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ePHC Assessment - Pilot Study

Contribution of eHealth to closing the gap in PHC to provide people-centred and integrated healthcare services in LAC region: Argentina, Brazil, Costa Rica, Dominican Republic

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The study

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- Background
- The ePHC Assessment Framework Foundation
 - Strategic Context: Patient-centred High Quality Primary Health Care
 - eHealth Vision: eHealth enabled Primary Health Care (ePHC)
 - ePHC Assessment Model
- The Pilot Study



Background - LAC Health Situation

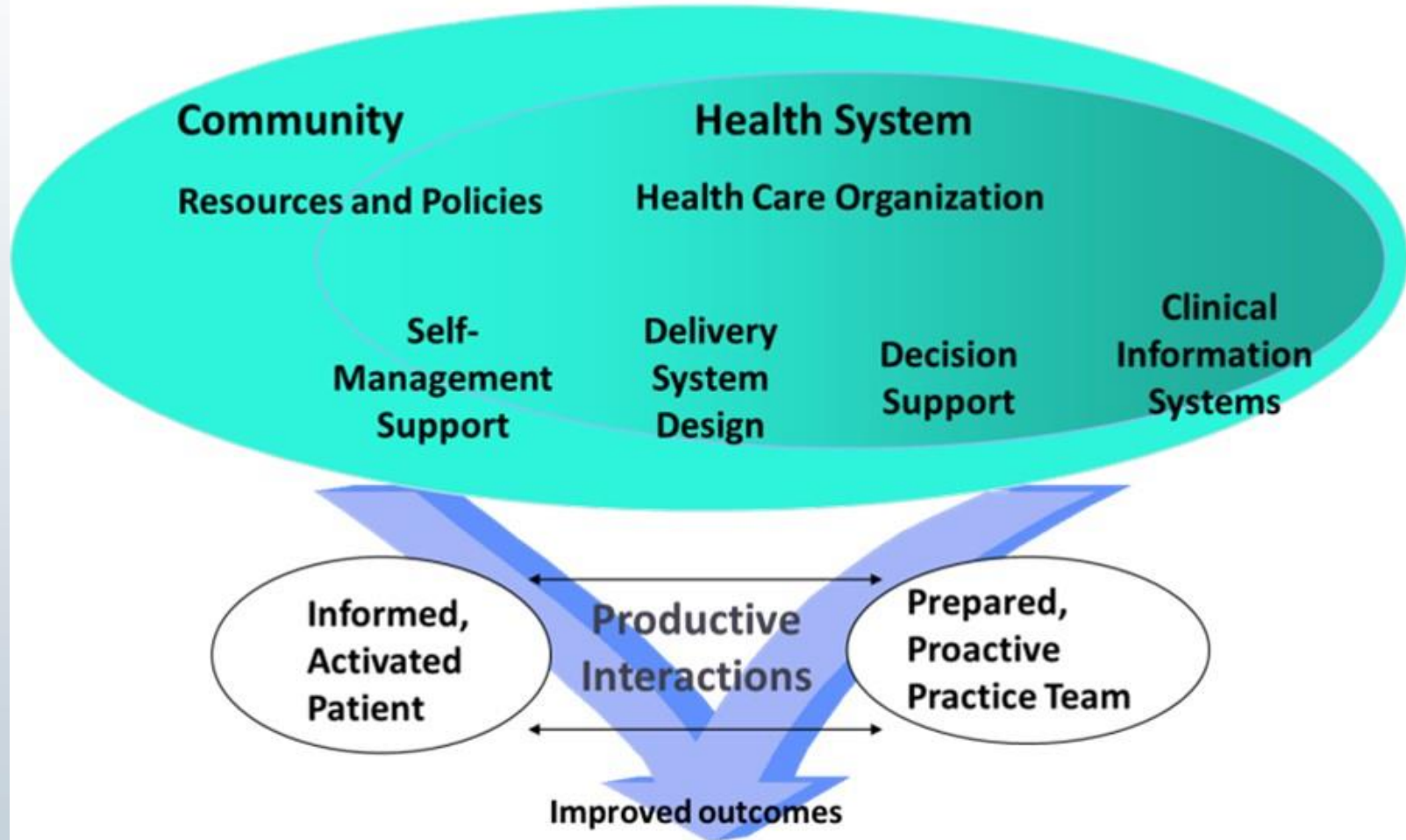
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- Several LAC countries have achieved outstanding results from adopting Universal Health Coverage (UHC)
- LAC remains the world's most unequal region
 - In 2010, 10% of the LAC's people still lived in conditions of multidimensional poverty
 - The lowest poorest 20% share of total income by region (2,9% - 2008)
- Fast and complex epidemiological changes
 - Increasing rates of non-communicable diseases and injuries
 - Many uncontrolled existing endemic and emerging diseases



