

MobiGuide: Homecare per Pazienti con Fibrillazione Atriale

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The MobiGuide Project

- Collaborative Large-scale integrating project, European Commission Seventh Framework Programme (2011-2015)
- **Guideline-based** intelligent DSS for patients requiring close monitoring
- The system accompanies patients wherever they go and helps them wherever they are through the constant application of clinical guidelines also outside the hospital thanks to the use of mobile devices

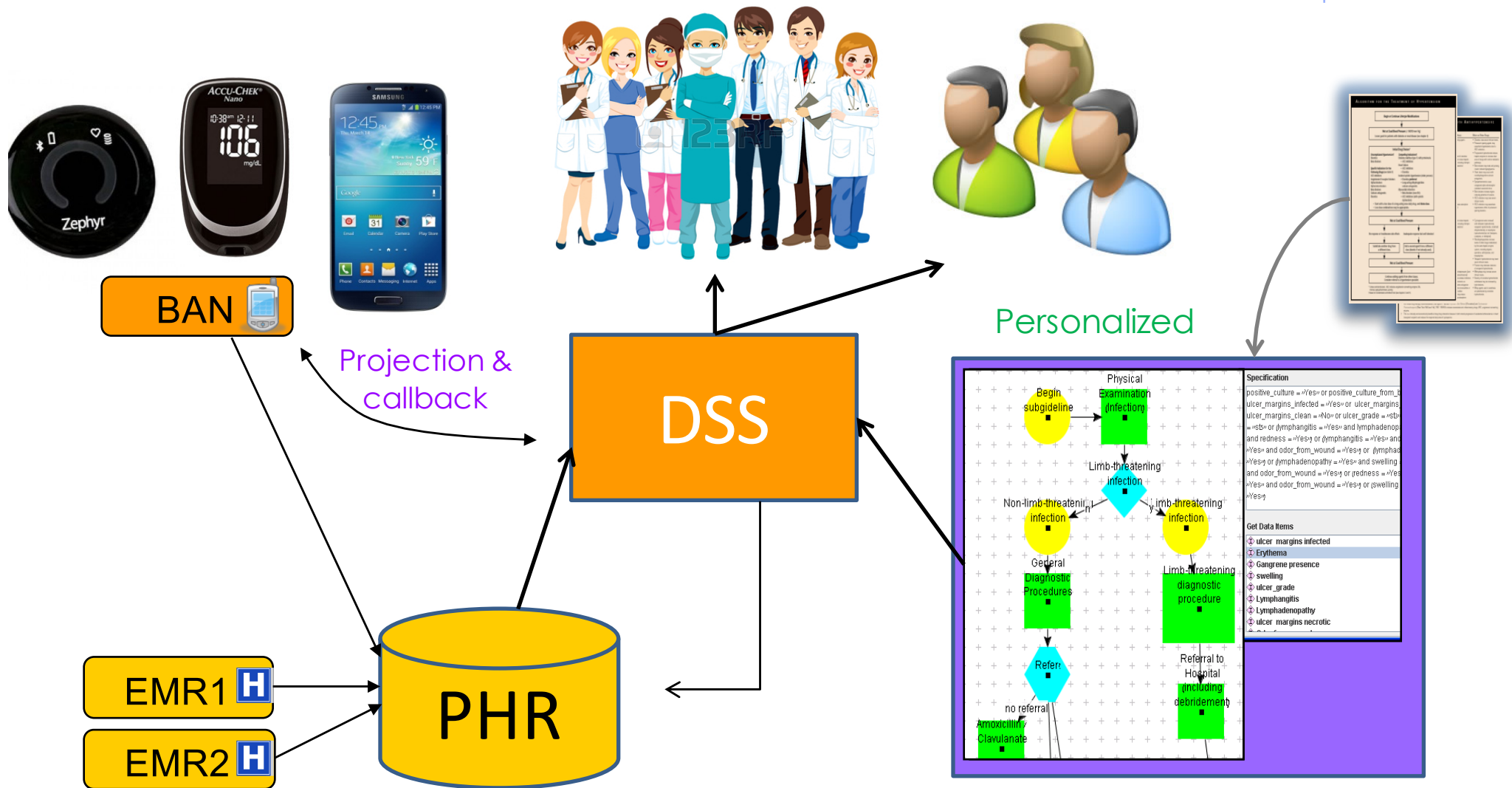
The MobiGuide Project



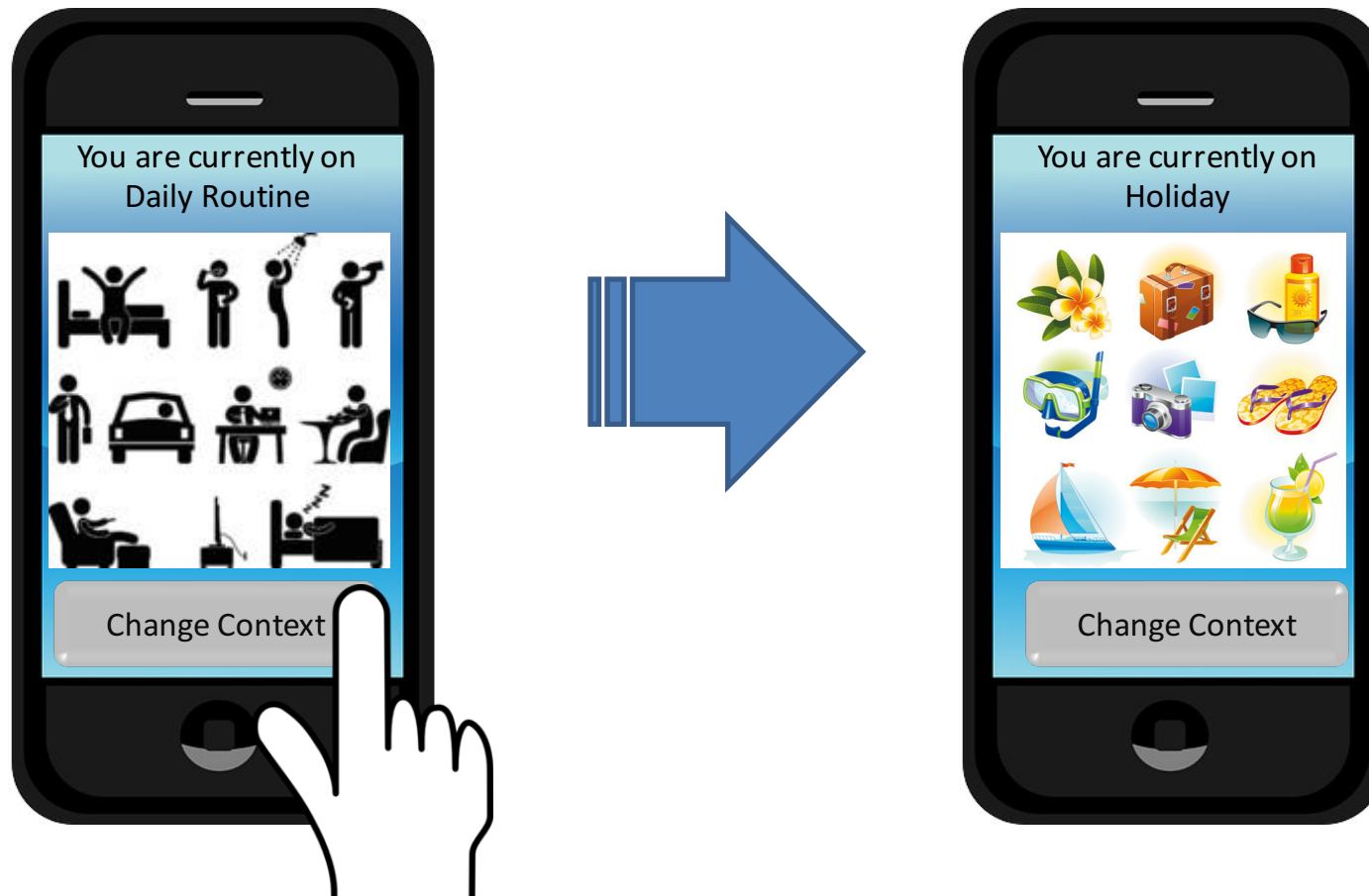
The map shows the geographical distribution of project partners across Europe. Logos are placed over their respective countries: ZORG GEMAK and University of Twente (The Netherlands) in the Netherlands; mobihhealth® in the UK; TU WIEN (Vienna University of Technology) in Austria; ETSIT and UPM (Spain) in Spain; Atos in Spain; Corporació Parc Taulí and adc (Associació de Diabètics de Catalunya) in Spain; FONDAZIONE SALVATORE MAUGERI CLINICA DEL LAVORO E DELLA RIABILITAZIONE (FSM) in Italy; BEACON TECH LTD (BTL) in Israel; and Ben-Gurion University of Haifa and Medical Informatics Research Center in Israel.

