







Assessing Patient Case Management Services with Adult Congenital Heart Disease Sensed Data

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Partners























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What is Panaceaia-iTV?


- Panaceaia-iTV is a user friendly and personalised home care system enabling the citizens to monitor their health and at the same time to access health information and guidance
- Through Interactive Digital TV it offers:
 - signs and symptoms monitoring
 - clinical advice
 - medication reminders
 - education

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What are the Benefits?


- Reduced rates of Hospitalisation
- Reduce outpatient clinic visits
- Improve quality of life for patients/citizens
- Increase life expectancy for patients
- Financial benefits for Healthcare Systems

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Who are the Users?

- Patients: Users who want to manage their own health and/or need specialized healthcare services
- Clinicians: Doctors & Nurses


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How do Patients use Panaceaia-iTV?

Follow a treatment plan that includes:

- Measurements transmission (blood pressure, weight, oxygen saturation)
- Signal transmission (Electrocardiogram ECG)
- Answers to signs & symptom questions
- Medical advice
- Medication dosage adjustment
- Medication reminders
- Schedule of health management actions
- Educational Material


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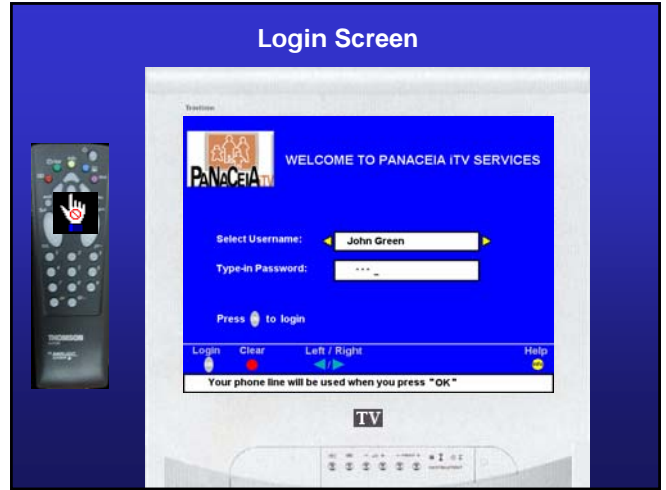
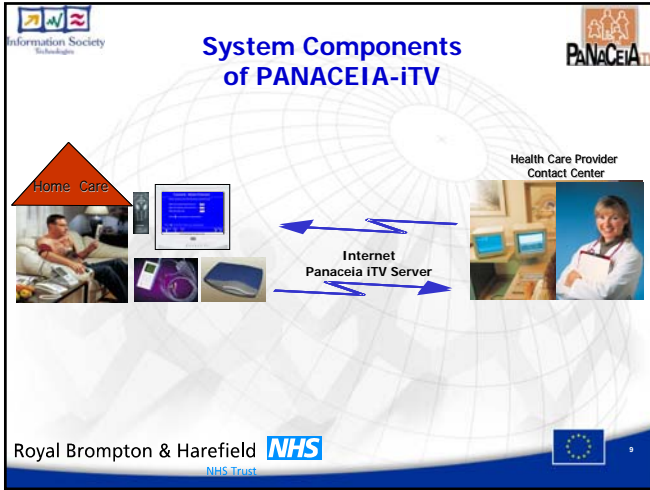
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How do clinicians use Panaceaia-iTV?

Clinicians use Panaceaia-iTV WEB application to:

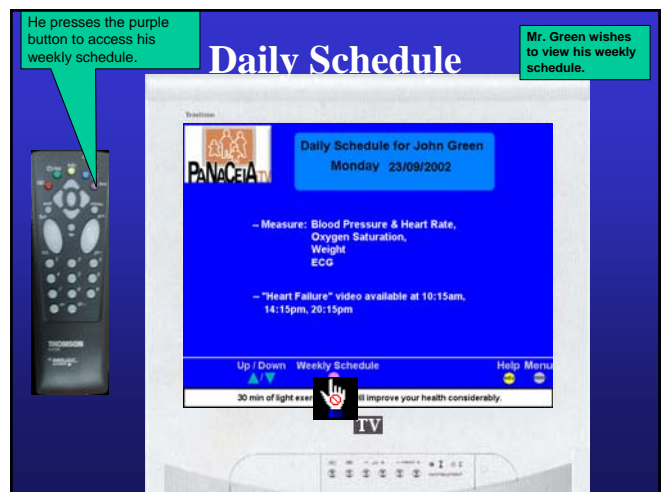
- Evaluate patient condition
- Review patients transmitted data
- Review/Edit patients schedule
- Review and adjust medication dosage
- Provision of Educational Material

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Default Screen

- Each time Mr. Green successfully logs in to the Panacea system, his daily schedule appears.



