

Guiding better decisions



Diagnosing market trends



How to conduct MR for pharma industry in Brazil



Macro Scenario

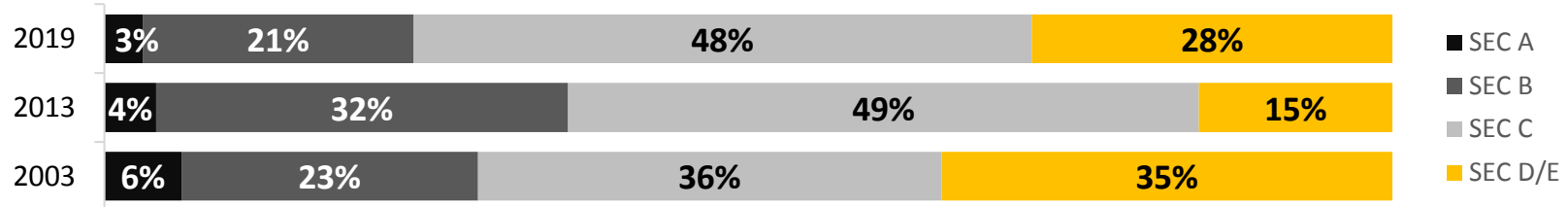
Population distribution by macro-region



- 6th largest country in population with more than 213,000,000 individuals
- Its population is unevenly distributed among macro-regions
- It is predominantly urban: 84,72% living in cities
- It is a young country and its population is aging... the elderly make up ~15% of the population
- Life expectancy: 77 years old
- In 50 years the average Brazilian family size has shrank, from 5,2 to 1,7 children
- Population growth rate is 0.8% a year
- Brazil is the 12th largest economy in terms of GDP (IFM)
- Per capita annual GDP: US\$8.717,19 (World Bank)

Macro Scenario

Social Economic Class

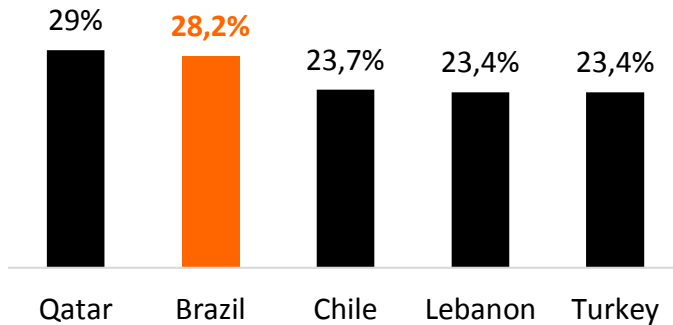


Source: ABEP (2019)

Criterio Brasil - ABEP

Strong Social Inequality

Income share held by the 1% richer



Source: PNUD (2019)

40% of the poorer retain 10% of the country's wealth



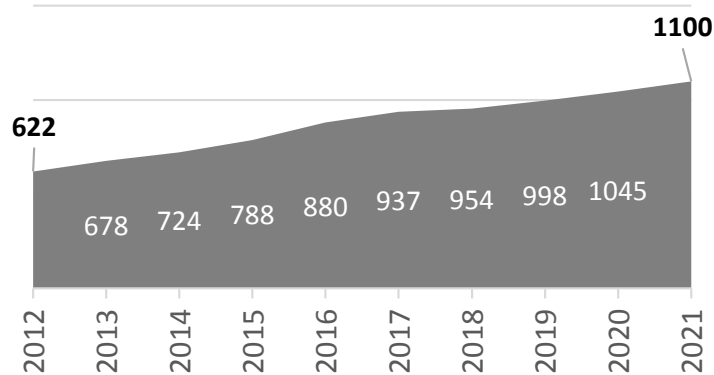
10% of the richer retain 42% of the country's wealth



Source: IBGE (2019)

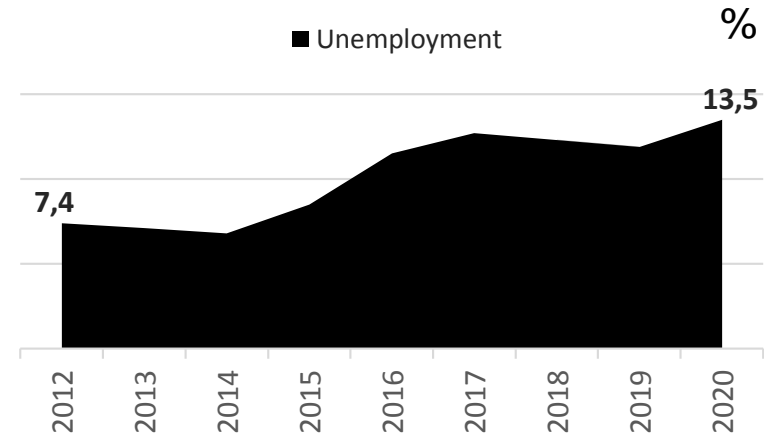
Economic data in Brazil's scenario

Minimum Wage (R\$)



