

# D6.8 Report on RSV community interactions

**116019 - RESCEU**

**REspiratory Syncytial virus  
Consortium in EUrope**

**WP6 – Project management and  
outreach to stakeholders**

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## Document History

Version	Date	Description
V1.1	02/07/2019	First Draft
V1.2	18/07/2019	Reviewers comments (Harish Nair, Harry Campbell, Clarisse Demont)
V1.3	05/08/2019	SC review
V1.4	08/08/2019	Final Version

## Document description

<b>Deliverable description</b>	This deliverable is intended to provide a progress report based on the implementation of the roadmap for collaboration with other projects/networks. It includes and describes an overall analysis of potential levels and areas of synergy identified to date.
<b>Keywords</b>	Roadmap, networks, synergies, collaboration, fast-track, initiatives, sustainability

## Definitions

Participants of the RESCEU Consortium are referred to herein according to the following codes:

- **UEDIN.** University of Edinburgh (United Kingdom)
- **UA.** Universiteit Antwerpen (Belgium)
- **UMCU.** University Medical Centre Utrecht (Netherlands)
- **UOXF.** The Chancellor, Masters and Scholars of the University of Oxford (United Kingdom)
- **SYNAPSE.** Synapse Research Management Partners S.L. (Spain)
- **Imperial.** Imperial College of Science, Technology and Medicine (United Kingdom)
- **SERGAS.** Servicio Galego de Saúde (Spain)
- **TUCH.** Varsinais-Suomen sairaanhoitopiirin kuntayhtymä (Finland)
- **RIVM.** Rijksinstituut voor Volksgezondheid en Milieu - National Institute for Public Health and the Environment (Netherlands)
- **SSI.** Statens Serum Institut (Denmark)
- **UMCG.** Academisch Ziekenhuis Groningen (Netherlands)
- **PENTA.** Fondazione PENTA for the treatment and care of children with HIV-ONLUS (Italy)
- **AZ.** Astrazeneca AB (Sweden)
- **Pfizer.** Pfizer Limited (United Kingdom)
- **GSK Bio.** GlaxoSmithKline Biologicals S.A. (Belgium)
- **SP.** Sanofi Pasteur (France)
- **JPNV.** Janssen Pharmaceutica, N.V (Belgium)
- **Novavax.** Novavax Inc. (United States of America)
- **Grant Agreement.** The agreement signed between the beneficiaries and the IMI JU for the undertaking of the RESCEU project (116019).
- **Project.** The sum of all activities carried out in the framework of the Grant Agreement.
- **Work plan.** Schedule of tasks, deliverables, efforts, dates and responsibilities corresponding to the work to be carried out, as specified in Annex I to the Grant Agreement.
- **Consortium.** The RESCEU Consortium, comprising the above-mentioned legal entities.
- **Consortium Agreement.** Agreement concluded amongst RESCEU participants for the implementation of the Grant Agreement. Such an agreement shall not affect the parties' obligations to the Community and/or to one another arising from the Grant Agreement.
- **Affiliated Partner.** Institution/team interested and supporting RESCEU, but that does not need to become full partner and sign the Grant/Consortium Agreements.

## Publishable Summary

The aim of this deliverable is two-fold. First, it provides an update on the collaborations and initiatives previously identified in Deliverable 6.6. Roadmap for collaboration with other projects / networks. Applying the methodological framework outlined in D6.6, it documents progress on existing links and collaborations, and it provides a broad overview on the areas and levels of synergy with established initiatives. Second, following an interrogation of European Funded Research Databases, online searches, and the contributions from WP2, a new list of selected projects and research organisations as potential collaborations and synergies is provided.

## 1. Introduction

RESCEU was designed as a multi-stakeholder and multi-disciplinary collaborative project. Continuous engagement with a broad range of stakeholders, including national and international public health agencies, pharmaceutical industry and regulators, is deemed as essential to ensure high impact and long-term sustainability. This deliverable is led by WP6 and includes contributions from WP2.

WP6 *Project management and outreach to stakeholders* is particularly designed to ensure strategic communication and dissemination to all stakeholders in order to maximise project awareness, to disseminate results and to promote community-building around the project. D6.8 builds on activities within Task 6.6 *Project communication, community-building, sustainability, fundraising and outreach to key stakeholders*. It aims to provide a progress overview of identified synergies with other projects and networks and to identify new initiatives to act as the base for future implementation throughout the project life cycle and as an instrument for sustainability.

WP2 *Consolidation of health care systems data* has an important outreach component, as it aims to link with external surveillance databases and actors, thereby contributing to the establishment of meaningful collaborations with external parties and initiatives.

Chapter 2 of this deliverable begins by providing a brief summary of the levels of synergy collaboration based on the methodological framework provided in Deliverable 6.6. Chapter 3 describes the current status of collaboration with established synergies and provides a brief overview assessment of existing levels of synergy. Chapter 4 documents the identification of new initiatives and collaborations, based on searches on European Research Funding databases, online searches, and the links established as a result of progress in Task 2.3. This is then followed by the identification of potential synergy mapping areas with RESCEU. Chapter 5 provides an update on the collaboration with Affiliated Partners while Chapter 6 describes collaborative developments such as the Patient Advisory Board (PAB) and the RSV Surveillance Meetings.

## 2. Methodological Framework: Implementation and Levels of Synergy

As described in D6.6, the methodological process, (Fig.1 below) includes identification, assessment, prioritisation, implementation and monitoring phases, leading to the identification of synergies and collaboration. This involves a series of steps which need to be taken into consideration and continuously re-addressed. Previously identified synergies in RESCEU, have been implemented to varying degrees. These synergies can be described as fast-tracked collaborations, since they were identified at the proposal stage. These refer to collaborations with projects, networks, and other initiatives which are considered relevant and within the RESCEU scope, and / or collaborations already implicitly or explicitly happening.

Building on the landscape analysis resulting from the initial Identification and Assessment steps in D6.6, this deliverable describes the work carried out to define a 'utilisation strategy' that can maximise benefits for RESCEU and any synergistic initiatives, for ultimate global benefit in the field concerned. It therefore outlines how WP6 and WP2 can enable RESCEU to capitalise on the specific expertise and outputs of existing and emerging external efforts. Providing a structured approach to building synergies will optimise RESCEU's efficiency and productivity. At the same time, it aims to facilitate the usage of RESCEU's learnings and outputs by synergistic external initiatives.

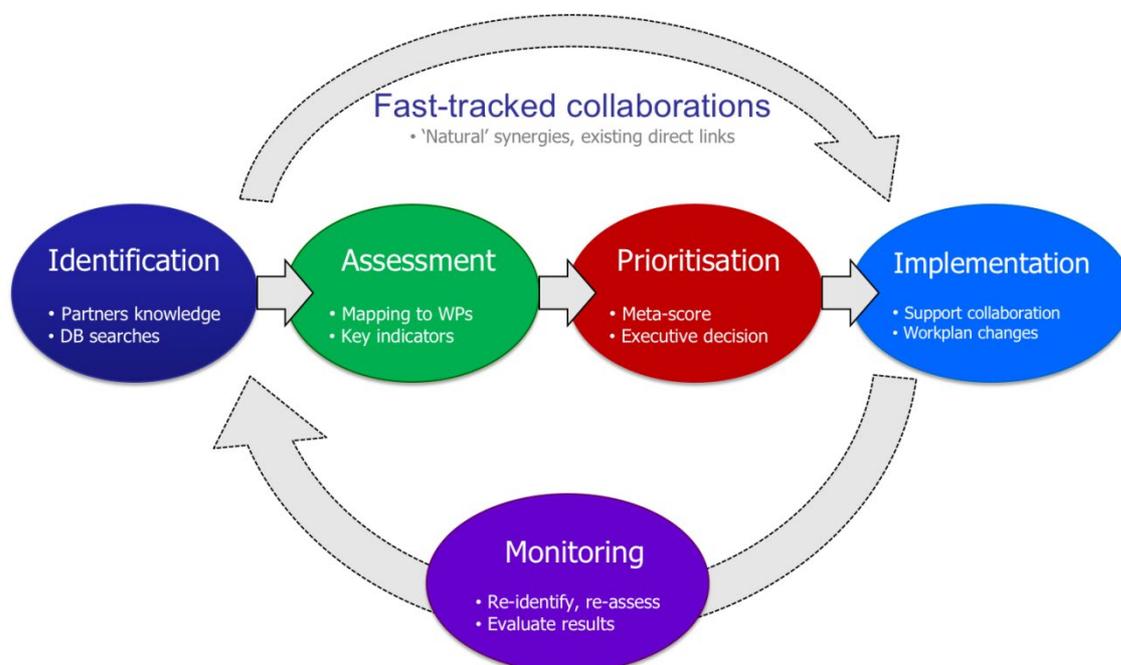


Figure 1. Methodological Framework

Synergies can be built at various levels:

- **Strategic alignment:** High-level interactions can offer a framework for collaboration, in which projects are mutually and regularly followed up, overlaps are detected, incentives for collaboration are created and joint programming is enabled. This can happen through joint meetings or mutual invitations and may also affect the strategic direction of external projects.
- **Outcome utilisation:** Deliverables and results from other projects/initiatives can be shared, re-used, leveraged or exchanged to accelerate progress and to promote program effectiveness. This would typically happen at the WP or task level.
- **Joint work:** Ideally, collaborations would reach a stage at which joint actual work is possible, for mutual benefit, towards the creation of knowledge and results that exceed the original work plan. This happens typically in the most effective manner through the creation of joint, cross-project task forces. Stretch goals through collaboration can multiply the impact of projects and create long-term relationships, providing an unparalleled thrust to the respective teams.

These three levels at which collaboration and synergies can happen are depicted in Figure 2. Typically, **strategic alignment** results in recommendations for **outcome utilisation**; this in turn can easily be the basis for a deeper mutual knowledge, help detect common gaps, and therefore trigger **joint work** plans.

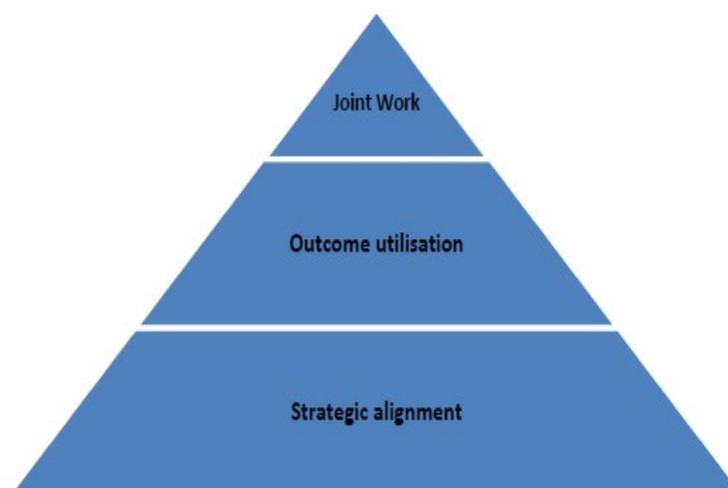


Figure 2. Levels of synergy and collaboration

The implementation of synergies involves the enabling of the collaboration, which can include a wide range of actions depending on the needs and factors influencing the collaboration, the issues raised, etc. These can be as diverse as, e.g. helping negotiate and sign MoU/agreements/contracts, instigating and formalising changes in the work plan with the additional tasks needed (via new task

forces if relevant), supporting the WP leaders and partners in effectively establishing the collaboration, addressing Intellectual Property rights (IPR), etc. It involves carrying out the work agreed as part of the collaboration but clarifying and facilitating it. It typically would also include the progressive creation of a 'toolbox' (templates, financial sheets, communication materials, summary of IPR conditions applicable to the own project, etc.) to aid in the establishment of the collaboration. In RESCEU significant effort has been devoted to signing agreements with the Affiliated Partners and advisors in order to formalise the collaboration framework (more than 50 agreements have been signed since the beginning of the project).

Aspects which determine collaborative approaches towards implementation of synergies can be described as follows:

- **Scientific/technical input:** This is the area which receives most attention. It relates to scientific/technical exchange, ranging from high-level analysis of overlaps and complementarity, to definition of re-use/leverage of specific outputs, to definition and development of joint work.
- **Legal/IPR:** The wide spectrum of legal formats of existing efforts requires careful evaluation of normative requirements for each specific collaboration possibility. This includes, but is not limited to issues around organizational status (e.g. legal entity vs project), governance, Intellectual Property Rights (IPR) policies (authorship, copyright, user rights and patents), drafting and concluding specific legal agreements, such as Memoranda of Understanding (MoU), Non-Disclosure Agreements (NDA), etc.
- **Resources/costs:** The possible cost implication of interaction needs to be assessed given the frequently pre-defined resources for commissioned work. For example, outputs may require adaptation or transformation to meet the respective needs and such modification may require resources. Wide reaching collaborations with newly defined, joint work may require fully-fledged budgeting and a significant amount of resources.
- **Timings/schedule:** the time schedules of the projects may not lend themselves for meaningful acceleration of the respective processes, taken into consideration dependencies among tasks, costs of opportunity, maintenance of specific results, etc.
- **Communication:** a fundamental area for cross-project collaboration, communication needs to be adequately enabled, both within and between projects and, also towards third parties.

These five broad areas affecting implementation of collaboration and synergy may occur at each of the levels of collaboration described above. The types of action that can therefore be implemented towards synergy can be seen as a matrix. While not intending to be comprehensive, Table 1 offers an overview of the different types of action that may need to be undertaken to implement synergy between projects, at the different levels identified and per area.

