HORIZON 2020	**HORIZON 2020** **Self management of health and disease:** **citizen engagement and mHealth**

Project:

myAirCoach - Analysis, modelling and sensing of both physiological and environmental factors for the customized and predictive self-management of Asthma"

(myAirCoach, Grant Agreement No. 643607)

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Authors List

Leading Author (*Editor*)		
Name / Surname	*Beneficiary Name (Short Name)*	*Contact email*
Giuseppe De Carlo	EFA	Giuseppe.decarlo@efanet.org
Isabel Proano	EFA	Isabel.proano@efanet.org
Joke De Vocht	EFA	joke.devocht@efanet.org
Co- Authors		
Name / Surname	*Beneficiary Name (Short Name)*	*Contact email*
Konstantinos Votis	CERTH	kvotis@iti.gr
Dimitrios Tzovaras	CERTH	tzovaras@iti.gr
Dimitrios Kikidis	CERTH	dkikidis@iti.gr
Omar S Usmani	ICL	o.usmani@imperial.ac.uk
Jan-Marc Verlinden	MV	jan-marc@medvision360.com
Ortmann Steffen	IHP	ortmann@ihp-microelectronics.com
Stephen Fowler	UNIMAN	Stephen.Fowler@manchester.ac.uk
Courtney Coleman	AUK	CColeman@asthma.org.uk
Anna Kharbanda	AUK	annak@asthma.org.uk
Erika Kennington	AUK	ekennington@asthma.org.uk

Executive Summary

MyAirCoach Dissemination Plan describes all activities planned to be undertaken in myAirCoach in support of the dissemination gained throughout the first year of project activities, and in line with the Horizon 2020 open access policy. It provides guidelines for dissemination of information from activities within the scope of myAirCoach. This document will be considered as a living document while more versions are planned for the future.

Dissemination is a key aspect to ensure enhancement of knowledge among stakeholders and within the wider European community. The dissemination of myAirCoach concepts, approach and progresses covers the whole project span (2015-2017). The objectives for dissemination are to:

- Raise awareness of myAirCoach with updated information on the evolution of the project and its findings,
- Inform about myAirCoach and the potential of m-health solutions to tackle chronic disease,
- Engage with myAirCoach audiences, especially with people living with asthma, to get input from end-users and improve the sustainability of myAirCoach solutions beyond the end of the project,
- Promote myAirCoach findings to encourage m-health use as support tools for disease self-management.

These multiannual objectives provide the framework for the production of three annual dissemination plans specifically reflecting yearly project activities. The present document is the first myAirCoach dissemination plan.

The dissemination plan was produced in February 2015 and guided all activities aimed at promoting the project. All dissemination activities and material produced in 2015 are listed in this document.

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List of abbreviations and acronyms

(*in alphabetic order*)

AEROCRINE	Aerocrine AB
AIM	International Association of Mutual Benefits Societies
AirPROM	Airway Disease Predicting Outcomes through Patient Specific Computational Modelling
ALLERTEC	Allertec Hellas SA
AMSE	Association of Medical Schools in Europe
ARIA	Allergic Rhinitis and its Impact on Asthma
ARTP	Association for Respiratory Technology & Physiology
AUK	Asthma UK
BEUC	European Consumers' Association
CERTH	Centre for Research and Technology Hellas
CNET	Cnet Svenska AB
CPME	Standing Committee of European Doctors
DDL	Drug Delivery to the Lungs
DG EMPLOYMENT	European Commission Directorate-General for Employment, Social Affairs and Inclusion
DG RESEARCH	European Commission Directorate-General for Research and Innovation
DG SANTE	European Commission Directorate-General for Health and Food Safety
DMP	Data Management Plan
EAACI	European Academy of Allergy and Clinical Immunology
EARIP	The European Asthma Research and Innovation Partnership
ECHA	European Connected Health Alliance
EDF	European Disability Forum
EESC	European Economic and Social Committee
EFA	The European Federation of Allergy and Airways Diseases Patients Associations
EFN	European Federation of Nurses Associations
EFPIA	European Federation of Pharmaceutical Industries & Associations
EGA	European Generic Medicines Association
EHMA	European Health Management Association

EHTEL	European Health Telematics Association
ELF	European Lung Foundation
EMA	European Medicines Agency
EMSA	European Medical Students Association
ENSA	European Nursing Students Association
ENVI	European Parliament Environment, Public Health and Safety Committee members
EPF	European Patients Forum
EPHA	European Public Health Alliance
EPSCO	Council of the European Union Employment, Social Policy, Health and Consumer Affairs Council configuration
ERS	European respiratory Society
EUPATI	European Patients Academy on Therapeutic Innovation
EURORDIS	Rare Diseases EuropeEuropean Rare Diseases Organisation
GSMA	Groupe Speciale Mobile Association
HOPE	European Hospital and Healthcare Federation
ICL	Imperial College London of Science Technology and Medicine
IHP	IHP GMBH – Innovations for High Performance Microelectronics/Leibniz-Institut fuer Innovative Mikroelektronik
IMI	Innovative Medicines Initiative
IPCRG	International Primary Care Respiratory Group
ISAM	International Society for Aerosols in Medicine
LUMC	Academisch Ziekenhuis Leiden – Leids Universitair Medisch Centrum
MV	ZorgGemak BV
NoTremor	Virtual, Physiological and Computational Neuromuscular Models for the Predictive Treatment of Parkinson's Disease
PGEU	Pharmaceutical Group of the European Union
U-BIOPRED	Unbiased BIOmarkers in PREDiction of respiratory disease outcomes
UEMS	European Union of Medical Specialists
UNIMAN	University of Manchester
UPAT	University of Patras

1 Introduction

1.1 Purpose and scope of the deliverable

Dissemination and communication activities are of paramount importance to myAirCoach partners, as a way to maximise the outreach of the project results among target audiences and interested stakeholders.

During the entire project life span, we aspire to establish a solid dissemination of myAirCoach findings and outputs that will trigger expectations across the involved user communities (patients, healthcare professionals, etc.) and ensure sustainability beyond the end of the project.

This document unfolds the dissemination plan for the myAirCoach communication activities taking place in the first year of the project but also in future. The ambition of this plan is to ensure that the project activities and outcomes are widely publicised among the appropriate target communities, at appropriate times, via appropriate methods. In this direction, the plan provides a comprehensive and consolidated overview of all the dissemination activities that the project partners executed to raise awareness and to increase myAirCoach visibility during the project duration.

In particular, myAirCoach dissemination activities will focus on creating awareness about the project and strive towards high visibility among the project partners' networks. The dissemination plan also describes internal communications within the myAirCoach consortium, in order to coordinate and ensure adequate internal and external dissemination of project deliverables.

The document provides guidelines on how to plan and report any dissemination activity within the scope of myAirCoach as well as to identify potential contributors to the development, evaluation, uptake and exploitation of myAirCoach outcomes, encouraging their participation on a regular basis. Finally, the document presents all the implemented communication activities as well as all the relevant material which was produced in accordance with the Dissemination Plan.

1.2 Approach and relation to tasks and other deliverables

EFA beneficiary created a first draft of the dissemination and communication Plan according to the myAirCoach Description of Work (section 3) and to conversations/contribution with all consortium partners during the scheduled project meetings (kick-off and plenary meetings, teleconferences) In this context, a consolidated version properly integrating all comments received was then developed. All partners were actively involved in the implementation of activities under the Task 7.1 "Dissemination activities, material and publication policy" of Work Package 7 – "Dissemination and Exploitation".

All the Dissemination material listed in this document and produced is part of the present D7.1 "Dissemination Plan and myAirCoach dissemination material"

This dissemination plan will be updated yearly and will be aligned with the annual dissemination objectives of the project.

1.3 Structure of the document

This document provides an overview of the management and coordination of the activities under the Task 7.1 and is composed by two main sections.

In the first section, the first draft of the Dissemination Plan, the dissemination objectives and the strategy are described, including target audiences, key messages and appropriate dissemination channels and tools. The Dissemination Plan also provides a detailed description of the produced dissemination material and activities conducted in 2015, together with a complete list of external events and conferences that are of interest to the project. Additionally, relevant evaluation procedures are reflected at the end of the Dissemination Plan.

The second section presents all the dissemination material produced by the myAirCoach consortium under the coordination of the project partner EFA.

2 Dissemination Plan

2.1 Internal Procedures

The European Federation of Allergy and Airways Diseases Patients Associations (EFA) is the leader of Work Package 7 – Dissemination and Exploitation – and responsible for the implementation of the activities under the Task 7.1 - Dissemination activities, material and publication policy. EFA is supervising the overall work progress for all the WP7 tasks, in order to ensure that all the WP7 deliverables are conveyed in time. EFA is also leading the production of the appropriate dissemination material by taking into account the myAirCoach target audience (see section 4.2).

EFA will be in constant communication with all Work Package leaders in order to be updated on all dissemination and communication activities and outcomes under the myAirCoach project. The communication flow will be guaranteed through:

- Meetings and scheduled Teleconferences: The myAirCoach plenary meetings but also the scheduled teleconferences (supported by EFA and being held every two months but also ad hoc teleconferences in case of need) among the consortium, can guarantee the progress of interest for dissemination to selected target audiences.

- Intranet: the use of the myAirCoach mailing list (created and hosted by CERTH)but also the internal area of the project web site (implemented and updated by CERTH) can be used for the easily exchange of information among the partners while also constituting a repository platform for working documents and other material restricted to project partners.

- MyAirCoach Data Management Plan (DMP) and the open data repository for dissemination and exploitation purposes. An open data repository will be available on myAirCoach website, conforming to potential ethical issues, in which the DMP will describe in details the derived models (WP3), anonymized data/metadata, asthma action plans and educational content that will be included in this repository.

- Communication with WP leaders: all partners who are involved in the WP7 “Dissemination and Exploitation”, but also myAirCoach WP leaders are able to communicate with EFA when significant outcomes arise from their dissemination and communication activities.

- Communication and Involvement of the Advisory Patient Forum: When required, the Advisory Patient Forum, which has been established under the T6.1 (Month 6), can be also involved to the revision of the produced dissemination material for ensuring the adoption of the patients important opinion.

2.2 Dissemination objectives

The main objectives of the dissemination plan for the activities initiated during the myAirCoach project duration can be summarisedbelow:

1. **To define the methodology and tools to raise awareness about the myAirCoach project results:** The plan will serve all consortium partners to agree on main dissemination channels, messages and tools to match their activities with the agreed dissemination and communication objectives for the project .
2. **To disseminate myAirCoach intermediate findings among the networks of the project partners:** Dissemination materials will be mainly distributed through myAirCoach partners' network and channels, increasing targeted outreach and visibility.
3. **To maximise communication opportunities about the project evolution to stimulate ongoing interest in the work of myAirCoach:** All channels and activities will provide potential opportunities to inform and promote myAirCoach findings, the most important ones are listed in the timeline (see section 6).

