

**101005177 — COVID-RED****COVID-RED****WP7 – Project management,  
coordination, and  
sustainability – WP Title**

## **D7.10 Report describing internal and external communication outputs**

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### **Document History**

<b>Version</b>	<b>Date</b>	<b>Description</b>
V1.0	08/09/2020	Draft for PMO team review
V1.1	30/09/2020	Draft updated following PMO review
V2.0	12/10/2020	Report finalized for submission

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## List of Acronyms

Acronym	Description
CE-marked	Conformité Européenne-marked
COVID-19	Coronavirus Disease 2019
DoA	Description of Action
EU	European Union
GDPR	General Data Protection Regulation
GP	General practitioner
HCP	Healthcare Professional
PCR	Polymerase chain reaction
R&D	Research and Development
SME	Small to Medium Enterprise
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2
UMCU	University Medical Center Utrecht
WP	Work Package

# COVID-RED Communication and Dissemination Plan

## Publishable Summary

### COVID-RED Ambition

The goal of COVID-RED is to evaluate the use and performance of a wearable device, which uses sensors to measure physical data such as breathing rate, pulse, skin temperature, and heart rate variability for the purpose of early detection and monitoring of COVID-19 in both general and high-risk populations.

This project will facilitate early detection of infections and remote monitoring for deterioration after infection with COVID-19 of populations, including **AI-facilitated triage of testing and treatment decisions to ensure optimal use of limited healthcare resources.**

#### *Real-world data – large open source data*

By repurposing the AVA CE-marked medical device and adapting existing algorithms, COVID-RED can reach real world use and widespread application within 12-18 months. As both a prerequisite to and a by-product of this work, this project will also develop the **largest yet cache of anonymized, open-source data related to the spread of COVID-19 in a general European population.** This real-time, data collection is meant to complement traditional public health surveillance methods, potentially leading to earlier detection and containment of current and future outbreaks in various geographical locations.

#### *Reduce healthcare system burden*

The consortium of COVID-RED has combined forces to reduce the spread of COVID-19 due to earlier detection and diagnosis. The ambition is by implementing this project to **contribute to the reduction of overwhelmed status of healthcare system following data-driven care allocation decisions.** More responsive and flexible prevention measures by governing bodies are expected due to improved understanding of the spread and development of the COVID-19 pandemic.

#### *Identification of COVID-19 antibodies*

COVID-RED **will deliver a large set of information on COVID-19 antibodies that can be used to develop additional diagnostics and therapeutics.** This would be of tremendous value in identifying, e.g., early symptomatic cases, efficient allocating testing capacity and ultimately reducing the time-to-detection of new COVID-19 cases and limiting the risk of disease spread and contamination.

#### *Early detection tools*

In addition to the above-mentioned ambitions, in a second step, the ambition is to develop a COVID-19 **early detection tools by fall 2020**, when COVID-19 possibly returns for a second epidemic wave. We anticipate that the tools will help people self-quarantine sooner and access medical care sooner, and healthcare workers serving vulnerable patients to stay at home from work earlier in their illness. Alternatively, symptoms in vulnerable patients and HCP's may be detected earlier and appropriate action taken more promptly. Overall, this will promote more efficient use of health care resources and attention.

#### *Citizen science – participatory approach*

With this project, we also aim a **participatory approach**, researchers and patients/citizen working together to validate how health data from wearables can be used as a powerful public health tool for early illness detection, enhancing the ability to track and respond to disease outbreaks like COVID-19 in the future.

#### *European pioneer in remote detection of COVID-19*

As outlined above, most initiatives that are related to COVID-RED are located outside Europe. To the best of our knowledge, none of them has all three of the main components of this project: semi-continuous vitals (temperature, breathing rate, and pulse rate), patient reported symptoms, and confirmation of COVID-19 serologic status for all subjects. COVID-RED will provide a unique, rich source of information and bring the European surveillance system at the forefront.

## **COVID-RED Organization and Objectives**

COVID-RED brings together representatives from 9 participating organizations across 8 work packages (WPs), each with their own objectives, tasks, and deliverables. The project operates over an 18-month period from July 2020 to December 2021.

