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New strategies to overcome drug shortages

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Conflict of Interest

Nothing to declare
No research funding from private sources

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Questions

- Single –source markets are more prone to shortages Y/N
- Cheaper older products face high risk of shortages Y/N
- Is issuing special licenses a long-term viable solution for shortages Y/N

If you don't know where you are going, any road will get you there.

*Definition of the problem

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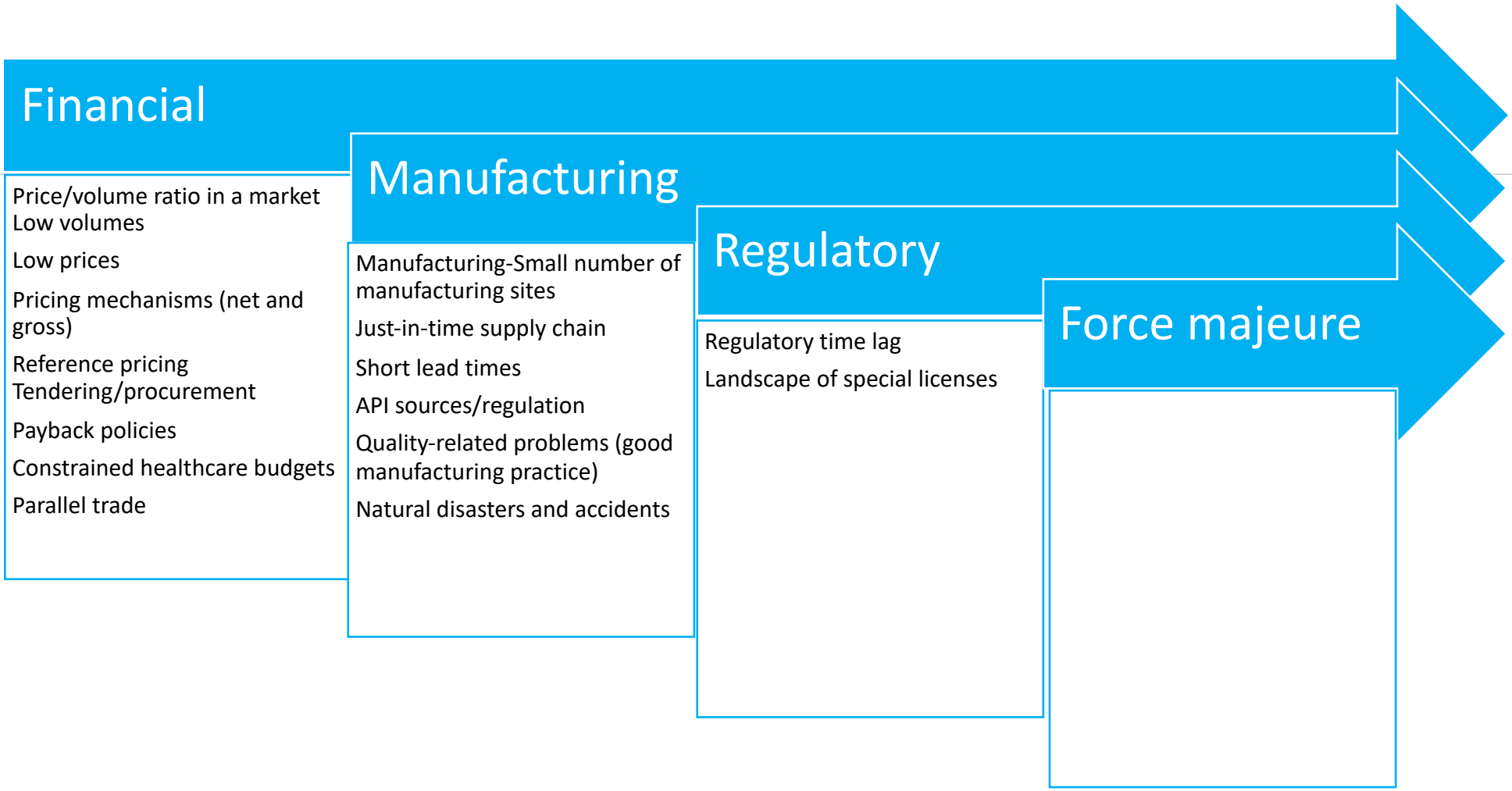
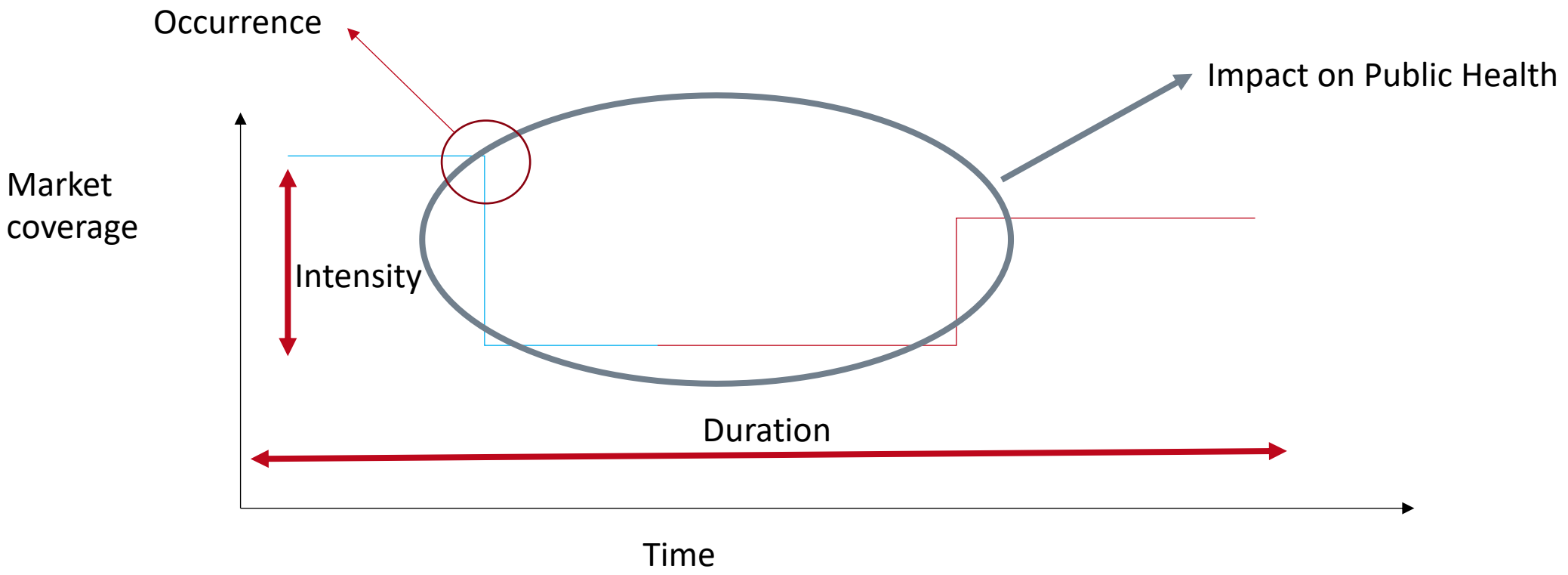