It is obvious that, all myAirCoach dissemination activities and publications will acknowledge the European Commission's Horizon 2020 Programme funding (especially for the Scientific publications will mention the following: "The research leading to these results has received funding from the European Commission's Horizon 2020 under grant agreement from project myAirCoach – No. 643607."), while we will ensure the Horizon 2020 Open Data Strategy for scientific information for improving, maximising access to and re-using of myAirCoach data generated for the benefit of society and the economy.

2.3 Dissemination strategy

Following the dissemination objectives described in the previous section, the dissemination activities will target specific audiences and use specific key messages.

2.3.1 Identification of target groups

MyAirCoach dissemination and communication efforts carried out over the entire project duration will target the following audiences:

a) myAirCoach consortium partners and their networks

b) Healthcare professionals:

- **Healthcare professional societies** i.e. European Respiratory Society (ERS), International Primary Care Respiratory Group (IPCRG), European Academy of Allergy and Clinical Immunology (EAACI), Allergic Rhinitis and its Impact on Asthma (ARIA), European Union of Medical Specialists (UEMS), Standing Committee of European Doctors (CPME), European Federation of Nurses Associations (EFN), Pharmaceutical Group of the European Union (PGEU).
- **Healthcare management structures** i.e. European Hospital and Healthcare Federation (HOPE), European Health Management Association (EHMA).

c) Asthma patients:

- **MyAirCoach test campaigns participants**, their friends and relatives.
- **MyAirCoach Advisory Patient Forum** and their networks.
- **European patients' networks**: European Patients Forum (EPF), Rare Diseases Europe (EURORDIS), European Lung Foundation (ELF), Asthma UK supporters.

d) Policy-makers:

- **European Union institutions and bodies**: European Commission Directorate-General for Health and Food Safety (DG SANTE), European Commission Directorate-General for Research and Innovation (DG Research), European Digital Agenda Initiative, European Commission Directorate-General for Employment, Social Affairs and Inclusion (DG Employment), European Economic and Social Committee (EESC), European Parliament Environment, Public Health and Safety Committee members (ENVI), Council of the European Union Employment, Social Policy, Health and Consumer Affairs Council configuration (EPSCO), European Medicines Agency (EMA), Innovative Medicines Initiative (IMI).

e) Public health community:

- **Non-Governmental Organizations** i.e. European Public Health Alliance (EPHA), European Health Forum, EuroHealthNet, International Association of Mutual Benefits Societies (AIM), European Consumers' Association (BEUC), European Disability Forum (EDF), AGE Platform Europe.

f) Scientists and researchers:
   - **EU ongoing projects' consortiums** i.e. AirPROM, EARIP, U-BIOPRED, NoTremor, EUPATI.
   - **Medical academia** i.e. European Medical Students Association (EMSA), European Nursing Students Association (ENSA), Association of Medical Schools in Europe (AMSE).

g) Industry representatives:
   - **Pharmaceutical companies** i.e. European Federation of Pharmaceutical Industries & Associations (EFPIA), European Generic Medicines Association (EGA).
   - **Medical technology companies** i.e. EUCOMED, MedTECH.
   - **M-Health organisations** i.e. European Connected Health Alliance (ECHA), European Health Telematics Association (EHTEL).
   - **Mobile Network operators** i.e. Groupe Speciale Mobile Association (GSMA).

h) **General public** interested in the use of breakthrough mobile health technology to reduce the burden of chronic diseases in Europe.

2.3.2 Definition of dissemination messages

MyAirCoach main objectives and expected results constitute the core dissemination messages of the project. Each target audience will receive tailored messages, according to their predefined interest, and support myAirCoach dissemination objectives for the first project year.

The language used for all messages will be the English. Where necessary, partners will disseminate messages to their networks in their own mother tongue. An overview of the main messages can be found below.

The statements listed in the table are meant to give a common direction and approach in the elaboration of the key messages that will addressed to the target audience. The table provide also examples of key messages.

Table 1 Main messages and target audience

Target audiences	Main messages
Consortium partners (internal)	**Background:** MyAirCoach project involves a consortium of 12 expert partners ranging from researchers, m-health enterprises and patients that work together to produce the best possible m-health tool for the self-management of asthma. To foster cooperation and avoid working in silos, Work Package leaders will communicate frequently to update all other partners about their achievements and boost research and communication synergies along the project. **Key message example:** *"Through our collaborative work in myAirCoach, we are building the path to ensure Europe leads the way on new e-health technologies"*

Healthcare professionals	**Background:** MyAirCoach mobile health system will enable healthcare personnel to monitor in real-time the condition of their asthma patients. Clinicians will be equipped with novel and smart tools that will allow them to estimate disease evolution based on the patients' accurate and updated data. Thanks to myAirCoach functionalities, clinicians will be able to better help patients self-manage their disease. MyAirCoach has the potential to significantly reduce healthcare inefficiencies in global asthma management, as asthma data will be easily shared and aggregated to better shape and tailor treatments. The technology used in myAirCoach is expected to contribute to a significant scientific advancement in the understanding and modelling of asthma. **Key message example:** *"MyAirCoach can become a breakthrough for the clinical management of asthma as it will systematically collect and analyse the patient condition to inform doctors while respecting patients' privacy".*
Asthma patients	**Background:** People with asthma will be able to access an accurate snapshot of their condition at any time thanks to the myAirCoach application in their mobile device. MyAirCoach will help patients to record their symptoms and treatment to better manage their condition. Patients will be able to access a variety of myAirCoach tools, including a Knowledge platform to know more about their asthma and how it affects their body. People with asthma, their family and friends will be able to participate in the myAirCoach Virtual Community where they will be able to get peer support and find out more on asthma management. **Key message example**: "*By giving people live access to data about their environment, their medicines and their body's response to their treatments, the myAirCoach project will help people with asthma and healthcare professionals to take the right steps at the right time to stay on top of their asthma and prevent attacks"*
Policy-Makers	**Background:** MyAirCoach is a cost effective solution that can be easily implemented in healthcare systems as a complementary tool to reduce the costs associated with treating asthma in Europe. MyAirCoach final device can optimise resources and contribute to the reduction of long-term asthma prevalence in an efficient way. MyAirCoach has not only the potential to bridge the health literacy gap by improving clinicians' control and patients disease self-management but also to boost patients' self-esteem, productivity and daily quality of life. **Key message example:** "*By closing the gaps between patients and doctors, myAirCoach can change the paradigm for chronic disease management and make m-health solutions for chronic disease management more accessible, reliable and cheap".*
Public health community	**Background:** MyAirCoach can become a best practice in Europe on chronic disease management as well as on prevention of asthma attacks and reduction of asthma symptoms. As an m-health system for asthma, myAirCoach will generate big data on the mechanisms and patterns of the disease on the one hand, and will draw better insights on individual treatment adherence and disease evolution on the other hand. Ultimately, the technology will foster cooperation between physicians and patients and will empower patients to share their experiences through a virtual community.

	Key message example: "*Because asthma is so common and because it affects people throughout their lives, myAirCoach also represents a great opportunity to demonstrate the wider benefits of combining technologies and data to improve healthcare"*
Scientists and researchers	**Background:** MyAirCoach can bring a technological breakthrough to the development of a mobile intelligence platform for chronic disease self-management. Conceived together with asthma patients, the technology can underpin the future development of technological frameworks that can support self-management for other diseases. **Key message example:** *"Because the future of chronic disease management needs deeper understanding about causes, results and daily life, myAirCoach will serve as an example of how a single platform can help patients self-management, healthcare professionals supervision and researchers analysis of big data.*
Industry	**Background:** The technology of myAirCoach can be applied to a wide spectrum of devices and areas within the health field that will allow the creation of new business concepts and models. MyAirCoach technology can be translated into new self-management health systems, clinical prediction engines or clinical trials testing methods that will bring new business among others to pharmaceutical companies, medical SMEs, and mobile phone operators. **Key message example:** *"MyAirCoach will contribute to the development of the next generation inhaler: a connected e-tool that will boost patient comprehension and control to take action at the earliest signs of an asthma attack".*
General public	Use all the messages above depending on the occasion and channel

2.3.3 Identification of dissemination channels and tools

MyAirCoach partners will use three main **dissemination channels** to distribute its messages and deliverables, mainly in English:

1. online channels;
2. non-electronic channels;
3. interactive channels.

In addition, myAirCoach **dissemination tools** can be attributed to three different categories: electronic supports and materials, paper-based dissemination materials and interactive dissemination tools.

Table 2 myAirCoach Dissemination Channels and Tools

Dissemination channel	Target Audience	Purpose	Tools
Online Dissemination			
Project website	All	Inform and raise awareness on the myAirCoach, engage the European community and promote the project on	• Visual identity • Web articles

		a regular basis	• Blog
Intranet	Consortium partners	Inform about project activities, working methods, deadlines and deliverables in a timely and coordinated manner	• Internal area of project Web site • Open repository • myAirCoach mailing list
Mailing	All	Inform and raise awareness on the project through direct tools that will provide with regular updates and outline myAirCoach achievements	• Work email • Project newsletters
Print media	All	Raise project awareness and disseminate project (intermediate) findings and outcomes, mainly among European health-related magazines	• Press releases • Interviews
Twitter handle	Policy-Makers Public health community Scientists and researchers Industry People with asthma	Feed into the public m-health debate in a timely manner addressing target audiences to myAirCoach activities and to other m-health related news	• Real-time content • Photos and infographics • Web articles
LinkedIn group	Scientists and researchers	Engage the scientific community online on myAirCoach public activities to get their feedback and create new partnerships	• Posts • Blogs • Invitations to events • Polls
Facebook page	Consortium partners Patients Public health community	Raise project awareness in a friendly and attractive manner to increase interest and expectations about the project outcomes	• Posts • Photos and infographics • Polls
Google+ profile	General public	Inform the community about project news and other health-self management related developments	• - Posts • - Blogs
YouTube channel	General public	Raise project awareness in a friendly and attractive manner to increase interest and expectations about the project outcomes	• Videos
Non-electronic dissemination			
Scientific publications	All, with specific emphasis on: • Healthcare	Promote myAirCoach findings among the scientific community in detail, to transfer knowledge	• Scientific journal publications • Research

	professionals •Scientists and researchers •Industry		papers
Events	•Healthcare professionals •Policy-Makers •Public health community •Scientists and researchers •Industry	Raise awareness at conferences relevant for the dissemination of project findings and results, either through myAirCoach presentations or by interacting with participants	• Posters • Invitations • Presentations • Stands • Flyers • Brochures • Demos
Interactive dissemination			
Teleconferences and meetings	Consortium partners	Coordinate project activities and discuss in a lively manner best options to improve the project outcomes	• Presentations • Polls
Feedback sessions	•Healthcare professionals •Patients •Scientists and researchers •Industry	Engage with potential users and gather information and feedback throughout the course of myAirCoach project.	• Presentations • Polls • Invitations • Demos
Training sessions	•Healthcare professionals •Patients	Promote the sensor-based inhaler device during the development process to increase the rate of system's adoption by the community.	• Brochures • Flyers • Invitations • Demos

2.4 Dissemination materials

The present myAirCoach dissemination plan covers the first project year duration and therefore focuses on raising awareness of the first but also the final project outcomes/objectives.

