



Associazione Farmaceutici Industria  
Società Scientifica

# The Industrial Perspective: What are the Unmet Needs?

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# Outlook

- \* **What is A.F.I.**
- \* **The pharma trends**
- \* **The industry trends**
- \* **The position of industrial pharmacist**
- \* **The challenges of education**

# A.F.I.

## *Italian Association of Industrial Pharmacists*

### *The goals of A.F.I.*

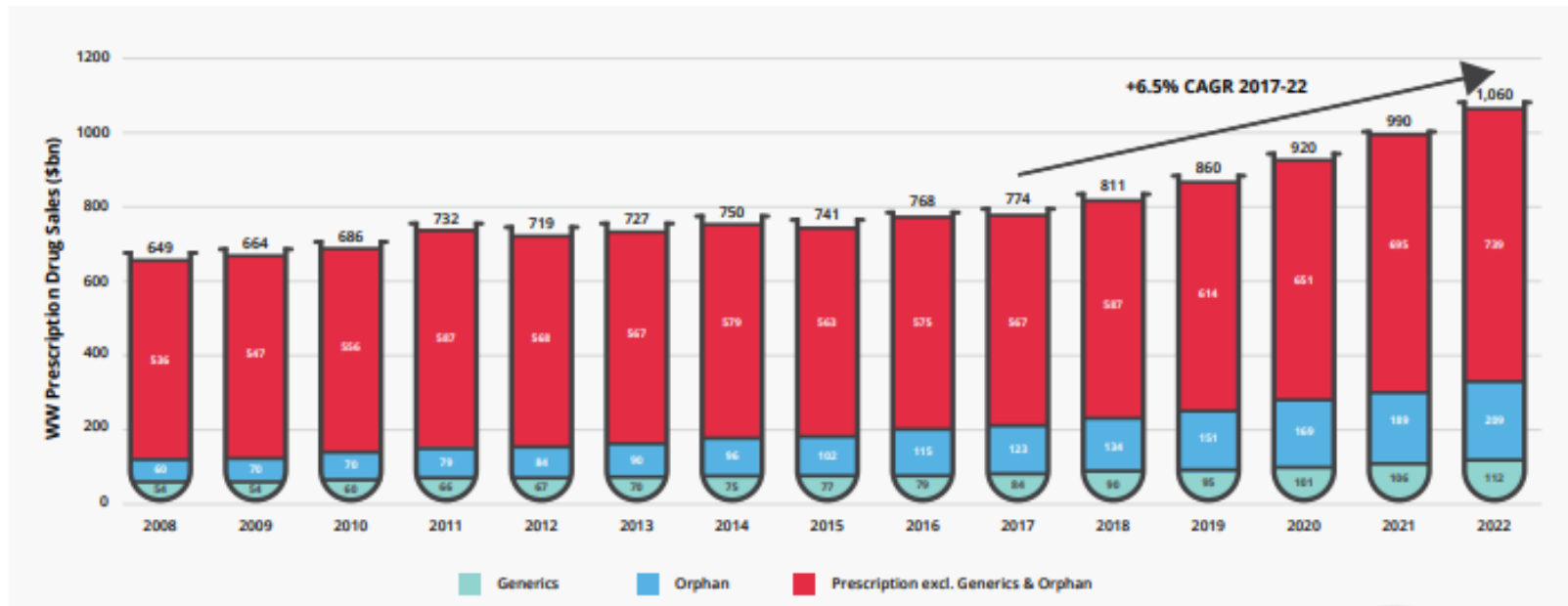
- ✓ *To promote the scientific and professional development of the industrial pharmacists, encouraging high standards of education at undergraduate and postgraduate level*
- ✓ *To organize courses and seminars on scientific and technical subjects, regarding all the industrial pharmaceutical fields*
- ✓ *To support other scientific initiatives for the promotion of the knowledge in the pharmaceutical area*
- ✓ *To maintain strict contacts with Health Authorities and to represent the position of its members on legislation matters*

*Over 2.000 members , including academics*

# The pharma trends

*A development at an unusual rapid pace*

Figure 1. Worldwide total prescription drug sales, 2008-2022



# The pharma trends

Market growth is due to:

- **Increasing world population – at 1.2% yearly**
- **Increasing urbanization and growing of middle class**
- **Increasing proportion of people aged >65, achieving 28% in 2030**
- **Emerging markets growth achieving 2/3 of entire drug volume**

# The pharma trends

The main changes:

## 1. **Biological products**

- Development of more complex drugs
- Changes in therapeutic approaches
- New treatments for rare diseases

## 2. **Less expensive solutions**

- Expiration of biotechnical patents
- Increasing production of biosimilars
- Promotion of biosimilar for cost reduction

## 3. **Precision medicine**

- Patient genotype identification
- More effectiveness and less side effects

# The industry trends

The current key industry drivers:

- \* **Intensive and focused R&D activity**
- \* **Partnership and collaboration**
- \* **Fast time-to-market**

# The industry trends

The new industry challenges:

- **Production to adapt to biological products and to highly potent drugs**
- **Facilities to change for equipment flexibility, containment systems, degree of automation**
- **Processes to face adequate performance (capability and cost), small batches request, continuous manufacturing**
- **New regulations on safety features for patient protection**



# The position of industrial pharmacist

## Pharmacists in industry

- \* **The education profile of a pharmacist is unique**
- \* **The *hybrid* scientific background allows pharmacists to cover several different positions in the pharma industry**
- \* **Only pharmacists have the complete knowledge of the whole cycle of a drug – from discovery to the patient**
- \* **Any position in the pharmaceutical industry can't prevent pharmacists to maintain their awareness of the patient needs**

# The position of industrial pharmacist

The new challenges:

- Increasing complexity in pharmaceutical dosage forms
- Fast evolution of industrial technologies (pharma 4.0)
- Complexity of the supply chain
- Changes in the regulatory environment

# The position of industrial pharmacist

Industrial pharmacist needs:

- **A continuous professional development (CPD, LLL)**
- **A strong quality culture**
- **A capability in managing interdisciplinary co-operation**
- **Development of soft skills**

# The challenges of education

- \* To ensure a continuously updated scientific knowledge
- \* To follow industrial technological developments, providing the scientific education background
- \* To keep constant connection and collaboration with the industrial world, through pharmacists associations
- \* To further develop education in:
  - \* Scientific approach to problems - *forma mentis*
  - \* Capability of integrating different disciplines - complexity
  - \* Knowledge management – learning how to learn



***Thank you  
for your attention***