Blueprint

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ADVANCE PROJECT CLOSING EVENT

BRUSSELS, 6 MARCH 2018

What is the Blueprint

- The Blueprint describes a framework to realise the vision of the ADVANCE project
- The ADVANCE vision: “Best evidence at the right time to support decision-making on vaccination in Europe”
- In essence, it describes a set of tools to facilitate the preparation and conduct of vaccine benefit-risk studies
- To address challenges, including:
  - Limited time
  - Need to develop a lot of documents from the beginning
  - Need to organize collaboration of various stakeholders

What the Blueprint is not about

- Picking up signals of new adverse event following immunization (AEFIs)
- Facilitating pre-marketing studies
- Estimating cost-effectiveness of vaccines

Webster definition

- *blueprint* noun [*blue·print* \ ˈ*blü*-ˌ*print*]
- 1 : a photographic print in white on a bright blue ground or blue on a white ground used especially for copying maps, mechanical drawings, and architects' plans
- 2 : something resembling a blueprint (as in serving as a model or providing guidance) especially : a detailed plan or program of action

Goal

- Primary objective to assess benefit-risk, benefits, risks and coverage
- Framework can have other uses:
  - Studying vaccine utilization (e.g. identification of missed opportunities for vaccination),
  - Studying the burden of vaccine-preventable diseases,
  - Etc., etc.
- Flexible enough to be used at the:
  - EU/EEA,
  - national,
  - or sub-national level

Audience of the Blueprint

- experts engaging in benefit-risk monitoring of vaccines (or vaccine studies in general)
- decision-makers commissioning studies (e.g. public health authorities deciding on vaccination programmes) or requesting them to be performed (e.g. regulators).
- policy-makers
- patients associations
- healthcare workers
- pharmaceutical industry

Models

- U.S. Vaccine Safety Datalink (VSD)
- U.S. PRISM (The Post-Licensure Rapid Immunization Safety Monitoring)
- Canadian Immunization Research Network (CIRN)

Review/revision schedule

- Steering Committee review (200+ comments and suggestions)
- ECDC Advisory Forum review (numerous comments)
- Project Consortium review (numerous comments)
- ECDC Public Consultation via the web portal (100+ comments and suggestions)
- ECDC Advisory Forum presentation in September 2018

Structure

- Two substantial chapters
  - A manual (“cook book”) for real-life future use of the framework (steps to take, tools to use, links to existing applications and sources)
  - Discussion on the future of the framework – its sustainability
- Text boxes with future needs included in many steps

Architecture: scenarios and steps

- “scenario” oriented
- each scenario represents a study purpose
- step by step practical guidebook for study conduct
- alphanumeric system: scenarios “A-D”, steps “1-11”

SCENARIOS

A. Benefit-risk monitoring

B. Vaccine benefit assessment

C. Vaccine safety assessment

D. Vaccination coverage monitoring

Steps in the generic study process

1. Activating the framework
2. Defining the study question
3. Setting up the study team
4. Deciding on the specific study governance
5. Choosing the methods
6. Developing study protocol and statistical analysis plan
7. Identifying available data sources
8. Securing ethics and data protection approvals
9. Extraction and transformation of data
10. Data analysis
11. Developing a communication strategy

Each specific scenario and step contains

- Brief instructional text
- Diagram (if applicable and available)
- Links to:
  - background documents (ADVANCE white papers or deliverables)
  - tools (ADVANCE tools or external tools / databases, etc.)

