

# Evaluation of a digital therapy for uncontrolled hypertensive patients followed by general practitioners in a semi-rural area in France

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## Méthods

The digital therapy was designed by hypertension specialists and included

a touch-sensitive tablet (Vodafone smart tab 3G) and an automatic blood pressure, connected via Bluetooth to the tablet (ihealth, BKN-550BT), a web portal developed specifically for the study with access reserved for health professionals involved in the follow-up of hypertensive patients. The health data were hosted on an accredited server. - as software for the patient, several applications specifically developed to 1) perform home blood pressure monitoring over 3 days 2) monitor treatment compliance (GIRERD questionnaire) 3) detect excessive salt consumption (ExSel questionnaire) for the physician a web interface specifically developed to 1) know the results of the remote monitoring of each patient 2) help to follow the recommendations of the ESH for the associations of antihypertensive drugs 3) obtain if necessary the opinion of a Hypertension specialist after a request written by e-mail. 77 patients treated for uncontrolled primary hypertension at office visit despite the prescription of bi-therapy were randomized into 2 groups: a group in which the physician had access to functions 2 and 3 of the website, and a control group in which the physician did not have access to functions 2 and 3 of the website. All patients were instructed to use the 1 2 3 applications once every 3 weeks for a total of 3 months.

The patients included were 63±7 years old. 32.5% of patients used the entire program and completed 4 HBPM and visited the physician again at the final visit. The table shows the main results by randomization group:

## Results

	<u>baseline</u>	<u>3 months</u>
Office (digital group)	155/88	143*/86*
HBPM (digital group)	143/89	132*†/81*†
Office (control)	157/86	137*/86*
HBPM (control)	143/89	136*/86*
<u>Tri-therapies (total population)</u>	45%	82%*
<u>Good drug compliance (total population)</u>	30%	92%*
<u>Excessive salt consumption (total population)</u>	16%	16%

\*p < 0.05 baseline vs. 3 months

† p<0.05 digital vs. control

## Conclusions

A digital therapy developed by hypertension specialists is effective in improving hypertension control in patients followed by general practitioners in France. An improvement in the use and follow-up of antihypertensive treatments seems to be at the source of the efficacy of this digital therapy.