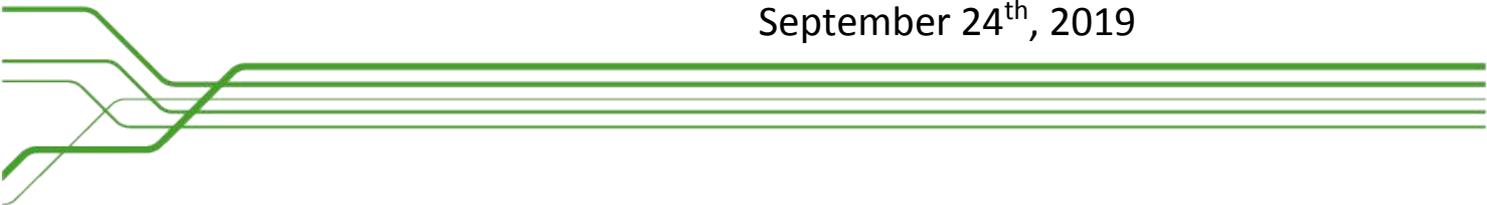




2º SEMINÁRIO INTERNACIONAL SESI DE SAÚDE SUPLEMENTAR

A Jornada de Saúde Baseada em Valor - experiência de inovação em Porto Rico: Transição a um sistema de saúde baseado em valor

Luis Pérez Moreno, MD, MPH, MHSA
Clinical Epidemiologist
CEO, **FARO LLC** | health strategists
September 24th, 2019



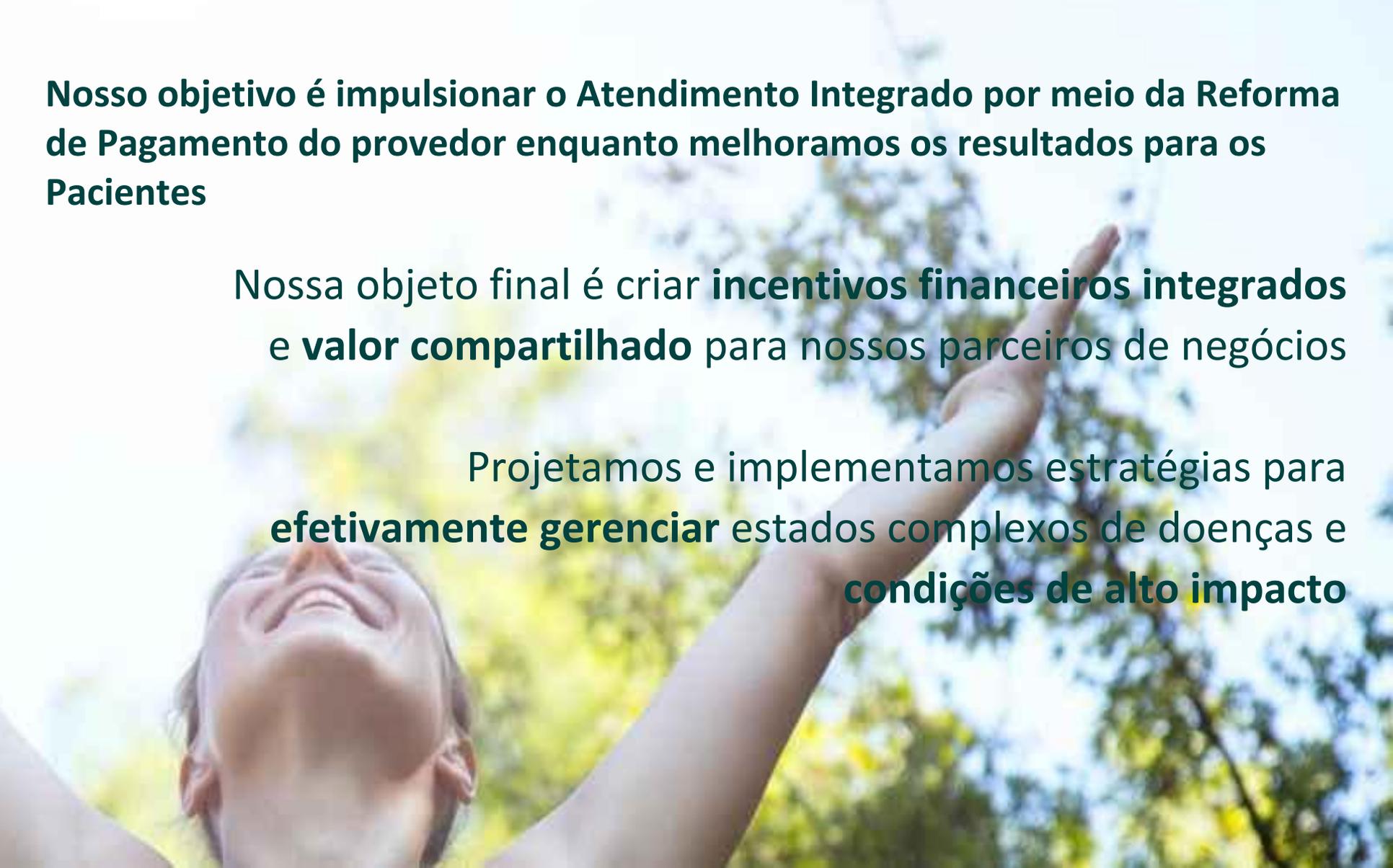
Serviço Social da Indústria
PELO FUTURO DO TRABALHO

At FARO , we
connect the
dots
between
clinical and
financial ROI

FARO is a healthcare management advisory firm that designs and implements strategies to effectively manage complex disease states and high impact conditions as well as to control Specialty medications cost trend

Our goal is to optimize the use of available financial resources, drive sustainable access, and leverage evidence-based care

Our endgame is to create aligned financial incentives and shared value for all our business partners



Nosso objetivo é impulsionar o Atendimento Integrado por meio da Reforma de Pagamento do provedor enquanto melhoramos os resultados para os Pacientes

Nossa objeto final é criar **incentivos financeiros integrados** e **valor compartilhado** para nossos parceiros de negócios

Projetamos e implementamos estratégias para **efetivamente gerenciar** estados complexos de doenças e **condições de alto impacto**

Proposed Agenda:

- **Observações iniciais**
 - **Puerto Rico**
 - ✓ Recessão econômica e falência, mudança demográfica e furacão Maria
 - **Obamacare e o modelo do Presidente Trump (*Blueprint*)**
 - ✓ The Triple AIM
 - ✓ A pressão de Trump para diminuir os custos com medicamentos
 - **Sustentabilidade na Saúde**
 - ✓ Modelos de Inovação de Estado
 - Desafios e Aprendizados
 - **Progresso!: “Luz no fim do túnel...”**
 - ✓ Projetos bem-sucedidos baseados em valor
 - **Por onde começar?**
 - ✓ Conjunto de Dados com Base em Valor do *The Economist*
 - **Próximos passos**
- 



Política

- Território não incorporado dos EUA sob os poderes do Congresso dos EUA.
- 3 partidos políticos ideológicos - Estado pró-Estado atualmente no poder desde 2016.
- País dividido em relação ao futuro do status político de Porto Rico.

Economia

- Recessão econômica desde 2006. Dívida de USD +124.000 milhões.
- + Economia de US \$ 104 bilhões; severamente impactada pelo furacão Maria em 2017 (US \$ 43.000 milhões).
- O Congresso americano aprovou a lei "PROMESA" para garantir o retorno de Porto Rico aos mercados de dívida e uma "estada legal" em litígios iminentes.

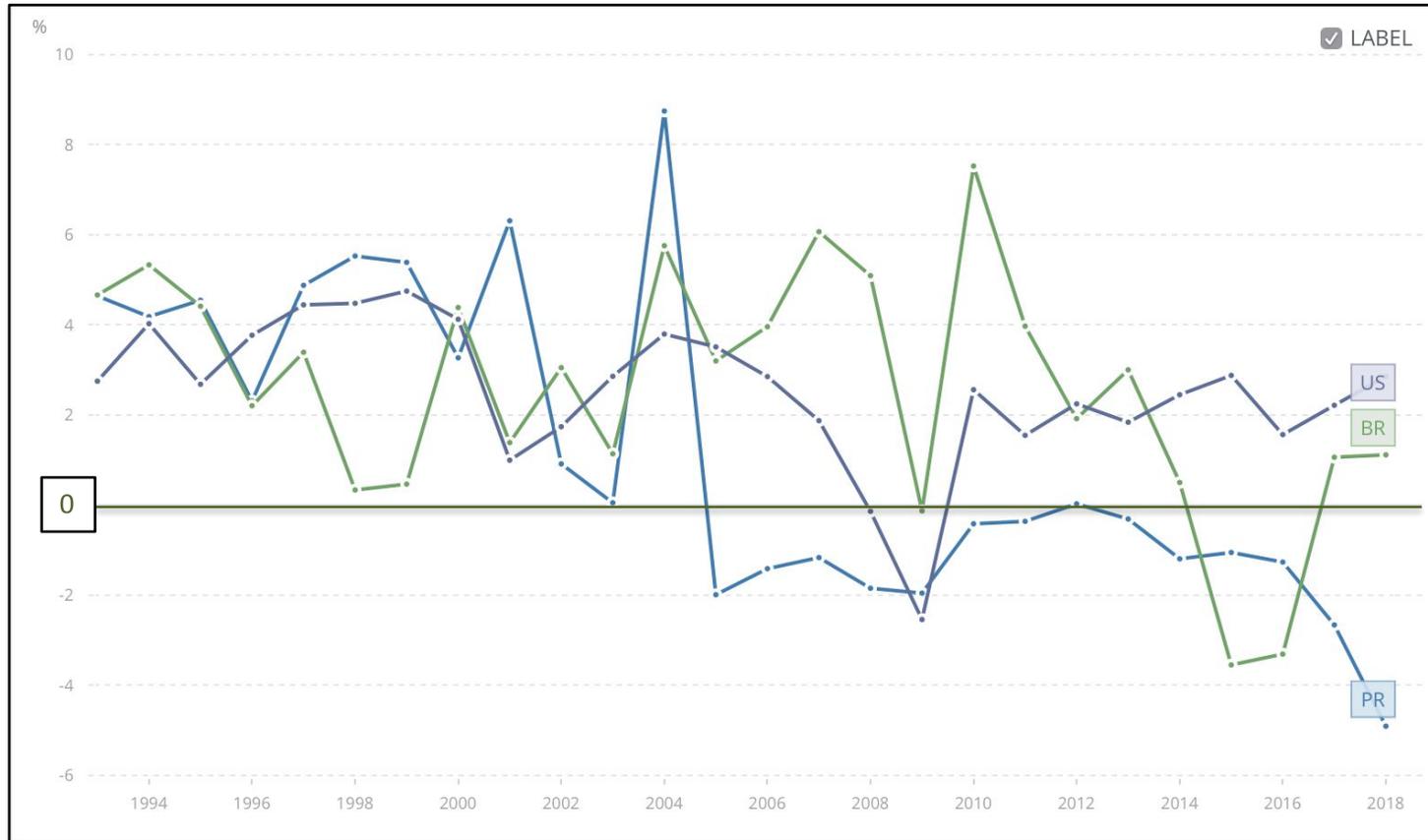
Demografia

- Idade média = 42.6 anos
- Migração líquida de 65 mil anualmente ao longo da última década para os EUA
- Perdeu 9% de população entre setembro de 2017 e dezembro de 2018.
- Taxa de natalidade extremamente baixa; as mortes superam os nascimentos.

