CHRONIC DISEASE MANAGEMENT: TELEFONICA VISION AND EXPERIENCE

Country Workshop: mHealth in Spain

WSIS FORUM 2013
13 - 17 May, Geneva
Technology is changing the way citizens are in contact with healthcare services…

users change…

Anytime…

… through new connected devices …

… using different channels and multiple formats.

… Anywhere…

Voice

Video

Social nets
Smartphones y Tablets have captured the end user...

Spain is the 2nd country with most smartphone and tablet penetration.

This is a very powerful communication channel with the patient, and it is part of our daily life.

SOURCE: Google “Our Mobile Planet: Global Smartphone User”, 2012
The health-social care sector recognizes the need for a true transformation

<table>
<thead>
<tr>
<th>Physical contact</th>
<th>Ubiquitous / “mobile”</th>
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<tbody>
<tr>
<td>Reactive medicine</td>
<td>Proactive, continuous</td>
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<tr>
<td>Passive patient</td>
<td>Active and informed patient</td>
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<tr>
<td>Focus on treatment</td>
<td>Focused on prevention and care</td>
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<tr>
<td>Fragmented</td>
<td>Connected and integrated</td>
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<tr>
<td>Generating data</td>
<td>Creating “intelligence”</td>
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<tr>
<td>Assist dependents</td>
<td>Promote independent living</td>
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- Dramatic change, “chronic/ dependency care” driven transformation
- Cultural transformation – patient centered vs. disease/ professional centered
- Significant role for ICT industry (technology/ mobile/ internet/ “digital world”) to play in the transformation, “a new eHealth wave”
Chronic Disease Management is a global priority, and will be the main driver of change in health systems in the world

- 88% of people above 65 years suffer a chronic disease*, nearly all people with high-dependency suffer as well a long term condition
- 70-80% of healthcare costs are linked to chronic diseases like diabetes, heart conditions, pulmonary diseases, etc.
- 2/3 of the growth in healthcare costs are due to growth in chronic disease prevalence
- 2/3 of the deaths are due to chronic diseases


These trends are true across the world, “the chronic disease epidemic”, for developed and for developing countries

In Spain, there is a countrywide push towards remote chronic patient management.
Our aim is to support the transformation using the possibilities of IT.
Remote Patient Management
Risk & Complexity Stratification

Distribution of the chronic population

- **5%** High
- **15%** Medium
- **80%** Low

Risk Level*

**Case Management**
- Intensive monitoring by health professionals.
- Very frequent/Daily monitoring.
- Guarantee for no error in data input (automatic sending of biometrics).
- High treatment compliance.

**Disease Management**
- Moderate monitoring by health professionals.
- Frequent/Weekly monitoring.
- Efficient usage of in-person medical appointments.

**Self-care Support**
- Periodic health control (manual data input).
- Access to health content and preventive initiatives.
- Incentives to promote treatment compliance.

*Note: Based on Kaiser Permanente’s model
Functional and technical Model

Patient SEGMENTATION in three risk levels has been made, where the most appropriate procedure should be applied to each segment.

### Education and self-care support

<table>
<thead>
<tr>
<th>Dedicated equipment</th>
<th>Biometric devices</th>
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<tbody>
<tr>
<td>Tablet Pc</td>
<td>Call center with proactive follow-up of the patients according to clinical protocols</td>
</tr>
<tr>
<td>Web portal</td>
<td>Mobile</td>
</tr>
<tr>
<td>Mobile education and promotion of healthy lifestyle. Patient School</td>
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</tbody>
</table>

- **High risk**
- **Medium risk**
- **Low risk**
Ease of use for the patient

- Proactive and customized health plan
- Biometrics
- Educational content
- Questionnaire
- Communication with professionals
- Calendar and Daily agenda
- Health Monitoring
Ease of use for the healthcare professional

<table>
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<tr>
<th>Reminders for compliance with the care plan</th>
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<td>Medical services on available resources</td>
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<td>Pathology based programs</td>
</tr>
<tr>
<td>Scheduling of patient monitoring</td>
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<tr>
<td>Predefined action protocols</td>
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</table>
Proyecto Valcrònic: Real experience with 12,000 patients

Project plan

PHASE 0
- Build teams
- High level scope definition

PHASE 1: PRE-SERVICE
- Care model: organizational, process and functional
- System integration
- Change management

Feb 2012
- Patient management under the new care model
  - Service operation and support by Telefónica (remote and in-situ)
  - Analysis of results and KPIs
- Definition of the deployment plan / Business model

Jan-Feb 2013
- Service extension (patients, pathologies)

Project scope

TOTAL: 12,000 patients

3 months
6 months
10-12 months

Analysis of results and KPIs

INDICADORES PRINCIPALES

1. Frecuentación en Atención Primaria (AP)
2. Frecuentación en Urgencias Hospital (URGH)
3. Frecuentación en Urgencias No Hospitalarias (URGEH)
4. Ingreso Hospitalarios
5. Estancia media
6. Visitas domiciliarias
7. Interconsultas
8. Activación de la actuación compartida
9. Satisfacción (pacientes y profesionales)
10. Mortalidad

16 care programmes (mix risk-pathology)

1. Diabetes
2. Hypertension
3. COPD
4. Heart Failure

Dirección de e-Health España
Nuevos Negocios
Impact

1. Improve quality of care for chronic patients
   - Improving communication with the patient (face to face and remote follow up)
   - Enabling access to educational and clinical contents
   - Allowing self-control and self-management of chronic diseases

2. Effectiveness and efficiency of care
   - Better performance of health center visits
   - Lowering bureaucratic or low performance consultations

3. Anticipation
   - Preventing and avoiding hospital admissions (cost optimization)

4. Better Communication
   - Developing new ways communication among all the agents involved
PROYECTO ICOR: Clinical study with 200 patients with Chronic Heart Failure

1. FEASIBILITY STUDY

- **OBJECTIVE:** Evaluate the feasibility, patient satisfaction and effectiveness of using telemedicine in stable patients who suffer from Chronic Heart Failure

- **SCOPE:**
  - 30 patients (70 - 74 years). Duration: 2 months (Sep - Nov 2010)
  - Relationship of patients with technology: 20.7% none, 48.3% basic use (mobile), 31.0% advanced use (PC)

- **RESULTS:**
  - Overall satisfaction: between 9.1 and 9.5 over 10 (100% of the patients scored more than 7)
  - > 81% of patients prefer the use of a telemedicine system than the usual care model

2. CLINICAL STUDY

- **OBJECTIVE:** Evaluate the efficacy, in terms of cost/benefit, effectiveness and impact of an intervention based on telemedicine.

- **SCOPE:** 200 patients (100 telemonitored + 100 control). Duration: 24 months

- Patients enrolled in the programme are provided with an interactive screen, a blood pressure monitor and a digital scale.

- Patients send information regarding their health condition to the medical team, who remotely monitor their disease.
- The medical team follows up the evolution of each patient, being able to anticipate clinical decompensations, which without this system would probably lead to a hospital admission.
Results

- 77% Reduction in patient decompensation
- 55% Reduction in hospitalization rate
- 64% Reduction in the avg. hospitalization time
- 34% Reduction in mortality
- 68% Reduction in patient cost

(*) Resultados preliminares del ensayo clínico proyecto ICOR, en el Hospital del Mar de Barcelona, dirigido por el Dr. Josep Comín.
Conclusions from proyecto ICOR

• The nurse is key

• Telemonitoring is not enough, it is an enabler for a care process redesign is a must

• Patient satisfaction levels > 95%

• IT and medical professionals cooperations is key