ICT tools and methodologies to improve Public Health in the Americas Region

PAHO HEALTH PROGRAM

Knowledge Management and Communication Area (KMC)
Deputy Directors Office (DD)
ICT tools and methodologies to improve Public Health in the Americas Region

PAHO Director’s vision

The context

Challenges and opportunities

Contribution to PHC

Conceptual model

PAHO Project
ICT tools and methodologies to improve Public Health in the Americas Region.

PAHO hEALTH Program

PAHO DIRECTOR’S VISION
PAHO Director’s vision

“This will be the century of networks, connectivity and interdependency, which will allow us to overcome barriers of space and time and will open possibilities that were unimaginable to humankind. If we encourage those networks to exponentially multiply the available share capital in order to link people and institutions within a large supportive and inclusive mesh of all the inhabitants of the continent, we will have taken a fundamental step towards eliciting knowledge and experience in new ways of exchanging technical cooperation for sustainable human development”.

Dr. Mirta Roses Periago’s Inauguration Speech as Pan American Health Organization Director, Regional Director for the Americas, January 31st, 2003
ICT tools and methodologies to improve Public Health in the Americas Region

THE CONTEXT
The context

• Primary Health Care is a commitment to **equitable and affordable care for all people**, ensuring citizen-centered services needed to live a healthy and productive life.

• WHO considers primary health care as "an essential approach to organizing health systems."

• Information and communication technologies are transforming health services and systems, providing solutions that were unthinkable 30 years ago.
ICT tools and methodologies to improve Public Health in the Americas Region

PAHO hEALTH Program

CHALLENGES AND OPPORTUNITIES
Challenges and Opportunities

- Universal Access to Health Services with improved quality of care;
- Extension of Social Protection in Health through PHC-Based Health Systems;
- Available, competent and motivated Health Workforce;
- Real Time Qualified Information Sources for Decision Making;
- Knowledge and Information Sharing within and among disperse populations;
- Monitoring and Surveillance Systems using mobile and wireless communication devices (i.e., Expanded Program on Immunization);
- Real Time Learning Objectives for eLearning and Training to develop competencies and motivation of PHC teams;
- Social networking tools and methodologies for disasters and Emergency Situations;
- Access to open access and certified public health content; and
- Access to Specialized Clinical Services for increased capacity at first level of care.
Challenges and Opportunities

• Convergence of eHealth initiatives worldwide;

• Web mobile-based applications for healthcare management;

• Fast Technology Changes;

• New role of Digital Government;

• New models of technical cooperation in the context of “National Digital Agendas” and “eGoverment initiatives;”

• Active participation in the world summit on the information society with emphasis in Health;

• Investments in connectivity by National Governments with support from Development Banks;

• Increased interest in Public/Private Partnerships.
ICT tools and methodologies to improve Public Health in the Americas Region

PAHO hEalth Program

CONCEPTUAL MODEL

PAHO hEalth Program - ICT tools to improve Public Health in the Americas Region
ICT tools and methodologies to improve Public Health in the Americas Region

PAHO HEalth Program - ICT tools to improve Public Health in the Americas Region
ICT tools and methodologies to improve Public Health in the Americas Region

Research

Partners

Needs ➔ ICT Solutions ➔ Adoption ➔ Training ➔ Use ➔ Lessons learned

- Access to information
- Access to training
- Interactions (2.0)

Institutions

People-centered Health & Patient Empowerment

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ICT tools and methodologies to improve Public Health in the Americas Region

INNOVATION

Research → Partners

Needs → ICT Solutions → Adoption → Training → Use → Lessons learned

People-centered Health & Patient Empowerment

Access to information
Access to training
Interactions (2.0)

PAHO HEALTH Program - ICT tools to improve Public Health in the Americas Region
ICT tools and methodologies to improve Public Health in the Americas Region

**Needs**

- ICT Solutions
- Adoption
- Training
- Use
- Lessons learned

**Access to information**
- Tele-consulting;
- Telemedicine;
- Web Conferences & lectures;
- Content aggregators (Blogs, Wikis, etc);
- Social networks

**Access to training**

- Trainings;
- Learning objects;
- Web Conferences;
- Lectures;
- Open content for educational resources.

**Interactions (2.0)**
- PAHO/WHO content;
- Public Health (Certified and open access) content;
- Other (certified) content – GHL – VHL HINARI – AGORA – OARE;
- Other (relevant) content.
ICT tools and methodologies to improve Public Health in the Americas Region

- Telemedicine
- Mobile (mHealth)
- PC
- WWW

Needs ict

Solutions

Adoption

Training

Use

Lessons learned

Access to information

- Access to information

Access to training

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Interactions (2.0)

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- **Research**
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- **ICT Solutions**

**Adoption**

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**Use**

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Differences in legislation

Interoperability
(Political/Legal, Organisational, Semantic and Technical)

- Differences in legislation
- Language barriers
- Multitude of technical systems

Main purposes:
> Freedom of circulation of personal data
> Protection of personal data

Needs → ICT Solutions → Adoption → Lessons learned

Access to information
Access to training
Interactions (2.0)

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ICT tools and methodologies to improve Public Health in the Americas Region

Needs → ICT Solutions → Adoption → Training → Use → Lessons learned

INNOVATION

People-centered Health & Patient Empowerment

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ICT tools and methodologies to improve Public Health in the Americas Region

- eHealth
- Vision
- Goal
- Expected results
- Indicators
- Corporate initiatives
eHealth

Projects, ICT Developments, Health Professionals, Patients and Population
## ICT tools and methodologies for improving public health in the Region of the Americas

