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NAMBP NTF

FNSNF

Towards cuffless blood pressure monitoring

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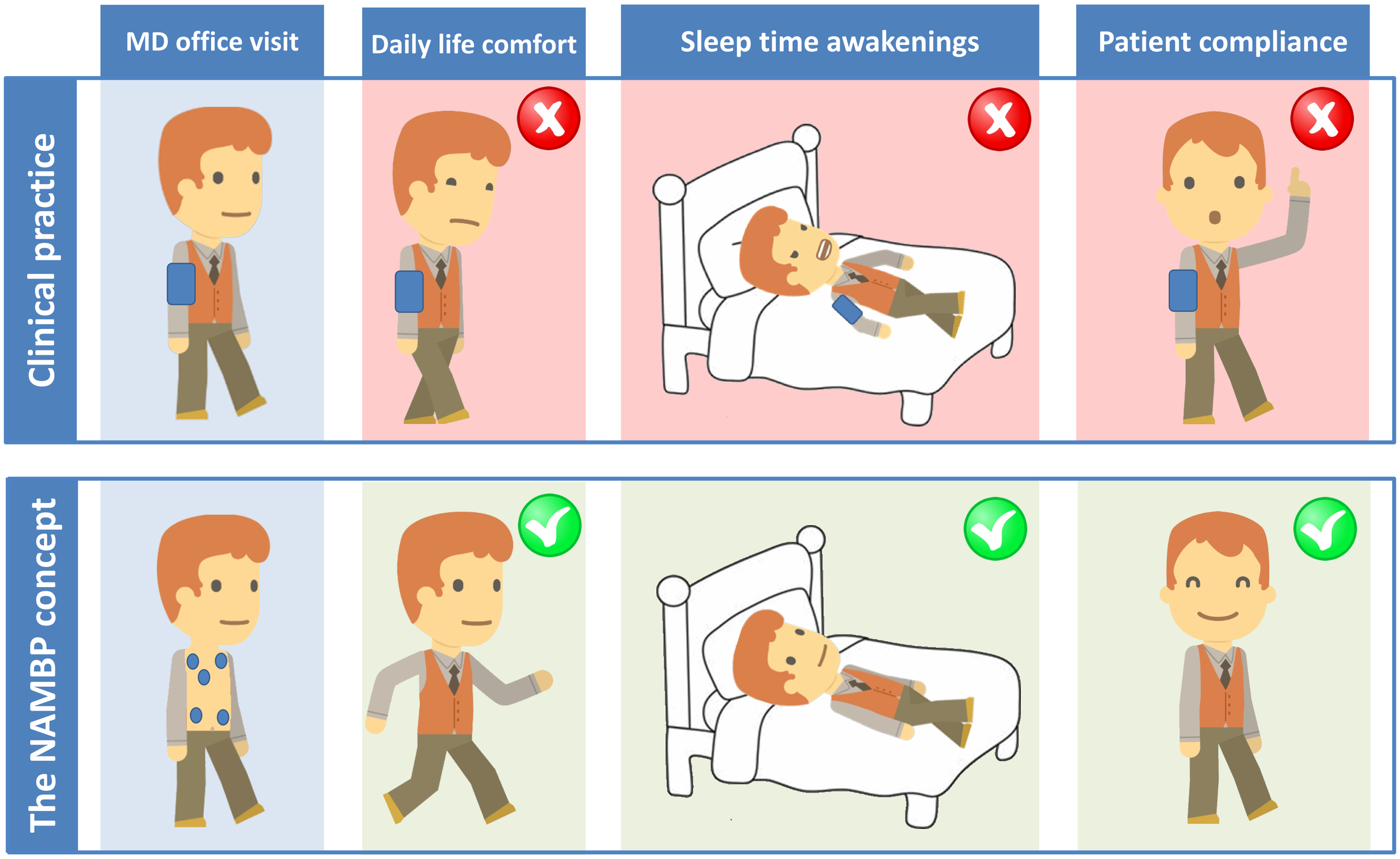
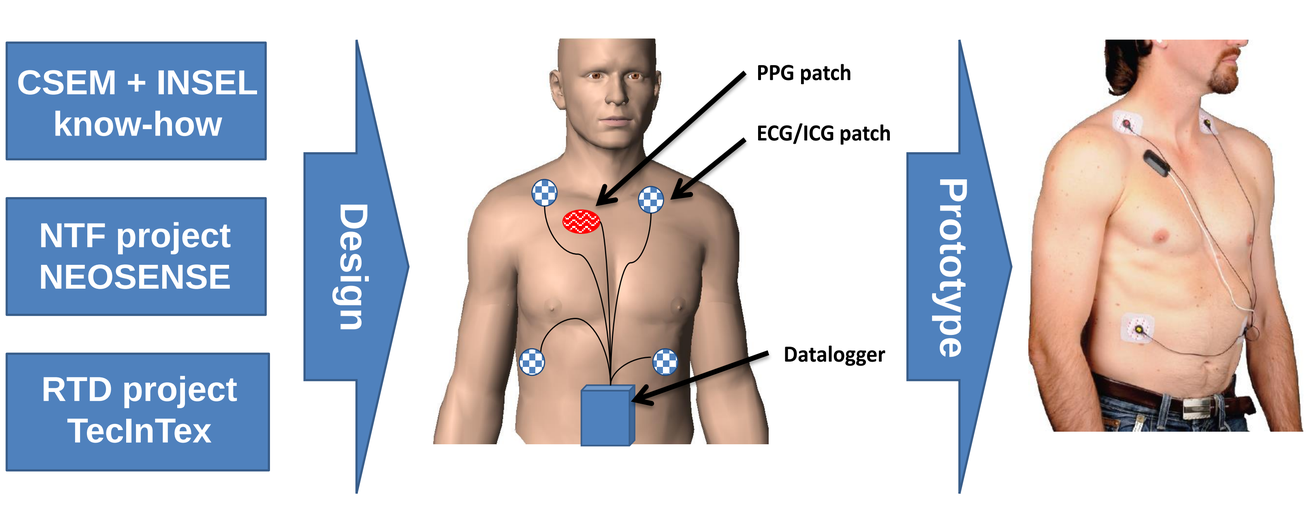
The need for CUFFLESS blood pressure