Chronic Care Model



Background - Existing Gaps in PHC in LAC



	Brazil	Colombia	El Salvador	Jamaica	Mexico	Panama	Overall
ACCESSIBILITY OF CARE							
Skipped doctor visit because of cost	15.82% ^{**}	12.64% ^{***}	29.32% ^{***}	31.49% ^{***}	19.54%	13.44% ^{***}	20.41%
Skipped prescribed treatment because of cost	16.48	13.09 ^{***}	26.58 ^{***}	28.98 ^{***}	18.33	18.26	20.32
Unable to schedule appointment	21.49	18.43	22.31	24.78 ^{***}	15.13 ^{***}	17.04	19.87
Transportation difficulties	8.17	9.42	15.97 ^{***}	10.41	10.43	7.56 ^{**}	10.33
Waited 5 or more days for PC appointment	31.55	40.15 ^{***}	52.11 ^{***}	24.05 ^{***}	20.76 ^{***}	32.79	33.56
No PC appointment by phone	64.09 ^{***}	15.97 ^{***}	75.8 ^{***}	25.82 ^{***}	41.18 ^{***}	22.11 ^{***}	38.59
Difficult to receive PC on weekend	74.09	79.82 ^{***}	83.05 ^{***}	60.07 ^{***}	74.25	77.50	74.87
CONTINUITY OF CARE							
No regular doctor	65.96% ^{***}	66.12% ^{***}	63.82% ^{***}	37.08% ^{***}	35.31% ^{***}	41.95% ^{***}	51.69%
PC doctor doesn't know medical history	56.78 ^{***}	26.14 ^{***}	31.46	39.76 ^{***}	23.79 ^{***}	26.07 ^{***}	33.64
PATIENT-CENTEREDNESS—PRIMARY CARE DOCTOR:							
Is difficult to communicate with	45.18%	49.43%	58.37% ^{***}	23.31% ^{***}	49.72% ^{**}	51.07% ^{***}	44.96%
Gives no opportunity to ask questions	38.59 ^{***}	23.50	28.84	35.37 ^{***}	19.75 ^{***}	23.72	28.12
Doesn't spend enough time	65.31 ^{***}	26.79 ^{**}	38.81	40.25	25.68 ^{***}	46.33 ^{***}	39.97
Doesn't explain things well	33.01 ^{***}	21.13 ^{**}	27.61	31.14 ^{***}	21.10 ^{**}	23.84	26.17
PROBLEM RESOLUTION							
Long time for diagnosis	15.12% ^{***}	22.58%	23.39%	26.37% ^{***}	17.43%	23.45%	21.41%
PC doctor doesn't solve most health problems	44.40 ^{***}	27.44	28.24	40.62 ^{***}	18.84 ^{***}	25.10 ^{**}	30.65
CARE COORDINATION							
PC doctor doesn't help coordinate care	74.14% ^{***}	52.74% ^{***}	57.11%	66.38% ^{***}	50.55% ^{***}	62.10%	60.54%
PRIMARY CARE PROBLEM COUNTS AND SCALE (TERTILE)^a							
No. of problems (out of 16)	5.11 ^{***}	4.17 ^{***}	4.94 ^{***}	4.75	3.96 ^{***}	4.29 ^{**}	4.53
Percent of population in tertile 1	22.19% ^{***}	41.92% ^{***}	21.77% ^{**}	30.64%	43.42% ^{***}	27.79%	32.47%
Percent of population in tertile 2	25.89 ^{***}	28.98 ^{**}	39.21	27.03 ^{**}	34.89	41.91 ^{**}	32.97
Percent of population in tertile 3	51.93 ^{***}	29.10 ^{***}	39.02	42.33 ^{**}	21.69 ^{***}	30.30	34.56



