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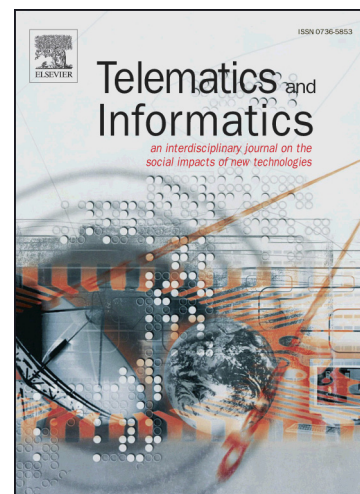
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## Privacy Management of Patient Physiological Parameters

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### ABSTRACT

Patient Physiological Parameters (PPPs) seem to be the most extensively accessed and utilized Personal Health Information (PHI) in hospitals, and their utilization by the various medical entities for treatment and diagnosis creates a real threat to patient privacy. This study aims to investigate whether PPPs access in a hospital environment violates patient privacy. If so, to what extent can we manage patient privacy while accessing PPPs in this environment? We investigated this question by analyzing questionnaire-based data from two Asian countries: Group A (China) and Group B (Pakistan). For data collection, we targeted those medical entities which were directly dealing with PPPs in their routine tasks. Results suggest that patient type directly influences the collection of PPPs: Group A (one-time=1.9, follow-up=1.06) and Group B (one-time=2.0 and follow-up=1.9). Both groups agreed that patients have the right to control their own PPPs. In both, doctors are the most trusted entity: for Group A, the Pearson Chi-Square with one degree of freedom is 1.414,  $p=0.234$ , whereas for Group B, the Pearson Chi-Square with three degrees of freedom is 4.511,  $p=0.11$ . Most of the Group A entities (92%) are familiar with unauthorized access of PPPs, while in Group B the level was only 35%. In Group B, only 35% of entities stated the purpose, specification and use limitations of PPPs. Doctors in both groups showed a high utilization of PPPs read authorization rights. This empirical evidence about PPPs usage in both countries will benefit health technology and improve policy on patient privacy.

Keywords: Patient, Privacy Management, Authorization rights, Asian countries, Patient Physiological Parameters (PPPs), Personal Health Information (PHI).

### 1. INTRODUCTION

Patient physiological parameters (PPPs) are a vital component for monitoring patient progress. Whether a patient is one-time or follow-up, monitoring of the PPPs allows timely detection of delayed recovery or undesirable events (J. Kause, 2004; P. Y. W. Sin, 2010; T.J. Hodgetts, 2002). Traditionally, these PPPs consist of blood pressure, body temperature, heartbeat frequency, pulse rate and glucose level, and so on. Therefore, PPPs are one of the highly utilized, accessed and recorded personal health information (PHI) in a hospital

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