Pharma Strategies in Latin America

Keys to Success - Part 1
FDANEWS Webinar – March 15, 2016
Key Webinar Information: Host Introductions

Featured Webinar Hosts

**Silvia Bendiner –**
Director of Strategic Regulatory Affairs and Life Sciences, Mapi Group

**Fernando Ferrer –**
Life Sciences Expert in Global and Latin American Business Growth and Expansion Strategies; Mapi Group Consultant
Air Force One will take President Obama to Latin America

**March 2016:**
President Barack Obama to visiting **Argentina** and the recently elected President Mauricio Macri.

**9 LATAM Countries visited by Mr. Obama**

- Mexico (5)
- Brazil
- Chile
- Colombia
- Costa Rica
- El Salvador
- Panama
- Jamaica
- Trinidad and Tobago

References are available upon request
President Barack Obama visiting President Raul Castro in Cuba

With Cuba trip, Obama aims to make renewed ties irreversible

President Barack Obama will use his historic trip to Cuba to chip away at key remaining U.S. obstacles to travel and commerce with the communist island, working to push his diplomatic relaunch past the point of no return before he leaves office.

Cuba & EU conclude negotiations for a bilateral Political Dialogue and Cooperation Agreement

The draft document signed this Friday, March 11, will be reviewed before being officially approved.

Foreign investment for development

Déborah Rivas, foreign investment director general at the Ministry of Foreign Trade and Investment (Minex), spoke with Granma, addressing the law’s impact thus far.

Importance of clinical laboratories emphasized

The quality of services provided by clinical laboratories, and their accreditation as diagnostic centers, were the center of attention for hundreds of experts from around the world, at the 9th National Congress on Clinical Pathology, CONAPAC 2016, held March 9-11 at Havana’s Convention Center.

Confirmed: The Rolling Stones to play in Cuba

The concert will kick off at 8:30 p.m. in the grounds of Havana’s Ciudad Deportiva with a capacity of 50,000 people and one of the largest stages the band has ever performed on.

References are available upon request.
Regulatory Landscape – Latin America

- LATAM region does not have a centralized or harmonized procedure for drug registration,

- Adoption or adaptation of guidelines from ICH countries have helped to harmonize the requirements for the development and approval of new medicines.

- LATAM countries have been aligning regionally and reinforcing harmonization, through initiatives of the Pan American Health Organization (PAHO) via the Pan American Network for Drug Regulatory Harmonization (PANDRH).

References are available upon request
Supranational key regulating bodies in Latin America

- **PAHO/OPS** – Pan American Health Organization
- **PANDRH/Red PARF** – Pan American Network for Drug Regulatory Harmonization
- **WHO/OMS** – World Health Organization
- **ICH** – International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use, Global Cooperation Groups

References are available upon request
Regulatory Convergence - PANDRAH

- Promotes **efficiency, transparency, standardization of regulatory function** strengthening through active participation and cooperation with NRAs in the LATAM region.

- Periodically defines strategies and mechanisms for regulatory convergence, supports their dissemination, adoption, and implementation by NRAs.

- Promotes the strengthening of competencies in Good Regulatory Practices and Regulatory Sciences.

- Promotes the exchange of experiences and regulatory knowledge between NRAs within PANDRH, as well as with NRAs outside of the Region.

- Participation of Industry, Academia and NGOs play a critical support role in the implementation PANDRAH’s strategic development plan.

References are available upon request
PANDRAH – Regional Working Groups

PAN AMERICAN NETWORK FOR DRUG REGULATORY HARMONIZATION (PANDRH)

Participating Regulatory Agencies

- **NAFTA**: US, Canada and Mexico
- **MERCOSUR**: Argentina, Brazil, Paraguay, Uruguay, Venezuela and Bolivia.
- **SICA**: Central American countries
- **ANDEAN**: Colombia, Ecuador, Venezuela, Peru, Bolivia.
- **CARICOM**: The Caribbean