Financial
Price/volume ratio in a market Low volumes
Low prices
Pricing mechanisms (net and gross)
Reference pricing Tendering/procurement
Payback policies
Constrained healthcare budgets
Parallel trade
Manufacturing
Manufacturing-Small number of manufacturing sites
Just-in-time supply chain
Short lead times
API sources/regulation
Quality-related problems (good manufacturing practice)
Natural disasters and accidents
Regulatory
Regulatory time lag
Landscape of special licenses
Force majeure

QUANTIFYING THE PROBLEM

- What about introducing metrics of the problem?
  - Burden of Disease – Focus
  - Existence of alternatives –Breadth
  - Market Share- Depth

Not a one size fits all approach

SEVERITY OF SHORTAGES



HEALTH TECHNOLOGY ASSESSMENT

- Shortages management resembles HTA : A group task and not an individual's mission
- HTA is a tool which is implemented in order to quantify the medical, social and financial repercussions of a product, once it's reimbursed
- Experts argue that we can expand the context of HTA by adding the notion of shortages as the introduction of regulatory flexibility enhancing suppliers

THE INPUT OF HTA

- Is it feasible to embed shortages as a core module in HTA?
- An effective policy can begin at early stages of HTA process; this can elucidate the potential impact of shortages
- It can serve as a time leeway, thus allowing establishment of proactive interventions and elaboration of health policies
- i.e. Covid mRna vaccines and their cold supply chain

THE GENERIC SEGMENT

- Generic drugs, in particular, face intense price competition driven by uncertain revenue streams and high investment requirements

"*race to the bottom*" in pricing

- Several opportunistic providers enter the market
- This disrupts the continuity of supply
- Adherence to serialization implies high costs
- For generics, the intense price pressure does not leave room for investment inf manufacturing
- Manufacturing capacity constraints