eHealth Contribution to Closing the Gap in PHC

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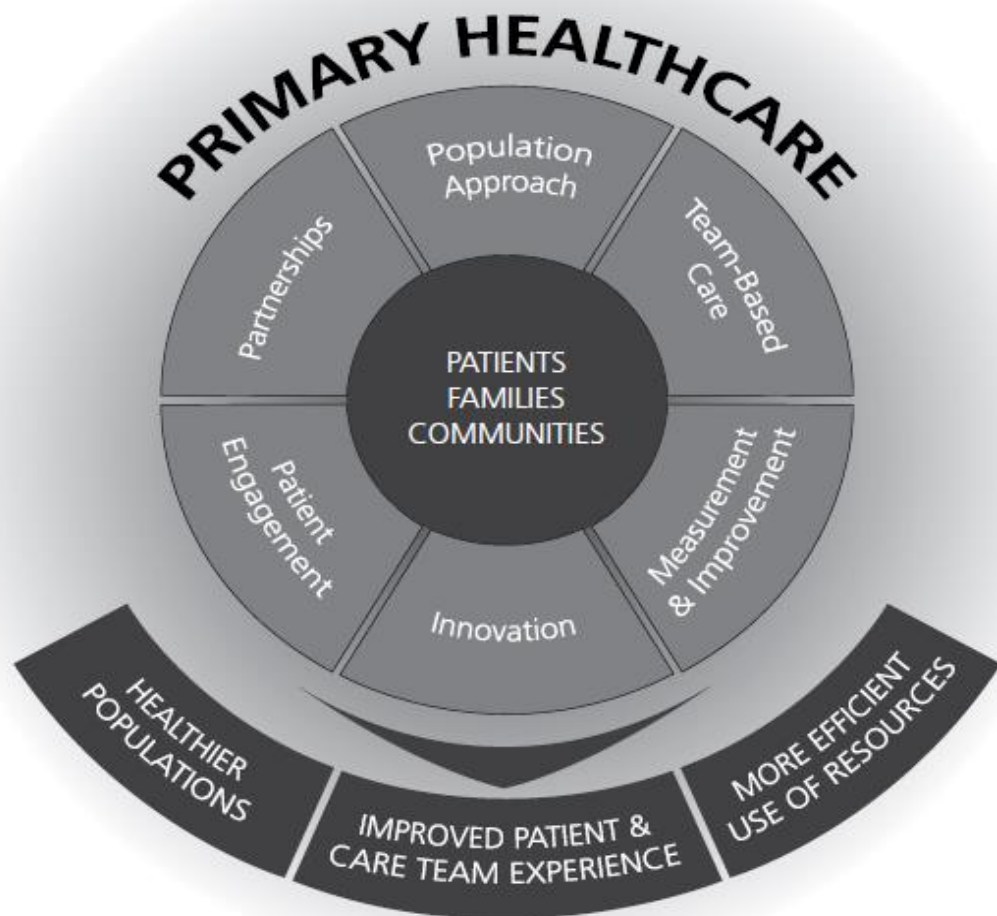
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- An ALCUE Net Project funded study
- To develop a methodology to assess ehealth policies contribution for closing the gaps in PHC to provide people-centred and integrated healthcare services in LAC
- A logical model to investigate how ehealth policies contribute to close the gap in PHC
- Testing of the model in selected LAC countries
- Disseminating the results - promoting deployment of the model
- The Goal: to help policymakers to evaluate the performance of the PHC vis a vis the potential contribution of eHealth



- Target questions:
 - a. Why a PHC-oriented approach to eHealth is needed?*
 - b. What an eHealth enabled PHC will achieve? And*
 - c. How it will be assessed?*
- The elements of the Framework
 - Strategic Context: Patient-centred High Quality Primary Health Care
 - eHealth Vision: ePHC – an eHealth enabled Primary Health Care
 - ePHC Assessment Model

