

The Impact of Recent Regulatory Developments on the Mexican Therapeutic Landscape: Addendum



Access to innovative medicines is key to improving overall population health, reducing hospitalisation time and decreasing morbidity and mortality. As we have shown in the original version of this Briefing ([CIRS R&D Briefing 76, May 2020](#)), recent developments in the Mexican regulatory system for the assessments of innovative new products have had a negative impact on the availability of innovative medicines for the Mexican public.

The original Briefing addressed the impact of suspending in May 2019 the activities of the New Molecules Committee (NMC) on the Mexican therapeutic landscape. We investigated the extent to which new drugs approved by the US FDA have also been approved by other important jurisdictions, specifically Mexico, Brazil, Europe, and Canada. In this manner, we gained a better understanding of the impact the absence of NMC evaluation sessions is having on the availability of innovative new medicines for Mexican patients.

In this Addendum to R&D Briefing 76, we further compare the regulatory activities in Mexico in the context of the Level IV PAHO National Regulatory Agencies of Regional Reference (NRAR), excluding Cuba and Colombia. We have compared the regulatory approval activity of a cohort of products approved in the US FDA by Argentina, Brazil, Canada, Chile and Mexico. These countries account for over 75% of the population in the Americas and 93% of the region's GDP. Regulatory authorisation information for Mexico has been updated with the latest data available as of 31 May 2020.

Our updated observations reinforce those observed in our initial investigation, that despite some indication of a start of activity with the NMC, products are not progressing through the Mexican regulatory process efficiently. Further, when a similar cohort of products is compared across countries, we have observed a more limited availability of products in Mexico compared with some of the countries included in this analysis. The regulatory approval system that had been in place prior to the NMC ceasing its activities in 2019 provided an opportunity for innovative products to obtain regulatory approval, despite recognised long timelines and process inefficiencies. These current findings extend our previous observations that the current situation has severely curtailed the availability of innovative products; this situation could be improved by the full-scale reinstatement of the NMC, the more effective use of accelerated pathways and by prioritising the assessment of critically important new medicines.

El acceso a medicamentos innovadores es clave para mejorar la salud de toda la población, para reducir los tiempos de hospitalización, la morbilidad y la mortalidad de un país. Como se mostró en la versión original de este Informe ([CIRS R&D Briefing 76, May 2020](#)), la evaluación reciente del sistema regulatorio mexicano respecto a la evaluación de nuevos medicamentos innovadores conlleva un impacto negativo en la salud de la población mexicana.

El Informe original analizó el impacto de la suspensión de las actividades del Comité de Moléculas Nuevas (NMC, por sus siglas en inglés) sobre el horizonte terapéutico de México. Se investigó en qué medida los nuevos medicamentos que han sido autorizados por la agencia de los Estados Unidos (FDA) han obtenido también registro sanitario en otras jurisdicciones importantes; en particular, comparamos el caso de México con los de Brasil, Europa y Canadá. De esta forma se logra comprender mejor el impacto que ha tenido la falta de reuniones de evaluación del NMC en la disponibilidad de nuevos medicamentos para los pacientes de México.

En este addendum al R&D Briefing 76, comparamos la actividad regulatoria de México dentro del contexto de las autoridades Nivel IV de la Organización Panamericana de la Salud que son Autoridades de Referencia Regional (NRAR), excluyendo a Cuba y Colombia. Los países considerados son Estados Unidos, Brasil, Canadá, Argentina, Chile y México. Estos países representan más del 75% de la población total del continente y 93% del PIB total de la región. La información referente a medicamentos de México se actualizó y ahora incluye datos el 31 de mayo de 2020.