- UNIVERSITY OF HAIFA (HU), Israel
- BEN-GURION UNIVERSITY OF THE NEGEV (BGU), Israel
- UNIVERSITA DEGLI STUDI DI PAVIA (UNIPV), Italy
- UNIVERSITEIT TWENTE (UT), Netherlands
- TECHNISCHE UNIVERSITAET WIEN (TUW), Austria
- MOBIHEALTH BV (MHBV), Netherlands
- FONDAZIONE SALVATORE MAUGERI CLINICA DEL LAVORO E DELLA RIABILITAZIONE (FSM), Italy
- UNIVERSIDAD POLITECNICA DE MADRID (UPM), Spain
- CORPORACIO SANITARIA PARC TAULI DE SABADELL (CSPT), Spain
- ATOS SPAIN SA (ATOS), Spain
- BEACON TECH LTD (BTL), Israel
- ZorgGemak BV (ZORG), Netherlands
- ASSOCIACIO DE DIABETICS DE CATALUNYA (ADC), Spain

The MobiGuide System



Updating the Personal Context



With an easy change of context by the patient, the DSS will be able to provide recommendations coherently with the patient's current status

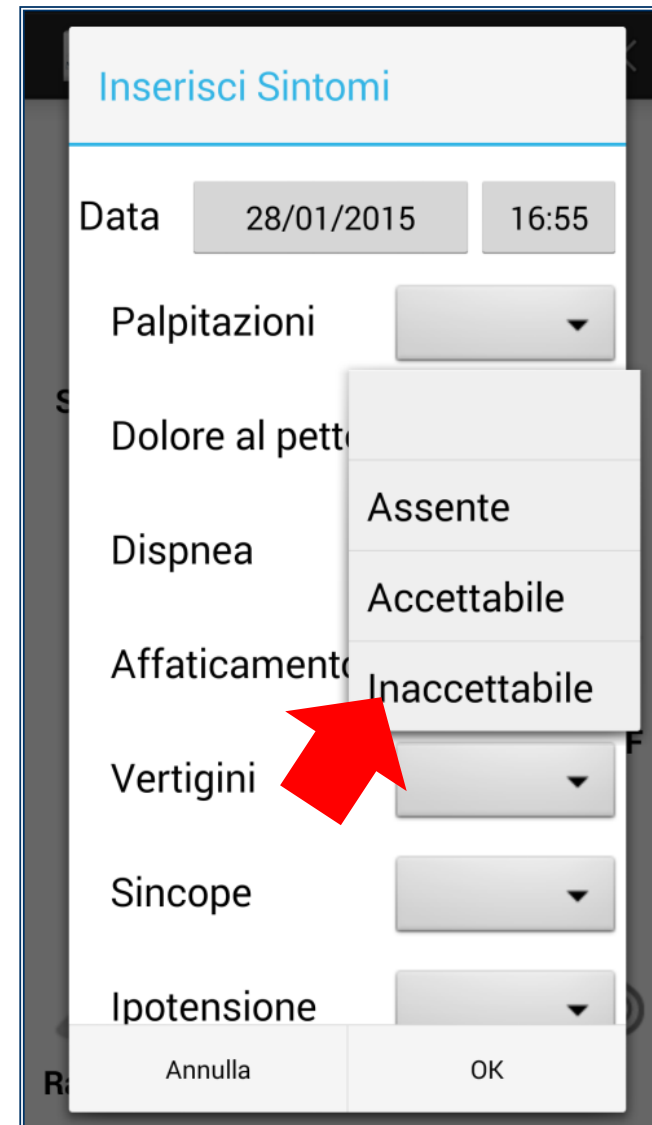
Distribution of Decision Support

- **Central** (Back-end DSS [BE-DSS], running on a central server)
 - Full access to the patient's historical longitudinal data and to the complete medical knowledge base
 - Capability of performing complex computations
- **Local** (Mobile DSS [mDSS], running on the patient's smartphone)
 - solves the problem of over-burdening the central server computationally
 - Enables robustness to connectivity problems -
 - Sends **Call back** to the central-DSS