Strategic Context - Patient-centered High Quality Primary Health Care



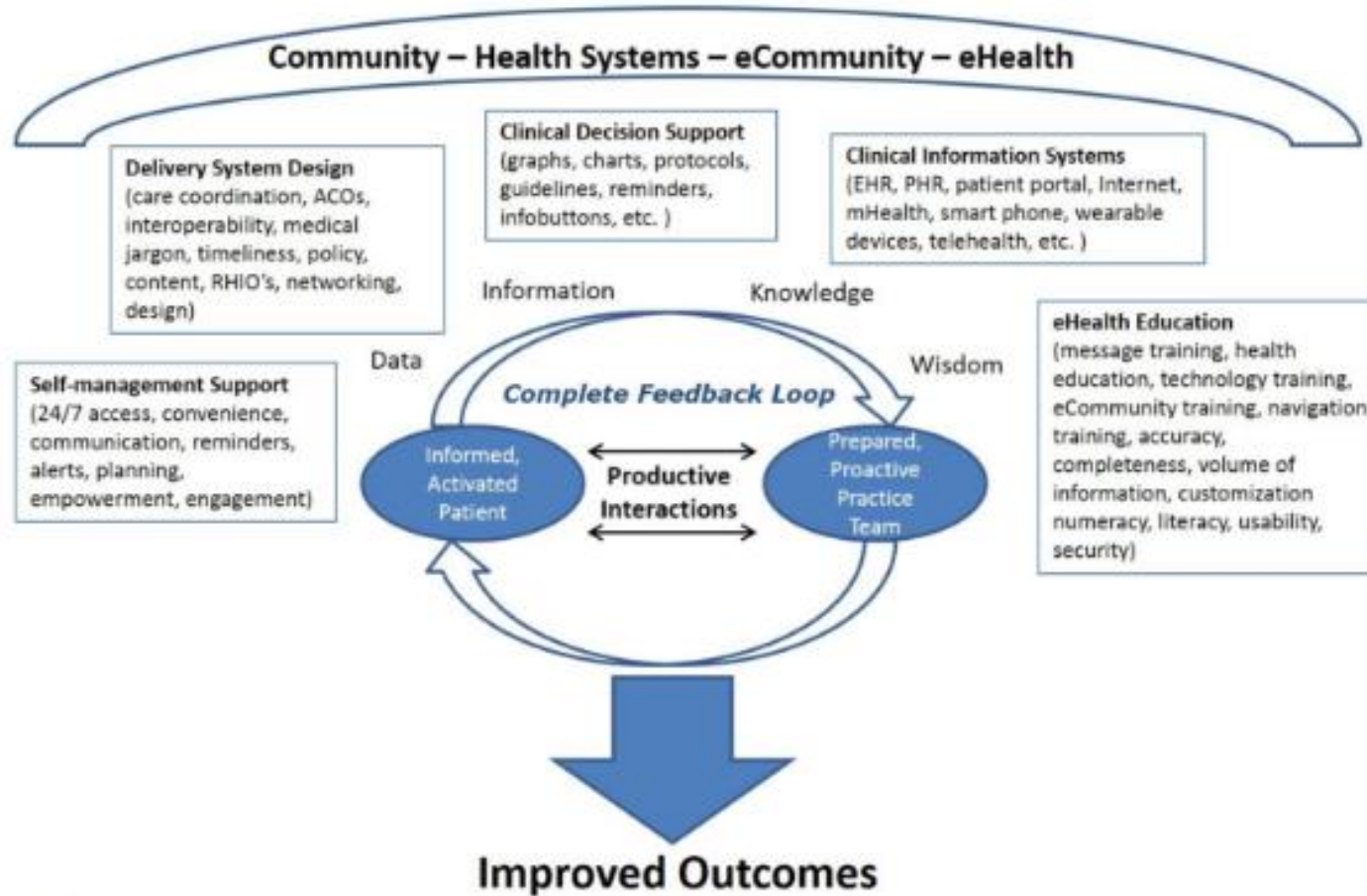


- The ten recommendations from PAHO (2013) for the improvement of quality of care for chronic conditions in the Americas are:
 1. Implement the Chronic Care Model in its entirety.
 2. Ensure a patient centered approach.
 3. Create (or review existing) multisectoral policies for CNCD management including UHC, aligning payment systems to support best practice.
 - 4. Create (or improve existing) clinical information system including monitoring, evaluation and quality improvement strategies as integral parts of the health system**
 5. Introduce systematic patient self-management support
 6. Orient care toward preventive and population care, reinforced by health promotion strategies and community participation
 7. Change (or maintain) health system structures to better support CNCD management and control.
 8. Create PHC-led networks of care supporting continuity of care.
 9. Reorient health services creating a chronic care culture
 10. Reconfigure health workers into multidisciplinary teams, ensuring continuous training in CNCD management

eHealth Vision: eHealth enabled Primary Health Care (ePHC)

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The eHealth Enhanced Chronic Care Model (eCCM)



Source . The eHealth Enhanced Chronic Care Model. Created by Gee, P M; Greenwood, D A; Paterniti, D A; Ward, D; and Miller, L M S (JMIR, 2015). Adapted from The Chronic Care Model



- **System Level**

1. Is eHealth established as an enabler of the PHC system?

- **Practice Level**

- Does eHealth improve:

1. Accessibility of care?

2. Continuity of care?

3. Patient-centredness?

4. Problem resolution?

5. Care coordination?



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Components of the ePHC Assessment Model – Logic Model

Is eHealth established as an enabler of the PHC system?

Leadership and governance

Strategy and investment

Services and applications

Standards & interoperability

Infrastructure

Legislation, policy and compliance

Workforce



Logic Model - ePHC Enabling environment

Component	Description
Leadership and governance	Coordination at the national level; ensure alignment with health goals and political support; promote awareness and engage stakeholders
Strategy and investment	Ensure a responsive strategy and plan for the national ePHC environment Align financing with priorities
Legislation and policy	Adopt national policies and legislation in priority areas
Workforce	Make ePHC knowledge and skills available. Establish ePHC capacity building programmes.



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Logic Model - ePHC Enabling environment

Component	Description
Infrastructure	<p>Form the foundations for electronic information exchange across geographical and health-sector boundaries</p> <p>This includes the physical infrastructure (e.g. networks), core services and applications that underpin a national ePHC environment</p>
Services and applications	<p>Provide tangible means for enabling services and systems; access to, and exchange and management of information and content</p> <p>Users include the general public, patients, providers, insurance, and others. The means may be supplied by government or commercially.</p>