Level of collaboration	Areas potentially affecting synergy and collaboration, susceptible of action towards implementation					Potential support from WP6
	Scientific/ technical input	Legal/IPR	Resources/	Timing/schedule	Communication	across levels
			costs			
<b>Strategic alignment</b>	<ul style="list-style-type: none"> <li>- High-level analysis of complementarity/overlap</li> <li>- Preliminary identification and analysis of outputs to leverage</li> <li>- Identification of spaces for joint work of mutual benefit</li> </ul>	<ul style="list-style-type: none"> <li>- MoU</li> <li>- NDA</li> </ul>	<ul style="list-style-type: none"> <li>- High level assessment of impact of synergy on RESCEU</li> </ul>	<ul style="list-style-type: none"> <li>- Analysis of overall timings/ schedule (mis-) alignment</li> </ul>	<ul style="list-style-type: none"> <li>- Establishing initial interactions.</li> <li>- Enabling appropriate communication channels and dissemination</li> </ul>	<ul style="list-style-type: none"> <li>- Assessment information - Initial contact facilitation,</li> <li>- Meeting/ interaction facilitation</li> <li>- Monitoring of collaboration</li> </ul>
<b>Outcome utilisation</b>	<ul style="list-style-type: none"> <li>- Deliverable/result examination and partial/total re-use</li> </ul>	<ul style="list-style-type: none"> <li>- NDA</li> <li>- Licensing</li> <li>- IPR clearing</li> <li>- Assessing terms and conditions for use</li> </ul>	<ul style="list-style-type: none"> <li>- Resourcing licensing costs</li> <li>- Resourcing adaptation/incorporation of results</li> </ul>	<ul style="list-style-type: none"> <li>- Identification of potential mis-alignments in schedule for specific results of interest, based on expected timings and input-output relationships</li> </ul>	<ul style="list-style-type: none"> <li>- Policy for acknowledgements</li> </ul>	<ul style="list-style-type: none"> <li>- Identification of relevant results</li> <li>- Assessment of IPR</li> <li>- Facilitation of sharing results</li> <li>- Monitor terms and conditions</li> </ul>
<b>Joint work</b>	<ul style="list-style-type: none"> <li>- Detailed scientific/technical definition and planning of joint work, including expected results</li> <li>- Development of joint work</li> <li>- Plan of joint work monitoring, result review and updates</li> </ul>	<ul style="list-style-type: none"> <li>- Amendments of existing respective contracts/agreements</li> <li>- Specific partnership agreements</li> <li>- Definition of IPR expected results</li> </ul>	<ul style="list-style-type: none"> <li>- Resourcing additional work / task forces</li> <li>- Budget development and follow up</li> </ul>	<ul style="list-style-type: none"> <li>- Scheduling of joint work</li> <li>- Updates to joint work schedule</li> </ul>	<ul style="list-style-type: none"> <li>- Enabling appropriate communication channels supporting joint work</li> <li>- Common specific dissemination actions</li> <li>- Policy for joint publication</li> </ul>	<ul style="list-style-type: none"> <li>- Supporting scoping and planning of extra work</li> <li>- Formalisation of new work/ incorporation into existing work plan</li> <li>- Supporting resource estimation and budgeting</li> <li>- Monitoring joint work</li> </ul>

<p><b>Potential support from WP6 across areas</b></p>	<ul style="list-style-type: none"> <li>- Support planning</li> <li>- Assessing impact on own project</li> <li>- Gathering adequate expertise within Consortium to assess the scientific/technical impact of external project.</li> <li>- Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>- Provide templates</li> <li>- Support negotiation and formalisation processes</li> <li>- Advice, expertise on IMI legal framework and rules; identification of legal questions to be addressed as part of building relations</li> <li>- Monitor terms and conditions</li> </ul>	<ul style="list-style-type: none"> <li>- Provide templates and tools</li> <li>- Financial/budgeting advice, expertise on IMI financial rules</li> <li>- Budget follow up</li> </ul>	<ul style="list-style-type: none"> <li>- Provide templates and tools</li> <li>- Support scheduling</li> <li>- Assessing impact on own project</li> <li>- Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>- Provide templates and tools</li> <li>- Enabling channels</li> <li>- Facilitating interactions</li> <li>- Support dissemination</li> <li>- Propose policies</li> </ul>	
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Table 1. Potential synergy implementation actions, classified by collaboration level and area, and potential support from WP6

## 3. Progress overview of Initiated Contacts and Established Collaborations

### 3.1 Progress and synergies identified in projects

WP6 leads this deliverable. It has the core role of supporting the WP leaders in establishing contacts and implementing synergies, as well as supporting the Steering Committee and Project Management Office in their efforts to establish contacts and implement synergies. For this purpose, WP6 has devised the strategy outlined in this document and works with the appropriate RESCEU work package members and external projects. WP6 is generally responsible for helping assess the relevance of identified projects and the feasibility of any interaction, identifying key partners and potential project liaisons.

As previously indicated in Chapter 2, an assessment of an exhaustive list of projects, networks and other initiatives was not initially required, as this had been provided by partners who were already involved in initiatives and synergies as part of their collaboration and expertise. The current landscape of identified initiatives relevant to RESCEU is summarised in the next section.

The twenty-nine synergies identified were (listed in alphabetical order and with indication of the joint partners in brackets):

- **ADVANCE** (SYNAPSE, SSI, RIVM) intimately linked IMI-project on benefit-risk assessment of vaccines
- **ARPEC/GARPEC** (PENTA, UA) EU FP7 Antibiotic Resistance and Prescribing in European Children
- **BMGF Bill & Melinda Gates Foundation** – Private Foundation whose main goals is to enhance healthcare globally and reduce extreme poverty
- **CIRN** – Canada Immunisation Research Network – national network of key vaccine researchers
- **COMBACTE** (UA) Combatting Bacterial Resistance in Europe, funded by IMI
- **ECDC** – European Centre for Disease Prevention and Control
- **EMA** – European Medicines Agency
- **EMIF** (PENTA, SYNAPSE) EU IMI European Medical Information Framework
- **EU-ADR Alliance** (PENTA, SYNAPSE) research consortium carrying out observational studies
- **EUCLIDS** (SERGAS) EU FP7 Genetic basis of meningococcal and other life-threatening bacterial infections of childhood
- **EUROHOPE** (UEDIN), EU FP7 European Health Care Outcomes, Performance and Efficiency project
- **Farr Institute** – The Farr Institute for Health Informatics Research
- **GIHSN** – Global Influenza Hospital Surveillance Network
- **GRACE** (UA), EU FP6 Genomics to combat Resistance against Antibiotics in Community-acquired LRTI; EU Network of Excellence
- **GRIP** (PENTA) EU FP7 Global Research In Paediatrics- Network of excellence

- **INDEPTH** Network (UEDIN), network of >50 surveillance systems sites in 20 LMIC with mortality data
- **ISARIC** – International Severe Acute Respiratory and Emerging Infection Consortium
- **MCEE** (UEDIN), Maternal and Child Epidemiology Estimates funded by Gates Foundation
- **PATH** (UEDIN), Centre for Vaccine Innovation and Access A global network whose team includes scientists, health professionals, business leaders, engineers, advocates, and experts from dozens of other disciplines. A Roadmap for Advancing Maternal immunisation against RSV, is one of their programmes.
- **PENTA-ID network** (PENTA, SERGAS) EU (FP7 and IMI) and pharma funded International ID network
- **PERCH** project (UEDIN) Pneumonia Etiology Research for Child Health funded by Gates Foundation
- **PERFORM** (SERGAS) EU Personalised Risk assessment in Febrile illness to Optimise Real-life Management across the EU
- **PoC-ID** – (SERGAS) EU Platform for ultra-sensitive Point-of-Care diagnostics for Infectious Diseases focused on RSV infection.
- **PREPARE** (SERGAS, UA, IMPERIAL) EU FP7 Platform for European Preparedness Against (Re)-emerging Epidemics
- **ReSViNet** (UMCU, UEDIN, TUCH, SERGAS), Respiratory Syncytial Virus Network [www.resvinet.org](http://www.resvinet.org)
- **RSV GOLD** (UMCU, UEDIN), RSV Global Online Mortality Database
- **RSV Global Epidemiology Network** (UEDIN, UMCU) global network of >70 sites contributing RSV disease burden data
- **VENICE III** – Vaccine European New Integrated Collaboration Effort
- **WHO Global Influenza Programme** – World Health Organisation Influenza Programme

For the twenty-eight synergies, based on the information received, assessments of the level of synergy (Strategic Alignment, Outcome Utilisation, Joint Work), geographical distribution and the nature of the organisations was conducted. An assessment of the potential level of synergy, is shown in Figure 3. An assessment of their geographical distribution is shown in Figure 4. An assessment of the nature of the organisations is shown in Figure 5