<table>
<thead>
<tr>
<th>Project</th>
<th>ICT Development</th>
<th>For Healthcare Workers</th>
<th>For Population and Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal Health Card (PHC)</strong></td>
<td>Common database for health card</td>
<td>&gt; Access to clinical information from any site where it has been stored</td>
<td>&gt; Unequivocal identification in the entire health system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; Measuring incidence/prevalence of certain diseases as well as risk factors which enable evaluating the effect of specific interventions</td>
<td></td>
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### ICT tools and methodologies for improving public health in the Region of the Americas

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<td><strong>Digital Clinical History</strong></td>
<td>Set of clinical data which gather the relevant healthcare information, ensuring security, confidentiality and control</td>
<td>&gt; To access a set of personal data and images from a patient (assistive use)</td>
<td>&gt; To access personal clinical reports and observe who is having access</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; To support decision making in clinical practice</td>
<td>&gt; Improved healthcare delivery outside their usual geographical setting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; Improved coordination among different healthcare levels</td>
<td>&gt; To select a set of data inaccessible for other regions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; To improve the access to retrieval</td>
<td></td>
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</tr>
<tr>
<td>Electronic prescription</td>
<td>Data repository available from any national pharmacy</td>
<td>&gt; Drug prescription using ICTs &lt;br&gt;Less bureaucratic areas  &lt;br&gt;More time for healthcare delivery &lt;br&gt;Rational use of medication &lt;br&gt;Facilitates epidemiological data analysis</td>
<td>&gt; Medication delivery using ICTs &lt;br&gt;Reduced visits to healthcare facilities</td>
</tr>
<tr>
<td>Appointment via Internet</td>
<td>Service to schedule an appointment using the Internet</td>
<td></td>
<td>&gt; More agile service for making an appointment &lt;br&gt;Confer other programmed appointments &lt;br&gt;Reception of messages via SMS</td>
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<td>Health portals and social web</td>
<td>&gt; Blogs, health portals and collaboration in forums</td>
<td>&gt; New role as author of information</td>
<td>&gt; To facilitate informed decision making</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; New opportunity to guarantee the access to reliable health information</td>
<td>&gt; Population and patient empowerment</td>
</tr>
<tr>
<td>Risk management and patient security</td>
<td>&gt; Databases which gather adverse effects</td>
<td>&gt; Reduction of medication mistakes</td>
<td>&gt; Improved health care delivery</td>
</tr>
<tr>
<td>(1/2)</td>
<td></td>
<td>&gt; More accurate measurement of interventions at sanitary and economic level</td>
<td>&gt; Reduction of adverse effects</td>
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PAHO HEALTH PROGRAM – ICTs for improving public health in the region of the Americas
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<tr>
<td>Risk management and patient security (2/2)</td>
<td>&gt; Improved prioritization of available resources</td>
<td>&gt; More time for complex decision making</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>&gt; To guarantee that patient benefits will remain equal to conventional healthcare</td>
<td>&gt; Improved access to specialists</td>
</tr>
<tr>
<td></td>
<td>Development of personal portable systems and other ICT tools</td>
<td>&gt; More time for healthcare delivery</td>
<td>&gt; Less wait time</td>
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<td></td>
<td></td>
<td>&gt; To deliver a more personalized healthcare</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; Best use of geographical limitations</td>
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<tr>
<td>Regional Call Centre</td>
<td>&gt; Call Centre</td>
<td>&gt; Improved time effectiveness</td>
<td>&gt; To improve information access of individuals to healthcare services</td>
</tr>
<tr>
<td>Digitalization of clinical and administrative documentation</td>
<td>&gt; Clinical documentation database</td>
<td>&gt; To improve efficacy and effectiveness of processes</td>
<td>&gt; To ease the access and retrieval of clinical documentation</td>
</tr>
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Vision

Universal Access to Health Services in the Information Age
Goal

To improve Public Health in the Americas through the use of innovative ICT tools and methodologies
Expected Results

• **Web-based data base** of “ICT solutions for Public Health” and “Healthcare Management” implemented in the context of PAHO Web 2.0 Strategy;

• **eHealth, Web and Mobile Strategies** implemented in “Health Care Organizations” and in “Public Health Institutions” of the Americas Region;

• **Knowledge and Information Sharing** within and among disperse and/or disadvantaged populations, people and public health institutions; and

• **Patients and people empowered** through the use of ICT tools.
Expected results

- Public and Private Partnerships established as part of PAHO/WHO technical cooperation projects;
- People, public health workers and public health institutions from disperse and/or disadvantage populations more connected;
- “eHealth Technical cooperation projects” established within member states;
Indicators

• **PAHO/WHO eHealth portal** with access to a Web-based data base of “ICT solutions for Public Health” and for “Healthcare Management;”

• **Model of** eHealth, Web and Mobile Strategies for “Health Care Organizations” and for “Public Health Institutions” developed;

• **Communities of practices** to improve Knowledge and Information Sharing within and among disperse and/or disadvantaged populations, people and public health institutions; and

• **Metrics** on the use of ICT tools in Patients.
Indicators

- **Terms of collaboration** in eHealth with Public and Private institutions;
- **Metrics on the use of Web-based Collaboration tools** by People, public health workers and public health institutions from disperse and/or disadvantaged populations; and
- **eHealth Technical cooperation projects**.
Corporate Initiatives

PAHO Corporate Initiatives:
- Regional Observatory of Health
- Intra-extranet
- Web conference
- Pan American Journal of Public Health
- Virtual Health Library
- Desктопs
- Web 2.0
- Social media
- Virtual Campus
- PAHO Institutional Repository

WHO Corporate Initiatives:
- Global Observatory of Health
- Web 2.0
- Global Health Library
- Global Institutional Repository
- Multilingualism

PAHO HEALTH Program - ICT tools to improve Public Health in the Americas Region