La nueva información refuerza los hallazgos de hace un mes, esto es, que a pesar de que hay alguna indicación de que el NMC ha iniciado actividades, no se observa que los productos estén avanzando eficientemente a través del proceso regulatorio de México. Además, al comparar la disponibilidad de los mismos productos entre los países, se observa más limitada la disponibilidad de productos en México que en los nuevos países que se han incluido en este análisis. La operación del sistema de autorización regulatoria previo a la suspensión de actividades del NMC, aun considerando los largos tiempos de evaluación e ineficiencias en el proceso, sí ofrecía una oportunidad para que productos innovadores obtuvieran un registro sanitario. Los nuevos hallazgos refuerzan nuestras observaciones previas respecto a que la situación actual ha reducido drásticamente la disponibilidad de medicamentos innovadores. Esta situación puede mejorar si se restablecen las reuniones del NMC, y se adoptan procesos acelerados de autorización sanitaria y/o se le asigna alta prioridad a la evaluación de medicamentos innovadores que sean de importancia crítica.

ADDENDUM TO R&D BRIEFING 76

Assessment of regulatory activity

Agencies designated as Pan-American Health Organization (PAHO) Level IV regional reference authorities (NRAr) have been evaluated and assessed by PAHO and have been found to demonstrate competency and efficiency in performance of health regulation functions to guarantee the efficacy, safety and quality of medicines for their population. In the Americas these eight agencies have been classified as NRAr: Argentina, Brazil, Canada, Chile, Colombia, Cuba, México and the United States.

One approach to improving the availability of innovative medicines in Latin America could be the more effective use of reliance mechanisms. More timely decisions could, therefore, be informed by prior approvals made by NRAr or other recognised reference agencies.

This Addendum to [R&D Briefing 76](#) assesses indicators of the marketing authorisation process and compares results among all the PAHO regional reference agencies, except for Cuba and Colombia.

Target assessment times

The extent to which new drug products are available within a country is largely a result of the efficiency of the agency's regulatory assessment process. When a pharmaceutical company submits its marketing authorisation dossier, it does so with an expectation of a process that is predictable in its timing and procedures. Therefore, the published agency review times become an important guide for innovator companies, the healthcare system and importantly, the patients who await the new therapy. The target times for the medicine review process (agency time) are compared in Table 1.

Country	Agency	Target agency times for standard review (calendar days)	Ref.
USA	FDA (Food and Drug Administration)	60 days filing Determination plus 300 days for review	1
Argentina	ANMAT (Administración Nacional de Medicamentos, Alimentos y Tecnología Médica)	168 days (120 workdays)	2
Brazil	ANVISA (Agência Nacional de Vigilância Sanitária)	365 days	3
Canada	TPD (Therapeutic Products Directorate)	300 days	4
Chile	ISP (El Instituto de Salud Pública de Chile)	180 days (does not include 10 days filing)	5
Mexico	COFEPRIS (Comisión Federal para la Protección contra Riesgos Sanitarios)	180 days (does not include NMC time)	6

Table 1 – Target regulatory review times of NRAr agencies

¹ FDA - CDER 21st Century Review Process Desk Reference Guide. Accessed from: <https://www.fda.gov/media/78941/download>

² ANMAT – Decreto No.150/1992. Accessed from: <http://www.anmat.gov.ar/webanmat/Legislacion/Medicamentos/Decreto150-1992.pdf>

³ ANVISA – Drugs [webpage]. Accessed on 24 April 2020 at: <http://portal.anvisa.gov.br/drugs>

⁴ Health Canada - Service Standards for Drug Submission Evaluations (Pharmaceuticals and Biological Products) under the Food and Drug Regulations – Health Canada [webpage]. Accessed on 24 April 2020 at: <https://www.canada.ca/en/health-canada/corporate/about-health-canada/legislation-guidelines/acts-regulations/service-standards-high-volume-regulatory-authorizations/service-standards-drug-submission-evaluations-pharmaceuticals-biologic-products-under-food-drug-regulations.html>

⁵ ISP / ANAMED Reglamento del Sistema Nacional de Control de los Productos Farmacéuticos de Uso Humano - ARTICULO 47. Accessed on 9 June 2020 from: <https://www.leychile.cl/Navegar?idNorma=1026879&idVersion=2019-12-20>

