3rd Greek e-health ecosystem meeting

30/9-1/10 2014, Athens, Greece

Implementation of intergrated ICT based health services for chronic diseases management in the Region of Thessaly, Greece

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Optimal care will require new models of service provision

- Information and Communication Technologies (ICTs) have an ever-growing impact on our working and private lives and the healthcare sector is no exception

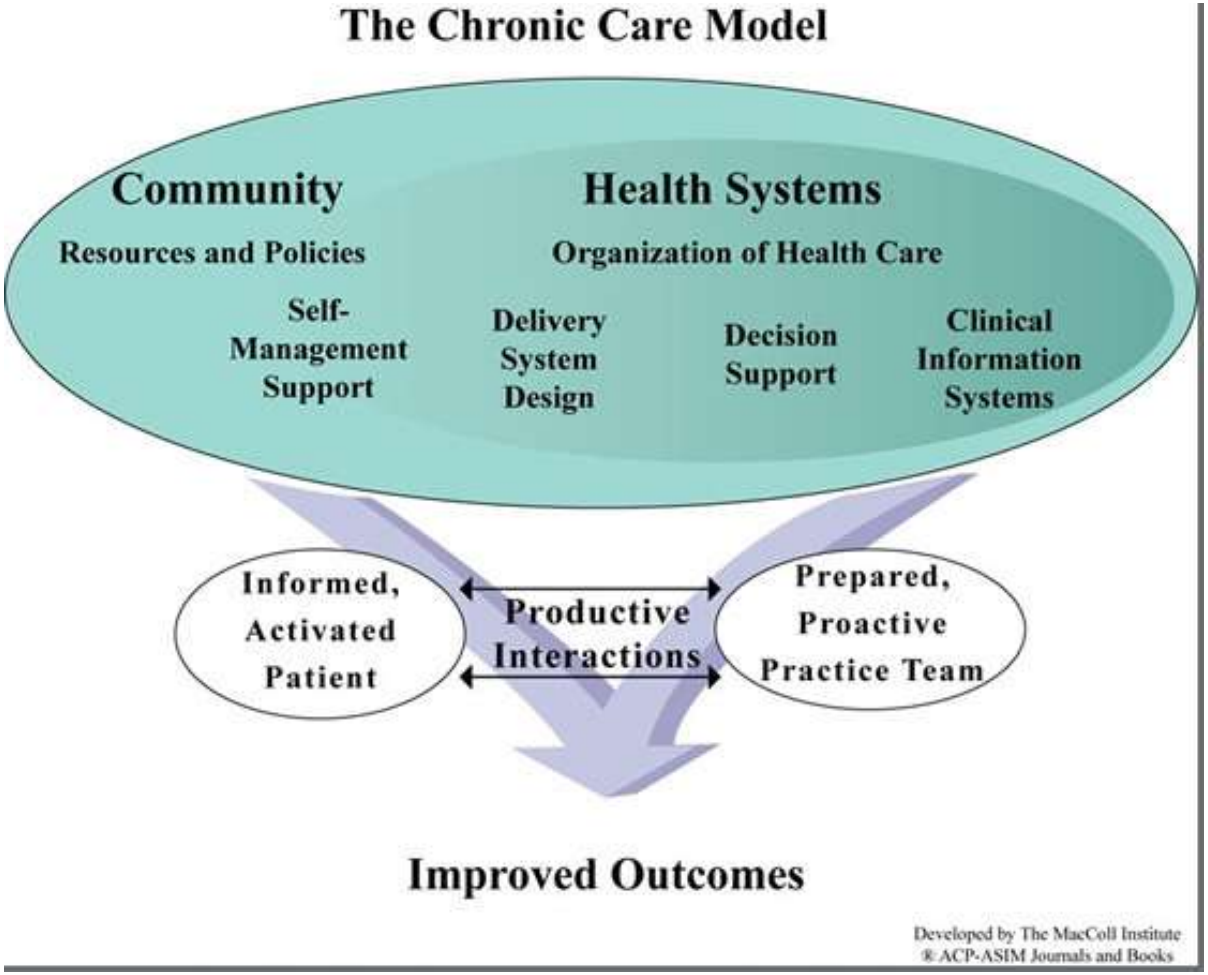
- Used appropriately, the tools and services which contribute to eHealth provide better, more efficient healthcare services for all.

