Contribution from PROTECT to regulatory practice: from science to process improvement

PROTECT SYMPOSIUM
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Translation of outputs into outcome

Output =
Short-term result
-product, service, knowledge, e.g.
Database, software, biomarker...
-Paper, patent, ...

Outcome =
Long-term result/impact
-Social and economical impact of an
output after (successful)
implementation
-Where possible quantitative
measurement (e.g. costs saved,
QALYs gained, times shortened,...)

Source: Angela Wittelsberger. ADVANCE 3rd General Assembly meeting, 18-19 September 2014
ULTIMATE JUDGE OF SUCCESS IS WHETHER THE EXCELLENT RESEARCH RESULTS (OUTPUTS) ARE CONVERTED INTO OUTCOMES FOR INNOVATION AND PUBLIC HEALTH
PROTECT Impact assessment

Objectives

1. To develop a conceptual framework for the review of the potential impact of outputs of regulatory science projects and the prioritisation of their implementation into regulatory practice

Using the PROTECT project as an example:

2. To test this conceptual framework to the outputs of PROTECT.

3. To make recommendations to EMA and its committees for an appropriate action on PROTECT results.
Scope: Regulatory science

**EMA definition**: Range of scientific disciplines that are applied to the quality, safety and efficacy assessment of medicinal products and that inform regulatory decision-making throughout the lifecycle of a medicine. It encompasses basic and applied medicinal science and social sciences, and contributes to the development of regulatory standards and tools.

European Medicines Agency process for engaging in external regulatory sciences and process improvement research activities for public and animal health EMA/14946/2013.


**FDA definition**: Science of developing new tools, standards, and approaches to assess the safety, efficacy, quality, and performance of all FDA-regulated products.


Questions to be addressed

• When are results matured enough to form a basis to implement changes in regulatory or clinical practice?

• To what extent should results/recommendations from regulatory science projects be systematically validated, scrutinised and peer reviewed in the scientific community before their implementation?

• Should there be a trade-off between timing of implementation and scientific replication/validation?

• Which outputs should be prioritised for implementation?
## Proposed criteria

<table>
<thead>
<tr>
<th>Domain</th>
<th>Indicator</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Process</td>
<td>Changes in process to be reflected in guidelines or procedures</td>
</tr>
<tr>
<td></td>
<td>Behaviour</td>
<td>Impact on behaviour of individuals or targeted entities</td>
</tr>
<tr>
<td></td>
<td>Outcome</td>
<td>Positive or negative impact reflected in actions</td>
</tr>
<tr>
<td><strong>Evaluation</strong></td>
<td>Impact of change</td>
<td>Evaluation of the level of benefits brought by the change in each dimension</td>
</tr>
<tr>
<td></td>
<td>Maturity</td>
<td>Need for further development or verification before use</td>
</tr>
<tr>
<td></td>
<td>Feasibility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Resources</td>
<td>Amount of resources needed for implementation</td>
</tr>
<tr>
<td></td>
<td>- Acceptability</td>
<td>Acceptability by stakeholders</td>
</tr>
<tr>
<td></td>
<td>- Compliance</td>
<td>Alignment with the legislation</td>
</tr>
<tr>
<td></td>
<td>Timing of implementation</td>
<td>Timing with which the deliverable can be implemented</td>
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</tbody>
</table>
Scoring

- Semi-quantitative: zero, low, medium, high
- Weighting possible according to stakeholders’ perspective
- Criteria divided in two categories:

**Feasibility category**
- Impact of the implementation of the output in terms of resources (human, financial, infrastructure, IT or other resource needed)
- Acceptability by concerned stakeholders
- Compliance with the existing applicable legislation
- Evaluation of the timing for implementation (e.g. <6 m., 1 y., 2 y, >2 y.)

**Impact category**
- Evaluation of the level of benefit brought by the change in each indicator
- Deliverable maturity (inadequate, incomplete, nearly complete, complete)
Visual representation
**PROTECT ADR database: Impact assessment**

<table>
<thead>
<tr>
<th>Indicators</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intended target</td>
<td>++</td>
</tr>
<tr>
<td>- Process</td>
<td>-</td>
</tr>
<tr>
<td>- Behaviour</td>
<td>+++</td>
</tr>
<tr>
<td>- Outcome</td>
<td>+++</td>
</tr>
<tr>
<td>Impact of change</td>
<td>+++</td>
</tr>
<tr>
<td>Maturity</td>
<td>++</td>
</tr>
<tr>
<td>Feasibility</td>
<td></td>
</tr>
<tr>
<td>- impact on resources</td>
<td>+</td>
</tr>
<tr>
<td>- acceptability</td>
<td>+++</td>
</tr>
<tr>
<td>- alignment with legislation</td>
<td>+++</td>
</tr>
<tr>
<td>Timing</td>
<td>++</td>
</tr>
</tbody>
</table>

Last update: 30 June 2013
SmPC-ADR database
Planned PROTECT Deliverables

| WP2. Improving consistency between pharmacoepidemiological studies | 7 |
| WP3. Methods for signal detection | 16 |
| WP4. Direct-to-Patient Pharmacovigilance | 7 |
| WP5. Benefit-risk integration and representation | 8 |
| WP6. Replication studies | 3 |
| WP7. Training & Communication | 1 |

Several outputs (reports, publications, databases, ...) for each deliverable
Next steps

1. Confirm evaluation criteria and relative weightings
2. Confirm scoring options
3. Identify which outputs are to be assessed as part of the prioritisation exercise.
4. Select documentation for each output (e.g. published article, executive summary)
5. Evaluate outputs against Scoring matrix
6. Prioritise implementation of outputs
Next steps

WE NEED YOU
Thank You

Mahalo

Kiitos

Toda

Grazie

Obrigado

Takk

Gracias

Merci
The deputy Co-ordinator, Liz Swain

WP co-leaders and deputy co-leaders project managers, members of the External Advisory Board, all members of the PROTECT Consortium

At IMI: Fatiha Sadallah, Antoine Juliens, Michel Goldman

At EMA:
Peter Arlett    Stella Blackburn
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Henry Fitt     Katarina Lenova
Thomas Lönnngren Leszczynska Malgorzata
Urszula Piotrowska Stephanie Prilla
Guido Rasi     Judith Routledge
Fergus Sweeney Panos Tsintis
Dagmar Vogl    Noël Wathion

Chairs of EMA Committees: June Raine, Tomas Salmonson, Peter Bachman, and others...

Staff of the Monitoring and Incident Management Studies
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