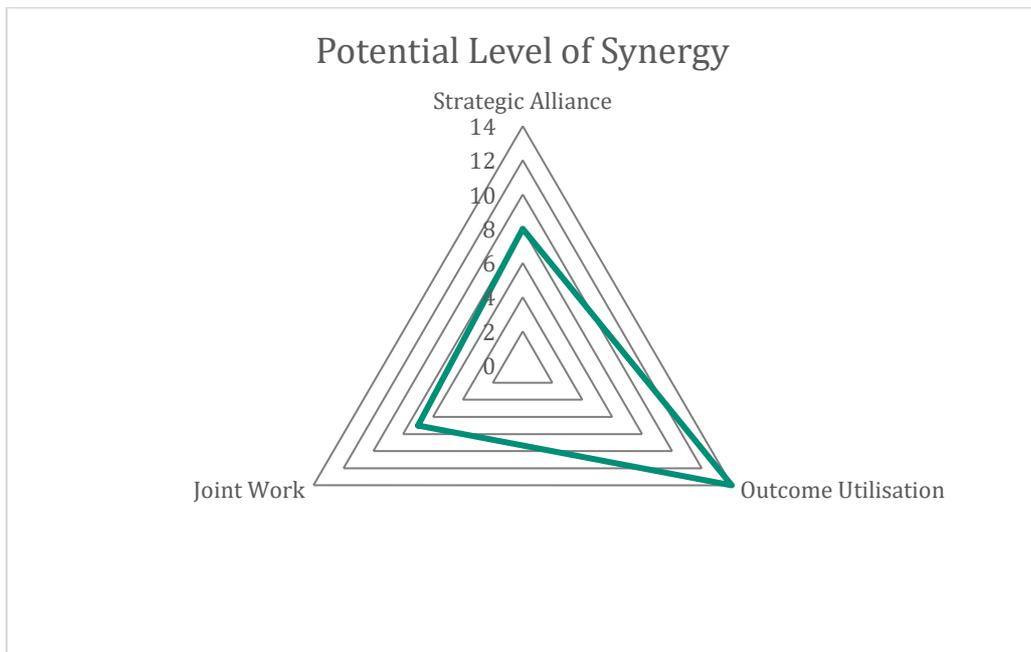


Figure 3. Levels of Synergy in RESCEU

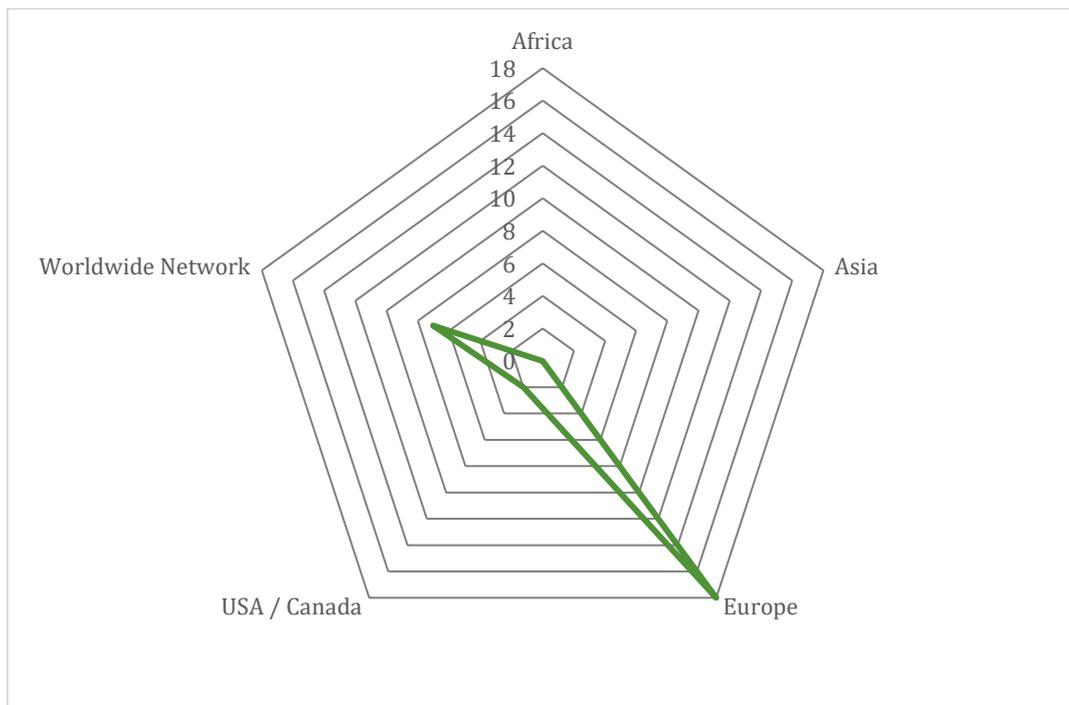


Figure 4. Geographical Distribution of Identified Projects and Initiatives

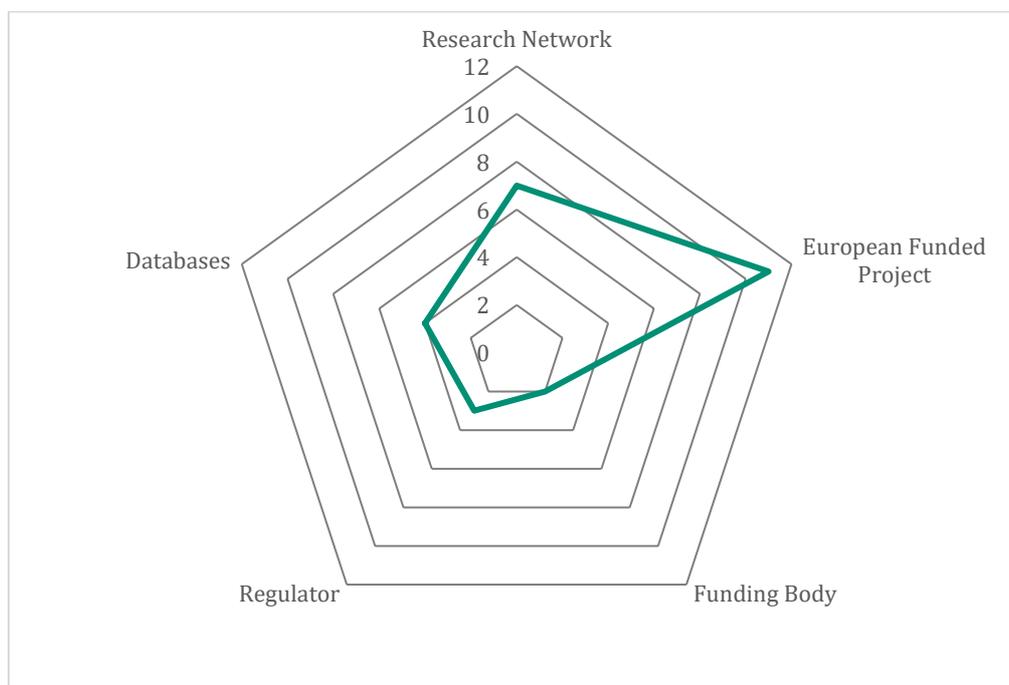


Figure 5. Nature of Organisations

From the twenty-nine synergies identified, eight were identified as having particular relevance and Section 3.2 describes in more detail the level of collaboration for these eight key synergies

## 3.2 Progress on identified synergies

Progress on the development of activities within the 8 Key Established Synergies is described and summarized in the table below:

### 3.2.1 ReSViNET

The Respiratory Syncytial Virus Network is a global network of experts in the field of RSV, whose main objectives include: the combination of knowledge and capacity required to enhance development of novel RSV therapeutics, the creation of awareness of the RSV disease, performing and cutting-edge research with a focus on randomized clinical trials; to advocate appropriate allocation of resources for RSV related research and introduction of prevention and treatment strategies for better care for patients with RSV infection; to bring together information related to RSV infection to all stakeholders; to act as a focal point for effective partnerships with stakeholders with the ultimate aim of reducing global child morbidity and mortality.

The collaboration with RESCEU started very early in the project and has proved to be successful on different fronts. Shared goals, resources and the presence of key contacts who are fully involved in both initiatives, are the key success outcomes. ReSViNET, pending the approval of RESCEU Grant Agreement Amendment #2 by IMI, will become Third Party in the RESCEU consortium to promote activities related to the GAM 3, held in Utrecht in June 2019, thereby strengthening their collaboration and commitment to the project.

Academics from RESCEU are part of ReSViNET Steering Committee, in particular Prof. Louis Bont, who is the Academic leader for WP4 in RESCEU and chairman of ReSViNET, while board members of ReSViNET includes the RESCEU coordinator, Prof. Harish Nair (UEDIN), some of RESCEU Principal Investigators, and members of the project Scientific Advisory Boards.

RESCEU representatives participated to the ReSViNET RSV Vaccines for the World 2019 to be held in Ghana, where preliminary results will be presented.

WP6 continues to collaborate with ReSViNET on the Paper of the Month initiative (already described in Deliverable D6.6). Every month two teams of researchers (based in UEDIN and UMCU), select a recent publication on RSV considered particularly relevant and/or ground breaking. The team, led by Prof. Harish Nair, University of Edinburgh, focuses on the assessment of clinical epidemiology papers, while the team led by Prof. Louis Bont, University Medical Centre Utrecht, is in charge of the selection of basic science papers. Both teams provide a lay summary of the articles, that is posted both on the ReSViNET as well the RESCEU websites

To date, 29 publications have been selected and shared. The Paper of the Month's section for RESCEU can be found in the Publications section, while a preview is also visible on the homepage. Each issue is linked to its bibliographical reference and a link to the full article online (when this is available), often to PubMed.

All Papers of the Month are highlighted in the quarterly RESCEU Newsletter through a dedicated space in order to keep all partners and subscribers updated on the monthly selection.

This collaboration will foster cooperation on multiple fronts and will continue in the future.

### **3.2.2. CIRN and IMPACT RSV Study Group**

Within the context of Task 2.3 *International linkages to promote interaction/synergy*, and specifically as part of the activities aiming at developing links with other major international efforts to quantify healthcare consequences of RSV disease, WP2 has continued to build on initial contact to foster collaboration with the CIRN and IMPACT research groups. This has continued in discussions held over teleconferences and through face to face meetings at conferences. These have resulted in achieving general agreement on future efforts to share best practices and develop common case definitions/core datasets.

### 3.2.3 ISARIC

On April 2017, RESCEU became a member of ISARIC, the International Severe Acute Respiratory and Emerging Infection Consortium. ISARIC is a global initiative aiming to ensure that clinical researchers have the open access protocols and data-sharing processes needed to facilitate a rapid response to emerging diseases that may turn into epidemics or pandemics.

### 3.2.4 ECDC

The collaboration with the European Centre for Disease prevention and Control was particularly successful.

It was established by WP2, and in particular as part of Task 2.2. *National/large scale surveillance systems in Europe*. This task has the major goal of mapping and improving European collaboration in the field of RSV Surveillance. ECDC was identified as a crucial partner to achieve this goal, as this organization together with WHO, is coordinating surveillance of infectious disease on a European level. Two developments of mutual benefit for collaboration were initiated during the first year and have been formalised during the second year. These are

- ECDC has become a member of the International Scientific Advisory Group (ISAG) of RESCEU;
- ECDC has collaborated and adopted RSV surveillance in their official strategy as a key activity.

As a collaboration between ECDC, SSI and RIVM, a survey has been initiated to assess the current state of national surveillance systems among all EU/EEA Member States. The publication of the results of this survey will be beneficial to the RESCEU project, as they can provide an important starting point to map the possibilities for enhancing the surveillance of RSV and demonstrate how harmonization of surveillance strategy at a (regional) European level would be most promising and beneficial.

### 3.2.5 EMA

As part of the efforts of RESCEU for establishing continuous communication and collaboration with Regulatory Bodies an EMA ITF Briefing Meeting with RESCEU representatives took place on March 16<sup>th</sup> 2018 at the EMA headquarters, after RESCEU's Consortium presented formal request to the EMA and provided the requested documentation. The meeting was attended by seven representatives from all the WPs, from both the Academia and the industry, while other WP representatives could participate in teleconference mode.

The discussion helped identify future steps to be taken by RESCEU, such as the Scientific Advice procedure. As a first follow up of this meeting, RESCEU representatives from WP2 were invited to

present RESCEU and explain its relevance to the EMA during a Vaccine Working Party (VWP) meeting which took place on June 8<sup>th</sup> 2018, as reported in Deliverable D6.7.

RESCEU representatives and EMA VWP members agreed that Work Package 2 outputs will be of importance to the EMA as they will: highlight target groups for interventions, inform research investment prioritization, inform the design of clinical trials (such as by aiding in the selection of appropriate outcomes and case/severity definitions) and produce “baseline” burden data that will help assess the impact of future interventions. RESCEU Work Package 2 will continue to engage with the EMA VWP, including sharing the results of the RSV burden estimates. Discussions are also to include WP4 outcomes on incidence rates.

### 3.2.6 GIHSN

WP2, as part of Task 2.3 *International linkages to promote interaction/synergy*, has been in communication with and attended the annual meeting of the Global Influenza Hospital Surveillance Network (GIHSN) and discussed with them how this could develop RSV activities in the coming years.

### 3.2.7 Bill and Melinda Gates Foundation (BMGF)

As part of its Global Health strategy for significantly reducing child mortality, the Bill and Melinda Gates Foundation is actively engaged in research on RSV vaccines and the development of a RSV Surveillance Global Strategy.

The RESCEU Consortium established an early linkage with the Foundation, thanks to the connection provided by Prof. Harish Nair, RESCEU Coordinator and member of the Scientific Advisory Committee (SAC) for the RSV mortality studies in Pakistan and Zambia funded by the BMGF.

RESCEU continues regular contact with the Foundation and Dr. Padmini Srikantiah, BMGF’s Lead for Influenza and RSV

### 3.2.8 WHO

The RESCEU Consortium is aware of the importance of involving supranational organisations as a means to leverage the impact of RESCEU and ensure sustainability of its results in the long term. Along these lines, the Consortium has been particularly keen, since the beginning of the project, to involve the World Health Organisation as a fundamental actor on RSV research and surveillance on the world stage.

The main point of contact between WHO and RESCEU is provided by Prof. Harish Nair, University of Edinburgh, who is on one side coordinator of the project and, on the other side, a member of two WHO Advisory Groups, one on RSV Surveillance (as Chair) and another on RSV vaccines.

RESCEU has developed a strong working collaboration with WHO during the last 18 months. Following on from the first WHO RSV Surveillance Meeting held on December 2017, WP1 was able to reach about 10 investigators in Latin America and Africa, for collecting unpublished data, and shared data collection template with them. These links have revealed crucial to collect unpublished data from outside the EU and tangibly advance on the WP1 research, in particular as part of Task 1.1 *RSV disease burden in the elderly* and Task 1.2 on *Burden of all-cause acute lower respiratory infections in the elderly, have mostly benefited from this approach*. In this case the link with WHO was facilitated through the establishment of connections and forms of cooperation with non-EU investigators that could have proved harder to establish otherwise.

As part of WP2, Task 2.3 *International linkages to promote interaction/synergy* has among its main goals to coordinate with WHO as it develops global plans for RSV surveillance, building on the excellent existing working relationship with WHO outlined. RESCEU members in WP2 continue to work and strengthen their collaboration with WHO to design and start to implement an RSV surveillance project in 14 countries around the world. The collaboration with WHO is also strengthened through the participation of WP2 PIs in several WHO meetings on RSV. These links include collaboration the WHO Collaborating Centre for Infectious Disease Epidemiology and Control in Hong Kong.

Dr. Siddhivinayak Hirve, WHO representative, attended the GAM2 in Oxford, June 2018 and has also attended the RESCEU General Assembly Meeting in Utrecht, 21<sup>st</sup> June, this year. Dr. Hirve presented an update on the WHO RSV surveillance pilot study during the second day of the meeting. Dr. Wenging Zhang, also a WHO representative, was also present at the kickoff meeting in Jan 2017.

## 4. Potential New Projects, Networks and Initiatives for Collaboration

### 4.1 Sources for the identification of relevant projects and networks

WP6 is mainly in charge of the identification of initiatives suitable for collaboration with RESCEU. A preliminary list of relevant projects and networks was provided in the DoA as part of the section dedicated to the Impact, Communication and Dissemination Activities. The projects and initiatives are considered at the same time targets for dissemination activities and for potential synergies. Many initiatives have been identified through RESCEU partners and Affiliated Partners (see section 6. Affiliated Partners) and in some cases the collaboration has been already established. This list has been expanded during project implementation based on suggestions received from Consortium members, who have extensive international network. The project is also monitoring any new initiatives in RSV and connected fields (in IMI, Europe and beyond).

The next section will provide the list of projects, networks and other initiatives that have been identified as potentially synergetic for RESCEU. For some of them, collaboration has already started at a certain level (see also section 7. *Initiated contacts and established collaborations*).

#### Identification of relevant initiatives

- WP2 task (2.2) To add that most synergies are provided by RESCEU experts in their field, in particular WP2.
- In addition to the contribution from WP2, WP6 conducted a research on funding databases in order to identify further relevant initiatives. Below is a description of each database and search methods used, which were included in the landscape analysis.

**CORDIS:** <https://cordis.europa.eu/en> The community Research and Development Information Service (CORDIS) is the European Commission's primary public repository of all EU-Funded research projects. Projects are included once the project agreement has been signed with the EC and are kept up-to-date by the EC Directorates General and agencies since 1980. Projects were searched using the following keywords: RSV, Respiratory Syncytial Virus, RSV economic impact.

**CHAFEA:** ([http:// ec.europa.eu/eahc/projects/database.html](http://ec.europa.eu/eahc/projects/database.html)): The consumers, health and Food Executive Agency (CHAFEA formerly, the public health executive agency) was created on January 1<sup>st</sup>.2005 to perform tasks and activities entrusted by the EC, relating to public health, consumer protection and training for safer food. It works closely with the Health and Consumers Directorate General. All ongoing and planned projects in the EU Health Programme since 2003 within the CHAFEA funding database were searched.

