# Digitation of the Israeli Health System: Cost, Benefit, and Ethics

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## Background:

- Healthcare in Israel is universal and public, and participation in a medical insurance plan is compulsory;

- All Israeli residents are entitled to basic healthcare services, as a fundamental right;

- Healthcare is provided by 4 HMOs (Health Maintanance Organization);

- All major hospitals are public, and their budgets are set by the Ministry of Health;

- Israel is known for its high-quality medical services

## Digitation of health-care data:

- Israel has a huge data base on the health of the population;

- It includes each and every piece of medical information – from birth to death, for the whole population;

- The Israeli system has been a global pioneer in medical information computing.Information goes back many years, and new information is costantly added;

- Another advantage of the Israeli data bases is ethnic diversity. Because the soceity is very heterogeneous, the medical and genetic data are diverse and broad

## Benefit:

•In the emerging era of artificial intelligence (AI) and of personalized medicine, high-quality big data on millions of people, covering many years, is a highly valuable asset;

•The data will be used to develop personalized medicine, create tools for the identification and prevention of disease, improve existing drugs, and more;

•Blood samples, of a sample of around 100,000 citizens, will be collected from the four HMOs, to create a genetic database (called MOSAIC);

• Digital health data is available to researchers, aimed to boost research, that will further improve the Israeli health-care system;

• Digital health is believed to become an important local industry, with huge prospects for export of medical data. Thus, boosting economic growth;

• Due to the major benefits of digitation of the health-care system, the Health Ministry appointed a special official in charge of digital health. This job did not exist a few years ago, and today became a focal component of the country's health-care system

## Cost:

•The Israeli health-care system is fully computerized for many years. The cost of upgrading computer systems is therefore not a major cost;

•Two years ago the government allocated 922 million shekel (267 million US$), to upgrade computer systems, reorganize, unify and improve medical records, and develop the Mosaic genetic data base;

•Funds are allocated for the development and monitoring of ethical standards

## Ethics:

•There are major concerns about medical privacy and the public's property rights, over the information derived from the medical records of the population;

•A governmental committee composed of officials from the health-care system and representatives of the public examined the public's attitudes toward digitation and use of the health data;

# Ethics (continued):

•Surveys conducted by the committee indicate that " The public trusts the health-care organizations and is ready to let them conduct research with its medical data – but that it also wants to know exactly what researchers are doing, so that nothing happens behind their backs";

•Draft regulations, suggested by the Health Ministry (after 18 months of preparation), have been circulated to the relevant key players for review and comment.

• About 50 reviews have already been submitted and will be used for the review and fine-tuning of the regulations;

• Due to time limitation, I will not relate to the specifics and details of proposed regulations