

# An Innovative Approach to Care Across the Continuum in Brazil

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CARE CONTINUUM ALLIANCE



SEPT. 7-9, 2011 • SAN FRANCISCO

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**Brazil in Brief - Overview**

**Brazil in Brief - Health Care Industry**

**Chronic Disease Management Operations**

**A Successful Case Study**



## Brazil in Brief - Overview

Brazil in Brief - Health Care Industry

Chronic Disease Management Operation

Success Case



# Brazil in Brief

## Estereotype



Soccer



Caipirinha



Samba



Pele



Rio de Janeiro



Amazon

# Brazil in Brief



## São Paulo City Curiosity

# Brazil in Brief

## São Paulo City

- 11 million people
- 6.5 million vehicles
- 148 Universities
- 110 museums
- 160 theaters
- Unique town w/ 4 Tiffany's stores
- Largest fleet of helicopters, jet aircrafts and cabs

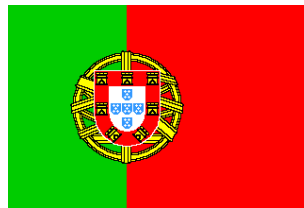


# Brazil in Brief

## São Paulo City



- 1<sup>st</sup>. “japanese city” out of Japan
- 1<sup>st</sup>. “portuguese city” out of Portugal
- 1<sup>st</sup>. “spanish city” out of Spain
- 3<sup>rd</sup>. “lebanese city” out of Lebanon
- 3<sup>rd</sup>. “italian city” out of Italy



# Brazil in Brief



# Brazil in Brief

**Area:** 8.5 million km<sup>2</sup> – 5<sup>th</sup> largest

**Inhabitants:** 193 million (2009)

**Government:** Presidential federal republic

**President:** Dilma Rousseff

**Official language:** Portuguese

**Currency:** Brazilian Real (BRL)

**Urban Rate:** 84%

**Nativity Rate:** 15,77 / 1.000 inhabitants

**Child Mortality Rate:** 22,5 / 1.000 inhabitants

**Life Expectancy:** 73.1 years

**HDI – Human Development Index:** 0,699 (high human development)



# Brazil in Brief

**Economically Active Population:** 62%

**GDP :** US\$ 2.1 tri 7th largest

**GDP per capita 2010 est. (PPP):** 11,200 USD

**Inflation 2010:** 5.9%

**Interest rate:** 12.5% (Aug 2011)

**Exports:** US\$ 201 bi 2010 (22<sup>nd</sup>.) – Commodities, airplanes, vehicles

**Imports:** US\$ 191 bi 2010 (20<sup>th</sup>.)

**S&P rating:** BBB-/A-3 foreign currency, BBB+/A-2 Local currency (Investment Grade)



**Brazil in Brief - Overview**

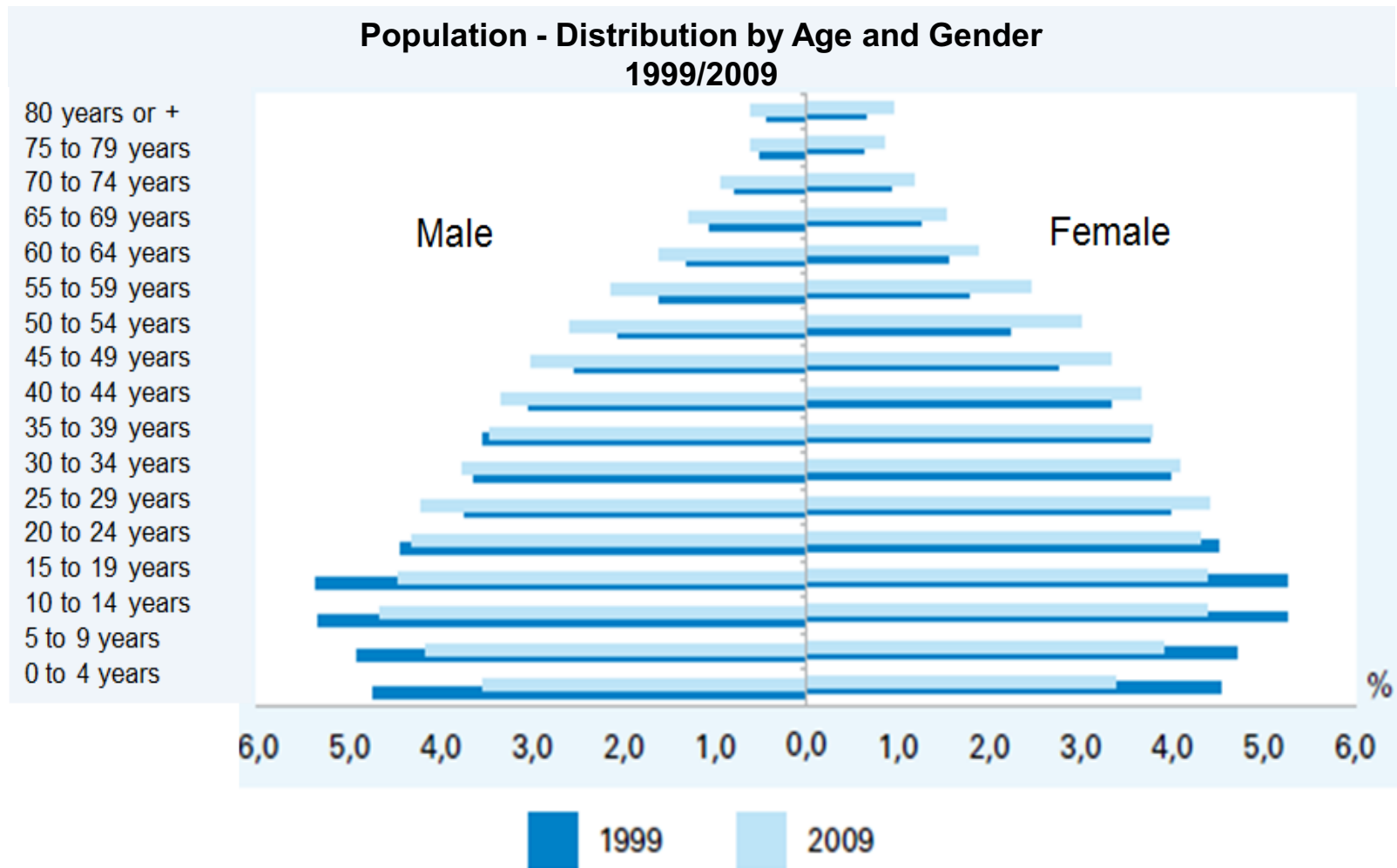
**Brazil in Brief - Health Care Industry**

**Chronic Disease Management Operation**

**Success Case**

# Brazil in Brief

## Demographic Analysis



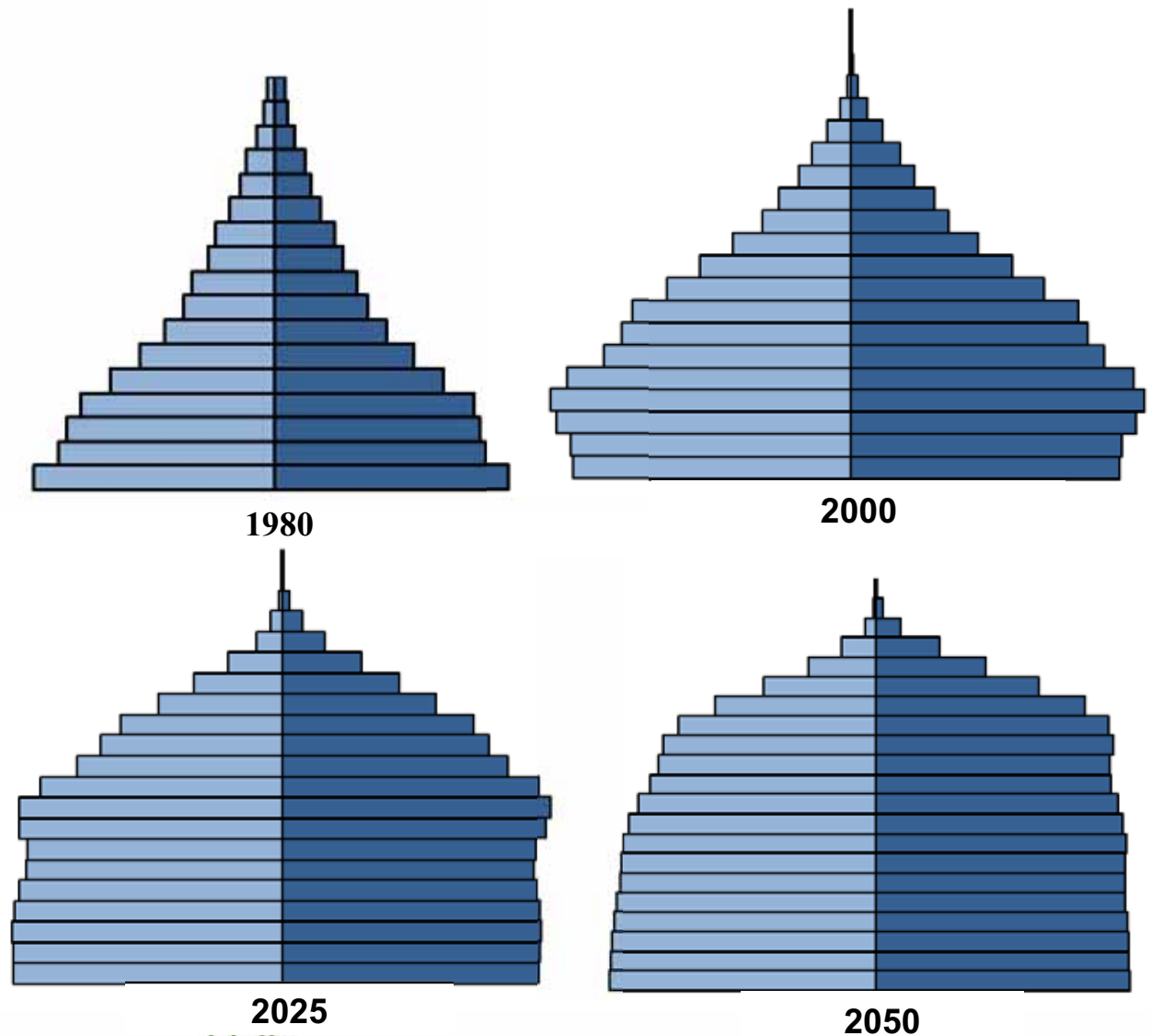
Source: IBGE

# Brazil in Brief

## Demographic Analysis

From 1980 to 2000

- Fecundity: 4.4 to 2.3 children per woman
- Older adult population growth -107%.  
Meanwhile growth rate for group under 14 yrs of age only 14%