- Good Manufacturing Practices
- Bioequivalence and Bioavailability
- Good Clinical Practices
- Combating Counterfeit Drugs
- Good Laboratory Practices
- Pharmacopeia
- Medicinal Plants
- Drug Classification
- Drug Registration
- Pharmacovigilance
- Vaccines
- Promotion and Marketing
- Biotechnology Products

References are available upon request
Regulatory Convergence - Function Strengthening across Latin America

- **CD50.R9**: Strengthening National Regulatory Authorities for Medicines and Biologics for the qualification of regulatory authorities of regional reference
- Currently, there are seven regulatory authorities in the Americas that qualified as competent and efficient in the performance (Level 4 category) per WHO recommended regulatory functions;
  1. Argentina (2009)
  2. Brazil (2010)
  3. Colombia (2010)
  5. Mexico (2012)
  6. Canada
  7. United States of America
- The key topics for alignment have included sharing safety data, developing a common pharmacopeia, recognizing reciprocal acknowledgement of clinical site and GMP inspections.
- On-going Institutional development plans in process for: Costa Rica, Chile, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Panamá, Paraguay, Trinidad & Tobago.

References are available upon request
Organizational Environment

- Political
- Economical
- Social
- Technological
- Natural
- Industrial

S - W

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Nations with over 200 years with stable Democracies

Year of Independence of the 33 Latin American Nations

Elections 2016 – 2019 in Major Countries

- HUM AL A, Ollanta: Apr-16
- PRIVERT Jocelerme: Apr-16
- MEDINA, Danilo: May-16
- ORTEGA, Daniel: Nov-16
- SIMPSON MILLER, Portia: Dec-16
- CORRE A, Rafael: Feb-17
- BARROW, Dean: Jun-17
- HERNANDEZ, Juan: Nov-17
- SANTOS, Juan Manuel: Nov-17
- BACHELET, Michelle: Nov-17
- CARMONA, Anthony: Feb-18
- CASTRO RUIZ, Raúl: *Feb-18
- SOLIS, Luis Guillermo: Feb-18
- SANCHEZ CEREN, Salvador: Mar-18
- CARTES, Horacio: Apr-18
- PEÑA NIETO, Enrique: Jul-18
- VAZQUEZ, Tabare: Oct-18
- ROUSSEFF, Dilma: Oct-18
- MADURO, Nicolás: Apr-19
- VARELA, Juan Carlos: May-19
- MORALES, Jimmy: Sep-19
- MACRI, Mauricio: Oct-19
- MORALES, Evo: Dec-19

References are available upon request.
– Australia, Brazil, Libya, Spain and Turkey, have deteriorated

– 2/3 of countries worldwide have a serious corruption problem.

– Not one single country, anywhere in the world, is corruption-free.
Coexistence of Growth Markets and Emerging Markets in Latin America

<table>
<thead>
<tr>
<th>Developed Markets</th>
<th>Growth Markets</th>
<th>Emerging Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>• High average income per capita</td>
<td>• Current share of global GDP ≥ 1%</td>
<td>• Current share of global GDP &lt; 1%</td>
</tr>
<tr>
<td>• Advanced stages of economic development</td>
<td>• Favorable demographics and rising productivity going forward</td>
<td>• Generally low GDP and incomes per capita, but rapidly increasing in places</td>
</tr>
<tr>
<td>• Open and transparent financial markets</td>
<td>• Adequate market size and depth to achieve scale and liquidity</td>
<td>• Scope for improvement of investment environment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>33 Countries</th>
<th>8 Countries</th>
<th>160+ Countries</th>
</tr>
</thead>
</table>
| For example: US, EURO Zone, UK, Japan, Australia, New Zealand, Switzerland, Israel | Brazil, Russia, India, China, + South Korea, Mexico, Indonesia and Turkey | For example; Nigeria, Vietnam, Philippines, Iran, Egypt, Pakistan and Bangladesh.