⁶ COFEPRIS (2008) Healthcare Regulation (RIS) and amending Decree Jan 2, 2008. Accessed from: http://dof.gob.mx/nota_detalle.php?codigo=5028081&fecha=02/01/2008

Product analyses – by country






As for the original analysis, we compared the extent to which a similar group of products was approved across the target countries through December 2019 (this Addendum updates Mexican regulatory activities through the end of May 2020). We selected as the comparator cohort the 33 new molecular entities (NMEs) that were approved by the US FDA during the period of January 2017 through December 2018 (see Appendix). These products were submitted by 'top' multinational pharmaceutical companies defined as pharmaceutical companies with R&D spending >\$3 billion USD in 2017. These were selected as the companies most likely to have the infrastructure and opportunities to submit their products to multiple countries following FDA submission.

Internationalisation: Latin America market

Internationalisation measures the extent to which products approved by US FDA are submitted to other markets. By the end of 2019, only 12 of the 33 products (36%) had been submitted to Argentina, Brazil, Chile and Mexico. In comparison, a total of 20 products accounting for 61% of the 33 authorised by US FDA, were submitted to Canada, EMA, Swissmedic and TGA (data from [R&D Briefing 76](#)).

Submission and approval status in selected PAHO Level IV regional reference agencies

The status* of the 33 NME products was as follows:

 Mexico		 Brazil		 Argentina	
Submitted:	26	Submitted:	19	Submitted:	23
Not submitted:	5	Not submitted:		Not submitted:	8
Indeterminate:	2	Indeterminate:	14	Indeterminate:	2
Approved:	14 (54%)	Approved:	17 (89%)	Approved:	20 (87%)
In Review:	12 (46%)	In Review:	2 (11%)	In Review:	3 (13%)
 Chile		 Canada			
Submitted:	22	Submitted:	29		
Not submitted:	9	Not submitted:	4		
Indeterminate:	2	Indeterminate:	0		
Approved:	16 (73%)	Approved:	29 (100%)		
In Review:	6 (27%)	In Review:	0		

*by 31 December 2019 for all countries except Mexico (May 30, 2020)

During this time period, 79% of all cohort approvals were submitted to Mexico; Argentina and Chile had 22 or more (>66%) of the cohort products submitted to their agency compared to 29 products (88%) for Canada. Surprisingly, a lower number was submitted to Brazil, 19 (58%) products of the 33. The proportion of products approved in relation to those submitted to a country by the endpoints of this study varied widely. In Brazil 17 of 19 products (89%), Argentina 20 out of 23 products (87%) and Chile 16 out of 22 (73%) were approved. Approximately half of products submitted to Mexico (54%) received an authorisation.

These observations suggest that Mexico represents an important market for multinational pharmaceutical companies to submit innovative medicines within the countries of the Latin American region. However, if the low approval rate prevails, this emphasis could change. The consequence would be more delay for Mexican patients to receive the benefits of innovative therapeutic alternatives.

Overall approval times

Approval time is calculated from the date of submission to the date of approval by the agency. This time includes agency and company time. Importantly, COFEPRIS assessment time in Mexico is independent of and does not include the NMC time. We have added 300 working days to account for the estimated NMC review time (parenthetically). The median approval time across the Latin American countries was 399 days compared to 240 days for the US FDA and 343 days for TPD Canada. Table 3 compares the median approvals times in calendar days across NRAR agencies.