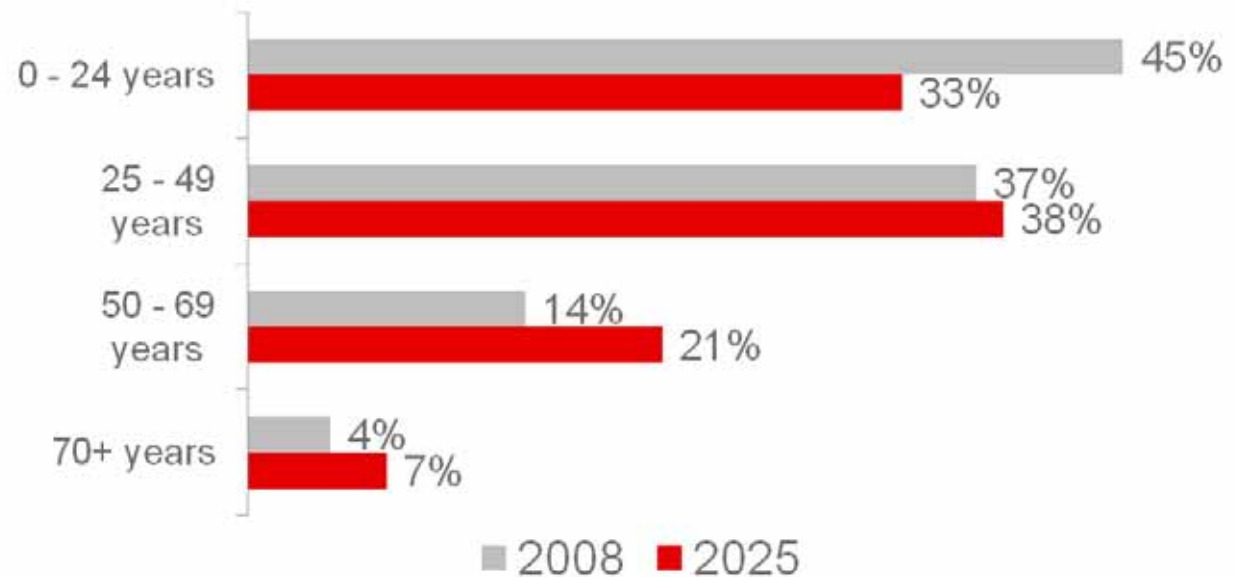
Source: Secretaria de Vigilancia Sanitaria - Brazil

# Brazil in Brief

## Demographic Analysis



### Population - Distribution by Age Forecast



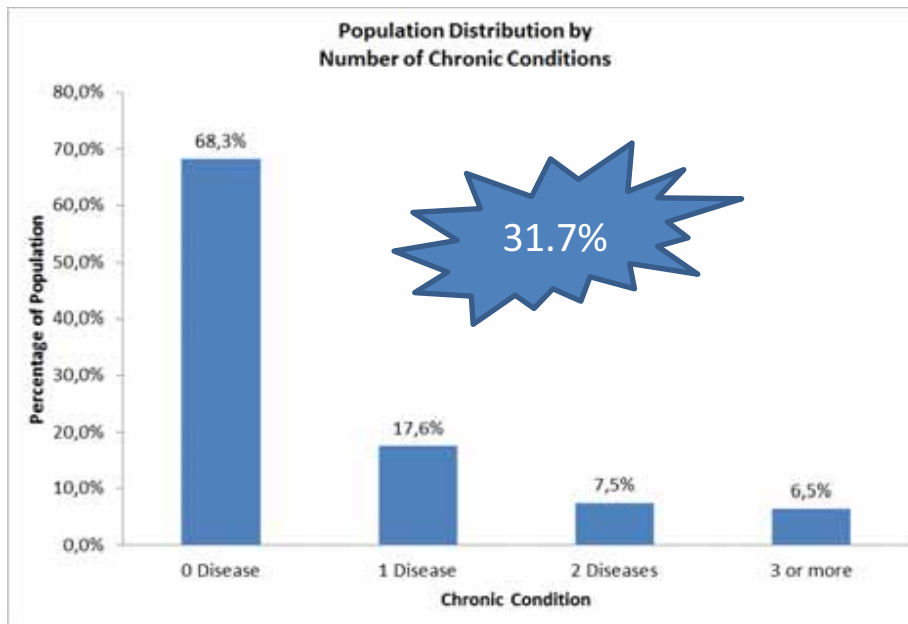
Source: IBGE

# Brazil in Brief

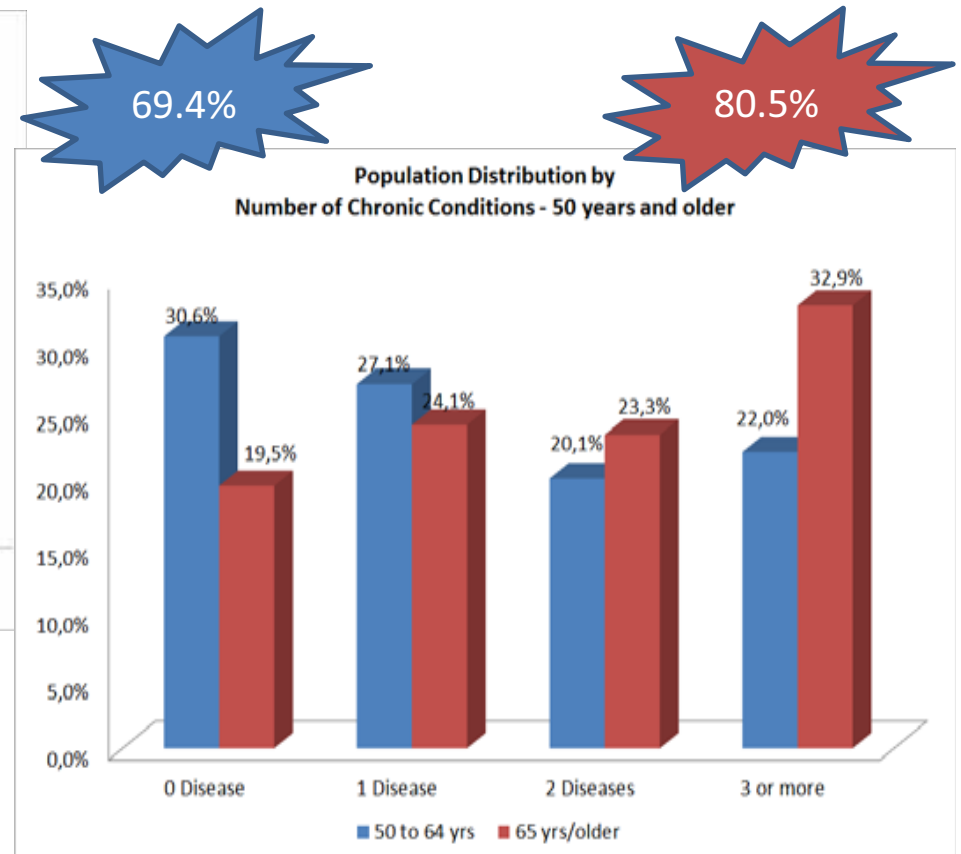
## Demographic Analysis



### Chronic Diseases



Source: IBGE/PNAD 2003

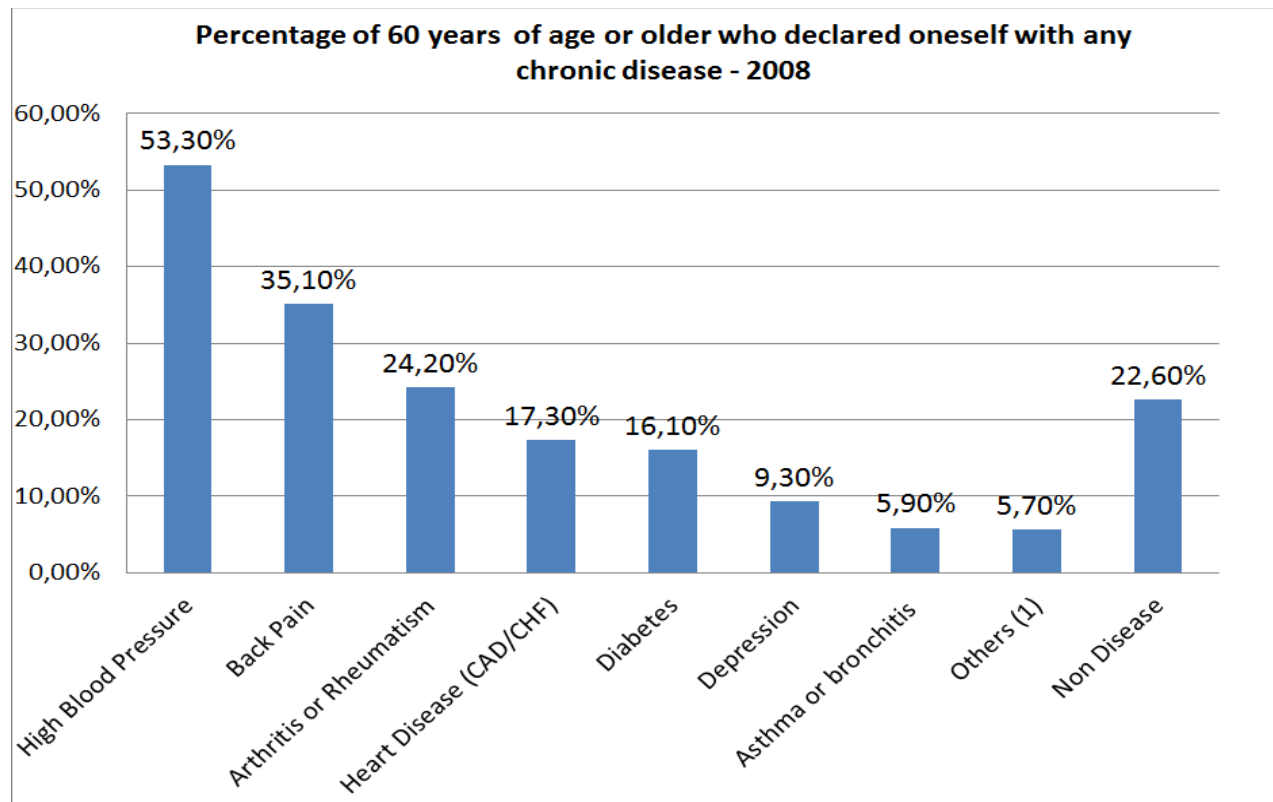


# Brazil in Brief

## Demographic Analysis



### Chronic Diseases



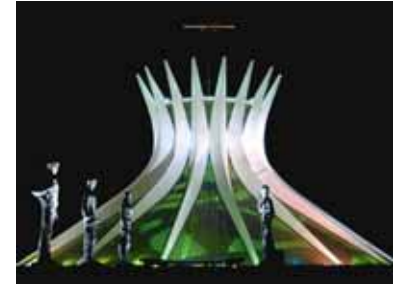
Source: IBGE, 2008

(1) Include: Tendinitis or tenosynovitis (5.0%), chronic kidney disease (3.3%) and cancer (2.5%)