1

• ACTIVATE THE FRAMEWORK

A. B/R monitoring	B. Vaccine benefit assessment	C. Vaccine safety assessment	D. Vaccination coverage monitoring
• When there is a specific issue related to the benefit-risk • Use in a continuous way	• To measure vaccine benefits depending on vaccine impact and burden of the vaccine-preventable disease • When the benefit of the vaccine is questioned	• When there is an expected adverse event • When there is a signal of a new suspected/potential adverse event	• When there are signs of decreasing vaccination coverage • When safety concerns are noticed

2

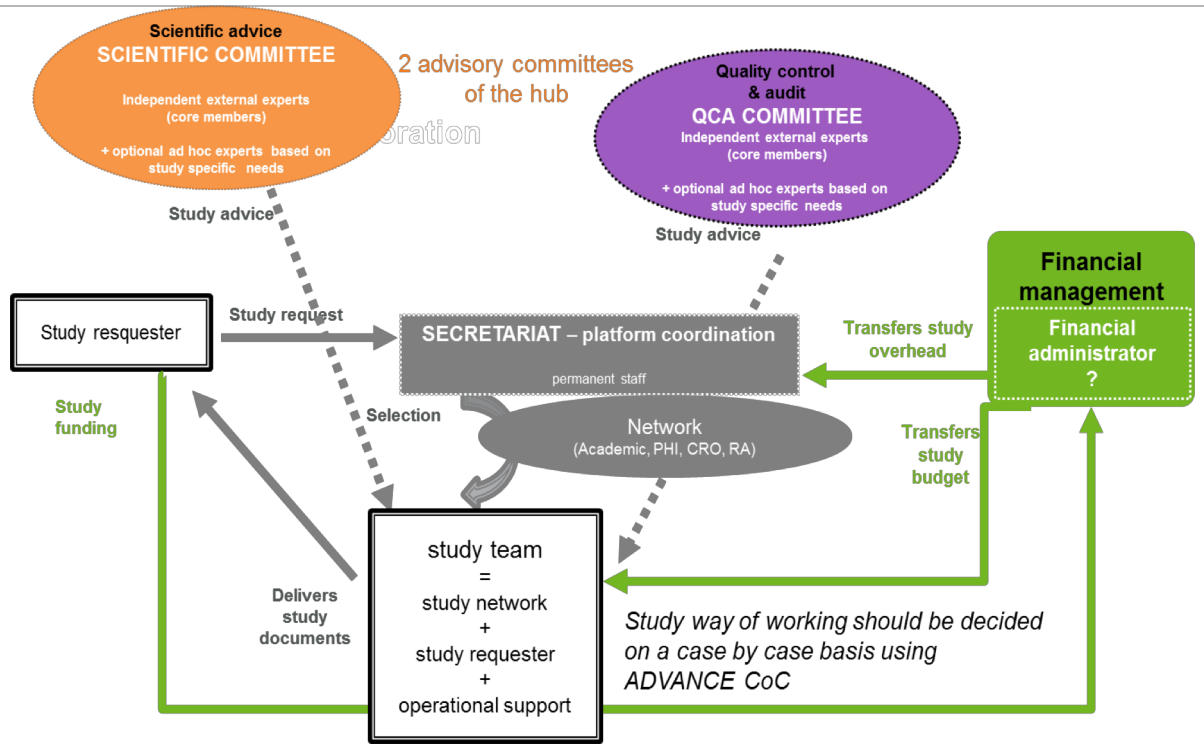
• DEFINE THE STUDY QUESTION

A. B/R monitoring	B. Vaccine benefit assessment	C. Vaccine safety assessment	D. Vaccination coverage monitoring
• What is the B/R during the specified period? • What is the trend in B/R ratio of new vaccine monitored at regular intervals following its introduction?	• What is the burden of disease prevented by vaccine?	• Whether the incidence of a suspected AEFI differs between vaccinated and non-vaccinated? • What is the time distribution between vaccination and appearance of the suspect AEFI?	• What is the vaccination coverage and is there evidence that it is changing? • Has the country introduced a new way of collecting coverage data?

