

TITLE

Awareness, sensing, quantified self and patient-Health Service interface

ABSTRACT

Information and communication technology lies at the heart of the human health care revolution. We introduce and discuss key scenarios in which hardware and software technologies capable of simultaneously sensing physiological signals process data in real-time to issue alarms, warnings, or simple recommendations to the subject or to the carers. In an aging population where diffuse comorbidities, mild to severe cognition impairment and inflammaging events require new paradigms of medical intervention there is an urgent need to shift medical care from institutions to the daily living environment. In addition to this clinical need, there is an economical urgency calling for a different type of care: the already very low ratio between care providers and care seekers will become even lower and the presently growing costs of assistance will soon become unsustainable. Information and communication technologies tools are already being proposed and studied to provide a solution to these problems, but much more is still expected. The emergence of body computing is an on-going revolution in hospitals and home caring where physicians, medical engineers and adhoc-trained personnel use handheld mobile devices as clinical sensor and computing tools (and support decision making in the future). In particular we will address the following issues: Personalised health care in mobile networks, wearable sensors capable of measuring cheaply and possibly not at all invasive for quantified self, i.e. gather, and learn from each other as self-monitoring and tracking and their potential effects of self-tracking on ourselves and society. The final aim would be a more quantitative and qualitative health- and cost- effective interface between patients and health service frameworks.