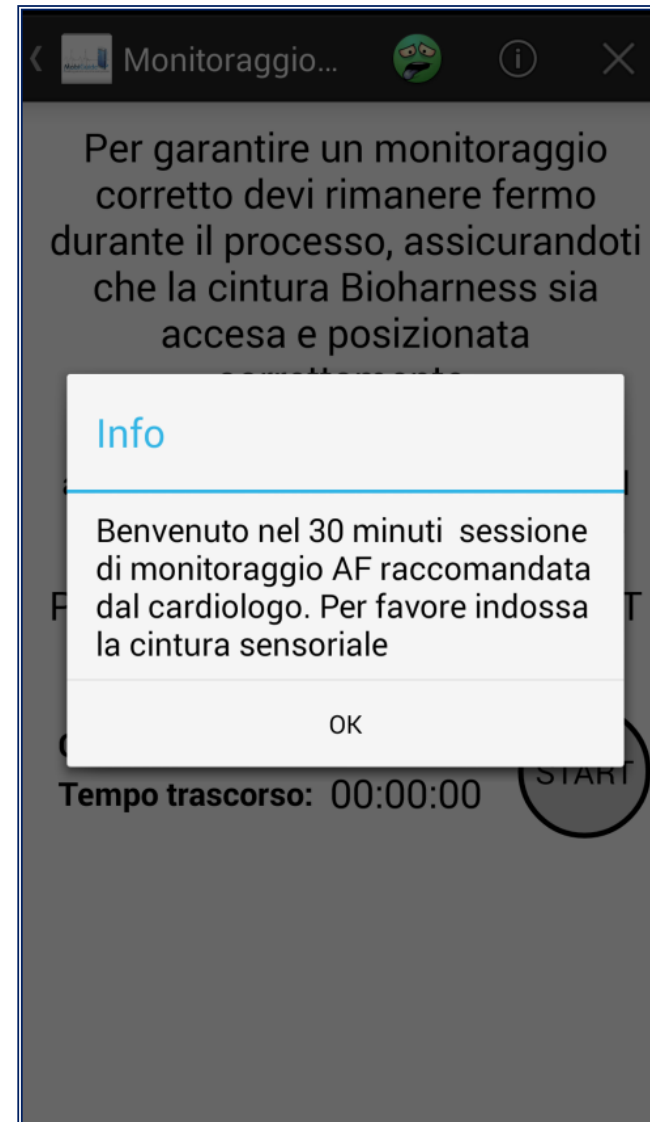
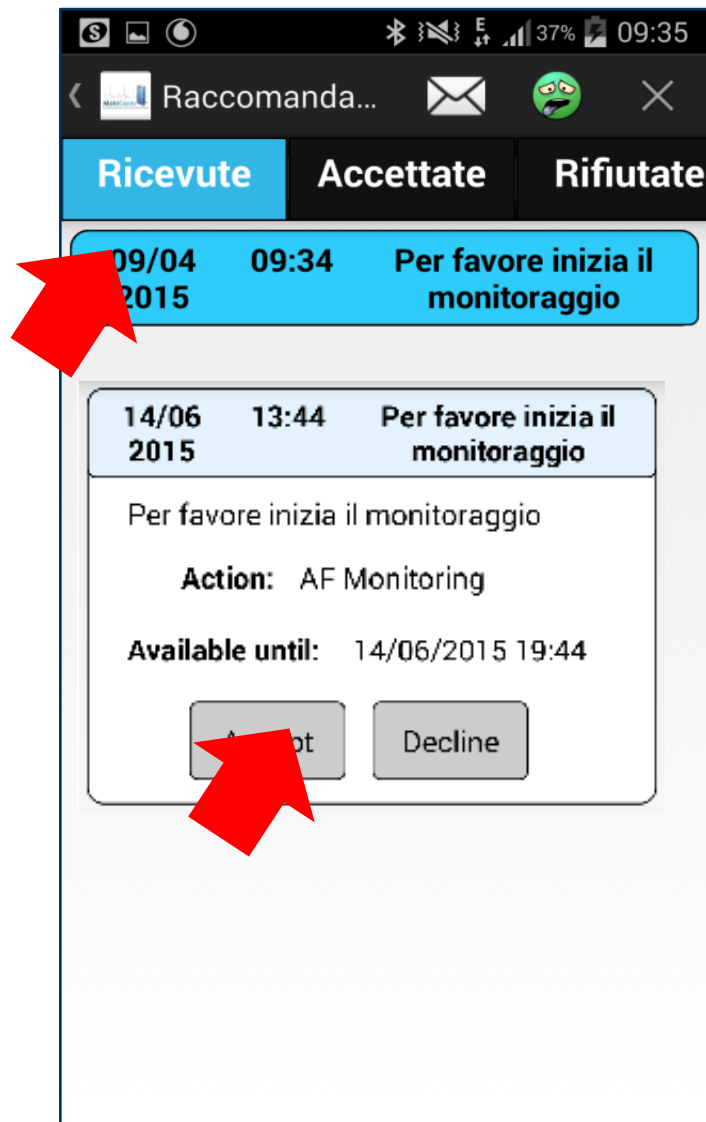
The MobiGuide App for AF