**IMI** (<http://www.imi.europa.eu/content/research-projects>) The Innovative Medicines Initiative (IMI) is a joint undertaking between the EU and the European pharmaceutical industry association and is thereby Europe's largest public-private initiative. The initiative aims to speed up the development of better and safer medicines for patients. All ongoing projects within the IMI database were reviewed.

## Identification of Projects and Networks

All identified initiatives from the survey and database searches were collated in a database of initiatives with potential for synergy. Keywords search included “RSV”, “Respiratory Syncytial Virus”, “RSV economic impact”, “RSV impact”. 94 results were returned and after examination of each project factsheet, those not relevant to RESCEU were eliminated. Also, only projects belonging to Framework Programmes belonging to Framework Programmes on and beyond FP5 were included in the selection. 28 synergies were finally selected. Also included in the table are those synergies identified by RESCEU partners and WP2 leaders. . For each of the projects or initiatives, the following information was extracted if available:

- Project Objective
- Geographical Location
- Funding Source
- Funding Period
- Project Status
- Listed partners
- Involvement of RESCEU partners
- Potentially relevant output to RESCEU

Potential areas of synergy were grouped as follows, based on the type of project / study:

RSV Vaccine Development

RSV Surveillance

RSV Global Databases

RSV Clinical Trials and Studies

Other RSV Therapeutics and diagnostic devices

A preliminary assessment of the mapping areas (Fig 6), geographical distribution and type of projects and organisations is provided below in Figures 7, 8 and 9.

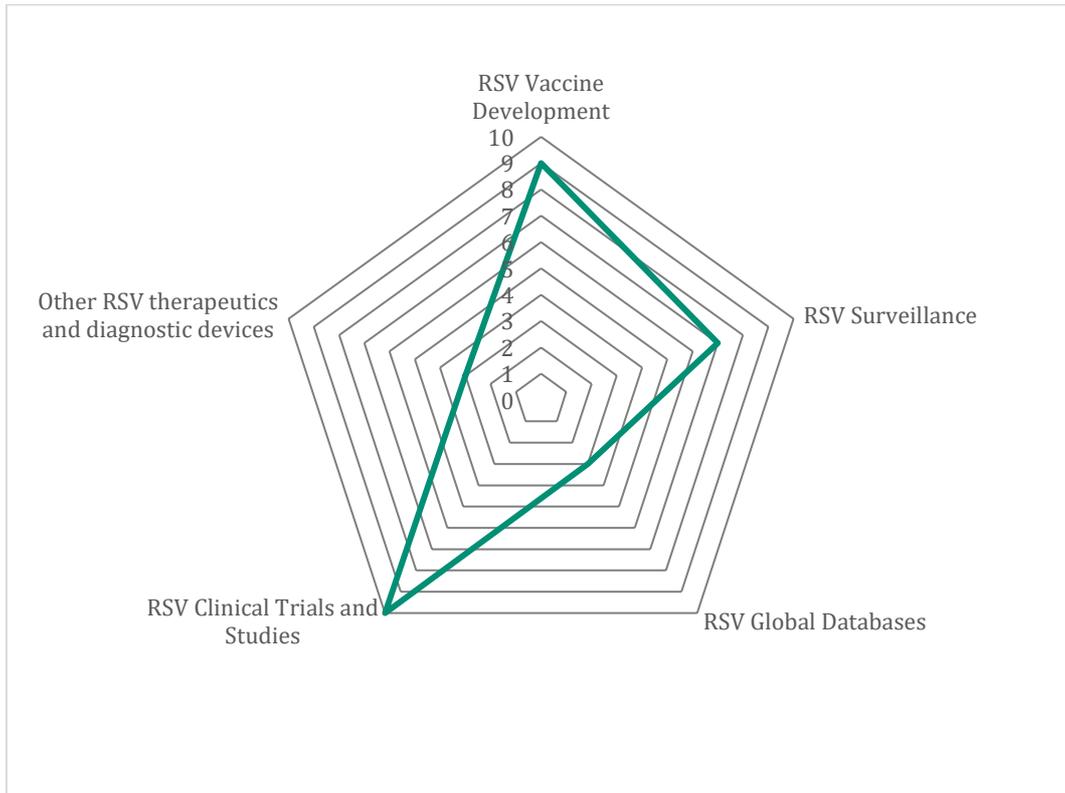


Figure 6. Mapping of Potential Areas of Identified Synergies

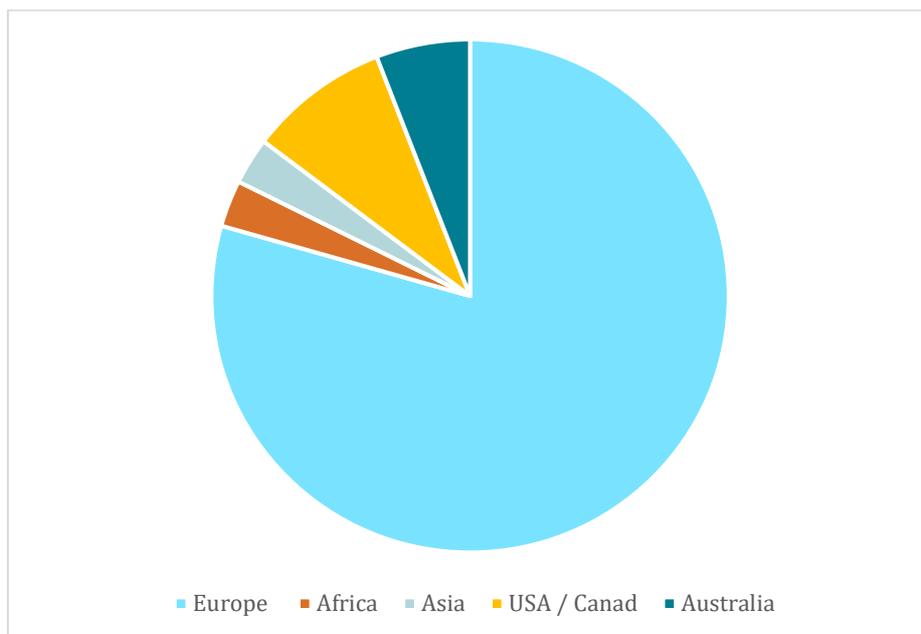


Figure 7. Geographical Distribution of Identified Initiatives

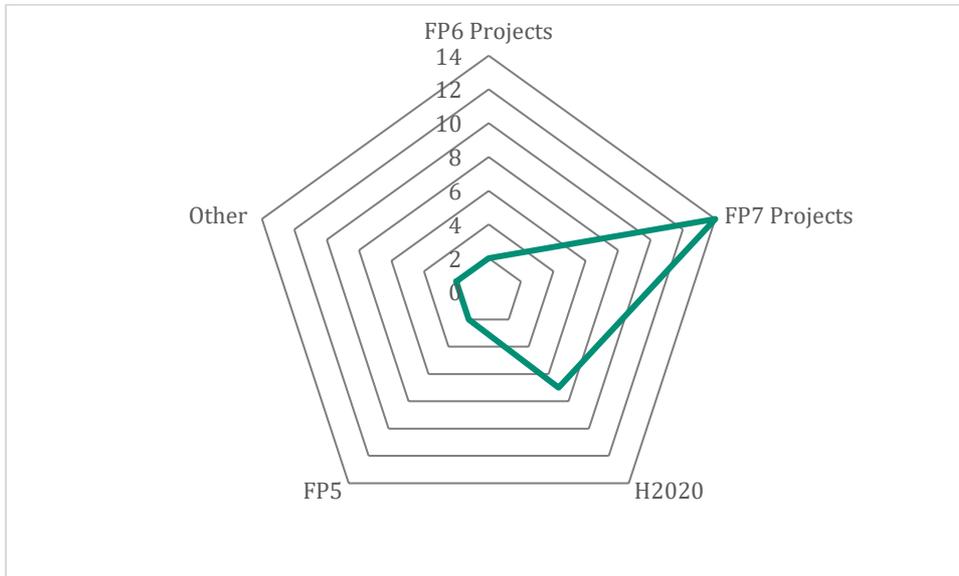


Figure 8. Types of EU-Funded Projects

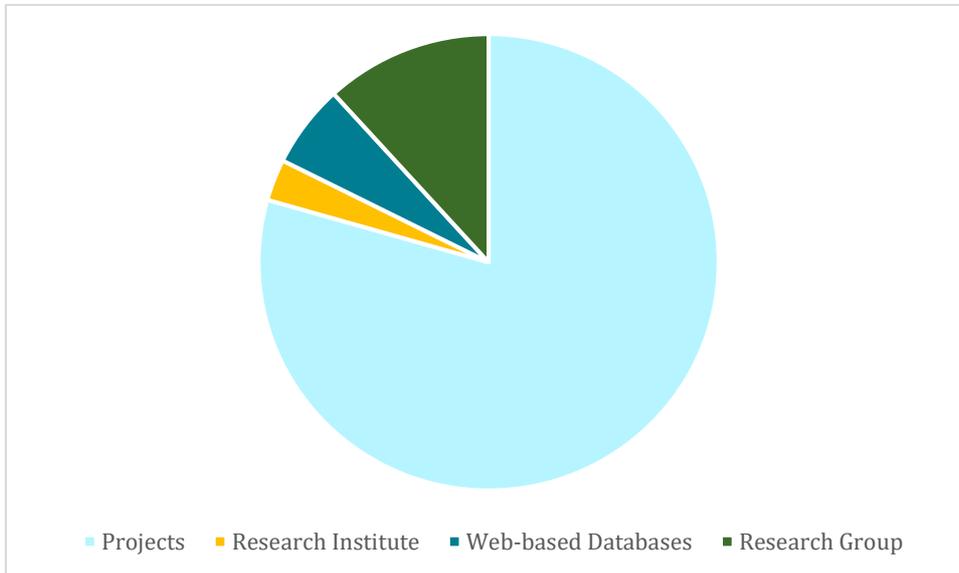


Figure 9. Type of Organisations

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Name/Acronym	Full Title	Description	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>CHILD-INNOVAC</b>	Nasal Vaccination Against Respiratory Infections in Young Children	FP7 Health Funded project RSV nasal vaccination	RSV Vaccination Children	Europe	<a href="https://cordis.europa.eu/project/rcn/88092/factsheet/en">https://cordis.europa.eu/project/rcn/88092/factsheet/en</a>	Project
<b>EMPERIE</b>	European Management Platform for Emerging and Re-emerging Infectious disease Entities	Network of centres of excellence combining the expertise, techniques and resources necessary for countering (re)-emerging infectious diseases.	Infectious Diseases Surveillance Network	Europe	<a href="https://emperie.eu/">https://emperie.eu/</a>	Project
<b>SAPHIR</b>	Strengthening Animal Production and Health through the Immune Response	Development of vaccine strategies effective against endemic pathogens responsible for high economic losses in livestock in order to strengthen the profitability of food animal systems, improve animal welfare and reduce xenobiotic usage in farming with a One Health perspective.	RSV Vaccination Animals	Europe	<a href="http://www.h2020-saphir.eu/">http://www.h2020-saphir.eu/</a>	Project
<b>RSV Budding</b>	Cellular and viral components in Respiratory Syncytial Virus (RSV) assembly and budding	FP7 Funded Project on RSV budding. RSV studies on a new paradigm for membrane fission and virus release.	RSV	Europe	<a href="https://cordis.europa.eu/project/rcn/104577/results/en">https://cordis.europa.eu/project/rcn/104577/results/en</a>	Project
<b>PREDICTA</b>	Post-infectious immune reprogramming and its association with persistence and chronicity of respiratory allergic diseases	Post-infectious immune reprogramming and its association with persistence and chronicity of respiratory allergic diseases	RSV vaccine	Europe	<a href="https://cordis.europa.eu/project/rcn/96868/results/en">https://cordis.europa.eu/project/rcn/96868/results/en</a>	Project
<b>RESPVIRUSES</b>	Immune response to respiratory virus infections and vaccination in elderly	Study on the immune response of elderly against these viruses.	Respiratory infections Immune response elderly	Europe	<a href="https://cordis.europa.eu/project/rcn/84956/factsheet/en">https://cordis.europa.eu/project/rcn/84956/factsheet/en</a>	Project

Name/Acronym	Full Title	Description	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>REINFECTIONTHRESHOLD</b>	Reinfection thresholds and the management of recurrent infections	The project develops a conceptual framework to study the global epidemiology of infectious diseases.	Epidemiology, global databases	Europe	<a href="https://cordis.europa.eu/project/rcn/81766/reporting/en">https://cordis.europa.eu/project/rcn/81766/reporting/en</a>	Project
<b>STADVINN</b>	Strengthening adaptive immunity via innate immunity: enhancing the CD8 T cell response by using the NKG2D ligand expressed in a herpesvirus vector	The main idea behind this project stems from our preliminary data which suggest that a recombinant CMV vector expressing NKG2D ligand has a tremendous potential for subverting viral immunoevasion and boosting the efficiency of CD8 T cell response.	Vaccine Development	Europe	<a href="https://cordis.europa.eu/project/rcn/108238/factsheet/en">https://cordis.europa.eu/project/rcn/108238/factsheet/en</a>	Project
<b>ViR</b>	Industrial Leadership H2020 SME project	We are developing ground-breaking therapeutics to cure currently untreatable respiratory infections affecting children and the elderly	Industrial Leadership	DE		Project

