Review of 11 National Policies for Rare Diseases in the Context of Key Patient Needs

June 4th, 2017
Rare Disease International (RDI) Meeting

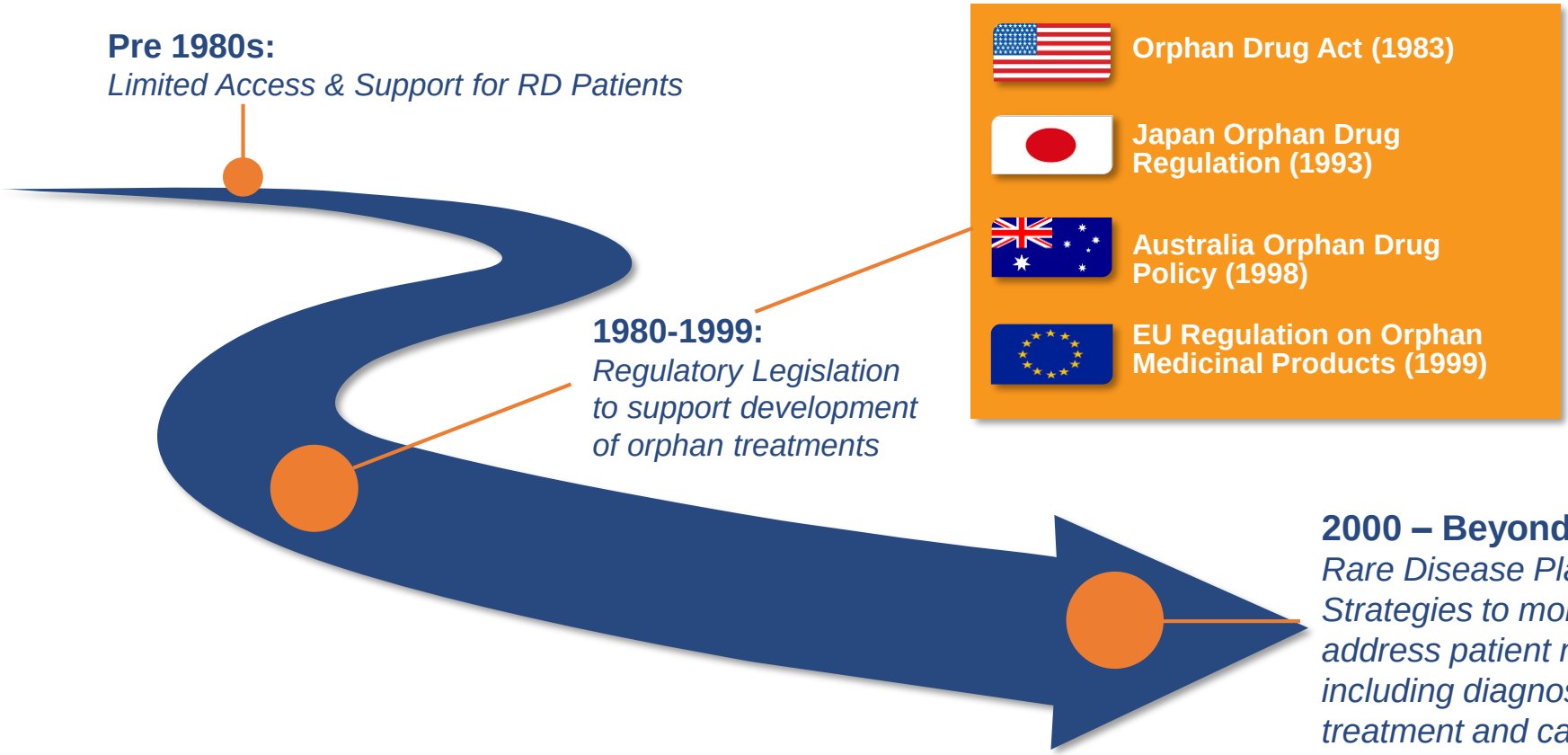
Publication Authors: Durhane Wong-Rieger, Sharon Terry, Safiyya Dharssi, Matthew Harold, Kyra Rosow

Pfizer Innovative Health

The Evolution of Rare Disease (RD) Policy

In the last two decades, there has been a recognition by governments to go beyond supporting the development of treatments, but more comprehensively support the needs of rare disease patients.