HOWEVER

- No corresponding insight exists for the life cycle of generic products : Entry, sustained supply, exit.
- What are the competitive forces? Are there any market access barriers?
- What’ s the optimum marketing strategy for the generics?
- Not only sales wise but supply chain wise

You can't fatten the cow by simply measuring it every day - ACTIONS

- Enhance the efficiency of regulatory procedures and implement fast-track processes to alleviate acute medicine shortages
- Regulate the Special licenses section, which can remedy shortages
- Allow greater flexibility on delivery of medicines and the movement of packs across borders during medicine shortages

ACTIONS (II)

- Find balance between fast-track temporary licenses and risks of abusing this scheme for attainment of “permanent license” –we cannot afford to evade proper regulatory pathways
- Make compulsory an EU early-notification requirements for manufacturers- Although a relevant directive exist, it’s not consistently implemented
- Keep in mind that it’s probably unaffordable to invest for “cash cows” or legacy products, which carry high risk for shortages, both from a financial and manufacturing perspective

ADDRESSING THE PROBLEM FOR HIGH IMPACT SHORTAGE PRODUCTS

- Risk mitigation strategies
  - Multi-supplier sourcing
  - Multi-site processing
- Extended value stream mapping of the manufacturing process
- The notion of safety stocks should be applied
- Supply chain security along with business continuity must be pursued
- Provision of alternative facilities for manufacturing

AUTHORITIES CAN…

- Issue guidance on detection and notification of shortages of medicinal products for Marketing Authorization Holders (MAHs) in the Union
- Draft and disseminate guidelines (in 2019, the EMA and HMA released two joint guidelines on shortages -The first harmonized definition of shortage across EU countries)
- Issue recommendations to improve the collaboration among Regulatory Authorities and stakeholders (EMA and HMA, 2019a,b).
- Efficiently communicate to the public
- Select and implement the appropriate communication tools based on impact of shortages

AUTHORITIES CANNOT

- Force manufactures to disclose details of shortage causes
- Force a company to
  - make a drug or
  - make up for other companies shortage
- Order to whom and how much they will sell

SHORTAGES AND DISPENGING FIELD

- Capitalize on pharmacists' expertise
- Switch to other interchangeable products (ATC 4)
- Switch formulation/ strength
- Galenic formulation (if possible)

DEADLOCK

Alternative dosing (lower dose/or limiting the use to high risk patients) could be explored;

Alternative manufacturing site for the same product

Use of different strength/formulations of the same product

Other products in the same class or even other classes

Criteria for classification of critical medicinal products

Duration and urgent need of clinical guidelines

Manufacturing capacity, technical and regulatory times to switch.

Focus of special populations' needs

Adverse events.

What about special populations

SHORTAGES AND THE REIMBURSEMENT SECTOR

- Focus on tendering practices –reliability and long-term perspective should be key issues apart from price
- Low prices mesmerize authorities –they are also jeopardizing continuous supply
- The adoption of multi-winner tendering practices can be considered – sustaining competitive forces while safeguarding market coverage
- Shift the market to healthy multi-supplier one in order to mitigate risk
- Implement and further strengthen EU early-notification requirements for manufacturers at national level for situations in which medicine shortages are expected
- Transparency at national level

REGULATORY PERSPECTIVE

- Consider ban on Parallel trades, especially for prone to shortage products
- Fine-tune payback policies (clawbacks) which may further hinder supply of pharmaceuticals, especially cheap and old ones
- Just in Time supply chain has been cost-efficient for the industry, but travails to meet increasing demand
- This JIT may trigger shortages
- For some products, only one API produced is available

SOLUTIONS

- Reward mature quality management
- Communicate the value of quality management maturity so it can be adopted by manufacturers and priced into contracts by purchasers
- Provide incentives for identification of better tools to assess manufacturing performance in order to enhance earlier detection of potential problems that could perpetuate shortage
- Incentivize improvements to manufacturing infrastructure that enhance reliability of manufacturing and thus supply
- Provide pharmacists the ability to substitute certain products (among same therapeutic category), protected from liability

- Provide incentives for companies and MaH to alleviate shortages
- Fast-tracked regulatory procedures
- Standardization of pack sizes across Europe and introduction of “e-leaflets” (spc).

The second best time to take care of shortages is now

The best time was 5 years ago.

Take home messages

- It’s never early to intervene in shortages
- Shortages have a multilayer causality
- An array of approaches, which include pricing, manufacturing, regulatory actions can be brought forward