

Supplementary

Tables

Table S1. Comparison between BBPS assessment by the expert and self-assessment of patients in the control and intervention groups

Patient's assessment	Expert's assessment			
	Control		Intervention	
	<i>Good</i>	<i>Poor</i>	<i>Good</i>	<i>Poor</i>
<i>Good</i>	242 (92.4%)	20 (7.63%)	216 (93.1%)	16 (6.9%)
<i>Poor</i>	15 (93.8%)	1 (6.3%)	2 (100%)	0 (0%)

Table S2. Reasons for exclusion from analysis

Intervention group	Control group
<ul style="list-style-type: none"> – <i>Protocol violation:</i> <ul style="list-style-type: none"> • 02 patients did not have indication for colonoscopy • 01 patient was found to have anxiety disorder after randomization – 02 patients were excluded during endoscopy because acute problems were found – 07 patients were not qualified for a colonoscopy 	<ul style="list-style-type: none"> – Protocol violation: 01 patient was found to be on menstrual period after randomization – 02 patients: case report form not found – 03 patients were excluded because they were found to have contraindications to endoscopy: hyperthyroidism, chest pain (referred to cardiology), partial bowel obstruction – 03 patients were not qualified for a colonoscopy

Figures

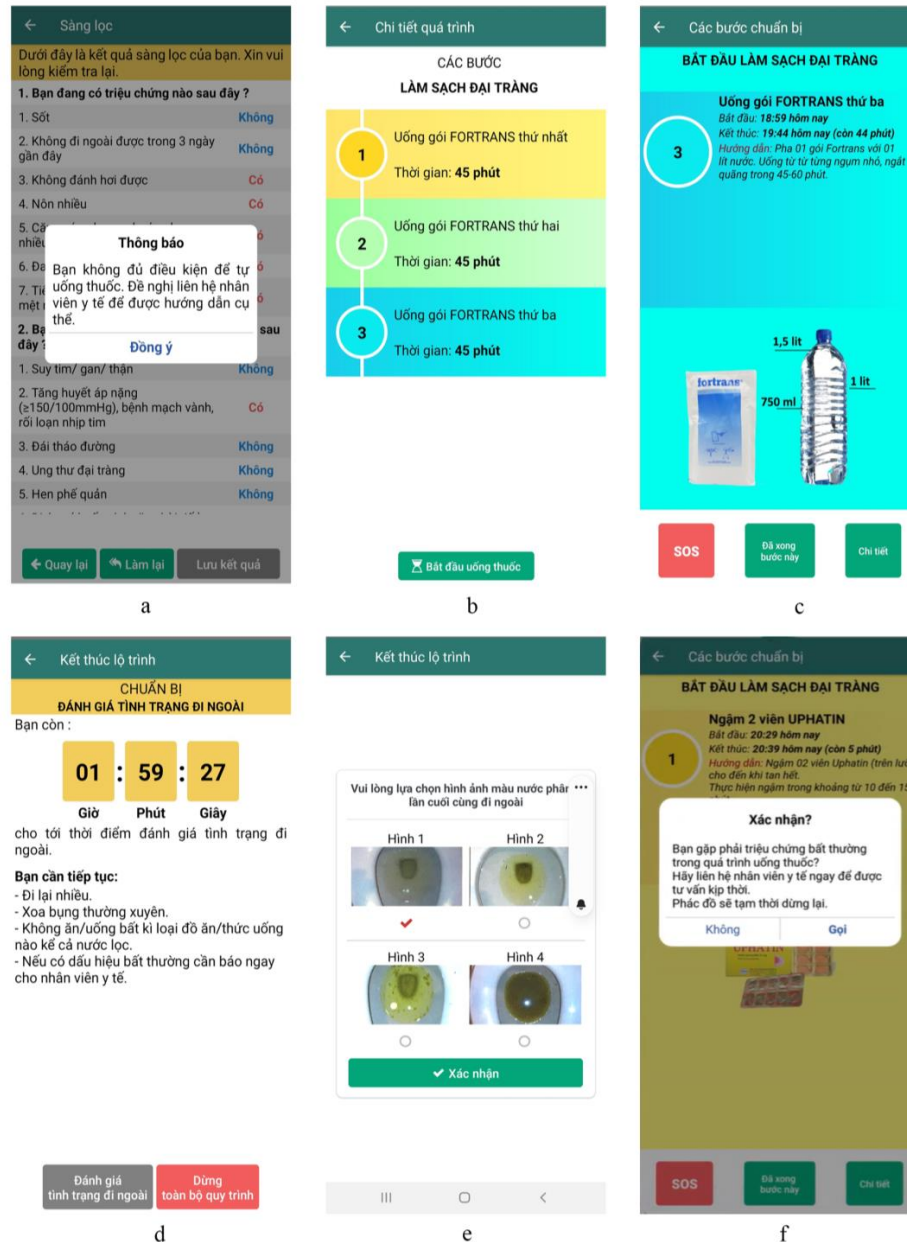


Figure S1. Screenshots of the mobile app

(a) After patients complete their screening, a message appears if they have any symptom or history that requires re-evaluation from physicians before colonoscopy. (b) An overview of the bowel preparation protocol. Information includes the name of drug and duration of intake. (c) Detailed instruction during bowel preparation. Start time, elapsed time, intake instruction, and photos of the drug are given to increase compliance. (d) After finishing the bowel preparation regimen, a count-down screen appears, showing the remaining time until patients can assess their preparation result. (e) When patients are ready to assess their preparation result, four images corresponding to different levels of cleansing are given. This is a self-assessment and can be repeated once if patients report poor cleansing. (f) If during bowel preparation, patients develop any problem that requires medical attention, they can press the SOS button. This screen appears to confirm that they are having some problems and offer to call the medical staff.

Instructions for bowel preparation with FORTRANS

FORTRANS X 3 SACHETS

1. Dosage: Dissolve each sachet of FORTRANS into 1 liter of water
2. Usage:
 - From 8 am to 11 am, slowly take up all 3 liters of mixed solution