Pre 1980s:
Limited Access & Support for RD Patients



1980-1999:
Regulatory Legislation to support development of orphan treatments

- **Orphan Drug Act (1983)**
- **Japan Orphan Drug Regulation (1993)**
- **Australia Orphan Drug Policy (1998)**
- **EU Regulation on Orphan Medicinal Products (1999)**

2000 – Beyond:
Rare Disease Plans & Strategies to more broadly address patient needs, including diagnosis, treatment and care

Orphanet Global Policy. Accessed April, 2015. <http://www.orpha.net/consor/cgi-bin/Education_AboutOrphanDrugs.php?lng=EN>

Aim

- The aims of the study were to:
  - Identify a framework to assist in understanding the global rare disease policy landscape
  - Determine key elements across diverse Rare Disease Programs and consider how these may relate to patient access to care and treatment through further policy development

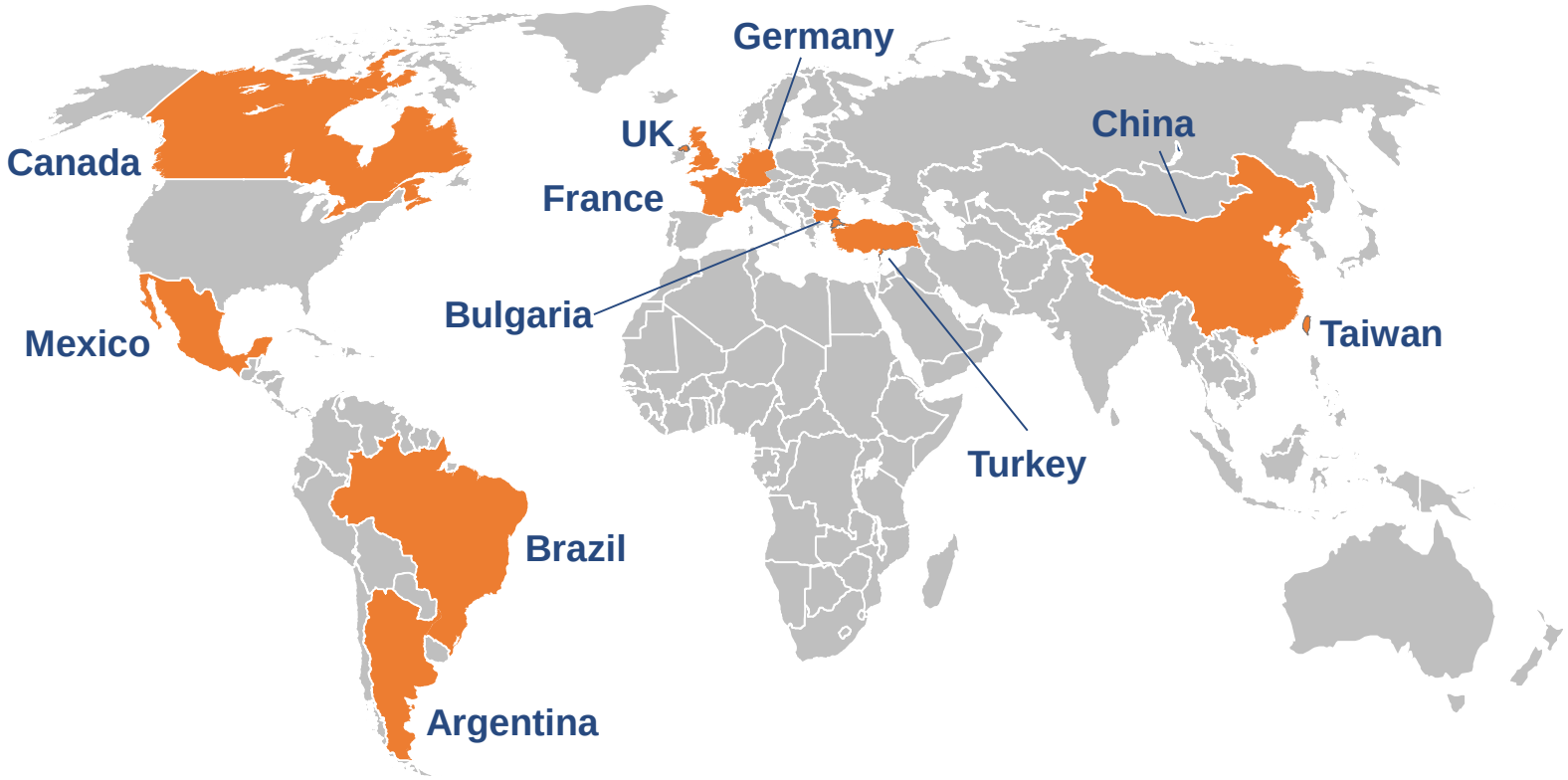
- We analyze current policies and programs that could align with the key elements of comprehensive rare disease plans; these reflect the core needs of rare disease patients and translate into core programmatic aspects leading to improved care and treatment.

