Causaly – Your preferred partner in Epidemiology

Causaly saves up to 90% of the time normally spent on literature reviews*

Finding accurate epidemiology data has traditionally been a very time-consuming and resource intensive task. Epidemiologists and literature reviewers typically spend weeks or months searching for the data needed to inform drug development decisions, healthcare policy and public health best practice, but complete coverage is difficult and important evidence can easily be missed.

Causaly offers a new approach, with interactive and user-friendly access to prevalence, incidence and morbidity rates for over 43,000 diseases, clinical findings and rare indications. Using artificial intelligence and machine-reading, Causaly is able to process, extract and visualise epidemiology data from millions of publications, similarly to how a human reader would do it – with the main difference that Causaly is able to find this information in seconds.

Prevalence and incidence data for 43,000 diseases and clinical findings

Get answers in seconds for improved decision-making

Causaly is a fast and efficient synthesis tool for commercial departments within pharma, biotech, and other organisations with similar needs.

For: Health Economics, Market Access, Business Development & Licensing

- Provides up-to-date epidemiology data in seconds
- Understands entire disease landscapes by geography, age and other population groups
- ✓ Saves ~ 90% of the time required for desk research and literature reviews*
- Fast ROI work-flow integration and time savings increase productivity

90% time savings and added value through extra findings and detail

Causaly finds additional epidemiology data that may be missed in literature review by machine reading full texts of biomedical literature, not relying on not relying on titles and abstracts alone.

- For: Epidemiologists, Information Specialists, Regulatory Departments and Authorities
- Instantly provides a targeted set of up-to-date articles, relevant to the sub-population of interest, such as geography, age group and gene mutation
- Finds additional documents compared to systematic literature review, through full text screening
- Saves ~ 90% of the time required for desk research and literature reviews*
- Fast ROI work-flow integration and time savings increase productivity
 - ★ Data shows that Causaly saves up to 90% of the time required for an information specialist to conduct a targeted literature review.

causaly



CASE STUDY

Using Causaly to find incidence and prevalence data of Systemic Lupus Erythematosus

Causaly allows researchers to interact with and filter the evidence according to their specific needs

In Causaly's Epidemiology module, the user starts by searching for the disease of interest, in this case 'SLE'. Causaly presents incidence and prevalence data, providing an overview of the epidemiological data found in the literature corpus.

Search results can be further focused by using filters such as population context filters, including age range, geographic location, ethnicity and country.

User-friendly, visual interface

Ŀ		
Ŀ		
•		

Causaly is easy to use for the non-expert users, but also allows expert users to create advanced search strategies.



The image below shows a search constrained on evidence related to adult age groups in Korea. In this specific case, 16 articles with 29 extracted incidence/prevalence values were found.



Full text article with prevalence data

Causaly highlights the article in which the data is found and displays the sentence from the paper, together with its data values. Users can easily sort the results, share the search strategy and export the articles to Excel or can explore relevant literature in more depth by clicking on the article title.

Within seconds, researchers are able to find and interact with epidemiology data that is otherwise hidden within the vast biomedical literature corpus, and can tailor the information exactly to their needs.

Causaly provides accurate and high-quality data, as well as value-adding articles compared to literature reviews

The quality of the data can be explored by comparing information retrieved by Causaly to the findings presented in the systematic review of SLE by Rees et al. (2017).

After the title and abstract screening process, the systematic review found 168 potentially relevant studies and this is after the authors had screened 4936 articles retrieved in the initial search, the majority of which were not relevant. Causaly finds 929 articles that are potentially relevant.

To compare the actual data, an example population reported in the systematic review can be compared with the same population found using the filters in Causaly. Taking incidence of SLE in the UK population as an example, Causaly retrieves all of the studies included in the systematic review, as well as a number of others not included. **Causaly is providing extra epidemiological data** that researchers can explore to determine whether or not it is useful, giving them a more comprehensive overview of the topic than if they had relied on the review alone.

Causaly overcomes the vulnerability of keyword search strategies by machine reading full text articles

Most curated databases and traditional search strategies only consider abstracts, which is why keyword search strategies will not capture all relevant articles. Causaly is able to find additional epidemiology data without adding noise, by machine-reading full text articles. These have ten times as many data points compared to abstracts, thus yielding extra findings and detail.

The important difference is that a systematic review can take months to complete, whereas Causaly is able to find comparable information as well as value-adding articles in seconds, while at the same time being user-friendly and easy to integrate with existing workflows. Data comparing Causaly with targeted literature reviews shows that Causaly can lead to 90% time savings for information specialists; e.g. desk research task that would normally take 5 days can be completed in half a day.

causaly

Targeted epidemiology data in seconds ensures high ROI





High ROI by saving up to 90% of research time*

Causaly saves approximately 90% of the time normally spent on targeted literature reviews, enabling valuable expert resources to focus on more innovative research activities.

Enables faster decisions and reduces time to market

Causaly increases productivity and output for desk research and literature reviews, and enables faster, more informed decisions and earlier regulatory submissions, thus reducing time to market.



Adds value to systematic reviews through full text screening

Causaly is able to use full text articles to find epidemiology data without adding noise, thus yielding extra findings and details.



Broad coverage of diseases and population groups

Causaly covers epidemiology data for over 43,000 diseases and clinical findings, including rare and niche indications. Users can select patient populations by geography and demographic factors as needed.



Always up-to-date

Each month more than 100,000 new publications are machine-read and added to the over 30 million articles already included. Users can also subscribe to new epidemiology data of interest, to stay up-to-date with recent developments.



Reproducible search strategies and work flow integration

Searches in Causaly are transparent and reproducible and search strategies can be saved and shared with other users.

* Data shows that Causaly saves up to 90% of the time required for an information specialist to conduct a targeted literature review.

Accurate and up-to-date epidemiology data for over 43,000 diseases and clinical findings