The materials that will be developed will aim to to support the project objectives and will be widely used and tailored when possible to each project activity

myAirCoach logo

A defined visual identity (project's logo and branding) will ensure consistency among myAirCoach communication activities and will increase recognition during the first project year. The main objective of the myAirCoach visual identity is to define a unique image that can support the project awareness and help to increase the project visibility among the interested stakeholders and target audiences.

myAirCoach brochure

A corporate project brochure with visual schemes/infographics on the project objectives will be key to disseminate myAirCoach activities at the beginning of the project.

myAirCoach flyer
Given that myAirCoach partners will use their own professional business cards to give more information about the project, myAirCoach dedicated flyers will be produced to ease transportation and visibility of myAirCoach work, addressing different audiences to the project website and social media channels.

myAirCoach templates
Official ready-to-use project templates will be developed in line with the visual identity and will include a journalistic description of the project understandable for the public, a PowerPoint presentation, press releases, letters and flyer models. These materials will be prepared to promote the project concept and innovations in various events and workshops.

myAirCoach newsletter
The objective of the newsletter is to inform target audiences about myAirCoach concept in a detailed way. The newsletter will be updated once per year on the project activities and intermediate findings and will also feature the establishment of relevant partnerships initiatives and events relevant to the project. It can be sent to the myAirCoach partners in order to disseminated through their own networking channels as a way to contribute to the engagement of the public.

myAirCoach website content
A project website will be the key and permanent communication tool for the project. Developed and managed by the project coordinator (CERTH), the website will feature the myAirCoach concept, vision and objectives of myAirCoach. The website will be updated on a monthly basis with the latest project materials and documentation, news and links to related websites.

myAirCoach social media content
Strong social media presence will ensure project exposure to a largest possible audience. Not only social media will be used as a channel to promote other project channels and materials, but also to engage with wider audiences. MyAirCoach will create a project profile in the following social media channels:

- **Facebook page**: myAirCoach Facebook profile will be created with the objective of engaging with a wider and diverse audience of individuals. The content will be more accessible to non-scientific readers and will cover myAirCoach findings, activities and other project related news. It will be managed by CERTH and updated on a monthly basis.
- **Twitter handle:** a Twitter account will be created to ensure quick dissemination of myAirCoach project news. In this sense, a Twitter shortlink will be displayed on myAirCoach website enabling readers to share the news immediately. Trough Twitter, myAirCoach findings will feed the public

debate and be presented to policy-makers in a direct way. MyAirCoach Twitter will be managed by EFA on a weekly basis.

- **LinkedIn profile:** myAirCoach partners will have the opportunity to also share news relevant to myAirCoach through the LinkedIn group. The creation of the group is also intended to address a broader professional community (as identified in the target audiences) to promote project findings and ensure myAirCoach sustainability at the end of the project. The LinkedIn group will be updated at least every two months by EFA.
- **Youtube account**: short video clips have the potential to explain in an accessible way how m-health technologies work and what are the benefits for patients. MyAirCoach YouTube account will serve to publish project-related videos and presentations, including myAirCoach short film. It will be updated every six months by CERTH.
- **Google+ account:** a Google+ account will be created to ensure myAirCoach is visible among communities of individuals and professionals all over the world. It will serve to disseminate content directing readers to myAirCoach website and encouraging for comments and social engagement. It will be updated every two months by CERTH.

Peer reviewed Scientific Publications

MyAirCoach aims to produce outcomes of high value for the research and innovation community which will be submitted as abstracts to open access national and international medical meetings under three main disciplines: respiratory medicine, aerosol inhalation medicine and health technology. MyAirCoach abstracts will focus on the (i) development of the technology and also the (ii) clinical use of this technology by patients. The following list summarizes the results of a preliminary search for open access journals in which the research outcomes of myAirCoach could be published:

- **Models** (WP2 – *Test campaigns, measurements, clinical analysis*, WP4 - *Computational Models, Intelligent information processing and DSS module*, WP6 - *Evaluation*): European Respiratory Journal, European Journal of Medical Research, American Journal of respiratory and Critical Care Medicine, BMC Medical Research Methodology, International Journal of BioMedicine, Journal of Asthma and Allergy, Journal of Research in Medical Sciences, Multidisciplinary Respiratory Medicine, etc.

- **Prototype and Guidance System** (WP3 - *Smart sensor-based Inhaler prototype and Wireless BAN Sensor network*, WP4 - *Computational Models, Intelligent information processing and DSS module*, WP5 - *Integration and Personalised Guidance System)*: International Journal of Telemedicine and Applications, Preventing Chronic Disease, IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Mobile Computing, IEEE Transactions on Biomedical Engineering, International Journal of Healthcare Technology and Management, etc..

2.5 Dissemination activities and timeline

MyAirCoach dissemination activities will target the audiences described above and will use tailored messages accordingly. All consortium partners will participate in the project dissemination activities.

EFA will disseminate myAirCoach results from a patient-driven perspective to raise the profile of the project, contribute to fostering greater publicity for the project achievements in the context of EU research and create evidence to inform about the project's legacy. Ongoing activities and updates from the project consortium members will be communicated by EFA to patients' networks throughout the lifespan of the project through different communications channels, such as social media and EFA's own monthly newsletter.

Asthma UK (AUK) will disseminate the progress of the project and its outcomes through a variety of means and to a variety of audiences. Dissemination activities will run through AUK's website and links to the myAirCoach website and social media, media activities, news articles, presentations at conferences, participation in scientific conferences and targeted events. When needed, AUK will support EFA in translating clinical information and research outcomes in a lay language.

Other consortium partners will also promote myAirCoach, like ICL at doctors' meetings in UK (British Thoracic Society annual meetings) and internationally (European Respiratory Society and American Thoracic Society) while IHP, AEROCRINE, MV, Allertec, CNET plan to disseminate the results in international events like CeBit, Medica, etc. Finally the research partners (CERTH, UPAT, LUMC, IHP) will participate in well known concertation events, participating in scientific conferences and submitting research work).

During the project duration, the myAirCoach project partners will participate to relevant external events in order to raise key stakeholders' awareness and facilitate knowledge sharing, thus increasing the project impact. The following table gives an overview of planned events (already identified and attended in some of them) of potential interest for the myAirCoach in 2015.

Table 3 myAirCoach Dissemination Timeline

Date	Dissemination activity	Channel / Event	Lead / Participant	Role
January 2015 - UK	Unable to attend, but will consider participation and presenting myAirCoach in the coming project years	ARTP Annual conference	N/A	N/A
January 2015	In future: myAirCoach aims to be included in the world map of mHealth applications	GSMA Connected Living Tracker	CERTH	Responsible
February 2015 – Dhaka, Bangladesh	Unable to participate, but will consider it in the coming project years	4th International Conference on Lung Health "Pulmocon 2015"	N/A	N/A

February 2015	myAirCoach website	Myaircoach.eu	CERTH - EFA	Responsible
	myAirCoach Press release	Mailing	EFA	Responsible
	myAirCoach journalistic description	Mailing	EFA	Responsible
	myAirCoach social media	Facebook LinkedIn Twitter Google+ YouTube	CERTH - EFA	Responsible
February	Abstract submission	ERS Congress 2015	TBD	N/A
March 2015	myAirCoach visual identity	Myaircoach.eu	EFA	Responsible
March 2015	Scientific conference	Lung Science Conference	TBD	Speaker Moderator Participant Stand
March 2015	Networking to stimulate collaboration and partnerships within the mobile technology industry for the development of the project and beyond, to transform it into a commercially viable system	Mobile World Congress	TBD	N/A
March 2015 - Lyon, France	Scientific conference	5th European Respiratory Care Association Congress and 14th international conference on home mechanical ventilation joint meeting 2015	TBD	
March 2015	Abstract submission	mHealth + Telehealth World 2015	TBD	
April 2015	myAirCoach flyer	External events myAirCoach social media	EFA	Responsible
April 2015	Understand the key thinking and advances in the respiratory drug market	Asthma and COPD 2015 conference	TBD	N/A
April 2015 – Singapore	Scientific forum	8th World Asthma Allergy and COPD Forum 2015	TBD	N/A
May 18-19 2015 – Málaga,	Presentation of myAirCoach project to EFA membership: 38 European asthma, allergy and COPD patients associations	2015 EFA's Networking meeting	EFA	Organiser / Presenter

Spain			AUK	Attending
May 2015	Asthma patient testimony on myAirCoach concept and how it could benefit its daily life	Blog	EFA	Responsible
May 2015 - Riga, Latvia	Position myAirCoach in the global mHealth panorama and present it to government officials, industrial and academic developers and non-profit organizations	mHealth Summit	TBD	N/A
May 2015 - Boston, USA	Scientific conference	Third Annual Medical Informatics World Conference 2015	TBD	N/A
May 2015 - Denver, USA	Scientific conference	Annual Thoracic Society Conference	TBD	N/A
May 2015	Awareness raising about asthma as a chronic disease and new existing solutions for asthma management	World Asthma Day	EFA AUK	Preparation of press release
May 30 – June 3, 2015	Present myAirCoach project in the e-health in respiratory medicine symposium	ISAM 2015	CERTH	Submission of abstract and oral presentation
June	Post ISAM conference feedback on impressions on the myAirCoach concept	Blog / LinkedIn post	EFA CERTH	Responsible Contributor
16 – 17 June 2015	LUMC presented appropriate self-management solutions for asthma patients in primary care	ERS Presidential Summit	LUMC EFA	Speaker Attending
July 2015	MyAirCoach Brochure	External events Myaircoach.eu	EFA	Responsible
July 2015 – Boston, USA	Attendance	mHealth + Telehealth World 2015	TBD	
3-12 September -	Prepare the grounds to have the first asthma patient participating in the tour to promote myAirCoach system use by athletes	mHealth Grand Tour	TBD	
September 2015	Blog announcing new paths towards m-health solutions to respiratory patients	Blog / LinkedIn post	EFA AUK	Responsible Contributor
26-30 September 2015, Amsterdam	Networking to stimulate collaboration and partnerships within the pulmonary sector and raise awareness about the myAirCoach concept	ERS Congress 2015	EFA AUK	Probably speaker Attending
30th September/	Raise awareness about myAirCoach concept and the benefits of m-health on	18th European Health Forum	EFA	Probably

2nd October – Gastein, Austria	chronic disease patients	Gastein		speaker
October 2015 - London		5th International Conference on Wireless Mobile Communication and Healthcare	TBD	
November 2015	MyAirCoach Newsletter	Mailing	EFA	Responsible
December 2015	Submit an abstract to the conference, which is dedicated to those with an interest in drug delivery to the airways	DDL Conference 2015	CERTH	Submission of abstract (deadline July 2015)
December 2015	Exhibition stand in the eHealth forum 2015	eHealth Forum 2015	CERTH	Attended as an exhibitor

2.6 Dissemination evaluation

The impact of regular dissemination activities will be systematically analysed and reported to the project consortium. An official report will collect annually all dissemination materials, activities outreach scores, based on views, shares, recipients, engagement and audience numbers and will assess their impact in a given timeframe; to this end specific tools will be used, such as Facebook Insights, Twitter and YouTube Analytics, LinkedIn views, Website analytics. The dissemination plan will be re-adapted annually according to the dissemination evaluation.