- We suggest that the findings of this pilot study could provide a framework for sharing international best practices as well as have practical application in the design of RD plans.

Dharssi et al. "**Review of 11 national policies for rare diseases in the context of key patient needs**." Orphanet Journal of Rare Diseases. 2017. 12:63

Methods

Information was analyzed from 11 countries



In accordance with goals outlined in the EURORDIS & CORD position statements, we summarized in 5 dimensions that align with key needs of the rare disease community : **coordination of care**, **diagnosis**, **access to treatments**, **patient awareness and support**, and **research**.

Methods (cont.)

Table 1. Summary of the research components from the NRDP analyzed in this study.

Component	Details on what was researched
National plan	• Existence and status of a rare disease strategy/plan/framework/program
Definition of rare disease	• Definition of rare disease and rarity of disease • Prevalence of the disease justifying orphan status
Authorization process	• Policy and regulatory environment supporting marketing authorization, including accelerated approval/distinct regulatory pathway(s) for orphan drug registration
Current access to treatment	• Specific funding for orphan drugs • Specialized processes for health technology evaluations
Diagnosis programs	• Development and implementation of initiatives/programs to improve access to screening and diagnostic tests, including neonatal screening of rare diseases, diagnostic tests and DNA/gene sequencing • Initiatives to improve access to screening and access to diagnostic tests
Coordination of care	• Development of (networks of) centers of excellence/specialist centers where specialized services for rare diseases are provided for diagnosis, research and treatments, including hospitals that are dedicated to the treatment of rare diseases, specialized clusters/centers of competence, networks of researchers across regions/countries
Research	• Initiatives to promote research and innovation on rare diseases/treatments • Grants to support research into natural history/pathophysiology of rare diseases • Support for initiation of the collection of consistent and appropriate data • Coordination of National patient databases (e.g., pooling/sharing local, regional and national data)
Patient engagement	• Initiatives to raise awareness and empower patients • Level of activity, influence and mobilization of patient organizations as well as their involvement in policy and legislative developments

Results

Dimension 1: Co-ordination of care

The term "coordination of care" was used to describe resources designed to improve the provision of timely, equitable, and evidence-informed care

Selected findings	
France	~130 Centers of reference and 600 Centers of competence have been created throughout France since the second NP[1]
UK	Limited designated CoEs, despite recommendation for specialized centers; however, NHS lists ~150 providers of highly specialized services & centers starting to be created (i.e. Birmingham Center for Rare Diseases)[2]
Taiwan	No formal CoEs; however, 10 Genetic Counseling Centers to advance diagnosis & treatment of rare diseases.

