



## The Danish National Board of Health uses SAS® to provide health data for all citizens

### Industry

Health Care Providers

### Business Issue

Increase, enhance public's ability to access health statistics.

### Solution

SAS® Enterprise Guide® and analytics allow for 24-hour, online self-service access.

The Danish National Board of Health uses an active IT strategy to, among other things, give Danes access to statistical information on health and illness. The latest access point is a Web site ([www.sst.dk](http://www.sst.dk)) where you can find statistical information relating to such subjects as hospital treatments, incidences of cancer, number of births and causes of death.

The Danish National Board of Health develops and uses a wide range of registers within the health sector that are used for health monitoring and planning, as well as research and administration. On the basis of the extensive data contained in the registers, the Danish National Board of Health draws up the Danish health statistics that are now available online.

“For a long time we have wanted to make health data more widely available and, in March 2004, we went live with the Web site. Anybody can use the site to find information and gain inspiration for such things as writing assignments, local political initiatives or benchmarking between the counties,” says Morten Hjulsager, Head of Health Statistics at the Danish National Board of Health.

### Freeing resources

In recent years, The Danish National Board of Health has experienced a growing interest in, and demand for, information and data in the health sector. Administrators, health care sector workers, politicians, students, journalists and patients have put forward questions and requests for statistics and documents.

The service to citizens represents an increasingly time-consuming burden that requires freeing up staff time to help the users.

“In order to serve the citizens better and free resources internally in the department to produce health statistics, we have chosen a solution from SAS that provides us with a clear and easy access to a wide range of health statistics information,” explains Thomas Quaade, principal in the department of Health Statistics at the Danish National Board of Health.

Statistical information previously only appeared one or more times a year in publications on the Internet or in book form, and now there is access to dynamic data around the clock. The information is developed and updated continuously. The users themselves are, to a large extent, able to define tables and determine the graphic presentation, or transfer the data to Excel spreadsheets and process it further there if it is to be used for documentation in reports and assignments.

### Dispelling myths

Politicians and administrators are able to make use of the Web site as a tool for submitting important questions regarding the health care sector. They are able to screen local information in order to investigate why the illness pattern looks the way it does in their own part of the country. This can provide the inspiration for a particular effort locally if, for example, there is an overrepresentation of specific illnesses. Or, one can view

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things from a financial angle and look at the connections between the hospitals' staffing and activity levels.

“Health data is able to dispel myths by documenting statistics. There has been some speculation, for example, that the number of suicides has been increasing, but according to the cause-of-death statistics, the number of suicides in Denmark has actually been decreasing and has actually been halved since the '80s,” states Quaade.

**Lifestyles give cause for concern**

The Web site makes it possible to delineate tables with regard to relevant factors such as gender, age, geography and diagnoses, among others. One can, for example, see from the data that the number of caesarean sections is increasing, that the number of cardiovascular illnesses is falling, and that there is a sharp increase in the number of cancerous conditions.

The so-called “lifestyle illnesses” have increased statistically, giving rise to more concern in this area. “I am personally convinced that there can be better prevention of lifestyle illnesses,” says Hjulsager. “If all Danes ate healthily, exercised regularly and stopped smoking, then this would be reflected in the statistics after a few years. But the causal explanations are something we leave to others, as they are not to be found in the statistical tables alone. We support causal explanations by means of a solid data foundation and are able to help in

asking the questions that make it possible to find explanations and causes.” He stresses that the Web site consists of aggregated data that is not intended for research on individual-based data.

**Easy to compare**

The Web site is also meant to be available for people who are not fully experienced statisticians. The objective is to make health data available to everyone, and not just specialists.

“We have helped the users on their way, so that they do not have to program and calculate everything themselves on the basis of the raw data,” says Quaade. “It is possible to make direct comparisons with, for example, counties by making use of age-standardized intervals that constitute a calculation model that adjusts differences on the basis of age, and thereby makes it possible to effect a direct comparison between a ‘young’ county and an ‘old’ county.”

Whereas users previously ordered the data they needed, the self-service page affords everyone the opportunity to search not only what they are specifically looking for, but also to look for new connections and thus gain further knowledge, faster. The tables are interactive and constantly updated, while new functionalities are continuously developed.

“We very much want to be involved in qualifying the health care debate,” says Hjulsager. “And when we are able to

improve efficiency with a solution that makes it cheaper in the long-term while also increasing the service levels, then we feel that we are able to live up to the Danish National Board of Health's management requirements in relation to the users.”

**Running a complex system**

SAS has developed a solution at the request of the Danish National Board of Health that has further developed and created Web site content and defined functionalities. SAS solutions run the underlying statistics each time a user activates a search criterion and a table is to be produced.

“We wanted a flexible and open solution with interactive figures and tables. We have achieved this with the help of a range of adapted SAS solutions. The preparation of data takes place in SAS Enterprise Guide. As this was an entirely new area we were moving into, we cut out the point-and-click functions and worked with traditional SAS programming run in SAS Enterprise Guide, because it went faster. We are very satisfied with the solution and are curious to see who will be using it,” concludes Quaade.

The Danish National Board of Health has made the strategic choice of using SAS solutions for statistical analysis because they afford flexible, speedy and powerful access to the Danish National Board of Health's constantly growing volumes of data in the central registers.



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