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Personalized SMS-text messages and check-list for initiation of medication for better blood pressure control: a cluster randomized controlled protocol for check and support study

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Background & Aim: This protocol describes a cluster randomized controlled study with Finnish primary care patients to test whether personalized SMS-text message support combined with a check-list for initiation of medication is more effective than usual care in controlling systolic blood pressure at first year of medication.

Method: The eight study centers are grouped to comparable pairs and randomized to function as intervention and control sites (2-cluster design). At least seventy participants for both groups are recruited by physicians when prescribing the first antihypertensive medication. The primary outcome of the study is the proportion of participants achieving the systolic blood pressure target at 12-months. Secondary outcomes include the proportion of patients that are evaluated to be well adherent to medication and the change in office blood pressure and home blood pressure.

Results and Conclusion (Discussion): Poor medication adherence is widely accepted to be the most important factor in failing to control hypertension and even 50% of hypertensive patients quit the antihypertensive medication during the first year of medication. Numerous interventions to enhance medication adherence have been developed but still majority of patients with antihypertensive medication do not achieve the blood pressure target in Finland and worldwide. To our knowledge, this is the first randomized controlled study focusing on the first year of antihypertensive medication and also the first trial combining personalized SMS-text message support with a check-list for initiation of medication. The study protocol includes obligatory factors for a modern study assessing adherence and disease management. These factors include sufficient study power, follow-up period of at least 6 months and clinically relevant outcome (blood pressure) together with subjective and objective measurement of adherence. Furthermore, the intervention is based on theoretical framework of information-motivation-behavioral skills model. If effective, the intervention is also simple and feasible enough to be carried out in wide-scale in non-research settings.