# Brazil in Brief

## Brazilian Health Care Model – Public x Private Sector

- Public sector – *SUS* (Unified Health System)
  - Government-run public healthcare system
  - Universal and comprehensive care,
  - From basic prevention to organ transplants
  - Health of Family Program: multidisciplinary teams responsible for attendance families at circumscribed regions.
    - Currently covers 95% of total (5.290) city councils
- Private sector
  - 46.6 million people
  - Record 2% growth of number of beneficiaries -1st. Quarter 2011
  - Business Model: Self-Managed Plans, Health Maintenance Organizations, Health Co-Operatives, Health Insurance Companies



# Public X Private Health

## Welfare State Aspiration

*“Healthcare is a right of every citizen, guaranteed by the State through services of health promotion, protection and recovery.”*  
*Brazilian Constitution*



## Developing Country Reality

- *Large country*
- *Partly rural*
- *Through industrialization process*
- *Unequal wealth distribution (AKA: BellIndia)*



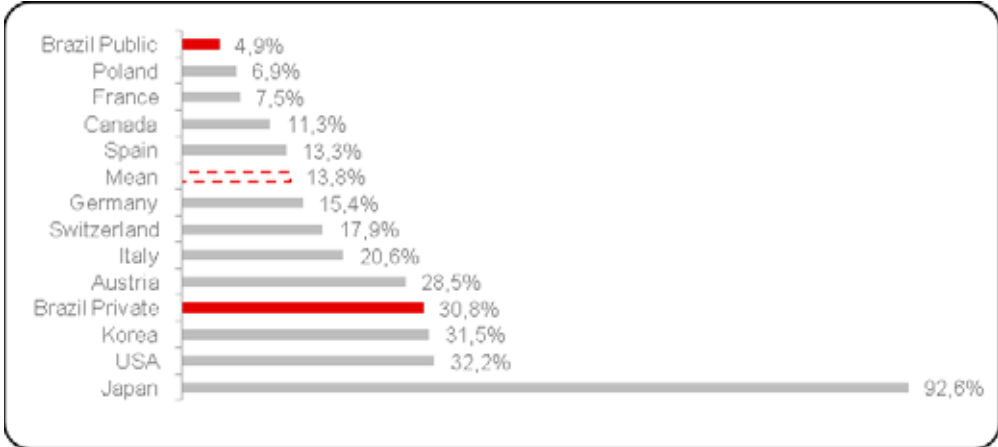
## Room for Private Health Insurance

- *Employee demand*
- *Demand from the wealthy citizens*

# Brazil in Brief

## Brazilian Health Care Model – Public x Private Sector

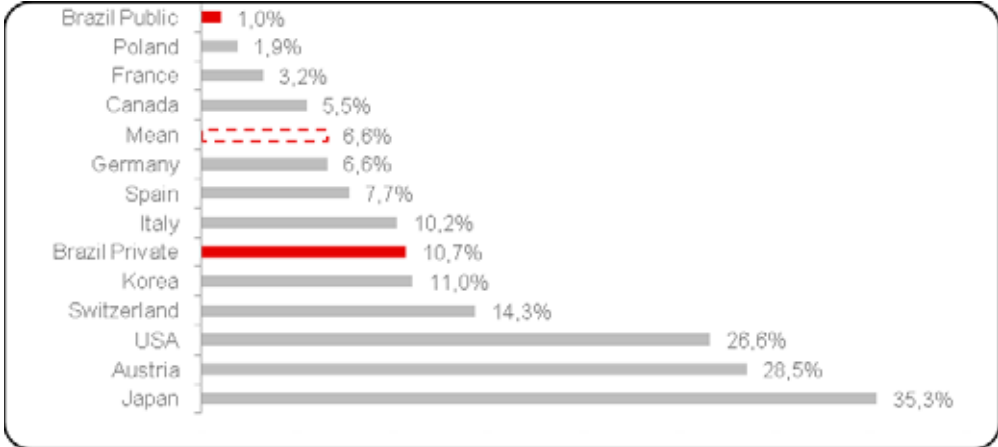
Computed Tomography



**MEMBERS**

151 mm on public health  
X  
42 mm on private health

Magnetic Resonance



**EXPENDITURE**

45.7% on public health  
X  
54.3% on private health

Source: WHO – World Health Organization

# Brazil in Brief



## Brazilian Health Care Model – Public x Private

	Brazil	USA	CAN	GER	JAP	Similar
Expenditure as % of GDP	9,0%	16,2%	10,9%	11,3%	8,3%	UK - 9,3%
% of Government Expenditure	45,7%	48,6%	68,7%	75,7%	80,0%	USA - 48,6%
% of Health on Total Government Expenditure	6,1%	18,7%	17,0%	18,0%	17,9%	BUL - 11,2%
% of Out-of-pocket Expenditure	57,1%	24,2%	49,6%	53,9%	80,6%	AUS - 59%

Source: WHO - World Health Organization

# Brazil in Brief

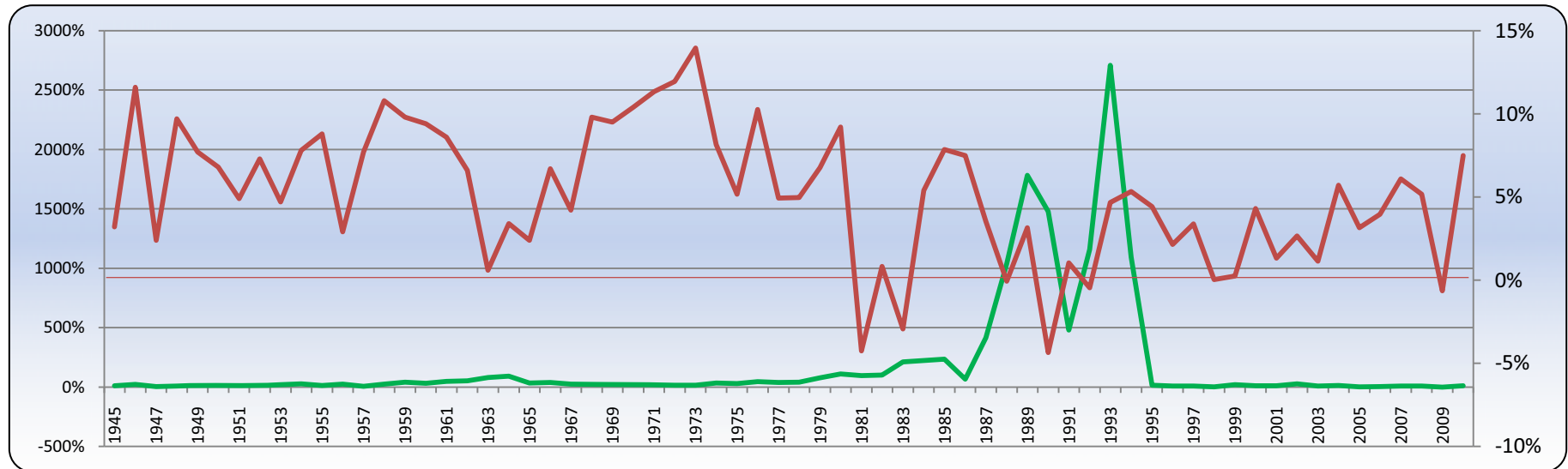
# Market Timeline

- 1<sup>st</sup> Health insurance contract dating from 1940
- Market growing without regulation
- No consumer protection
- Country industrializing in a fast pace
- Inflation starting to cause worries



- As there was no consumer protection, contracts were obscure both in coverage and in premium changes
- No cost control mechanisms
- Premiums increasing constantly

1940 - 1970



Source: IPEADATA

Inflation Rate

GDP Growth

# Brazil in Brief

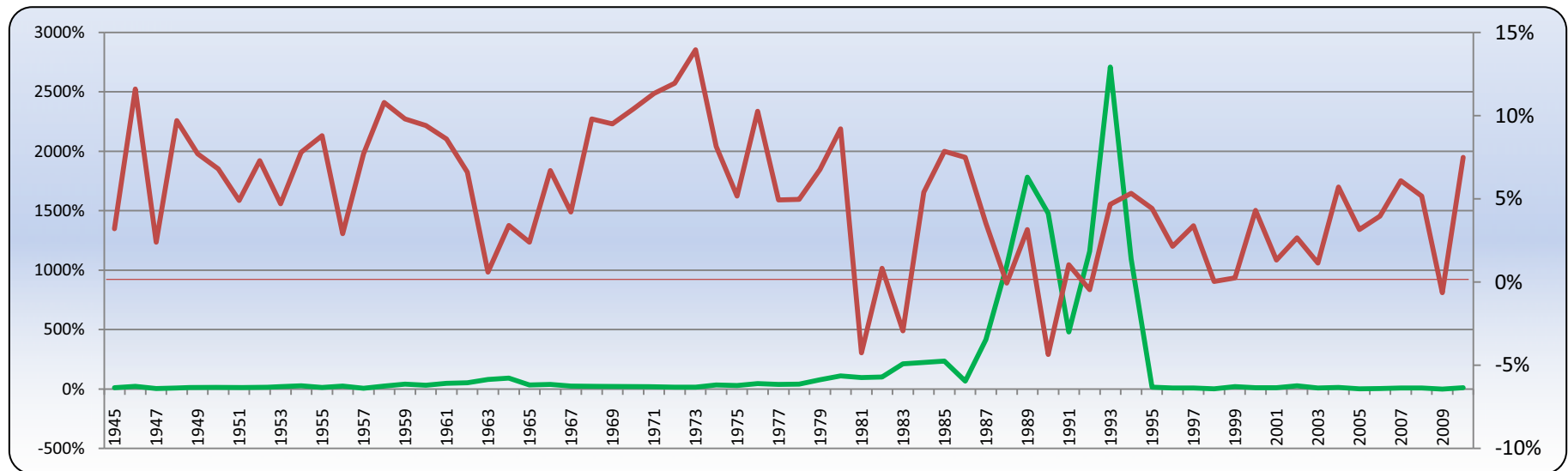
- Number of payors growing
- Market growing disrespecting customers
- Economy meltdown
- Inflation soars

# Market Timeline

- High inflation associated with favourable payment cycle (bill client upfront. Settle claims after 60 days)
- No cost control mechanisms (not necessary)
- Premium increasing constantly (absence of relative prices)



