Global Observatory on Health R&D

Health products in the pipeline from discovery to market launch for all diseases

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AdisInsight is a database from academic publisher Springer Nature that tracks various health products such as medicines, vaccines and diagnostics from discovery to market launch for all diseases. (See more about the scope of the AdisInsight database below.) Presented here is a descriptive overview of these products, which will be updated monthly.

View previous pipeline analysis for infectious diseases (superceded by this analysis)

See also:
Antibacterial products in clinical development for priority pathogens

What you see

Charts in the interactive data visualization show the following data for health products:

- Number of products, by type (chart 1)
- Number of products, by health category (chart 2)
- Number of products, by phase of development (chart 3)
- New molecular entity (chart 4)
- Orphan status (chart 5)
- Number of products, by route of administration (chart 6)
- List of products (with additional information in popup windows) (chart 7)

Products can be viewed according to:

- Status (active or inactive)
- Stage (in development or developed)
- Phase (preclinical, clinical, or registration)
- Type of disease (WHO neglected tropical diseases or WHO R&D Blueprint pathogens)

Points to note:
There is a grand total of more than 86,000 products; nearly 80% of these (whether active or not) are for noncommunicable diseases. (View chart 2)

Out of the total number of products, less than half have active status (either in development or developed). The majority of these active products are medicines; while there seem to be relatively few diagnostics, note that the scope only includes those with an active pharmaceutical ingredient (API) - see data scope below. (Select the “Active” status button on the top left and view chart 1)

Out of the total number of products that have inactive status, the vast majority of these were in development. (Select the “Inactive” status button on the top left and view chart 1. Then view chart 3)

Out of products that are active and in a clinical phase of development. (Select the “active” status, “development” stage and “clinical” phase buttons at the top left):

- far more are for noncommunicable diseases (87%) than for other disease categories (chart 2a);
- only a small proportion are for communicable, maternal, perinatal, and nutritional conditions (9%) (chart 2a);
- of the noncommunicable disease sub-categories, the highest number of products are for malignant neoplasms (select ‘non-communicable diseases’ and view chart 2b);
- of the communicable, maternal, perinatal, and nutritional conditions sub-categories, the highest number of products are for infectious and parasitic diseases (around 80%) (select ‘communicable …’ and view chart 2b).

Only a tiny proportion of active products (less than 0.5%) target a WHO neglected tropical disease. (Select the “active” status and “WHO neglected tropical diseases” disease type buttons at the top left and then view chart 1)

Only a tiny proportion of active products (less than 0.4%) target a WHO R&D Blueprint pathogen. (Select the “active” status and “WHO R&D Blueprint pathogens” disease type buttons at the top left and then view chart 1)

Out of the total number of products, around 1/3 are known to include a new molecular entity and around 2/3 have an orphan status. (See chart 4 and chart 5 respectively)

Considering those with unspecified route of administration, the most common route is parenteral followed by enteral. (View chart 6)

To explore the data further:

- Select desired options using the circular buttons at the top left of the data visualization; select more than one button to view according to a combination of criteria.
- Hover the cursor on a data element of interest (e.g. a cell in a table, or a bar in a graphic) to see more information on that data element in a popup window.
  -- For example, hovering on the last column in the chart 7 (showing the phase of development) provides additional information in a popup window on the originator, developer and other relevant information for each product listed.
- Select multiple diseases to compare (using Ctrl on keyboard).
- Use Ctrl on the keyboard to select, and thus compare, more than one disease in chart 2c.
- Undo a selection by clicking the same element again or refreshing the browser.

Scope of the data

https://www.who.int/research-observatory/monitoring/processes/health_products/en/
AdisInsight is an integrated database of product reports authored by Springer Nature editors on products in development, clinical trials, medicines safety, patent details and company deals sourced from public information, updated daily.

The database profiles products (medicines, vaccines and diagnostics) from research to market launch for all indications in all regions around the globe that were launched after 1995. The database monitors company websites for thousands of organizations, clinical trial registries across major regulatory bodies and organizations, published abstracts from the top scientific conferences, annual reports from pharma/biotech companies, regulatory agency websites, Major newswire services and the main pharma-focused news organization are also monitored. All relevant journals indexed on Medline and Embase are monitored for efficacy and safety results.

Products are included if they satisfy the following criteria:

- Medicinal products that contain an active pharmaceutical ingredient (API)
- The medicine or vaccine must be developed as prescription products and follow a government regulated approval process for proprietary (unique) products
- At least one of the developers is a commercially driven organization (a company)
- The product must be a proprietary one
- Biosimilars
- General diagnostics - agents administered into or onto the human body. (Diagnostics must be medicines-based to be included e.g. diagnostic kits are not included if they are not drug-based)
- Companion diagnostics - where Specific therapeutic product(s) are identified as companion for the diagnostic test
- New formulations of existing medicines, if they satisfy the above criteria

Products are excluded when they satisfy one or more of the following criteria:

- Generic medicines
- Medical devices (unless in combination with an active pharmaceutical ingredient)
- Nutraceuticals and herbals if their regulation is not via the medicine approval process
- Vaccine adjuvants

Limitations of the data and analysis
- This analysis is updated monthly, but time lags with up-to-date data from the source are inevitable.
- Accuracy and completeness of the information is the responsibility of the data source, see terms and conditions of use.

Data source
Springer Nature AdisInsight database