- ICT in HEALTH/CARE SECTOR could become the catalyst for the re-formation of the traditional health care models

- However “old organisation with new equipment means more costly organisation”!

Reformation of the current care model is required

The ideal chronic care model requires coordinated social and health care, in cooperation with the patients and the use of technology



Provision of social and health services in Greece is usually parallel and not coordinated:

- **Health Care is provided by the Regional Health Authorities** via the hospitals and their outpatients departments , their primary health centers (rural and the new established urban settings from ΙΚΑ) and the affiliated private practice doctors (ΕΟΠΠΥ).
- **Social Care is provided by the Municipalites via:**

  -***ΚΑΠΗ*** και Κέντρα Ημερήσιας Φροντίδας Ηλικιωμένων - ΚΗΦΗ (elderly supporting centers)

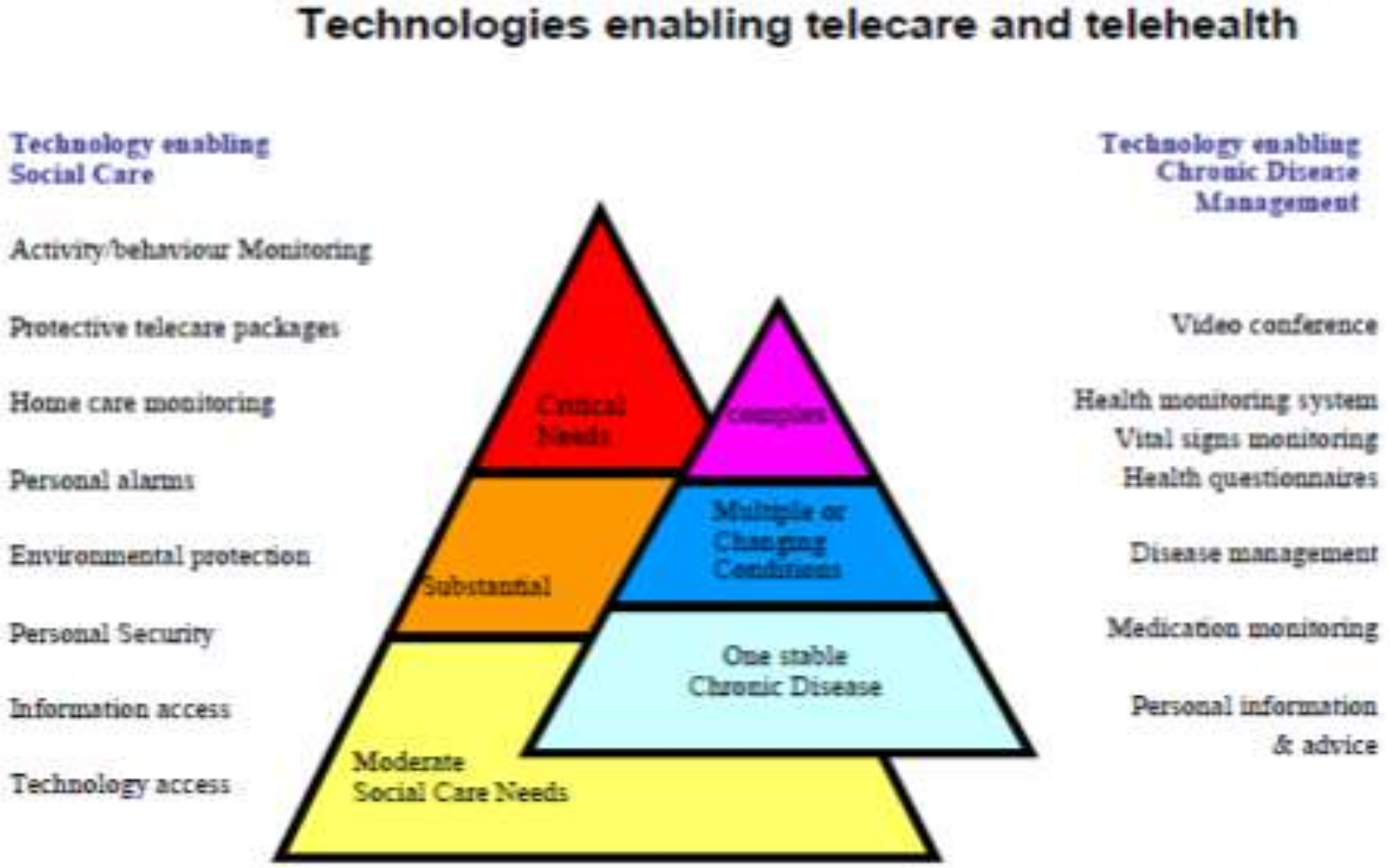
  -"Help at Home" service

  -***Municipal Social pharmacies*** (δημοτικά κοινωνικά φαρμακεία)

  -***Municipal outpatient health centers*** (Δημοτικά ιατρεία)

  -***ROMA*** health and social centers (ιατροκοινωνικά κέντρα ROMA)

Using technology the social and health services can be coordinated



Ref: CommonWell – Independent project

Based on the “best practices and current evidence” the greek e- health ecosystem needs to address the challenges in order to ensure large scale deployment of the e-health services:

- **Clinical guidelines in e-health clinical evidence**
- **Privacy Issues**
- **Security**
- **Liability**
- **Cost Effectiveness and reimbursement of e-care/e-health services**
- **Interoperability /standards**
- **Infrastructures via structural funds (Σ.Ε.Σ. : «νέο ΕΣΠΑ»)**

“Know-how” and “Best Practices” from the Region of Thessaly:

National Pilot Projects - EU co-funded :

Renewing Health
and
United for Health
for the evaluation and development of telehealth services