References are available upon request
The world’s largest advanced and emerging economies

- 75% of international global-trade
- 85% of global GDP
- 2/3 of the world's population

Top 3 Latin American Economies

<table>
<thead>
<tr>
<th>Argentina</th>
<th>EU</th>
<th>Turkey</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>France</td>
<td>Saudi Arabia</td>
<td>China</td>
</tr>
<tr>
<td>Mexico</td>
<td>Germany</td>
<td>South Africa</td>
<td>India</td>
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<tr>
<td>Canada</td>
<td>Italy</td>
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<td>Indonesia</td>
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<tr>
<td>United States</td>
<td>UK</td>
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<td>Japan</td>
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<tr>
<td></td>
<td>Russia</td>
<td></td>
<td>South Korea</td>
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</tbody>
</table>
Various initiatives helping the Political and Economic integration

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAN - Comunidad Andina de Naciones</td>
<td>1969</td>
</tr>
<tr>
<td>Caricom - Comunidad del Caribe</td>
<td>1973</td>
</tr>
<tr>
<td>Mercosur - Mercado Común del Sur</td>
<td>1991</td>
</tr>
<tr>
<td>SICA / SIECA - Sistema de la Integración Centroamericana</td>
<td>1991</td>
</tr>
<tr>
<td>NAFTA - North American Free Trade Agreement</td>
<td>1994</td>
</tr>
<tr>
<td>ALBA - Alianza Bolivariana para los pueblos de nuestra America</td>
<td>2004</td>
</tr>
<tr>
<td>CAFTA-DR - Central American-Dominican Republic Free Trade Agreement</td>
<td>2007</td>
</tr>
<tr>
<td>CELAC - Comunidad de Estados Latinoamericanos y Caribeños</td>
<td>2010</td>
</tr>
<tr>
<td>UNASUR - Unión de Naciones Suramericana. 12 South American Countries</td>
<td>2011</td>
</tr>
<tr>
<td>OEA - Organización de los Estados Americanos</td>
<td>1948</td>
</tr>
<tr>
<td>Bilateral free trade agreements with other Nations and Economic Alliances</td>
<td>--</td>
</tr>
</tbody>
</table>

References are available upon request
US Dollar is getting much stronger in Latin America

Europe, UK, Canada, China devaluated 8 – 12%

Argentina, Brazil, Mexico, devaluated 29 – 80%

References are available upon request
Venezuela & Brazil with negative growth. Venezuela & Argentina with high inflation rates.

GDP growth (%)

Inflation (yearly average) (%)

2014 – 2015f – 2016f
Arg, Bra, Chi, Col, Mex, Per, Ven, Cuba, Germany, USA, China, Japan

References are available upon request.
Venezuela and Brazil with higher budget deficit

2014 – 2015f – 2016f
Arg, Bra, Chi, Col, Mex, Per, Ven, Cuba, Germany, USA, China, Japan

References are available upon request
Colombia, Brazil, Peru and Venezuela with higher deficit

Current account balance (% GDP)

2014 – 2015f – 2016f
Arg, Bra, Chi, Col, Mex, Per, Ven, Cuba, Germany, USA, China, Japan

References are available upon request
Peru, Cuba and Chile with the lowest debt-to-GDP ratio

![diagram showing public debt of different countries]

References are available upon request.
Latin America and the Caribbean

- 615 million of inhabitants (8.5% WW)
  - People | Language | Nations | Territories
  - 391.7 | Spanish | 18 | -
  - 204.3 | Portuguese | 1 | -
  - 11.3 | French | 1 | 5
  - 6.8 | English | 12 | 9
  - 0.9 | Dutch | 1 | 6
  - 615 | LA&CB | 33 | 20

- 20.5 millions of km² (14% WW)
  - along South and Central America, the Caribbean and part of North America

- GDP PPP U$D 9.5 trillion (8.4% WW, 4th after EU, China, USA)

- 18 countries (Continental + Dom. R.) account for:
  - ✓ 94% of the population
  - ✓ 97% of the area
  - ✓ 95% of the GDP

Source: 2015 Analysis multiple sources: IMF, Gazetteer, World Bank, CIA

References are available upon request
NRA’s moving towards Convergence

• National Regulatory Agencies (NRA) in Latin America are:
  • transitioning towards Convergence in Regulatory Systems Development guiding national regulatory policy.
  • prioritizing their regulatory legal frameworks, structure and quality management systems;
  • defining core regulatory functions based on national policy objectives;
  • cooperating with partner / reference NRAs for regulatory policy decision making, that is, leveraging regulatory processes as those taken by more well established / resourced NRAs;

• **International partner cooperation**: PAHO/WHO, Gates Foundation, World Bank.

