new forces. These changes will also affect the medical system and the way staff and patients relate to each other and to the new array of digital machines. Are the changes reason for concern? Absolutely, but they are also rife with chances. For that we will have to re-invent parts of our lives.

O4 Intelligent IT in adverse healthcare event prevention and control

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Why intelligent IT in healthcare? In answering this question, the topic's complexity, responsibility, timeliness, research, and innovations will be touched. What are the fields of action? The examples will include drug-drug interactions, AMR and HAI surveillance, clinical decision support, clinical monitoring and alerts, and personalized medicine.

Who are the partners for workable solutions? Among them are clinical experts, knowledge engineers, IT specialists, researchers, and also administrators and health authorities.

What are the potential aims and outcomes? Beneficial outcomes reach from reduced adverse events, optimal diagnostics, therapies, and patient management to improved resource allocation and cost-benefit ratio.

Now, we come to "How intelligent IT works in healthcare?". We will differentiate between big "raw" data mining, clinical text mining (e.g., Dr. Watson), as well as structured knowledge design approaches (e.g., evidence-based rule and guideline systems, medical expert systems) and explain their backgrounds, methods, results, and perspectives.

A number of clinical examples are given: clinical alerts, reminders, and score calculations, HAI surveillance and monitoring, adverse drug event monitoring, and mobile app laboratory test interpretation.

O5 Same principles, different practices: diversity in antibiotic prescribing practices across different countries and continents

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The reasons for the uneven geographic distribution of antibiotic prescribing are not fully understood. For instance, there are striking differences in the volume and pattern of antibiotic consumption between Asia, North America and Europe. Disparities may be explained by several determinants:
1. surveillance methods;
2. infection control practices;
3. availability of diagnostic tests influencing antibiotic prescribing practices;
4. population characteristics and patient case-mix;
5. cultural factors (e.g. human behaviour and handling of uncertainty);
6. factors related to the healthcare systems and available resources; and
7. political commitment.

Clearly, effects exerted at the macrolevel by the healthcare system and the political environment contribute substantially to the observed diversity in antibiotic prescribing. In my talk, I will outline useful lessons that can be learned from the experience of different countries in Europe and the United States. I will cite different examples and present recent publications that demonstrate progress in antibiotic stewardship.

O6 Understanding infection control non-compliance: can behaviour theory help?

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Despite the ever increasing scientific literature, most healthcare institutions continue to face major challenges in achieving effective compliance with infection prevention and control (IPC) policies. One of the main reasons for this conundrum lies in the fact

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