Activities led by PAG community

In countries without formal centers for rare diseases, patient groups are playing an active role in supporting coordinated care, e.g. the Pituitary Diseases Association in Argentina and the Lysosomal Storage Disease Patient network in Mexico

COE: Center of Excellence; HCP: healthcare professionals; NHS: National Health Service.

1. EUCERD Join Action Working Group on Rare Diseases. "2014 REPORT ON THE STATE OF THE ART OF RARE DISEASE ACTIVITIES IN EUROPE."
2. UK Forum on Rare Disease. "Delivering for patients with rare diseases: Implementing a strategy."

Results

Dimension 2: Diagnosis

Availability of universal or highly accessible screening and diagnostic programs, including neonatal screening, diagnostic testing and DNA/gene sequencing

Selected findings	
Taiwan	Expanded core program of neonatal screening, which covers > 26 metabolic disorders[1]
Germany	Implemented core program of neonatal screening, which covers 14 conditions[2]
Canada	In 2016, Health Ministers agreed to a list of 22 core conditions for newborn screening programs across all provincial and territorial jurisdictions[3]
Brazil	Implemented National Newborn Screening Program (PNTN), but only 6 diseases are included in the formal program.[4]

Activities led by PAG community

Patient groups have spurred the development of early diagnosis funding, patient registries, and efforts to raising rare disease awareness e.g. in Brazil, Mexico and Taiwan

1. Taiwan Foundation for Rare Disorders. www.tfrd.org.tw/english/news/Cont.php?kind_id=61&sid=10&top1=NEWS%20AND%20EVENTS; 2.Hams E et al. “Neonatal Screening for Metabolic and Endocrine Disorders.” Dtsch Arztebl Int 2011; 108(1–2): 11–22; 3. Perinatal Services BC. „http://www.perinatalservicesbc.ca/our-services/screening-programs/newborn-screening-program“ ; 4. Passos Bueno et al. „Genetics and genomics in Brazil: a promising future.” Molecular Genetics & Genomic Medicine.” www.ncbi.nlm.nih.gov/pmc/articles/PMC4113268/pdf/mgg30002-0280.pdf

Results

Dimension 3: Access to Treatments

Expedited authorization process, specific funding for orphan drugs and specialized processes for health technology assessments (HTA)

Selected findings	
UK, Germany, Bulgaria and France	Committee for Orphan Medicinal Products (COMP) reviews applications for orphan designation and national standardized authorization processes with expedited timelines; New PRIME process in place[1]
Mexico, China, Taiwan, Canada*	Fast track or expedited review processes for orphan medicines, but the criteria and process vary across the countries[2,3,4,5]
UK, Germany	Specialized HTA processes; HST process in UK[6,7]
Scotland	New Medicine Fund of £40 million a year (increased to of £80 million last year) allocated to orphan drugs to ensure patient access to the most advanced therapies for diseases with unmet needs[8]

EMA: European Medicines Association; ODA: Orphan Drug Act; US FDA: US Food and Drug Administration
*Canada is in the process of developing an orphan drug regulatory framework .
1. Prime Research. “Orphan Drug & Rare Disease Development.” https://premier-research.com/wp-content/uploads/2016/06/Premier_WP_Orphan-Drug-Dev-0516.pdf; 2.Caetano et al. “Expedited Approval of Orphan Drugs in Latin America Not Yet a Reality.” http://www.raps.org/WorkArea/DownloadAsset.aspx?id=3593; 3. IHS Markit. “China to reform drug approval system to expedite authorisation of innovative drugs.” https://www.ihs.com/country-industry-forecasting.html?ID=1065999174; 4. Tsai Ye Wen. “Rare Disease Legislation in Taiwan”; http://report.nat.gov.tw/ReportFront/report_download.jspx?sysId=C10303332&fileNo=006>; 5. Health Canada http://www.hc-sc.gc.ca/ahc-asc/legislation/acts-reg-lois/frp-ppr/2016-2018/odrd-momr-eng.php; 6. NICE Highly Specialized Technology Guidance. https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-highly-specialised-technologies-guidance; 7. Bouslok. “G-BA benefit assessment of new orphan drugs in Germany: the first five years” Expert Opinion On Orphan Drugs Vol. 4 , Iss. 5,2016; 8. Scottish Government. <http://news.scotland.gov.uk/News/Fund-for-new-medicines-doubles-18eb.aspx>

