

Project Description

tive medical care. A heated discussion is going on about a new legislation aiming at up to 20% reduction of drug price. One of the proposed measures is the substitution of branded drugs with cheaper generic drugs.

In the medical practice a physician typically needs pharmaceutical information on the indication and availability of drugs, administration of the drugs, dosing, length of the treatment, etc. With the rapid development and breakthroughs in pharmacy science and technology, drugs and the associated drug application information are getting ever more complex. This not only increases the information demand by the general physicians, but it also places more risk and liability to the physicians, manufactures and other parties in the medical sector. Furthermore, the latest medical science development is a shift from individual drug-based treatments to more complex multiple drug treatments. In addition, the government cost-reduction campaign requires healthcare professionals to be more cost conscious in their prescriptions, which adds and emphasises economic dimension to the information needs.

In the dynamic healthcare environment the role that pharmacists play are also changing. General physicians are experts in medical science and focus on proven knowledge and experiences, while the pharmacists are specialised in the science of pharmacy. Both knowledge domains are essential in the modern medical practice. The emerging prescription pattern in the Dutch healthcare is that physicians and pharmacists are jointly making prescription decisions: often the doctors make the generic decisions and the pharmacists decide the brand of the drug. It is interesting to note that the purchasing group of pharmaceuticals is being enlarged from the individual doctors to the combination of the two professional groups.

Together, these changes in healthcare indicate a strong need for the integration of information and knowledge of pharmaceuticals. Currently a number of experimental projects are going on in the medical field in order to, apart from the planned cost reduction of healthcare, support the healthcare professionals to better cope with the increasing complexity of pharmaceutical information and the need for knowledge integration. The Dutch FTO discussion groups (Pharmacy-therapy discussion project) is a typical example in this regard.

Goals of the Project

Based on our findings so far as well as with the identified information needs of the pharmaceutical information system, the next phase of Pharmatica project is planned to (1) design the best way of structuring, integrating the relevant information resources at a high level integration of the relevant information resources, and (2) representing it to the users, e.g. the FTO discussion groups. The key element of the system design is not the individual information elements or the information links from one component to the other, but a value-added knowledge component: the overall information structure that integrates various information resources and the suitable navigation capability that enables the users to view and use multiple information resources in the way they desire. The goal is to build a prototypical pharmaceutical information platform system on the Web including pharmaceutical product comparison, doctor - pharma company/research interaction and trading features and to study it under the perspective of network redesign and changing forms of interaction in electronic commerce. By doing so, we expect to provide the healthcare professionals with new opportunity for high leverage utilization of the complex and dynamic pharmaceutical application information, and ultimately, for a more effective and efficient healthcare.