The objectives of COVID-RED, aligned to each responsible WP are:

1. To assess the diagnostic and prognostic value of monitoring vital signs (such as breathing rate, pulse rate, skin temperature, and heart rate variability) by bracelet in users at home (for early COVID-19 case identification)
2. To monitor individuals after the diagnosis to detect deterioration and that are under medical supervision (for early identification of COVID-19 patients requiring mechanical ventilation and/or intensive care) (WP 1 Technology & algorithm development and maintenance)
3. To study the added value of these remotely measured vital signs to the patient reported outcomes (WP3 Study design, execution, and analysis)
4. To assess on the economic and clinical effects of monitoring vital signs for the early detection of COVID-19 and in the detection of deterioration after the diagnosis (WP4 Health economics analysis)
5. To generate a large database on vital signs and symptoms over time, and health care usage, that can be linked to COVID-19 antibody presence (as a marker of past COVID-19 infection) at the end of the data collection period (WP2 Testing procedure and implementation)
6. To deliver large open-source databases that are GDPR compliant (WP5 Data management)
7. To partner with stakeholders and other related projects to create a network and maximize project impact (WP6 Communication, dissemination, and stakeholder outreach)
8. To ensure the efficient & effective management of the consortium and sustainability of results, in compliance with the Grant Agreement and Consortium Agreement. (WP7, Project management, coordination, and sustainability)

## **COVID-RED Communication and Dissemination Plan**

The purpose of the communication and dissemination plan is to:

- Define target audiences, communication channels, and key messages for COVID-RED
- Establish clear goals, objectives, and timelines for communication activities.
- Provide guidance to project participants for the development of communication activities and the preparation and use of materials

The overall aim is to maximize the impact of COVID-RED by ensuring full use of available communication channels both within and outside of the project.

This plan is intended to function as a foundation for the planning and execution of communication activities by members of the project in a professional and coordinated manner. Key messages for different audiences (stakeholders) relating to project deliverables and overall objectives are identified in advance and a matrix is used to map these to project timings, appropriate channels of communication, and the intended impact on stakeholders. Communication activities and, where

necessary, key messages will be updated periodically as the project progresses and as feedback from stakeholders is obtained.

High quality internal and external communication is key to the success of COVID-RED, underpinning effective collaboration between project partners and maximizing the impact of the project's findings.

# COVID-RED Communication and Dissemination Plan

## 1. Purpose and objectives of this plan

This plan is intended to serve as a foundation for planning and executing communication activities by members of COVID-RED in a high quality, consistent, and co-ordinated manner. Key messages for different stakeholders are identified and are matched with project timings, communication channels, and intended impact.

Communication activities, and where necessary key messages, will periodically be updated as the project progresses, particularly as feedback is obtained from key stakeholders. Both external and internal (i.e. between project partners and WPs) is included in this plan.

The overall aim of this plan is to maximise the impact of COVID-RED by optimising the flow and exchange of knowledge, information, and guidance to both internal and external audiences. The specific objectives of this plan are to:

- Define target audiences, communication channels and key messages for COVID-RED
- Establish clear goals, objectives, and timelines for communication activities.
- Provide guidance to project participants for the development of communication activities and preparation and use of materials.

The adoption of this plan should encourage the full use of available communication channels into, within, and out of the project. Furthermore, it should ensure quality and consistency of communication.

Success in communicating the ideas and outputs of the project will be achieved by having:

- High quality, timely and effective communication activities
- Clear and manageable processes for content development and production,
- Efficient, enthusiastic, and well-organized collaboration between teams to provide communication.
- An engaged internal and external community.

Ultimately, successful communication from COVID-RED will help raise awareness and guide decision making for the early identification and management of Covid-19. Successful internal communication will ensure a ready and free flow of ideas and findings among project partners and across WPs, building a sense of co-creation, community, energy, and cooperation throughout the project.

## 2. COVID-RED: project organization, aim, and objectives

COVID-RED brings together representatives from 9 participating organizations across 8 work packages, each with their own objectives, tasks, and deliverables. The project operates over an 18-month period from July 2020 to December 2021. The inter-relationship of COVID-RED's work packages is shown in Fig. 1.

