

Using Intervention Mapping to design a health education program to increase colorectal cancer screening in Puerto Rico

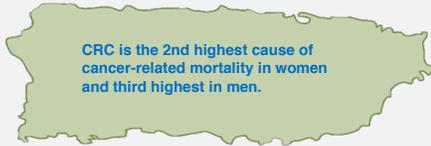
Serra-Martinez, Yolanda; Fernández-Espada, Natalie; Colon, Vivian; Vélez, Camille; Ayala, Aleli; Fernandez, María

The University of Texas Health Science Center at Houston, The University of Puerto Rico Medical Sciences Campus

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Background

- Colorectal cancer (CRC) is the second most common cancer in both men and women in Puerto Rico (PR).
- The U.S. Preventive Services Task Force recommends screening for CRC using fecal occult blood testing, sigmoidoscopy, or colonoscopy in adults 50 to 75 years of age.
- Although largely preventable through screening and treatment of precancerous polyps, CRC incidence and mortality continue to increase in PR, while screening rates remain low.

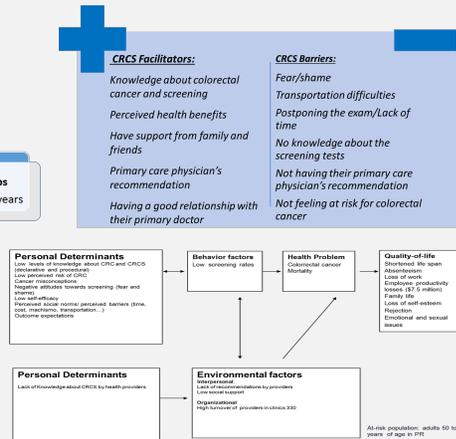


Results

Focus group findings



Logic model of the problem



Matrix of change objectives

Performance Objectives	KNOWLEDGE	DECISIONAL BALANCE	OUTCOME EXPECTATIONS	SELF EFFICACY/SKILLS	PERCEIVED SOCIAL NORMS	ATTITUDES
FOB GET SCREENED FOR COLONOSCOPY	<p>K1A. States that colonoscopy is recommended to be done every 10 years for people over 50 year old</p> <p>K3D. Describes the steps to complete an endoscopy including prep</p> <p>K5C. Lists place where to go for colonoscopy</p> <p>K9D. Describes need to get a referral from doctor</p>	<p>D5A. States the advantages of doing colonoscopy</p> <p>D5B. Believes there are more benefits to CRCs and colonoscopy specifically than barium</p> <p>D5C. Believes ability to overcome barriers to doing colonoscopy</p>	<p>O5A. Expects that if he/she gets a colonoscopy they will reduce the risk of CRC or detect it early enough to be cured</p> <p>O5B. Expects that getting a colonoscopy will allow them to avoid having to get another one (if negative)</p>	<p>S5A. Expresses confidence in ability to identify someone to go with him/her to get</p> <p>S5D. Expresses confidence in ability to conduct prep</p> <p>S5E. Expresses confidence in ability to complete colonoscopy</p>	<p>SN5A. Believes that other adults like them identify person to accompany them to the apt.</p> <p>SN5B. Believes that other adults like them get colonoscopy</p> <p>SN5C. Believes that other adults like them complete prep correctly</p>	<p>AT5A. Believes that colonoscopy is useful and important because it can identify cancer and polyps (pre-cancer)</p> <p>AT5B. Believes that correctly completing a test contributes to a more accurate test</p> <p>AT5C. Believes that the test results will give them peace of mind</p> <p>AT5D. Believes that even if embarrassed the test is worth it</p> <p>AT5E. Believes that cancer if detected early can be cured</p>

Identification of Methods and Practical Applications

Used two overarching methods containing other methods: Entertainment Education and Behavioral Journalism. We develop messages and educational materials including a tailored interactive multimedia intervention, newsletters and printed materials.