Blood Pressure Measurement

- Mr. Green gets ready to measure his Blood Pressure.

Main Menu

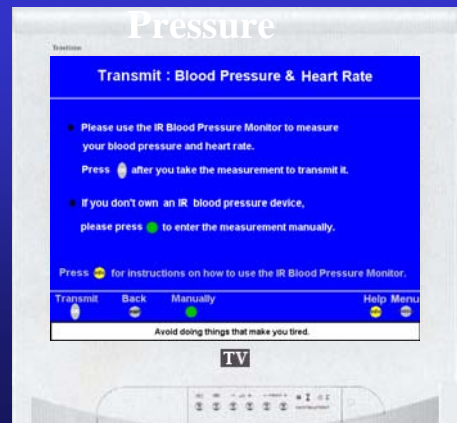


He presses 'OK' to select the desired type of measurement.

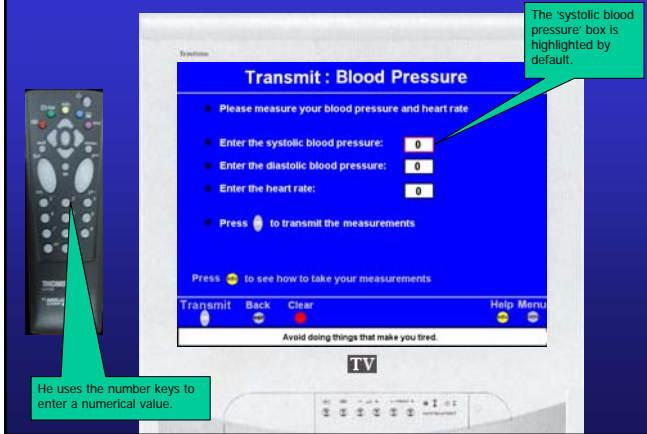
Transmit Measurements



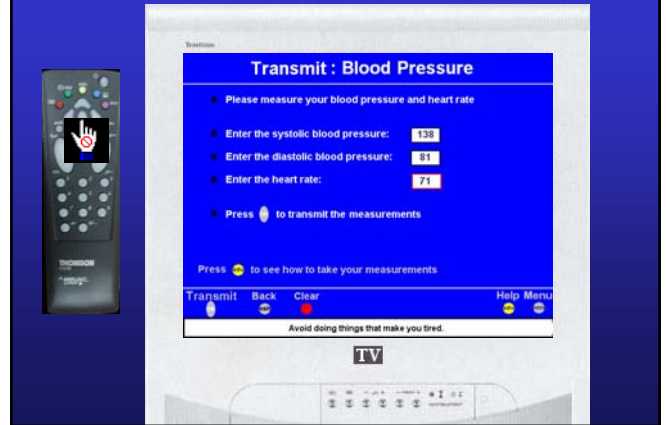
Transmit Measurements - Blood Pressure



Transmit Measurements - Blood Pressure



Transmit Measurements - Blood Pressure

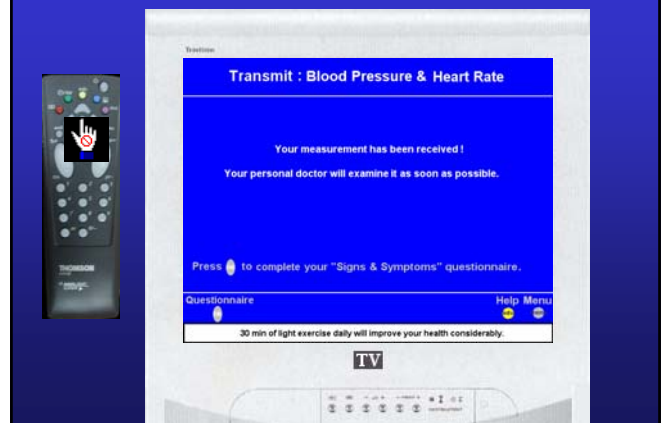


Communication with Panacea Server

The Set Top Box:

- contacts the Panacea Server and submits the Blood Pressure and Heart Rate measurements.
- receives and displays the Panacea Server's reply.