Mercado de Saúde

- Despesa total em saúde = US \$ 12.000 milhões (Mercado de Farmácia = US \$ 3.800 milhões)
- Jurisdição regulamentada pela FDA dos EUA
- Segue a estrutura reguladora de saúde dos EUA
- Profissionais médicos treinados sob creditação e regulamentos dos EUA - alta migração de médicos para os EUA

Perfil Econômico: Crescimento do PIB (%)



H. R. 4900

To establish an Oversight Board to assist the Government of Puerto Rico, including instrumentalities, in managing its public finances, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

APRIL 12, 2016

Mr. DUFFY introduced the following bill; which was referred to the Committee on Natural Resources, and in addition to the Committees on the Judiciary and Education and the Workforce, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To establish an Oversight Board to assist the Government of Puerto Rico, including instrumentalities, in managing its public finances, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

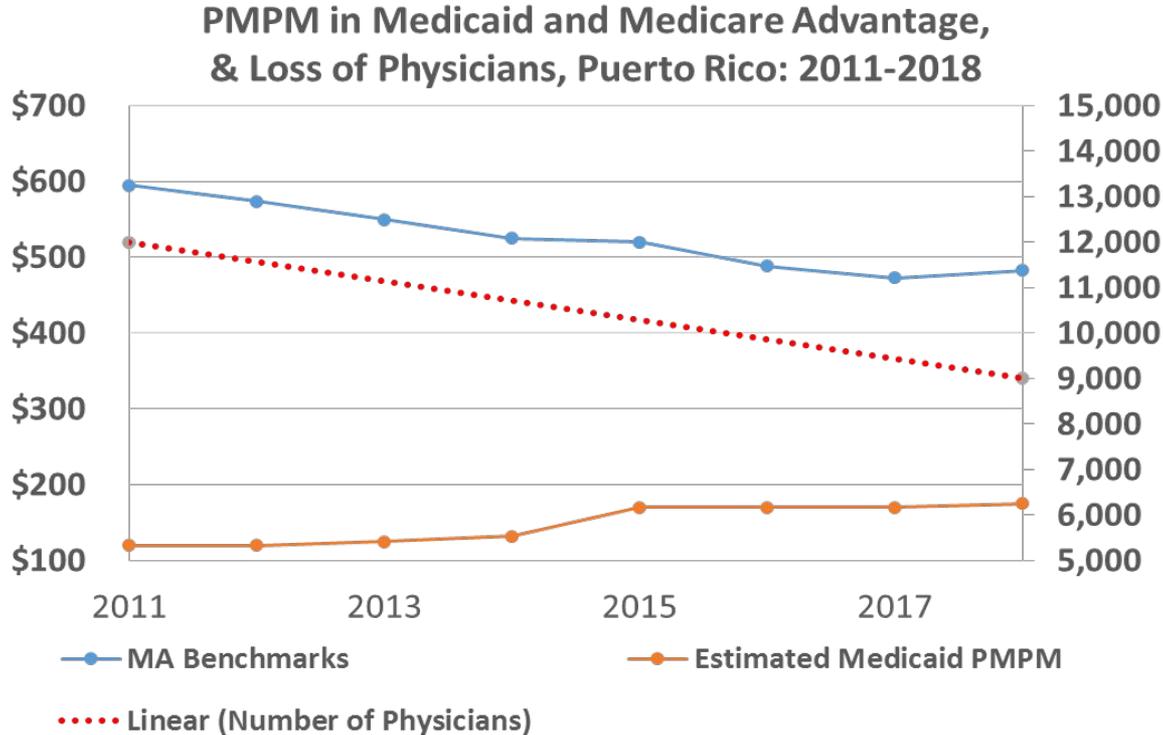
4 (a) SHORT TITLE.—This Act may be cited as the
5 “Puerto Rico Oversight, Management, and Economic Sta-
6 bility Act” or “PROMESA”.

7 (b) TABLE OF CONTENTS.—The table of contents of
8 this Act is as follows:

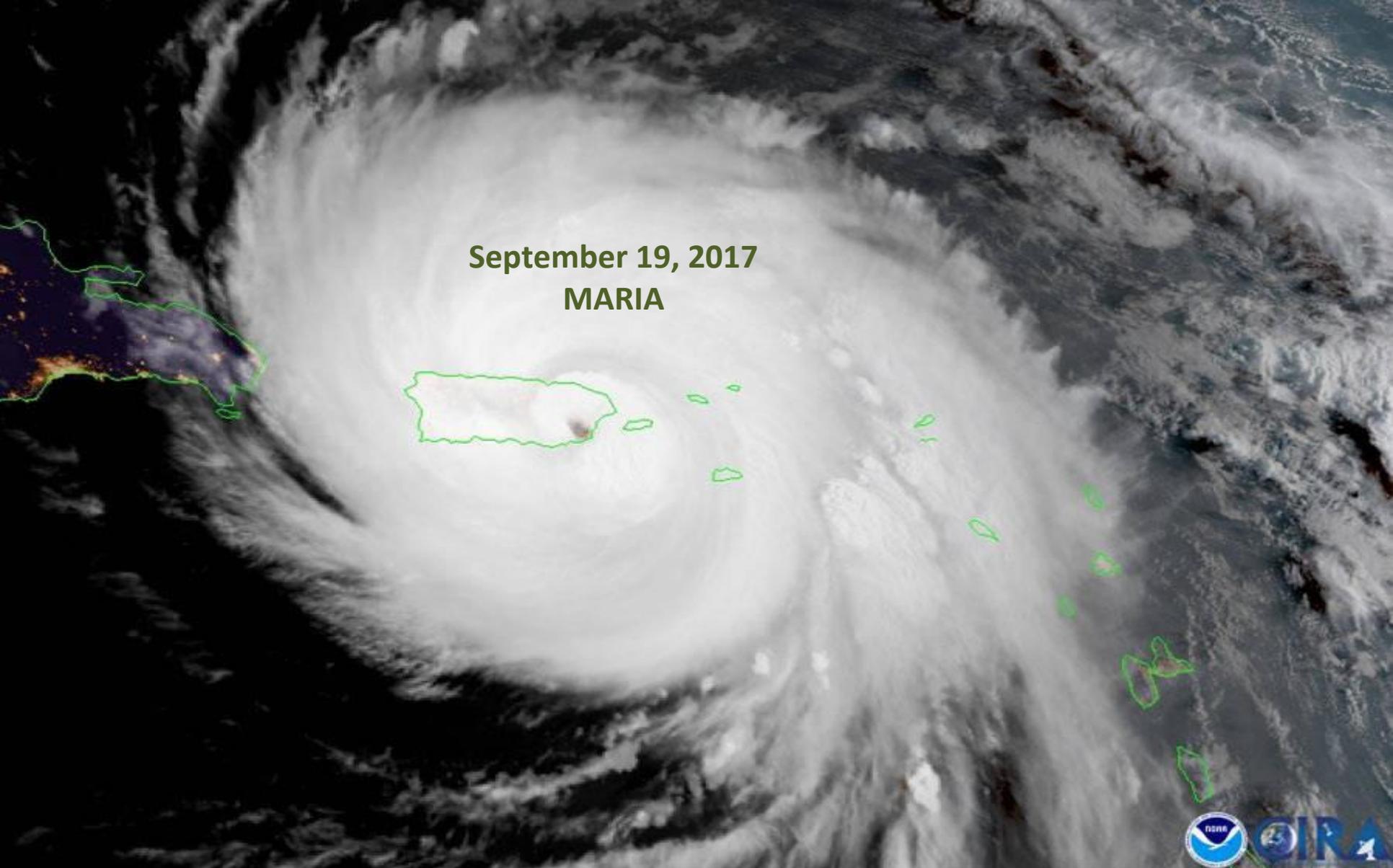
Falência Territorial: Lei “PROMESA”



Migração de Médicos Diretamente Relacionada a Reduções em seu Reembolso

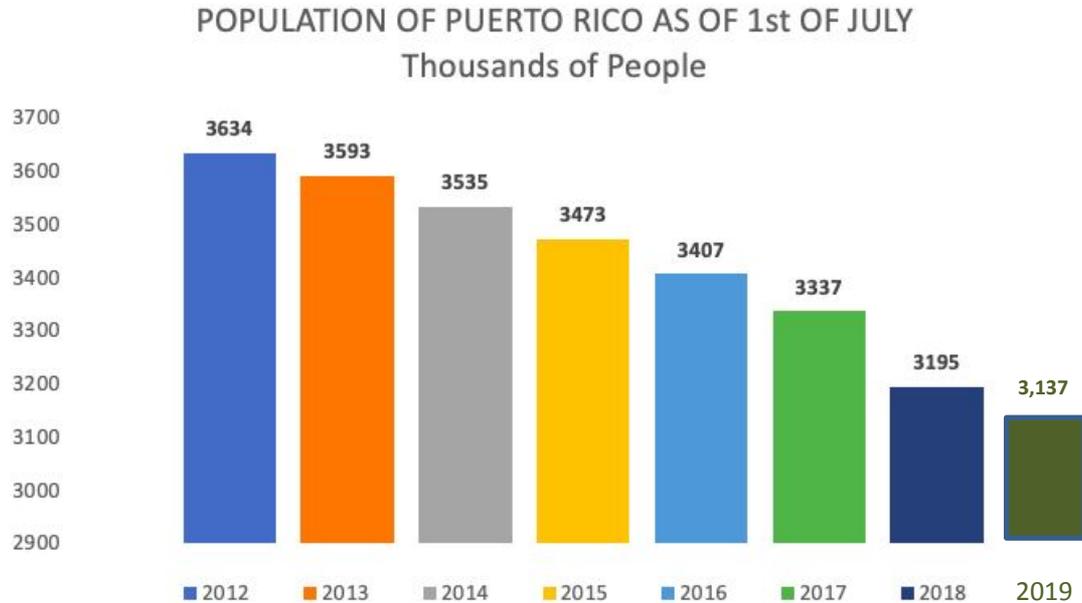


September 19, 2017
MARIA



Perda de População em Porto Rico nos Últimos Anos

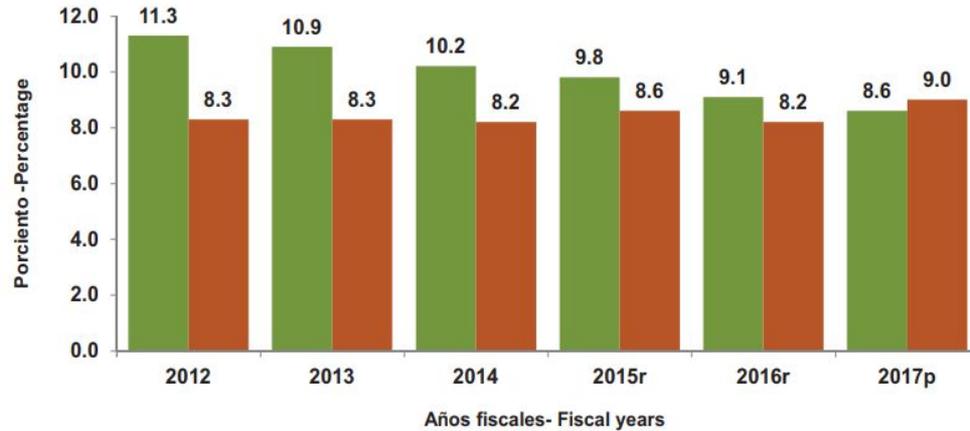
-Perda de 6% da população após o furacão Maria em 2017-