3 myAirCoach dissemination material

This report constitutes a detailed description of the dissemination materials produced so far to create awareness about myAirCoach and to increase targeted outreach and visibility. In the framework of the first myAirCoach project year, several dissemination materials have already been defined, to promote the first steps in the myAirCoach project.

The following section summarises the different myAirCoach dissemination materials that have already been used as part of the myAirCoach dissemination activities. All dissemination materials were linked to the wide exposure of the project activities to targeted stakeholders and, where possible, tailored to the project activity. These include communication activities, production of support materials as well as project web presence, social media channels, and participation in relevant external events.

3.1 Journalistic description and press release announcing the project

As one of the first myAirCoach communication activities, a press release and journalistic description of the project were both developed.

A press release was issued with the purpose of announcing myAirCoach to a targeted audience of key stakeholders. The journalistic description served to inform about the myAirCoach concept and goals and was developed using language which could be interpreted and easily understood by the general public, the target audience for the communication

The Journalistic Description document is provided in Appendix A: “A Journalistic Description” and the press release have been provided in Appendix B: “A project press release”.

Both documents have been published on the project website.

3.2 Project Website and Social media

The myAirCoach website is one of the project’s main dissemination channels. The website was designed in the early stages of the project to support all horizontal activities of the project and is planned to be maintained for at least three years beyond the project lifespan.

The URL of the official project webpage is: www.myaircoach.eu

The website follows the project’s visual identity and the architecture includes these main sections:

- “*Home Page*” which outlines the project goals and displays the latest project news as well as the project’s latest twitter activity.
- “*Project*” which describes the project in greater detail by providing a summary, explaining its concept and approach, ambition, objectives and informs on related projects.
- “*Partners*” outlines the multidisciplinary nature of the project and presents the consortium partners, as well as a link to their respective websites.
- “*Results*” includes the list of scientific myAirCoach publications, public deliverables, presentations and a press kit.

- "*News and Events*" covers a list of news related to the goals of the project and publication of project results, a list of the events related to the project or as part of the project work plan, as well as the project newsletter, and the facility to subscribe to the newsletter.
- "*Knowledge Portal*" which directs myAirCoach partners to the project wiki page, after using their unique login information.
- "*Advisory Patient Forum*" which directs myAirCoach Advisory Patient Forum members to an online platform that serves as a document repository as well as a discussion forum for the APF members with a list of biographies of all the APF members. This online platform can be accessed by the APF members, only after using their unique login information.
- "*Contact*" which allows visitors of the website to request feedback regarding the project and/or website functionalities, as well as contact information for the project coordinator.

myAirCoach social media channels are used to promote other project channels and materials and to engage with wider audiences. Profiles were created in the following social media channels:

- **Facebook page:** myAirCoach Facebook profile holds the opportunity to engage with a wide and diverse audience of individuals and to receive their opinion as immediate feedback. Having a Facebook page will make the project more discoverable and accessible to non-scientific readers. The content of the page will cover myAirCoach findings, activities and other project related news, as well as images and visual material to engage the audience on this channel.

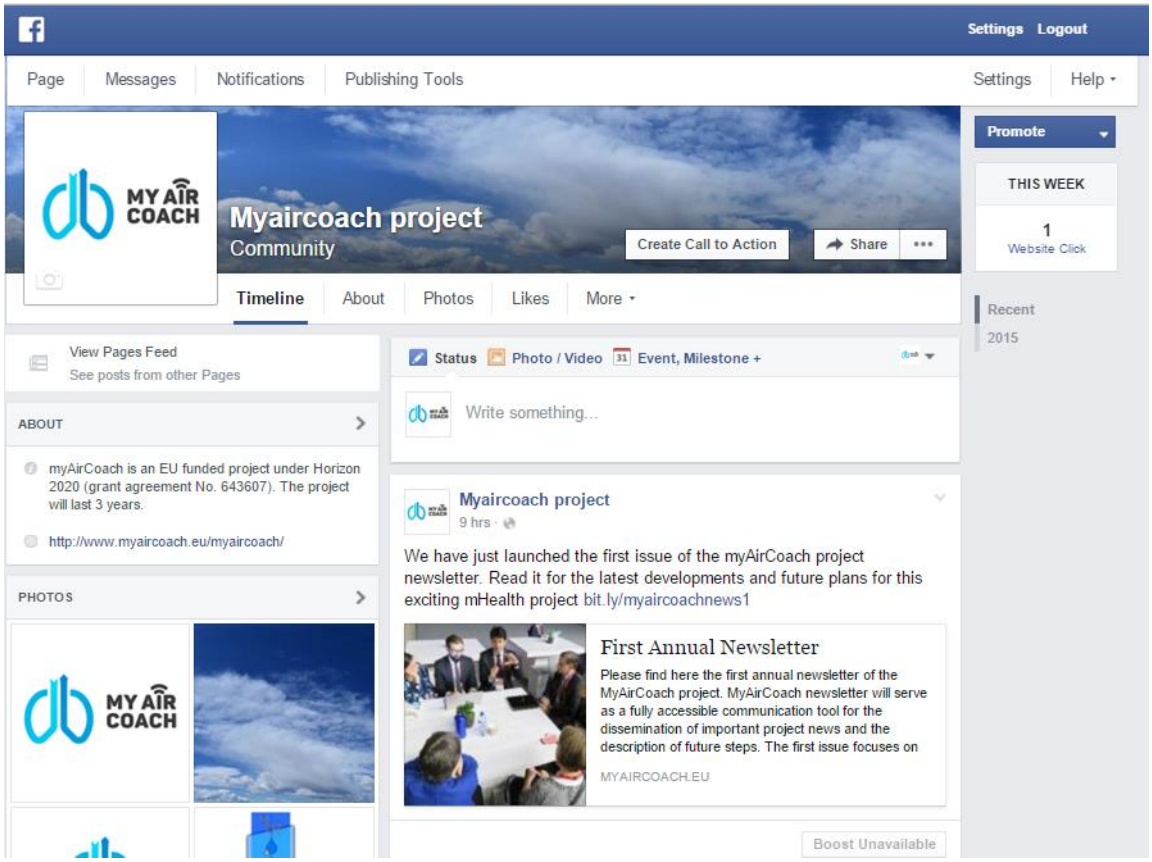


Figure 1*: A screenshot of the myAirCoach Facebook Community*

- **Twitter handle:** a Twitter account has been created to ensure quick dissemination of myAirCoach project news. In this sense, a Twitter shortlink is displayed on myAirCoach website enabling readers to share the news immediately. Trough Twitter, myAirCoach findings will feed the public debate and be presented to policy-makers in a direct way. MyAirCoach Twitter will be managed by EFA on a weekly basis.

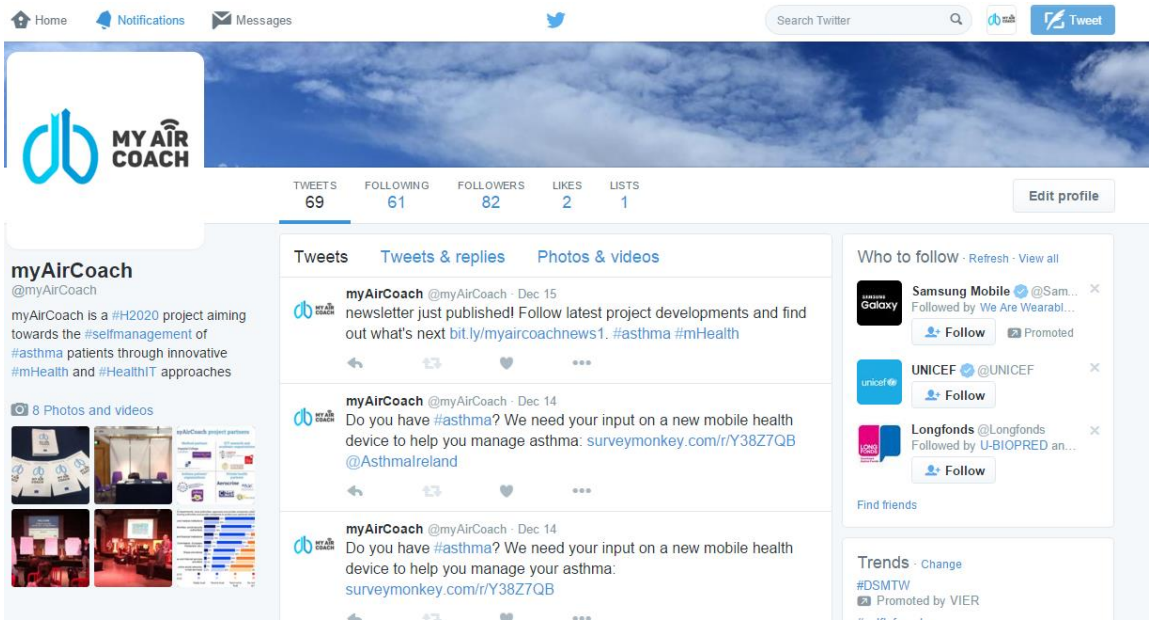


Figure 2: ***A screenshot of the myAirCoach Twitter Handle***

- **LinkedIn profile:** The myAirCoach LinkedIn group introduces the opportunity to address a broader professional community of stakeholders, to promote project findings and ensure myAirCoach sustainability upon project completion. Through the sharing of news and promoting upcoming events, the myAirCoach consortium gets direct feedback from the audience.

