

Integration of In-clinic and Internet Based Remote Cardiac Device Analysis Data in the Electronic Medical Record

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Background: PM/ICD/CRT devices are among the most sophisticated therapeutic strategies in current cardiac practice. However analysis data from these devices are captured and stored in the patients medical record in a very primitive and fragmented way, most often on a single paper print-out. We present the first automated and complete integration of all PM, ICD and CRT analysis data obtained during implant, outpatient visits as well as remote monitoring data, in the patients electronic medical record using I.P.A.D.2 (Implantable Pulse Generator and Defibrillator Dataplace, SJM) and HL7 file communication. **Methods:** We have modified the existing software platform IPAD2 to capture all analysis data from the device analyzer, check the patients administrative data with the central hospital administrative system (HL7 communication) and send the data in .pdf format to the electronic patient record (EPR) (MediWeb/MedAr, Agfa). Analysis data (unscheduled alerts and remote regular checks) captured through Merlin@home, the remote monitoring website for SJ ICD and CRT devices, are also transferred into the patients electronic medical record. **Results:** We have transferred successfully in-hospital and outpatient clinic device analysis data from more the 300 patients in the central electronic medical record. Similarly, more than 250 device analysis data sets from 53 patients currently in remote follow up via Merlin@home, are transferred electronically into the EPR and combined with in-clinic follow-up data. **Conclusion:** We present a fully automated integration into the patients electronic medical record of all cardiac rhythm device analysis data, obtained at implant, during outpatient visits as well as internet based remote monitoring data. This set-up has improved significantly the quality of care delivered to patients with cardiac device implants and facilitates dramatically communication with referring cardiologists and family practitioners.