Source: U.S. Bureau of the Census, Population Division; Puerto Rico Planning Board, Office of the Census.

Porto Rico já Iniciou sua Mudança Demográfica

BIRTH AND DEATH PER 1,000 POPULATION



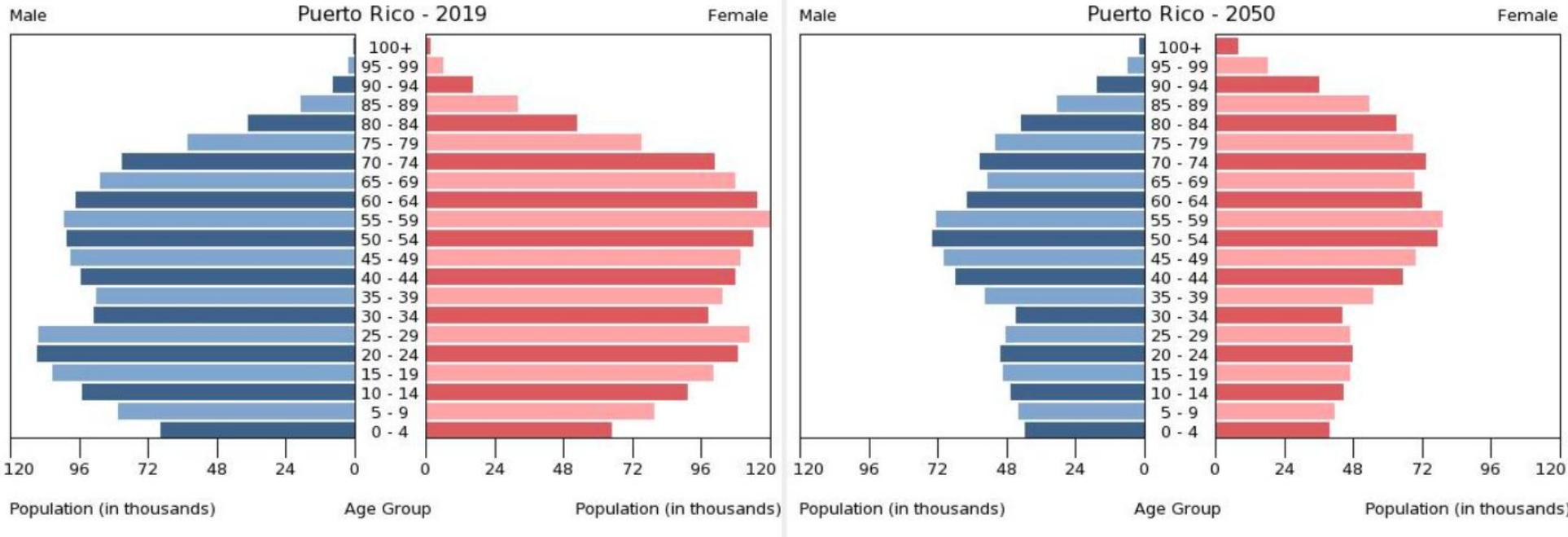
r- Cifras revisadas.
r- Revised figures.

p- Cifras preliminares.
p- Preliminary figures.

■ NATALIDAD: BIRTH RATE
■ MORTALIDAD: DEATH RATE

Source: Puerto Rico Planning Board, Program of Economic and Social Planning, Subprogram of Economic Analysis.

Idade Média em Porto Rico = 43 anos



Source: U.S. Census Bureau, International Data Base, Demographic Overview (Puerto Rico).

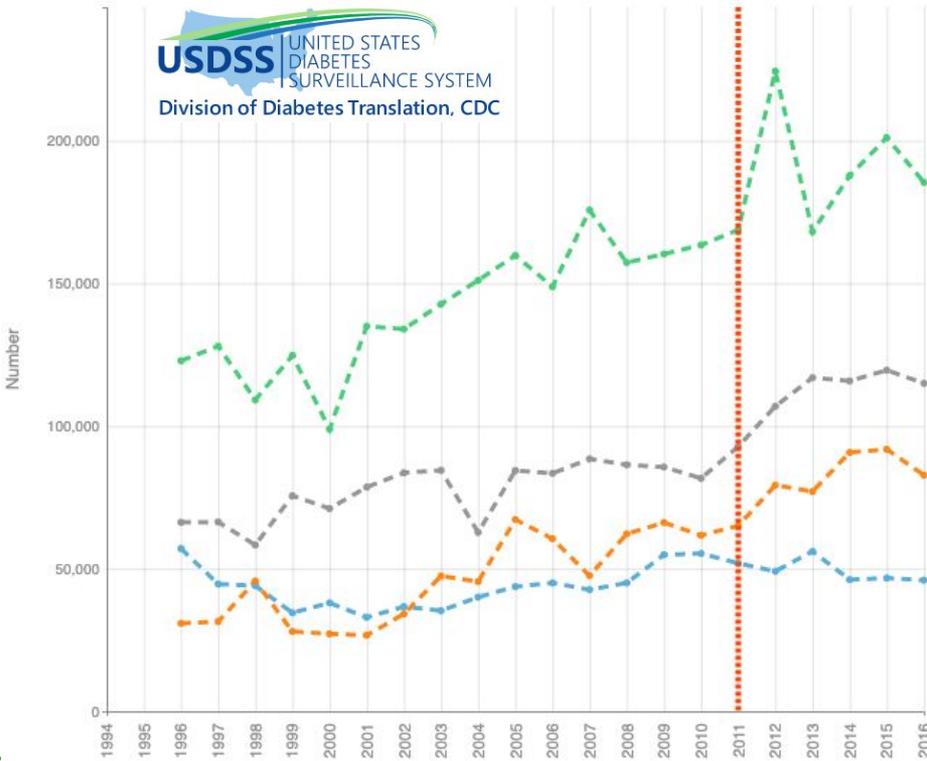
Causes of death	Sept./ Oct. 2015	Sept./ Oct. 2016	Sept./ Oct. 2017	Pct. change
Essential hypertension and hypertensive renal disease	88	84	134	+56
Sepsis	138	117	197	+55
Suicide	31	35	49	+48
Alzheimer's and Parkinson's Diseases	370	343	524	+47
Diabetes	441	473	666	+46
Chronic Lower Respiratory Diseases	143	175	225	+42

The New York Times | Source: Demographic Registry of Puerto Rico, Health Department of Puerto Rico (causes of death as of May 31) | Note: Percentage change is the number of deaths in September and October 2017 compared with the average of the number of deaths in the same months in 2015 and 2016.

Diagnosed Diabetes,
 ■ 18-44 ■ 45-64 ■ 65-74 ■ 75+



USDSS UNITED STATES
 DIABETES
 SURVEILLANCE SYSTEM
 Division of Diabetes Translation, CDC

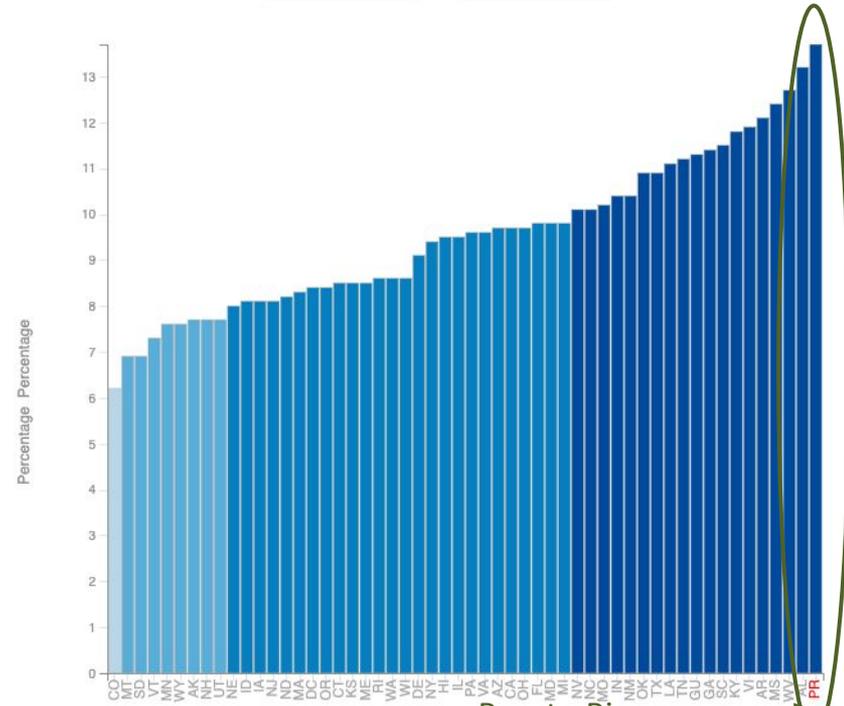


Diagnosed Diabetes,
 Total, Adults with Diabetes, Age-Adjusted Percentage, Natural Breaks, All States, 2016