• **Private Sector**: through the Pan American Network for Drug Regulatory Harmonization (PANDHR), Industry Associations, Academia and NGO

References are available upon request
Caribbean Regulatory System (CRS)

The CRS will become a regulatory unit for CARICOM (Caribbean Community Member States) based within CARPHA (the Caribbean Public Health Agency) in Trinidad & Tobago.

- The CRS to manage a centralized medicines registration process focused initially on the WHO list of essential medicines (registration of generic medicines for the treatment of no communicable diseases, as well as some other priority antibiotics).

- The process to be managed through an electronic platform to facilitate issue of a single common registration.

- The registration process: based on an abbreviated review procedure leveraging information on registration and marketing authorizations granted by Reference Authorities and/or WHO Prequalification (information to be supplied by the manufacturer).

- Initiative supported by the US FDA, Mexico, Argentina and the Gates Foundation. Technical guidance by the WHO/PAHO

References are available upon request
LATAM - Regional Regulatory Requirements

- **Individual country legal requirements**
  - MAA: Local presence/direct representation-hosting/distributor
  - Market Authorization approval ownership
  - Language
  - Patent, trademarks, Intellectual Property

- **Individual country Regulatory dossier/MA requirements**
  - Specific to NCE’s, generics, similar, biologic, vaccines, orphan drugs
  - International certifications, other specific docs.
  - Need for a local clinical trial or international trials accepted
  - GMP Inspection requirements
  - Reference product
  - Packaging and Labeling/country specific

References are available upon request
Registration of Medicinal products in the Americas
ICH - CTD Regulatory Dossier

- **Module 1**
  - Administrative and Legal Information – Country specific

- **Module 2:**
  - Quality Information

- **Module 3:**
  - Non clinical studies

- **Module 4:**
  - Clinical studies

- **Annex I**
  - Summary of Product Characteristics (SPC)

- **Annex II**
  - Information on Labeling and Package inserts

- Each country has its own application form to request health registration pursuant to its own legislation.

Sample: Developing a Regional Regulatory Strategy Dossier Roadmap – e Submission Tool

References are available upon request
## Stability Requirements across the Americas

### Countries

<table>
<thead>
<tr>
<th>Climatic zone</th>
<th>Definition of Climate</th>
<th>Criteria</th>
<th>Long-term testing conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Temperate</td>
<td>≤ 15 °C / ≤ 11 hPa</td>
<td>21 °C / 45% RH</td>
</tr>
<tr>
<td>II</td>
<td>Subtropical and Mediterranean</td>
<td>&gt; 15 to 22 °C / &gt; 11 to 18 hPa</td>
<td>25 °C / 60% RH</td>
</tr>
<tr>
<td>III</td>
<td>Hot and dry</td>
<td>&gt; 22 °C / ≤ 15 hPa</td>
<td>30 °C / 35% RH</td>
</tr>
<tr>
<td>IVA</td>
<td>Hot and humid</td>
<td>&gt; 22 °C / &gt; 15 to 27 hPa</td>
<td>30 °C / 65% RH</td>
</tr>
<tr>
<td>IVB</td>
<td>Hot and very humid</td>
<td>&gt; 22 °C / &gt; 27 hPa</td>
<td>30 °C / 75% RH</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Climatic zone</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>Argentina, Mexico, Uruguay, United States of America</td>
</tr>
<tr>
<td>IVA</td>
<td>Bahamas, Belize, Canada, Chile, Costa Rica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Paraguay, Saint Kitts and Nevis, Trinidad and Tobago</td>
</tr>
<tr>
<td>IVB</td>
<td>Antigua and Barbuda, Barbados, Bolivia, Brazil, Colombia, Cuba, Guyana, Panama, Peru, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Venezuela</td>
</tr>
</tbody>
</table>

