

OECD Workshop

e-Health service for elderly people

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I. Korea Health Environment

1. Health Resource
2. Change of Population Structure

▶ Rapid increase of healthcare resource utilization

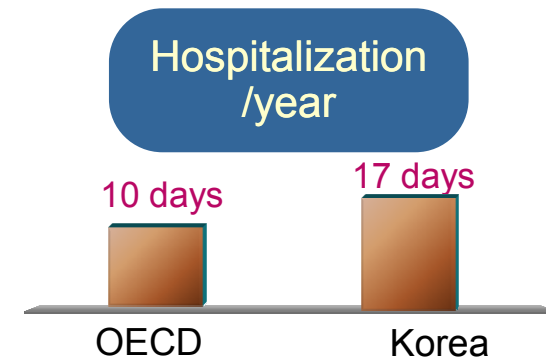
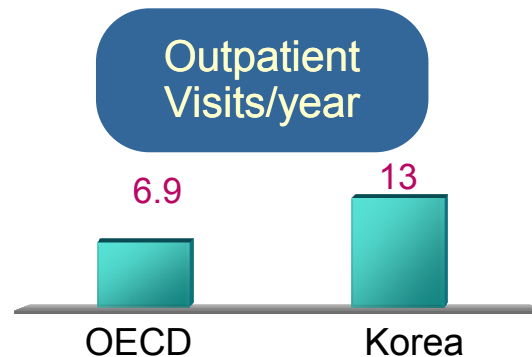
Healthcare Expenditure

- Increase rate/person in past 10 year ('97~'07) : Korea 8.7%, OECE Average 4%

	2000	2001	2002	2003	2004	2005	2006	2007	2008
. National health Expenditure(BN USD)	28.9	34.6	37.1	41.3	44.6	49.6	55.3	61.8	66.7
. Increase Rate (year on year, %)	17.4	19.7	7.3	11.3	8.0	11.2	11.6	11.8	7.9
. Proportion in GDP (%)	4.8	5.3	5.1	5.4	5.4	5.7	6.1	6.3	6.5
OECD Average(%)	7.8	8.1	8.4	8.8	8.8	8.9	8.9	8.9	9.0

Healthcare Resource Utilization

- Resource utilization is larger than other OECD countries and keeps increasing



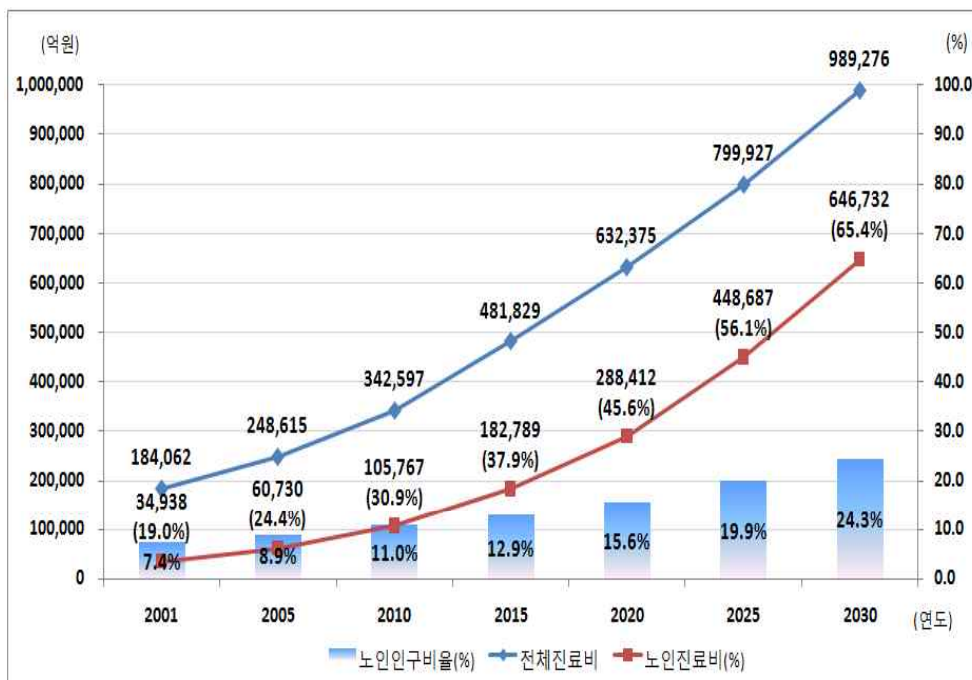
※ Source : Korean Ministry of Health & Welfare, 2011