	Number of approved products	Median approval time	Fastest approval time	Slowest approval time
FDA	33	240	57	1088
ANVISA	17**	305	213	665
TPD	29	343	201	871
ANMAT	20	241	97	812
ISP / ANAMED	16	356	189	789
COFEPRIS	14	267 (567*)	32 (332*)	717 (1017*)

Table 3 - Comparison of approval times across selected PAHO Level IV regional reference agencies

* Estimate including 300 days of NMC time

** Submission dates not available for four products

Lag Time

As indicated in the original Briefing, the time from the approval of a product by the FDA to the date of approval in a target country is considered the 'Lag Time'. This is the time patients need to wait until products reach approval in their country compared to the availability in the United States. Lag Time is affected by many factors^{7,8}. These include the sponsor's ability to support the regulatory filing in the specific country, the commercial opportunity and prioritisation for the country, product availability and local regulatory requirements that may impact submissions. For the Latin American region, we observe that products approved by ANVISA and ANMAT had a median Lag Time of

⁷ CIRS (2014) R&D Briefing 53 - Availability of new medicines: characterising the factors influencing drug roll out to six mature markets. Available at: <https://cirsci.org/publications/cirs-rd-briefing-53-factors-influencing-drug-roll-out-to-six-mature-markets/>

⁸ CIRS (2012) R&D Briefing 51 - Characterising the influencers of submission Lag Time for medicines in the Emerging Markets: Analysis of short and long Lag Time factors. Available at: <https://cirsci.org/publications/cirs-rd-briefing-51-submission-lag-time-in-the-emerging-markets/>

298 days and 287 days respectively. In contrast, we observe that products approved by COFEPRIS and ISP show median lag time of 473 days and 502 days correspondingly.

Factors influencing authorisations

Multinational pharmaceutical companies integrate worldwide medicine discovery, research, regulatory and distribution plans into a product's overall development programme. While most products are initially introduced into commerce in the major developed markets (i.e. United States, Europe, Japan), all companies, due to increasing importance and expectations by patients, create plans that include making these products available in the developing or 'Emerging Markets'. The Emerging Markets have diverse and often less predictable regulatory schema than mature jurisdictions. Furthermore, as we have discussed in a previous publication, many factors influence the rollout of new medicines to these populations, including the following:

Factors related to company strategy

- The product was not considered to be an internal priority
- Company's perception of the role/value this product in this country
- Availability (or lack thereof) of support from a local affiliate office for the submission

Factors related to country-specific issues

- This country required local studies/bridging study, which delayed the submission
- Applicant was required to generate additional country-specific clinical data
- This country's place in the company's overall global marketing and development strategy
- The size of the country's population and nature of its market
- This country's submission requirements were outside the norm/unexpected compared to others which added complexity to the submission process
- Pricing considerations – probability of attaining fair reimbursement once approved

Factors related to product-specific issues

- Regulatory approval delays in other markets impacted the submission of this product dossier
- Unexpected safety signals from other jurisdictions slowed the submission decision

Drug Lag Time is an issue for both companies and countries. Understanding the factors that influence how and when the marketing authorisation application for a new medicine is submitted to a particular jurisdiction and what the factors are that speed or delay this process provides insights into factors that affect the time required for new medicines to reach patients in these important growing economies. Regulatory efficiency contributes to shortening the Lag Time, and the contributions of both agencies and companies to efficient regulatory assessment processes will play a continuing role in ensuring effective regulatory authorisation processes across all jurisdictions.

A reliance approach

As mentioned earlier, improving the availability of innovative medicines in Latin America could be done more effectively through the use of reliance mechanisms. More timely decisions could therefore, be informed by prior approvals made by NRAR or other recognised reference agencies.

It should be noted that since 2012 Mexico has had several decrees in place that allow reliance on the marketing authorisations issued by specific reference regulatory agencies (e.g. FDA, EMA, TGA, TPD, SwissMedic). More recently in 2019, Mexico allowed the authorization of pre-qualified products listed by WHO and in 2020 expanded this to acceptance of countries that are members of the Pharmaceutical Inspection Co-operation Scheme (PICs). These decrees offer expedited pathways to approve new medicines in as quickly as 60 working days. But based on the observations in this study the data suggest the 2012 mechanisms is not having the desired positive effect on the approval time for innovative new medicines in Mexico.

