Multiple Sclerosis patients can be offered a wide range of immunomodulating therapies nowadays. Many new potential treatments for MS are in phase 2 or 3 clinical trials and will soon contribute to the broad choice of possible therapies. Disease modifying drugs (DMD) have different biological actions of proven efficacy. They can be prescribed according to the traditional strategy of 1st or 2nd line treatments, be ordered in line with the national guidelines, tailored to an individual patient’s medical status and predicted response, or administered along with individual neurologists’ preferences, restricted by local conditions.

Due to these reasons, which affect how DMDs used to be prescribed, the space and time patterns of MS treatment on national or county levels, are difficult to acquire and almost impossible to find out for selected groups of patients.

Visualisation and Analysis Platform - VAP offers a wide range of flexible, real-time reports, visualization and visualization options to monitor DMD treatment in MS. It opens the possibility to easily customize and compare diagrams on different administrative levels of healthcare providers. VAP satisfies the needs of detailed information on treatment patterns to decision makers, clinicians and researchers, which is otherwise challenging to gather.

Our intention was to create the possibility to perform cross sectional comparisons and monitor longitudinal follow-up of treatment strategies.

The diagram shows DMD treatment patterns in different counties of a selected group of SPMS patients with naïve treatments, further drug. Proportions between patients using specific drugs and not treated patients can be shown as well.}

The system is controlled by an intuitive user interface with reactive programming supported by simple graphical selection tools - a "control panel".

Conclusions

Real-time monitoring of DMDs in VAP is divided into two groups of customized diagrams: cross-sectional comparisons (current status or status at a selected time point) (Fig.1,3,5) and longitudinal comparisons (monthly and annually) (Fig.2,4,6).

The user can compare the drug use in multiple ways.

1. Started, discontinued and ongoing treatments can be selected. All, treatment naïve patients or secondary/further treatment patients can be chosen. Division by gender, clinical course, disease duration and age groups has been implemented.

2. Monitoring can be done on five different administrative levels: from a neurologist’s own patients (Fig.5), through the clinic (Fig.4,5,6), county, region, up to the national level (all figures).

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