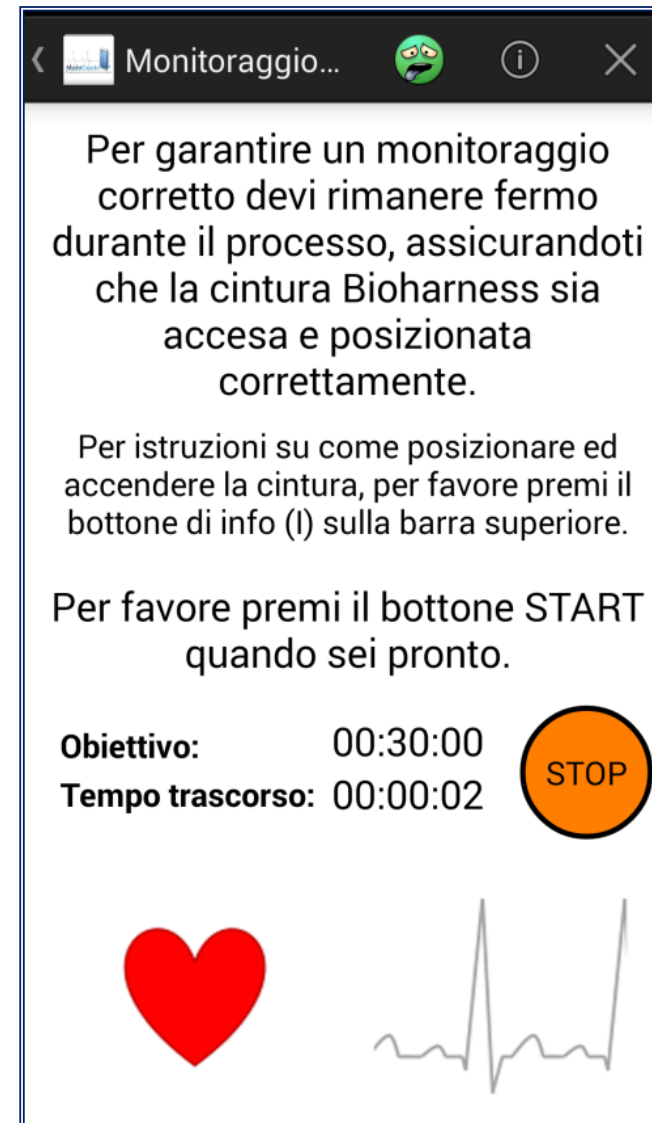
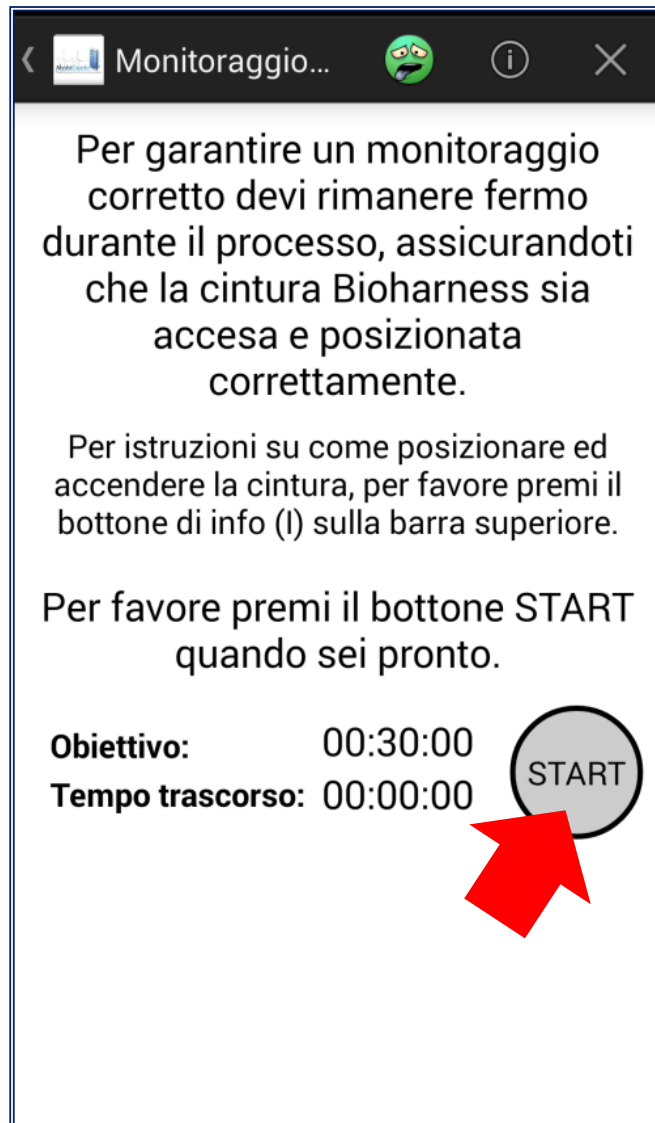
The MobiGuide App for AF



