capital and strengthens the capacity of a people to face the continuous changes and adjustments required by the modern world.

# Food for Thought

It is important to recognize that  
the ultimate responsibility for  
the health care of the population of Puerto Rico  
lies at the  
Department of Health;  
the agency designated for that purpose by  
the Constitution of the Commonwealth of Puerto Rico.

# Gracias

