



## Fulfilling German regulations on the prevention of infections by using SNOMED CT

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### Audience

Actors in health care systems, especially German.

### Objectives

Benefits of the use of SNOMED CT for providing semantic interoperability in electronic health records.

### Abstract

In Germany all necessary regulations and obligations concerning the prevention of infections are determined in the law on the prevention of infections (IfSG). The IfSG's 6th and 7th article summarizes the modalities in the management of notifiable infectious agent data and infectious diseases data. Each identified notifiable infectious agent and relating infectious disease has to be transmitted to the relevant health authority. The common use of standardized information technology is not state of the art [1]. Proprietary ways of transmission inherit threats like deficient or incomplete availability of data. According to the IfSG, the documentation of notifiable infectious agents and relating infectious diseases is carried out by the use of specific communication paper forms depending on German federal state regulations [2]. In these forms the infectious agent, the specimen and the method of the diagnosis have to be manually signed by the physician. In this approach, the applicability of SNOMED CT shall be tested in the domain of diagnostic findings respective notifiable infectious agents determined in the German IfSG. If SNOMED CT fulfills the requirements it provides a serious room for improvement in the management of infectious data in Germany. Within this research, all notifiable infectious agents specified in the IfSG are translated into English language, because there is no validated German version of SNOMED CT, and then entered into the "CliniClue®" SNOMED CT browser. The entirety of the notifiable infectious agents that are mentioned in the German IfSG is represented in the terminology SNOMED CT at 100 percent. The results demonstrate that SNOMED CT is suitable for the display of relevant diagnosis data. Furthermore it is possible to fulfil all regulations of the specific communication paper. For example, the detection of Adenovirus is only notifiable in form of a conjunctival swab. This can be done via postcoordination in SNOMED CT or in comparison with other recognized medical terminologies, for example LOINC®. It is obvious that the use of SNOMED CT is feasible to provide structured information from laboratories and physicians to the local health authority. An unimpeded information transfer depends on the correct insertion of SNOMED CT terms in HL7 documents. Due to the absence of a validated German version of SNOMED CT the results of this investigation are transferrable to a limited extend. A further barrier can be found in the fact that Germany is not a member of the International Health Terminology Standards Development Organization (IHTSDO). Irrespective of these facts, SNOMED CT shows obvious advantages in this field and an implementation of the terminology can be recommended.

### References

1. E-Health Planungsstudie Interoperabilität  
[http://www.bmg.bund.de/fileadmin/dateien/Pressemitteilungen/2012/2012\\_03/120924\\_PM\\_69\\_Anlage\\_E-Health\\_-\\_Planungsstudie\\_Interoperabilitaet.pdf](http://www.bmg.bund.de/fileadmin/dateien/Pressemitteilungen/2012/2012_03/120924_PM_69_Anlage_E-Health_-_Planungsstudie_Interoperabilitaet.pdf)
2. Robert-Koch-Institut Meldebögen  
[http://www.rki.de/DE/Content/Infekt/IfSG/Meldeboegen/Meldungen\\_node.html](http://www.rki.de/DE/Content/Infekt/IfSG/Meldeboegen/Meldungen_node.html).