Results

Dimension 4: Patient Awareness and Support

Level of activity, influence and mobilization of patient organizations as well as their involvement in policy and legislative developments

Selected findings	
UK, France, and Germany	Established PAGs delivered a range of programs including education and awareness conferences, patient guides to RD research[1,2]
Bulgaria	PAG implemented call for legislative action to support their needs and launch of 13 epidemiological registries for rare diseases[3]
China	Initial patient advocacy engagement; however, support for awareness from medical associations over past years.

Activities led by PAG community

ALIBER has established a system across Ibero-American countries to collaborate and share ideas surrounding RDs

APARDO represents a collaborative unification of national rare disease groups in China, Japan, India, Australia, and Singapore

ALIBER: The Iberoamérican Alliance for Rare Diseases; APARDO: Asia-Pacific Alliance of Rare Disease Organizations

1. Communication Tools. http://www.alliance-maladies-rares.org/les-outils-de-communication/#more-2869. Accessed 08 August, 2016;
2. Rare Disease Day 2016. 2016; http://www.raredisease.org.uk/our-work/rare-disease-day-2016/#. Accessed 08 August, 2016; 3. Miteva-Katrandzhieva T IG, Stefanov R, Naumova E, Guergueltcheva V, Savov A. Overview of epidemiological rare diseases registries in Bulgaria. *Rare Dis Orphan Drugs.* 2016;3(1):11-15.

Results

Dimension 5: Research

Initiatives to promote research and innovation on rare diseases treatment and natural history, research grants, support for data collection, coordination of patient databases

Selected findings	
France, Germany, UK, and Canada	Research relatively well-funded with government investment • France, which currently funds over 300 clinical research projects with collaborations across national and international institutions, is seen as a leader in the research space.[1] • In Germany, BMBF is currently funding 12 research consortia since 2012 with more than €23million for three years; additional funding through initiatives such as the National Genome Research Network [2]
Bulgaria, Turkey, Argentina, Mexico, Brazil	Few or no national initiatives to promote research and/or innovation in the treatment of rare diseases; academic and private support for research

Activities led by PAG community

In China, the CARDPT has established the first ever national research program of prevention and treatment for rare diseases

CARDPT: The China Alliance for Rare Disease Prevention and Treatment. **1.** EUCERD Join Action Working Group on Rare Diseases. "2014 REPORT ON THE STATE OF THE ART OF RARE DISEASE ACTIVITIES IN EUROPE; 2 EUCERD Join Action Working Group on Rare Diseases. "2014 Report on the state of the art of rare disease activities in Europe."