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Name/Acronym	Full Title	Description	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>PHA-ST-TRAIN-VAC</b>	Leveraging Pharmaceutical Sciences and Structural Biology Training to develop 21st Century Vaccines	ITN- EID (Research-Industrial doctorates) brings together two cross-sector, world leading teams – GSK Vaccines S.r.L and the University of Strathclyde – with the objective to equip the next generation of vaccinologists with the skills and tools to deliver vaccines for the 21st Century. PHA-ST-TRAIN-VAC will deliver a unique, multidisciplinary and intersectoral training programme to develop and equip four early stage researchers with the required skills and entrepreneurship to develop new vaccines to protect against RSV and GBS, in a formulation tailored to the age of the patient.	RSV, GBS Vaccine Development Research Capacity and Training	Europe	<a href="http://www.phast-train-vac.eu/">http://www.phast-train-vac.eu/</a>	Project
<b>TRANSVAC-2</b>	European Vaccine Initiative (EVI) coordinates H2020 Research Infrastructure funded project	Designed to accelerate vaccine development by enhancing European vaccine research and training, and increase sustainability of EC vaccine projects by implementing a permanent research infrastructure for early vaccine development.	Vaccine Development - Research Capacity and Training	Europe	<a href="http://www.transvac.org/">http://www.transvac.org/</a>	Project

Name/Acronym	Full Title	Description	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>PNEUMOSIP</b>	PneumoSIP diagnostic device	PneumoSIP project aims to be a compact Respiratory Infectious Diseases diagnostic device providing fast quantitative identification of pathogens involved in CAP, enabling faster and more specific treatments. PneumoSIP seeks to combine laboratory standard precision with the simplicity required for POC applications.		DE	<a href="https://cordis.europa.eu/project/rcn/198805/factsheet/en">https://cordis.europa.eu/project/rcn/198805/factsheet/en</a>	Project
<b>DECIDE</b>	The impact of Demographic Changes on Infectious Diseases transmission and control in middle/low income countries	Mathematical population models for the transmission of infectious diseases to evaluate the impact of public health measures under changing demographic conditions.	RSV Surveillance / Public Health Measures in Middle / Low income countries	Europe / Low Middle income Countries	<a href="https://cordis.europa.eu/project/rcn/103003/factsheet/en">https://cordis.europa.eu/project/rcn/103003/factsheet/en</a>	Project
<b>The RSV Prem Study</b>	RSV Pre-Term infant study	The purpose of the study is to evaluate how effective a new medication (called MEDI8897) is at preventing serious respiratory illness caused by RSV in preterm infants	RSV Clinical Trials	Australia (Victoria)	<a href="https://www.mcri.edu.au/research/projects/rsv-prem-study">https://www.mcri.edu.au/research/projects/rsv-prem-study</a>	Project
<b>Lab150 RSV Project</b>	LAB150 is a partnership between MARS innovation and EVOTEC AG with the goal of accelerating academic research towards commercial outcomes by providing funding and access to pharmaceutically validated platforms and expertise.	The goal of this project is to develop new therapeutics for the treatment of respiratory syncytial virus (RSV). RSV is the leading cause of lower respiratory tract infections in infants and young children.	RSV Clinical Trials	Canada (Toronto)	<a href="https://lab150.com/two-new-projects-cystic-fibrosis-and-respiratory-syncytial-virus/">https://lab150.com/two-new-projects-cystic-fibrosis-and-respiratory-syncytial-virus/</a>	Project

Name/Acronym	Full Title	Description	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>TAILORED-TREATMENT</b>	Tailored Antimicrobial Treatment Regimens And Novel Host-Pathogen Insights For Respiratory Tract Infections And Sepsis	Focussed on the rapid and correct diagnosis of infectious diseases for guiding antibiotic treatment in patients presenting with respiratory tract infections and/or sepsis.	RSV Clinical Trials	Europe	<a href="https://cordis.europa.eu/project/rcn/109349/reporting/en">https://cordis.europa.eu/project/rcn/109349/reporting/en</a>	Project
<b>ADITEC</b>	Advanced Immunization Technologies	Use of systems biology working concept and advanced immune assays to elucidate, at a highly sophisticated level, how effective vaccines stimulate the human immune system and to apply this information to the rational design of novel and highly targeted immunization technologies.	Vaccine Development	Europe	<a href="https://cordis.europa.eu/project/rcn/100067/reporting/en">https://cordis.europa.eu/project/rcn/100067/reporting/en</a>	Project
<b>HARC</b>	Healthy Ageing Research Centre	The major goal of the project was to upgrade the research potential of research groups at the Medical University of Lodz investigating various aspects of healthy ageing and constituting already established Healthy Aging Research Centre.	Studies on the elderly	Europe	<a href="https://cordis.europa.eu/project/rcn/108748/reporting/en">https://cordis.europa.eu/project/rcn/108748/reporting/en</a>	Project
<b>RID-RTI</b>	Rapid Identification of Respiratory Tract Infections	The principle objective of RiD-RTI is to develop and to validate a multiplex diagnostic system, based on a novel “sample-in, answer-out” diagnostic platform, for the rapid detection (< 2 hrs) of the specific microbial aetiology of RTIs in adults and children acquired in the community and in hospitals.	Diagnostics for infectious diseases	UK	<a href="https://cordis.europa.eu/project/rcn/104050/reporting/en">https://cordis.europa.eu/project/rcn/104050/reporting/en</a>	Project

Name/Acronym	Full Title	Description	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>NEOVAC-EC</b>	Improving vaccination in early life	The objectives of Neovac-Ec are :1) to increase knowledge of immunological factors which, in early infancy, lead to a high susceptibility to infectious diseases and to relatively weak vaccine-induced responses;2) to define optimal vaccine design and new immunization strategies for the rapid induction, in early life, of protective vaccine responses and long lasting immunological memory; 3)to identify and standardize suitable evaluation procedures	RSV, infectious diseases, vaccination in infants	Europe	<a href="https://cordis.europa.eu/project/rcn/52675/factsheet/en">https://cordis.europa.eu/project/rcn/52675/factsheet/en</a>	Project
<b>PORTFASTFLU</b>	Portable automated test for fast detection and surveillance of influenza	The approach is based on the integration of a lab-on-a-chip (LOC) consumable cartridge for automated extraction and amplification of the Ribonucleic acid (RNA) of the virus (carrying its genetic information), followed by hybridisation and real-time detection on a microarray, in a single portable and easy to use machine called the GeneSpress® platform.	RSV detection and surveillance	Europe	<a href="https://cordis.europa.eu/project/rcn/87493/reporting/en">https://cordis.europa.eu/project/rcn/87493/reporting/en</a>	Project
<b>C4L</b>	Chips for Life	The overall objective was therefore to develop a panel of dedicated rapid diagnostic tests to allow medical staff to link antibiotic prescription to evidence-based diagnosis.	RSV clinical studies, diagnostics tests	Europe	<a href="https://cordis.europa.eu/project/rcn/102035/reporting/en">https://cordis.europa.eu/project/rcn/102035/reporting/en</a>	Project

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Name/Acronym	Full Title	Description	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>NEUPROTALL</b>	The role of neutrophils and their proteases in the pathology of allergic airway disease	framework to define the role of neutrophils and their proteases in directing the cellular inflammation and pulmonary remodelling in a clinically relevant model of allergen induced airway disease.	RSV studies	UK	<a href="https://cordis.europa.eu/project/rcn/188101/reporting/en">https://cordis.europa.eu/project/rcn/188101/reporting/en</a>	Project
<b>IMPRESSUVAC</b>	Immunopathogenesis of respiratory syncytial virus infections in calves, mice, non-human primates, and humans : development of second generation subunit vaccines.	Identification of immunological correlates of enhanced disease after FI-RSV vaccination in calves and mice (bRSV) and macaques (hRSV).	RSV , vaccination, animal studies	Europe	<a href="https://cordis.europa.eu/project/rcn/51503/factsheet/en">https://cordis.europa.eu/project/rcn/51503/factsheet/en</a>	Project
<b>ALLOSERGON</b>	The role of TREM proteins in inflammatory lung disease	The overall scientific objective is to combine established models of respiratory bacterial infection and house dust mite induced asthma in the mouse.	RSV models, animal studies	UK	<a href="https://cordis.europa.eu/project/rcn/103323/factsheet/en">https://cordis.europa.eu/project/rcn/103323/factsheet/en</a>	<b>Project</b>
<b>IMMUNEXPLORE</b>	New approaches to analyze and exploit the human B and T cell response against viruses	To explore the specificity and dynamics of human antibody responses to influenza virus by using newly developed technological platforms to culture human B cells and plasma cells and to analyze the repertoire of human naïve and memory T cells.	RSV studies	Switzerland	<a href="https://cordis.europa.eu/project/rcn/95521/factsheet/en">https://cordis.europa.eu/project/rcn/95521/factsheet/en</a>	Project

Name/Acronym	Full Title	Description	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>Telethon Kids Institute</b>	Telethon Kids Institute is one of the largest medical research institutes in Australia	Childhood's diseases, conditions and issues in four research focus areas (Aboriginal Health, Brain and Behaviour, Chronic and Severe Diseases, Early Environment). Also specific research programmes in Children Respiratory Health.	Respiratory Child Health, Vaccines, Infectious Diseases	Australia (Perth)	<a href="https://www.telethonkids.org.au/">https://www.telethonkids.org.au/</a>	Research Institute
<b>FluID</b>	WHO Geneva database of influenza data	FluID - a global influenza epidemiological data sharing platform	Database	WHO Geneva	<a href="https://www.who.int/influenza/surveillance_monitoring/fluid/en/">https://www.who.int/influenza/surveillance_monitoring/fluid/en/</a>	Web based database platform WHO
<b>FluNET</b>	WHO Geneva database of influenza data	FluNET - a global influenza epidemiological data sharing platform	Database	WHO Geneva	<a href="https://www.who.int/influenza/gisrs_laboratory/flunet/en/">https://www.who.int/influenza/gisrs_laboratory/flunet/en/</a>	Web based database platform WHO
<b>SPH - HKU</b>	WHO Collaborating Centre	WHO Collaborating Centre for Infectious Disease Epidemiology and Control, School of Public Health, The University of Hong Kong	RSV surveillance and disease burden	Hong Kong	<a href="https://sph.hku.hk/en/about-us/faculty-and-staff/academic-staff/cowling,-benjamin-john">https://sph.hku.hk/en/about-us/faculty-and-staff/academic-staff/cowling,-benjamin-john</a>	Research Group
<b>NICD</b>	National Institute for Communicable Diseases in South Africa.	National Institute conducting RSV surveillance	RSV surveillance and disease burden	South Africa	<a href="http://www.nicd.ac.za">http://www.nicd.ac.za</a>	Research Group

Name/Acronym	Full Title	Description	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>CIRN; IMPACT</b>	Canadian Immunisation Research Network	National surveillance system which includes RSV	RSV surveillance	Canada	<a href="http://cirnetwork.ca/research-studies/">http://cirnetwork.ca/research-studies/</a>	Research Group
<b>INFLAMMAGE</b>	Airway inflammation during RSV infection of older volunteers	INFLAMMAGE is a unique investigation of the immunobiology of RSV infection in older adult volunteers,	RSV elderly	Europe	<a href="https://qtr.ukri.org/">https://qtr.ukri.org/</a>	Project
<b>VITAL</b>	Vaccines and infectious diseases in the ageing population	Map the burden of vaccine-preventable infectious diseases in the elderly and investigate vaccinations and immunity to infections in the ageing population.	RSV elderly	Europe	<a href="https://www.imi.europa.eu/projects-results/project-factsheets/vital">https://www.imi.europa.eu/projects-results/project-factsheets/vital</a>	Project
<b>ISIRVS</b>	International Respiratory Syncytial Virus Society	A special interest group of ISIRV in order to develop mutual scientific interests and benefit from the organizational structures and support provided by ISIRV	RSV	Europe	<a href="https://www.isirv.org/site/index.php/special-interest-groups/international-respiratory-syncytial-virus-society">https://www.isirv.org/site/index.php/special-interest-groups/international-respiratory-syncytial-virus-society</a>	Organization



Table 2. List of updated new synergies

## 5. Affiliated Partners (APs)

One of the fundamental founding principles of RESCEU is to generate a critical mass of research capacity spanning all relevant stakeholders, in order to maximise the project's impact and create a long-lasting, far-reaching community effort in the field. In order to achieve this goal, RESCEU was designed from the outset as an inclusive structure that encourages active participation of all members and in which their diverse perspectives have appropriate exposure and consideration. At the same time, the Consortium needs to be manageable in order to not endanger the ambitious, pragmatic scientific goals of the project.

During the second year of RESCEU, some APs have continued to commit resources to the implementation of RESCEU tasks and contributed to the delivery of some of the RESCEU deliverables. Collaborations have been established with Martin-Luther University Halle-Wittenberg for the implementation of certain WP1 tasks, while the Norwegian Institute of Public Health (NIPH), the National Institute for Health and Welfare (THL) and the University of Lisbon collaborated with WP2 and the University of Lille (ULille), the London School of Hygiene & Tropical Medicine (LSHTM), the University of Cambridge (UCam), the Center for Health Policies and Services (CHPS) contributed to WP3. It is envisaged that in a near future, the Netherland Institute for Health Services Research (NIVEL) will also become a Third Party for the implementation of WP1 tasks. The list of current RESCEU APs is provided in the table below; given the structure and approach of RESCEU, this list is expected to grow throughout the project's life span. A new AP (Telethon Kids Institute), based in Australia, -described in next section below- has joined the RESCEU Academic Institutions (Outer Circle) and this has addition has been documented in the recent request for amendment to the Grant Agreement.