1970 - 1990



Source: IPEADATA



# Brazil in Brief

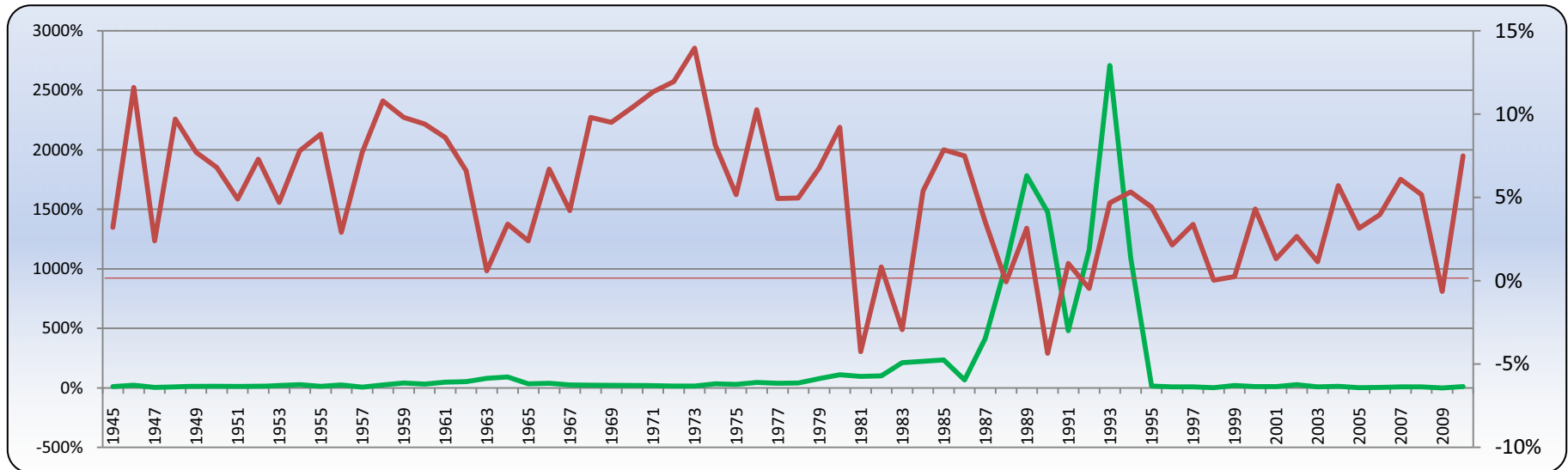
- Market growing disrespecting customers
- Inflation reaches 2700% per year
- Country in recession

# Market Timeline

- Government issues the Consumer Defence Code (1991)
- Unbalanced relationship between consumers and vendors
- Litigation is just about to start
- No cost control mechanisms (still not necessary)



1991 –  
1994



Source: IPEADATA

# Brazil in Brief

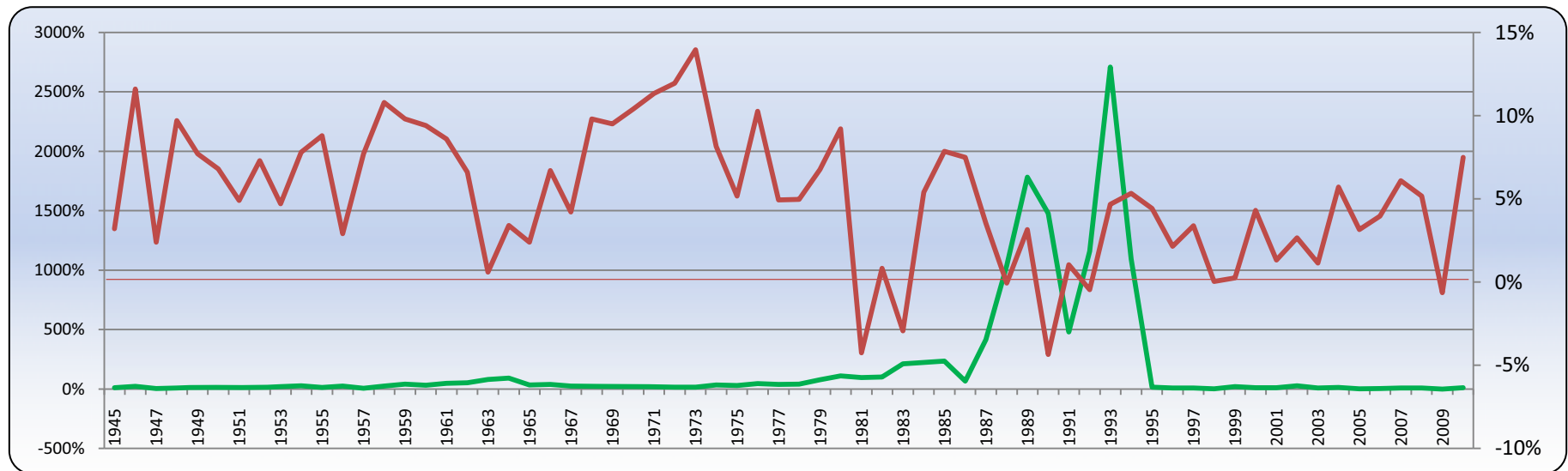
- Brazil defeats (inertial) inflation (from 1094% to 15% in one year).
- Relative prices start to reappear
- Sizable health insurance market still unregulated

# Market Timeline

- Necessity to implement cost controls starts to become clear
- Number of payors decrease
- Litigation grows
- Health Insurance Act is passed (1998)



1994 – 1998



Source: IPEADATA

# Brazil in Brief

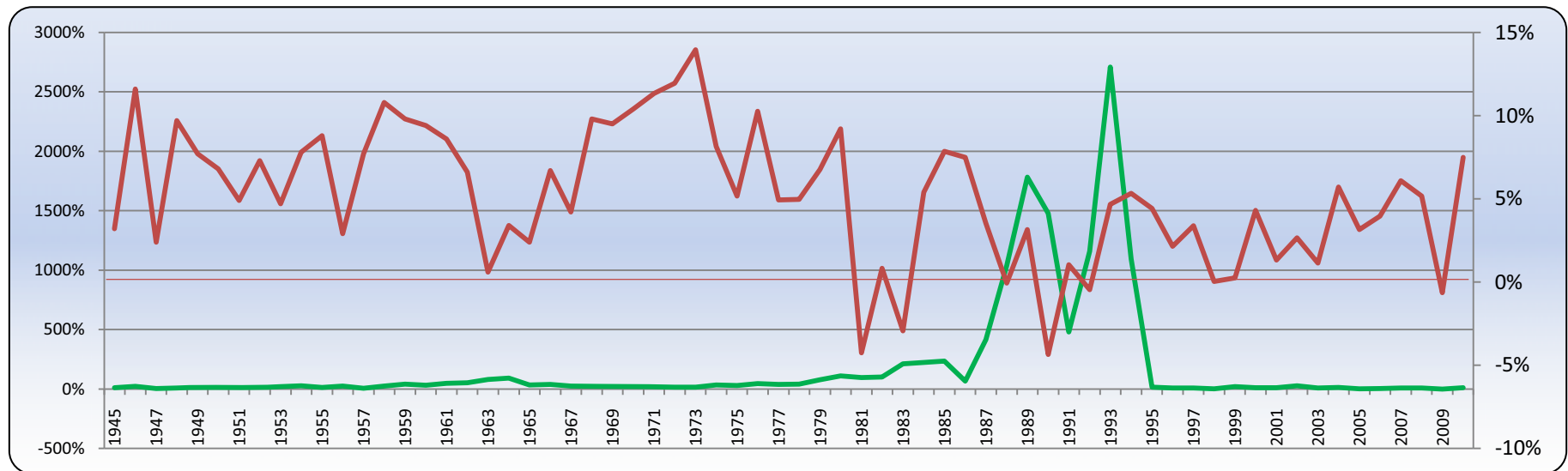
- Low inflation
- Irregular GDP growth
- M&A throughout the country
- Consumers very aware of their rights

# Market Timeline

- Necessity to implement cost controls is imperative
- Number of payors decrease sharply (from 2.000 to 1.200 – so far...)
- Litigation still growing
- ANS is created
- Regulation (partly inconsistent) speeds up



1999 - 2011



Source: IPEADATA

## Brazil in Brief

### Regulation

Reserves

Price controls

Coverage definitions

Network rigidities

Tech. incorporation

**Scale**

## The new Market

### Economic Environment

Growing economy

Capital availability

M&A

**IT**

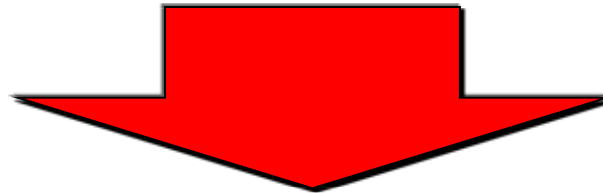
### Client Needs

SLA

Cost efficiency

Rights awareness  
(Unequal Litigation)

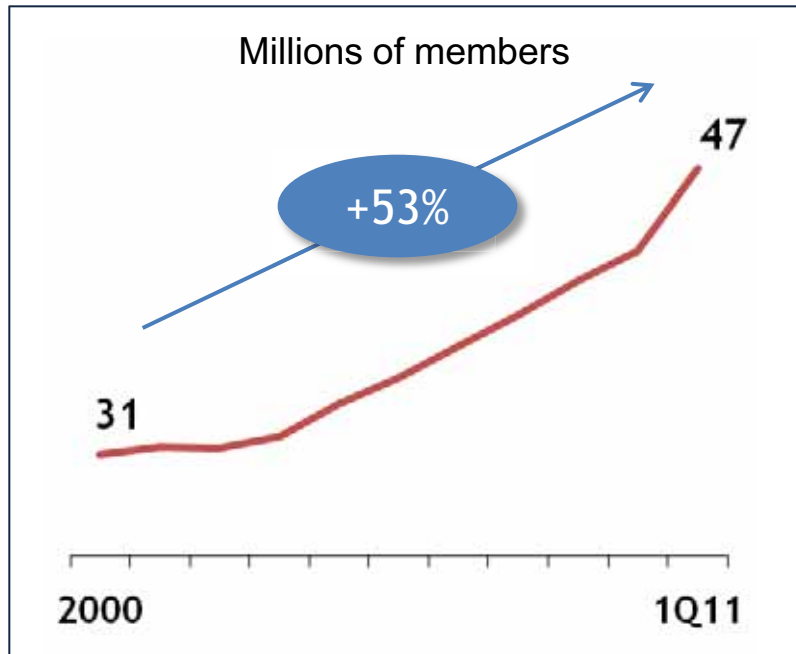
**Cost Control**



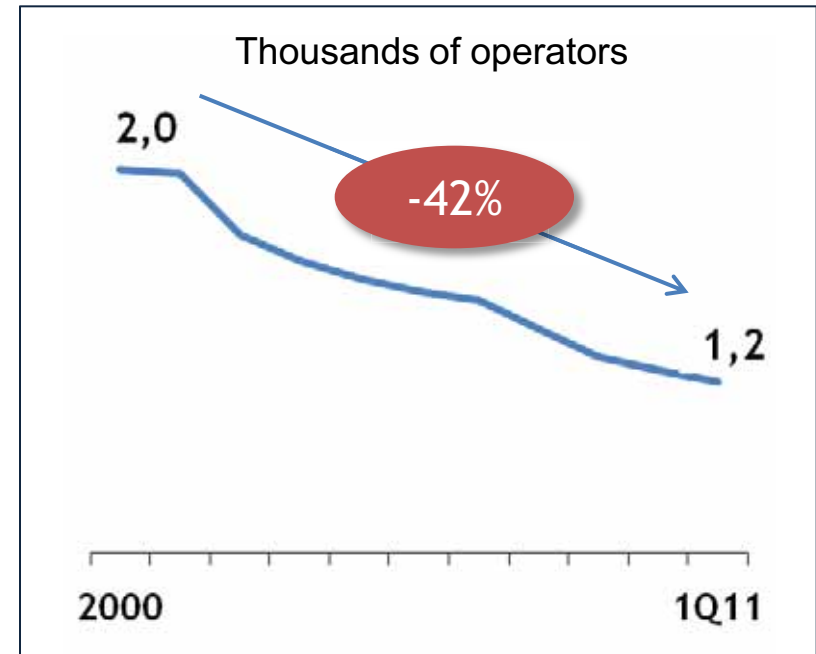
# Brazil in Brief

# The new Market

## Private Healthcare Membership is Growing



## Number of Operators is Declining



### CAGR 2000-2010

Beneficiaries of Private Sector = 4,06%  
Brazil Population = 1,23%

Source: ANS

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## Industry Consolidation



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# Is there room for DM in this new market?