Source: MTE

Unemployment



Source: IBGE

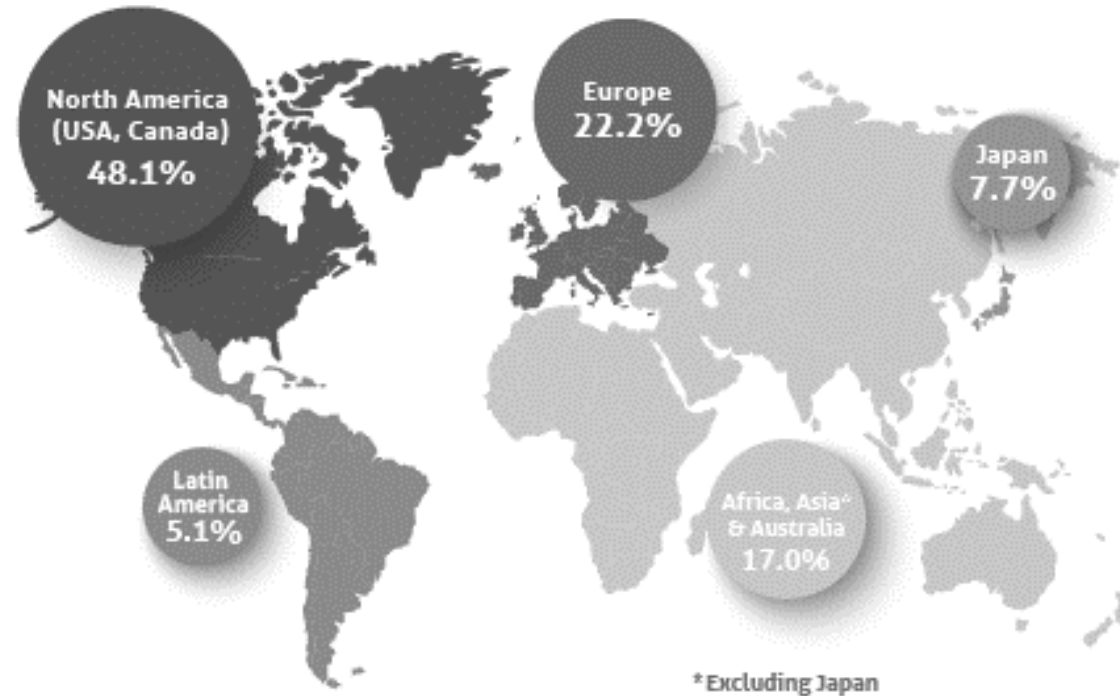
| Country | Tax revenue (% of GDP) |
|----------------|------------------------|
| Sweden | 42,9 |
| United States | 24,5 |
| United Kingdom | 33,0 |
| Germany | 38,8 |
| Brazil | 33,1 |

Source: OECD (2019)

- The minimum wage has increased 76,8% from 2012 to 2021.
- Unemployment rate has increased in 82,4%.
- Taxes are similar to those of developed countries

Pharmaceutical Market in Brazil

Pharmaceutical Sales (2017)



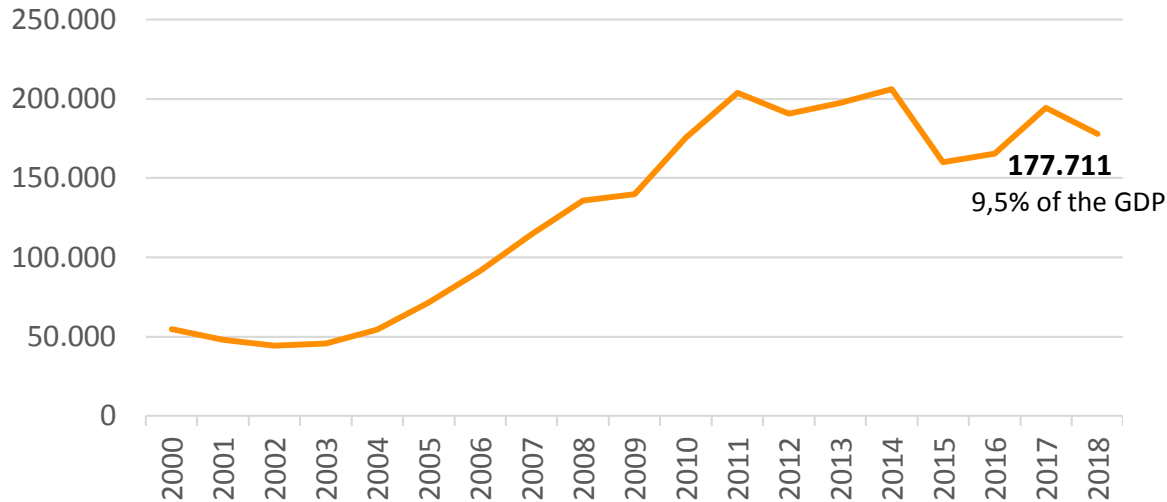
In \$ of sales

- Brazil has the largest pharmaceutical market in LATAM.
- Brazil made over R\$ 100bi in sales in 2019, with a 11,4% growth compared to 2018.
- **With 2% of the world sales, Brazil is the 7th largest pharmaceutical market. The country is projected to be the 5th in 2023.**
- 249 pharmaceutical laboratories: 59% with domestic capital and 41% international.
- Almost 100,000 direct jobs.