2. Change of Population Structure

► Needs for new healthcare service model for elderly people

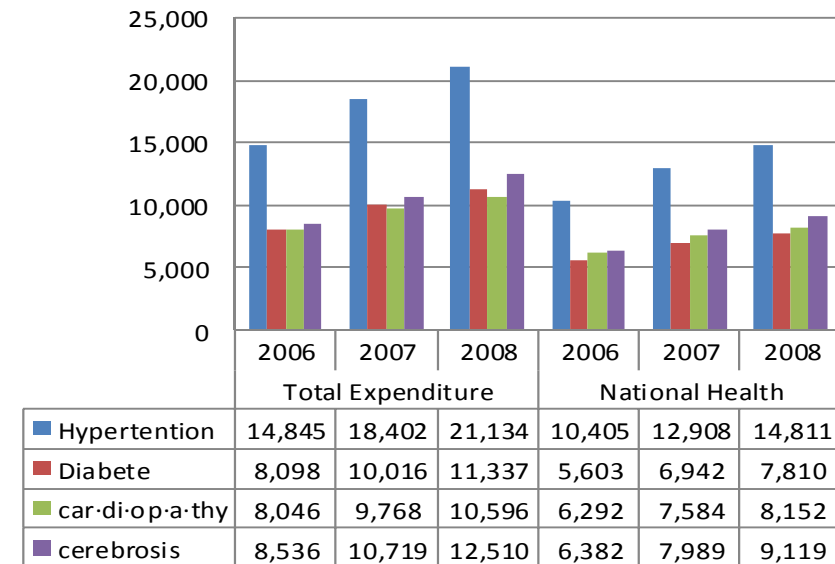
→ Only 9.9%(elderly people over 65 year) spent 31.4%(\$12B) of total national health insurance ('09)

Population & Healthcare Expenditure



Expenditure for Chronic Disease

National Health Insurance Expenditure per Chronic Disease
(Unit : 0.1 MN USD)



Finally has the lowest birth rate in the world after steady decline of past 20 years

→ Number of births(10K) : 101('70) → 87('80) → 66('90) → 64('00) → 44('05) → 47('08)

※ Source : Korean Ministry of Health & Welfare, 2011



II . Case – 1 (Public)

1. Service Model
2. Background
3. Key Features
4. Benefit
5. Operation Structure

▶ Home Safety Care System for elderly people who live alone



▶ Korea government launched new service model for elderly people

The number of people who live alone is 22.4% of total elderly people and be on the steady increase from 1,000K(2009) to 1,060K(2011)
(National Statistical Office)

MOHW(Ministry of Health & Welfare) launched Home Safety Care Service In 2008 and expanding the regional coverage (This service stands on the 2 of article 27 of elderly people welfare law)

2008	2009	2010	2011
3 city/district (5,550 houses)	8 city/district (10,400 houses)	15 city/district (13,914 houses)	15 city/districts (18,700 houses)

