Standardization and Impact of Clinical Guidelines Customization

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\textbf{Introduction}: One of the greatest challenges facing doctors and chronic patients is sustaining patient adherence to treatment recommendations over time. Patients struggle to meet long-term recommendations as they could contradict their desire to maintain their daily routine. Many doctors recognize this conflict and try to adjust long-term treatment recommendations to accommodate the patient's lifestyle and habits.

\textbf{Purpose}: We propose to improve the chronic patient care process by augmenting clinical practice guidelines with key personal categories that could affect clinical goals and treatment recommendations.

\textbf{Results}: After conducting interviews with 46 clinicians and 15 patients, we defined 17 key personal categories, e.g. level of patient support, daily routine etc. that can affect clinical decisions. Our approach is based on defining for each patient a Routine Personal Profile and adding other personal profiles for foreseen recurrent contextual conditions that differ from the routine profile (e.g., for the context of travel). The patient's physician will define treatment recommendation for each personal profile. The patient will be able to switch to a new profile while receiving appropriate recommendations for his specific current profile. This should make it easier for him to adhere to the treatment recommendations. In this paper we present three principles for augmenting clinical practice guidelines with personal categories and their effects into the guidelines: identify decision points in the clinical guideline where several
treatment options are offered, consider the most relevant personal categories to a given clinical guidelines, and define the effect of each personal category on the treatment recommendations. Based on these three principles, we will be able to add the personal categories and their effects to the clinical guidelines.

**Conclusions:** The paper presents the personal categories and uses a case study to illustrate the augmentation of a clinical guideline and the definition of three personal profiles. First results of using personal profiles to improve the motivation of patients to adhere to clinical guidelines show encouraging results.

**Key words:** Clinical Guidelines; Decision Support System; Customization