

# Visualizing and Predicting Heart Diseases with an InteractiveDash Board

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# Heart Disease Prediction

Heart disease describes a range of conditions that affect your heart. Diseases under the heart disease umbrella include blood vessel diseases, such as coronary artery disease, heart rhythm problems (arrhythmias) and heart defects you're born with (congenital heart defects), among others.

The term "heart disease" is often used interchangeably with the term "cardiovascular disease". Cardiovascular disease generally refers to conditions that involve narrowed or blocked blood vessels that can lead to a heart attack, chest pain (angina) or stroke. Other heart conditions, such as those that affect your heart's muscles, valves or rhythm, also are considered forms of heart disease.

Heart disease is one of the biggest causes of morbidity and mortality among the population of world. Prediction of cardiovascular disease is regarded as one of the most important subjects in the section of clinical data analysis. The amount of data in the healthcare industry is huge. Data mining turns the large collection of raw healthcare data into information that can help to make informed decisions and predictions.

About 610,000 people die of heart disease in the United States every year—that's 1 in every 4 deaths.<sup>1</sup>

Heart disease is the leading cause of death for both men and women. More than half of the deaths due to heart disease in 2009 were in men.<sup>1</sup>

Coronary Heart Disease(CHD) is the most common type of heart disease,killing over 370,000 people annually.

Every year about 735,000 Americans have a heart attack. Of these, 525,000 are a first heart attack and 210,000 happen in people who have already had a heart attack.

## **IBM Cognos Analytics:**

IBM Cognos Business Intelligence is a web-based integrated business intelligence suite by IBM. It provides a toolset for reporting, analytics, score carding, and monitoring of events and metrics. The software consists of several components designed to meet the different information requirements of a company. IBM Cognos has components such as IBM Cognos Framework Manager, IBM Cognos Cube Designer, and IBM Cognos Transformer.

IBM has undergone a large number of mergers and acquisitions during a corporate history lasting over a century; the company has also produced a number of spinoffs during that time.

The acquisition date listed is the date of the agreement between IBM and the subject of the acquisition. The value of each acquisition is listed in USD because IBM is based in the United States. If the value of an acquisition is not listed, then it is undisclosed.

With IBM Cognos Go! Dashboard, interactive dashboards containing IBM Cognos content and external data sources can be created to fit the information needs of an individual user.

The following items can be added to a dashboard: Report objects, they are displayed in a Cognos Viewer portlet. Report parts such as lists, crosstabs, and charts are displayed in interactive portlets. Lists or crosstabs can be displayed as a chart and vice versa. Content can be shown or hidden dynamically by the use of sliders and checkboxes. The Cognos Search portlet allows searching for published content. In addition, Web links, Web pages, RSS feeds, and images can be displayed on the dashboard.

The user interface has two modes: In the interactive mode, existing dashboards are viewed and interacted with, and the creation and editing of dashboards can be done in assembly mode.