▶ **Detecting System and Support Center**

1. Home sensors and gateway to transmit the elderly people's status data

- Activity detector**
- Go out button**
- Gas detector**
- Fire detector**

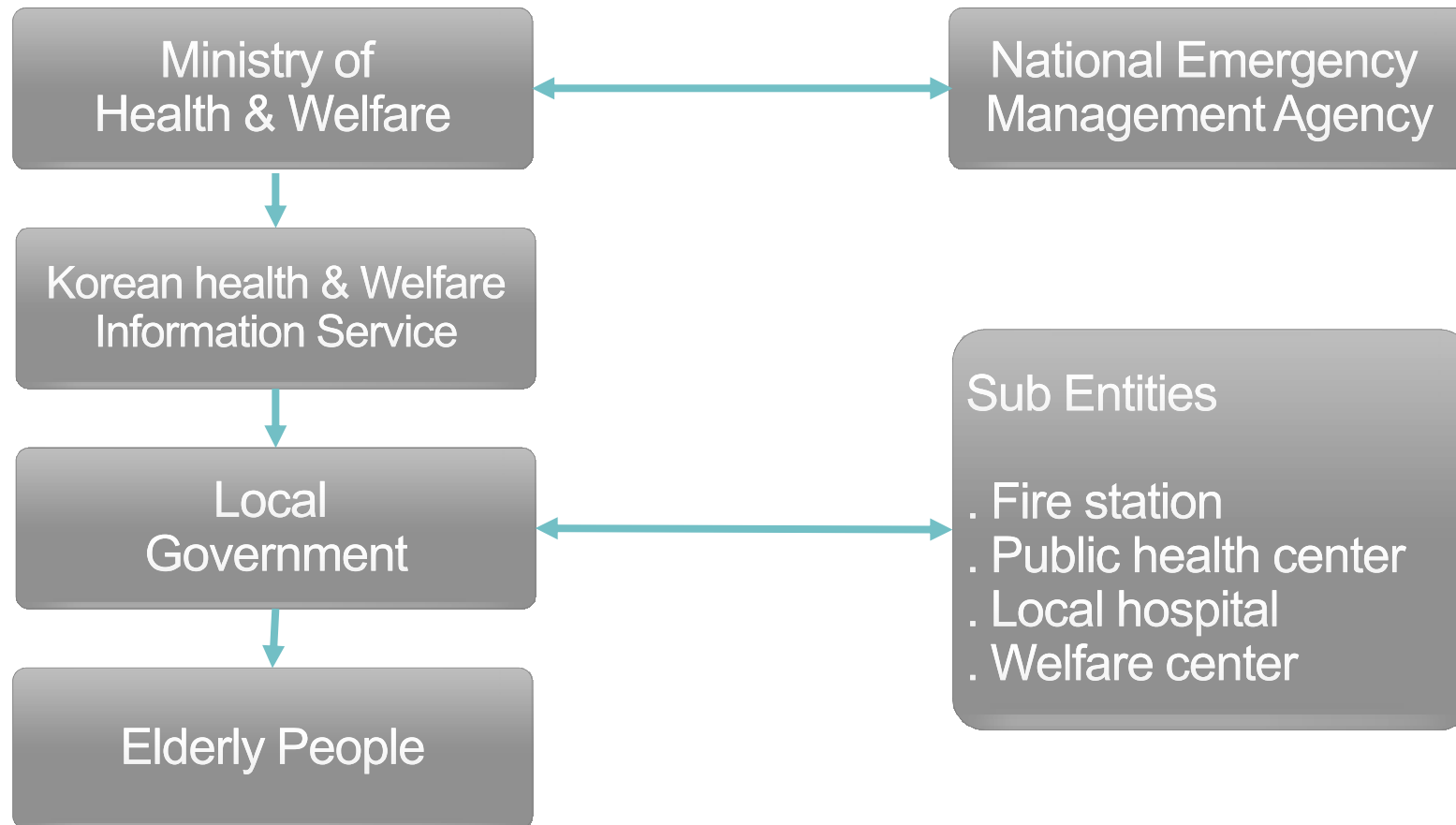
2. local support center

- Collect and manage the information of elderly people who live alone**
- Notice and notify emergency situation**
- Monitor the data from home system**
- Visit and consult with elderly people**