References are available upon request.
GMP Certification – Inspection Requirements

- The majority of Latin American countries follow the WHO GMP requirements.
- Argentina, Brazil, Colombia and Mexico enforce their own inspection and GMP certification regimes (including international inspections for API and Finished Product).
- Bolivia, Chile, Costa Rica, Dominican Republic, Guatemala, Nicaragua, Panama, Peru, Puerto Rico, Venezuela and others accept foreign GMP certifications.
- Brazilian GMP certification is mandatory for product registration approval.
- Argentina, Colombia and Mexico accept GMP certifications from high vigilance countries (i.e. USA, Europe, etc.).

References are available upon request
Population 2015 in Latin America

6 countries > 20 Million inhabitants

24 Nations with Population > 0.5 Million

Very different population profile in LA vs US and Canada

Source: Census, CIA 2015
Physicians and Beds /1000

Privileged and Confidential

Physicians /1000 population

Argentina 3.9
Brazil 1.9
Chile 1.2
Colombia 1.5
Peru 1.1
Venezuela 1.9
Mexico 2.1
Canada 2.1
United States 2.5
Japan 2.3
Russia 4.3
India 0.7
China 1.5
Korea 2.1
Indonesia 0.2
Turkey 1.7

Beds /1000 population

Argentina 4.7
Brazil 2.3
Chile 2.1
Colombia 1.5
Peru 1.5
Venezuela 0.9
Mexico 1.5
Canada 2.7
United States 2.9
Japan 13.9
Russia 9.7
India 0.7
China 3.8
Korea 10.3
Indonesia 0.9
Turkey 2.5

References are available upon request

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The challenges of the Pharmaceutical business in Latin America

The Latin American countries when taken together possess certain regional common characteristics in their political, geographical, socio-economic, racial and cultural profile and many peculiarities and differences that range from infrastructure to local regulations and market access,

all of which must be understood in order to create and implement business strategies to capture the market of over 600 million people.

References are available upon request
Major Cultural Dimensions on the Major Latin American Economies

- Hierarchy should be respected and inequalities amongst people exist
- Collectivism and loyalty within the group
- Consensus and cooperation in general, but also with individualism, competitiveness and reward orientation
- Strong need for rules and legal systems in order to structure life, but the individual’s need to obey these laws is weak

References are available upon request
Technologies impacting on the stakeholders and medicine use

Patient-related
- Social media
- Apps
- Monitoring

Provider-related
- Remote monitoring
- Diagnostics
- Decision-support tools
- Electronic health records

Payer-related
- Real-world data analysis
- Value-based insurance

Increased use of medicines in a
- appropriate
- safe
- cost-effective way

Prevention in the use of medicines
- overuse
- misuse
- irresponsible use

References are available upon request
The paths of patients seeking information in the web

77 % of online health seekers in the US start at search engines
Online retail sales to grow at a CAGR of 17% between 2014 - 2019 to $85 billion in sales

Breakdown of Latin America e-commerce sales, by Country

- **Brazil** leads the e-commerce in LATAM. Argentina is the fastest growing market [with a CAGR 2014 – 2019 of 28% !]

Breakdown of Latin America e-commerce sales, by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>2015 Sales</th>
<th>2019 e Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>42%</td>
<td>35%</td>
</tr>
<tr>
<td>Mexico</td>
<td>12%</td>
<td>16%</td>
</tr>
<tr>
<td>Argentina</td>
<td>9%</td>
<td>15%</td>
</tr>
<tr>
<td>Others</td>
<td>37%</td>
<td>34%</td>
</tr>
</tbody>
</table>

Latin America is one of the fastest-growing regions for e-commerce.

References are available upon request.
New consumers and new purchasing habits will impact the life science industry

- who are ordering groceries online for home delivery?