In this project, we will evaluate the use and performance of a CE-marked device (wearable), which uses **sensors** to measure **breathing rate, pulse rate, skin temperature, and heart rate variability** for the purpose of **early detection and monitoring of COVID-19 in general and high-risk populations**. At the same time, a mobile application will be used to track participant-reported symptoms. A prospective, observational study will follow 13,000 individuals from the general population and 7,000 high-risk individuals wearing the device and responding to participant self-report parameters via a purpose-designed app. Based on this data, an algorithm will indicate which individuals likely require general practitioner (GP) care (for COVID-19 diagnostic testing, further vital signs assessment, and/or treatment) and/or hospital care. To evaluate algorithm performance, the cohort will be tested for COVID-19 antibodies at the end of follow up, with stored baseline samples of participants who have tested positive also being tested to determine whether the participant was

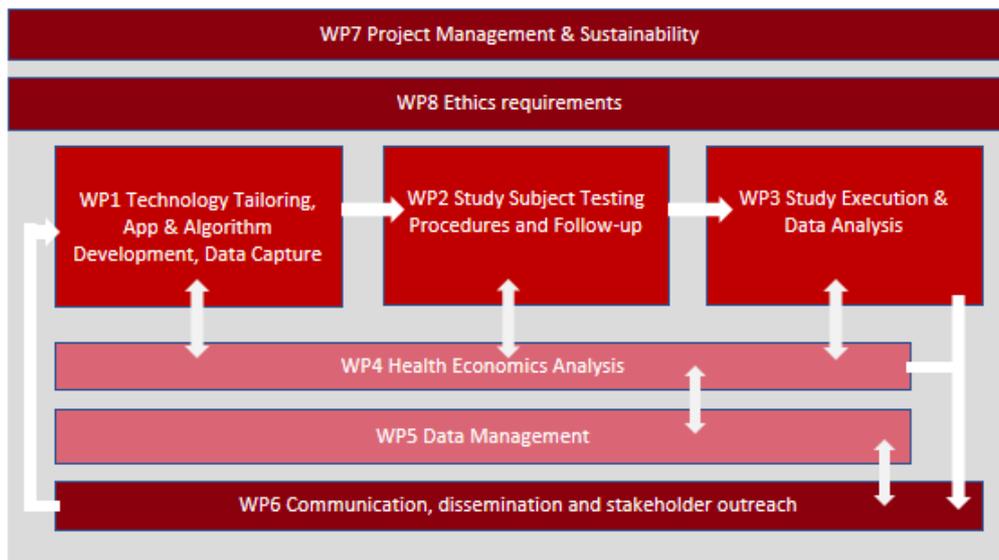


Fig. 1. The eight work packages of COVID-RED and their interdependencies

already positive at baseline or was exposed to SARS-CoV-2 during follow-up. COVID-19 seropositivity in the intervention cohort will be compared to seropositivity in a control population of 10,000 individuals drawn from the same populations using an application only. Thus, **this project will deliver a large body of information on COVID19 PCR testing and antibodies that can be used to develop additional diagnostics and therapeutics** in addition to validating remote vital signs and self-reported symptoms monitoring systems.

The objectives of COVID-RED, aligned to each responsible WP are:

1. To assess the diagnostic and prognostic value of monitoring vital signs (such as breathing rate, pulse rate, skin temperature, and heart rate variability) by bracelet in users at home (for early COVID-19 case identification)
2. To monitor individuals after the diagnosis to detect deterioration and that are under medical supervision (for early identification of COVID-19 patients requiring mechanical ventilation and/or intensive care) (WP 1 Technology & algorithm development and maintenance)
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6. To deliver large open-source databases that are GDPR compliant (WP5 Data management)
7. To partner with stakeholders and other related projects to create a network and maximize project impact (WP6 Communication, dissemination, and stakeholder outreach)
8. To ensure the efficient & effective management of the consortium and sustainability of results, in compliance with the Grant Agreement and Consortium Agreement. (WP7, Project management, coordination, and sustainability)

### 3. COVID-RED Target audiences

Communication and dissemination activities are directed towards a wide range of internal and external audiences (stakeholders), including project participants (Table 1). Two-way communication is sought,