5η Υ.Πε Θεσσαλίας & Στερεάς Ελλάδας

ΔΗΜΟΣ ΤΡΙΚΚΑΙΩΝ
ΑΣΚΛΗΠΙΟΣ - ΤΡΙΚΚΗ

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RENEWING HeALTH

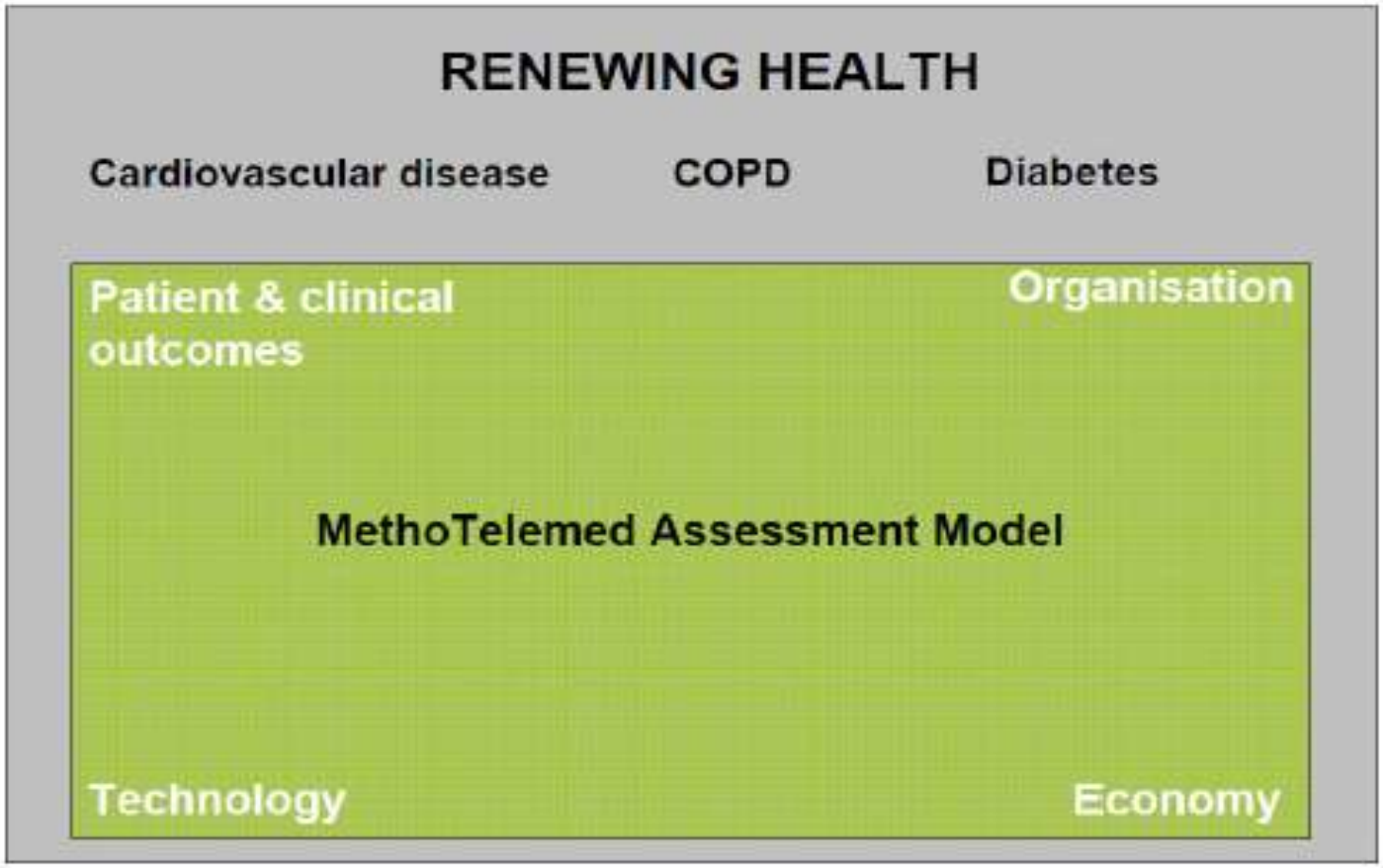
REgioNs of Europe WorkINg toGether for HEALTH

- **Size and Impact :**
  - **20 partners + 5 Competence Centres**
  - **More than 7.000 patients recruited**
  - **Budget of 14 millions Euros**
- **Multicultural/multinational character:**
  - **Partners come from different EU countries covering Northern, Central and Southern Europe covering the various health systems models**
- **Evaluation methodology:**
  - **Randomised Controlled Trials (pragmatic)**
  - **MAST (outcome of Methotelemed study – EC)**

www.renewinghealth.eu

ICTPSP
ICT POLICY SUPPORT PROGRAMME

Comprehensive evaluation model



- **United4Health objectives:**

- Collect and assess data at **large scale** from across **many regions** and institutions in Europe that can be aggregated at European level; thus providing data.

- **Adapt** clinically validated **services from some regions** and institutions in Europe (Renewing Health partners) **in the local setting of a large number of other regions** and institutions (United4Health partners).

- **Maximize the transferability** of services and knowledge among European healthcare providers at such large scale and in close collaboration.

RENEWING HEALTH
REgIoNs of Europe WorkINg toGether for HEALTH

Clusters 2, 4, 7: Diabetes, COPD, CVD - Thessaly (GR)

Long-term telemonitoring of patients with type 2 diabetes mellitus

Renewing Health multicenter trial

cluster 2

Pilot site / Type of service	PATHOLOGY	VENETO	SYDDANMARK	NORRBOTTEN	NORTHERN NORWAY	CATALONIA	SOUTH KARELIA	THESSALY	CARINTHIA	BERLIN	Number of patients involved
Cluster 2 Life-long monitoring	DIABETE	X						X		X	925

Primary outcomes

- ***HbA1c changes***
- ***Health related quality of life (QoL)*** assessed by a generic (SF36v2) questionnaire

Secondary outcomes

- ***Economic Evaluation*** (Cost-Effective Analysis-Cost Utility Analysis)
- *Patients' Acceptance-Satisfaction*
- *Nutrition habits*
- *Physical activity*