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About CIRS

The Centre for Innovation in Regulatory Science (CIRS) is a neutral, independently managed UK-based subsidiary company, forming part of the Clarivate Analytics group. CIRS' mission is to maintain a leadership role in identifying and applying scientific principles for the purpose of advancing regulatory and HTA policies and processes. CIRS provides an international forum for industry, regulators, HTA and other healthcare stakeholders to meet, debate and develop regulatory and reimbursement policy through the innovative application of regulatory science and to facilitate access to medical products through these activities. This is CIRS' purpose. CIRS is operated solely for the promotion of its purpose. The organisation has its own dedicated management and advisory boards, and its funding is derived from membership dues, related activities, special projects and grants.

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Appendix - Comparison of key product characteristics and milestones

Generic Name	Brand Name	ATC	Company/Sponsor	FDA Approval date	HealthCanada Approval date	ANVISA Approval date	COFEPRIS Approval date	ANMAT approval date	ISP / ANAMED Approval date
ABEMACICLIB	Verzenio	L01	ELI LILLY AND CO	28/09/2017	05/04/2019	11-Mar-19	15-Oct-19	29/03/2019	17/12/2019
acalabrutinib	Calquence	L01	ASTRAZENECA	31/10/2017	23/08/2019	24-Dec-18	29-May-19	17/07/2019	11/09/2019
Apalutamide	Erleada	L02	JANSSEN BIOTECH	14/02/2018	03/07/2018	15-Oct-18	Pending	18-Sep-18	16/08/2019
axicabtagene ciloleucel	YESCARTA	L01	Kite Pharma Inc.	18/10/2017	13/02/2019	26-Nov-18	pending		
baricitinib	Olumiant	L04	ELI LILLY AND CO	31/05/2018	17/08/2018	26-Nov-18	13-Oct-17	24/01/2018	27/02/2019
BENRALIZUMAB	Fasenra	R03	ASTRAZENECA AB	14/11/2017	22/02/2018	4-Jun-18	15-Jul-19	29-Jul-18	pending
COPANLISIB DIHYDROCHLORIDE	Aliqopa	L01	BAYER HEALTHCARE	14/09/2017			pending		
dacomitinib	Vizimpro	L01	PFIZER INC	27/09/2018	26/02/2019				pending
Damococog alfa pegol	Jivi	B02	Bayer Healthcare LLC	29/08/2018	18/10/2018		pending		
DORAVIRINE	Pifeltro	J05	MSD MERCK CO	30/08/2018	12/10/2018		16-Dec-19	05/08/2019	29/04/2019
DURVALUMAB	Imfinzi	L01	ASTRAZENECA UK LTD	01/05/2017	03/11/2017	26-Dec-17	11-Nov-19	30/09/2019	pending
ELAGOLIX	Orilissa	H01	ABBVIE INC	23/07/2018	05/10/2018		pending		not submitted
EMICIZUMAB	Hemlibra	B02	GENENTECH INC	16/11/2017	02/08/2018	16-Jul-18		08-Feb-19	03/10/2018
EMTRICITABINE, BICTEGRAVIR SODI	Biktarvy	J05	GILEAD SCIENCES INC	07/02/2018	10/07/2018	25-Nov-19	14-May-19	14/02/2019	30/07/2019
erenumab	Aimovig	N02	AMGEN INC	17/05/2018	01/08/2018	25-Mar-19	01-Sep-19	02/01/2019	04/12/2018
ERTUGLIFLOZIN	Steglatro	A10	MERCK SHARP DOHME	19/12/2017	09/05/2018		07-Oct-19	15/02/2019	06/02/2020
Galcanezumab	Emgality	N02	ELI LILLY AND CO	27/09/2018	30/07/2019	22-Jul-19	pending		pending
glasdegib	Daurismo	L01	PFIZER INC	21/11/2018					-
glecaprevir / pibrentasvir	Mavyret	J05	ABBVIE INC	03/08/2017	16/08/2017	16-Apr-18	17-Dec-17	19-Jan-18	not submitted
GUSELKUMAB	Tremfya	L04	JANSSEN BIOTECH	13/07/2017	10/11/2017	26-Mar-18	31-Oct-18	25-Jul-19	10/09/2019
inotuzumab ozogamicin	Besponsa	L01	WYETH PHARMS INC	17/08/2017	15/03/2018	25-Sep-19			29/09/2019
LETERMOVIR	Prevymis	J05	MERCK SHARP DOHME	08/11/2017	01/11/2017		pending	05/07/2019	not submitted
lorlatinib	Lorbrena	L01	PFIZER INC	02/11/2018	22/02/2019		22-Nov-19		not submitted
midostaurin	Rydapt	L01	NOVARTIS PHARMS CORP	28/04/2017	21/07/2017	9-Apr-18	12-Apr-18	14/12/2017	11/09/2018
moxetumomab pasudotox-tdfk	Lumoxiti	L01	ASTRAZENECA AB	13/09/2018			pending		not submitted
OCRELIZUMAB	Ocrevus	L04	GENENTECH INC	28/03/2017	14/08/2017	26-Feb-18		15/03/2019	20/03/2018
ribociclib succinate	Kisqali	L01	NOVARTIS PHARMS CORP	13/03/2017	02/03/2018	30-Jul-18	30-Oct-17	19/06/2017	16/03/2018
SARILUMAB	Kevzara	L04	SANOFI SYNTHELABO	22/05/2017	12/01/2017			05-Mar-18	
sodium zirconium cyclosilicate	Lokelma	V03	ASTRAZENECA PHARMS	18/05/2018	25/07/2019		pending	PENDING	not submitted
tafenoquine	Krintafel	P01	GLAXOSMITHKLINE	20/07/2018					not submitted
talazoparib	Talzenna	L01	PFIZER INC	16/10/2018	06/09/2019		pending	06/05/2019	30/12/2019
tisagenlecleucel	KYMRIAH	L01	Novartis Pharmaceuticals	30/08/2017	05/09/2018		pending		not submitted
VOXILAPREVIR	Vosevi	J05	GILEAD SCIENCES INC	18/07/2017	16/08/2017		pending	03-Apr-19	09/07/2019