Table 1. COVID-RED Target Audiences/Stakeholders

Audience/Stakeholder	Communication requirements
<b>External</b>	
Study participants	Specific requirements for participants in the study will be determined. General requirements include being informed of project progress, including study protocols, major findings, and any changes to the study.
Patients (including those with and those at risk for COVID-19)	Keep informed of project concept, progress, and outputs via relevant patient organizations (who may set up their own communication activities in which COVID-RED participates). Patients will also have direct access to publications, webinars, website updates and newsletters.
Patient & disease specific organizations	Establish frequent and efficient contact with overarching patient and disease specific organizations where appropriate to keep them informed of the progress of COVID-RED and any major project developments, e.g. via publications, webinars, website updates and newsletters.
Health-care providers and clinical researchers	Keep periodically up to date on project progress through publications, public webinars, website updates, and newsletters.
Healthcare provider organizations (including HCPs)	Keep periodically up to date on project progress through publications, public webinars, website updates, and newsletters.
Members of Ethics boards	Keep periodically up to date on project progress through publications, public webinars, website updates, and newsletters. Targeted communications re: specific outputs on ethical and related issues from WP8
Healthcare payers/insurers	Keep periodically up to date on project progress through publications, public webinars, website updates, and newsletters.
Industry R&D, Pharma, and related institutions	Keep periodically up to date on project progress through publications, public webinars, website updates, and newsletters.
Funding and “parent” organizations	Require submission of deliverables (reports etc.) and reports as scheduled in the project DoA, as well as ‘success stories’ and impact of project outputs  COVID-RED to participate in communications and presentations organized by these organizations to showcase IMI projects
Media and (targeted) general public	Keep periodically up to date on project progress through publications, public webinars, website updates and newsletters.
<b>Internal</b>	
COVID-RED leadership and consortium management team	Need regular updates on WP activities and progress, including draft project outputs for review and approval WP leaders to drive topics and identify potential interviewees or speakers for webinars and podcasts
COVID-RED partners	Need to be updated on project activities and deliverables: Input sought from project partners on activities completed in the last quarter or where input from other WPs is needed. Project partners will update their own organizations on project activities and deliverables
Incoming communications from stakeholders	COVID-RED project partners will use various channels to seek input from stakeholders into the environment, planned activities such as the study, project outputs, and their communication to generate the most impact

with valued inputs coming into the project from stakeholders.

The stakeholder groups will be further differentiated and prioritized based on the results of Stakeholder Mapping.

## 4. COVID-RED Communication Key Messages

The key messages for COVID-RED are:

- WHAT is COVID-RED**  
 COVID-RED is an IMI-funded project which aims to develop an algorithm wherein non-invasively collected markers of human health (temperature, heart rate, heart rate variability) can be used to predict the likelihood of Covid-19 infection.
- WHY is COVID-RED needed?**  
 Owing to the novel nature of COVID-19, its high rate of spread, and the need to rapidly identify and contain cases, new and innovative technologies are needed to identify potential new infections rapidly, safely, and accurately. This will allow more rapid access to treatment, contact tracing and quarantining of at-risk individuals.
- WHAT can be expected from COVID-RED**  
 The primary expected outcome of COVID-RED is a computationally derived algorithm wherein data from a smartphone app with or without supplemental data from wearable technology will predict potential COVID-19 infections in individuals. This may significantly impact the future spread of COVID-19 (and future pandemics) as well as providing detailed data which will be of high interest to the scientific community, thus facilitating research collaborations.

## 5. COVID-RED Communication channels

In order to communicate effectively with various target groups, communication channels and tools must be tailored to the needs and expectations of those groups. These channels and tools depend on the complexity, importance, and content of the intended message and should correspond to the expectations of the audience. The list of possible communication channels and their descriptions is in Table 2 below:

