Appendix A. Search Strategy for Ovid Medline

Data Source	Database	Medline
	Vendor	Ovid
Limiters	English only?	No
	Time period searched	1948 – 5/05/2015
	Publications types	All
	Other	None
Search Strategy	1	exp COLORECTAL NEOPLASMS/
	2	((colorectal* or colo-rectal* or colon* or rectal* or bowel*) adj5 (cancer* or neoplas* or carcinom* or tumor* or tumour* or malignan* or polyp*)).mp.
	3	exp COLONOSCOPY/
	4	exp OCCULT BLOOD/
	5	(colonoscop* or sigmoidoscop* or proctosigmoidoscop*).mp.
	6	(((fecal* or faecal*) adj5 occult adj3 blood) or ((test* or screen* or dna) adj3 stool*1)).mp.
	7	FOBT*1.mp.
	8	or/1-7
	9	(decision* adj1 (aid* or tool*)).mp.
	10	9 and 8
	11	((share*1 or sharing) adj3 decision*).mp.
	12	11 and 8
	13	(decision* adj5 (multimedia* or booklet* or pamphlet* or brochure* or video* or website* or "web-site*" or package*)).ti.
	14	(patient* and (educat* or prefer*) and screen*).ti.
	15	(video* and educat*).ti.
	16	(attitud* and screen*).ti.
	17	or/13-16
	18	17 and 8
	19	10 or 12 or 18
	20	exp MASS SCREENING/
	21	screen*.mp.
	22	20 or 21
	23	(1 or 2) and 22
	24	3 or 4 or 5 or 6 or 7 or 23
	25	24 not 19
	26	PATIENT PREFERENCE/
	27	exp PATIENT ACCEPTANCE OF HEALTH CARE/
	28	exp CHOICE BEHAVIOR/
	29	or/26-28
	30	25 and 29
	31	DECISION MAKING/
	32	exp DECISION SUPPORT TECHNIQUES/
	33	exp EDUCATIONAL TECHNOLOGY/
	34	(decision* adj5 (multimedia* or booklet* or pamphlet* or brochure* or video* or website* or "web-site*" or package*)).mp.
	35	or/31-34
	36	35 and 30
	37	19 or 36

Appendix Table 1. Description of Studies Evaluating Patient Decision Aids About CRC Screening Included in the Qualitative Review

Authors, Year	Study purpose Study design	Country - setting Recruitment and subjects	Intervention and comparison(s)	Implementation of DA	Outcomes
Pignone et al. 2000[42]	To test whether a DA consisting of an educational video, targeted brochure, and chart marker increased performance of CRCS in primary care practices. ▪ RCT	U.S. – Clinical Recruited at 3 community primary care practices in 2 moderate-sized cities in central NC. ▪ n=249 ▪ Age 50-75 years	Aid: CHOICE Comparison: Control; Video of similar length about automobile safety and a brochure on automobile safety.	Conducted around a scheduled visit by a RA.	▪ Intention to ask for screening ▪ Discussed screening ▪ Screening test ordered ▪ Screening test completed ▪ Test preference ▪ Stage of change
Wolf and Schorling, 2000[50]	To assess the impact of informed consent on elderly patients' CRCS preferences. ▪ RCT	U.S. – Clinical Recruited at 4 primary care practices: a university-based, suburban, rural office, and a rural community health center. ▪ n=399 ▪ Ages 65 years and older	Aid: Verbal informed consent script with CRCS screening information Comparison: (1) DA; DA with absolute risk reduction information presented; (2) CRCS info; script briefly described FOBT & FSIG.	Conducted around a scheduled visit by a RA.	▪ Knowledge ▪ Screening interest ▪ Screening intention ▪ Perceived efficacy of screening
Dolan and Frisina, 2002[32]	To conduct a pilot test of a decision aid designed to help patients choose among currently recommended CRCS programs. ▪ RCT	U.S. – Clinical Recruited at 2 internal medicine practices in Rochester, NY. ▪ n=96 ▪ Ages 50 years and older ▪ Not up-to-date for CRCS	Aid: Investigator-developed computer-based DA Comparison: CRCS info; 470-word description of CRC, the screening tests, and testing schedule; urged to discuss CRCS w/ physician.	Conducted before a scheduled visit by a RA.	▪ Screening test completed ▪ Screening plan (intention) ▪ Decisional conflict ▪ Agreement between role preference (pre) and performance (post)

