To do this visualization I have selected **Tableau tool**. Tableau tool is most powerful, secured, and flexible end to end analytics platform for the data. Tableau is very easy to use interface, this helps the BI industry to analyze data. To visualize data there are few factors that influence the choices, which are audience, content, context, dynamics, and purpose.

**Audience:** Its important to adjust data representation to the target audience. **Content:** the type of data determines the tactics. **Context:** we may use different approaches to the way your graphs look and therefore read depending on the context. **Dynamics:** there are various types of data, and each of it implies a different rate of change. **Purpose:** the goal of data visualization also has serious influence on the way it is implemented.

For Hospital Management the main concentration is what vaccinations need to be produced to get that vaccine in stock for the patients to get that vaccine in time. Because the hospital management just need to know the availability of the medicine based on the demand of the patients should be predicted. To address the selected audience, my analysis of representing data in treemap. The use of this treemap is to display data in nested rectangles. Each rectangle has different size and color. So, I have considered few columns in the dataset to tell the story to the audience that are concentrated in the hospital managements point of view.

For healthcare workers interacting with families the main concentration of their story would be at what point a person should get the vaccination. Because those families should take the medicine they just need to know when to take the vaccination at the right time. To address the selected audience, my analysis of representing data in stacked bars. This is an extended bar chart from looking at numeric values across one categorical variable to two. Each bar in a standard bar chart is divided into a few sub bars stacked on each categorical variable.

For the lay public audience are to be aware of what vaccination are required for an age group, if not taken what are the risks and if taken what are the consequences. Because the public just need to be aware of the vaccination that are available for the treatments if at all they need to have them what are the consequences. To address the selected audience, my analysis of representing data in Circle View chart. This is one of the powerful visualizations for comparative analysis.

There are few tools that can do the complex data visualization and analytics, Microsoft azure power BI, ELK stack Kibana and Grafana.

**Power BI** is exceptional for its highly intuitive drag and drop interface, short learning curve and large integration capabilities, including salesforce and mailChimp.

**Kibana** is the part of the Elastic Stack that turns data into visual insights. It’s build on and designed to work on Elasticsearch data only. This exclusivity, however, dose not impede kibana from being the best data visualization tool for log data.

**Gragana** – a professional data visualization and analytic tool that support up to 30 data source including AWS, Elasticsearch and Prometheus.

**Order of presentation** I have chosen is initially hospital management’s perspective because total drugs or vaccines information will be received by the hospital management, next comes healthcare workers because doctors will choose what drug is required for certain patient and introduce them with the drug, and then finally come the lay public then public gets to know the drugs or vaccines work and success and risk rate. This is my order of presentation of different audiences.

**References:**

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