3. SET UP A STUDY TEAM

- This step applies in the same form to the four identified scenarios
- Two aspects:
  - Technical: which kinds of expertise and experience are needed for this kind of study? Which databases may be useful and available?
  - Related to study governance: which are the potential partners, and what are the rules for their cooperation? Where would the funding come from?
- Factors influencing study team selection, i.e. the need to:
  - To respond rapidly when immediate action and communication may be key
  - To include database owners/custodians
  - To include lay persons, or representatives of patient organisations in the team
- Code of conduct

4. SET UP STUDY GOVERNANCE



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• CHOOSE THE METHODS

A. B/R monitoring	B. Vaccine benefit assessment	C. Vaccine safety assessment	D. Vaccination coverage monitoring
• MCDA • Composite health measures: DALY-based method • Others	• Comparison of incidence of VPDs in vaccinated and non-vaccinated	• Variants of cohort studies • Variants of case-control studies • Variants of case-only designs • Sequential designs	• Healthcare register database studies • Survey methods • Administrative methods

6. DEVELOP A PROTOCOL

- Links to example protocols in the Blueprint (ENCePP site)

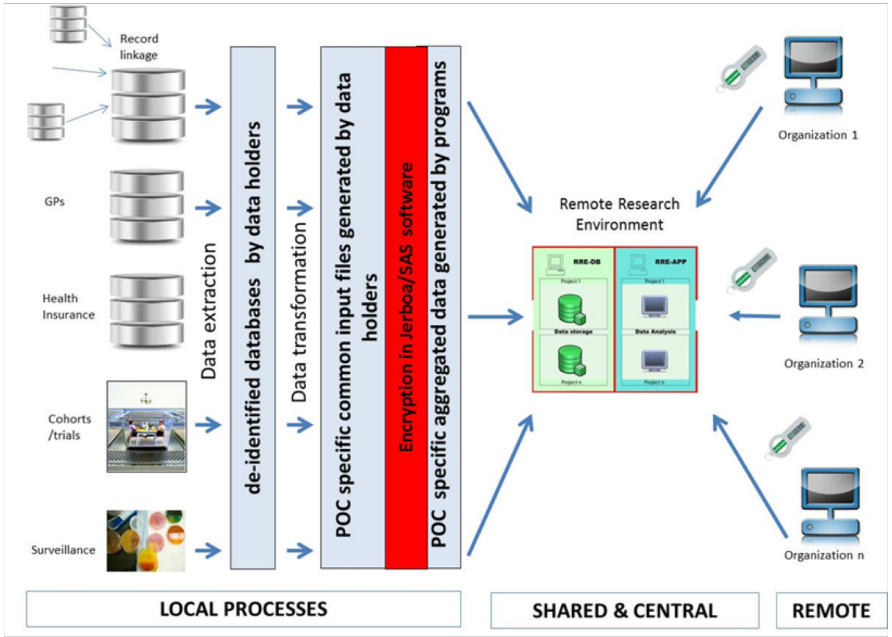
7. IDENTIFY DATABASES

- First, consider using databases which were used in the ADVANCE project Proof of Concept studies
  - results of the ADVANCE AIRR survey and ADVANCE Web Catalogue at EMIF site (http://www.emif.eu/)
- If needed, more suitable databases can be identified by a search of a comprehensive existing database catalogue, e.g. the ENCePP database catalogue (http://www.encepp.eu/encepp/resourcesDatabase.jsp)
- Other databases:
  - E.g. ECDC's The European Surveillance System (TESSy): https://ecdc.europa.eu/en/publications-data/european-surveillance-system-tessy