Example: Brazilian ePHC Assessment

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- Strategy and investment

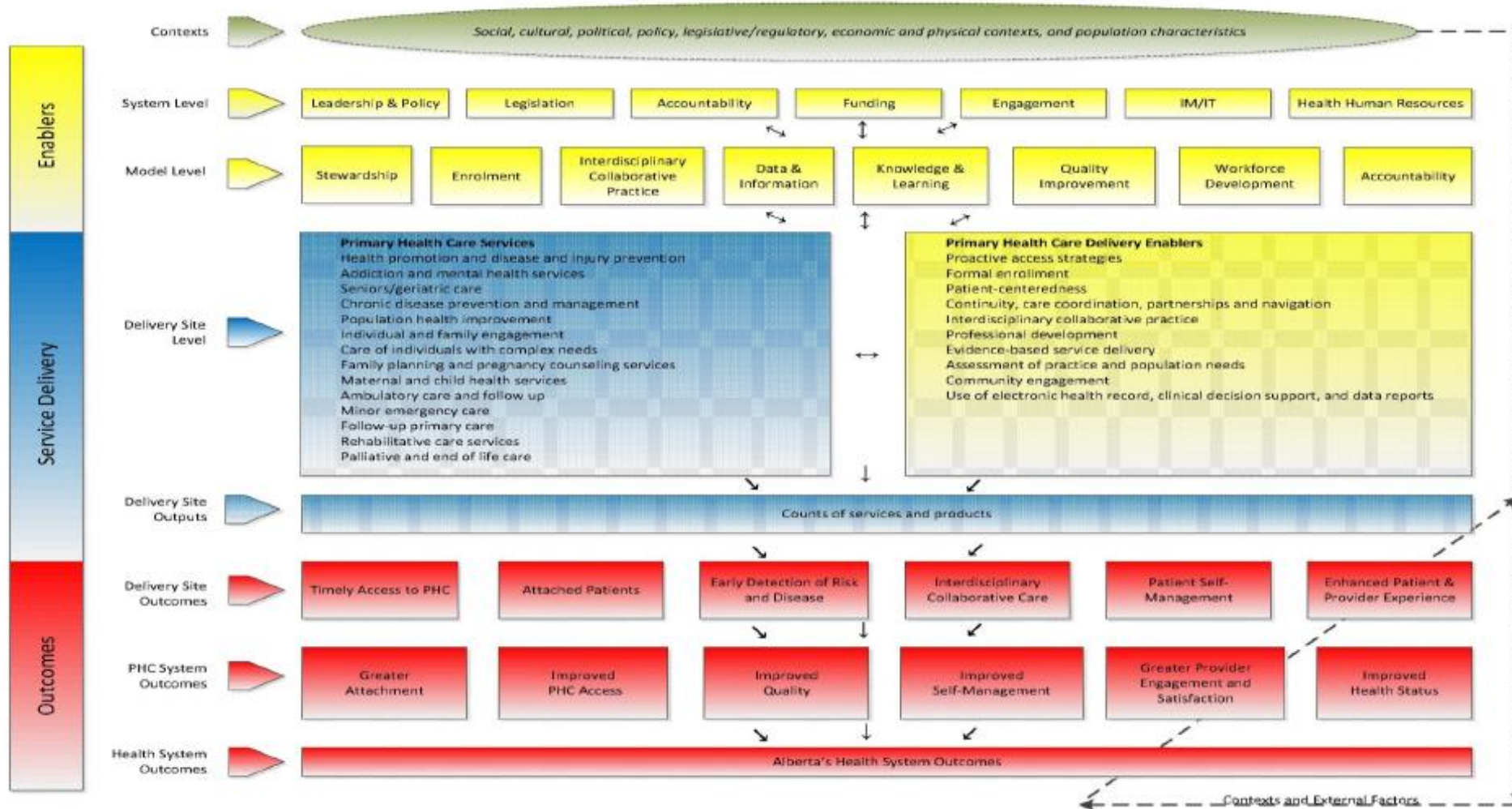
Question	Answer
There is an eHealth Strategy for PHC?	Yes

- Comments

The Brazilian eHealth Strategy for PHC named e-SUS Atenção Básica (e-SUS AB) was conceived by the *Departamento da Atenção Básica* (Primary Health Care Department or DAB) of the Ministry of Health. It proposes to increase information management, processes automation, improve infrastructure conditions and improve work processes at primary care level. Source: Brazilian Ministry of Health

Components of the ePHC Assessment Model – Logic Model

Logic Model for Alberta's Primary Health Care System





PHC Problem

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Domain	PHC Problem
Accessibility of care	Skipped doctor visit because of cost
	Skipped prescribed treatment because of cost
	Unable to schedule appointment
	Transportation difficulties
	Does eHealth improve accessibility of care? <ul style="list-style-type: none">• Online appointment is available Yes or No
	No PC appointment by phone
	Difficult to receive PC on weekend

Measurement concepts and methods – eHealth Atlas



Costa Rica



Country context*			
Population (000s)	4,872	Life expectancy at birth (years)	79
GNI per capita (PPP Int \$)	13,570	Total health expenditure (% GDP)	9.9
Physician density (per 10 000 population)	1.11	ICT Development Index rank	60
Nurse & midwife density (per 10 000 population)	0.77	Mobile-cellular subscriptions (% population)	111.92
Hospital bed density (per 10 000 population)	12	Internet users (% population)	47.5

1. eHealth foundations

National policies or strategies

	Country response	Global "yes" response [†]	Year adopted
National universal health coverage policy or strategy	Yes	75%	1973
National eHealth policy or strategy	Yes	58%	2012
National health information system (HIS) policy or strategy	Yes	66%	2012
National telehealth policy or strategy	Yes	22%	1996

