

CHISU Results in Action

Leveraging Software to Improve Data Visualization at the Institute Of Public Health of Serbia “Dr. Milan Jovanovic Batut”



Power BI training participants, IPH Batut, February 20–23, 2023.
Picture: CHISU.

BACKGROUND

In the Republic of Serbia, the only legally defined institution for collecting medical data is the Institute of Public Health (IPH) Batut, whose network consists of 24 institutes of public health that collect data from health facilities and send it to IPH Batut.

As custodians of health data, analysis and interpretation are an important part of the job performed by employees of IPH Batut. However, because of understaffing, they do not always have the ability to monitor and use new technologies for doing this work. This is why IPH Batut turned to CHISU to support training for employees on the use of Microsoft Power BI software, which is a powerful tool for creating data visualizations. Excel and Power BI are Microsoft’s tools for data processing and graphical rendering. Although both tools can process large amounts of data, there are significant differences in how

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data is processed in both tools. Excel works with tabular data, thus enabling people to use a wide range of data processing functions. On the other hand, Power BI is intended for advanced data analysis with the ability to create interactive visual scans. Since IPH Batut uses a great deal of data, it was easy to choose a pair of datasets with which to train employees—and that way, they could work more quickly, efficiently, and independently on new datasets in the future.

STEPS TAKEN

IPH Batut and CHISU decided that employees would receive basic tool training, and after that an advanced course would be organized for those who wanted to learn more and improve their skills with the tool. The institution management defined the lists of employees to be trained (79 in total; 54 female and 25 male participants) and provided space for the training; CHISU provided a certified Power BI trainer and made a training plan. Basic training was conducted and the employees were very satisfied with what they learned, because after many years of working in Microsoft Excel, Power BI came as a natural upgrade and allowed them to broaden their horizons around data visualization.

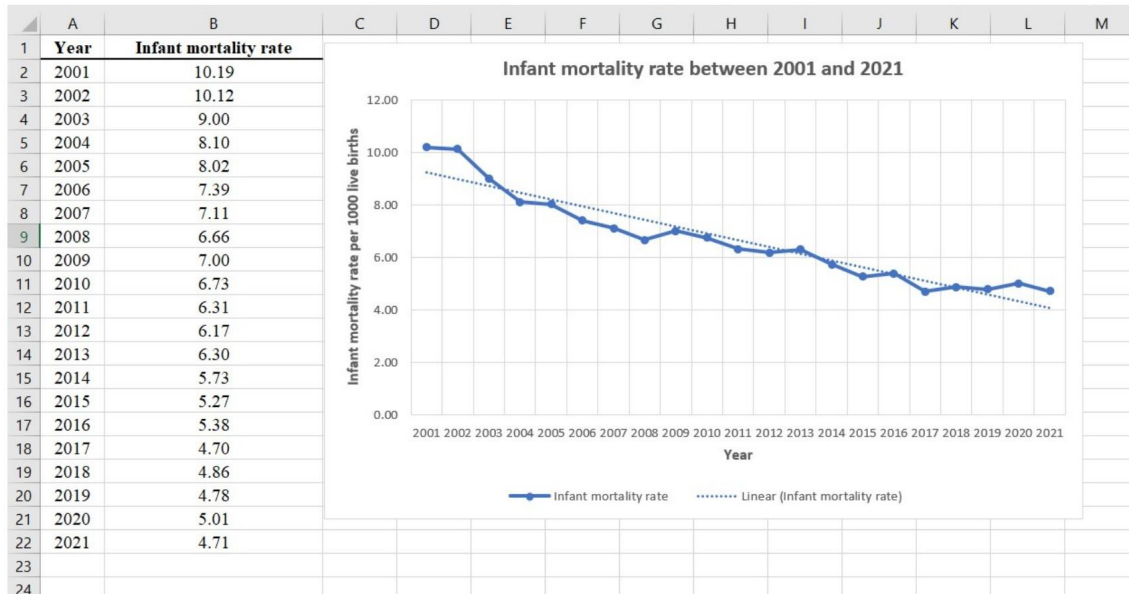
About 20 people who passed the basic advanced course were trained on more advanced techniques for improving data visualizations using Power BI. During all this, training was organized for administrators working in the information technology (IT) department of IPH Batut so that the Institute can install and maintain Power BI instances.

RESULTS + NEXT STEPS

Thanks to CHISU's support to the IPH Batut, employees have acquired new skills and are now trained to independently make new analyses and visualizations of their large volume of data. "This has been a very important support for us and we would like it if you could provide us with the continuation of this type of education in the next year," said Ivan Ivanovic, Deputy Head of State, Director of IPH Batut. IPH Batut is planning to expand the number of trained people and also include the staff from the network of 24 institutes located in districts.

Figure 1. (a) Example of reporting prior to the deployment of Power BI software; (b) An example of reporting after the application of Power BI software.

a)



b)

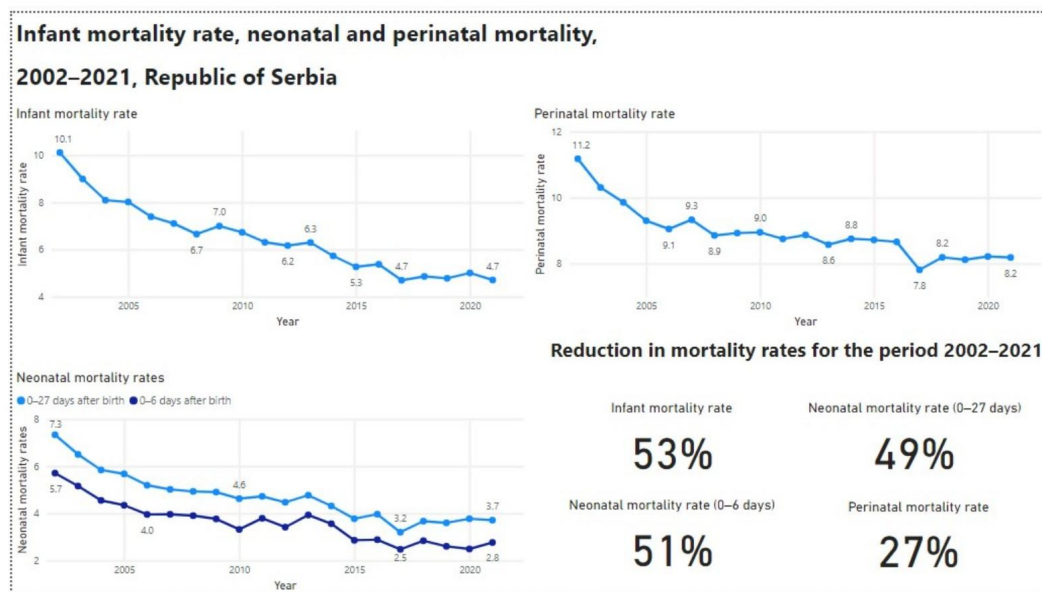


Figure 1a. shows a graphical representation of the reporting of infant mortality rates in the period from 2001 to 2021 done in Excel. In contrast, Figure 1b. shows the reporting with the same (and supplemented data: Perinatal mortality rate, neonatal mortality rate, and 20-year reduction percentage) done in Power BI.

IPH Batut staff are planning to apply these skills to the improvement of the presentation of data in such public facing products as the Annual Statistical Yearbook.



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