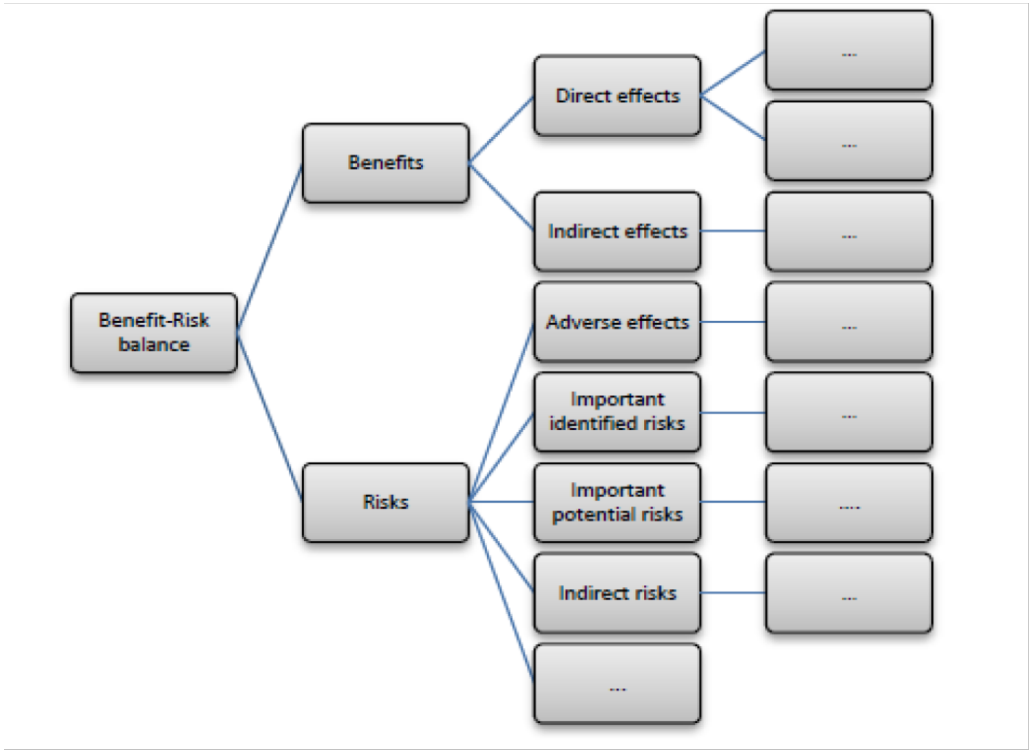
8. SECURE ETHICS AND DATA PROTECTION APPROVALS

- Privacy and ethics guidance (PE-tool) was developed and used in the first ADVANCE proof-of-concept (POC) study
- There is a need for further training of experts engaged in benefit-risk analyses of vaccines using electronic health database, focused on legislation and codes of practice regarding i.e. privacy, ethics approval, data protection, and code of conduct

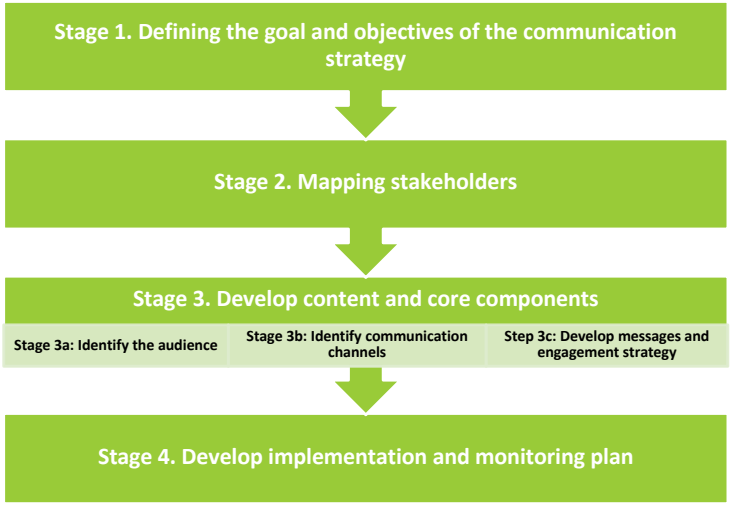
9. EXTRACT AND TRANSFORM DATA



10. ANALYSE DATA



11. DEVELOP A COMMUNICATION STRATEGY



Sustainability

Four approaches presented:

1. ‘Toolbox’
2. ‘Project’
3. ‘Network’
4. ‘Central hub + platform’

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Dissemination


ARTIBVS

Dissemination and use

- Spread the word
- Use the Blueprint
- Electronic platform