Healthcare In Brazil

Health Expenditure in Brazil

in billion current US\$



41,8 %

Public Funding

30,7%

Private: Voluntary
Health Insurance

27,5%

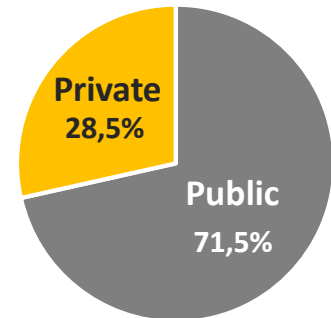
Private: Out-of-
pocket payment

Source: WHO

The Public Healthcare System is stretched financially:

- 42% of all healthcare spending comes from the public budget
- Almost $\frac{3}{4}$ of the population depend on it

Health Care Coverage in Brazil



Source: IBGE (2019)

A Single Healthcare System - SUS



- universality of service
- service equality
- free distribution of medicine

- shortage of doctors in the public service
- sluggish service
- long wait lists for appointment with specialists



‘Farmácia Popular’

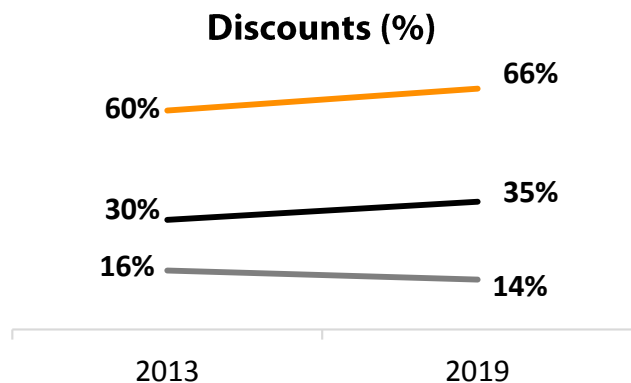
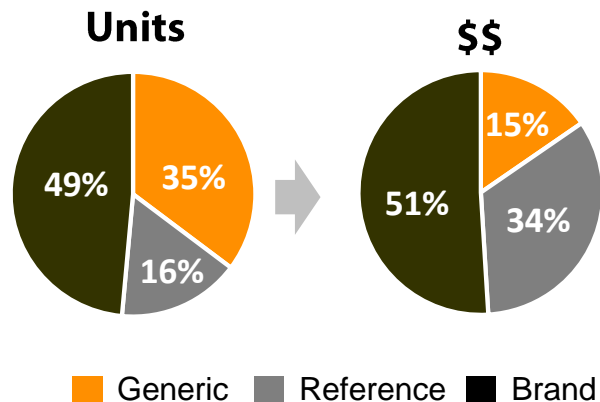
Extend access to medication for the most common diseases among the population.

- more than 30,000 participating pharmacies, including both public and private
- **20 million Brazilians benefits**
- ‘Saúde Não Tem Preço’ (Health has no price): free distribution of ‘basic’ medication asthma, hypertension and diabetes.

Generics

“To ensure the overall population access to quality medications at lower cost”