Clear Selections

Map Bar Table

Sort by Name Sort by Value



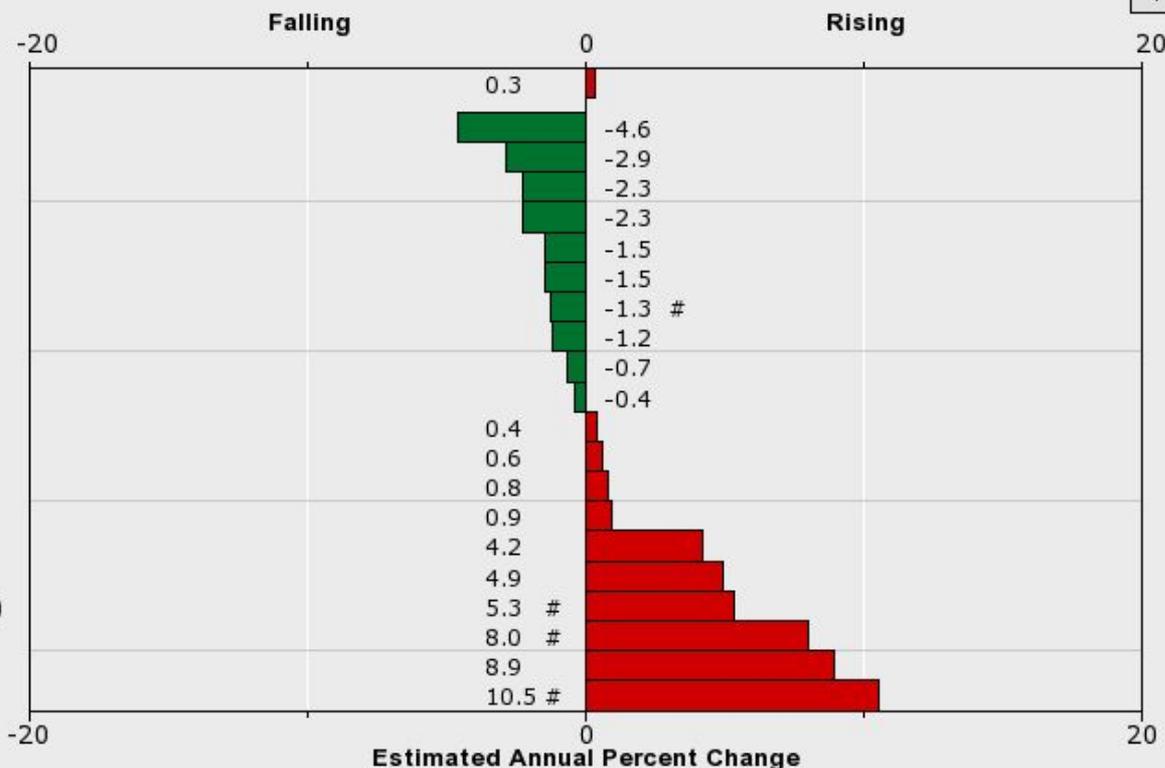
Puerto Rico

5-Year Rate Changes - Incidence
Puerto Rico, 2011-2015
All Ages, Both Sexes, All Races (incl Hisp)



All Cancer Sites

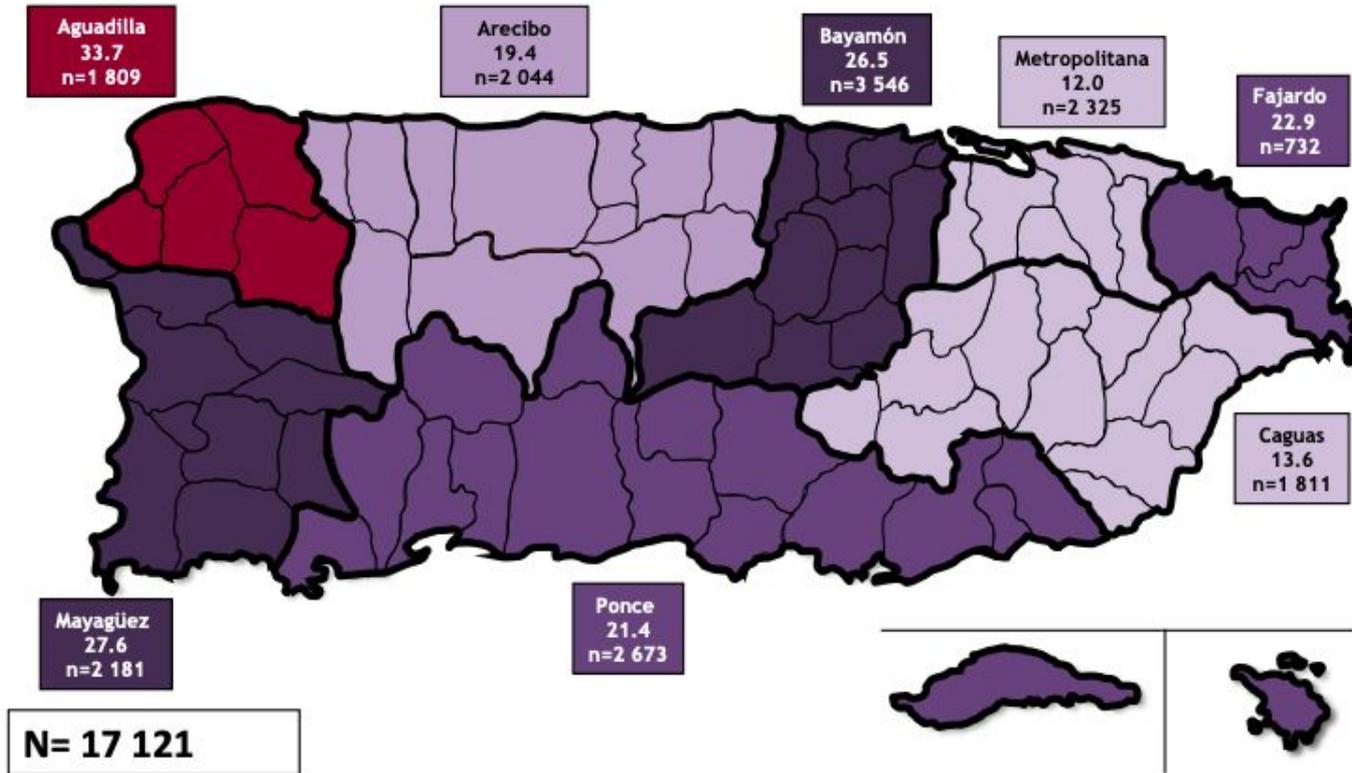
- Esophagus
- Brain & ONS
- Ovary (Female)
- Prostate (Male)
- Bladder
- Stomach
- Colon & Rectum
- Lung & Bronchus
- Breast (Female)
- Liver & Bile Duct
- Oral Cavity & Pharynx
- Non-Hodgkin Lymphoma
- Pancreas
- Cervix (Female)
- Leukemia
- Kidney & Renal Pelvis
- Uterus (Corp/Uterus NOS) (Fem)
- Breast (in situ) (Female)
- Melanoma of the Skin
- Thyroid



Created by statecancerprofiles.cancer.gov on 05/28/2019 2:09 pm.

Taxas de Alzheimer por Região

(Por 1,000 pessoas com 60 anos ou mais)

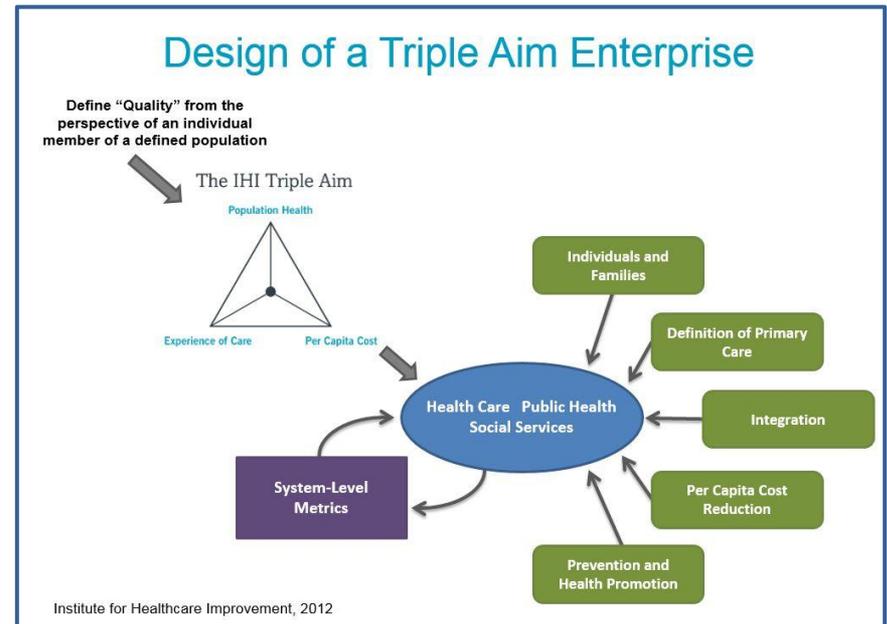


“Affordable Care Act” e o Triple AIM

-Acelerando Adoção de Cuidados Baseados em Valor-

Triplo AIM:

- Melhorando a *experiência*
- Melhorando a *saúde*
- *Diminuindo custos per capita*



Trumpcare & Valor Baseado em Preços

Se afasta de um modelo de precificação de medicamentos que vincula a receita de vendas ao volume e explora o pagamento de medicamentos prescritos com base em sua eficácia.

Opções:

1. “Preços baseados em resultados”
2. “Preços baseados em indicação”

American Patients First

The Trump Administration Blueprint to Lower Drug Prices and Reduce Out-of-Pocket Costs

MAY 2018

Dores de Crescimento!