<table>
<thead>
<tr>
<th>Generation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation Z (15-20)</td>
<td>28%</td>
</tr>
<tr>
<td>Millennials (21-34)</td>
<td>30%</td>
</tr>
<tr>
<td>Generation X (35-49)</td>
<td>22%</td>
</tr>
<tr>
<td>Baby Boomers (50-64)</td>
<td>17%</td>
</tr>
<tr>
<td>Silent Generation (65+)</td>
<td>9%</td>
</tr>
</tbody>
</table>

six e-commerce options

1. home delivery
2. in-store pickup
3. drive-through pickup
4. curbside pickup
5. virtual supermarket
6. automatic subscription
Latin America will continue growing above the Global Pharmaceutical market

** CAGR % ** Const. US$

- **Global Market**: 4.8%
- **Asia*/Africa/Australia**: 8.4%
- **North America**: 4.2%
- **Europe (EU+non-EU)**: 2.8%
- **Japan**: 0.7%
- **Latin America**: 6.3%

# Global Retail Market in 2019: US$ 1.3 Trillion

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**Notes:**
- **Constant $** uses Q4 14 average exchange rates (Q1 2015 rates for Algeria, Belgium, Brazil, Chile, China, Colombia, Egypt, Mexico, Peru, Russia, Saudi Arabia, United Arab Emirates and USA).
- **Including**: Indian Sub-continent
- **at ex-manufacturer price levels**, not including rebates and discounts. Contains Audited + Unaudited data. All CAGR calculations are 5 years.

References are available upon request.
### 4 Latin American Countries within the top 20 Pharmaceutical Global Markets

<table>
<thead>
<tr>
<th>Rank</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>United States</td>
</tr>
<tr>
<td>2</td>
<td>China</td>
</tr>
<tr>
<td>3</td>
<td>Japan</td>
</tr>
<tr>
<td>4</td>
<td>Germany</td>
</tr>
<tr>
<td>5</td>
<td>France</td>
</tr>
<tr>
<td>6</td>
<td><strong>Brazil</strong></td>
</tr>
<tr>
<td>7</td>
<td>Italy</td>
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<tr>
<td>8</td>
<td>UK</td>
</tr>
<tr>
<td>9</td>
<td>Canada</td>
</tr>
<tr>
<td>10</td>
<td>Spain</td>
</tr>
<tr>
<td>11</td>
<td>India</td>
</tr>
<tr>
<td>12</td>
<td>Russia</td>
</tr>
<tr>
<td>13</td>
<td>South Korea</td>
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<tr>
<td>14</td>
<td>Australia</td>
</tr>
<tr>
<td>15</td>
<td><strong>Venezuela</strong></td>
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<tr>
<td>16</td>
<td><strong>Mexico</strong></td>
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<tr>
<td>17</td>
<td>Turkey</td>
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<tr>
<td>18</td>
<td>Poland</td>
</tr>
<tr>
<td>19</td>
<td><strong>Argentina</strong></td>
</tr>
<tr>
<td>20</td>
<td>Belgium</td>
</tr>
</tbody>
</table>

References are available upon request.
Overview - Clinical Trials: ClinicalTrials.gov

World = 222,811*

USA 40%
Canada 6%
Latin America 5%
Europe 25%
ASIA PACIFIC 18%
ME 4%
Africa 2%

Source: ClinicalTrials.gov | Oct 2015
Inclusion of communities and minorities

- The selection and inclusion of patients in clinical studies will continue evolving to encompass a greater number of what are now considered minorities
  - Latin American and Hispanic communities will have the opportunity to actively participate in more clinical trials
The Food and Drug Administration (FDA) is working to increase the participation of people in racial, ethnic and other minority groups in the clinical trials that test new medical products.

Clinical Trials Shed Light on Minority Health

"Potential racial, ethnic and other differences in response to drugs are important to FDA’s efforts to help ensure that the safety and effectiveness of drugs are studied in all people who will use the products once they are approved," she says.