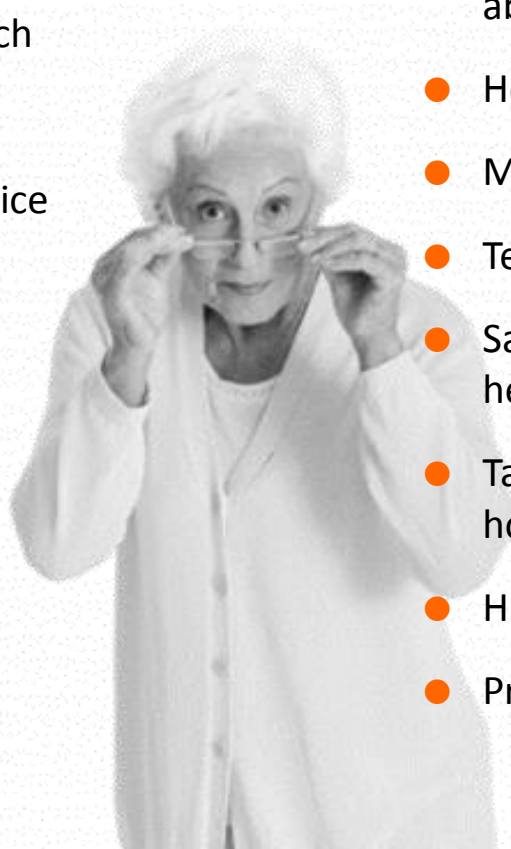
Market Share



- It started in 2000, it has been **21 years** of constant adaptations and changes on the design of the market share distribution.
- The local generic industry is the **largest Latin America**.
- Since 2000, writing the name of the active principle/substance on the prescription is mandatory for the public practice (SUS). At the private practice, it is up to the doctor to decide
- **90 manufacturers** offering generics in 2021, and nearly **4 thousand drugs registered**.
- 15 companies are responsible for more than 82% of the Brazilian generic market .
- **15 of the 20 most prescribed drugs are generic** and they are available as an option to treat more than 90% of known diseases.

Public Healthcare Programs

- *Farmácia Popular*: medications at lower prices
- Disease prevention approach
- Fighting Dengue
- Basic healthcare units: service decentralization.
- Organ donation
- Emergency mobile care
- Mortality rate reduction
- Cancer control program
- Smoking control program
- Vaccination campaigns
- Programa Mais Médicos: takes physicians to regions where there is a shortage or absence of these professionals.
- Home care for people with low mobility
- Mental Health care
- Telemedicine
- Safe access to medicinal plants and herbal medicines
- Tax exemption for top philanthropic hospitals
- Human milk banks
- Prenatal care

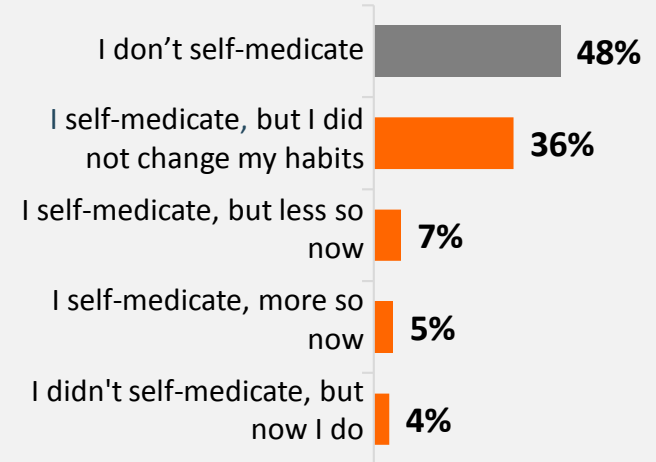


Brazilian pharmaceutical market

- Medication advertising Rx is forbidden in Brazil
- Prescription guidelines exist, but are not always followed
- High self-medication rate: purchase occurs without prescription, except for state-controlled medications.
- Drugstore attendant plays an active role in recommending medication and switching the prescription



Self-medication



Source: Demanda (2020)



In this scenario, Primary Research is essential for better understanding of:

- prescription behavior
- consumption dynamics

And to

- make accurate sales predictions

Secondary data sources

to be complemented !

Lack of information

- Treatment flow for chronic diseases over time
 - cancer, rheumatoid arthritis, diabetes, AF, etc.



Patient Record

Patient Diary

Treatment flow

- Diagnosis
- Journey
- Coming from other treatment
- Other specialists
- Comorbidities
- Multi-medicated