SAÚDE SUSTENTÁVEL

INICIATIVA EM PORTO RICO



Modelo de Atendimento Centrado no Paciente para Diabetes

O Modelo foca na Coordenação da Atenção Primária, no Acompanhamento dos Cuidados ao longo do tempo e em seus diferentes contextos

O modelo de gestão para diabetes tipo 2 deve conter 6 padrões e 25 elementos do atendimento de qualidade:

- Aprimorar o acesso e a continuidade
- Cuidados com a equipe
- Gestão da Saúde da População
- Planejar e gerenciar cuidados
 - Planejamento de cuidados e suporte ao autocuidado
 - Gerenciamento de terapia medicamentosa
- Acompanhar e coordenar cuidados
 - Acompanhamento de testes e Follow Up
 - Coordenar as transições de atendimento
- Medir e Melhorar o desempenho
 - O objetivo é o controle da condição do paciente (por exemplo, A1c)
 - Use a tecnologia Certified EHR (ou seja, informações "Push" e "Pull") de e para PCPs (e outras partes interessadas)
 - Relatar o desempenho a todas as partes interessadas

NCQA Standards

Reduzir a Morbidade e a Mortalidade

Centrado no Paciente	Trate para controlar
Integração Tecnológica	Coordenação do atendimento

O PCP coordena uma equipe multidisciplinar que acompanha os cuidados ao longo do tempo e entre locais, inclusive com outros profissionais e especialistas

Cada membro da equipe de atendimento trabalha com a mais alta capacidade

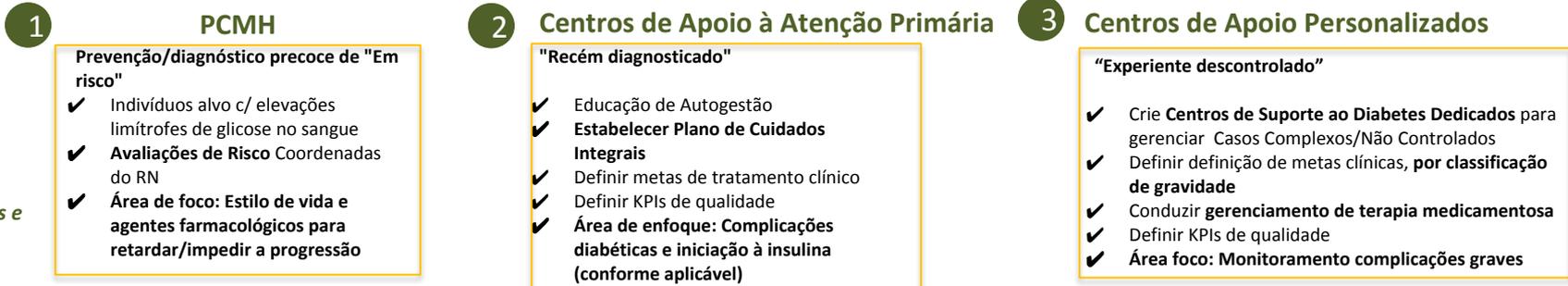
Plano de assistência no centro das atividades: o atendimento é organizado de acordo com as necessidades do paciente

Pacientes são atores ativos no seu próprio cuidado

Intervenção Direcionada: Controle da condição do paciente e prevenção de complicações

Plano Tático de Educação em Saúde: Educação em Gerenciamento Clínico PCP, Componente de Autogestão do Paciente e Educação focada em "Train the Trainer"

População-Alvo e Estratégias Preventivas:



Diagnóstico padronizado, codificação de procedimentos, definições, protocolos clínicos e métricas de resultados



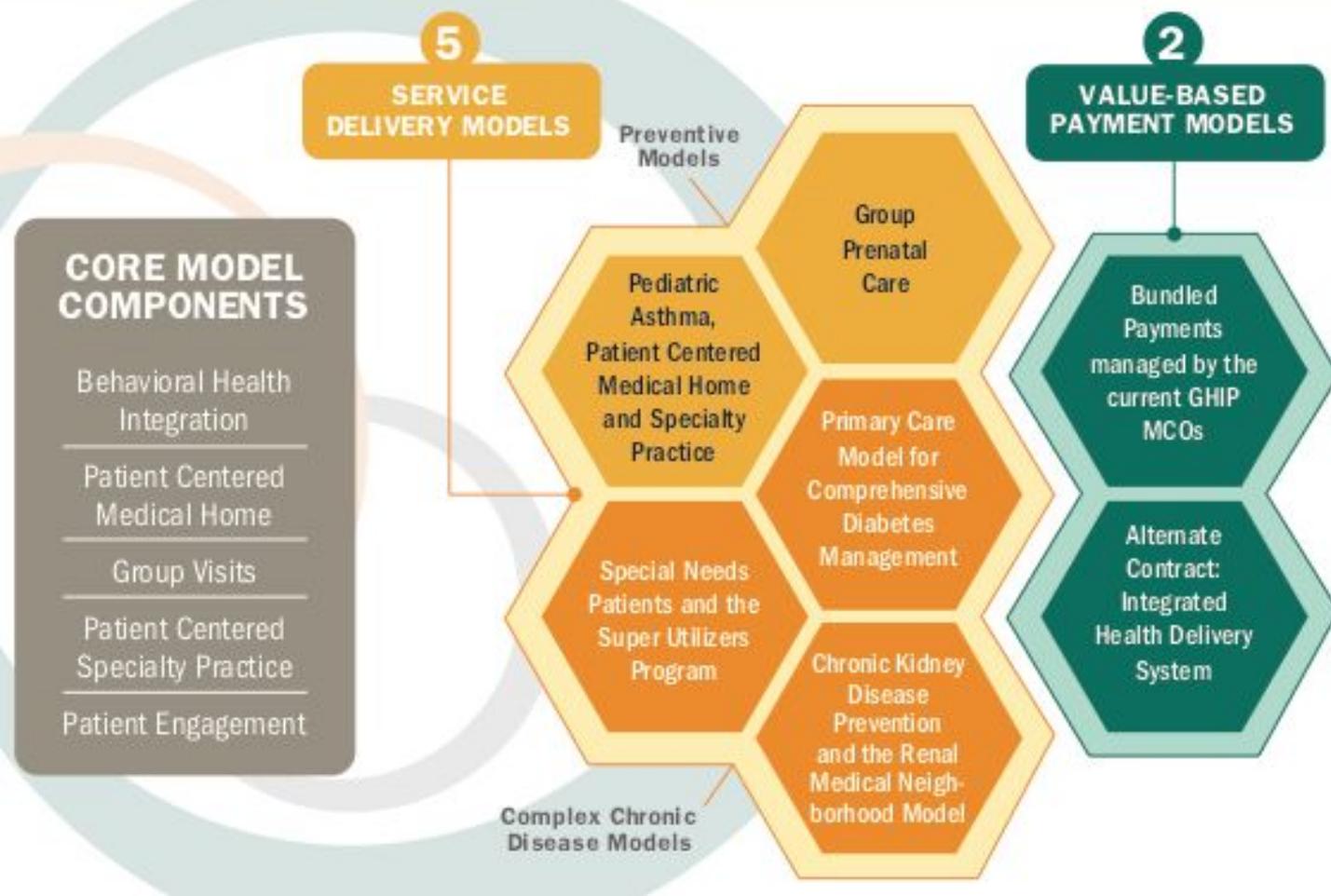
AIM Transform delivery and management of health care services in Puerto Rico by testing innovative care models of prevention and management of high costs, complex-need populations.

BETTER HEALTH | BETTER CARE | LOWER COSTS

EXPECTED OUTCOMES

- **Reduced incidence of type 2 diabetes**
- **Increased access to behavioral health**
- **Reduced low weight births**
- **Reduced pediatric asthma hospitalizations**
- **Reduced avoidable emergency room visits and hospitalizations**
- **Achieved savings from improvement in the population's health**

PROPOSED TESTING MODELS



SIM INVESTMENTS WILL ENABLE:

- 10 Group Prenatal Care Practices serving 5,000 women
- 10 Pediatric Asthma Patient Centered Medical Home and Specialty Practices serving 50,000 children
- 10 Primary Care Model for Comprehensive Diabetes Management Practices serving 10,000 diabetic patients
- 10 Chronic Kidney Disease Prevention Practices serving 10,000 CKD patients
- 10 Special Needs Patients and Super Utilizer Program Practices serving 10,000 high needs patients
- 3 provider led Integrated Health Delivery Systems serving 30,000 patients

ESTIMATED SAVINGS

\$95M

MILLION FROM TESTING ACTIVITIES

BUILDING BLOCKS

WORKFORCE DEVELOPMENT



STAKEHOLDER ENGAGEMENT



HEALTH INFORMATION TECHNOLOGY INFRASTRUCTURE

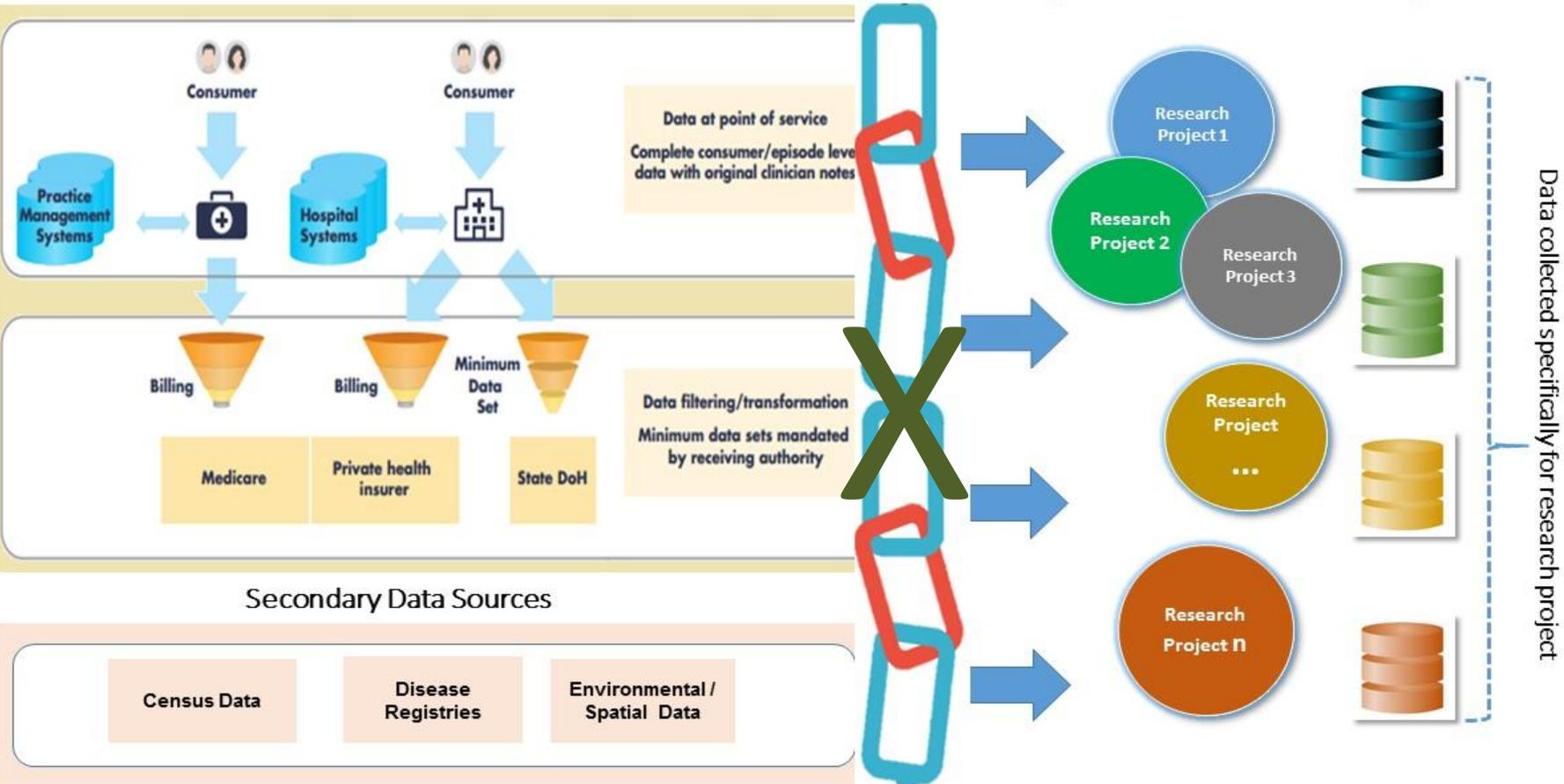
Establish HIT/HIE Governance and Roadmap that leverage federal investments to establish:

1. Encounter notification
2. Medication Adherence Tracking
3. Master Patient Index
4. Healthcare Provider Directory
5. Public Health Registries
6. Core Quality Metrics
7. Summary of Care Exchanges
8. Care Management Solutions
9. Population Health Analytics
10. Enable Value Based Payment

Key Take Away: não tínhamos Governança HIT/protocolos para compartilhamento de dados

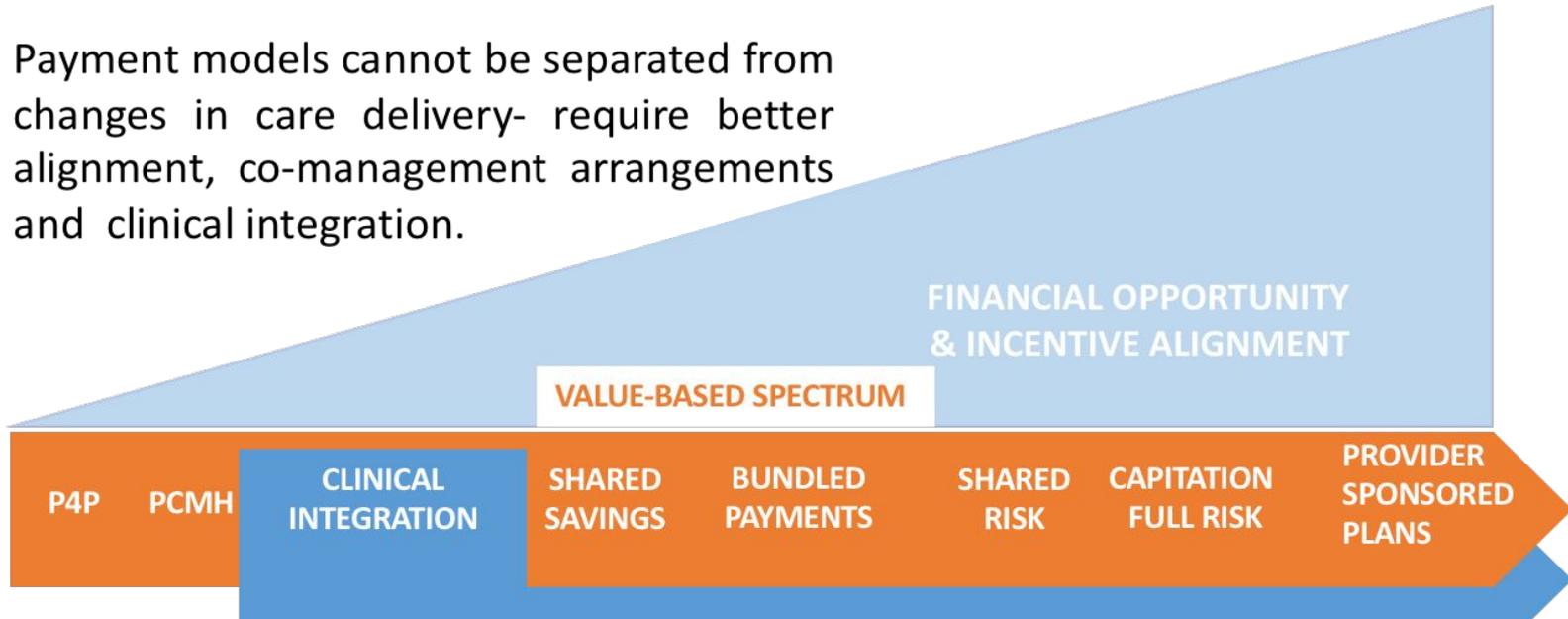
Primary Administrative Health Data

Secondary Use of de-identified Primary Data



VALUE-BASED SPECTRUM

Payment models cannot be separated from changes in care delivery- require better alignment, co-management arrangements and clinical integration.



Adapted from HFMA

FARO, LLC

Compartilhamento de dados baseado em princípios

Definições de Estado de Doença Comum,
Listas de Complicações, Padrões Técnicos
e Layouts de Compartilhamento de Dados

By Michael E. Porter, Erika A. Pabo, and Thomas H. Lee

ANALYSIS & COMMENTARY

Redesigning Primary Care: A Strategic Vision To Improve Value By Organizing Around Patients' Needs

EXHIBIT 1

Potential Outcome Measures For A Value Scorecard For Healthy Adult Patients

Measure	Specifics of measure
Survival	Mortality
Degree of recovery or health	Functional status (physical and mental health)
Time to recovery or return to normal activities	Time to treatment for minor urgent care issues Time to definitive diagnosis for more complicated conditions Time spent accessing treatment Time to complete specialist treatment for more complicated or urgent issues Work days missed due to lack of full physical or mental function
Disutility of care or treatment process	Pain and anxiety prior to treatment Pain and anxiety during treatment Care complications
Sustainability of recovery or health over time	Maintained functional level Frequency of minor urgent care issues Frequency of major acute issues (such as cancer, myocardial infarction, stroke) Acuity of chronic conditions and complications (such as hypertension, diabetes)
Long-term consequences of therapy	Side effects of care received



How many pts in the health plan have been diagnosed with RA?

Active plan as 3/26/201 (Multiple Item:)

Diagnosticated RA*	Patients	% of Total	Total_Costs**
NO	15,571	96.67%	\$1,446,710
YES	536	3.33%	\$7,173,427
Grand Total	16,107	100.00%	\$8,620,137

*Code M06.1 was not used in the query

How many pts are under the care of a rheumatologist?

Active plan as 3/26/2018 (Multiple Item:)

Diagnosticated RA*	Rheumatology Spc. Patients	% of Total	Total_Costs**	
<input type="checkbox"/> NO	NO	15,490	99.48%	\$139,371
	YES	81	0.52%	\$1,307,339
<input type="checkbox"/> YES	NO	307	57.28%	\$855,299
	YES	229	42.72%	\$6,318,128
Grand Total	16,107	100.00%	\$8,620,137	

How many of your newly diagnosed pts are not receiving a DMARD?

Active plan as 3/26/201 (Multiple Item:)
DMARD NO

Diagnosticated RA*	Patients	% of Total	Total_Costs**
NO	15,325	98.11%	\$974,258
YES	295	1.89%	\$762,892
Grand Total	15,620	100.00%	\$1,737,150

How many patients are potentially undiagnosed or misdiagnosed?

Active plan as 3/26/2018 (Multiple Item:)
Diagnosticated RA NO

Inflammatory conditions that can mimic RA	Patients	% of Total	Total_Costs**
NO	15,555	99.90%	\$1,171,435
YES	16	0.10%	\$275,275
Grand Total	15,571	100.00%	\$1,446,710

Other Conditions (Non Inflammatory) that can mimic RA	Patients	% of Total	Total_Costs**
NO	15,295	98.23%	\$254,286
YES	276	1.77%	\$1,192,424
Grand Total	15,571	100.00%	\$1,446,710

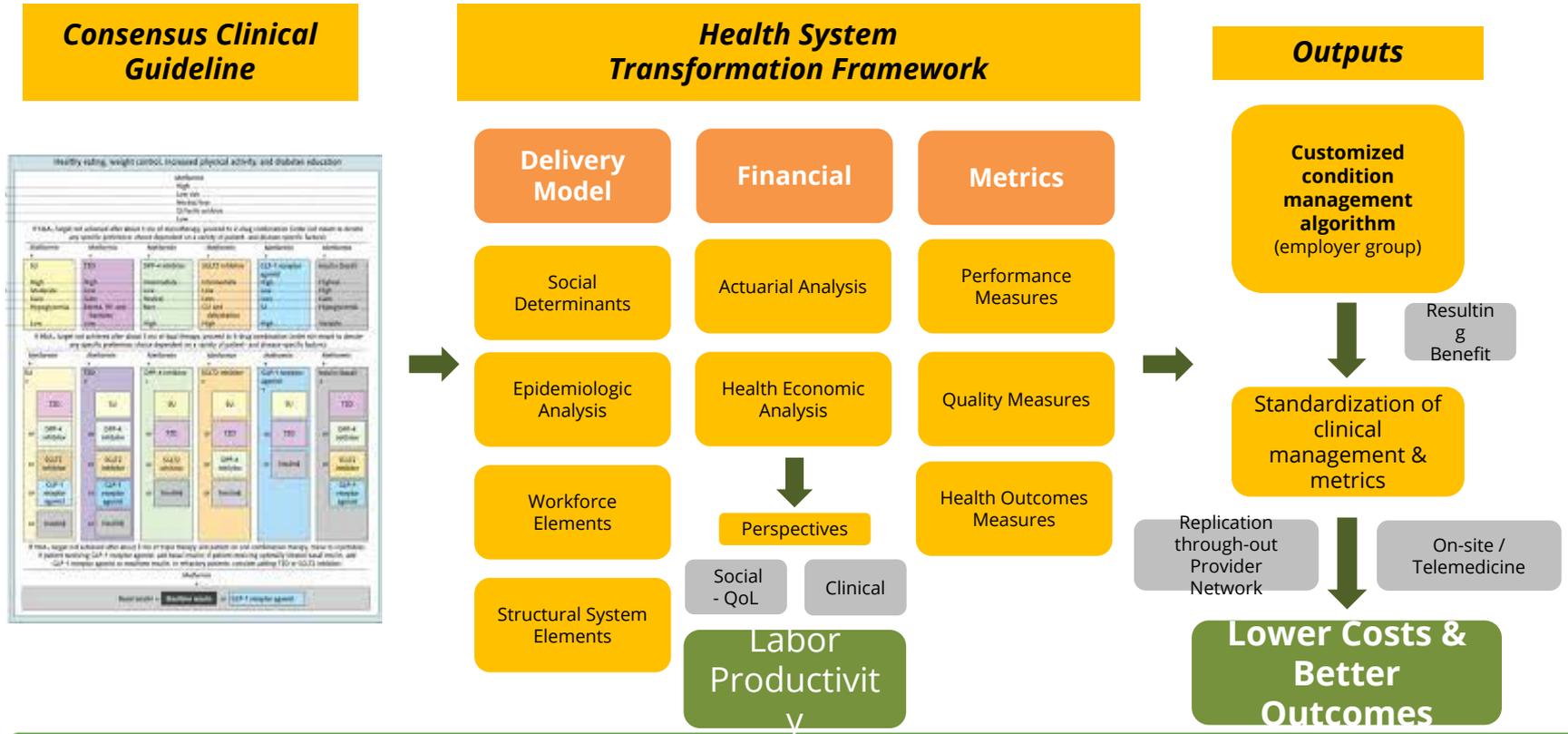
Progresso!

