ALLENA VITA

The lifestyle coach

A study conducted by WHO found that 80% of heart disease, stroke and diabetes, can be prevented by a combination of information/awareness and a coordinated system of incentives / disincentives. Electronic communications, such as telemonitoring, may become enhanced with "health tutoring" and intensified care[1] . These processes can help extend care coverage to citizens, especially in rural areas, at low cost.

AllenaVita consists of a modular web based EHR (Electronic health record) that allows information sharing between patients, nurses and general practitioners. The system was designed following participatory design approaches in order to satisfy diverse user needs, specifically users with physical impairment or low technological expertise; but able to use, independently or assisted, smartphones, tablets, PCs[2]. We also applied persuasive technology[3] that uses persuasion and social influence to drive change of behaviour in people. Behaviour is the product of motivation, ability and triggers[4] .

AllenaVita aims at improving adherence to treatment with patient awareness, motivational strategies, self-monitoring and intensified care. The care model adopted is based on the registered nurse that has the responsibility of patient parameters and lifestyle monitoring, as well as the goals shared through a lifestyle patient agreement (patient empowerment). A multidisciplinary process[5] is applied to reduce cardiovascular risks.

AllenaVita is a mobile lifestyle coaching application that brings together health monitoring with lifestyle changing goals and activities.

GRUPPO GPI

GPI spa
I-38123 Trento (TN)
Via Ragazzi del '99 nr. 13
T +39 0461 381 515 | F +39 0461 381 599
www.gpi.it | info@gpi.it

It is very important to have a system that enforces lifestyle changes because the determinants of health within a population are: genetic predisposition 30%, behavioural pattern 40%, environment exposure 5%, heath care 10%, social circumstances 15% .

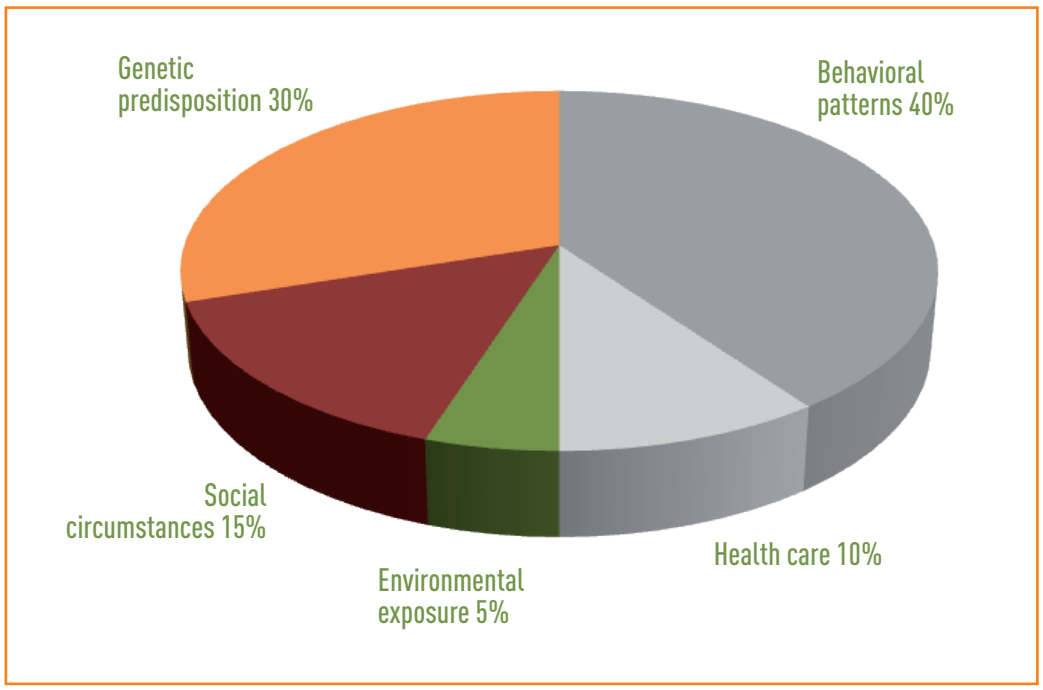

Image 1: Determinants of health (McGinnis et Al. 2002)