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The MobiGuide App for AF




The Doctor's GUI

Patient	Activation	AF Details	Clinical History	Prescriptions	Measurements	Recommendations
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Activation

- Select Guideline
- Personalize Contexts



User: John Smith [Logout](#)

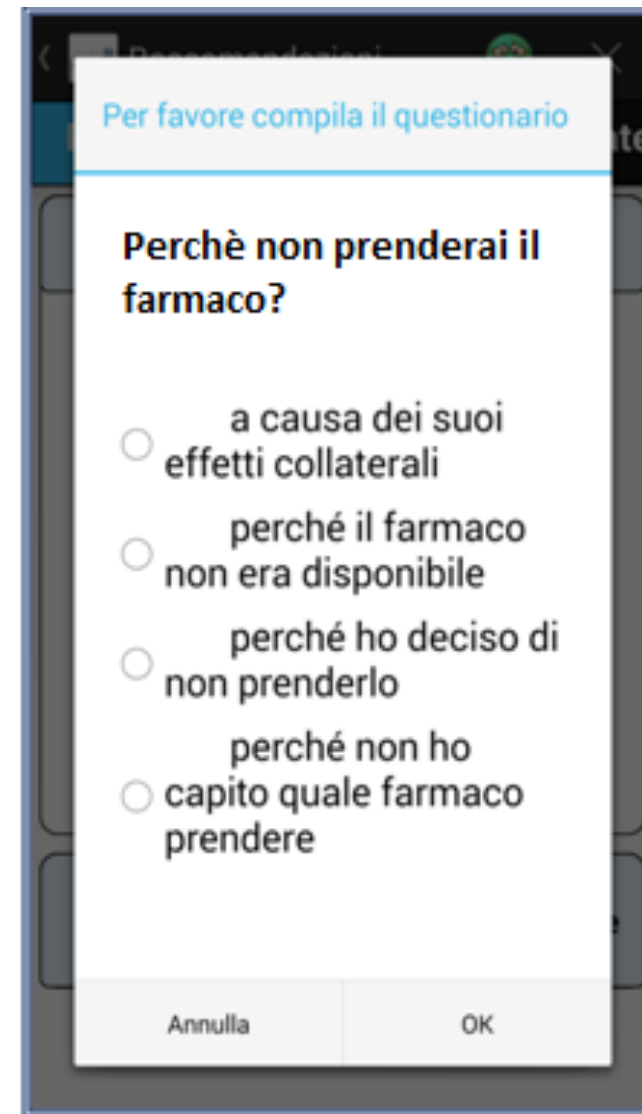
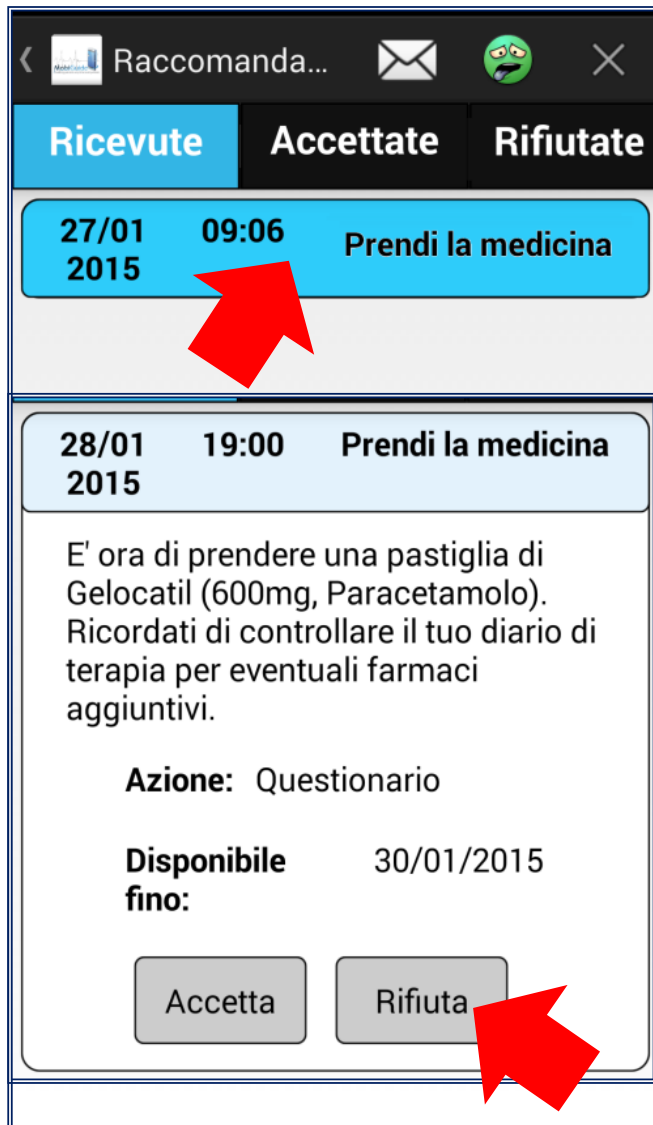
Patient: [Eros Ramazzotti](#) [Deselect](#)