Authors, Year	Study purpose Study design	Country - setting Recruitment and subjects	Intervention and comparison(s)	Implementation of DA	Outcomes
Jerant et al. 2007[36]	To develop and evaluate a personally tailored interactive multimedia computer program to encourage CRCS. ▪ RCT	U.S. – Clinical Recruited at 6 of 10 offices in the University of California Davis Primary Care Network. ▪ n=49 ▪ Ages 50 years and older ▪ Not up-to-date for CRCS	Aid: Tailored, interactive, computer-based educational program Comparison: DA; Electronic leaflet w/ text, graphical and animated education about potential risks, benefits, harms, and inconveniences of CRCS. No personally tailored info, choice of how much educational content, or video clips.	Conducted around a scheduled visit by a RA.	▪ Knowledge ▪ Stage of readiness ▪ Self-efficacy for CRCS ▪ Perceived benefits and barriers of CRCS ▪ Program ratings
Ruffin et al. 2007[44]	To compare an interactive electronic web-tool to an existing stand-alone website on CRCS modality preference and CRCS use. ▪ RCT	U.S. – Community Recruited at urban (Detroit), suburban (Flint, Saginaw), rural (St. Joseph, Benton Harbor) communities in MI. ▪ n=174 ▪ Age 50-75 ▪ Not previously screened for CRC	Aid: Investigator-developed, interactive, tailored DA Comparison: CRCS info; Non-interactive CRC web site with similar content but primarily text, limited graphics w/ no direct CRCS comparisons, testimonials, or video presentations by healthcare experts.	Conducted at hotels, meeting rooms in malls, or other public meeting areas.	▪ Screening test completed ▪ Test preference ▪ Agreement between test preference and test completed ▪ Decision phase (not presented)

Authors, Year	Study purpose Study design	Country - setting Recruitment and subjects	Intervention and comparison(s)	Implementation of DA	Outcomes
Trevena et al. 2008[49]	To test the effect of a self-administered DA on informed choice in participants from a range of educational backgrounds and to assess whether their decisions are consistent with values about screening. ▪ RCT	Australia – Clinical/Home Recruited at 1 rural and 5 urban primary care practices in New South Wales. ▪ n=314 ▪ Ages 50-75 years	Aid: Investigator-developed paper-based DA Comparison: CRCS info; Consumer version of Australian CRCS guidelines; 3-page text w/ biennial FOBT recommendation; brief info about false-positives, no info about follow-up COL. No quantified outcomes, graphs/pictures, or personal worksheet or examples.	Intervention was mailed to the patients.	▪ Informed choice (adequate knowledge) ▪ Integrated decision (adequate knowledge and if values clear from Decisional Conflict Scale subscale) ▪ Knowledge ▪ Values clarity ▪ Screening intention ▪ Screening test completion ▪ Decisional conflict ▪ Role preference ▪ Role performance ▪ Satisfaction with decision ▪ Anxiety ▪ Self-efficacy (not presented) ▪ Program ratings
Griffith et al. 2008[35]	To compare in a pilot randomized trial, two CRCS DAs that differed in the number of screening options presented. ▪ RCT	U.S. –Community/Decision Lab Recruited from University of NC decision-support lab registry, newspapers, and email listservs. ▪ n=62 ▪ Ages 48-75 ▪ Not up-to-date for CRCS	Aid: CHOICE Comparison: DA; CHOICE DA with only 2 options presented: FOBT & COL. Introduction (5 min) and then able to navigate additional info.	Conducted at a decision laboratory.	▪ Knowledge ▪ Screening interest ▪ Test preference ▪ Decisional conflict ▪ Decision satisfaction ▪ Program ratings