ADVANTAGES

- Introduction of a new care delivery model
- More patients can be reached
- Contacts can be more frequent, with a greater chance of addressing patients' concerns in a timely manner; tailoring treatment and ultimately improving adherence
- Less personnel costs
- Improvement of quality of life for patients
- More personalised services
- More efficacy related multiprofessional approach

FEATURES

Remind: AllenaVita is the resulting design, that enables motivation through the means of raising awareness. This is achieved by facilitating self-monitoring, reminding patients of their health status and suggesting them activities to follow in order to improve their lifestyles. Patient are reminded about lifestyle improvement activities and dates related to specific therapies and monitoring. (image 2)

Measurement: patients with a smartphone (in the future also a tablet) can register their health parameters, either manually or automatically syncing enabled devices (image 3).

Additional information: in order to help improve health workers' acknowledge about patient health, AllenaVita collect additional information related to measurements (image 4).

Lifestyle coach: according to the patient planning, people are motivated to change their behaviours, e.g. improving nutrition, increasing physical activities, etc. (image 5 and 6).

Feedback: AllenaVita favours a direct feedback from healthcare professionals to maintain high motivation and satisfaction; patient feels cared for and followed (image 7).

Results: AllenaVita has a system of positive reinforcement in the visualization of the results (image 8 and 9).

Clustering: AllenaVita classifies patients relating cardiovascular risk (image 10).

Monitoring: nurse can monitor all patient measured parameters and activities, helped by graphic alarms and notifications (image 11).

Planning: nurse and physician can establish, according to patient needs, the monitoring calendar and the objectives for lifestyle changing.

Medical record: physician and nurse can write evaluations related to patient monitoring and share them according to privacy constraints.

