

Roundtable discussion "Matching data and resources"

By Peter Posch

"Data" is everywhere and unstoppable, but the starting point is difficult as the term comprises areas such as digitalization, data analytics or internet of things/sensors to name a view. Each of these areas is very heterogeneous and quickly developing. Without specific knowledge a full assessment of current developments is likely to fail short. Thus we focus on what data will do to the world of healthcare management and we find it will lead to a system which provides more precise and personalized services, e.g. precision medicine.

During this process, as Frank points out, data will drive consolidation of small providers as they cannot keep up with the challenges and changing demand from the user.

But before the data really unfolds its changing powers we will need to figure out three important elements. Firstly the question of privacy, so where is data stored, who has access to which part of the data and how to ensure anonymization and encryption. Acknowledging that no system will provide full security we have to ask ourselves how valuable privacy is compared to the new services provided (and whenever something is provided without charge these days, your data is often the product being sold). The second and closely associated question is the ethical dimension such as do we really want a world where risk-adjusted insurance yields to sky high premia for the high risk patient? Also with data and prediction models in place do we have the right not to know the results (Thomas' point). And finally: what to do with all the IT infrastructure which already is a large part of companies' budget and will most certainly increase in complexity.

We consider further challenges along the prototypical model line of input → processing → output. On the input side the data collection and validation process will be highly different depending on the intended usage and the collector. The processing itself, the tools used to analyze or make use of the information, is subject to a model error. As example machine learning algorithms are often in reduced form. Finally the output of any model needs a solid interpretation and the user of such output an education on the caveats.

Finally Liz proposed that a "data converter" is needed for different dimensions, firstly across systems such as providers and also countries (much like a travel converter), but also between statistics and us humans.