Authors, Year	Study purpose Study design	Country - setting Recruitment and subjects	Intervention and comparison(s)	Implementation of DA	Outcomes
Smith et al. 2010[47]	To determine whether a DA designed for adults with low education and literacy can support informed choice and involvement in decisions about screening for bowel cancer. ▪ RCT	Australia – Community/ Home Recruited from a New South Wales electoral register; ▪ n=572 ▪ Age 55-64 years ▪ Avg. or slightly above risk for CRCS ▪ Eligible for CRCS ▪ Low literacy (educational attainment)	Aid: Investigator-developed DA with question prompt list Comparisons: (1) DA; DA without question prompt list; (2) CRCS info; Consumer information booklet developed for people invited to take part in the Australian national bowel cancer screening program.	Intervention was mailed to the patients.	▪ Informed choice (knowledge, attitude toward screening, and behavior) ▪ Knowledge ▪ Screening interest ▪ Attitude towards screening ▪ Screening test completion ▪ Decisional conflict ▪ Role preference ▪ Decision satisfaction ▪ Confidence in decision making ▪ General anxiety ▪ Worry about bowel cancer ▪ Program ratings
Miller et al. 2011[41] Duren-Winfield et al. 2015[53]	To determine if a web-based multimedia CRCS patient DA, developed for a mixed-literacy audience, could increase CRCS. ▪ RCT	U.S. – Clinical Recruited at a community-based university affiliated internal medicine faculty–resident practice serving a primarily SES disadvantaged patient population. ▪ n=246 ▪ Age 50-74 years ▪ Mixed literacy ▪ Not up-to-date for CRCS	Aid: CHOICE Comparison: Control; Program about prescription drug refills and safety which also incorporates multimedia and interactivity.	Conducted before a scheduled visit by a RA.	▪ Screening test ordered ▪ Screening test completed ▪ Test preference ▪ Change in readiness

Authors, Year	Study purpose Study design	Country - setting Recruitment and subjects	Intervention and comparison(s)	Implementation of DA	Outcomes
Steckelberg et al. 2011[48]	To compare the effect of evidence based information on risk with that of standard information on informed choice in screening for CRC. ▪ RCT	Germany – Insurance-based/Home Recruited from German statutory health insurance scheme. ▪ n=1,577 ▪ Ages 50-75 years	Aid: Evidence-based risk information in various formats Comparison: CRCS info; official German national leaflet on CRCS; has no quantitative information on risks or benefits, harms not completely communicated.	Intervention was mailed to the patients.	▪ Informed choice (good knowledge, attitude toward screening, and combination of actual and planned uptake) ▪ Knowledge ▪ Attitude towards screening ▪ Screening intention ▪ Screening test completed ▪ Combination of actual and planned screening
Schroy et al. 2011[45], 2012[46]	2011: To assess the effectiveness of a novel interactive computer based DA on SDM in the primary care setting. 2012: To assess the impact of decision aid-assisted SDM on CRC screening uptake. ▪ RCT	U.S. – Clinical Recruited at 2 urban ambulatory care sites: (1) Boston Medical Center - private, nonprofit academic medical center affiliated with the Boston University School of Medicine; serves mostly minority patients; (2) South Boston Community Health Center - affiliated with Boston Medical Center; serves mostly white, non-Hispanic low-income patients. ▪ n=665 (2011), 825 (2012) ▪ Ages 50-75 years ▪ Prior CRCS except FOBT	Aid: Investigator-developed DA with Your Disease Risk (YDR), a personalized risk assessment. Comparisons: (1) DA; DA without YDR; (2) Control; version of "9 Ways to Stay Healthy and Prevent Disease" posted on Harvard Center for Cancer Prevention web site.	Conducted before a scheduled visit by a RA.	2011: ▪ Knowledge ▪ Attitude towards screening ▪ Screening intention ▪ Screening test ordered ▪ CRCS discussed ▪ Test preference ▪ Satisfaction with decision making process ▪ Agreement between test preference and test ordered 2012: ▪ Screening test ordered ▪ Screening test completed