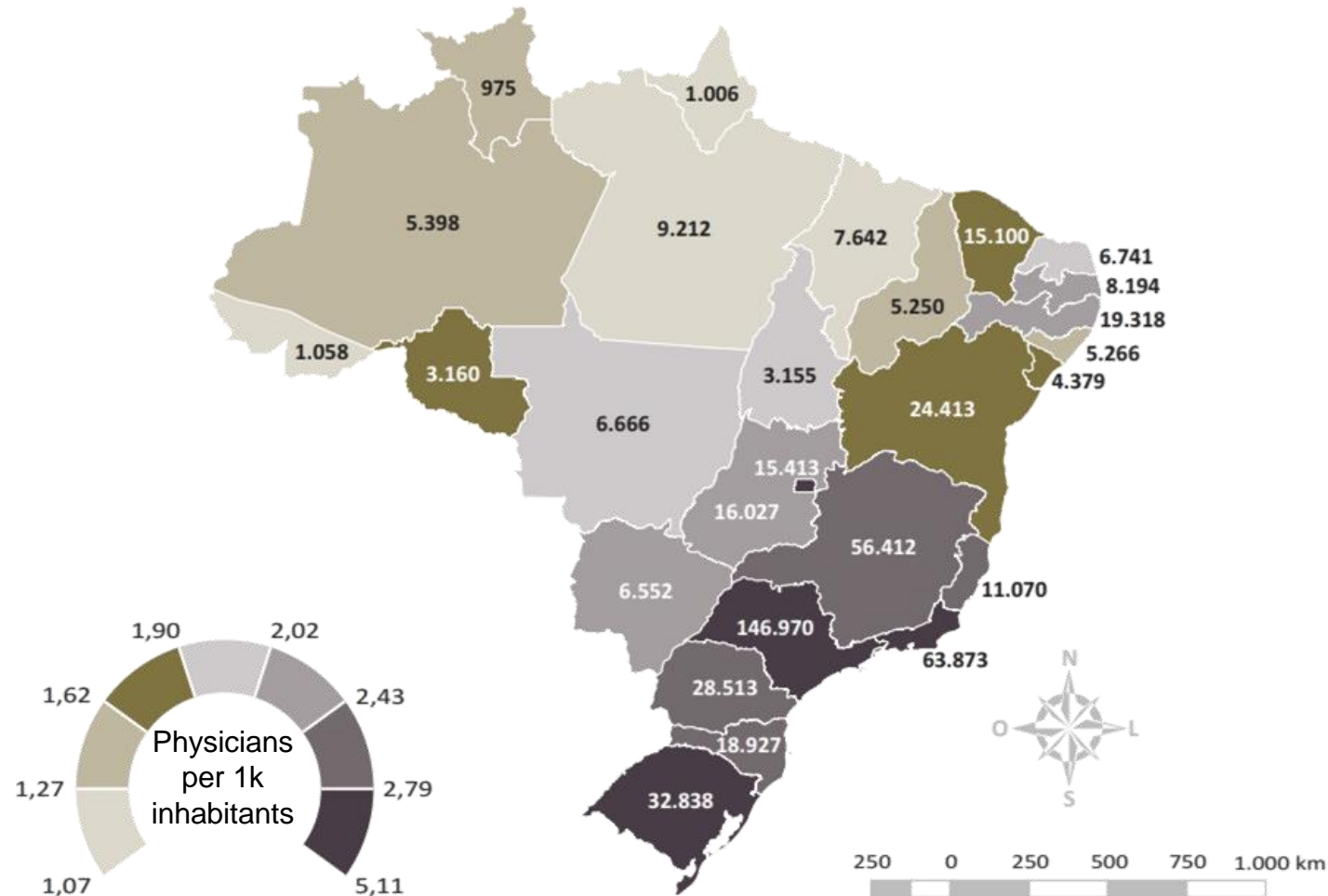
- National data of prevalence and incidence for many pathologies
 - The majority of forecasts and patient flows are developed based on American or European data
 - However, it is found good epidemiologic local data for few pathologies

Characteristics of the profession



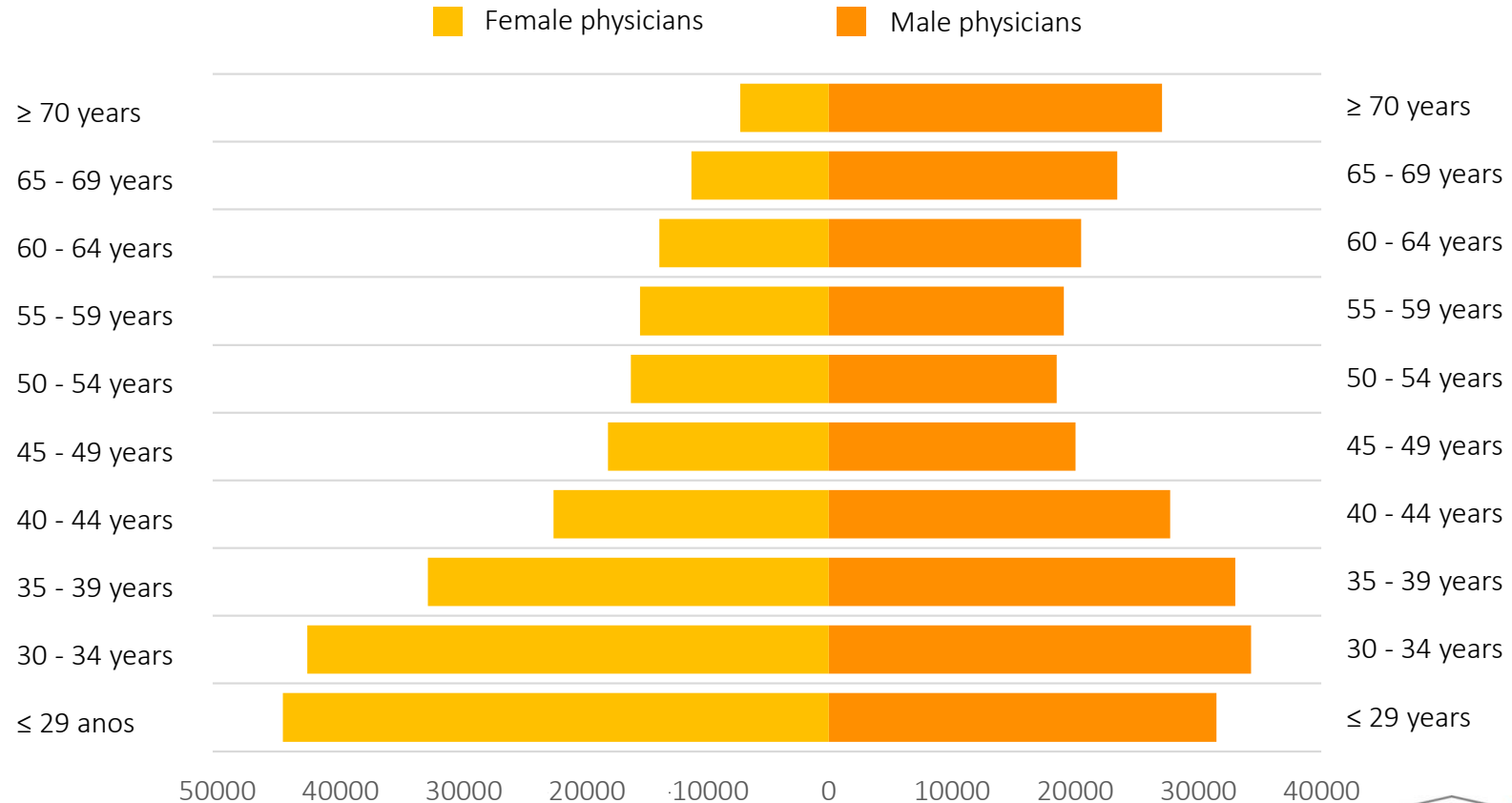
1. Brazil has the 6th largest number of doctors in the world
2. There is no shortage of doctors overall, but there is **imbalance** in **geographic** and **specialty** terms
3. Market ATTRACTIVENESS:
income vs. reference centers vs. opportunities
4. Multiple jobs (both private & public)
long work shift
5. Young doctors
longer professional lifespan
more doctors coming in than going out