Economy: Stable with relevant growth

Population: Annual Income Increase

High Growth of “middle class” population

39 million people ascended middle class in the last 10 yrs (13 million only last 2yrs)

High Growth of total outstanding credit

Government social programs decreased to extreme poverty

# Is there room for DM in this new market?

Large market to explore

High growth potential

Can be applied to both private and public sector

Brazil: Chronic diseases responsible for 72% of deaths

WHO forecasts deep changes in Brazil's epidemiological profile from 2005 to 2015:

More than 10 million people will die due to a chronic disease

Deaths caused by chronic disease will rise 22%, specially by diabetes which will rise 82%

**Yes!**

**Brazil in Brief**

**Health Care Industry in Brazil**

**Chronic Disease Management Operation**

**Success Case**

# AxisMed

- **Experience:** Leader and pioneer in Disease Management in Brazil with 10 years of experience. Currently with 300 employees.
- **Screening:** More than 9,5 million people and 500 million procedures analyzed
- **Members:** 90 thousand members around the country – national coverage.
- **Compliance:** Full compliant with National Regulatory Agency requirements.
- **Customers:** Self-managed plans, Health Maintenance Organization, Corporate customers, Health Insurance Companies with around 5million members..
- **Main Recognitions:**
  - 2010 – Ranking of 100 SM companies w/ highest growth index (5<sup>th</sup>.)
  - 2006 – Winner of entrepreneur of the year by Entrepreneur Endeavor Institute and Voce S.A. Magazine
  - 2004 – Best chronic disease management program to diabetes by Latin America Diabetes Association (ALAD – Associação Latino Americana de Diabetes)



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# Chronic Disease Management Operation

## Operational Principles

- **Knowlege:** Program coverage following diseases:

### Currently

- ✓ Diabetes type I and II
- ✓ Congestive Cardiac Failure, Coronary Diseases (heart and artery) and Systemic Arterial Hypertension
- ✓ Changes in cholesterol levels (Dyslipidemia)
- ✓ Chronic Lung Diseases: asthma, bronchitis and emphysema
- ✓ Chronic Kidney Disease

- ✓ Depression
- ✓ High Risk Management
- ✓ Metabolic Syndrome

### Under development

- ✓ Repetitive Strain Injuries
- ✓ Obesity
- ✓ Low back pain

# Chronic Disease Management Operation

## Resources Distribution

- On average, only 10% of a population is responsible for about 65% of their assistance costs. Of this amount, it is estimated that about 70% is generated by problems related to chronic diseases;
- The monitoring of these high-risk populations, which includes education, prevention practices statements and 24 hours support, is a proven solution to reduce these costs:

Risk Grid <sup>®</sup>	Characteristics	% of Population	% Assistance Cost	Per capita assistance cost / per annum – R\$	Health promotion
1. Low risk/ Healthy	Physical and mental welfare	35.0%	35%	< \$ 800 (average expenses of \$ 300)	Life quality programs:
2. Moderate risk		30.0%			Health promotion
3. High risk		25.0%			Disease prevention
4. Diagnosed	Multiple ambulatory procedures	5.50%	8%	> \$ 800 < \$ 2,000	<b>Chronic Disease Management</b>
5. Undertreatment	Multiple ambulatory procedures and visits to ER	3.50%	17%	>\$ 2,000; <\$15,000	
6. Complex cases	Several visits to the ER and one admission	0.85%	20%	>\$ 15,000; < \$ 45,000	
7. Catastrophic cases	Multiple admissions and visits to ER	0.15%	20%	>\$ 45,000	

Source: OMS, ANS, OPAS, IBGE, Datasus, Company

R\$1,60 = US\$ 1.00  
Aug,12 33

# Chronic Disease Management Operation



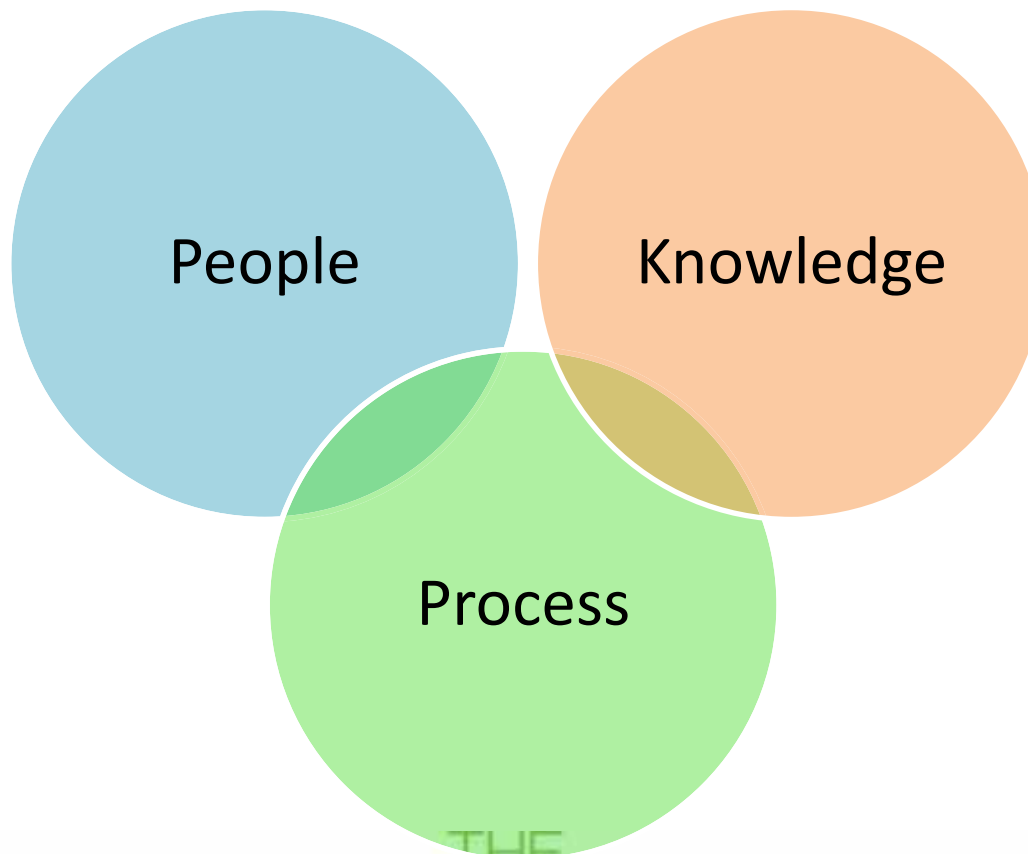
## Operational Principles

- **Integration:** We integrate our activities with Health Plan Operators initiatives;
- **Relationship:** We promote the relationship between patient, physician and HPOs – we do not replace medical procedures and treatments;
- **Focus on Management:** We do not focus on providing clinical services, otherwise we would duplicate services and costs already provided by other traditional players;
- **Self control:** We contribute to patient engagement and behavior change so patients can take control of his/her own health and enhance quality of life.
- **Consistency:** Communication pattern and control.
- **Continuity:** Outcomes and growth history.
- **Coverage:** Having “quantity” is important to provide population impact in all risk levels.
- **Measurable:** If something is worth to be done, it has to be measured.

# Chronic Disease Management Operation

## Operational Principles

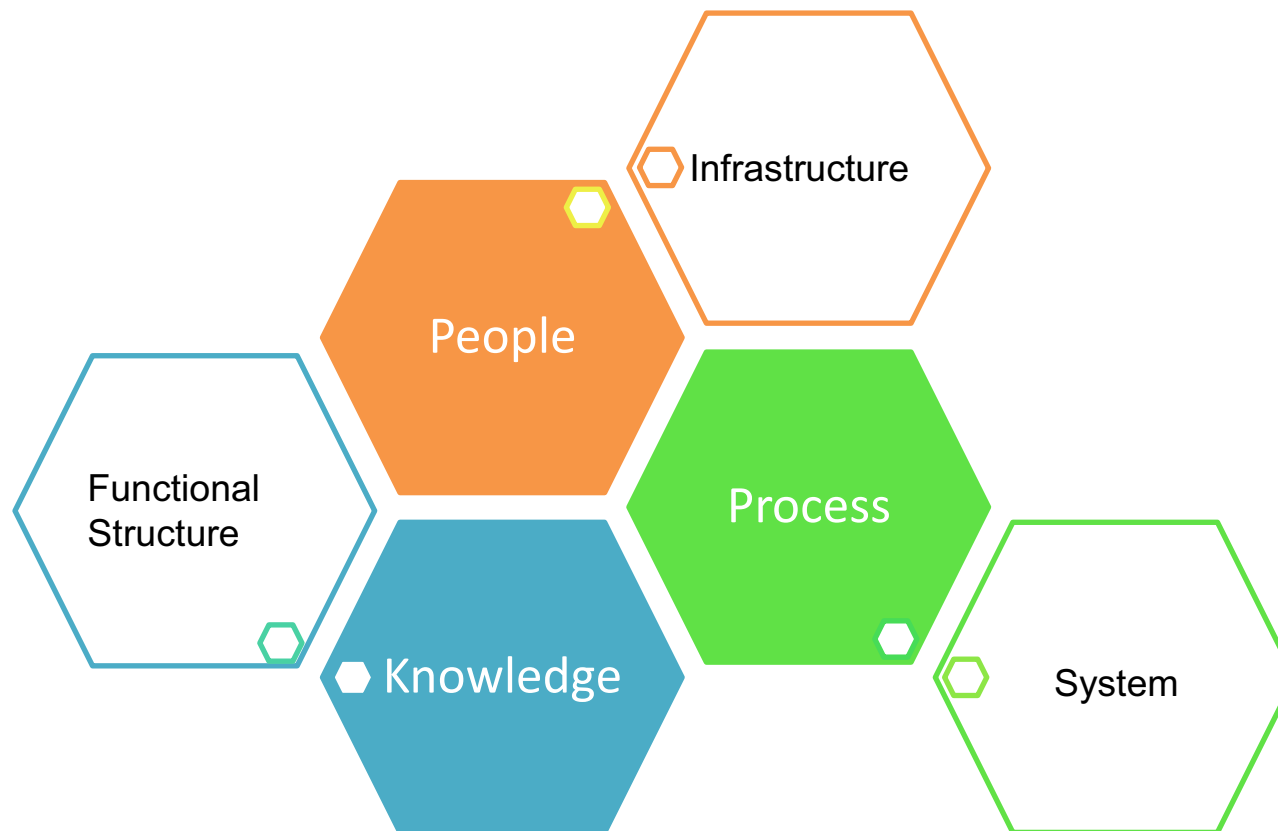
- **Pillars:** We believe in three pillars of operation:



# Chronic Disease Management Operation

## Operational Principles

- **Pillars:** Sustained by three basic foundations:



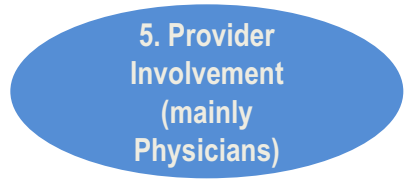
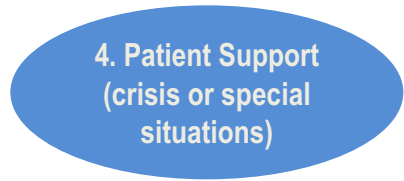
# Chronic Disease Management Operation

## Operational Principles

### Process:

#### 1. Screening and Target Population Identification:

- Data sources Identification (claims, PBM , primary care data, etc.)
- Impact of health plan design on utilization
- Impact of high costs events and outliers analysis
- Provider Network utilization profile



#### 2. Patient evaluation:

- Patient health background
- Habits and Behaviors
- Health self perception
- Current health
- Physician relationship
- Willingness to change
- Prescription adherence
- Household Support

#### 3. Patient Management:

- Operation supported by proprietary DM software (call center, visits, mail,).
- Visits to high risk or low adherence patients
- Health Advisors skilled in behavior change training supported by software features
- Physicians and high skilled specialists (nutritionists, social workers, etc.) act as 2nd level operation support

#### 5. Provider Participation:

- Critical information is available at the right time for the HES\* team
- Health report is periodically sent to the reference physician

#### 6. Results:

- Treatment / medical adherence
- Laboratory exams adherence
- Prescription adherence
- Health Stability
- Health Plan utilization (frequency)
- Regression and ROI analysis



\* HES – Home Emergency Support

# Chronic Disease Management Operation

## Operational Principles – DM program principles

- Members must be evaluated by a HRA
- Every single member has to have a physician with an appointment schedule plan
- In general terms, we have to know:
  - All events of hospitalization and emergency room visit
  - Medications
  - Instability has to be followed or notified at least
  - Allergy and devices
  - Exams results
  - Inadequate behavior
  - Health knowledge (education guidance)
  - Control Measurements (e.g. blood pressure)



# Chronic Disease Management Operation

## Differences



# Chronic Disease Management Operation

## Operational Principles

- **People:** Multidisciplinary team:
  - **Nurses**
  - **Nutritionists**
  - Psychologists
  - **Pharmacists**
  - **Physiotherapist**
  - Physicians
  - Social Workers



- » Health advisors are grouped by 4 professionals with different backgrounds – multidisciplinary teams

# Chronic Disease Management Operation

## Operational Principles

### ▪ **System:**

- Patient centered
- Automation of the following activities:
  - Risk and product determination through individual assessment
  - Customization of resource allocation (appropriate number of calls, mail, visits, etc.)
  - Customization of monitoring plan per member: frequency, importance and actions (involving clinical exams, education, changing behaviors, control of stability signs, physician visits, immunizations)
  - Determination of behavior change phase (Prochaska model)
  - Summary of member contact
  - Alerts (traffic light model) to most common clinical exams

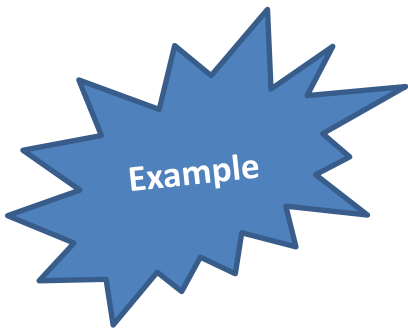
# Chronic Disease Management Operation

Operational Principles - System

## Study Screen

# Chronic Disease Management Operation

## Operational Principles - System



**RESULTADOS**

Tempo no Produto: **14 de 12 meses**

Objetivo do Contato:  
Associado em Melhoria da Condição de Saúde. (Combino marcar consulta com pneumologista (devido a tosse) e otorrinolaringologista (devido voz mais fraca). Continuar preenchendo mapa de PA.. Atualizado em: 04/07/2011 11:36:53 - [REDACTED])

Roteiro do PAR:  
Roteiro: **Resultado esperado: 1.Discorrer sobre a carta "Preparando-se para a consulta" 2.Relacionar com Orientação e Educação e/ou com Tratamento não-Medicamentoso**  
Sucesso: .

- Operacional/ Estabilidade
- Exames
- Médico/ Plano de Consulta
- Medicamentos
- Sinais de Controle
- Tratamento Não Medicamentoso
- Orientação e Educação
- MAPA

---

**CONTATO** | PL SAÚDE | CONTRATO | PRODUTO

Pagante: [REDACTED]  
 Produto: **GDC IDOSO**  
 Telefones:  
 Residencial [REDACTED]  
 Residencial [REDACTED]  
 Horário de Preferência:

**PERFIL**

**Mulher, 88 anos**  
 Estilo Psicológico: **Extrovertido(a) - Otimista**  
 Atividade Profissional: **Aposentado(a)**  
 Estado Civil: **Viuvo(a)**  
 Particularidades / Pontos de Sucesso: **01/07/2010**  
 Religião: **Católica**

**ROTEIRO** | H. LIGAÇÃO | H. VISITA | H. CORRESP.

- 15 Caminhada
- 14 Resultado esperado: 1.Di...
- 13 Preparando-se para consulta
- 12 Resultado esperado: 1.Co...
- 11 Lâmina Exames

---

**RESUMO** | C.SAÚDE | MÉDICO | AVAL. | EVOLUÇÃO

**Resumo Clínico**  
 (04/07/2011 11:36:53) (18/05/2011 11:34:04) Associada portadora de Hipertensão Arterial Sistêmica(HAS) e

**H.FUP'S** | RESPONSÁVEL | SITUAÇÃO | H.TIME | H.A

Tipo	Data	Encerrado
	24/05/2011	

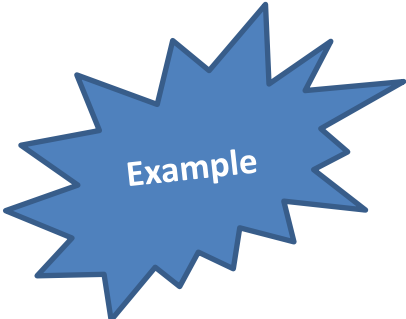
**DADOS** | INTERC. | INTERNAÇÕES | P.S.H.B.

Qtd Contatos Receptivos: **2**  
 Qtd Intercorrências Notificadas: **0**  
 Qtd Internações: **0**

# Chronic Disease Management Operation

## Operational Principles - System

Chart of Evolution – Based on Prochaska Model – Transtheoretical Model of Behavior Change

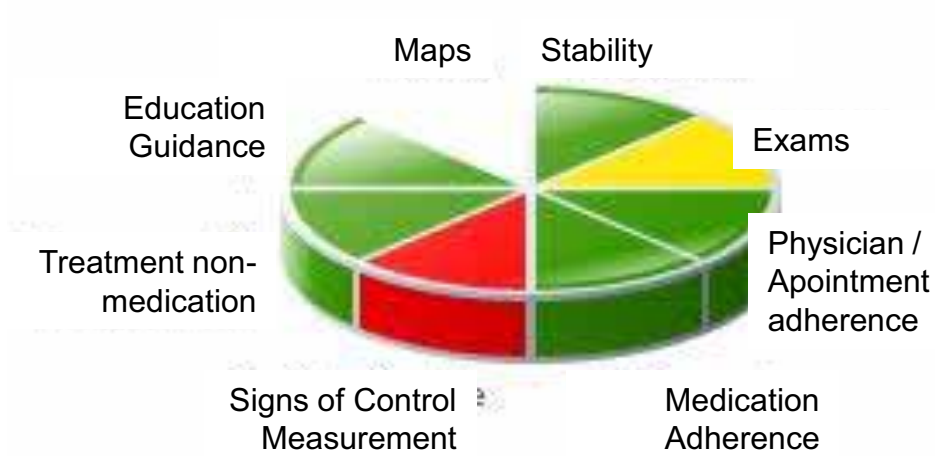
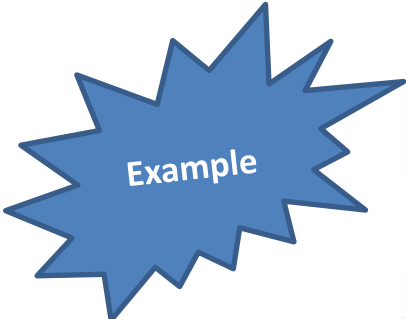


Precontemplation -> Contemplation -> Preparation -> Action ->Maintenance ->Termination