3. Statistics and Report

- 1. Monitor the elderly people's status and give the immediate reply thereby easing the elderly people's mind**
- 2. Prevent danger through an accurate estimate about emergency situation**
- 3. Improve the efficiency of caregiver in local support center**
 - Easily make and review reports about consultation/emergency history/ current environment of elderly people in their region**
 - Reduce the manual work to collect and manage data**
- 4. Reduce the cost for system operation by integration with the existing elderly people care system and expansion of target houses**
- 5. Improve the service quality for elderly people through the combination health system and fire protection system**

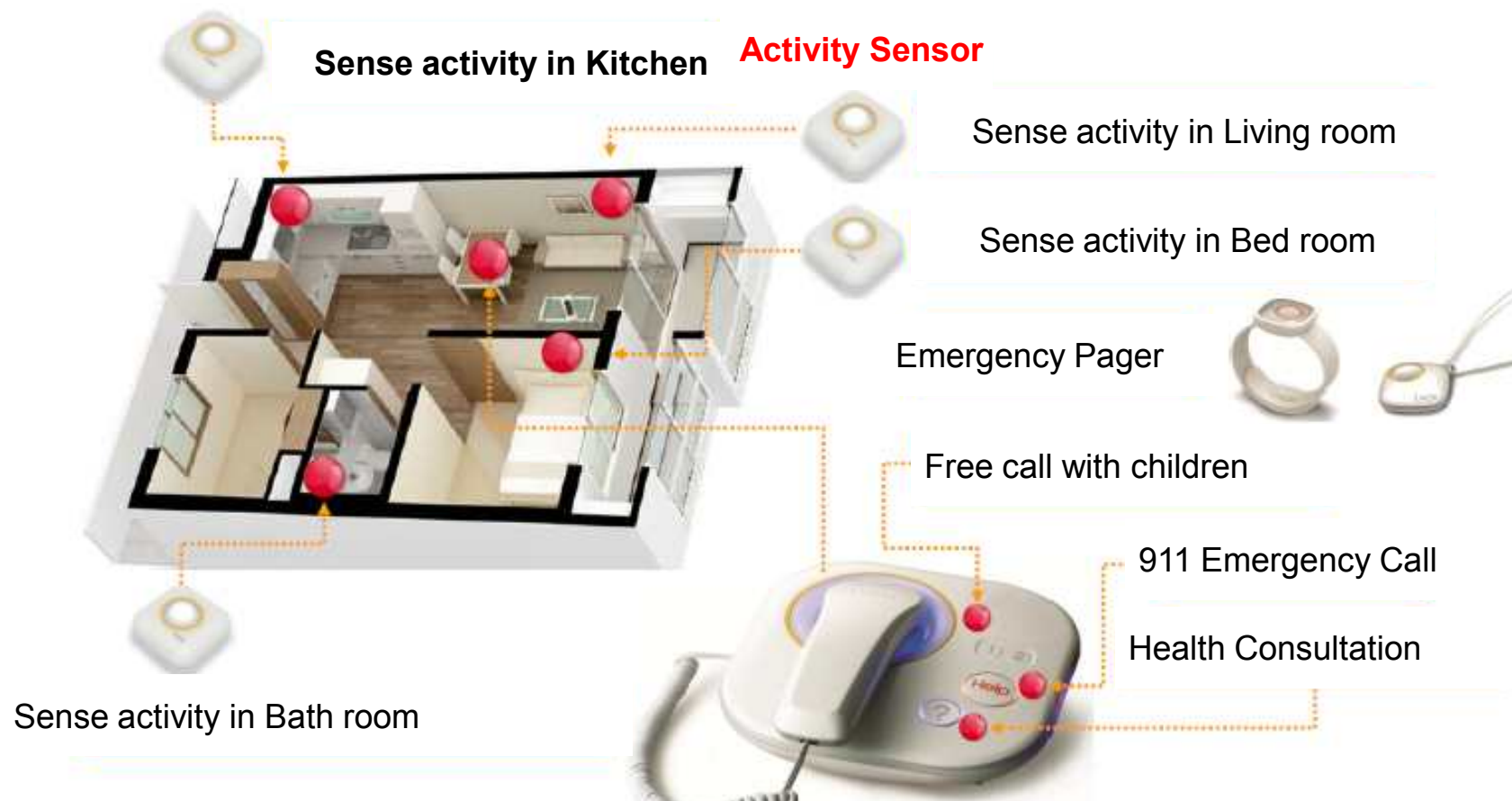
- ▶ **Health, Administration, Emergency related government entities cooperate for this service**