Guideline: AF (guideline active)

BAN session summaries

	Start Date Time	Stop Date Time	Irregular heart beat	Heart rate	Mean heart rate
①	14/06/15 13.46.38	14/06/15 13.49.48	0.0 %	72.0 - 96.0 BPM	82.8 BPM
①	05/06/15 14.22.16	05/06/15 14.22.20	0.0 %	93.0 - 93.0 BPM	93.0 BPM
①	05/06/15 13.54.16	05/06/15 13.56.35	46.041245567216464 %	78.0 - 98.0 BPM	87.5 BPM
①	21/05/15 13.54.33	21/05/15 13.56.39	58.73096486981915 %	0.0 - 82.0 BPM	65.8 BPM

The MobiGuide App for AF



The MobiGuide App for AF



The screenshot shows the 'Diario' app screen. It has a dark header with the title 'Diario' and a hamburger menu icon on the left, and a plus sign and a close icon on the right. Below the header are three tabs: 'Dieta', 'PA', and 'Esercizio'. The 'PA' tab is selected and highlighted in blue. Below the tabs is a table with the following data:

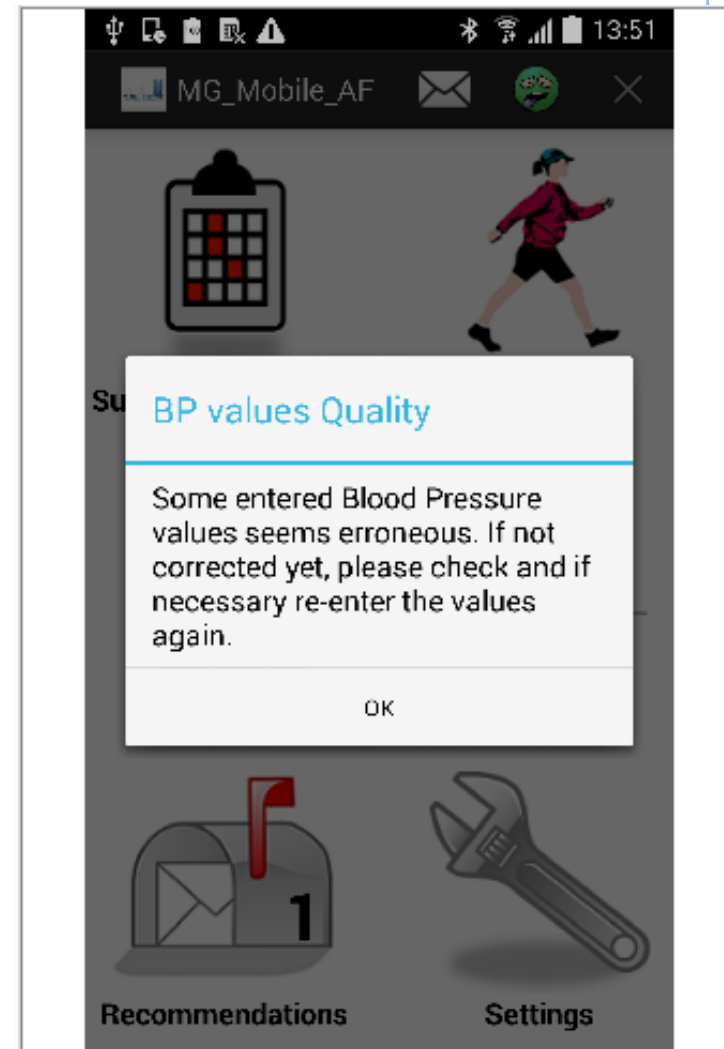
Data	Ora	Sist./Diast.	FC
27/01 2015	08:43	120/90	65
26/01 2015	11:27	60/90	70

The MobiGuide App for AF

The screenshot shows the 'Diario' (Journal) app interface. At the top, there are three tabs: 'Dieta', 'PA', and 'Esercizio'. The 'PA' tab is selected. A modal window titled 'Inserisci Pressione' (Enter Blood Pressure) is open. It contains the following fields:

- Data: 29/01/2015, 11:31
- Sistolica: 120
- Diastolica: 700
- Freq. Cardiaca: 60

A red arrow points to the 'Diastolica' field, which contains the value '700'. At the bottom of the modal, there are two buttons: 'Annulla' (Cancel) and 'OK'.