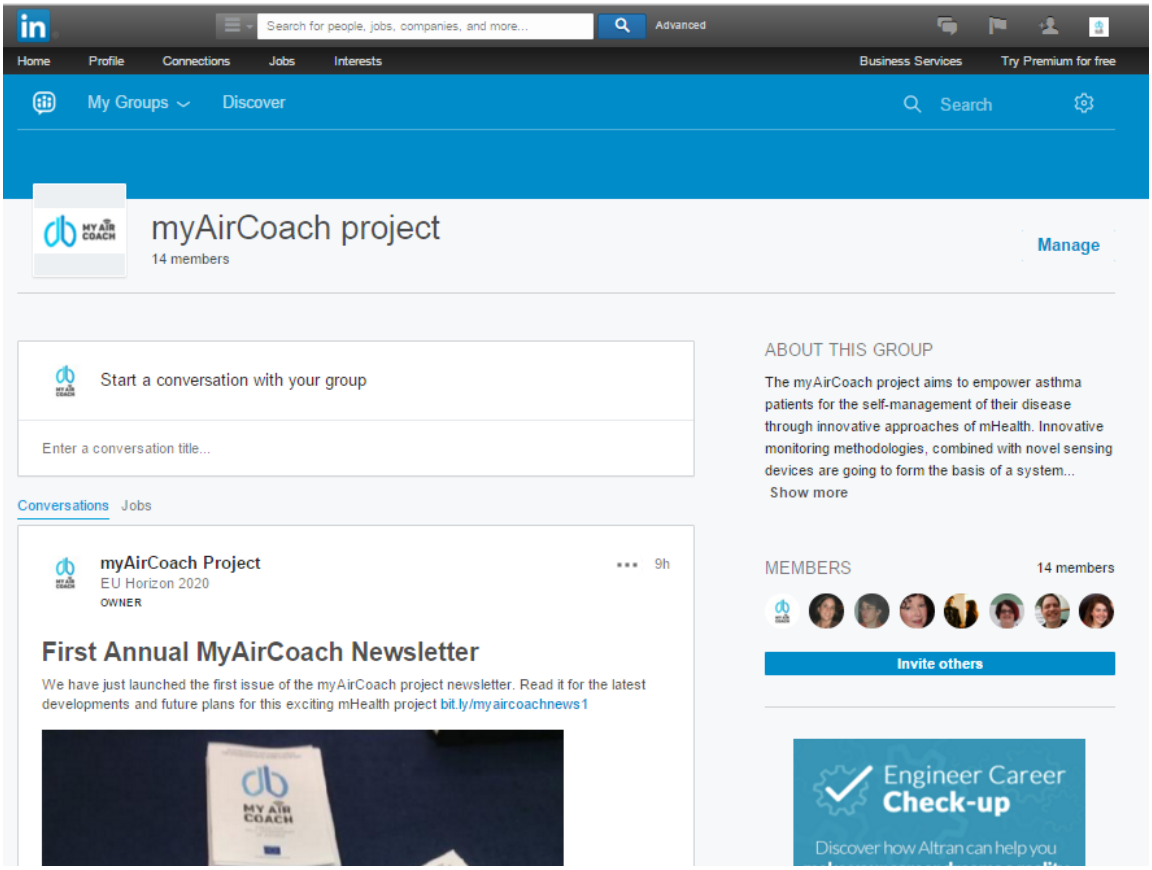


Figure 3: ***A screenshot of the myAirCoach LinkedIn Group***

- **Youtube account**: short video clips hold the potential to explain in an understandable way how m-health technologies work and the benefits they have for patients.

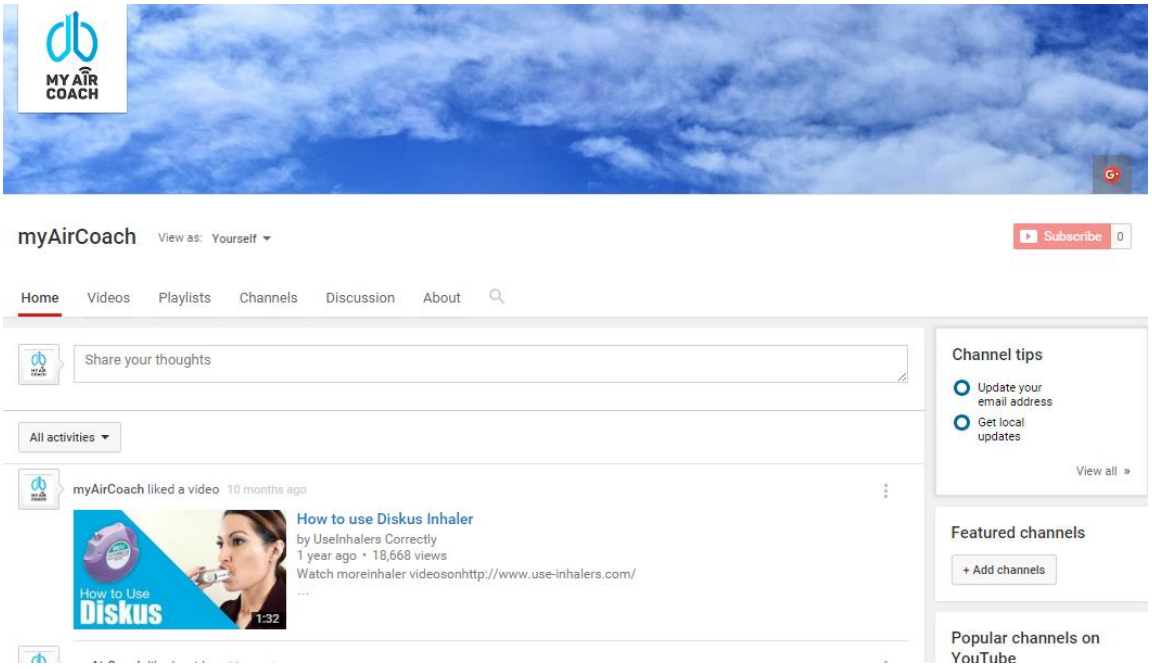


Figure 4: ***A screenshot of the myAirCoach Youtube channel***

- **Google+ account:** a Google+ account was created to ensure myAirCoach is visible among communities of individuals and professionals all over the world. It serves to disseminate content directing readers to the myAirCoach website and encourages comments and social engagement, it also helps with SEO visibility in google.

A Google Analytics & Reporting tool is used to provide a clear view and detailed statistics of the myAirCoach online web presence.

Overview

The following graphics show an overview of the user activity. Figure 5 represents a monthly performance report that clearly shows constant user activity between April and October 2015

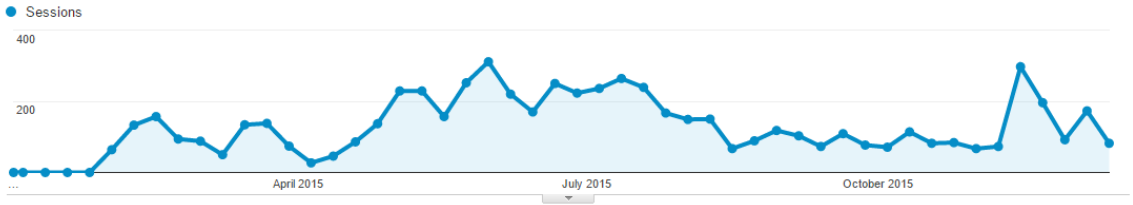


Figure 5: ***Monthly Performance Report***

So far the total number of myAirCoach website audience has reached 4,745 persons in 6,441 sessions with an average duration of 02:44 min. These figures and other indicators are displayed in figure 6 "General overview of the users' activity".

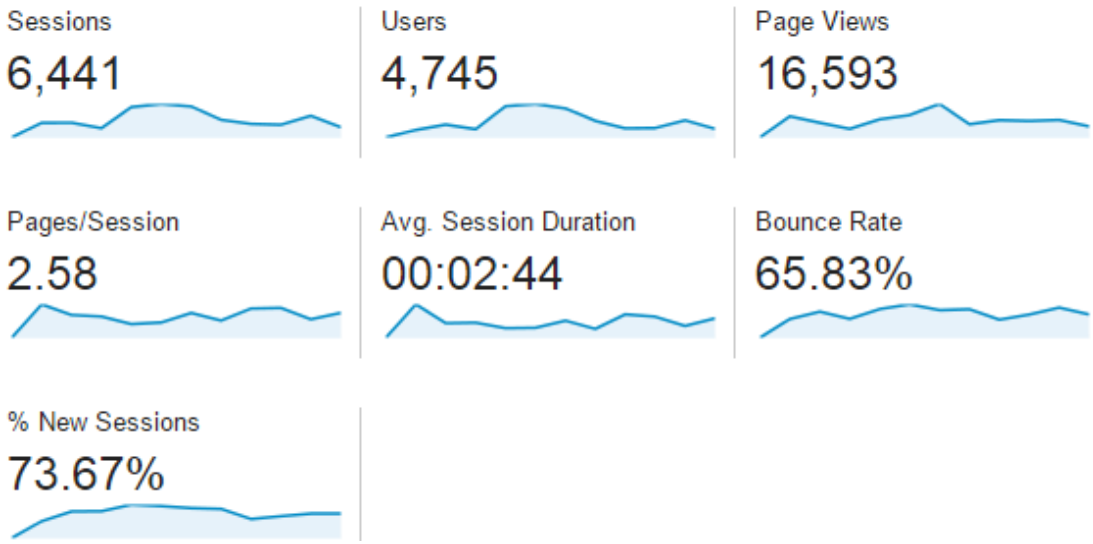


Figure 6: ***General Overview of the users' activity***

Almost 25% of the visitors return, which is shown from figure 7 "New Visitors – Returning Visitors".

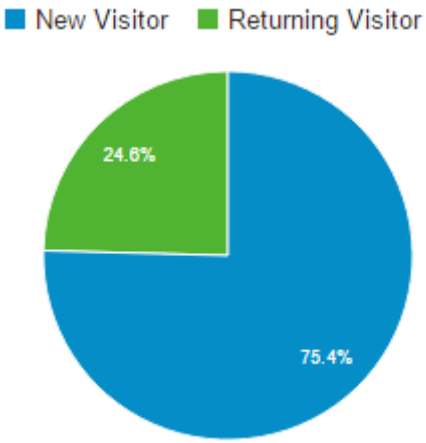


Figure 7: ***New Visitors – Returning Visitors***

3.3 Visual identity and templates

The **myAirCoach visual identity** defined the project's logo and branding to ensure consistency among all myAirCoach communication activities and materials used, and to support project awareness and increase visibility among target audiences.

It was established during the first months of the project, along with an official icon for the myAirCoach project, necessary to enable immediate recognition of the project among the general public and all relevant stakeholders.

Official ready-to-use project templates (a journalistic description of the project understandable for the public, a PowerPoint presentation template used for communication and dissemination activities carried out by each project partner in the framework of the project, press releases, letters, newsletters and flyer templates) were prepared in line with myAirCoach visual identity to promote the project concept and innovations in various events and workshops.

The following figures portray the different versions of the logo:

(a) **(b)**

Figure 8: ***(a) horizontal project logo and (b) horizontal project logo with signature***

Figure 9: ***(a) vertical project logo and (b) vertical project logo with signature***

3.4 Press releases

On World Asthma Day EFA drafted a myAirCoach press release that was shared with myAirCoach partners for dissemination to their network and through their channels. A template version was provided, so that it could be personalised by the respective partner.

