

APPENDIX

Summary of qualitative feedback from patient and providers regarding barriers to colonoscopy preparation and action plans to improve preparation, arranged by major and minor domains.

Major domain	Minor domain	Feedback	Proposed action plan
Knowledge	Dietary preparation	Lack of knowledge regarding definition of a “clear liquid”	Provide an explicit definition of a “clear liquid,” and provide a litmus test to help distinguish a “clear liquid” from other liquids. The nurses explained that a “clear liquid” is best demonstrated by holding it over newspaper, and reading the newsprint through the liquid. They suggested including pictures of clear liquid (e.g., apple juice without pulp) and of opaque liquid (e.g., orange juice) over newsprint to visually display the differences
		Lack of knowledge about specific foods that are prohibited	Provide color photographs of food groups that are prohibited, and also provide specific examples of foods that are allowable
		Lack of knowledge about the importance of beginning a clear liquid diet 1–2 days in advance of the procedure	Emphasize the importance of a clear-liquid diet as a vital component of bowel preparation. Provide a detailed “checklist” of dietary steps for the 2 days preceding colonoscopy
		Lack of knowledge regarding how much fluid to drink	All providers uniformly agreed that patients do not drink enough fluids during their preparation. They suggested highlighting the importance of fluids, both in written and visual forms
	Completeness of preparation	Lack of knowledge about how to interpret the stool effluent—i.e., how to know “when I’m done.” Many patients believed that evacuation was complete after the first dose of medication, regardless of the appearance of the stool effluent	Providing a color chart would be helpful to monitor the degree of readiness, based on the physical appearance of the stool effluent
		Lack of knowledge about why complete bowel preparation is necessary. It was unclear to many patients that the success of the procedure is dependent on the patient and the provider	Provide explicit instructions the success of which partly depends on patients and their careful attention to detail. Several providers believed that patients need to view actual pictures of prepped and un-prepped colons. One provider recommended using a visual analogy, in which an adequate prep is likened to “driving on a country road on a clear summer day,” and an inadequate prep is likened to “driving on a snowy road in a blizzard on a gray wintry day.”
	Pre-procedural step sequencing	Lack of knowledge or misunderstanding of the sequence of dietary and medication steps to follow on each day preceding colonoscopy	All patients requested a clear and concise visual presentation of what steps to follow during the 2 days before and on the day of colonoscopy
	Timeliness of providing directions	Some patients had lost their directions. This occurred because the bowel prep regimen and directions had been sent, at times, months in advance of the procedure itself	Most patients believed it would be more effective to provide the directions 1 week before the test
	Beliefs	Perceived risk of colorectal cancer	Provide an explicit statement regarding the lifetime risk of colon cancer, such as “One out of every 16 Americans will get colon cancer.
		Perceived severity of colorectal cancer	Provide an explicit statement regarding the potential benefits of timely screening or surveillance colonoscopy, such as “If colon cancer is found early, then most people live. If colon cancer is found late, then only 5% of people will live.”
		Perceived benefits of following recommended behaviors	Provide an explicit statement regarding the potential benefits of meticulous adherence to instructions, such as “Colonoscopy can find cancer and save lives. But your doctor must be able to see in order to do the test right. If it is dirty on the inside, then your doctor may not see important things, like polyps or cancer, and may even have to do the test again.”
		Perceived barriers to following recommended behaviors	Provide instructions that are straightforward and frank. For example, inform patients that their stool should “look like urine—yellow and clear” upon completion of their prep. Similarly, explicitly inform patients that the success of the procedure depends, in large part, on them “getting the job done.” Finally, one provider suggested the following outright plea: “help us help you!”

(continued)

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		Belief that purgatives are “just too difficult to take.” Concerns included unpalatable taste, risk of severe diarrhea, and risk of nausea and vomiting	The nurses pointed out that many patients stop taking the prep because of the unappealing taste and/or smell of the bowel preparation. They suggested that patients be warned of this possibility, and to explicitly state, “Please do not let this get in the way of taking the medicine as directed.” Provide further explicit warnings about other common adverse events, including nausea, vomiting, and diarrhea. One provider introduced the concept of “one and done,” explaining that patients often respond well to the idea of “doing things right, and doing things once.” This includes actively commiserating with the patient that bowel preparation can be uncomfortable, but using this as motivation to ensure that the procedure need only be performed once