# Chronic Disease Management Operation

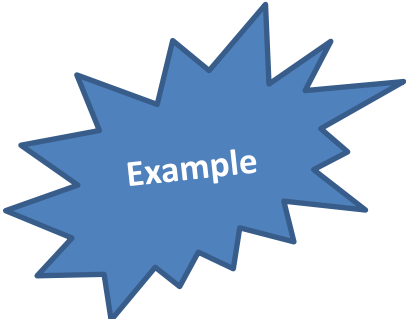
## Operational Principles - System

Control Chart



# Chronic Disease Management Operation

## Operational Principles - System



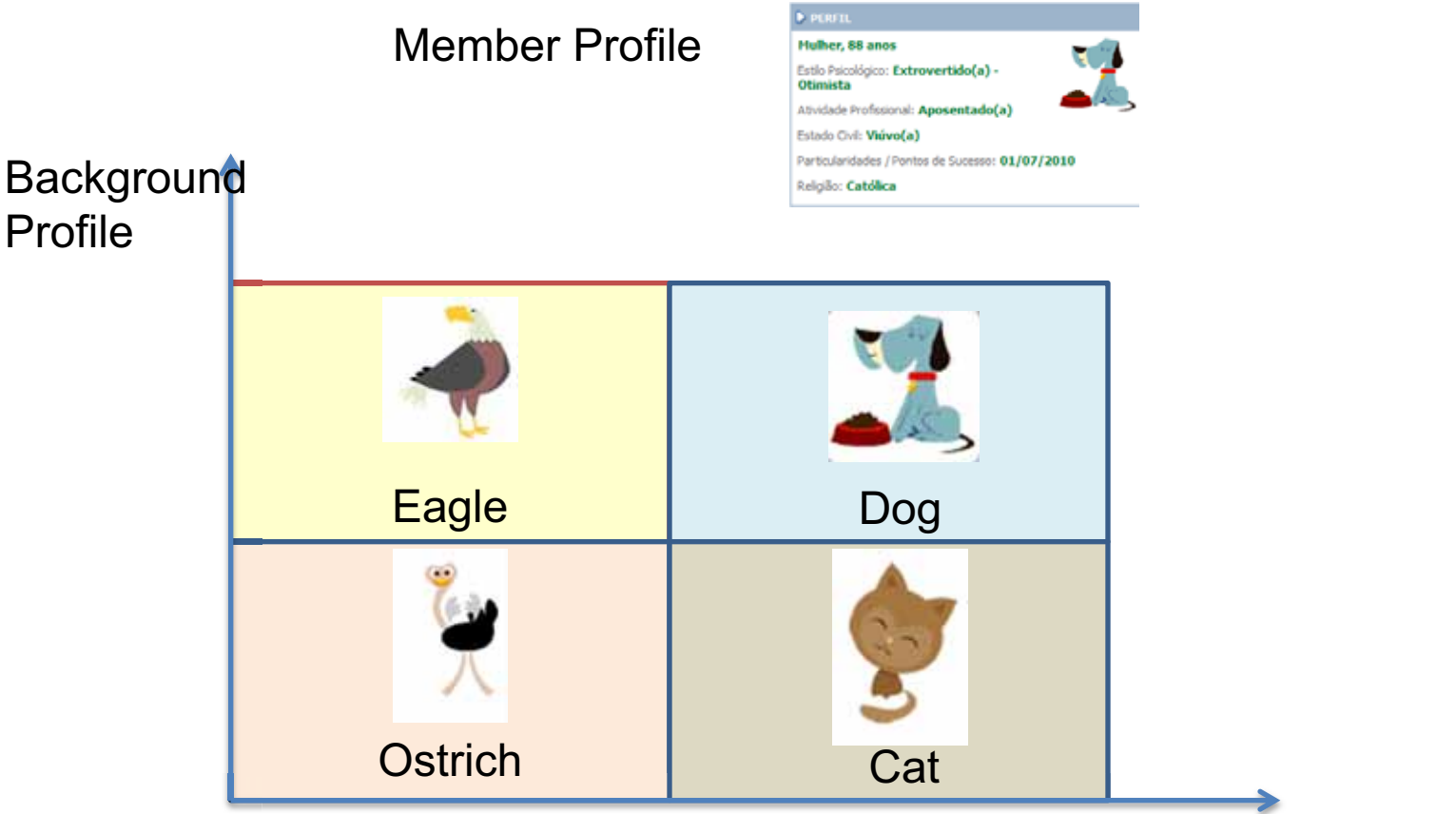
### Execution Measurer



-  Stability
-  Exams
-  Physician / Apointment adherence
-  Medication Adherence
-  Control Measurement
-  Treatment non-medication
-  Education Guidance

# Chronic Disease Management Operation

## Operational Principles - System



PERFIL

Mulher, 88 anos

Estilo Psicológico: **Extrovertido(a) - Otimista**

Atividade Profissional: **Aposentado(a)**

Estado Civil: **Viuvo(a)**

Particularidades / Pontos de Sucesso: **01/07/2010**

Religião: **Católica**



# Chronic Disease Management Operation

Operational Principles - System

## Contact Screen

# Chronic Disease Management Operation

## Operational Principles - System

### Contact Screen

Exams

Nome	Data	Valor	Status	Atualizar em:
Creatinina (Estimativa de Filtração Glomerular: Insuficiência Renal Leve - 84 ml/min)	17/09/2010	0,9 mg/dl	■	09/2011
Glicose em jejum	17/09/2010	99 mg/dl	■	03/2011

Alerts

Nome	Valor Penúltima Medição	Valor Última Medição	Valor Medição Atual	Última Atualização	Status	Atualizar em:
Peso (IMC: 33,4977)	87 kg	87 kg	89 kg	08/04/2011	■	08/2011
Pressão arterial	140x60 mmHg	140x80 mmHg	160x80 mmHg	06/07/2011	■	08/2011

Education Guidance

Nome	Estágio Atual	Tempo no Estágio Atual	SMART	Última atualização:	Atualizar em:
Alimentação com teor reduzido de sal	■	■	Não	09/05/2011	

Nome	Data Início	Última Atualização	Situação	Concluído	Atualizar em:
Alimentação com restrição de sódio	09/05/2011	09/05/2011	Entendeu	Sim	
Auto-Controle	09/06/2011	09/06/2011	Entendeu	Sim	
Hipertensão arterial	23/02/2010	23/02/2010	Entendeu	Não	
Medir pressão arterial	23/02/2010	09/06/2011	Entendeu	Sim	
Situação de instabilidade	19/04/2011	19/04/2011	Entendeu	Sim	



# Chronic Disease Management Operation

## Operational Principles - System



## Changing Behavior



**SMART** to members on preparation or action stage (Prochaska model)

Específico (o que o(a) senhor(a) deseja fazer?):

Atual:

Mensurável (qual a meta para esta mudança?):

Atual:

**Specific**

**Measurable**

**Achievable (Agreed Upon)**

**Realistic**

**Timeframe**

**Brazil in Brief**

**Health Care Industry in Brazil**

**Chronic Disease Management Operation**

**Success Case**

# Sul América: A Unique Kind of Insurance Company...

Ranking as independent pure play Brazilian insurance company — not owned by a bank

**#1**

Strong brand reputation (116 years old)

**116**  
years of history

Network of 30,000 independent brokers — a key advantage






**#1**

Net income growth last 5 years (2006 – 2010)

**40%**  
CAGR

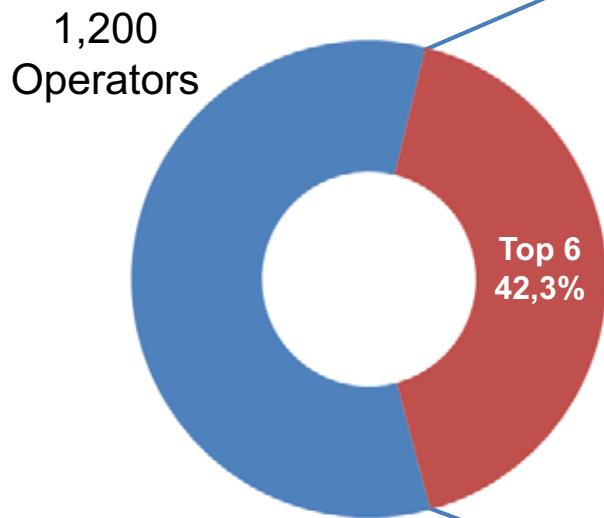


## ...With a Strong, Multiline Growth Platform

Line	% of Total Insurance Premiums*	Positioning
 Health	65.9%	<ul style="list-style-type: none"> <li>• Top 3 in premiums</li> <li>• 2.3M members across the country</li> </ul>
 Auto Insurance	23.8%	<ul style="list-style-type: none"> <li>• 1.5M vehicles insured</li> </ul>
 Other P&C	5.2%	<ul style="list-style-type: none"> <li>• Expertise in commercial and individual lines</li> </ul>
 Life & Pension	5.2%	<ul style="list-style-type: none"> <li>• Advisory and specialization in pension. Differentiated services in life.</li> </ul>
 Asset Management	NA	<ul style="list-style-type: none"> <li>• R\$17.3B AUM, strong institutional focus</li> </ul>

...Ranked number 3 in healthcare market.

### Private Healthcare Breakdown In premiums



### Market Share of Top 6 Operators In premiums

• Amil	12.4%
• Bradesco	11.3%
• <b>SulAmérica</b>	<b>9.4%</b>
• Unimed Rio	3.5%
• Intermédica	2.9%
• Unimed Paulistana	2.8%
	<u>42.3%</u>

# Success Cases

## Program Evolution



### Disease Management Program - About our experience

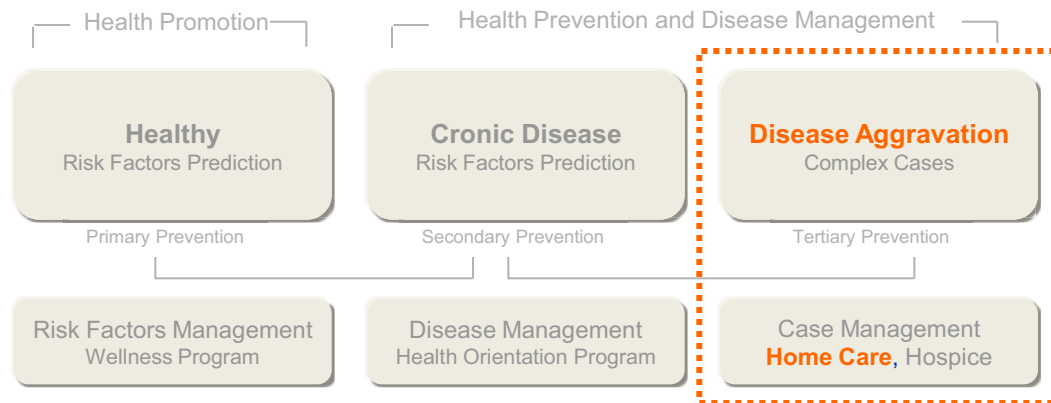
Health Orientation Program - Programa de Orientação à Saúde - POS

# Success Cases

## Program Evolution



- Focus only on Home Care Program.
- Joint venture with Aetna in 1997.
- 1999 - HMO line of business was developed as a pilot for a small Group in south Brasil: Primary Care Physician payed by captation and bonus by performance; prevention based actions; network managed by Medical Director - high quality and restrict network; specialists payed by packed procedure.

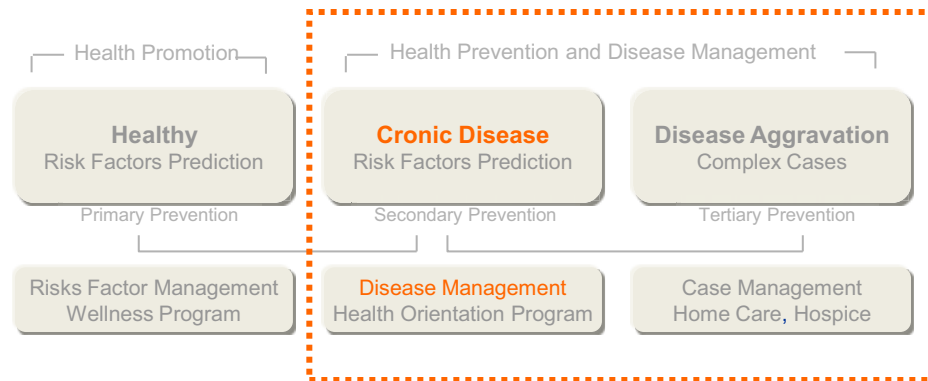


# Success Cases

## Program Evolution



- 2000 - 2002: SulAmérica learning health management tools.
- 2002 - Product development for HMO business - not successful.
  - Immature market - model was not accepted.
  - HMO experience was primarily used to develop some programs for group plans
- 2002 Disease Management Program began for US\$50,000+ members.