III. Case – 2 (Private)

- 1. Service Model
- 2. Key Feature
- 3. Pricing

- ▶ **Telecare Service for parents monitor parent's status and inform it to their son & daughter living separately**



- ▶ **Service can be divided into 2 parts, one part is for Son & daughter and another Part is for parents**

Son & Daughter

- Short Text Messaging and Web site service to monitor parent's health status 24 hours a day for 365 days
- Hello to parents with weather information
- Monthly health report about parents
- Send text message to children in parent's emergency situation
- Provide compensation(5,000 USD) in parent's death

Parents

- Nurse/Doctor health consultation with nurse/doctor
- Monthly inquiry call service by nurse
- Provide compensation for health check (every 2 year)
- Support hospital reservation and provide information about hospital
- Counteract service for emergency situation for 365 days
- 300 Min. Free call service with Children and health consultation center
- Emergency call to 119 for 365 days

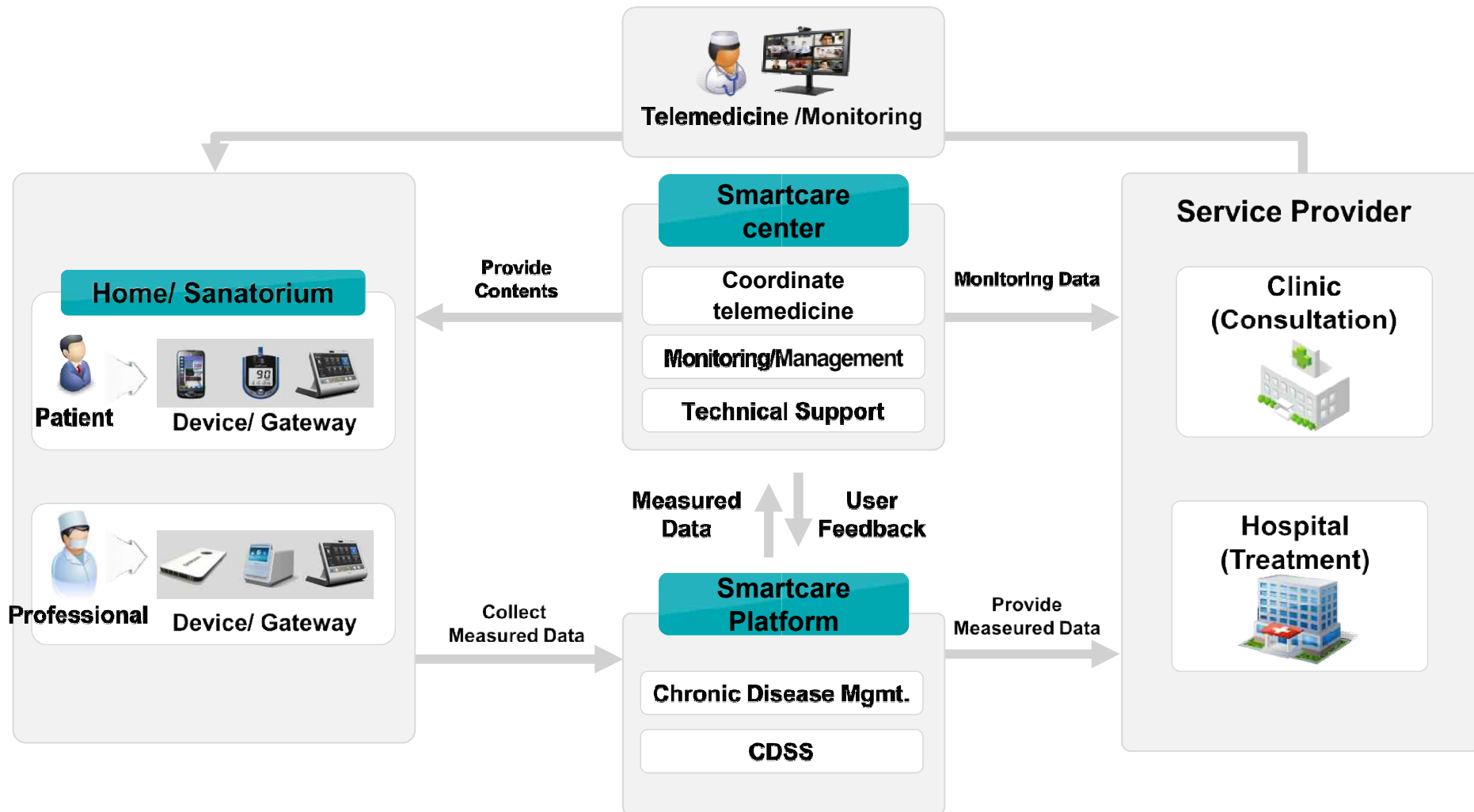
► **Sub services are packaged into 2 products having different price**

