Preserving Security, Privacy of Health Passport Over Patient in Cloud

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Abstract: *The passport is an expandable document in which key personal, social care and clinical information is recorded. Everyday people move to difference places whether abroad or within the country and some people it might happen they forgot their health passport or they are not registered in any health sectors as a result it might be difficult to have treatment without a health passport. So we designed a Cloud health passport system which is secure, fast and private which will be helpful, using block chain algorithm to allow continuous updating by family and health professionals, acting as a 'live' synchronized record of changing need, service. The passport is set up by the patient (or their agreed representative) and carried on their mobile device across different healthcare settings using Dynamic Searchable Symmetric Encryption (DSSE). It stores demographic details and pertinent clinical information. By having a digital record of this information, valuable patient (and administrative) time is not wasted at registration, improving the patient experience. By incorporating an individual health identifier, it allows a patient to be readily identified across any healthcare setting. The option of storing the dates of upcoming appointments could lead to a reduction in the out-patient non-attendance rate currently estimated at 15%. The increased likelihood that important clinical information is filed to the correct patient record frees up more time for direct patient care.*

Keywords: Authorization Query, Cloud Computing, Personal Health Record (PHR), Privacy-Preserving Query, Intelligent Healthcare, Forward Security, Attribute Access Control, Searchable Encryption

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