<b>Academic (Inner Circle)</b>	<b>Public Health Institutions (Inner Circle)</b>
Barcelona Institute for Global Health (ES)	National Institute for Health and Welfare (FI)
Queen's University Belfast (UK)	Norwegian Institute of Public Health (NO)
Emma Children's Hospital, Academic Medical Centre (NL)	Public Health Institute Slovenia (SL)
Erasmus Medical Centre (NL)	National Centre For Epidemiology Department of Respiratory Viruses (HU)
Institut Pasteur (FR)	Center for Health Policies and Services (RO)
London School of Hygiene & Tropical Medicine (UK)	Netherland Institute for Health Services Research (NL)
Ospedale Bambino Gesù di Roma (IT)	Public Health Institution of Galicia (ES)
Royal Manchester Children's Hospital (UK)	<b>Patient Societies (Inner Circle)</b>
U. Valencia / Global Influenza Hospital Surveillance Network (ES)	ReSVINET Patient Advisory Board (NL)
Université de Versailles Saint-Quentin (FR)	<b>Clinical Societies (Inner Circle)</b>
University of Cambridge (UK)	RCGP Research & Surveillance Centre (UK)
University of Groningen (NL)	Royal College of Physicians of Edinburgh (UK)
University of Leuven (BE)	World Association of Perinatal Medicine (WAPM) (INT)
University of Lille ((FR)	<b>Academic Institutions (Outer Circle)</b>
University of Lisbon (PT)	Nationwide Children's Hospital in Columbus (USA)
University of Liverpool (UK)	Fundación INFANT (ARG)
University of Perugia (IT)	Pontificia Universidade Católica do Rio Grande do Sul (BRA)
University of Surrey (UK)	Telethon Kids Institute (AUS)
Utrecht University (NL)	<b>Public Health Institutions (Outer Circle)</b>
University Children's Hospital Sant Joan de Deu (ES)	Canada Immunization Research Network (CAN)
Université Libre de Bruxelles (BE)	PATH - Center for Vaccine Innovation and Access (USA)
Medical Faculty of the Martin-Luther University Halle-Wittenberg (DE)	

Table 3. Affiliated Partners

## 5.1 Telethon Kids Institute

Within the context of Task 2.3 in WP2, initial contact was developed with the Telethon Kids Institute. A successful collaboration was developed. The Telethon Kids Institute resulted in the Institute becoming an Affiliated Partner in RESCEU in the field of RSV. The Telethon Kids Institute is based within the Perth Children's Hospital, and is one of the largest, and most successful medical research institutes in Australia, comprising a dedicated and diverse team of more than 700 staff and students. It brings together a community, researchers, practitioners, policy makers and funders, whose main vision is to improve the health and wellbeing of children through excellence in research. Their Severe Diseases and Early Environment Research Focus Areas include programmes on Respiratory Health and the Vaccine Trials Group who provide high level of expertise in and research on RSV in children.

## 6. Other Initiatives

### 6.1 RESCEU Patient Advisory Board

Patient Advisory Board: over the last 12 months, the Steering Committee and the Consortium agreed on the need of an increase in the level of involvement of the Patient Advisory Board during the project. A session on PAB's engagement took place during the second General Assembly Meeting in Oxford when PAB's members were introduced to the Consortium (2 new members joined RESCEU a few months before the meeting) and explained PAB's main objectives. Included in these objectives is the creation of an RSV patient organization to continue after the end date of the project. The open discussion that followed the PAB's presentation led to the agreement of the need to define a more detailed work plan for the activities of the PAB within RESCEU and to define a consequent allocation of resources to the activities to be implemented, starting from 2019. WP6 coordinated the discussion with the PAB and provided support to the definition of the Workplan.

### 6.2 RSV Surveillance Meeting

Organisation of at least two RSV Surveillance Meetings during the project duration (led by RESCEU Partner and national public health agency RIVM, in WP2 and supported by WP6) are one of RESCEU's objectives in order to agree on standards and to share best practices among national public health agencies and in liaison with ECDC. The first RSV Surveillance Meeting took place on 20-21<sup>st</sup> March 2019 in Copenhagen, Denmark. The aim of the workshop was to bring together experts within the fields of public health, epidemiology, virology, pediatrics and infectious diseases in a working-group format, to discuss technical and operational issues related to surveillance of RSV and work towards an agreed consensus for aligning RSV surveillance platform(s) within the EU/EEA region. The ECDC-based meeting report "RSV and Enterovirus surveillance needs in Stockholm in Feb 2017" was circulated and a report summarising the results of the ECDC "RSV surveillance inventory survey" (carried out in Summer 2017) were provided to the participants ahead of the meeting and used along with standard surveillance protocol guidelines as background literature for the meeting.

The objectives of the RSV surveillance meeting were:

- To discuss the technical and operational issues related to surveillance of RSV
- To discuss the preliminary findings of the ongoing worldwide WHO-led RSV case definition
- To review developments in RSV surveillance in the EU/EEA Region during the past decade and anticipate future developments
- To propose an aligned approach to national RSV surveillance system(s) within the EU/EEA region
- To draft a report of the workshop and, as a follow-on, present the proposal for alignment of national RSV surveillance systems widely within the RSV surveillance community in Europe.

Attendees were participants from the EU already involved in RSV surveillance:

- National focal points for respiratory virus surveillance designated by national health authorities
- Reference laboratory representatives
- Epidemiology, virology, pediatrics and infectious disease experts, and academics (in the RSV surveillance and research field)
- RSV/Influenza researchers & RESCEU academic partners

Pharmaceutical industry representatives were not involved in the workshop due to sensitivities expressed by the ECDC and several national public health agencies regarding involvement of pharmaceutical industries in setting the RSV surveillance agenda in Europe.

UEDIN will host a two-day working group meeting (RSV in premature infants) in Edinburgh in November 2019 where approximate 20 participants will be invited from the US, Singapore, Brazil, Israel, Germany, Spain and Ireland.

The 2<sup>nd</sup> RSV Surveillance meeting is anticipated to take place in April 2020.

## 6.3 ISIRVS

The International Respiratory Syncytial Virus Society (IRSVS) in 2017, became a special interest group of ISIRV in order to develop mutual scientific interests and to benefit from the organizational structures and support provided by ISIRV.

The mission of the IRSVS is to promote and support excellence in research, scholarship, clinical practice, and development of interventions to prevent disease caused by respiratory syncytial virus (RSV) for the benefit of human and animal health and welfare.

This will be achieved by organizing global IRSVS symposia and by providing authoritative, independent and impartial advice to those sharing our mission and goals (including governmental and non-governmental bodies, funders and industry).

## 6.4 INFLAMMAGE

INFLAMMAGE is a unique investigation of the immunobiology of RSV infection in older adult volunteers, using a milestone-driven approach involving a multi-institute alliance with GSK. In human challenge, RSV infection causes macroscopic, transcriptomic and histopathological inflammation of the lower airway that is quite different from what is seen with other common cold viruses (e.g. human rhinovirus, influenza). The project focussed on obtaining a better understanding of the immune mechanisms that protect against virus-induced lung disease in older people and how these differ from responses seen in younger adults. INFLAMMAGE uses cutting edge experimental medicine and high-dimensional -omics techniques with to study how acquired immunity, innate immunity and barrier functions of the respiratory mucosa contribute to protection against RSV-induced lower airway disease.

## 7. Next Steps and Conclusions

Over the last 30 months, liaisons between RESCEU partners and stakeholders from external initiatives have followed various tracks of collaboration. A limited number of potential synergies have been formalised thus far. For example, ECDC has become an ISAG member through the signature of an Advisory Agreement with RESCEU. Others have become Affiliated Partners (Telethon Kids Institute), will join RESCEU as Third Parties (ReSViNET) or increase their commitment to RESCEU (Patient Advisory Board). These changes have been reflected on the recent request for amendment #2 of the Grant Agreement, which is currently being processed by IMI.

Previous experiences have proved that where knowledge and/or output from external initiatives are already the public domain synergies occur mostly at the level of outcome utilisation for which formalisation is not necessarily needed. Such publicly accessible information is an important and sustainable element for synergy creation with past initiatives, but also for current synergies where possibilities for joint work may be limited. Direct interaction between the relevant WP members with identified stakeholders of external initiatives is however the most efficient to initiate and explore potential synergies. This stresses the importance of consortium members with a large network within the research domain. These members play a key role in a “synergy” creation.

In this aspect, RESCEU members have also maintained good contact with several other major international efforts to quantify the healthcare consequences of RSV disease. These include the Canadian Immunisation Research Networks CIRN and IMPACT research groups. RESCEU members in WP2 have also made initial contact with research groups in Japan, Hong Kong (WHO Collaborating Centre) and South Africa (National Institute for Communicable Diseases in South Africa). An excellent existing working collaboration with WHO to design and initiate implementation of an RSV surveillance project in 14 countries around the world is ongoing. This project is now being extended to further countries in phase 2 starting in 2018. RESCEU members have participated in several WHO meetings on RSV in 2018 and this has strengthened the collaboration with them. WP2 members have also been in communication with and attended the annual meeting of the Global Influenza Hospital Surveillance Network (GIHSN) and discussed with them how this could develop RSV activities in the coming years.

The establishment of new collaborations and identification of potential synergies will continue in the next years of RESCEU. Monitoring of synergies, which involves the follow-up of collaborations, including re-identification (e.g. for projects or results closely related to those already identified, or for fine-tuning preliminary identification), reassessment and re-prioritisation, will continue and aim to expand over the whole duration of the project and if possible, to include an evaluation of the collaborations effectively implemented in RESCEU as part of its impact objectives.

To support the objectives of the scientific WPs (namely WP2), the Consortium is envisaging the collaboration in the organisation of a series of relevant events on RSV with a high networking potential. In particular, the collaboration with ECDC on the organisation of the next European RSV surveillance meeting to report data, share good practices, promote engagement with clinical societies and encourage and support extension of RSV surveillance across Europe. This meeting is scheduled to be held end 2019/ early 2020-

Also, RESCEU plans to hold a high-level RSV Science Policy Forum including sessions with European national immunisation technical advisory groups (NITAGs), national regulatory agencies and policy makers. This would represent a European Summit to give an overview of scientific advances in the RSV field; present RESCEU cost-effectiveness data; draw attention to key issues and relevant data for EMA and national medical regulation agencies; and develop a roadmap for an RSV action in Europe. Towards the end of the project, a session will be organised at the Annual Health Forum in Gastein (a high-level policy meeting including Members of EU parliament and governments (<http://www.ehfg.org/home.html>) and presentations at the EUPHA conferences (<https://www.eupha.org/who-we-are>)

Over the next 2.5 years, WP2, as part of Task 2.3 *International linkages to promote interaction/synergy*, plans to continue developing international relationships further and to continue work towards promoting the development of a global data sharing platform.

Synergies will be also established for dissemination purposes, for example as part of Task 2.5 *Dissemination of findings to raise awareness of RSV healthcare burden*, which is expected to start later in the project. The aim of this task is to raise awareness about RSV healthcare burden among policy makers, healthcare workers and the general public across Europe, through coordination with WP6 and exploitation of different dissemination channels. To prepare the way to the activities envisaged within this task, a draft list of relevant stakeholders has been developed, followed by the identification and understanding of the types of information that should be targeted to different audiences to address the needs of policy makers, healthcare workers and the general public.