But historically, both women and minorities have been under-represented in clinical trials. For example, according to a 2011 report from the conference "Dialogues on Diversifying Clinical Trials," sponsored by FDA’s Office of Women’s Health and the Society for Women’s Health Research and supported by OMH:

- African Americans represent 12% of the U.S. population but only 5% of clinical trial participants;
- Hispanics make up 16% of the population but only 1% of clinical trial participants; and
- Men make up more than two-thirds of the participants in clinical tests of cardiovascular (heart and blood vessel) devices.

At the conference, more than 200 representatives from government and industry came together with patient advocates and the scientific community to discuss strategies for increasing the participation of women and minorities in clinical trials.
Hispanic Accrual on Randomized Cancer Clinical Trials: A Call to Arms

Alberto Parra, Anand B. Karnad, and Ian M. Thompson, University of Texas Health Science Center at San Antonio, TX

The Hispanic population is the fastest growing demographic group in the United States and is expected to triple from 46.7 million to 132.8 million by 2050. Hispanics suffer from major health disparities, and they have low participation in cancer screening and prevention programs and higher incidence rates for cancers of the cervix, stomach, liver, and gall bladder compared with non-Hispanic whites. Despite the compelling impact of cancer on Hispanics as evident from the death of 17,400 Hispanic men and 15,800 Hispanic women as a result of a malignancy in 2012 alone, the data on Hispanic enrollment onto practice-changing cancer clinical trials are negligible.

South Texas is the largest geographic region in Texas, about the size of Pennsylvania, and the population in this region is predominantly of Hispanic ethnicity. Of note, 58% of the population of San Antonio—the largest city in South Texas—is Hispanic, although the upward trend (approaching 90%) of Hispanic population is evident in

With a view to Hispanic patients in accrual data of all phases the year of 2012 by investigators in the deemed were most published in one of the Medicine, Journal of Institute, Lancet, and

Despite Hispanics being a growing proportion of the US population, most recently reported cancer clinical trials either do not report the proportion of accrued Hispanic patients or they report rates that are far lower than the proportion of this ethnic group in the US population. Steps must be taken at this time to improve the accrual and reporting of Hispanics in clinical trials to be able to best monitor and treat neoplastic disease in this ethnic group.
Designating an Orphan Product: Drug and Biological Products

- FDA, Q&A. “What if the sponsor has difficulty finding data on prevalence? What if data is not available? What are the best prevalence estimate resources? What should a sponsor do if the best resource they can find is 10-20 years old (or from other countries only)?”

- “If data is old, the sponsor should explain why the data is still pertinent and, if from a foreign source, why data with that country’s population could also be representative of US population.”
Is Latin America a foreign source representative of US population?

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>10 Latin America</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 - Population in Million</td>
<td>321</td>
<td>524</td>
</tr>
<tr>
<td>White/Mestizo/Hispanic - Million</td>
<td>257</td>
<td>363</td>
</tr>
<tr>
<td>WMH in %</td>
<td>80%</td>
<td>69%</td>
</tr>
<tr>
<td>Black/African/Mulato/Moreno - Million</td>
<td>41</td>
<td>127</td>
</tr>
<tr>
<td>BAMM in %</td>
<td>13%</td>
<td>24%</td>
</tr>
<tr>
<td>Indigenous/Other - Million</td>
<td>23</td>
<td>34</td>
</tr>
<tr>
<td>IO in %</td>
<td>7%</td>
<td>7%</td>
</tr>
</tbody>
</table>

420 to 560 million people with a Rare Disease in the world

EU  30 – 40 Million
USA  25 – 30 Million

10 Latin American countries: 40 million

10 Latin American population considered: Argentina, Brazil, Chile, Colombia, Cuba, Ecuador, Mexico, Peru, Puerto Rico, Venezuela

References are available upon request
Latin America Provides

- Excellent geographical location/time zones
- Large, urban patient populations in all therapeutic indications enables faster enrollment and f/up
- Large drug naïve patient populations with common and special disease profiles
- Rapid compliant patient recruitment
- Highly involved and experienced investigators
- Ready and professional supply of research facilities and contract research organizations (CROs) offering professional services for partnering solutions in clinical trial conduction
  - Increasing competition for investigators and patients