Transmit Measurements - Blood Pressure - Ok



Transmit Measurements - S&S Questions

He uses the left/right arrows to select a different answer.

- The first question is selected by default.
- There is a default answer for all the questions.

Signs & Symptoms Questionnaire

| Questions | Answers |
|---|---|
| Question 1: Have you been feeling any symptoms? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Question 2: Have you taken all your medications? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |

OK

Select the "OK" button at the end of the list to submit your answers.

Select Up / Down Left / Right Help Menu

Watch your weight daily. Increase in your weight implies deterioration of your disease.

Communication with the Panacea Server

- The set top box submits the completed questionnaire to the Panacea Server.

Main Menu

He uses the down arrow to move to the desired option.

Menu

- Schedule
- Measurements
- Personal Medical Data
- Medication
- Messages
- Educational Video Session
- Log Out

Select Up / Down Left / Right Help Menu

30 min of light exercise daily will improve your health considerably.

Log Out

Thank you for using Panacea ITV Services!

Remember your next hospital visit is scheduled for Wednesday, October 3rd

Have a nice day!

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PANACEIA-iTV Pilot Sites

UK
Brompton Hospital, London
Adult Congenital Heart Center,
Congenital Heart Disease Patients

BE
Univ. Hospital, Gent,
Dept. of Obs and Gynae,
High Risk Pregnancies

GR
Hippokrateion Hospital, Thessaloniki
Dept of Endocrinology
Diabetic type II

Hippokrateion Hospital, Thessaloniki
First Dept of Obs & Gynae,
Infertility couples

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Target Groups

| | Diabetes | ACHD | Pregnancy | Infertility |
|--|---|---|---|--|
| User Characteristics | <ul style="list-style-type: none"> chronic disease older patients Hospitalized often | <ul style="list-style-type: none"> chronic disease young patients Hospitalized often | <ul style="list-style-type: none"> young women, general population short term Long stay in hospital in high risk pregnancies | <ul style="list-style-type: none"> sub-acute condition young couple highly motivated for receiving education |
| Benefits from Panacea-iTV | <ul style="list-style-type: none"> Reduce Hospitalizations Reduce outpatient clinic visits Improve quality of life | | <ul style="list-style-type: none"> Reduce stay in the hospital and clinic visits for high risk pregnancies | <ul style="list-style-type: none"> Educate couples so that physicians |
| Healthcare needs addressed by Panacea-iTV | <ul style="list-style-type: none"> Patient monitoring clinical advice & treatment Education | <ul style="list-style-type: none"> Patient monitoring communication with clinician education ECG monitoring | <ul style="list-style-type: none"> intense patient monitoring education CTG monitoring | <ul style="list-style-type: none"> education |

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Patients view regarding Panacea-iTV (21 patients)

- Intention to use the system in the future and recommend the system to other patients
- Belief that the system is easy to use
- Perception of the system as a useful, efficient and appropriate for use for their condition
- Perception that the system provided easy access to their personal data and profiles
- Ease of understanding information provided by the system and relevant to their condition
- Overall satisfaction with the quality of experience

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ACHD Patients' Concerns


- Time required learning the system
- Concerns about the confidentiality of the system
- The system can become uninteresting to use
- Concerns with technical problems using the system
- Time consuming sessions

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Clinicians' Point of View


- Panacea-iTV was useful
- Assisted effective patient monitoring
- Functional and easy to use

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Critical Findings


- The majority of the participants did not feel that the system affected their relationship with their doctor
- They considered it as a useful complementary tool in the care they receive from the hospital and were interested to participate in future trials
- The system was also well received by clinicians

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Future plans

- Effectiveness study
- Randomised controlled trial
- Investigating role of potential partners
- Seek a complementary role to the NHS digital TV system

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