## Annex I – Complete Table of Synergies Overview

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>ADVANCE</b>	Accelerated development of vaccine benefit-risk collaboration in Europe	Intimately linked IMI project on benefit-risk assessment of vaccines.	Outcome Utilisation	Vaccines	Europe	<a href="http://www.advance-vaccines.eu">www.advance-vaccines.eu</a>	Project
<b>ARPEC/GARPEC</b>	Antibiotic Resistance and Prescribing in European Children	Project aimed to develop and implement a novel method of surveillance of antimicrobial prescription and resistance in children attending hospitals and primary care across Europe.	Strategic Alignment	Surveillance of antimicrobial prescription and resistance in children	Europe	<a href="https://penta-id.org/antimicrobials/garpec/">https://penta-id.org/antimicrobials/garpec/</a>	Project
<b>BMGF</b>	Bill & Melinda Gates Foundation	Private foundation founded by Bill and Melinda Gates in 2000. One of the main goals of the Foundation is to enhance healthcare globally and reduce extreme poverty. Specifically, the Foundation is supporting different actions and programmes for the development of an RSV vaccine and a global RSV surveillance system (with WHO).	Strategic Alignment	Development of an RSV vaccine and a global RSV surveillance system (with WHO) support.	US	<a href="http://www.gatesfoundation.org">www.gatesfoundation.org</a>	Funding Body
<b>CIRN</b>	Canada Immunization Research Network	National network of key vaccine researchers who develop and test methodologies related to the evaluation of vaccines as they pertain to safety, immunogenicity and effectiveness, and program implementation and evaluation.	Outcome Utilisation	Quantification of healthcare consequences of RSV disease	Canada	<a href="http://www.cirnetwork.ca">www.cirnetwork.ca</a>	Research Group / Research Network

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>COMBACTE</b>	Combating Bacterial Resistance in Europe	IMI-funded project which battles antimicrobial resistance by speeding up the development of new antibiotics.	Outcome Utilisation	Clinical Trials	Europe	<a href="http://www.combacte.com">www.combacte.com</a>	Project
<b>ECDC</b>	European Centre for Disease Prevention and Control	EU agency aiming at strengthening Europe's defences against infectious diseases. ECDC works in three key strategic areas: it provides evidence for effective and efficient decision-making, it strengthens public health systems, and it supports the response to public health threats.	Outcome Utilisation	RSV Surveillance	Europe	<a href="http://www.ecdc.europa.eu">www.ecdc.europa.eu</a>	Regulator
<b>EMA</b>	European Medicines Agency	The European Medicines Agency (EMA) is a decentralised agency of the European Union (EU). Formerly in London and to be relocated to Amsterdam, it began operating in 1995. The Agency is responsible for the scientific evaluation, supervision and safety monitoring of medicines in the EU.	Outcome Utilisation	RSV Surveillance - scientific evaluation, monitoring	Europe	<a href="http://www.ema.europa.eu">www.ema.europa.eu</a>	Regulator
<b>EMIF</b>	European Medical Information Framework	IMI-funded project aiming to develop common technical and governance solutions and improve access and use of health data.	Outcome Utilisation	Framework of patient-level data, access to medical research data sources	Europe	<a href="http://www.emif.eu">www.emif.eu</a>	Regulator

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>EU-ADR Alliance</b>	Exploring and Understanding Adverse Drug Reactions by Integrative Mining of Clinical Records and Biomedical Knowledge	Research consortium carrying out observational studies. The EU-ADR Alliance's main goal is running studies and answering drug safety questions with the use of extracted data from multiple European privately and publicly owned Electronic Healthcare Records (HER) databases.	Outcome Utilisation	Collaboration network of running studies, databases	Europe	<a href="http://www.eu-adr-alliance.com">www.eu-adr-alliance.com</a>	Research Group / Research Network
<b>EUCLIDS</b>	Childhood-life threatening infectious disease study	EU FP7 project aiming to understand the genetic basis underlying susceptibility and outcome to the major childhood infections including meningitis, septicaemia, bone and joint infections due to meningococcus, pneumococcus, staphylococcus aureus, Group A streptococcus and salmonella.	Joint Work	Childhood infections	Europe	<a href="http://www.euclids-project.eu">www.euclids-project.eu</a>	Project
<b>EUROHOPE</b>	European Health Care Outcomes, Performance and Efficiency project.	EU FP7 project to evaluate the performance of European health care systems in terms of outcomes, quality, use of resources and costs.	Strategic Alignment	European Healthcare Systems Evaluation	Europe	<a href="http://www.eurohope.info">www.eurohope.info</a>	Project

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>Farr Institute</b>	The Farr Institute for Health Informatics Research	The Farr Institute is a UK-wide research collaboration involving 21 academic institutions and health partners in England, Scotland and Wales. Publicly funded by a consortium of ten organisations led by the Medical Research Council, the Institute is committed to delivering high-quality, cutting-edge research using 'big data' to advance the health and care of patients and the public.	Outcome Utilisation	Healthcare Big Data	UK	<a href="http://www.farrinstitute.org">www.farrinstitute.org</a>	Research Group / Research Network
<b>GIHSN</b>	Global Influenza Hospital Surveillance Network	Platform able to generate strong epidemiological and medical evidence on the burden of severe influenza and the public health impact of influenza vaccines. The GIHSN was initiated by Sanofi Pasteur in 2011 to fill the gap in epidemiology and public health knowledge. The GIHSN gathers several sites affiliated with national health authorities.	Outcome Utilisation	Research RSV Network	Worldwide	<a href="http://www.gihsn.org">www.gihsn.org</a>	Research Network
<b>GRACE</b>	Genomics to combat Resistance against Antibiotics in Community-acquired LRTI	EU FP6 project aiming to integrate and coordinate the activities of physicians and scientists from many institutions in 14 European countries to combat antibiotic resistance in community-acquired lower respiratory tract infections.	Outcome Utilisation	Geno	Europe	<a href="http://www.grace-lrti.org">www.grace-lrti.org</a>	

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>GRIP</b>	Global Research in Paediatrics – Network of Excellence	EU FP7 project, which aims to stimulate and facilitate the development and safe use of medicines in children.	Outcome Utilisation	Childhood infections	Europe	<a href="http://www.grip-network.org">www.grip-network.org</a>	Project
<b>INDEPTH Network</b>	INDEPTH Network	Network of >50 surveillance systems sites in 20 LMIC with mortality data. INDEPTH membership is currently composed of 42 member health research centres that observe through 49 HDSS field sites the life events of over three million, eight hundred people in 19 LMICs in Africa, Asia and Oceania.	Outcome Utilisation	Research RSV Network	Worldwide	<a href="http://www.indepth-network.org">www.indepth-network.org</a>	Database
<b>ISARIC</b>	International Severe Acute Respiratory and Emerging Infection Consortium	ISARIC is a global initiative aiming to ensure that clinical researchers have the open access protocols and data-sharing processes needed to facilitate a rapid response to emerging diseases that may turn into epidemics or pandemics.	Outcome Utilisation		Europe	<a href="http://www.isaric.tghn.org">www.isaric.tghn.org</a>	Research Network
<b>MCEE</b>	Maternal and Child Epidemiology Estimates	Project funded by Gates Foundation with the overall goal of ensuring that high-quality and timely data are utilized in the assessment of global and national priorities in maternal, neonatal and child health and in planning and evaluation of health intervention programs.	Outcome Utilisation		Worldwide	<a href="http://www.jhsph.edu/research/centers-and-institutes/institute-for-international-programs/current-projects/maternal-child-epidemiology-estimation/">www.jhsph.edu/research/centers-and-institutes/institute-for-international-programs/current-projects/maternal-child-epidemiology-estimation/</a>	Project

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>PENTA-ID network</b>	PENTA Infectious Diseases network	EU (FP7 and IMI) and pharma funded International ID network conducting world class clinical studies, training programmes and infrastructure development initiatives in the area of paediatric infectious disease.	Outcome Utilisation		Worldwide	<a href="http://www.penta-id.org">www.penta-id.org</a>	Network
<b>PERCH project</b>	Pneumonia Etiology Research for Child Health	Bill and Melinda Gates Foundation funded and multi-country project and case-control study to determine the etiology of and risk factors for severe and very severe pneumonia in children 1-59 months of age.	Strategic Alignment		Worldwide	n/a	Project
<b>PERFORM</b>	Personalised Risk assessment in Febrile illness to Optimise Real-life Management	Aimed at developing a comprehensive management plan for febrile patients, capable of being implemented across different health-care systems in Europe, linking sophisticated new genomic and proteomic approaches to clinical phenotyping.	Joint Work		Europe	<a href="http://www.perform2020.eu">www.perform2020.eu</a>	Project

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>PoC-ID</b>	Platform for ultra-sensitive Point-of-Care diagnostics for Infectious Diseases	H2020 funded EU Platform for ultra-sensitive Point-of-Care diagnostics for Infectious Diseases focused on RSV infection. The project addresses the increasing demand for rapid and sensitive point-of-care diagnostics to reduce healthcare costs and increase the quality of life with a focus on infectious diseases, one of the world's leading causes of morbidity and death.	Joint Work		Europe	<a href="http://www.poc-id.eu">www.poc-id.eu</a>	Project
<b>PREPARE</b>	Platform for European Preparedness Against (Re)-emerging Epidemics	FP7 funded network for harmonised large-scale clinical research studies on infectious diseases to provide rapid respond to any severe ID outbreak, providing real-time evidence for clinical management of patients and for informing public health responses.	Joint Work		Europe	<a href="http://www.prepare-europe.eu">www.prepare-europe.eu</a>	Research Network
<b>ReSViNet</b>	Respiratory Syncytial Virus Network	ReSViNET is a global network of experts in the field of Respiratory Syncytial Virus (RSV) infections, established in 2014 in Utrecht.	Joint Work	RSV	Europe	<a href="http://www.resvinet.org">www.resvinet.org</a>	Database
<b>RSV GEN</b>	RSV Global Epidemiology Network	Global network of >70 sites contributing RSV disease burden data.	Strategic Alignment		Worldwide	n/a	Database

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>RSV GOLD</b>	RSV Global Online Mortality Database	<p>Online accessible database containing information on individual RSV-related mortality cases.</p> <p>Health care providers and researchers from all over the world are encouraged to share cases of children dying from RSV infection.</p>	Joint Work		Worldwide	<a href="http://www.hetwkz.nl/en/Research/Research-themes/RSV-Gold">www.hetwkz.nl/en/Research/Research-themes/RSV-Gold</a>	Database
<b>VENICE III</b>	Vaccine European New Integrated Collaboration Effort	<p>ECDC funded project started in December 2013 with the aim of collecting, sharing and disseminating information on national immunization programmes through a network of professionals and providing information useful to build up methodologies and provide guidance for improving the overall performance of the immunisation systems in the EU/EEA Member States.</p>	Outcome Utilisation		Europe	<a href="http://www.venice.cineca.org">www.venice.cineca.org</a>	Project

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>WHO Global Influenza Programme</b>	World Health Organization Influenza Programme	Programme providing WHO MS with strategic guidance, technical support and coordination activities to support their health systems against seasonal, zoonotic and pandemic influenza threats to population and individuals. The programme, with support from Bill and Melinda Gates Foundation, is piloting RSV surveillance strategy based on the Global Influenza Surveillance and Response System (GISRS) in 14 countries in order to develop an evidence-base for informing RSV vaccination policy.	Strategic Alignment		Worldwide	<a href="http://www.who.int/influenza/rsv/en/">www.who.int/influenza/rsv/en/</a>	Funding Body
<b>CHILD-INNOVAC</b>	Nasal Vaccination Against Respiratory Infections in Young Children	FP7 Health Funded project RSV nasal vaccination		RSV Vaccination Children	Europe	<a href="https://cordis.europa.eu/project/rcn/88092/factsheet/en">https://cordis.europa.eu/project/rcn/88092/factsheet/en</a>	Project
<b>EMPERIE</b>	European Management Platform for Emerging and Re-emerging Infectious disease Entities	Network of centres of excellence combining the expertise, techniques and resources necessary for countering (re)-emerging infectious diseases.		Infectious Diseases Surveillance Network	Europe	<a href="https://emperie.eu/">https://emperie.eu/</a>	Project

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>SAPHIR</b>	Strengthening Animal Production and Health through the Immune Response	Development of vaccine strategies effective against endemic pathogens responsible for high economic losses in livestock in order to strengthen the profitability of food animal systems, improve animal welfare and reduce xenobiotic usage in farming with a One Health perspective.		RSV Vaccination Animals	Europe	<a href="http://www.h2020-saphir.eu/">http://www.h2020-saphir.eu/</a>	Project
<b>RSV Budding</b>	Cellular and viral components in Respiratory Syncytial Virus (RSV) assembly and budding	FP7 Funded Project on RSV budding. RSV studies on a new paradigm for membrane fission and virus release.		RSV	Europe	<a href="https://cordis.europa.eu/project/rcn/104577/results/en">https://cordis.europa.eu/project/rcn/104577/results/en</a>	Project
<b>PREDICTA</b>	Post-infectious immune reprogramming and its association with persistence and chronicity of respiratory allergic diseases	Post-infectious immune reprogramming and its association with persistence and chronicity of respiratory allergic diseases		RSV vaccine	Europe	<a href="https://cordis.europa.eu/project/rcn/96868/results/en">https://cordis.europa.eu/project/rcn/96868/results/en</a>	Project
<b>RESPVIRUSES</b>	Immune response to respiratory virus infections and vaccination in elderly	Study on the immune response of elderly against these viruses.		Respiratory infections Immune response elderly	Europe	<a href="https://cordis.europa.eu/project/rcn/84956/factsheet/en">https://cordis.europa.eu/project/rcn/84956/factsheet/en</a>	Project
<b>REINFECTIONTHRESHOLD</b>	Reinfection thresholds and the management of recurrent infections	The project develops a conceptual framework to study the global epidemiology of infectious diseases.		Epidemiology, global databases	Europe	<a href="https://cordis.europa.eu/project/rcn/81766/reporting/en">https://cordis.europa.eu/project/rcn/81766/reporting/en</a>	Project

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Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>STADVINN</b>	Strengthening adaptive immunity via innate immunity: enhancing the CD8 T cell response by using the NKG2D ligand expressed in a herpesvirus vector	The main idea behind this project stems from our preliminary data which suggest that a recombinant CMV vector expressing NKG2D ligand has a tremendous potential for subverting viral immunoevasion and boosting the efficiency of CD8 T cell response.		Vaccine Development	Europe	<a href="https://cordis.europa.eu/project/rcn/108238/factsheet/en">https://cordis.europa.eu/project/rcn/108238/factsheet/en</a>	Project
<b>ViR</b>	Industrial Leadership H2020 SME project	We are developing ground-breaking therapeutics to cure currently untreatable respiratory infections affecting children and the elderly		Industrial Leadership	DE		Project