Authors, Year	Study purpose Study design	Country - setting Recruitment and subjects	Intervention and comparison(s)	Implementation of DA	Outcomes
de Haan et al. 2013[31]	To evaluate the level of informed decision making in a randomized trial comparing COL and CT-COL screening. ▪ RCT	Netherlands – Clinic/Home Recruited via mailed invitations to participate in either COL or CT-COL. ▪ n=3,311 ▪ Ages 50-74 years	Aid: Leaflet containing CRC and CRCS information on COL. Comparison: DA; same leaflet except CRCS information was on CT-COL.	Intervention was mailed to the patients.	▪ Informed decision making (adequate knowledge, attitude toward screening, behavior) ▪ Knowledge ▪ Attitude towards screening ▪ Screening test completed
Pignone et al. 2011[43]	To test the effect of a combination of 2 evidence-based interventions, a DA for health plan members and academic detailing for physician practices, on CRCS test completion by health plan members. ▪ G-RCT	U.S. – Clinical/Home Recruited from family, general and internal medicine practices in the Atlanta, Tampa and Orlando areas; physicians participated in Aetna HMO. ▪ n=443 ▪ Age 50 years and above ▪ Not up-to-date for CRCS	Aid: CHOICE Comparison: Control; Practices did not receive academic detailing and control patients received brief mailed reminders from Aetna encouraging them to obtain CRCS.	Personalized letter and intervention were mailed to the patients.	▪ Knowledge ▪ Screening test completed (self-report and by claims data)

Authors, Year	Study purpose Study design	Country - setting Recruitment and subjects	Intervention and comparison(s)	Implementation of DA	Outcomes
Clouston et al. 2014[52]	To evaluate the effect of a DA given to patients by their family physician on FOBT screening uptake, accounting for cluster randomization at clinic and physician levels ▪ G-RCT	Canada – Clinical/Home Physicians recruited from community-based family practices; patients recruited by physicians during clinical visit. Randomization to intervention and control done at clinic level. ▪ n=2,395 ▪ Ages 50-74 years ▪ No h/o CRCS ▪ No symptoms of CRC or other colon disease requiring monitoring by colonoscopy	Aid: Fridge magnet directing patients to use investigator-developed website with screening information, nurse-managed telephone line. Access to DA is patient-initiated. Comparison: Control; Controls did not receive access to the intervention materials.	Intervention given to patients during physician visit.	▪ Screening test completed ▪ Time to completion of FOBT ▪ Patient utilization of intervention materials
Frosch et al. 2008[33]	To assess the effects of informational brochures and video DAs about cancer screening on patient intention to engage in SDM and its predictors in a racially diverse sample. ▪ CT	U.S. – Clinical Recruited at 13 primary care practices in the LA area (11 solo-practitioner offices and 2 community clinics). Each practice sequentially recruited 20 patients (10 in each group). ▪ n=207 ▪ Ages 50 years and older ▪ Eligible by guidelines	Aid: FIMDM Comparison: CRCS info; Centers for Disease Control brochure on CRCS.	Conducted around a scheduled visit by a RA and clinic staff.	▪ Knowledge ▪ Screening intentions/decision ▪ Intention to discuss screening ▪ Discussed screening ▪ Role preference ▪ Integrative Model of Behavior (attitudes, perceived social norms, and self-efficacy toward working with a doctor to make a decision)

Authors, Year	Study purpose Study design	Country - setting Recruitment and subjects	Intervention and comparison(s)	Implementation of DA	Outcomes
Lewis et al. 2008[39]	To determine whether a multi-modal intervention, which included mailing a patient reminder with a CRCS DA to patients and system changes allowing direct access to scheduling screening tests through standing orders, would be an effective and efficient means of promoting CRCS in primary care practice. ▪ CT	U.S. – Clinical/Home; Recruited from the University of NC Ambulatory Care Center in the General Internal Medicine practice, a setting with 15 attending physicians and 46 residents. ▪ n=237 ▪ Ages 50-75 years ▪ Not up-to-date for CRCS	Aid: FIMDM Comparison: Control; "Waitlist" arm that received the DA after the study outcome data had been collected.	Intervention was mailed to the patients.	▪ Screening interest ▪ Screening test completed ▪ Cost per additional patient screened ▪ Attempted to schedule screening ▪ Program ratings
Griffith et al. 2008[34]	To examine the effect of including or not including an explicit discussion of the option of deciding not to be screened in a CRCS DA on subjective measures of DA content; interest in screening; and knowledge. ▪ CT	U.S. – Community Recruited from 2 Northeast communities, 1 Southeast using print advertising, telephone, and marketing database. ▪ n=106 ▪ Ages 50-85 years	Aid: FIMDM Comparison: DA; Same as intervention DA, but did not explicitly describe the option of not being screened or the 2 endorsement vignettes.	Conducted in focus groups.	▪ Knowledge ▪ Screening interest ▪ Screening intention ▪ Program ratings