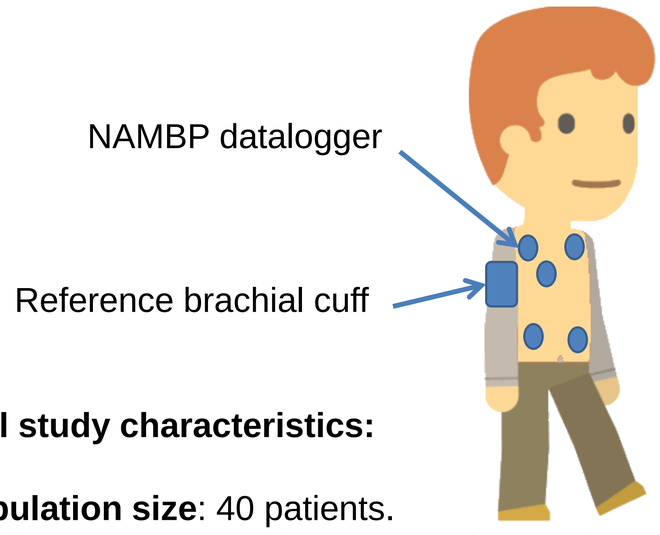
The NAMBP technology



The **NAMBP sensor** relies on the combination of three sensing technologies: electrocardiography (ECG), impedance cardiography (ICG), and multi-channel photoplethysmography (PPG) all measured at the chest region.

The **NAMBP multi-parametric processing algorithm** calculates the transit time required by arterial pressure pulses to travel from the aortic valve toward the subcutaneous vasculature. Any increase of blood pressure is associated to an increase in the velocity at which such pulses propagate along the arterial tree, and can thus be estimated from a decrease of the pulse transit time (PTT) parameter. After a calibration procedure, the NAMBP data logger translates measured PTT values (typically in the range of 40 to 80ms) into blood pressure values in terms of mmHg.

The NAMBP clinical study



Clinial study characteristics:

- **Population size**: 40 patients.
- **Study type**: comparative prospective study.
- **Rationale:** evaluate the accuracy of the NAMBP datalogger to measure blood pressure during sleep.
- **Acceptance criteria**: hypertensive patients requiring ambulatory BP measurements.
- **Protocol**: after visit at doctor office, patients go home for a 24h ambulatory BP exam including a reference brachial cuff and the NAMBP datalogger.
- **Reglementary issues**: currently preparation of Swissmedics and Kantonale Ethikkommission Bern.
- **Schedule**: study to start after summer 2015.