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Tyoe of Organisation
<b>PHA-ST-TRAIN-VAC</b>	Leveraging Pharmaceutical Sciences and Structural Biology Training to develop 21st Century Vaccines	ITN- EID (Research-Industrial doctorates) brings together two cross-sector, world leading teams – GSK Vaccines S.r.L and the University of Strathclyde – with the objective to equip the next generation of vaccinologists with the skills and tools to deliver vaccines for the 21st Century. PHA-ST-TRAIN-VAC will deliver a unique, multidisciplinary and intersectoral training programme to develop and equip four early stage researchers with the required skills and entrepreneurship to develop new vaccines to protect against RSV and GBS, in a formulation tailored to the age of the patient.		RSV, GBS Vaccine Development Research Capacity and Training	Europe	<a href="http://www.phast-train-vac.eu/">http://www.phast-train-vac.eu/</a>	Project
<b>TRANSVAC-2</b>	European Vaccine Initiative (EVI) coordinates H2020 Research Infrastructure funded project	Designed to accelerate vaccine development by enhancing European vaccine research and training, and increase sustainability of EC vaccine projects by implementing a permanent research infrastructure for early vaccine development.		Vaccine Development - Research Capacity and Training	Europe	<a href="http://www.transvac.org/">http://www.transvac.org/</a>	Project

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>PNEUMOSIP</b>	PneumoSIP diagnostic device	PneumoSIP project aims to be a compact Respiratory Infectious Diseases diagnostic device providing fast quantitative identification of pathogens involved in CAP, enabling faster and more specific treatments. PneumoSIP seeks to combine laboratory standard precision with the simplicity required for POC applications.			DE	<a href="https://cordis.europa.eu/project/rcn/198805/factsheet/en">https://cordis.europa.eu/project/rcn/198805/factsheet/en</a>	Project
<b>DECIDE</b>	The impact of Demographic Changes on Infectious Diseases transmission and control in middle/low income countries	Mathematical population models for the transmission of infectious diseases to evaluate the impact of public health measures under changing demographic conditions.		RSV Surveillance / Public Health Measures in Middle / Low income countries	Europe / Low Middle income Countries	<a href="https://cordis.europa.eu/project/rcn/103003/factsheet/en">https://cordis.europa.eu/project/rcn/103003/factsheet/en</a>	Project
<b>The RSV Prem Study</b>	The purpose of the study is to evaluate how effective a new medication (called MEDI8897) is at preventing serious respiratory illness caused by RSV in preterm infants	The purpose of the study is to evaluate how effective a new medication (called MEDI8897) is at preventing serious respiratory illness caused by RSV in preterm infants		RSV Clinical Trials	Australia (Victoria)	<a href="https://www.mcri.edu.au/research/projects/rsv-prem-study">https://www.mcri.edu.au/research/projects/rsv-prem-study</a>	Project

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>Lab150 RSV Project</b>	LAB150 is a partnership between MARS innovation and EVOTEC AG with the goal of accelerating academic research towards commercial outcomes by providing funding and access to pharmaceutically validated platforms and expertise.	The goal of this project is to develop new therapeutics for the treatment of respiratory syncytial virus (RSV). RSV is the leading cause of lower respiratory tract infections in infants and young children.		RSV Clinical Trials	Canada (Toronto)	<a href="https://lab150.com/two-new-projects-cystic-fibrosis-and-respiratory-syncytial-virus/">https://lab150.com/two-new-projects-cystic-fibrosis-and-respiratory-syncytial-virus/</a>	Project
<b>TAILORED-TREATMENT</b>	Tailored Antimicrobial Treatment Regimens And Novel Host- Pathogen Insights For Respiratory Tract Infections And Sepsis	Focussed on the rapid and correct diagnosis of infectious diseases for guiding antibiotic treatment in patients presenting with respiratory tract infections and/or sepsis.		RSV Clinical Trials	Europe	<a href="https://cordis.europa.eu/project/rcn/109349/reporting/en">https://cordis.europa.eu/project/rcn/109349/reporting/en</a>	Project
<b>ADITEC</b>	Advanced Immunization Technologies	Use of systems biology working concept and advanced immune assays to elucidate, at a highly sophisticated level, how effective vaccines stimulate the human immune system and to apply this information to the rational design of novel and highly targeted immunization technologies.		Vaccine Development	Europe	<a href="https://cordis.europa.eu/project/rcn/100067/reporting/en">https://cordis.europa.eu/project/rcn/100067/reporting/en</a>	Project

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Tyoe of Organisation
<b>HARC</b>	Healthy Ageing Research Centre	The major goal of the project was to upgrade the research potential of research groups at the Medical University of Lodz investigating various aspects of healthy ageing and constituting already established Healthy Aging Research Centre.		Studies on the elderly	Europe	<a href="https://cordis.europa.eu/project/rcn/108748/reporting/en">https://cordis.europa.eu/project/rcn/108748/reporting/en</a>	Project
<b>RID-RTI</b>	Rapid Identification of Respiratory Tract Infections	The principle objective of RiD-RTI is to develop and to validate a multiplex diagnostic system, based on a novel “sample-in, answer-out” diagnostic platform, for the rapid detection (< 2 hrs) of the specific microbial aetiology of RTIs in adults and children acquired in the community and in hospitals.		Diagnostics for infectious diseases	UK	<a href="https://cordis.europa.eu/project/rcn/104050/reporting/en">https://cordis.europa.eu/project/rcn/104050/reporting/en</a>	Project

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>NEOVAC-EC</b>	Improving vaccination in early life	The objectives of Neovac-Ec are : 1) to increase knowledge of immunological factors which, in early infancy, lead to a high susceptibility to infectious diseases and to relatively weak vaccine-induced responses; 2) to define optimal vaccine design and new immunization strategies for the rapid induction, in early life, of protective vaccine responses and long lasting immunological memory; 3) to identify and standardize suitable evaluation procedures		RSV, infectious diseases, vaccination in infants	Europe	<a href="https://cordis.europa.eu/project/rcn/52675/factsheet/en">https://cordis.europa.eu/project/rcn/52675/factsheet/en</a>	Project
<b>PORTFASTFLU</b>	Portable automated test for fast detection and surveillance of influenza	The approach is based on the integration of a lab-on-a-chip (LOC) consumable cartridge for automated extraction and amplification of the Ribonucleic acid (RNA) of the virus (carrying its genetic information), followed by hybridisation and real-time detection on a microarray, in a single portable and easy to use machine called the GeneSpress® platform.		RSV detection and surveillance	Europe	<a href="https://cordis.europa.eu/project/rcn/87493/reporting/en">https://cordis.europa.eu/project/rcn/87493/reporting/en</a>	Project

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>C4L</b>	Chips for Life	The overall objective was therefore to develop a panel of dedicated rapid diagnostic tests to allow medical staff to link antibiotic prescription to evidence-based diagnosis.		RSV clinical studies, diagnostics tests	Europe	<a href="https://cordis.europa.eu/project/rcn/102035/reporting/en">https://cordis.europa.eu/project/rcn/102035/reporting/en</a>	Project
<b>NEUPROTALL</b>	The role of neutrophils and their proteases in the pathology of allergic airway disease	framework to define the role of neutrophils and their proteases in directing the cellular inflammation and pulmonary remodelling in a clinically relevant model of allergen induced airway disease.		RSV studies	UK	<a href="https://cordis.europa.eu/project/rcn/188101/reporting/en">https://cordis.europa.eu/project/rcn/188101/reporting/en</a>	Project
<b>IMPRESSUVAC</b>	Immunopathogenesis of respiratory syncytial virus infections in calves, mice, non-human primates, and humans : development of second generation subunit vaccines.	Identification of immunological correlates of enhanced disease after FI-RSV vaccination in calves and mice (bRSV) and macaques (hRSV).		RSV , vaccination, animal studies	Europe	<a href="https://cordis.europa.eu/project/rcn/51503/factsheet/en">https://cordis.europa.eu/project/rcn/51503/factsheet/en</a>	Project
<b>ALLOSERGON</b>	The role of TREM proteins in inflammatory lung disease	The overall scientific objective is to combine established models of respiratory bacterial infection and house dust mite induced asthma in the mouse.		RSV models, animal studies	UK	<a href="https://cordis.europa.eu/project/rcn/103323/factsheet/en">https://cordis.europa.eu/project/rcn/103323/factsheet/en</a>	Project

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>IMMUNEXPLORE</b>	New approaches to analyze and exploit the human B and T cell response against viruses	In this project we will explore the specificity and dynamics of human antibody responses to influenza virus by using newly developed technological platforms to culture human B cells and plasma cells and to analyze the repertoire of human naïve and memory T cells.		RSV studies	Switzerland	<a href="https://cordis.europa.eu/project/rcn/95521/factsheet/en">https://cordis.europa.eu/project/rcn/95521/factsheet/en</a>	Project
<b>Telethon Kids Institute</b>	Telethon Kids Institute is one of the largest medical research institutes in Australia	Childhood's diseases, conditions and issues in four research focus areas (Aboriginal Health, Brain and Behaviour, Chronic and Severe Diseases, Early Environment). Also specific research programmes in Children Respiratory Health.		Respiratory Child Health, Vaccines, Infectious Diseases	Australia (Perth)	<a href="https://www.telethonkids.org.au/">https://www.telethonkids.org.au/</a>	Research Institute
<b>FluID</b>	WHO Geneva database of influenza data	FluID - a global influenza epidemiological data sharing platform		Database	WHO Geneva	<a href="https://www.who.int/influenza/surveillance_monitoring/fluid/en/">https://www.who.int/influenza/surveillance_monitoring/fluid/en/</a>	Web based database platform WHO
<b>FluNET</b>	WHO Geneva database of influenza data	FluNET - a global influenza epidemiological data sharing platform		Database	WHO Geneva	<a href="https://www.who.int/influenza/gisrs_laboratory/flunet/en/">https://www.who.int/influenza/gisrs_laboratory/flunet/en/</a>	Web based database platform WHO
<b>SPH - HKU</b>	WHO Collaborating Centre for Infectious Disease Epidemiology and Control, School of Public Health, The University of Hong Kong			RSV surveillance and disease burden	Hong Kong	<a href="https://sph.hku.hk/en/about-us/faculty-and-staff/academic-staff/cowling,-benjamin-john">https://sph.hku.hk/en/about-us/faculty-and-staff/academic-staff/cowling,-benjamin-john</a>	Research Group
<b>NICD</b>	National Institute for Communicable Diseases in South Africa.	National Institute conducting RSV surveillance		RSV surveillance and disease burden	South Africa	<a href="http://www.nicd.ac.za">http://www.nicd.ac.za</a>	Research Group

Name/Acronym	Full Title	Description	Potential level of Synergy	Potential Area of Synergy (Mapping)	Location	Website	Nature / Type of Organisation
<b>CIRN; IMPACT</b>	Canadian Immunisation Research Network	National surveillance system which includes RSV		RSV surveillance	Canada	<a href="http://cirnetwork.ca/research-studies/">http://cirnetwork.ca/research-studies/</a>	Research Group
<b>INFLAMMAGE</b>	Airway inflammation during RSV infection of older volunteers	INFLAMMAGE is a unique investigation of the immunobiology of RSV infection in older adult volunteers.		RSV elderly	UK	<a href="https://qtr.ukri.org/">https://qtr.ukri.org/</a>	Project
<b>VITAL</b>	Vaccines and infectious diseases in the ageing population	Map the burden of vaccine-preventable infectious diseases in the elderly and investigate vaccinations and immunity to infections in the ageing population.		RSV elderly	Europe	<a href="https://www.imi.europa.eu/projects-results/project-factsheets/vital">https://www.imi.europa.eu/projects-results/project-factsheets/vital</a>	Project
<b>ISIRVS</b>	International Respiratory Syncytial Virus Society	A special interest group in RSV of ISIRV	RSV	RSV studies	UK	<a href="https://www.isirv.org/site/index.php/special-interest-groups/international-respiratory-syncytial-virus-society">https://www.isirv.org/site/index.php/special-interest-groups/international-respiratory-syncytial-virus-society</a>	Organization

## Annex II – RSV Surveillance Meeting Cover Letter



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### Invitation to a RSV Surveillance workshop

20<sup>th</sup>-21<sup>st</sup> March 2019 in Copenhagen, Denmark

### Development of a proposal for aligning RSV surveillance systems in Europe

Times: 20<sup>th</sup> March 10.30-17.30, 21<sup>st</sup> March 09.00-14.00

Venue: Statens Serum Institut, Copenhagen, Denmark

Dear

On behalf of ECDC and the academic partners and public health agencies in the REspiratory Syncytial virus Consortium in EUrope (RESCEU) project, we would like to invite you to a workshop to discuss RSV surveillance. The focus for this workshop is:

- To move forward from the RSV sessions at the 2017 Annual ECDC Influenza meeting in Stockholm
- To develop a proposal for aligning national RSV surveillance systems within Europe.

RSV is of great interest at present. Promising phase II and III clinical trials are in progress, as well as Europe-wide research on estimating RSV health burden and costs to patients and health services. It is therefore highly probable that there will be effective prevention and treatment options for RSV within the near future.

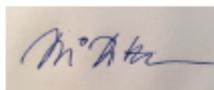
The workshop aims to bring together experts from Public Health agencies and academic bodies to develop a proposal for aligning national RSV surveillance systems in Europe. Further details are given in the attached workshop proposal. Travel and accommodation costs will be paid from the RESCEU research grant via the University of Edinburgh.

If you are unable to attend then we would be grateful if you would nominate a colleague with RSV-expertise who might participate in your place.

Please let us know by 6<sup>th</sup> December 2018 whether or not you are able to take part in the workshop.

To confirm your attendance, please email: [Stephanie.Scott@ed.ac.uk](mailto:Stephanie.Scott@ed.ac.uk)

Kind regards



Thea Kølsen Fischer

Pasi Penttinen, ECDC

Anne Teirlinck, RIVM, Netherlands

Thea Kølsen Fischer, SSI, Denmark