References are available upon request
Practice and Quality in Latin America

- Healthcare systems in LA have improved substantially throughout the last years
- Regulations have become stricter and formal in line with foreign regulatory and health authorities
- USA and EC-equivalent medical standards
- More patients per site can be enrolled
- Highly experienced monitoring and project management teams thoroughly trained on GCP and ICH guidelines
- Research has become more proficient with improved standards of operation

References are available upon request
Communities will be better represented in clinical trials

- government, industry/services, HCPs and patients/ patient organizations should be prepared to respond appropriately

- the senior management of life science organizations should consider this trend in making their corporate decisions
Road Map towards a successful global regulatory strategy including Latin America (I)

- Perform short and long-term planning with an appropriate product strategy, analyze the regulatory requirements for MAA, factor related investments.

- Consider common Regulatory requirements/country specific

- Analyze dossier gaps

References are available upon request
• Verify country specific acceptance of GMP certificates/CPP/CMP

• Take into consideration country specific stability testing requirements (climatic zones), local testing and labelling requirements

• Analyze local clinical requirements and extension of clinical trial development activities into the Latin American territory.
Length of registration time for innovative drugs in select countries 2015

Days to grant registration for innovative drugs in selected countries as of 2015

Mexico is showing a great improvement

Source: Pharmaceutical Executive, April 2015
Agency review timeframes NCE

- Argentina: 4 months
- Brazil: 12 months
- Mexico: 2 - 4.5 months to approve a new registration using the Authorized Third Party scheme.
- Colombia: 12 months.
Include Latin America in the priority list

- **Engage early on in the product development phase** with well established, reputable, international professional teams with sound expertise and global mindset with the ability to interact and respond to the high standards and demands of multinational companies.

- **Master project leadership and project management** which are equally relevant to undertake a LATAM project cross regionally.

References are available upon request.
Integrate internal and external teams

- **Work with integrated professional teams as Regulatory, Medical Affairs, Business Development, Market Access experts** and others as required having the understanding and internal capabilities to depict the general and specific tasks required for geographical expansion.

- **Keep current with regulatory changes, developments and requirements** per individual country across the region.

- Mastering the **countries’ local language** and understanding local idiosyncrasies is helpful increasing perspectives of successful market access.
Entry Models Opportunities and Challenges

- High demand of Time and Resources
- Gain experience
- Follows the Corp model

- Less Investment & profit
- Potential lost of effectiveness
- Communication and alignment

- Time Savings
- High Investment/Cash Flow/Credit
- Integration is key

- Shortening time to market, fast track
- Upfront investments
- Flexibility, Experience & Cultural awareness

References are available upon request
Current Time Zone in 5 hours range within the Americas

References are available upon request
Latin America - Snapshot

33 independent Nations:
- Continent ~ 200 years,
- Caribbean ~ 40 years
Democracies
Top growing economies:
- Argentina, Brazil, Chile,
- Colombia, Cuba, Mexico,
- Peru, Venezuela

Transaction currencies:
- Local and US$.
- Multiple Collaboration
- Alliances and Trade
- Agreements
Complex Tax systems

Diversity in race and origin:
- Mestizo, White, Black,
- Natives
- Christians 90%, Unaffiliated
- 7.7%, Folk 1.7%.
- High income inequality,
- security concerns
Rational and Emotional.

Top ranked countries in using mobiles:
- Brazil (6),
- Mexico (14), Argentina(23)
Converging but not
harmonized regulations,
bureaucracy.

Industrialization
concentrated in the major
economies, and major
cities/states.
IP: Brazil’s ANVISA has
‘prior consent’ authority
for pharmaceuticals

Rich in Natural Resources
- (Oil, Minerals) and Food
The leading region in clean
and efficient energy

References are available upon request
Thank You!

Additional Questions? Ask our Webinar Hosts directly!

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