HBA1c levels results

	mean HBA1c (%)		
	1st month	**12th month**	**p value**
■ ***CONTROL***	8.62 (1.43)	7.77 (0.78)	p=**0.000 (**Wilcoxon Test)
■ **INTERVENTION**	8.55 (1.38)	7.14 (0.61)	p=**0.000 (**Wilcoxon Test)

Mean differences (SD) in HBA1c levels at 1st and 12 month between control and intervention group

	Control	Intervention	p value
ΔHBA1c	0.85 (1.08)	1.41 (1.27)	p=0.001 (a)

a= Mann-Whitney U

Physical component scale of QoL (SF36v2 – PCS) in control and intervention group at 1st and 12th month

	mean score		
	1st month	**12th month**	**p value**
■ **CONTROL**	50.99 *(6.12)*	49.73 (5.08)	**p= 0.001 (**Wilcoxon Test)
■ **INTERVENTION**	52.01 (4.34)	53.19 (2.97)	p=0.053 (Wilcoxon Test)

(Range 0-100 , increase in scores denotes improvement)

Mental component scale of QoL (SF36V2 – MCS) in control and intervention group at 1st and 12th month

	mean scores		
	1st month	**12th month**	**p value**
■ **CONTROL**	48.19 (10.17)	44.95 (8.90)	**p= 0,000** (Wilcoxon Test)
■ **INTERVENTION**	50.04 (8.42)	53.50(6.54)	**p= 0,000** (Wilcoxon Test)

(Range 0-100 , increase in score denotes improvement)

Renewing Health Diabetes type 2 RCT in Thessaly
Preliminary Conclusions

- Our preliminary results indicate that home telemonitoring is more effective in improving glycemic control and health related Quality of Life in DMT2 patients compared with the usual care.

- Usual care model needs to address the aspects related to the health related Quality of Life in DMT2 patients , and not only focus in improving glycemic control.

The average cost per patient was €986.26 for the (I) group and €494.85 for the (C) control based on 2011 prices.
In Central Greece, health utility results revealed that the intervention increases the HRQoL by approximately 0.11 points (p=0.000). This is a significant increase in actual numbers as well since the SF-6D ranges from 0.0 to 1.0.

- **SF6D health utility scores for diabetic patients**

Outcome	Intervention			Control			Mean after 12 months between groups (CI 95%)
	Baseline	After 12 months	p-value	Baseline	After 12 months	p-value	
	Mean (SD)			Mean (SD)			
Health utility calculated with SF6D	*0.74 (0.11)*	*0.78 (0.10)*	*0.000*	*0.72 (0.12)*	*0.67 (0.09)*	*0.000*	*0.111 (0.078, 0.144) p=0.000*

Economic evaluation

- Therefore, due to the effectiveness of the telemedicine intervention in this pilot an incremental cost-effectiveness ratio (ICER) analysis was performed in order to assess it in terms of both costs and benefits.
- The ICER calculated for the intervention in the diabetic group was €5,460.11 per QALY, indicating that even though telemedicine is more expensive compared to usual care, it is a cost-effective choice, since €5,460.11 < 3 X the GDP per capita in Greece (€18,625 for 2011) .
- This indicates that even though telemedicine is more expensive compared to usual care, it is a cost-effective choice, especially given the the use national tariff for usual care costs which is in favour of the control group, given the underestimated national tariffs prices.

Collaboration/Funding:

- European Commission
- Greek Ministry of Health and Social Welfare
- Prefecture of Thessaly, Greece
- Intermunicipal Digital Community of Central Greece
- Municipality of Trikala, Greece
- e-trikala SA, Municipal SME
- Vodafone GR
- ICT SMEs

Ευρωπαϊκή Επιτροπή

ICT PSP
ICT POLICY SUPPORT PROGRAMME

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
ΠΕΡΙΦΕΡΕΙΑ ΘΕΣΣΑΛΙΑΣ

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Thank you for your attention

ΕΥΧΑΡΙΣΤΩ

ΓΙΑ ΤΗΝ ΠΡΟΣΟΧΗ ΣΑΣ