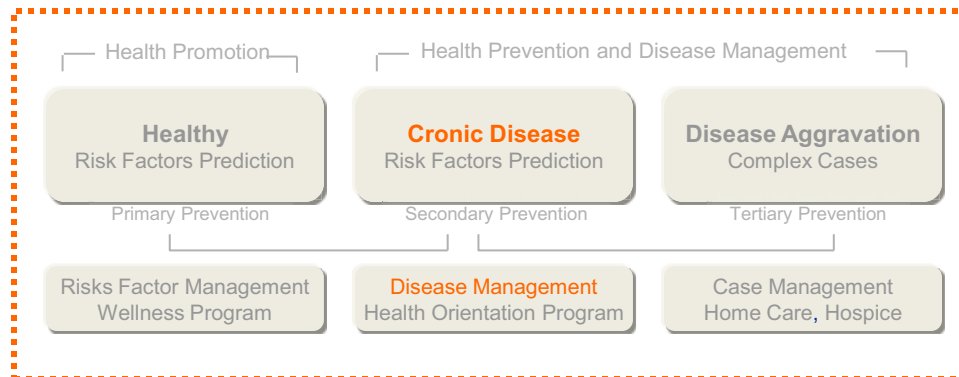


# Success Cases

## Program Evolution



- Improved methodology to find eligible members, providers performance evaluation and results (financial, clinical and customer perception).
- Eligible criteria set by risk profile not by cost limitation.
- Initially operated by non DM focused providers (14 providers nationwide).
- Axismed joined in 2004 - focus on DM.
- 2007 target growth set at 24,000 members, after evaluation by Booz Allen.
- Health Risk Assessment launched (help to identify new eligible cases - low utilization).

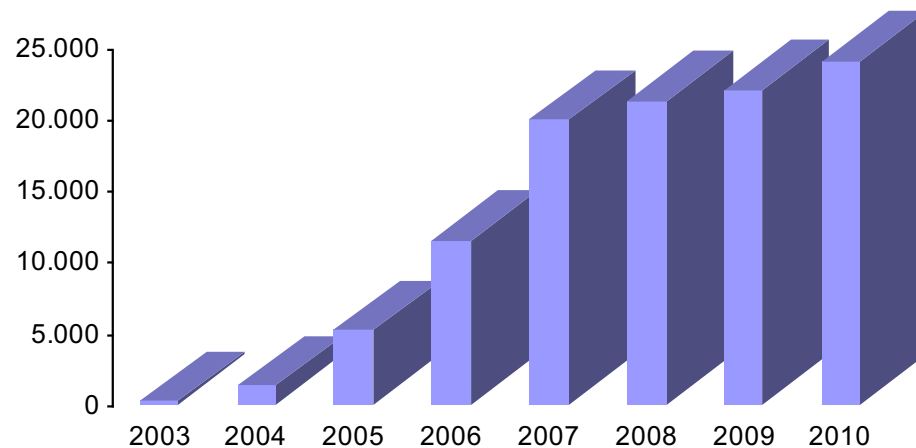


# Success Cases

## Program Evolution



- Accelerated growth.
- Human resources and technology investment (team and system to manage DM program).
- 2008 - RFP: methodology, results, quality, coverage area, structure to receive new cases.
- Axismed was hired among 8 major competitors (providers).



# Success Cases

## Program Evolution



- Axismed received all 22,000 cases in the program after migration process planning.
- ANS (Government Regulatory Agency in Brazil) approved our program.
- New implementation programs: healthy aging program and obesity program.



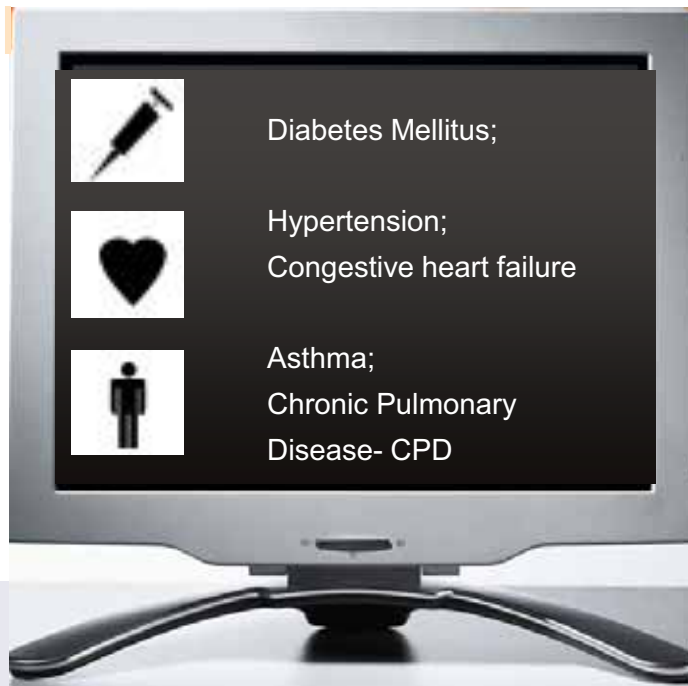
# Success Cases

## Background

Starting date	2002
Covered Area	Brazil (all regions)
Providers	1
% Estimate eligible members	4,6% (75.000 members)
Cost per chronic x population ratio	3,9
Inclusion ratio	24.000 members (active) 43.000 participated
% Inclusion	30%
Disease group distribution	Cardiovascular 75% Diabetes Mellitus (DM) 20% Chronic Pulmonary Disease - CPD 7%
Age and Gender	60% women - average age
Investment	Total SulAmerica - no cost to the customer
Length of time	Continuous support (change of level)

# Success Cases

## Eligible Cases - Enrollment



- Screening - medical algorithms (>90%)
- Medical referral.
- PBM (medicine used).
- Health Risk Assessment (Framingham).
- Self-application.

# Success Cases

## Service Level Agreement - SLA

Process	Quality indicators
Incoming	Period for inclusion Inclusion rate
Maintenance	Desistance rate Non acceptance - excluded by sulamerica
Clinical adherence Rate	to the medical recommendations to medicine used to clinical tests
Financial Aspects	Cost results Frequency of utilization (Inpatient and ER)
Management	Reports deadlines Quality of information
Client feedback rates	Acceptance (Good performance) Rejection (Poor performance) Complaint

# Success Cases

## Results

### Health Cost



Statistical analysis comparing costs between Members X Control Group (previous homogeneity test for the groups).

**Results: 15% better on Participant Group**

### Frequency Utilization



Groups	Control	Participant
Inpatient Daily	+ 29,5%	- 31,1%
ER	+ 4,2%	- 0,5%

### Health conditions



Stabilized in the normal classification

Blood Pressure	<b>64,5%</b>
Glycemia	<b>80%</b>
BMI	<b>80,6%</b>
Cholesterol	<b>91%</b>
Triglycerides	<b>91,9%</b>

### Client Perception

Quality research



**83% changed their lifestyle**

by following the guidelines offered in the program.

**94% consider the program as better than expected".**

# Success Case

## Determinantes of success



- Nationwide coverage.
- Clear goals.
- Successful partnership
- Clear methodology for monitoring and evaluation.
- Long-term planning and persistence.
- Based on scientific evidence.
- Healthcare skilled personnel.
- Diversity and cultural adaptation.
- Cost effective.
- Primary focus on the individual.

# Success Case

...next steps



- Expand targeted diseases.
- Expansion to elderly members.
- Improve analytical methodology for results.
- Improve lifestyle change methodology .
- Improve Health Risk Assessment and Health Promotion Programs.
- Improve information exchange: company, market and medical community.

# An Innovative Approach to Care Across the Continuum in Brazil



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# Appendix

## Additional Case

# Success Cases

## Background

- Health Plan (Self-Managed) – Company founded to offer pension fund and health plan to retired and respective families of former employees of Telecom companies (before brazilian privatization wave on 90's).
- 45.000 members
- Age of 54 years on average
- New members are not permitted
- Challenges pointed by customer:
  - Predefined outcomes measurement methodology
  - Based on member participation with high satisfaction
  - National cover with remote interventions
  - Goals and measurement to all dimensions: clinical, operational, financial and quality (satisfaction)

# Success Cases

## Program Evolution

### ▪ Enrollment

- Population enrolled had an average age of 67 years old;
- 89% had 2 or more chronic diseases;
- 59% had 5 prescribed medications and 34% had more than 7 prescribed medication per day and
- 60% had no defined physician in the beginning of monitoring

# Success Cases

## Program Evolution

### ▪ Financial Results

- Program generated savings of:
  - 23,75% compared to pre-program costs and
  - 28% compared to control group
- Nurseline call center has solved 75% of total calls avoiding costs to Health plan, as following:
  - 64% by phone
  - 11% ICU ambulance service at patient home

# Success Cases

## Program Evolution

### ▪ Clinical Results

- Significant improvement on self-control:
- 99% of the members with high blood pressure adhered blood pressure control;
- 89% of diabetics members adhered blood glucose control;
  - 44% of diabetics that had shown not normal fasting glucose have improved results
  - 26% of diabetics that had shown not normal HbA1c have improved results
- 52% of members who had shown abnormal cholesterol levels, have improved levels
- 56% of members who had shown triglyceride levels out of normal range have improved levels.
- 19% of members who were overweight have lost weight
- Decreased by 30% emergency room visits in members with chronic respiratory disease;
- 94% of participants adhered a physician and its appointment plan as well.

# Success Cases

## Program Evolution

### ▪ Clinical Results

- Percentage of members with Hypertension that improved results:
  - 46% - Limitrophe Hypertension (130-139/85-89 mm Hg)
  - 65% - Hypertension stage I (140-159/90-99 mm Hg)
  - 91% - Hypertension stage II (160-179/100-109 mm Hg)
  - 100% - Hypertension stage III (at or greater than 180/110 mm Hg)

# Success Cases

## Program Evolution

- **Customer feedback**

- The success of this program is **formally recognized by customer:**

“evaluating the program allowed the verification of its efficiency in terms of members’ quality of life and financial return, with results higher than our expectations”.

- **Member Survey**

- **95%** of total members considered the **program** good/very good
  - **99%** of total members considered **health advisor** good/very good professional
  - **97%** of total members would **indicate** the program to a friend or relative