Funding sources for eHealth

	Country response	Global "yes" response [†]	Funding source %**
Public funding	Yes	77%	>75%
Private or commercial funding	No	40%	Zero
Donor/non-public funding	Yes	63%	<25%
Public-private partnerships	No	42%	Zero

Multilingualism in eHealth

	Country response	Global "yes" response [†]	Year adopted
Policy or strategy on multilingualism	No	28%	N/A
Government-supported Internet sites in multiple languages	No	48%	

eHealth capacity building

	Country response	Global "yes" response [†]	Proportion**
Health sciences students – Pre-service training in eHealth	Yes	74%	25-50%
Health professionals – In-service training in eHealth	Yes	77%	25-50%

Legal frameworks for eHealth

Policy or legislation – purpose	Country response	Global "yes" response [†]
Defines medical jurisdiction, liability or reimbursement of eHealth services such as telehealth	Yes	31%
Addresses patient safety and quality of care based on data quality, data transmission standards or clinical competency criteria	Yes	46%
Protects the privacy of personally identifiable data of individuals irrespective of whether it is in paper or digital format	Yes	78%
Protects the privacy of individuals' health-related data held in electronic format in an EHR	Yes	54%
Permits the sharing of digital data between health professionals in other health services in the same country through the use of an EHR	Yes	34%
Permits the sharing of digital data between health professionals in health services in other countries through the use of an EHR	No	22%
Permits the sharing of personal and health data between research entities	No	39%
Permits individuals electronic access to their own health-related data when held in an EHR	No	29%
Permits individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	No	32%
Permits individuals to demand the deletion of health-related data from their EHR	No	18%
Permits individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	Yes	28%
Permits civil registration and vital statistics	Yes	76%
Permits national identification management systems	Yes	65%



Measurement concepts and methods – ePHC Profile

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Primary Health Care eHealth Delivery Enablers

PHC Enablers	CCM Elements				
	Health System				Community
	Self-Management support	Delivery system design	Clinical decision support	Clinical information system	Resources and policies
Proactive access strategies		Help manage patient appointments ¹			
	Health call centers ¹				
Formal enrolment					
Person-centeredness					
Continuity, care coordination, partnership and navigation		Appointment reminders ¹			
		Treatment adherence ¹			
Interdisciplinary collaborative practices		Mobile telehealth ¹ Provider-Provider Communication			
Professional					



■ Geographical Coverage

- Latin American and Caribbean countries
 - South America – Argentina and Brazil
 - Central America – Costa Rica
 - Caribbean – Dominican Republic

■ Timeline

- Review: Jan - Feb/2017
- Testing: Mar - Jun/2017
- Report: Jul - Oct/2017



Main findings of the study

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- ePHC Foundation - Most of the countries are engaged on eHealth initiatives as part of the transformation of PHC to provide person-centered high quality services. Main evidences:
 - the existence of eHealth and health information systems (HIS) strategies and some of them assure the participation of PHC representatives on the governance;
 - legal framework and investment for eHealth are important issues for the policymakers;
 - EHR systems are being deployed at PHC level at large scale; ICT infrastructure is being constructed to support the implementation of the applications; and
 - eHealth capacity programs are being executed.



Considerations – Part I

- The Pilot Study showed: achievements in establishing solid ePHC foundation, enablers and services to improve efficiency of the PHC to prevent and manage chronic conditions as part of a transformation process to promote a person-centered high quality primary health care system in LAC.
- Analytical instruments are effective; development of the ePHC Assessment Framework is promising.
- Showcases: political willingness is the main driver to implement eHealth policies and the role range of benefits in quality of and access to services, especially to remote populations.
- Availability of guidelines: WHO, ITU and PAHO



Considerations – Part II

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- Study results to be disseminated
- Need of a regional approach to eHealth by means of sharing best practices and taking joint actions to constitute a regional eHealth initiative.
- EU-CELAC joint collaboration: strategic emphasis on eHealth as a means of inclusion and addressing of societal challenges
 - Topics: normalization and interoperability aspects, health surveillance, disease notification, innovations and business opportunities, the social, cultural, demographic and economic aspects of the populations