Authors, Year	Study Purpose Study Design	Country - Setting Recruitment and Subjects	Intervention and Comparison(s)	Implementation of DA	Outcomes
Leone et al. 2013[38]	To determine intervention effectiveness, measure the reach and use of intervention materials and estimate intervention efficacy by examining screening rates for intervention recipients vs. non-recipients. ▪ G-CT with matched controls	U.S. – Clinical/Home Recruited from patient registries of primary care practices, selected based on Medicaid claims data. Matched controls came from de-identified aggregate Medicaid claims data. ▪ 414 ▪ Ages 50-74 years ▪ Not up-to-date for CRCS ▪ Currently enrolled in Medicaid and not Medicare	Aid: CHOICE Comparison: Control; Controls did not receive any materials.	Intervention and reminder were mailed to the patients by a trained patient navigator.	▪ Screening interest ▪ Intent to ask provider for screening ▪ Screening test completed (intervention effectiveness) ▪ Test preference ▪ Intervention reach, use, and efficacy ▪ Program ratings
Kim et al. 2005[37]	To develop a patient-directed, computer-based DA about CRCS and investigate whether it could increase patient interest in screening. ▪ UCT	U.S. – Clinical Recruited from University of NC's General Internal Medicine practice. ▪ n=80 ▪ Not up-to-date for CRCS or decision for next screening opportunity	Aid: CHOICE Comparison: None (within-subjects comparison only).	Conducted around a scheduled appointment by a RA.	▪ Screening interest ▪ Intent to ask provider for screening ▪ Stage of readiness ▪ Criteria most important to decide screening ▪ Screening test ordered ▪ Screening test completed ▪ Test preference ▪ Subjective change in knowledge ▪ Role preference ▪ Program rating

Authors, Year	Study purpose Study design	Country - setting Recruitment and subjects	Intervention and comparison(s)	Implementation of DA	Outcomes
Lewis et al. 2010[40]	To develop and test a decision aid designed to promote individualized CRCS decision making for adults age 75 and older. ▪ UCT	U.S. – Community/Home Recruited from local senior center or seniors participating in a medication management program that contained home visits. ▪ n=46 ▪ Age 75 years and older	Aid: Investigator-developed paper-based DA booklet Comparison: None (within-subjects comparison).	Conducted at a senior center or at a home visit.	▪ Individualized decision (Adequate knowledge and clear values) ▪ Knowledge ▪ Values clarity ▪ Screening intention ▪ Decisional conflict ▪ Program rating ▪ Agreement between screening interest and values
Reuland et al. 2012[51]	To evaluate the effect of a computer-based, Spanish CRCS DA on knowledge, screening intent and screening self-efficacy in Latinos with limited English proficiency; and to survey the sample after 4 months for rates of CRCS test completion and discussions with a healthcare provider. ▪ UCT	U.S. – Clinical/Community Recruited from clinical patient registry data at a federally qualified health center and an academic medical center, and via fliers on community bulletin boards and newspaper ads. ▪ n=80 ▪ Hispanic/ Latino ethnicity with limited English ▪ Age 50-75 years	Aid: CHOICE (Spanish adaptation) Comparison: None (within-subjects comparison).	Conducted at clinic (independent of visit) and in the community at a library by a RA.	▪ Knowledge ▪ Screening intention ▪ Discussed screening ▪ Screening test completed ▪ Self-efficacy for CRCS ▪ Received recommendation for specific CRCS test

Notes: Studies listed in chronological order within same study design.
RCT is the comparison group.
DA, decision aid; CRCS, colorectal cancer screening; CRC, colorectal cancer; RA, research assistant; FOBT, fecal occult blood test; FSIG, flexible sigmoidoscopy; COL, colonoscopy; CT-COL, virtual colonoscopy; G-RCT, Group RCT; G-CT, Group controlled trial (non-randomized); CT, Controlled trial (non-randomized); UCT, Uncontrolled trial (pre-post study, within-subjects design); BE, barium enema

Appendix Table 2. Description of the Patient Decision Aids About Colorectal Cancer Screening Included in the Review