Image 2: Lifestyle coach

Image 3: Measurement

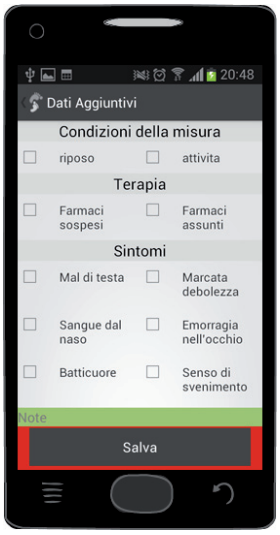

Image 4: Additional information

Image 5: physical activity registration

Image 6: diet registration

Image 7: PAO visualization with feedback

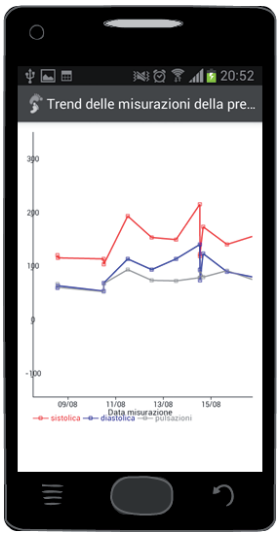

Image 8: PAO trend

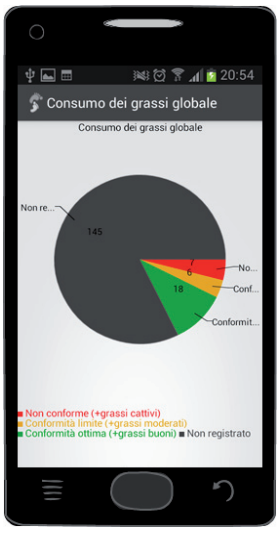

Image 9: diet result

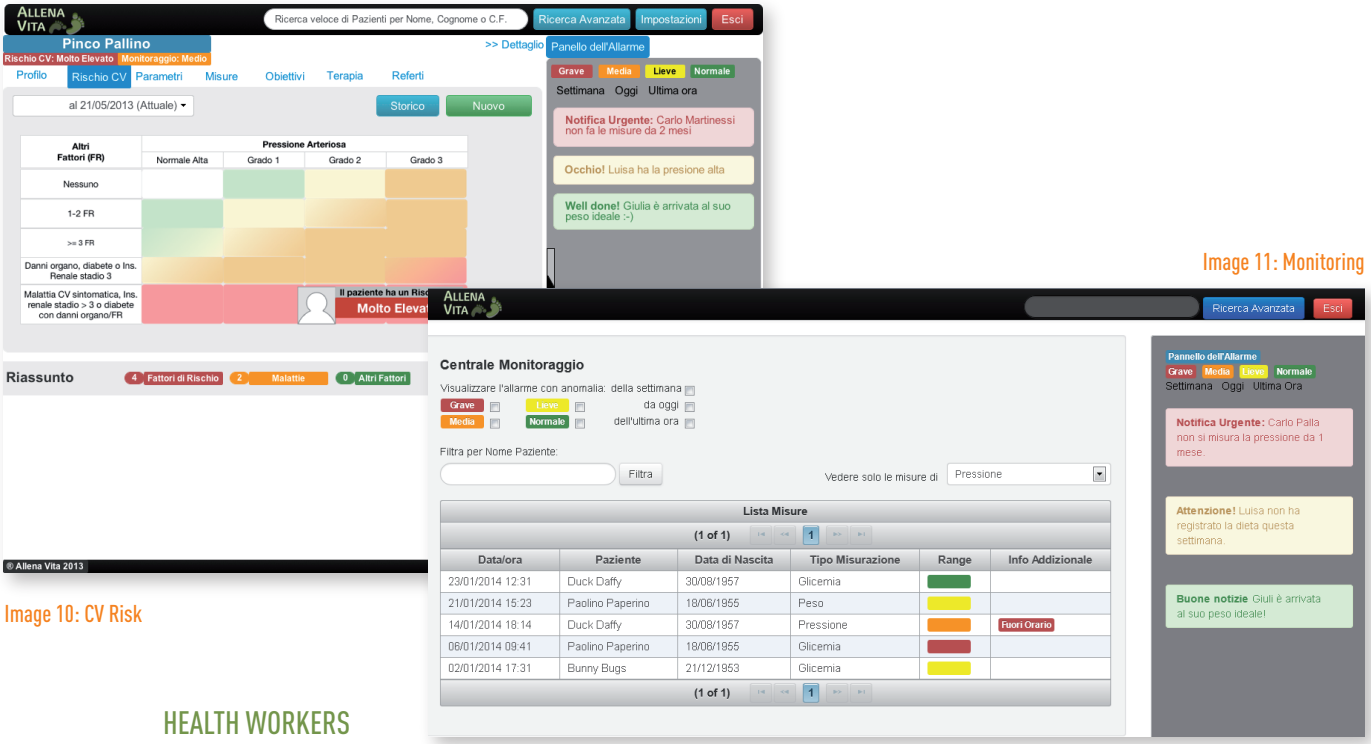

Image 11: Monitoring

Image 10: CV Risk

ARCHITECTURE

AllenaVita is accessed via a web application or a mobile application; designed as unique tool for patients and health workers.

AllenaVita can receive data from medical devices but the measurements can also be inserted manually.

AllenaVita is connected to a platform that handles local specifications related to personal data and medical records repository.

Bibliografia

1 The Task Force for the Management of Arterial Hypertension of the European Society of Hypertension (ESH) and of the European Society of Cardiology (ESC). "Guidelines for the management of arterial hypertension". Eur Heart J 2013; doi: 10.1093/eurheartj/eht151.

2 Michael Massimi. Participatory Design of Mobile Phone Software for Seniors. A thesis submitted in conformity with the requirements for the degree of Master of Science Graduate Department of Computer Science University of Toronto. 2007.

3 Fogg, Brian J. "Persuasive technology: using computers to change what we think and do." Ubiquity 2002.December (2002): 5.

4 Fogg, B. J. "A behavior model for persuasive design." Proceedings of the 4th international conference on persuasive technology. ACM, 2009.

5 The delivery of health care to the patient is a multidisciplinary process that must take into account the availability of resources, the educational preparation of the nurse, the competencies of staff, the needs of the patient, and the cost implications for the institution or health system (McCauley & Irwin, 2006).