Analysis of quantities related to COVID-19 pandemic

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The presentation will review the course of the COVID-19 pandemic through numerical calculations in 17 countries covering the continents. Countries show surprisingly high degree of similarity over time in total cases, the amount of vaccines used, the number of vaccinated people and the number of fully vaccinated individuals. This provides an opportunity to develop inventory models that can be used in different countries. The first model seeks to minimize warehousing costs, while the second model guarantees security of supply at a given probability level with minimal storage costs.

Keywords: COVID-19 epidemic, saturation process, Cachy distribution, minimum warehousing costs, Hungarian inventory management model.