Author, Year	Aid name	Format	Theory	Screening options	Content	Features/Description
Pignone et al. 2000[42]	Investigator-developed; foundation for CHOICE	VHS video, printed brochure	Transtheoretical stages of change model.	FOBT, FSIG, FOBT+FSIG	CRC susceptibility, availability of effective screening test, how tests are performed, meaning of test. Emphasized screening to be effective and offered choice of test.	11-min video w/ vignettes featuring 4 patients discussing CRCS experience; color-coded brochure to corresponding stage of readiness for CRCS; matching laminated card attached to chart.
Kim et al. 2005[37]	CHOICE Version 1.0 based off previous videotape (1).	Computer-based video	Noted in original study.	FOBT, FSIG, COL, BE	What CRC is, prevalence and lifetime risk, importance of CRCS and early detection, overview of tests, comparison of tests, how test is performed, preparation, and common concerns (anticipated discomfort, risk of side effects, ability to detect CRC and polyps), abnormal test results.	Modular design w/ a 5-min intro and 5 additional 3-5 min segments that describe tests or comparisons. Choice of test-specific segment from menu to view. Animated cartoons and text visually depict anatomic area examined and how it is performed. 5-15 sec patient vignettes that describe reasons for choice, benefits and risks, video of preparation. Narration and graphs explain follow-up and comparisons.
Griffith et al. 2008[35]	Modified CHOICE based on version 1.0 (2).	DVD video	Noted in original study.	FOBT, FSIG, FOBT+FSIG, COL, BE	CRC and screening decision, each test, and comparison info.	5-option DA was 30 min. Required to view 7-min intro and able to navigate DVD's chapter menu.
Miller et al. 2011[41] Duren-Winfield et al. 2015[53]	CHOICE, Version 6.0W	Web-based video, handout	Noted in original study.	FOBT, FSIG, COL	CRC prevalence, CRCS overview and rationale, test info (specific test and comparison info optional).	Designed to be accessible to low-literacy patients. Easy-to-understand audio segments, video clips, graphics, and animations. Prior to exiting, participants indicate their screening decision, and the program prints a corresponding one-page color handout.

Author, Year	Aid name	Format	Theory	Screening options	Content	Features/Description
Pignone et al. 2011[43]	CHOICE updated from previous versions (1, 2).	DVD/ VHS video, brochure	Noted in original study.	FOBT, FSIG, FOBT+FSIG, COL, BE	CRCS general info, CRCS benefits, test-specific info, comparison of tests (efficacy, frequency, preparation, discomfort, complications, costs).	Practices received academic detailing to prepare to facilitate CRCS once patients were activated. Patients received (1) brief mailed reminders from Aetna encouraging them to obtain CRCS and an updated, (2) Aetna-specific copayment and referral information, (3) CRC screening option chart, (4) 22-min CHOICE DA, along with color-coded, stage-targeted brochures.
Reuland et al. 2012[51]	CHOICE in Spanish, based on previous versions (1, 2)	Computer-based video for DVD or web-streaming, brochure	Prochaska's Transtheoretical Model, Social Cognitive Theory.	FOBT, COL	Overview and rationale for CRCS; specific information about FOBT and COL; summary and comparison table for both screening tests with information on test frequency, cost, effectiveness, time required, discomfort, risk of complications; patient vignettes about their screening decision and choice of test.	14-min Spanish-language video with CRCS information tailored to low literacy levels, with written text read out by narrator, explanation of technical terms using easy-to-understand narration, vignettes, graphics and animations; color-coded brochure to corresponding stage of readiness for CRCS.
Leone et al. 2013[38]	CHOICE updated from Version 6.0W (4)	DVD video	Noted in original study.	FOBT, COL	Information on CRC and tests available to screen for it, specific information on and comparison of COL and FOBT, testimonials from people who have been screened, encouragement for participants to undergo CRCS and choose the test that is best for them.	11-min educational video (details not described); telephone-based motivational interviewing by patient navigator for a subset of intervention recipients.