Geographic distribution of physicians

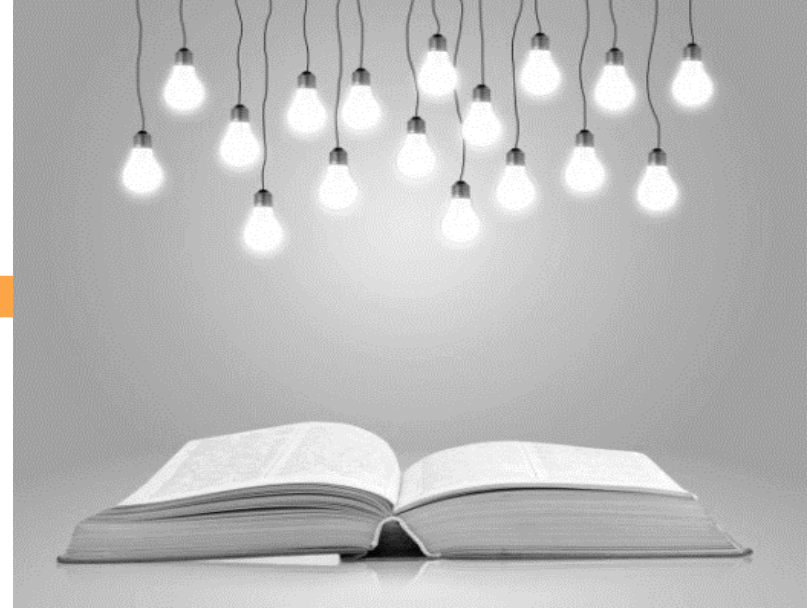


Distribution of physicians

Distribution of physicians by gender and age



Some relevant info about the Pharma Market Research itself



Pathologies x Specialities

Allergy and Immunology HIV, Vaccines: Influenza, TB, Strep A, Dengue Anesthesiology
Anesthetics, Infusion devices Cardiology and Hemodynamics Anti-hypertensive, Atrial
fibrillation, Anticoagulants CV Surgery Primary care Vitamins, infections Dermatology
Dermatitis, Psoriasis, Acne, Onychomycosis, Aesthetics Emergency care Endocrinology
Metabolic syndrome - hyperglycemia, obesity, Type I and II diabetes - devices, treatment,
medication Gastroenterology GERG, Gastritis, Ulcer, Crohn's disease, UC, Hep B-C Genetic
study Gerontology GOB Hormone therapy, Vulvovaginal Atrophy, Dyspareunia, Endometriosis,
Contraception, Osteoporosis, In Vitro Fertilization, HPV Hematology Gaucher, CLL, Hemophilia
Hepatology Infectious diseases Hospital-acquired infection Mastology Breast CA Nephrology
Chronic Kidney Disease, Transplant Neurology MS, Alzheimer, Parkinson, Epilepsy, Neuropathic
pain, Cervical Dystonia, Spasticity of the limbs, Pain Occupational medicine Ophthalmology
Cataract, Glaucoma, IOL Oncology CLL, AML, Pancreatic, Lung, Prostate, MM Orthopedics
and Traumatology ENT Allergic rhinitis Pediatrics vaccines Pulmonology Rhinitis, Asthma,
Bronchitis, COPD, Emphysema Proctology CA prostate, Hemorrhoid disease Psychiatry
Depression, Alzheimer, Bipolar disorder, Psychosis, Schizophrenia Radiology and Medical
Imaging Rheumatology Osteoarthritis, Lupus, Rheumatoid Arthritis, Fibromyalgia Urology
erectile dysfunction, BPH Healthcare and Well-being Nutrition, Nicotine, Healthcare habits
Hospital-related Parenteral nutrition, Antibiotics ...