The World Asthma Day press release full text document is provided in Appendix C: "World Asthma Day press release".

3.5 Blog Entries

In 2015 a blog entry featuring a patient testimony of a member of the Advisory Patient Forum was posted on the myAirCoach website. The blog focused on the expectations of the Advisory Patient Forum, as a patient involved in the myAirCoach project and how patient participation in research could help shape the outcomes.

The full blog entry is provided in Appendix D: "myAirCoach Blog Entry"

3.6 Articles

To mark the celebration of World Asthma Day, on the 25th of May, Citizens News Service published an article on asthma management where the myAirCoach project was featured.

The link to the article on Citizens News Service can be found here: http://www.citizen-news.org/2015/05/putting-patients-at-centre-of-asthma.html

On the 17th of November Medtech Engine published an article that focused on the myAirCoach project, and more specifically the presentation of the project at the ISAM Congress in June where Dr Votis from CERTH outlines the project and its potential for innovation.

The link to the article on Medtech Engine website can be found here: https://medtechengine.com/article/a-pan-european-collaboration-for-asthma-management/

3.7 Project Brochure

The myAirCoach project brochure provides a brief project description with visual schemes/infographics on the project objectives. The brochure is targeted to a wide community and is a key dissemination tool for informing about myAirCoach activities at the beginning of the project.

The URL of the official project leaflet is:
http://myaircoach.eu/myaircoach/system/files/presskit/myaircoach_project_leaflet.pdf

Figure 10: ***A screenshot of the myAirCoach Project Brochure***

3.8 Newsletter

A myAirCoach newsletter will be issued annually to inform about the project progress. The first myAirCoach newsletter was issued this December and describes the latest project news and findings. It will serve as a fully accessible communication tool for the dissemination of important project news and the description of future steps.

The newsletter text is provided in Appendix E: "myAirCoach Newsletter Issue No. 1".

3.9 Participation in external events

One of the key dissemination methods is the participation in relevant events, conferences, workshops and meetings, scientific and information days. This is in order to raise project awareness, present project results and findings and liaise with key stakeholders to increase the project's impact. The following list depicts an overview of relevant events attended where partners presented or promoted the myAirCoach project.

3.9.1 Presentations

The myAirCoach project concept was presented by myAirCoach consortium partners at the following events:

- International Society for Aerosols in Medicine (30 May – 03 June)

  Conference Location: Munich, Germany

  Scope: During the International Society for Aerosols in Medicine (ISAM) Congress, CERTH presented the current state of the art technologies in the field of mhealth technologies and framed the myAirCoach goals in the optimisation of asthma management in his presentation "*The digital patient: - the future of mobile health for respiratory patients*".

- International Conference on e-Health and Bioengineering (19 - 21 November)

  Conference Location: Iasi, Romania

  Scope: On Friday 20th of November, CERTH presented their paper "*Utilizing Convolution Neural Networks for the Acoustic Detection of Inhaler Actuations*" at the IEEE eHealth and Bioengineering Conference 2015.

- International Conference on Interactive Mobile Communication, Technologies and Learning (19 - 20 November)

  Conference Location: Thessaloniki, Greece

  Scope: In the International Conference on Mobile Communication, Technologies and Learning, CERTH presented the design process of the myAirCoach app during the presentation "*myAirCoach: designing a mobile application for the education of patients regarding asthma disease*", as well as the educational components of the myAirCoach project.

- eHealth Forum (03 - 04 December)

  Conference Location: Athens, Greece

  Scope: During the 2015 eHealth Forum CERTH presented the overall myAirCoach framework, with the ambition of exploring potential synergies with commercial entities and research institutes in Greece as well as introducing novel eHealth approaches in the Greek HealthCare system.

3.9.2 Project Promotion

myAirCoach was promoted by project partners through the distribution of the project brochure and by informing a variety of stakeholders at the following events:

- ERS Presidential Summit, (16 - 17 June)

Conference Location: Brussels, Belgium

Scope: Presentation of overall myAirCoach concept in presentation "self-management for asthma patients in primary care" by consortium partner (LUMC) and attended by EFA.

- ERS Congress (26 - 30 September)

  Conference Location: Amsterdam, the Netherlands

  Scope: Presentation of overall myAirCoach framework and dissemination of main objectives and myAirCoach project concept by partners EFA, ICL, LUMC and Aerocrine.

- European Health Forum Gastein (30 September – 02 October)

  Conference Location: Bad Gastein, Austria

  Scope: Dissemination of myAirCoach concept and objectives by partner EFA.

- Responsible Research Innovation-ICT (08 - 09 July)

  Conference Location: Brussels, Belgium

  Scope: Promotion of overall myAirCoach framework by partner EFA.

- DDL26 Conference – Drug Delivery to the Lungs (9 - 11 December)

  Conference Location: Edinburgh, Scotland

  Scope: Promotion of the myAirCoach framework at EFA conference stand and dissemination of main objectives and project concept by disseminating the myAirCoach project brochure.

3.10 Scientific Publications

No.	Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Year of publication	Pages	Permanent identifiers[1]	Open access[2]
ATTENDED									
1.	The digital patient: - the future of mobile health for respiratory patients	CERTH/ITI: Dr Votis Konstantinos, Dimitrios Kikidis, Dr Dimitrios Tzovaras ICL: Dr Omar S. Usmani	In proceeding of the 2015 Congress of the International Society for Aerosols in Medicine	*Annual conference*	*ISAM society*	*2015*	*N/A*	Not yet available	No
2.	*Utilizing Convolution Neural Networks for the Acoustic Detection of Inhaler Actuations*	CERTH/ITI: Dr Votis Konstantinos, Dimitrios	*In proceedings of the IEEE International Conference of e-*	*Biennial conference*	*IEEE Romania Section*	*2015*	*4*	Not yet available	

[1] A permanent identifier should be a persistent link to the published version full text if open access or abstract if article is pay per view) or to the final manuscript accepted for publication (link to article in repository).

[2] Open Access is defined as free of charge access for anyone via Internet. Please answer "yes" if the open access to the publication is already established and also if the embargo period for open access is not yet over but you intend to establish open access afterwards.

		Kikidis, Dr Dimitrios Tzovaras	*Health and Bioengineering*						
3.	*MyAirCoach: Designing a mobile application for the education of patients regarding asthma disease*	CERTH/ITI: Dr Votis Konstantinos, Dimitrios Kikidis, Dr Dimitrios Tzovaras	*In proceedings of the International Conference on Interactive Mobile Communication, Technologies and Learning*	*Annual Conference*	*International Association of Online Engineering*	*2015*	*4*	Not yet Available	
4.	*The Digital Asthma Patient: The History and Future of Inhaler Based Health Monitoring Devices*	CERTH/ITI: Dr Votis Konstantinos, Dimitrios Kikidis, Dr Dimitrios Tzovaras	*Journal of Aerosol Medicine and Pulmonary Drug Delivery*	*Bimonthly Journal*	*Thomson Reuters*	*To be published 2016*	*41 (submission format not camera ready)*	Not yet available	
5.	*Energy Efficient Telemonitoring of Asthmatic Wheezes*	A. S. Lalos and K. Moustaka	*EUSIPCO 2015*	*Annual Conference*	*EUSIPCO*	*2015*	*NA*	Not yet available	
6.	*Analysis Modelling and Sensing of Both Physiological and Environmental Factors for the Customized and*	K. Votis, A.S. Lalos, K. Moustakas and D. Tzovaras	*6th Panhellenic Conference on Biomedical Technology*	*Annual Conference*		*2015*	*NA*	Not yet available	

	Predictive Self-Management of Asthma								
7.	*Sparse Coding of Dense 3d Meshes in Mobile Cloud Applications*	*A. S. Lalos, I. Nikolas and K. Moustak*	*In proceedings of IEEE International Symposium on Signal Processing and Information Technology*	*Annual Symposium*	*ISSPIT 2015*	*December 2015*	*NA*	Not yet available	

4 Appendix

4.1 Appendix A: A Journalistic Description

myAirCoach *will help patients take control over their asthma by putting them at the centre of their disease management.*

Who is involved?

The **myAirCoach** project consortium is composed of members from different functional areas in the field of healthcare that will work together to develop digital models, specific to each patient, that will monitor the patient's condition and predict the progress of the disease.

The project is coordinated by the "Centre for Research and Technology Hellas" (Thessaloniki, Greece) that will partner with three research centres, three academic organisations, four private small and medium enterprises and two patient organisations.

Through the patient organisations, the project will count on a committee of patient volunteers that will be in continuous communication with the researchers. This committee will ensure that patients' needs are taken into account for the entire project.

Putting patients at the centre of asthma management

Asthma is one of the most chronic diseases and affects 30 million people in Europe. Despite decades of research, asthma control remains poor because it is underdiagnosed, undertreated and difficult to predict.

myAirCoach is a new EU project aiming to overcome the gaps in asthma management. Under the coordination of the Centre for Research and Technology Hellas, myAirCoach researchers will develop a new mobile health system to help and support asthma patients to self-manage their disease with success.

Asthma control depends on many external factors that need to be measured. The personalised asthma monitoring system that will result from myAirCoach will have sensors to monitor the patient's symptoms and triggers, the use of medication, environmental factors and.

People living with asthma have very sensitive muscles surrounding their airways. When their muscles get irritated, patients will experience breathlessness and wheezing.

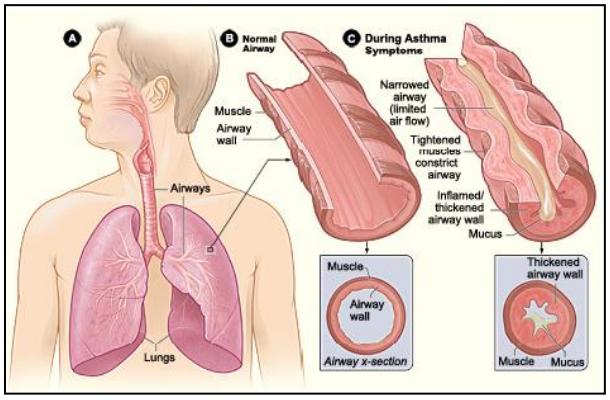
Thanks to myAirCoach sensors, the data collected from these symptoms will be transferred to a mobile device for analysis. The data will serve to create a personalized digital model of each patient's condition and to match each patient to the right treatment plan.

Funded by the new EU Programme for Research and Innovation, Horizon 2020, myAirCoach will put patients at the centre of asthma management. Not only will they be involved in the research project itself, but the m-health tool resulting from the project will provide them with precious information on their day to day condition. This will bring the patient towards a (near) healthy lifestyle with the prevention of symptoms as the ultimate goal.

Why one size does not fit all

Asthma affects **patients' airways** and, more specifically, the muscles surrounding their airway passage. When the muscles become irritated they clamp up, making breathing very difficult for asthma patients.