Package	Price	Period	Device	Service
A Type	\$16 USD/ Month	3 years	Dedicated Phone 1 Emergency Pager 1	<ul style="list-style-type: none"> - Emergency call to parent - Emergency call to 119 - Simple conversation service - Health consultation call by nurse - Health check call with nurse - Reservation and guide to hospital - Reservation for health check-up - Hello call service
B Type	\$32 USD/ Month	3 years	Dedicated Phone 1 Emergency Pager 1 Activity Tracker 3	<p>Above +</p> <ul style="list-style-type: none"> - Monthly health report - 300 Min. free call with children - Monitoring of sleep/bath/eat - Text messaging to son & daughter in parent's emergency situation - Provide compensation for health check-up/year

III. Case – 3 (Private)

- 1. Service Model
- 2. Trial
- 3. Implication

- ▶ Smartcare service provides diabetes management tools to patient at home and health professionals in sanatorium



- ▶ **“Smartcare” project included 2 type of trials to prove clinical and economic effectiveness of e-health service for diabete management**

- **“SmartCare” Project**

- Duration : 2010.4 ~ 2013.3 (3 years)
- Consortium Participant : SKT (Platform) and other manufacturers (Gateway, Sensors)
- Sponsored by Ministry of Knowledge & Economy

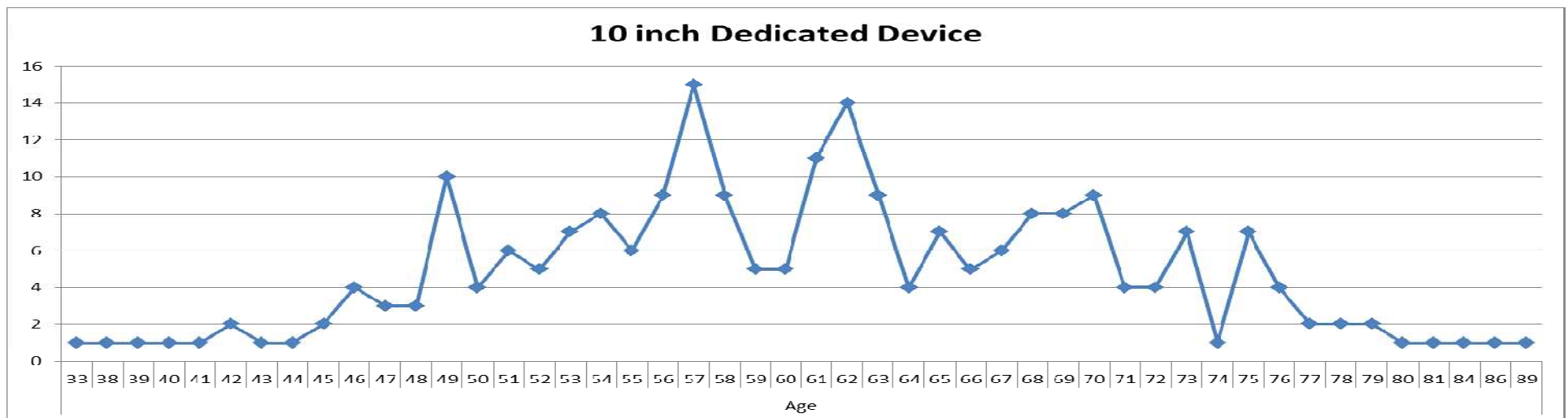
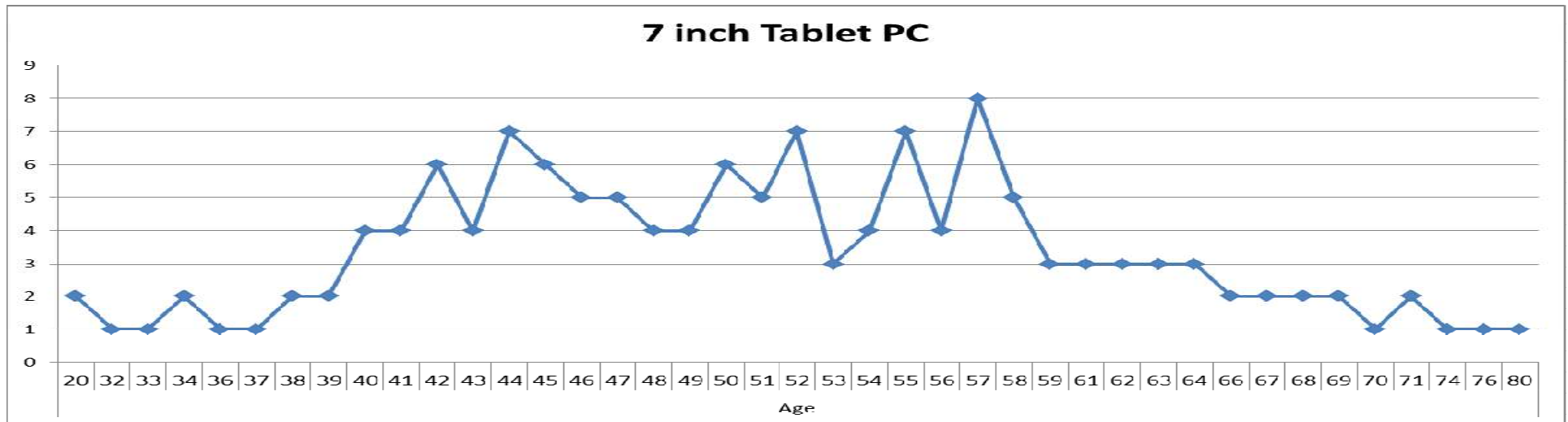
- 1) Clinical Trial (for clinical effectiveness)**

- 3 General Hospitals
- Participation : Type 2 diabetes 538 participant (269 test / 269 control)