 - The patient must not have breakfast and lunch on the colonoscopy day and do not drink milk or colored drinks. The patient can drink sugar water if hungry.
 - From 11 am, must stop drinking all types of water, including portable water (to avoid reflux under anesthesia)
3. Evaluation:
 - For an effective colonoscopy, the colon must be clear of feces.
 - Passing stools from 8 to 10 times or more. Bowel preparation is completed when the stool coming out is liquid and clear.
4. Attention:
 - One day before the endoscopy, the patient should eat foods that are easy to digest and low in fiber, not eat vegetables and fruits with small seeds, and have dinner early, before 6 pm.
 - While taking medicine, the patient should get up, walk around and rub the stomach frequently to stimulate bowel movements
 - Take medicine slowly and intermittently to avoid vomiting (if the patient vomit, must buy new medicine to make up for the amount the patient vomited)
 - Patients with chronic diseases (heart failure, hypertension, kidney failure, diabetes...) need to consult a specialist before taking medicine.
 - If there are abnormal signs when taking medicine (abdominal pain, abdominal distention, inability to defecate, vomiting a lot, vomiting blood...), stop taking medicine and contact a healthcare provider.
 - Patients indicated for pre-anesthesia must be accompanied by a relative and must not drive within 24 hours after the colonoscopy.
 - For a woman, if she is on a period, she cannot take medicine for bowel preparation. Please contact a healthcare provider for support.

Figure S2. Conventional instructions for a colonoscopy within a day (translated into English)

The protocol instruction of taking 3 hours of Fortrans sachet combined with walking exercise and abdomen massage.

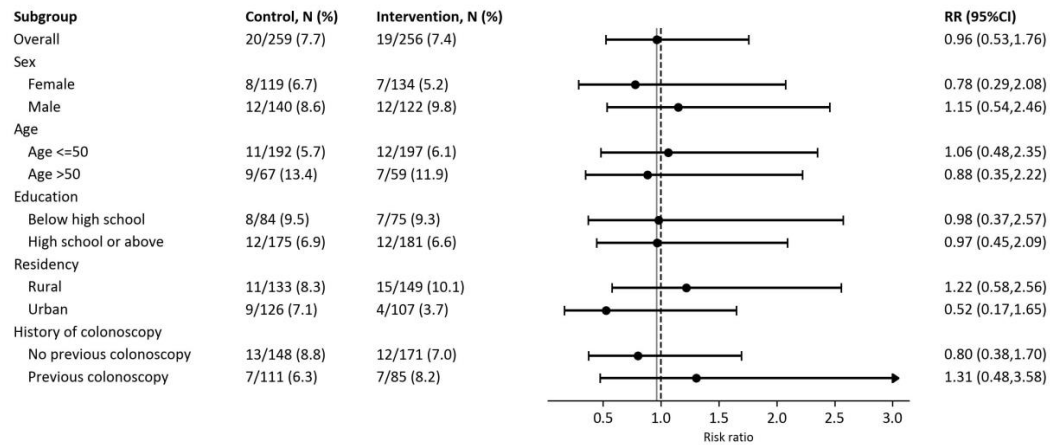


Figure S3. Subgroup analysis

The Forest plot shows the risk ratio (RR) of poor cleansing (total BBPS <6) comparing between the intervention and control groups. An RR <1 means lower risk of poor cleansing in the intervention group, which implies the effectiveness of the intervention in this subgroup. This effectiveness was demonstrated in female patients, urban patients, and patients who had no previous history of colonoscopy. On the contrary, the risk of poor cleansing was higher in the intervention group among male patients, rural patients, and patients who had previous history of colonoscopy. All these differences were not statistically significant.