When asthma patients have an "**asthma flare-up**", also known as exacerbation, the airways swell up, making it increasingly difficult to get the air both in and out of the lungs. The patient will no longer be able to properly exhale, leaving lungs still half full. This situation makes breathing in very painful: the lungs are over-inflated when the patient tries to breathe again, which results in hurtful stretching of the rib joints and chest muscles. Despite the lungs holding a lot of air, the air is stale, containing less than the average 20% oxygen, which explains why the patient will suffer from a shortage of breath.



Asthma is a **difficult to treat disease**, since it is influenced by many factors that might be out of the patient's control:

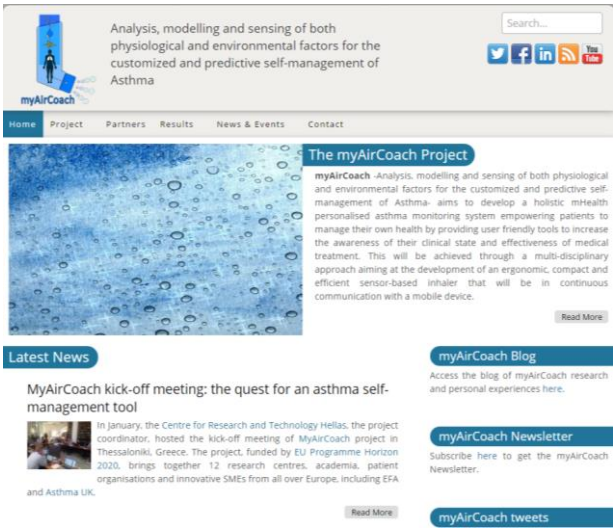
- Age
- Genetic makeup: Gender, Genes …
- Bodily functions: Lung function, fitness …
- Behaviour: Use of medication, lifestyle, emotions …
- Environmental factors: Allergies, air pollution…

In addition to these parameters, the disease is also constantly changing. As a chronic disease, patients go through different stages that go along with different phases in their life, which makes every case of asthma unique.

Asthma patients **need a treatment plan specifically tailored** to their needs, because changing symptoms will lead to different treatment needs and options.

For more information

If you wish to know more on **myAirCoach** (Analysis, modelling and sensing of both physiological and environmental factors for the customized and predictive self-management of Asthma), visit the project website: www.myaircoach.eu



4.2 Appendix B: A project press release

myAirCoach will enable asthma management and control from a mobile phone

European researchers have been awarded over € 4.5 million to create a user-friendly tool to support asthmatic patients monitor and self-control their disease.

MyAirCoach stands for Analysis, modelling and sensing of both physiological and environmental factors for the customized and predictive self-management of Asthma, and seeks to merge mobile health potential to improve the quality and efficiency of healthcare with the daily needs of chronic asthma patients.

Need for a customized asthma treatment

Asthma is one of the most common chronic diseases in Europe, affecting each patient differently. The place where patients live and work, the weather and season, age and even emotions (for example work-related stress) impact the disease symptoms.

Asthma changes constantly, along with the patients' life, making it compulsory to adjust treatments accordingly.

This makes every case unique, even for a single patient and on a day to day basis, requiring a treatment plan tailored to the patient's needs.

A personalized asthma monitoring system?

Today, mobile devices can support medical and public health practice if the right apps are in place. mHealth can significantly contribute to patients' empowerment, enabling them to manage their health more actively and to live more independently. It can also support healthcare professionals in treating patients more efficiently as mobile apps can track adherence to treatment and encourage healthy lifestyles.

Funded by the EU Horizon 2020 Research and Innovation framework programme, **MyAirCoach** aims to develop a patient-friendly, sensor-based tool to collect clinical, environmental and behavioural data relating to the patient. These measurements will serve as the basis for a digital model that will enable the medical and research community to make accurate predictions of the patient's disease progression. The patient will receive immediate feedback on how to manage his/her condition as well, especially when facing a higher risk of asthma aggravation, enabling patients to manage their health to avoid those asthma symptoms.

MyAirCoach project will run for three consecutive years and involves research centres, academic organisations, patient organisations and private medical enterprises from across Europe, to bring various perspectives on asthma self-management to the project.

Interested? Find out more about the project on the myAirCoach website.

4.3 Appendix C: World Asthma Day press release

Involving patients to develop a mobile system to self-manage asthma

Brussels, 5 May 2015 / WORLD ASTHMA DAY - Despite the wide availability of asthma therapies, many people with asthma still experience lots of symptoms impacting significantly on their quality of life. In line with this year's World Asthma Day theme "You can control your asthma", myAirCoach, a leading pan-European project is recruiting patients to develop a monitoring device which is integrated with mobile technology to help people with asthma to take the right steps to stay on top of their condition and reduce their risk of an asthma attack. There are many external factors which can impact an individual's ability to manage their asthma.

MyAirCoach will use a network of sensors to collect data about a person's symptoms, inflammation inside the airways and the environment. The data will be transferred to a mobile device for analysis and will feed into a personalized digital model of each individual's asthma, supporting patients to better manage their condition and optimise their treatment. "This is a really innovative use of mobile technology and has the potential to make a big difference to people with asthma to produce a meaningful tool for patients", says Breda Flood, President of the European Federation of Allergies and Airways Diseases Patients' Associations.

Given that asthma needs individualised attention, myAirCoach will put patients at the centre of their asthma management. The project has set up an Advisory Patient Forum (APF) that will guide researchers to ensure that the resulting self-management system is relevant to patient needs. Patient representatives from EFA and Asthma UK will inform the design of myAirCoach through focus groups and surveys to make sure it is useful to patients in the real world.

If you have asthma and wish to be one of the patient experts helping to design a European project on asthma management, please email **research@asthma.uk.org**. You will receive updates on the consultations and activities that will take place under myAirCoach project.

Funded by the EU Programme for Research and Innovation Horizon 2020, myAirCoach represents a great opportunity to demonstrate the wider benefits of involving patients in the development of new technologies to improve healthcare.

myaircoach.eu

Notes to editors

About MyAirCoach

- By giving people live access to data about their environment, their medicines and their body's response to their treatments, myAirCoach will help people with asthma and healthcare professionals to take the right steps at the right time to stay on top of their asthma and prevent attacks
- What is an asthma attack? When a person with asthma comes into contact with something that irritates their airways (an asthma trigger), the muscles around the walls of the airways tighten and

become narrower and the lining of the airways becomes inflamed and starts to swell. Sometimes, sticky mucus or phlegm builds up, which can further narrow the airways. These reactions cause the airways to become narrower and irritated - making it difficult to breath and leading to symptoms of asthma, such as breathlessness and wheezing.

About EFA

The European Federation of Allergy and Airways Diseases Patients' Associations (EFA) is a non-profit network of allergy, asthma and chronic obstructive pulmonary diseases (COPD) patients organisations, representing 38 national associations in 24 countries and over 400,000 patients. Visit www.efanet.org for more information.

4.4 Appendix D: myAirCoach Blog Entry

"The greatest gift you can give me...", an open letter from an asthma patient

The greatest gift you can give me ...

By Laura Bond, member of the Advisory Patient Forum for the MyAirCoach Project

I am an asthma patient, or more accurately, an asthma sufferer really fed up of going to the doctors or the hospital because of my asthma. I'd much rather be on holiday, seeing friends and family; even just not worrying about whether I've remembered my inhaler or not would be brilliant!

That's why I decided to join myAirCoach project as a volunteer patient advisor.

I'm just a regular person with a family, a job and hopes for the future and I dream of the day that asthma will not influence my daily activities. This project can help me achieve that. myAirCoach has the potential to transform my life and that of the 30 million people living in Europe with asthma like me.

This project is very exciting because it is based on the promise that by putting our knowledge around health, new technologies and patients' views together, we can create a tool that responds to patient needs and can control asthma easily with a personalised system.

MyAirCoach plans to understand how asthma and the environment I live in affects me, through miniaturized sensors that will be attached to my inhaler and will be connected with my smartphone. These sensors will capture information that will then be combined with my medical records so that I can receive personalised advice on how to self-manage my asthma. This means that I will not have to go to the doctors or hospital as much and have more spare time for the things I want to do. Sounds perfect!

But there are some things that I'm worried about. For example, will I need to give consent to the doctors and technicians using my medical records or have myAirCoach engineers assumed that I'll say yes? What will the final device look like? Will it interfere with my life at all?

The input of patients like me to projects like myAirCoach can make a big difference to how the findings of the project are used and adopted by the patient community. If the final device is too hard to use, too heavy, too inconvenient or too ugly then honestly, I probably won't use it. This is the main reason why, together with the other 19 patients, I am part of the Advisory Patient Forum within the project. A group that guides myAirCoach partners to find the best approach to respond to patients' needs.

As a patient, I will help with the usability of myAirCoach Personal Guidance System and it would be fantastic if I were able to input throughout the design, build and testing stages. We, the patients, have the greatest understanding of the disease and its effects, so I will for sure be able to contribute to the ethical questions that arise from data sharing and the way in which the system gives me potentially bad news.

The scientists, clinicians and engineers on this project are amazing and I know that, together, we can make this happen. So, whilst I'm eagerly awaiting the time when myAirCoach could transform my life, the greatest gift the project can give me is something that I really want to use.

Laura Bond

4.5 Appendix E: myAirCoach Newsletter Issue No. 1

MYAIRCOACH NEWSLETTER

Issue No. 1

Welcome to the first annual issue of the MyAirCoach Newsletter.

MyAirCoach newsletter will serve as a fully accessible communication tool for the dissemination of important project news and the description of future steps.

Please subscribe to our mailing list in order to receive notifications for the project news

MY AIR COACH

Horizon 2020
European Union Funding
for Research & Innovation

myaircoach.eu

EDITORIAL

MyAirCoach is an EU funded project under Horizon 2020 (grant agreement No. 643607). The project started on the 1st of January 2015 and will last 3 years.

The MyAirCoach project aims to support asthma patients to control their disease through mHealth. New monitoring approaches, combined with the development of novel sensors will form a system that will address the needs of patients on a daily basis and in the real life environment. Analysis, modelling and prediction of disease symptoms are expected to engage patients in the management of their asthma, and also reveal the possibilities and innovative solutions that mHealth can bring to asthma control.

Furthermore, MyAirCoach is aiming to form an important tool for the support of healthcare professionals both for the efficient supervision of the condition of their patients and also for the research and understanding of asthma disease.

"Our vision is to provide a unified solution that will empower asthma patients to control their disease and enable doctors to help them more effectively and efficiently."

Project coordinator

Dr Dimitrios Tzovaras

Information Technologies Institute

Centre of Research and Technology – Hellas

OBJECTIVE

The MyAirCoach project aims to improve the quality of life of asthma patients and their families and to increase the efficiency of asthma healthcare as a whole.

MyAirCoach will do this through the use of miniaturized sensing devices and novel decision support methodologies. The system will be based on a wide spectrum of measurements which will include physiological, environmental and lifestyle parameters.