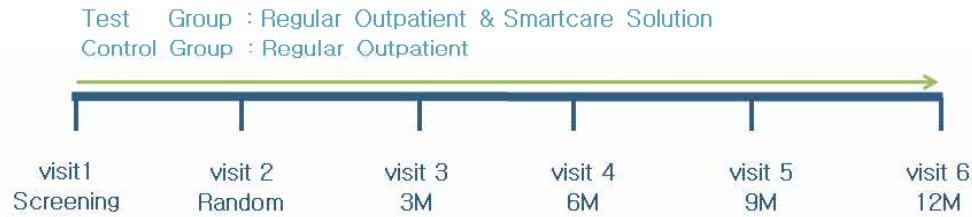
- 2) Practical Trial (for user satisfication)**

- 19 Clinics, 7 Sanitariums
- Care Center : 5 nurses, 2 sports curer, 2 nutritionist, 2 assistant
- Participation : Type 2 diabetes or Hypertension 400 participant (listed in primary care)

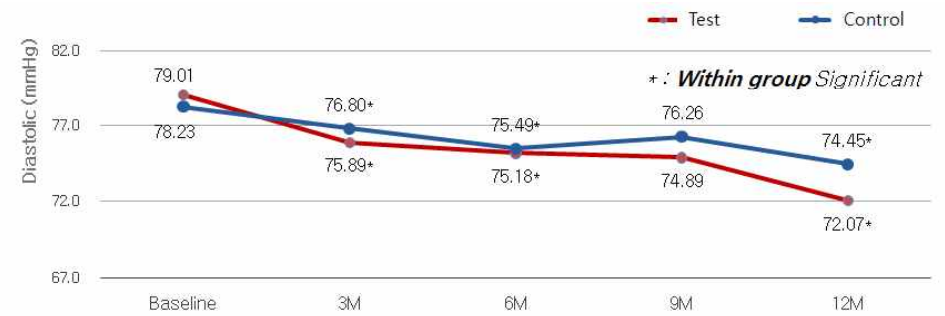
► Different device preference depending on age



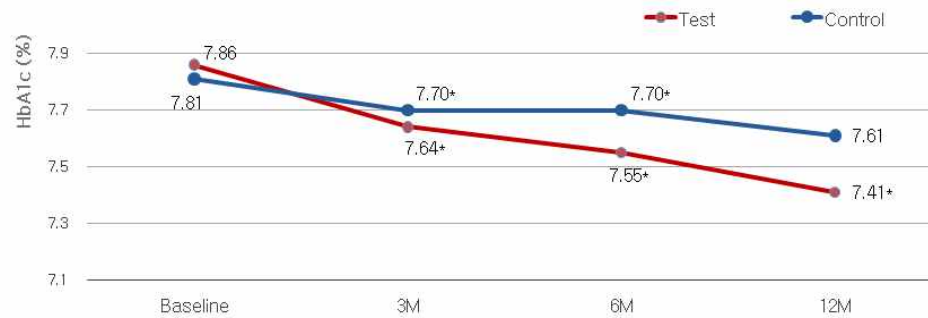
Clinical Trial Process



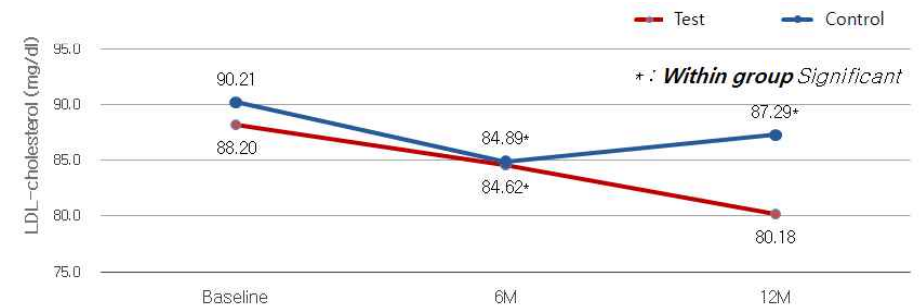
Blood Pressure



HbA1c



LDL Cholesterol



Thank You

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