A pathology...

oncology

Cancer

Breast

Leukemia
Melanoma
Pancreatic
Lung
Prostate
MM
Brain
....

Luminal A

Luminal B

Triple-
negative

HER2+

PATIENT PROFILE

Comorbidities

Private/ Public

Age/ habits

Genetic
predisposition

STAGES

Stage 0
Stage I
Stage II
Stage III
Stage IV

TREATMENTS

1st, 2nd 3rd line?
Refractory?

Recurrent?

Mutation?

Tamoxifen
Anastrozol
Letrozol
Trastuzumab
Lapatinib
Pertuzumab
TDM1
Radio
...

Who we talk to



Recruitment Methods



Qualitative... to be taken into account

IDI

- The majority of physicians in Brazil can be interviewed in-field as they generally have their own offices in hospitals/polyclinics.
- Hospitals do not usually restrict access to interviewers: pre-scheduled interviews are duly authorized

TIDI

- It offers the benefit of flexibility of time and location.
- Tidis are seen as less serious by physicians: a less important commitment: Rebooking, if incentives are not attractive

WEB-AIDED IDI

- Not rarely physicians used to struggled with links that support web-aided TIDIs. Lately, this has changed due to the pandemic + tech tools survival needs.
- ... KOLs, it is the best-choice methodology for interviews lasting no longer than 1 hour

Online

- Commonly adopted
- Specific targets & pathologies & Rx ➡ Conducted with prior recruitment
- Structured panels for online research and syndicated studies with doctors are still incipient in comparison to ad-hoc ones

SUCCESSFUL

RECOMMENDED
UP TO 30min

Friendly, clear
language

With a time bar
showing time to
completion

Being able to stop
and adjourned
some other time

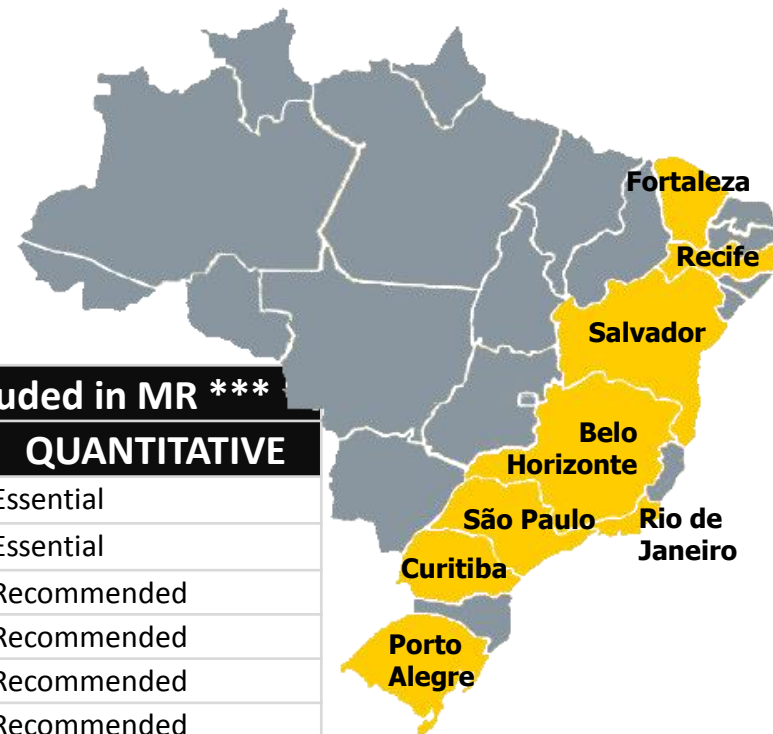
- It may take longer than expected: Portuguese X English
- Little familiarity with PC: Elderly and Regions outside the South, Southeast & Northeast
- Sterling recruitment is essential for engaging and committing respondent
- Updated database is important to speedup recruitment process

Choosing Markets

Qualitative and Quantitative Studies

The largest city in Brazil and in the Southern Hemisphere is São Paulo; it is the world's 7th largest city and 5th largest metropolitan region with 19,5 millions inhabitants.