Conclusion

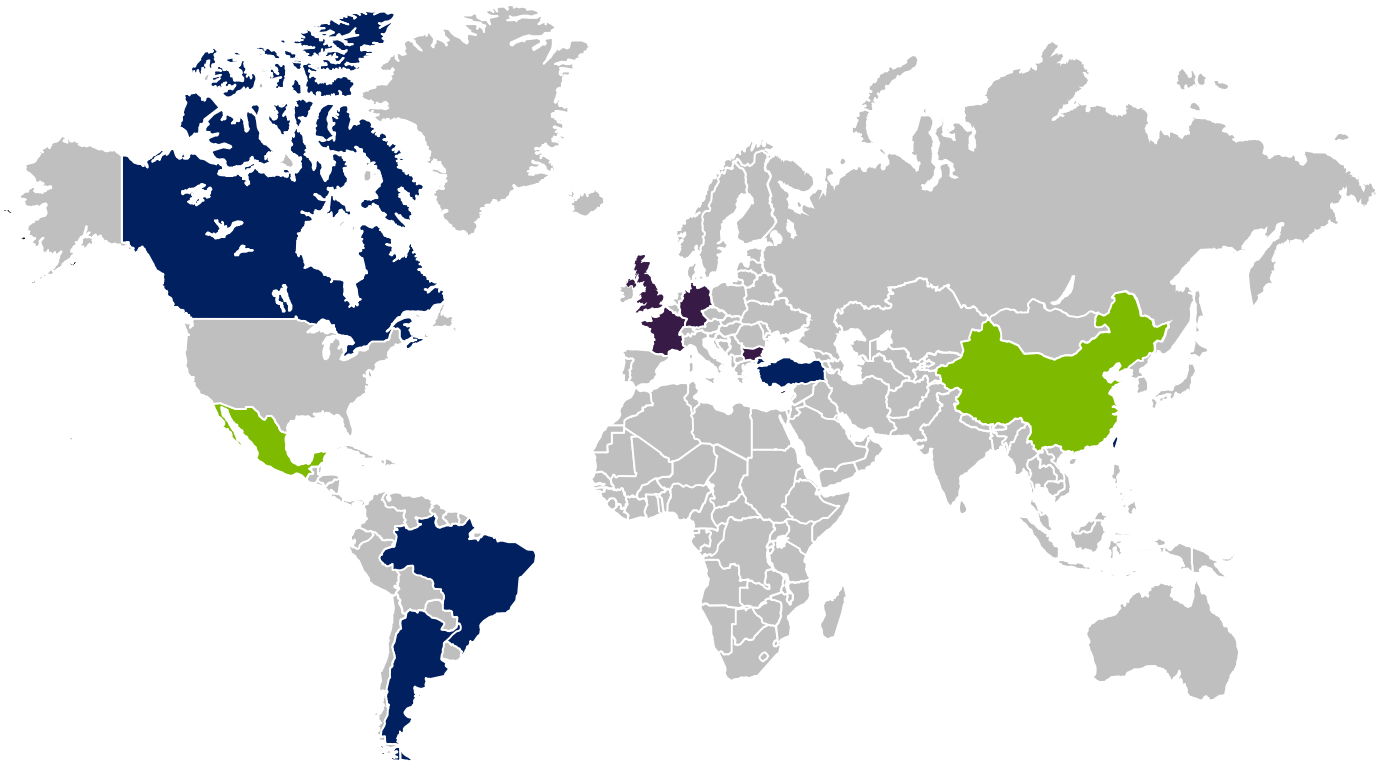
What was learned?

- Initial findings demonstrate a broad range of development and implementation of national rare disease plans (NRDPs) across the surveyed countries
- In countries where there were well-developed patient organizations, there was greater engagement (and leadership) in the development of the NRDPs and these also had more robust education and care provisions.
- Gaps exist between policy and practice; while a number of countries have regulations specific to rare disease/orphan drugs, implementation is limited and does not necessarily ensure access or care for patients.
- Despite the lack of formal NRDPs in place, several countries have been able to make great progress; countries looking to formulate their own strategies have adapted the national planning template prepared by the EU and leveraged best practice learnings from other countries.
- Many countries are forming regional networks to share resources, support information sharing and leverage key expertise.

Subsequent analyses are needed to assess the impact of policy on the implementation of actual programs and, ultimately, their effects on care

Results

Global Rare Disease Policy Environment



Developed National Plans
UK, Germany, France, Bulgaria
• National RD Plan adopted and being implemented at the national level
Initial Plan or Policy Development
*Turkey, Argentina, Canada, Brazil, Taiwan**
• N.P. introduced or adopted but not implemented or limited policy measures in-place
Limited Policy Development
China, Mexico,
• N.P. not proposed or proposed but stalled

Developed National Plans | Initial Plan Development | Limited Policy Development

Pfizer sponsored research.

*Despite no plan, Taiwan passed the Rare Disease Control and Orphan Drug Act in 2000