**INICIATIVAS BASEADAS EM VALOR
BEM-SUCEDIDAS**

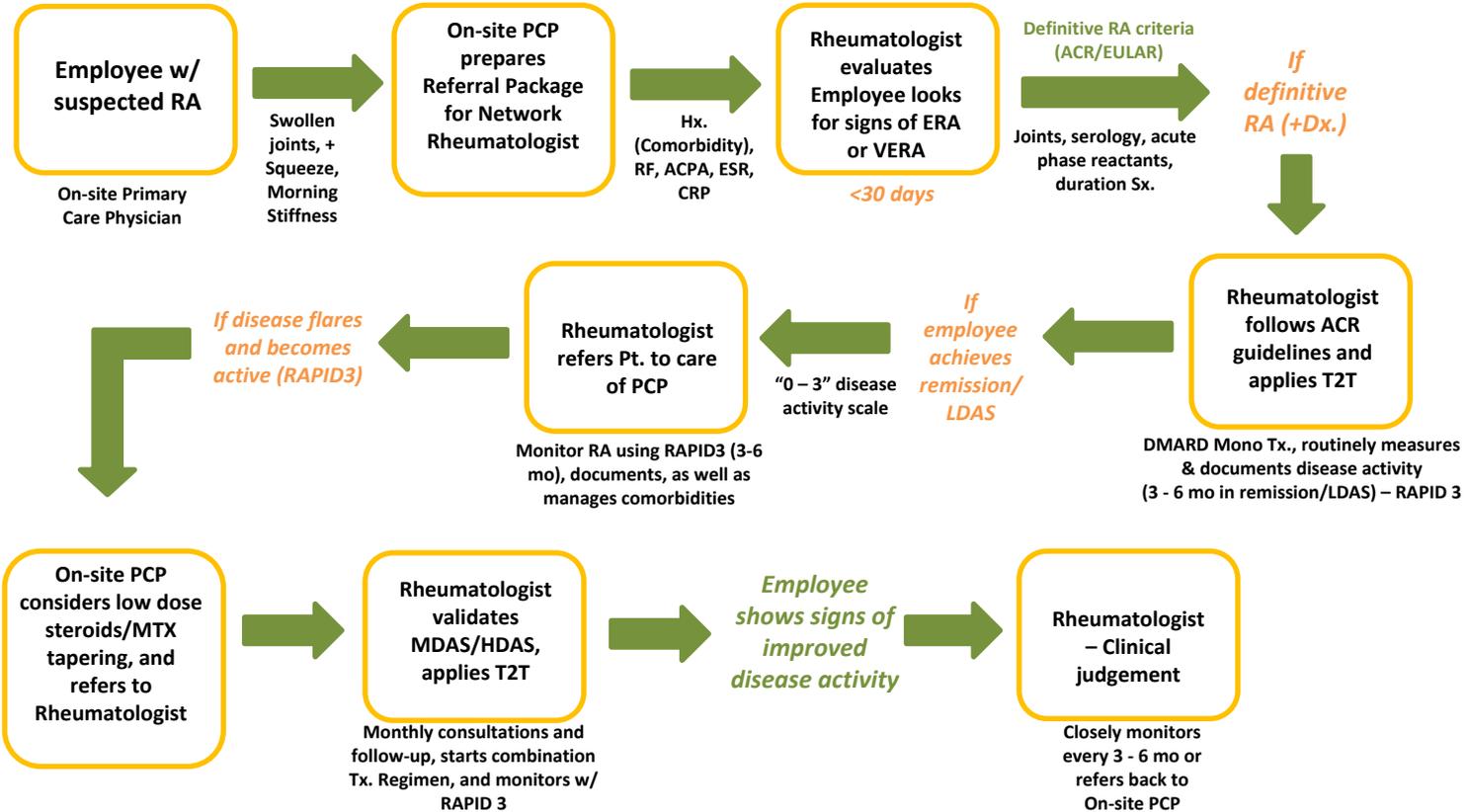


Ferramentas de Saúde da População

-Algoritmo de Gerenciamento Clínico: Processo de Design-



Modelos de Gestão Clínica Orientados Pelo Empregador: Artrite Reumatoide



Modelos de Preços de Referência de Medicamentos

Driving Consumer Decisions: The Need for a Drug Reference Pricing Model

LOCAL APPLICATION

- In situations where there is **wide price variation** for **therapeutically similar drugs**.
- Individual drugs are grouped according to therapeutic class and **payment is limited** to the price of the least expensive alternative in each class.

TARGET THERAPEUTIC CLASSES (AVG. ANNUAL SPEND USD \$800,000)

Row Labels	Average of GROSS_DUE_AMOUNT	Max of GROSS_DUE_AMOUNT	Min of GROSS_DUE_AMOUNT	MEDIAN MONTHLY PRICE VARIATION =
ACE inhibitors	\$11.38	\$271.74	\$1.36	\$384.17
Statins	\$18.36	\$526.33	\$1.00	

Drug	Claims	% of Total	Comments
ACE inhibitors	37,047		
ENALAPRIL	16,312	44%	More Expensive Drug
LISINOPRIL	11,381	31%	Reference Drug
Statins	89,011		
ATORVASTATIN	40,641	46%	More Expensive Drug
SIMVASTATIN	27,922	31%	Reference Drug
LOVASTATIN	472	1%	Reference Drug

DEMONSTRATES LIMITED ABILITY OF A TIERED DRUG FORMULARY TO INFLUENCE DECISIONS BASED ON DRUG COST

POTENTIAL SAVINGS*

Drug	RefDrug	Patients	Claims	Sum of Claims	Patient Paid	Plan Paid	New Plan Paid	Diff Plan Paid	Avg INGREDIENT COST PER UNIT	Avg REF INGREDIENT COST PER UNIT
⊕ ACE inhibitors		5,148	25,666	49.94%	\$128,541.83	\$340,514.66	\$127,401.23	(\$213,113.43)	\$0.34	\$0.128
⊕ Statins		6,537	25,732	50.06%	\$128,637.40	\$528,622.31	\$243,745.54	(\$284,876.77)	\$0.62	\$0.248

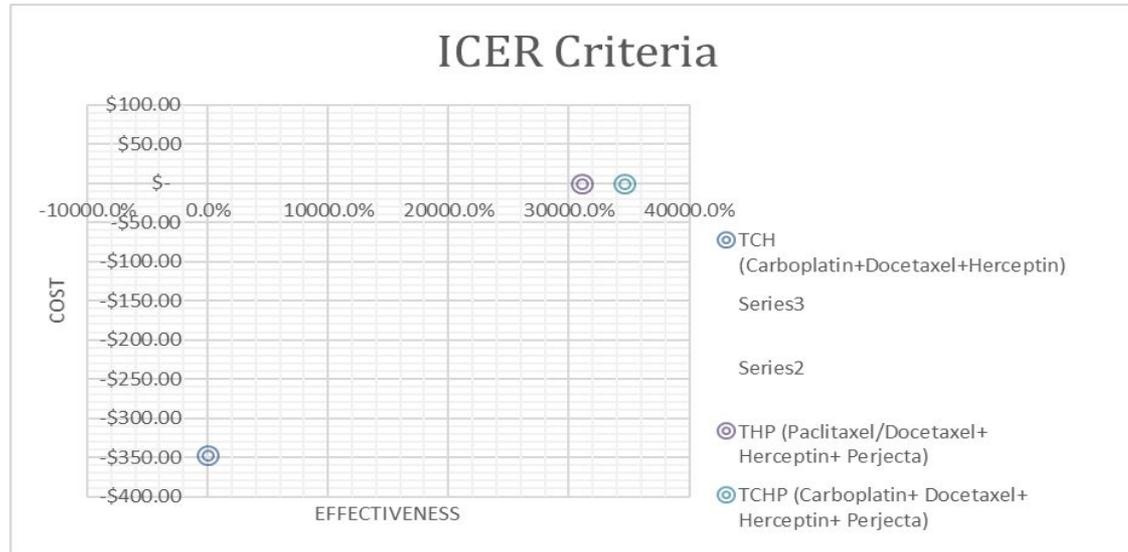
ADDITIONAL NOTES

- No formulary or benefit design changes are needed initially to do a reference pricing pilot
- All generic claims consider existing MAC pricing
- Patient will always have at least 1 reference product alternative to choose within each therapeutic class
- Important to leverage e-Rx and EHR to ensure timely pricing information ("pricing transparency") and exception documentation for prescribing physician
- Reference pricing needs to be embedded within a larger reimbursement framework– focus on lowering total cost of care (E.g., Shared Saving models)
- Reference pricing can be used with Specialty medications only if comparative effectiveness models are considered

CEA: Tratamentos direcionados para HER2 + Câncer de Mama



Code	Alternative	Cost	Incremental Cost	Effectiveness	Incremental Effectiveness	ICER
J9355	TH (Paclitaxel+ Herceptin)	\$ 1,516.57	-\$ 347.61	16.8%	-39.5%	\$ 880
J9355	TCH (Carboplatin+Docetaxel+Herceptin)	\$ 1,553.05	\$ -	56.3%	0.0%	-
J9306	THP (Paclitaxel/Docetaxel+ Herceptin+ Perjeta)	\$ 1,864.18	\$ 311.13	17%	-39.4%	-\$ 789.67
J9306	TCHP (Carboplatin+ Docetaxel+ Herceptin+ Perjeta)	\$ 1,898.56	\$ 345.51	31%	-25%	-\$ 1,387.59



Source: ASCO 2018 and Cancer Net Editorial Board 04/2017

Achieving Control of Chronic Diseases

3. Polypharmacy on Type 2 Diabetes Patient

- Patient:
 - Man, 70 years old
 - Diabetes for the past 15 years
- Recent Labs:
 - Hemoglobin A_{1c} (A1C) 8.2%
 - LDL cholesterol 126 mg/dl
 - Triglycerides 180 mg/dl
 - HDL cholesterol 45 mg/dl
 - Potassium 5.3 mmol/l
 - Albumin-to-creatinine ratio 37.7 mg/g
 - Serum creatinine 1.1 mg/dl
 - Estimated Creatinine clearance 40 ml/min.
- Primary Dx: **E11.8 Type 2 diabetes mellitus with unspecified complications**
- Secondary Dxs:
 - I48.2 Chronic atrial fibrillation
 - I50 Heart Failure
 - I11.0 Hypertensive heart disease with heart failure
 - E78.5 Hyperlipidemia, unspecified