Cities typically included in Pharma MR



| Market | Population | Physicians* | Ratio** | Cities typically included in MR *** | |
|----------------|------------|-------------|---------|-------------------------------------|----------------------|
| | | | | QUALITATIVE | QUANTITATIVE |
| São Paulo | 12,252,023 | 68,694 | 5,61 | Essential | Essential |
| Rio de Janeiro | 6,718,903 | 40,232 | 5,99 | Strongly Recommended | Essential |
| Salvador | 2,872,347 | 14,084 | 4,90 | Recommended | Recommended |
| Fortaleza | 2,669,342 | 11,171 | 4,18 | Recommended | Recommended |
| Belo Horiz. | 2,512,070 | 20,412 | 8,13 | Recommended | Recommended |
| Curitiba | 1,933,105 | 12,611 | 6,52 | Recommended | Recommended |
| Recife | 1,645,727 | 13,457 | 8,18 | Strongly Recommended | Strongly Recommended |
| Porto Alegre | 1,483,771 | 14,755 | 9,94 | Strongly Recommended | Strongly Recommended |

*Physicians registered at Conselho Federal de Medicina (Federal Council of Medicine - FMC)

**Physicians registered in FMC/1,000 inhabitants ratio

*** Demanda Health suggestions based on years of experience

Physicians



Receptivity

- Surveys: a source of knowledge and income...
- Reps' visit: updating
- One notices a certain appreciation in demonstrating knowledge.
- They tend to be very curious professionals when it comes to new launches
- High level of refusal or abandonment of online studies more than 45 minutes in length.

Patient information

- Physicians are increasingly being used as a source of patient records (PR).
- Ideal is to request up to 8 PR, to avoid respondent fatigue and drop out
- Attention: Referrals of patients!
- Patients are becoming more proactive and seeking information about their health.
- Patients come to the office knowing what they want to have as prescriptions for them.

Research with Patients & Caregivers

Methods

- Patients **want to** talk about their problems: ethno, video diaries, bulletin board work well.
- Want to be and feel **cared for**.
- **Transparency:** being clear on what is required of them.
- Processing Information: avoid showing sensitive data.

Age & Gender

- Conservative: In patient groups it is advisable not to mix genders within a group.
- Mix of ages is recommended as it enriches results.
- The permission of a guardian must be obtained before formally interviewing children under 14 years.

SEC x Education

- Social classification must be observed in selecting respondents.
- Combining very different social classes isn't recommended mainly because of the difference in level of education.

Difficulties

- If the disease is more debilitating, then in-home IDIs are preferred over studies at facility.
- Dexterity, visual impairment.
- Elderly: lack of PC familiarity.
- Suspicious.
- Most Brazilians speak only Portuguese.

Alzheimer



- Method
- Family' protection
- Unknown diagnosis
- Sad, sad learnings

Spinal Muscular Atrophy



- Dependent
- Movement limited
- Willing to take part in the study:
needs to talk
- Commotion in the back room

Urinary incontinence



- Social life is affected
- So, personal hygiene
- Embarrassment
- How to recruit???

Bipolar Disorder

● yes



● no

Cultural issues



- Brazilians speak Portuguese... English is spoken with low quality / proficiency
- Interviews with Brazilians are likely to take longer than in other cultures
- Because... Brazilians are outspoken and talkative
- A 15 minute delay is expected. It is culturally accepted, no one will get angry
- Brazilians are lenient: evaluations tend to be more positive than in other cultures

Expert Help

- On-line panels may be limited to A B C class. If D class is your sample frame, you may need to recruit on the street
- Some small markets don't have focus group facilities
- If the project calls for product placement, consider in person delivery. The local post office, and FedEx are not especially strong!
- **Uniqueness: An "A" household in Sao Paulo is NOT equal to an "A" household in Peru or Mexico.**

Business to Consumer: Don't ask household income, use SEC such as, A through E . Example Questions:

1. Do you own a car? How many?
 2. How many full-time household staff members do you employ?
- Know which time zone you are working in
 - Daylight Savings Time start and stop days vary—check and double check!

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Expert Help

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- Translation will be expensive, but don't skimp!
 - Brazilian Portuguese is different from that spoken in Portugal—you need the right translation! Think American vs. British English
 - Whether qualitative or quantitative, the language must be accurate!
 - Provide materials as early as possible to the translator
 - Triple check technical words
 - **Don't rely on Google Translate!**
- Stimulus Items:
 - Can they fit or be carried on the plane with you?
 - Will they have to be shipped? Have you allowed plenty of time? Customs clearance?
- If you are traveling in Latin America use in-country staff or the local research vendor to select hotel and car service, use DEMANDA!



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