Author, Year	Aid name	Format	Theory	Screening options	Content	Features/Description
Griffith et al. 2008[34]	FIMDM	Video	Not mentioned.	FOBT, FSIG, FOBT+FSIG, BE, CT-COL, no screening	Lifetime CRC mortality risk w/ and w/out screening; how tests help detect CRC; decision(s) they should consider while viewing the program, including whether or not to have screening, and if desired, which screening test to have; test description of how it is completed, time needed, effectiveness in finding polyps and cancer, convenience, discomfort, and risks associated; reminder to first decide whether or not to undergo screening, then preferred test; decision process thinking through options and values, test comparison on certain aspects.	35-min video includes vignettes of 1 endorsement for screening and 1 for no screening.
Lewis et al. 2008[39]	FIMDM "Colon Cancer Screening: Deciding What's Right For You."	VHS and DVD video	Not mentioned.	FOBT, FSIG, FOBT+FSIG, COL	CRC risk and CRCS test info, how each test is done, how often, time required, effectiveness, convenience, discomfort, risks.	35 min FIMDM video with moderator-led introduction followed by test-specific info + reminder that not up-to-date on screening and how to get screened.
Frosch et al. 2008[33]	FIMDM	Video	Not mentioned.	Screening tests options (unspecified)	CRC description, CRCS screening options, encouraged discussion w/physician.	30-min FIMDM video with info, patient testimonials, physician discussions.
Wolf and Schorling, 2000[50]	Investigator-developed	Oral presentation	Not mentioned.	FOBT, FSIG, no screening	Tests, tests characteristics, evidence supporting mortality reduction in general populations described in terms of RRR w/ a graphic, uncertain benefit of screening older persons.	3-min relative risk reduction (RRR) information script with graphic depicting RRR.

Author, Year	Aid name	Format	Theory	Screening options	Content	Features/Description
Dolan and Frisina, 2002[32]	Investigator-developed	Computer-based	Analytic hierarchy process (AHP).	FOBT, FSIG, FOBT+FSIG, BE, COL, no screening	Options, criteria for comparisons: avoid CRC, avoid major side effects, frequency, test preparation, test procedure.	Detailed analysis of the decision regarding the recommended CRCS options. Results reviewed with patients.
Jerant et al. 2007[36]	Investigator-developed	Computer-based, interactive multimedia program	Transtheoretical Model (TTM).	FOBT, FSIG, COL, no screening	Potential risks, benefits, harms, and inconveniences of CRCS; CRCS recommendation, addressed barriers of CRCS.	Text, graphics, and animations. Tailored feedback based on responses about CRCS knowledge, self-efficacy, and barriers; CRCS recommendation given derived by computer algorithm based on responses in descending order of priority for CRC test preference, readiness, self-efficacy, perceived barriers, and prior CRCS behaviors; choice of amount of educational content viewed using click on more options if desired except for short key points; patient and physician video clips to increase self-efficacy, reduce perceived barriers indicated by subject.
Ruffin et al. 2007[44]	Investigator-developed	Web-based, interactive program	Not mentioned.	FOBT, FSIG, COL, BE	Objective presentation of options, variables for consideration when choosing a preferred test, presentation of screening test most congruous with patient preferences, encouragement of preferred test.	Colorectal Web uses limited text and emphasizes graphics along with minimal screen scrolling. Establishes preferences by prompting to select 3 variables associated with tests to consider. Unlimited number of times to choose combinations of the 3 options until final selection. Preference is summarized w/ a video clip of a doctor encouraging them to get this test done.

Author, Year	Aid name	Format	Theory	Screening options	Content	Features/Description
Trevena et al. 2008[49]	Investigator-developed	Paper-based booklet	Theory of Planned Behavior.	FOBT, no screening	Provided age, gender and family-history-specific probabilities of the outcomes of biennial FOBT over 5 rounds; definition of screening; baseline probability/personal susceptibility/risk factors for CRC over next 10 years; absolute reduction in CRC mortality w/ screening over next 10 years; probability of test outcomes from biennial FOBT over 10 years; how to collect FOBT.	6 versions of 20-pg booklet with Flesch-Kinkaid of grade 10. Used words and 1,000-face diagrams. Examples of decisions were included and a personal worksheet required indicate what was important to user.
Smith et al. 2010[47]	Investigator-developed	DVD video, paper-based booklet	IPDAS.	FOBT, COL (as follow-up procedure), no screening	Tailored risk information for different sex and family history groups about the cumulative outcomes of biennial FOBT, including CRC mortality, risk of false positives and false negatives, interval cancers, removal of polyps detected by COL and CRC detected by screening.	Paper-based, 33-page, interactive booklet and accompanying DVD w/ Flesh-Kinkaid score grade 7. Reduced amount of text, lay language, glossary of medical terms, simplified medical diagrams, active voice, contextual info and illustrations, cartoon-style images and anatomical diagrams. Included a question prompt list.