User: John Smith [Logout](#)

Patient: [Eros Ramazzotti](#) [Deselect](#)

Guideline: AF (**guideline active**)

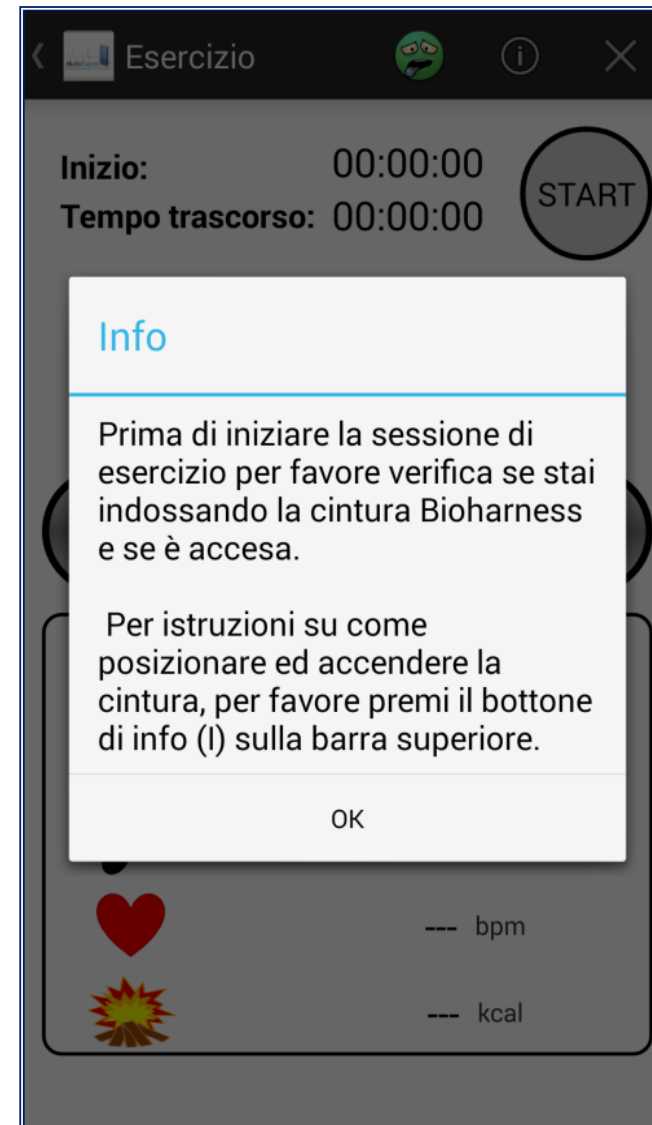
[Start visit \(with GL assistance\)](#)

[Update patient data](#)

[Show Measurements](#)

Date	Parameter	Value	Source	
14/06/15 13.52.15	Systolic/Diastolic Blood Pressure	120.0/80.0 mmHg	Patient	▼
14/06/15 13.52.15	Heart Rate	66.0 bpm	Patient	▼
14/06/15 13.50.29	Systolic/Diastolic Blood Pressure	120.0/80.0 mmHg	Patient	▼
14/06/15 13.50.29	Heart Rate	66.0 bpm	Patient	▼
05/06/15 13.51.32	Weight	80.0 kg	Patient	▼
05/06/15 13.43.05	Weight	80.0 kg	Patient	▼
05/06/15 13.41.25	Diet	++ (Savoy cabbage)	Patient	▼
05/06/15 11.17.48	Diet	+ (Spinach)	Patient	▼
05/06/15 11.04.39	Systolic/Diastolic Blood Pressure	120.0/80.0 mmHg	Patient	▼
05/06/15 11.04.39	Heart Rate	66.0 bpm	Patient	▼
21/05/15 12.45.13	Systolic/Diastolic Blood Pressure	120.0/80.0 mmHg	Patient	▼
21/05/15 12.45.13	Heart Rate	66.0 bpm	Patient	▼

The MobiGuide App for AF



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