Yellow= first approval **Green**= Orphan designation at COFEPRIS

WHO ATC classifications:

- A - Alimentary and metabolism: Drugs for acid related disorders, gastrointestinal disorders, antiemetics and antinauseants, bile and liver therapy, laxatives, antidiarrheals, intestinal antiinflammatory/antiinfective agents, drugs used in diabetes.
- B – Blood and blood forming organs: Antithrombotic agents, antihemorrhagics, antianemic preparations, blood substitutes and perfusion solutions, other hematological agents.
- H – Systemic hormonal preparations: excludes insulins, anabolic steroids, catecholamines, sex hormones, sex hormones used in treatment of neoplastic diseases, metreleptin used for treatment of complications of leptin deficiency in patients with generalised lipodystrophy.
- J - Anti-infectives: Antibacterials for systemic use, antimycotics for systemic use, antimycobacterials, antivirals for systemic use, immune sera and immunoglobulins, vaccines.
- L - Anticancer and immunomodulators: Antineoplastic agents, endocrine therapy, immunostimulants, immunosuppressive agents.
- N - Nervous system: Anesthetics, analgesics, antiepileptics, anti-parkinson drugs, psycholeptics, psychoanaleptics, other nervous system.
- P – Antiparasitic products, insecticides and repellents: antiprotozoals, antihelmintics, ectoparasiticides including scabicides, insecticides and repellents
- R – Respiratory system: Nasal preparations, throat preparations, drugs for obstructive airway diseases, cough and cold preparations, antihistamines for systemic use, other respiratory system products.
- V – Various: this group contains many different types of products including allergens, all other therapeutic agents, diagnostic agents, general nutrients, all other non-therapeutic products, contrast media, diagnostic radiopharmaceuticals, therapeutic radiopharmaceuticals, surgical dressings