The Innovative Medicines Initiative
Big Data for Better Outcomes Programme (BD4BO)

Pierre Meulien- Executive Director- IMI

Big data in health- how to improve healthcare services through big data and research
European Parliament 19th June 2018
10 YEARS OF LIGHTING THE WAY
IMI – Europe’s partnership for health

IMI mission

IMI facilitates open collaboration in research to advance the development of, and accelerate patient access to, personalised medicines for the health and wellbeing of all, especially in areas of unmet medical need.
IMI 2 budget (2014 – 2020)

EU funding goes to:
Universities
SMEs
Mid-sized companies
Patient groups etc…

IMI 2 total budget
€3.276 billion

EFPIA companies receive no funding
contribute to projects ‘in kind’

Associated Partners e.g. charities, non-EFPIA companies

€1.638 bn

€1.425 bn

Other
€213 m
Current IMI investment in major research areas

- **Brain disorders**: €270,601,583
- **Cancer**: €129,649,375
- **Drug discovery**: €214,201,208
- **Infectious diseases**: €1,036,204,301
- **Diabetes/metabolic disorders**: €184,045,418
- **Data and knowledge management**: €126,007,170
- **Inflammatory disorders**: €67,869,654
- **Translational safety**: €153,634,727
An international, cross-sector community

Over 11,500 researchers working for:

- open collaboration
- improved R&D productivity
- innovative approaches to unmet medical needs

- 198 SMEs
- 29 Patient Groups
- 530 Universities / academic organisations
- 43 EFPIA members
- 14 EFPIA Partners in Research
- 26 Regulators
- 6 Associated Partners
BD4BO Programme
BD4BO Programme Challenge

- **Massive amounts** of diverse healthcare data currently exist:
  - inpatient and outpatient hospital data, prescription data, claims information and patient-reported data, sociodemographic data, clinical trial data, 'omic measurements etc..

- **Linking this data** could lead to many **powerful insights**

- Currently, no wide scale exploitation of these data
BD4BO Programme Goal

- Exploit the opportunities offered by large data sets from variable sources to increase medical innovation and deliver better quality healthcare systems

- Support the evolution towards outcomes-focused and sustainable healthcare systems through engagement of key stakeholders
BD4BO – Big Data to transform patient care

*Big Disease Data cohorts…*

Clinical data
- „Omics“
- Genotyping
- GWAS
- Immunofluorescence

EHR
- Prescriptions
- Biomarker
- Cytogenetics

… to *transform Patient Care*

Clinically relevant phenotypes

Standard disease definitions and outcomes

Tools to predict clinical outcomes

Optimized decision-making processes and new therapies

Patient stratification

Risk prediction

Drug development
BD4BO - Programme Objectives

1. Design sets of standard outcomes and demonstrate value
   - Sets of outcomes
   - Clinical endpoints
   - Alignment of HC stakeholders on the outcomes

2. Increase access to high quality outcomes data
   - Mapping of data sources and methods for harmonization
   - Governance and technical standards

3. Use data to improve value of HC delivery
   - Drivers of outcomes variation
   - Best clinical practices
   - Methodologies to predict outcomes

4. Increase patient engagement through digital solutions
   - Patient Reported Outcomes opportunities
   - Profiling patients behaviors
   - Tools to increase patient engagement
**BD4BO - Programme at a glance**

"Big data for better outcomes"

<table>
<thead>
<tr>
<th>Coordination and Support Action (CSA)</th>
<th>European Health Data Network</th>
<th>Planned Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Design sets of standard outcomes and demonstrate value</td>
<td>Increase access to high quality outcomes data</td>
<td>Increase patient engagement through digital solutions</td>
</tr>
<tr>
<td>2</td>
<td>Use data to improve value of HC delivery</td>
<td></td>
</tr>
</tbody>
</table>

**Themes / Enablers**

- Coordination and operational topics

**Disease-specific topics**

- Alzheimer's Disease – Project Started
- Hematologic Malignancies – Project Started
- Cardiovascular – Project Started
- Prostate Cancer – Project Started
- Oncology ‘Big 4’ Project

*Future topic proposals, e.g. respiratory, multi-morbid patients and ophthalmology*
Visit our new website
www.imi.europa.eu

Sign up our newsletter
bit.ly/IMInewsletter

Follow us on Twitter
@IMI_JU

Join our LinkedIn group
bit.ly/LinkedInIMI

Email us
infodesk@imi.europa.eu

Thank you!