Physician: Primary Care Physician

Demo will simulate access to Patient EHR

Physician will tried to prescribe a new refill for METFORMIN TAB 1000MG. The following message will appear **"Risk of Polypharmacy with A1C > 7.5%. Please Call T2D Case Management Team at (1-866-999999)."**

Drug Name	NDC
PIOGLITAZONE TAB 15MG	00093204856
METFORMIN TAB 1000MG	68382076010
AVANDIA 4MG	00173086313
GLYBURIDE TAB 5MG	00093936401
LISINOPRIL TAB 10MG	00143126701
WARFARIN TAB 2MG	00093171301
SIMVASTATIN TAB 80MG	68180048103
FENOFIBRATE TAB 160MG	00115552210
ATENLOLOL TAB 25MG	00093078710
DILTIAZEM TAB 120MG	00093032101
KLOR-CON M20 TAB 20MEQ ER	66758019001
FUROSEMIDE TAB 40MG	00378021610

Physician: Endocrinologist

Demo will simulate access to EHR Physician Portal

A Warning Message and/or a ToDo list have to show a new entry with the Patient Info, highlighting that was referred to the Insurance T2D Case Management due to risk of Polypharmacy. The following message will appear **"The Patient has been referred to T2D Case Management Team. Please consider to schedule a visit <30 days"**

User: Insurance T2D Case Manager

The Insurance T2D team will receive a report, with the new Patients referral to the program.

RWE: Jornadas do Paciente

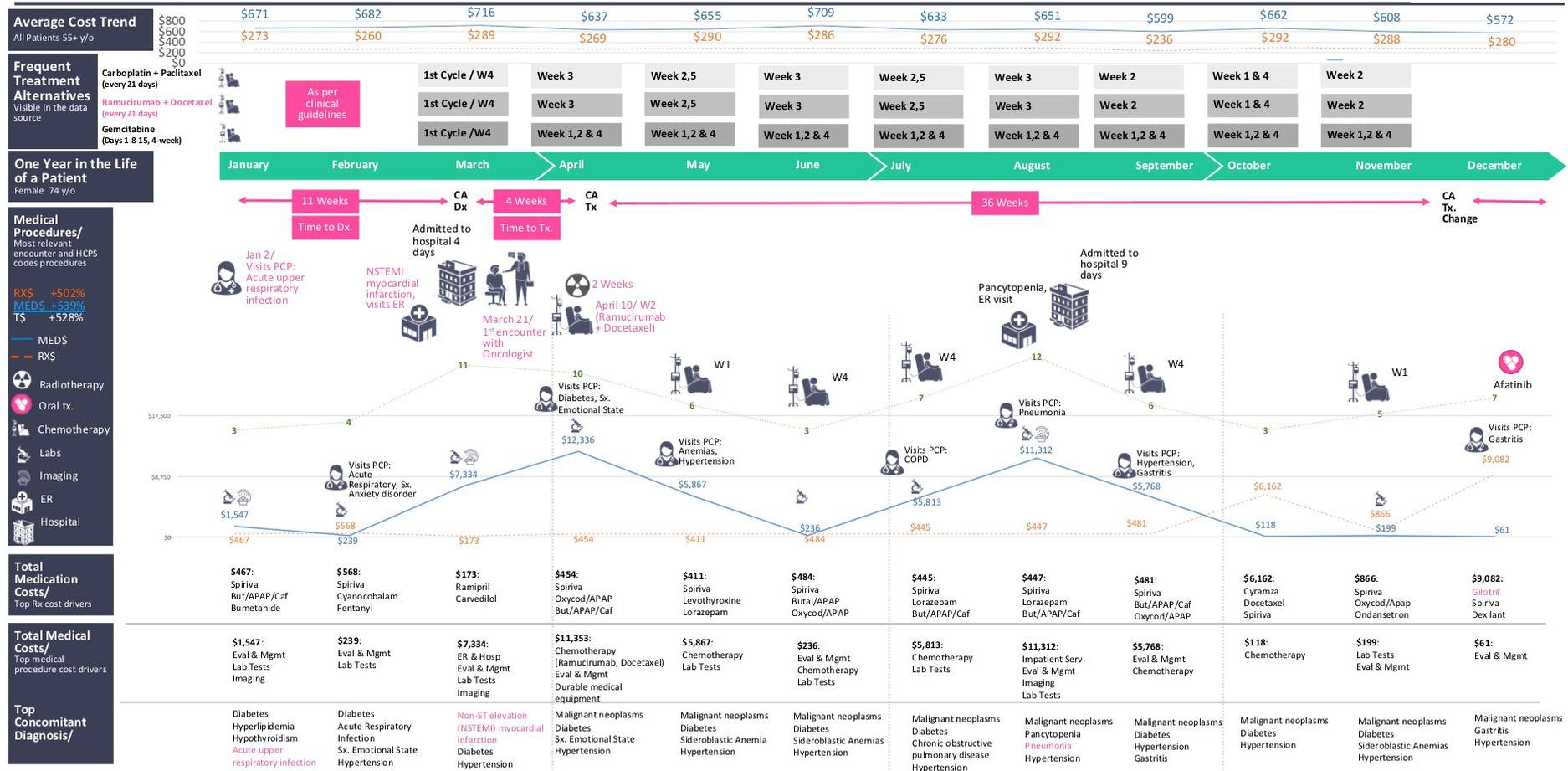
NON-SMALL CELL LUNG CANCER PATIENT EXPERIENCE

About this Data

This data set includes medical claims, encounters, diagnosis data and Rx claims from 2017 to 2019 for Medicare Advantage and Commercial insurance patients in Puerto Rico.



Average patient is a 74 y/o female with the target diagnosis under a Medicare Advantage plan. Data Discovery of a patient experience across 2017-2019 in Puerto Rico. Developed by FARO, LLC.



Por Onde Começar?

**CONJUNTO DE DADOS COM BASE EM
VALOR DO *THE ECONOMIST***



2º SEMINÁRIO INTERNACIONAL SESI DE SAÚDE SUPLEMENTAR

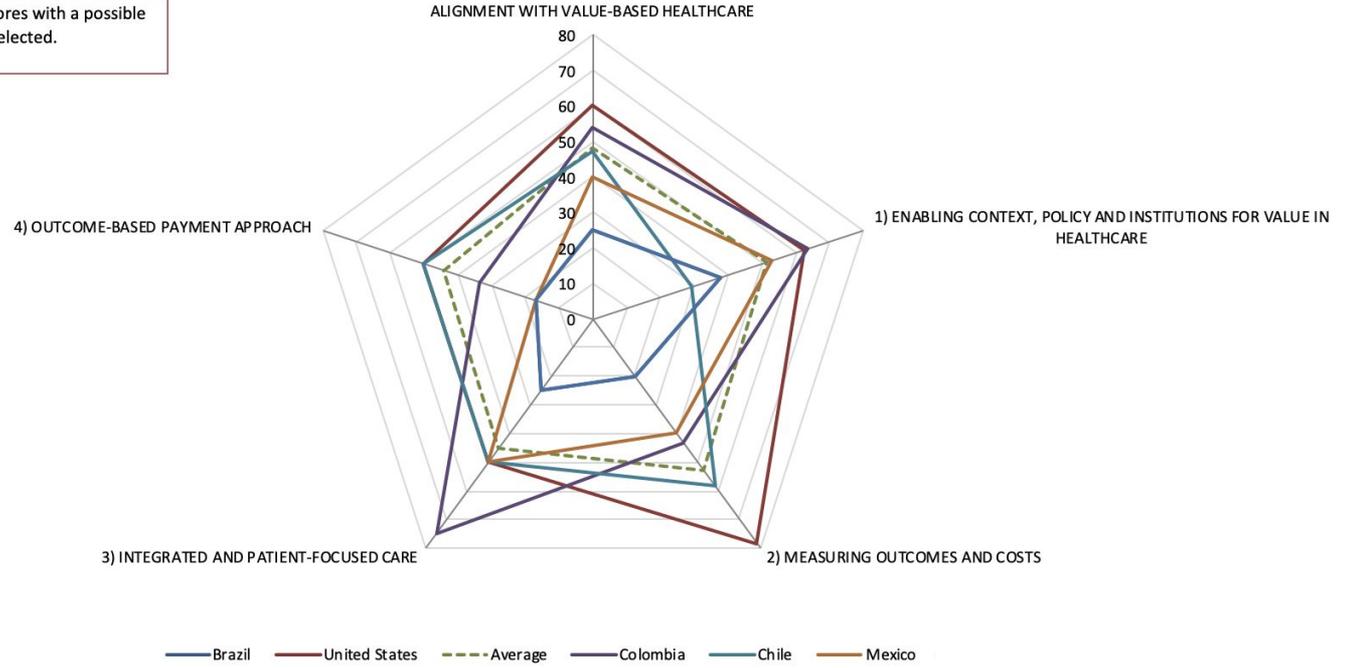
HOME TAG & COUNTRY EXPLORER INDICATOR AND DATA

INDICATOR LIST VBH MATRIX BAR CHART COUNTRY COMPARISON

SELECT COUNTRY 1: Brazil SELECT COUNTRY 2: United States SELECT REGION: Latin America

Spider chart: All countries in Latin America

Chart displays weighted total and domain scores with a possible range between 0 and 100 for the countries selected.



	Brazil	United States
Enabling context, policy and institutions for value in healthcare		
1.1) Health coverage of the population	4	3
1.2) High-level policy or plan	N	N
1.3) Presence of enabling elements for value-based healthcare	0	3
1.4) Other stakeholder support	N	Y
1.5) Health professional education and training in VBH	0	1
1.6) Existence and independence of health technology assessment (HTA) organisation(s)	1	0
1.7) Evidence-based guidelines for healthcare	2	3
1.8) Support for addressing knowledge gaps	2	2
Measuring outcomes and costs		
2.1) National disease registries	0	3
2.2) Patient outcomes data accessibility	0	2
2.3) Patient outcomes data standardisation	0	1
2.4) Data collection on patient treatment costs	0	2
2.5) Development of interoperable Electronic Health Records (EHRs)	Y	Y
Integrated and patient-focused care		
3.1) National policy that supports organising health delivery into integrated and/or patient-focused units	N	Y
3.2) Care pathway focus	1	0
Outcome-based payment approach		
4.1) Major system payer(s) promotes bundled payments	1	3
4.2) Existence of mechanism(s) for identifying interventions for de-adoption (disinvestment)	N	N

Obrigado!

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