Table 2. COVID-RED communication channels

Channel	Description
<b>External</b>	
COVID-RED website	The website is an important window into the project, housing original content generated by project partners
Journal publications	To be developed and submitted by internal project partners. Links to publications, summaries of content (abstracts), and full manuscripts (where permitted) will be made available on the COVID-RED website
Conference presentations	To be developed and submitted by internal project partners. COVID-RED will maintain a register of project presentations.
Press releases	Project members are encouraged to highlight major project events such as meetings, completion of key deliverables, presentations, and publications through a press release. All press releases need to be reviewed by COVID-RED project management to ensure that they are written in line with the key messages of the project. All press releases will be made available on the COVID-RED website.
Stakeholder engagement	Reaching out to scientific, clinical, and patient-focussed stakeholders to: participate in consortium quarterly meetings, engage in discussion with research partners, and develop specific activities such as specialized workshops for the discussion of specific issues.
Academic	Collaborations with other relevant European projects to maximize the

Collaborations	impact of EU funded research	
<b>Internal</b>		
Monthly core meetings	A monthly opportunity for all core team members to meet in an online space and discuss overall progress and progress within each WP.	
Quarterly project meetings	A regular opportunity for all project partners to meet in an online space and discuss overall project progress	
Project reports	Internal dissemination of project results and protocols for review and revision among partners	
“Kick-off” meetings	A series of online meetings at project initiation to allow all partners to present and discuss their role and progress within the project.	

## 6. Communication activities

The COVID-RED consortium will execute communication activities at (major) project milestones to raise awareness and increase project visibility, while reaching a wide range of stakeholders. Proposed communication measures are described in Table 3, which aim to reach a wide audience and create broad public support for the project activities. All consortium partners will be encouraged to communicate COVIDRED’s outputs and activities through their own channels.

Table 4. Proposed communication activities

	Proposed channels	Target audience	Content	Frequency	Proposed metrics
Digital tools	External website, project-unique logo, and templates	Consortium partners and all relevant stakeholders	Regular updates; news and upcoming events	Major milestones	Number of new visitors, number of returning visitors, number of page views
Written formats	Scientific publications, white papers	Scientific community. Industrial partners and regulators	Relevant scientific outcomes	At least once during the project duration	Impact factor, number of citations,
	Content marketing/press releases/newsletters	All stakeholders	Updates; major milestones	Major milestones	Media coverage
Events and meetings	Internal and consortium meetings	Consortium partners and relevant stakeholders	Project progress	At least annually	Number of participants
	External conferences	Clinicians, SMEs, and other industrial partners, regulatory bodies	Project progress	At least 2 times during the project duration (depending on whether such conferences will take place)	Number of conferences
	Webinars	All relevant stakeholders	Updates; major milestones	Major milestones	Number of views/shares/likes

Social media	LinkedIn, Twitter, YouTube	All relevant stakeholders	Project progress	Major milestones	Number of posts/tweets; number of followers/shares/likes/retweets
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## 7. Role of WPs in Communication activities

### WP6 – Communication, dissemination, and stakeholder outreach

WP6, led by UMCU, is responsible for internal and external COVID-RED communications. As such, it is responsible for undertaking a number of deliverables, in particular:

- **D6.1:** A report describing the initial dissemination, communication, and exploitation plan
- **D6.2:** A project website, templates, and social media tools
- **D6.3:** A report with stakeholder landscape analysis
- **D6.4:** A report on the barriers and enablers of remote monitoring devices and apps for detecting the early signs of COVID-19 infection.
- **D6.5:** A roadmap of planned project outputs, including qualification advice submissions, mapped to stakeholder needs and planned stakeholder interactions
- **D6.6:** A Checklist of best practices for setting-up remote monitoring technologies as new strategies for current and future epidemics
- **D6.7:** A report on relevant regulatory requirements
- **D6.8:** A regulatory management plan
- **D6.9:** A report describing the final dissemination, communication, and exploitation plan

Along with undertaking these deliverables, this WP also includes:

- Maintaining a planner and tracker of other WPs and facilitating cross-WP communication to produce deliverables in a timely manner.
- Assist in the generation and dissemination of conference presentations, publications, press releases, and newsletters.
- Develop and maintain the (externally facing) COVID-RED website.

### Other WPs

Other WPs will develop key messages associated with their outputs and collaborate with WP6 in delivering the relevant communications using appropriate channels. They will develop content material to be included in external and internal communications and will propose communication activities to help maximise the impact of their outputs.