Author, Year	Aid name	Format	Theory	Screening options	Content	Features/Description
Lewis et al. 2010[40]	Investigator-developed	Paper-based booklet	Walter and Convinsky framework of individualized DM for elders facing cancer screening decisions; IDM; Ottawa framework; IPDAS.	FOBT, COL, no screening	Importance of individualized decision making; who should use the aid; description of tests; risks and benefits of screening; emphasis that decision to undergo COL should be made because positive FOBT results in COL; treatments if cancer is found; why CRCS recommendations are different for older adults; reasons why older adults need to decide for themselves (incidence risk, comparison of competing mortality causes of death, cancer grows slowly and life expectancy needed to be saved by screening, uncertainty about benefit); magnitude of potential benefits of CRCS; comparison of risk of dying from competing causes over next 10 years and compares risk of complications after first 30 days of COL; comparison of how a person's health can influence the balance between benefits and risks of CRCS; values clarification.	Graphics for risk comparisons; values clarification on 9 cards w/ 1 statement for and 1 statement against: risk of cancer, functional status, priority, other screening decisions, treatment, worry, knowing I have cancer, complications for screening, uncertainty.
Steckelberg et al. 2011[48]	Investigator-developed	Paper-based, brochure and optional Web-based modules	The UK Medical Research Council's framework for complex interventions.	FOBT, FSIG, COL, BE, CT-COL, no screening	Personalized risk of CRC, test options w/ possible benefit and harm and option not to screen, prevention of CRC.	38-page brochure w/ personalized risk of CRC; two optional interactive internet modules on "risk" and "diagnostic tests." Info presented as natural frequencies rather than change in RR.

Author, Year	Aid name	Format	Theory	Screening options	Content	Features/Description
Schroy et al. 2011[45], 2012[46]	Investigator-developed	Video, computer based, interactive DVD and web	Ottawa Decision Support framework.	FOBT, FSIG, FOBT+FSIG, COL, BE, no screening	Importance of screening, purpose and instructions for tool; CRC epidemiology and natural history; CRCS rationale and benefits, options, and the lack of consensus regarding a best test; descriptions of tests; comparison of tests; summary of test features and patient vignettes describing their experience; decision-making module to detect preferences; a concluding section encouraging the user to discuss screening and preferences w/ doctor; ends with risk assessment.	Audiovisual DA using touch-screens, actors convey relevant information via on-screen video, animation, and/or graphics; patient vignettes, web-based personalized risk assessment (Your disease risk-YDR). Takes 20-30 minutes, depending on which of the optional segments.
de Haan et al. 2013[31]	Investigator-developed	Paper-based, leaflet	Not mentioned.	COL, CT-COL, no screening	Information on CRC and CRCS, risk & benefits of either COL or CT-COL depending on intervention group, follow-up information in case of a positive test result.	Mailed information leaflets, followed by offer of standardized consultation with research fellow/research nurse for invitees interested in getting screened.
Clouston et al. 2014[52]	Investigator-developed	Fridge magnet referring patient to decision aid at website, nurse-managed helpline	Health Belief Model.	FOBT	Information on colon anatomy, CRC and CRCS, description of FOBT screening test, patient vignettes, meaning of positive/negative FOBT results, instructions for stool collection and testing, dietary & medication recommendations , contact details for further information about FOBT testing.	Website patient aid includes information in text and graphic form, and videos on FOBT test, stool collection methods and patient vignettes.

Note: Studies listed in chronological order within same decision aid.
CHOICE, Communicating Health Options through Interactive Computer Education; FOBT, fecal occult blood test; FSIG, flexible sigmoidoscopy; CRC, colorectal cancer; CRCS, colorectal cancer screening; COL, colonoscopy; BE, barium enema; DA, decision aid; FIMDM, Foundation for Informed Medical Decision Making; CT-COL, CT colonography; IDM, informed decision making; IPDAS, International Patient Decision Aid Standards