This will in turn allow the accurate assessment of the patients' condition: help ensure proper use of medication, and the avoidance of possible future risk factors.

It is also envisaged that the innovative components developed as part of this project will stimulate research in the field of asthma management and support the creation of synergies, both across and within, the disciplines of technology development and medical research.

Modern approaches of modelling and prediction of asthma will be used for the optimization of the diagnosis and treatment process:

Multi-parametric monitoring

- Asthma related parameters, activity, lifestyle, and environment

Inhaler prototype

- Sensing capabilities and connectivity with smart devices

Personalized monitoring and guidance platform

- Automated assessment and guidance, interactive interfaces
- Supervision and communication with healthcare personnel

Patient-specific computational models

- Physiological and environment-aware computational models

Test campaigns

- Optimization and validation of the computational models

Predictive value of new physiological markers

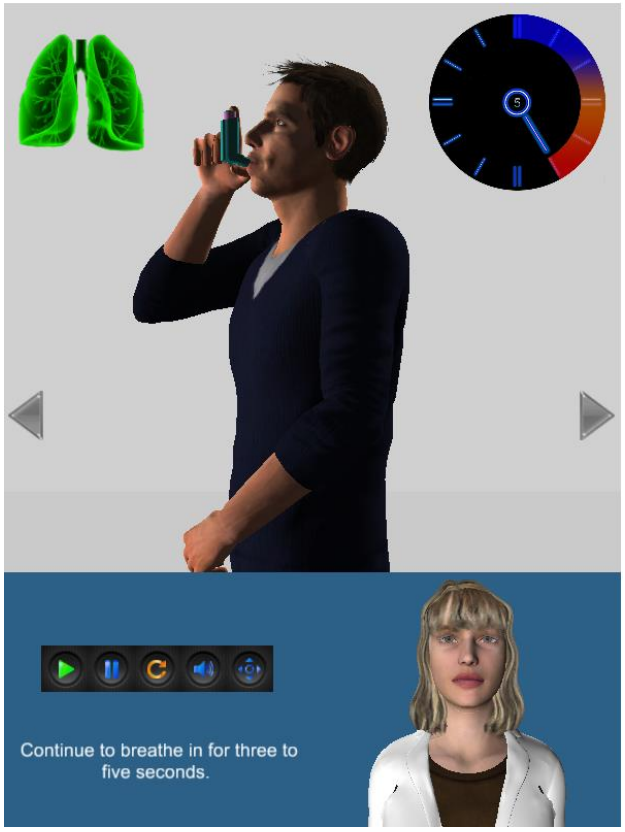
- Propose new metrics to analyze and evaluate medical treatments

Validation of the myAirCoach project

PARTNER MEETINGS

The project's consortium has established continuous communication links and a number of meetings have been organized so as to increase of cooperation towards the project's objectives.

Recently, consortium members have met in London. The meeting was an opportunity for project members to get together and discuss the progress and development of the project and targets for the year ahead.



The technical partners of the project presented their approaches, and the current state of development of the inhaler based sensor, and the software components required for their intelligent information processing of collected measurements. The first results of modelling were presented both for the understanding of airflow within the lungs of patients and the concentration of pollution particles that may trigger an asthma attack.

Finally, the first version of an interactive 3D environment for the presentation of inhaler instructions was presented and

discussed with the clinical partners and patient organizations for the improvement of its usability and easy comprehension by patients.

UPDATE ON ONGOING PROJECT ACTIVITIES

In order to find out what people with asthma want from a mHealth device, Asthma UK, Manchester and Leiden University ran three focus groups in London, Manchester and the Netherlands. We also ran another group with healthcare professionals (HCP's) in order to gain perspective from those who treat people with asthma.

A total of 22 patients contributed to the patient led focus groups. For the HCP group, we had two clinicians, two nurses and one clinical physiologist, all of whom are directly involved in treating people with asthma.

We asked the focus group participants:

- what kinds of measurements would be useful to help them manage their asthma,
- what kinds of alerts and reminders would be beneficial,
- their thoughts on the burden of inputting data, user support, privacy and product design amongst some other topics.

From this information we have pulled out some central themes and created a survey which will be sent out to people with asthma and health care professionals, allowing us to collect some quantitative data.

We aim to get 200 responses over the next few weeks, and these responses will help guide the design and usability of the final device.

PATIENT INVOLVEMENT

MyAirCoach will provide patients with a support system to help them in the self-management of their asthma. It will do this by enabling them to take the right steps, at the right time, in order to prevent asthma attacks.

But how can we ensure that the final product will meet the real needs of asthma patients? The key to achieving this is by involving and engaging with the patients directly, and making them a key part of the project development team.

Thanks to the expertise and the networks of both EFA and Asthma UK, a group of patients, called the Advisory Patient Forum (APF), was established to provide continuous feedback to the members of the consortium. This group will provide the patient's perspective to the research activities of the project.

The APF is composed of 22 adult asthma patients from four different European Countries: United Kingdom, Ireland, the Netherland, and Portugal. It was established in June and has already provided an outstanding contribution to the project. It has helped to define the device user requirement and on outlining the methodology of the test campaigns aimed at investigating and specifying appropriate physiological, behavioural and environmental markers which have significant predictive values for asthma. Laura, a member of the APF, has written a blog about her involvement in the project and you can read the blog in full here. She has this to say about what taking part in this project means to her and her hopes for the end result:

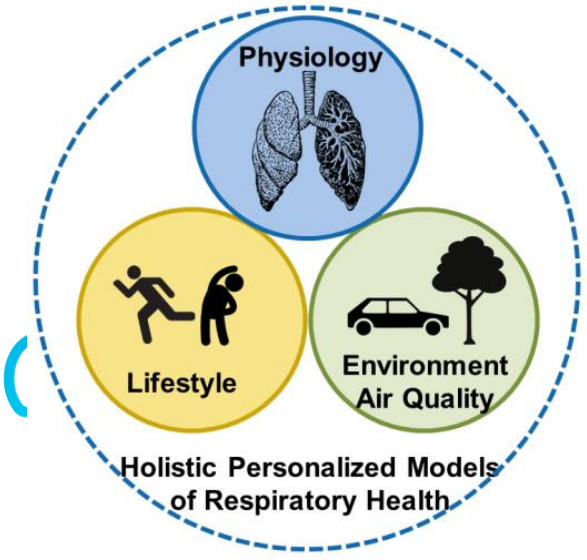
"This project is very exciting because it is based on the promise that by putting our

knowledge around health, new technologies and patients' views together, we can create a tool that responds to patient needs and can control asthma easily with a personalized system."

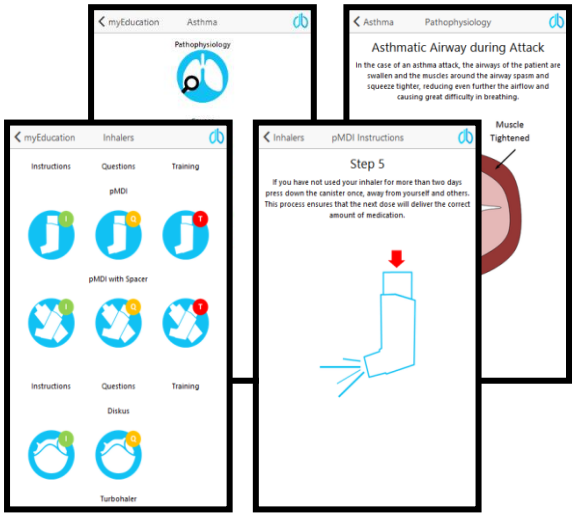
EXTERNAL EVENTS

MyAirCoach is currently being promoted at the DDL26 Conference – Drug Delivery to the Lungs, which takes place in Edinburgh from the 9th till the 11th December.

The conference is a non-commercial meeting aimed at providing high quality and varied program that promotes, by means of podium and poster presentations and exhibitions, recent developments in the field of inhalation therapy. 600 participants will receive a copy of the myAirCoach brochure and further information on the project is provided at the promotional stand manned by the European Federation of Allergy and Airways Diseases Patients Associations.



A podium presentation was given at the International Society for Aerosols in Medicine Congress (Munich, Germany, 30 May – 3 June) where the concept of the digital asthma patient was discussed introducing modern approaches of healthcare such as personalized modelling of asthma disease, introduction of modern healthcare monitoring approaches and the development of smartphone applications that put asthma patients in the centre of asthma treatment through self-management approaches.
Podium presentations were also given at the International Conference on e-Health and Bioengineering (Iasi, Romania, 19-21 November) where a novel approach was presented for the acoustic detection of inhaler actuations. The promising results of the presented methodology, allowed the continuation of research in this area in order to search for an algorithmic procedure that will allow the understanding of inhaler technique in addition to the assessment of adherence.



The educational components of the MyAirCoach project were presented at the International Conference on Interactive Mobile Communication, Technologies and Learning (Thessaloniki, Greece, 19-20 November), where the initial version of the MyAirCoach mobile app was described taking the first step not only for the definition of training and educational approaches of MyAirCoach but also for the design of the foreseen mobile application.

Project partners also promoted myAirCoach through the distribution of the project brochure and by providing information to a variety of stakeholders during events such as the ERS Presidential Summit (Brussels, Belgium, 16-17 June) and the ERS Congress (Amsterdam, the Netherlands, 26-30 September), the Responsible Research Innovation in ICT Workshop (Brussels, Belgium, 8-9 July) and the European Health Forum Gastein (Bad Gastein, Austria, 30 September – 2 October).

Finally, MyAirCoach was presented in the eHealth Forum in Athens, Greece where the project was positioned in the Greek eHealth environment and feedback was collected towards the parallel development with other efforts aiming to introduce novel eHealth approaches in the Greek healthcare system.

MYAIRCOACH IN THE SPOTLIGHT

The MyAirCoach project was recently highlighted in a recent article which appeared on MedTech Engine, a sit which highlights innovative projects in the field of medical technology. You can read the article in full here.

FUTURE DIRECTIONS

As the project evolves the user requirements will be outlined through the projects user centred design processes. This will then allow for the development and formation of the software architecture of the system, and the finalization of hardware components design.

More specifically, the input from the intended users will be used in order to develop the MyAirCoach online platform that will be used by doctors in order to assess the medical record of their patients and understand the evolution of their disease. Furthermore, a toolbar with decision support tools will be created that will help them manage and communication with all their patients effectively and in a privacy preserving manner.

In addition, the first version of the MyAirCoach mobile app will be created, aiming to support asthma patients to understand their condition and see how their actions and medication adherence can affect their asthma status.

Special attention will be given to the research of novel signal processing and modelling approaches that hold the promise to help medical researchers understand asthma disease and help their patients more effectively

Interested in finding out more?

Find out more about the project at myAirCoach.eu
Sign up for the myAirCoach newsletter

Connect with us on social media:

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