Change Objective	Change Objective	Methods	Practical Applications (Messages)	Component	Notes for materials - existing	Notes for materials - create
For patients	1A, 4B, 4B, 4B, 4B, 4B, 4B, 4B	Image	20 Images of resources for FIT/DOT/Fap (including brochures)	Image with color-coded information chart	Images of tests (FIT, FIT-DNA, FIT-DNA)	Images for materials - create
For patients	42a, 42b, 42c, 42d, 42e, 42f, 42g, 42h, 42i, 42j, 42k, 42l, 42m, 42n, 42o, 42p, 42q, 42r, 42s, 42t, 42u, 42v, 42w, 42x, 42y, 42z, 43a, 43b, 43c, 43d, 43e, 43f, 43g, 43h, 43i, 43j, 43k, 43l, 43m, 43n, 43o, 43p, 43q, 43r, 43s, 43t, 43u, 43v, 43w, 43x, 43y, 43z, 44a, 44b, 44c, 44d, 44e, 44f, 44g, 44h, 44i, 44j, 44k, 44l, 44m, 44n, 44o, 44p, 44q, 44r, 44s, 44t, 44u, 44v, 44w, 44x, 44y, 44z, 45a, 45b, 45c, 45d, 45e, 45f, 45g, 45h, 45i, 45j, 45k, 45l, 45m, 45n, 45o, 45p, 45q, 45r, 45s, 45t, 45u, 45v, 45w, 45x, 45y, 45z, 46a, 46b, 46c, 46d, 46e, 46f, 46g, 46h, 46i, 46j, 46k, 46l, 46m, 46n, 46o, 46p, 46q, 46r, 46s, 46t, 46u, 46v, 46w, 46x, 46y, 46z, 47a, 47b, 47c, 47d, 47e, 47f, 47g, 47h, 47i, 47j, 47k, 47l, 47m, 47n, 47o, 47p, 47q, 47r, 47s, 47t, 47u, 47v, 47w, 47x, 47y, 47z, 48a, 48b, 48c, 48d, 48e, 48f, 48g, 48h, 48i, 48j, 48k, 48l, 48m, 48n, 48o, 48p, 48q, 48r, 48s, 48t, 48u, 48v, 48w, 48x, 48y, 48z, 49a, 49b, 49c, 49d, 49e, 49f, 49g, 49h, 49i, 49j, 49k, 49l, 49m, 49n, 49o, 49p, 49q, 49r, 49s, 49t, 49u, 49v, 49w, 49x, 49y, 49z, 50a, 50b, 50c, 50d, 50e, 50f, 50g, 50h, 50i, 50j, 50k, 50l, 50m, 50n, 50o, 50p, 50q, 50r, 50s, 50t, 50u, 50v, 50w, 50x, 50y, 50z, 51a, 51b, 51c, 51d, 51e, 51f, 51g, 51h, 51i, 51j, 51k, 51l, 51m, 51n, 51o, 51p, 51q, 51r, 51s, 51t, 51u, 51v, 51w, 51x, 51y, 51z, 52a, 52b, 52c, 52d, 52e, 52f, 52g, 52h, 52i, 52j, 52k, 52l, 52m, 52n, 52o, 52p, 52q, 52r, 52s, 52t, 52u, 52v, 52w, 52x, 52y, 52z, 53a, 53b, 53c, 53d, 53e, 53f, 53g, 53h, 53i, 53j, 53k, 53l, 53m, 53n, 53o, 53p, 53q, 53r, 53s, 53t, 53u, 53v, 53w, 53x, 53y, 53z, 54a, 54b, 54c, 54d, 54e, 54f, 54g, 54h, 54i, 54j, 54k, 54l, 54m, 54n, 54o, 54p, 54q, 54r, 54s, 54t, 54u, 54v, 54w, 54x, 54y, 54z, 55a, 55b, 55c, 55d, 55e, 55f, 55g, 55h, 55i, 55j, 55k, 55l, 55m, 55n, 55o, 55p, 55q, 55r, 55s, 55t, 55u, 55v, 55w, 55x, 55y, 55z, 56a, 56b, 56c, 56d, 56e, 56f, 56g, 56h, 56i, 56j, 56k, 56l, 56m, 56n, 56o, 56p, 56q, 56r, 56s, 56t, 56u, 56v, 56w, 56x, 56y, 56z, 57a, 57b, 57c, 57d, 57e, 57f, 57g, 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72r, 72s, 72t, 72u, 72v, 72w, 72x, 72y, 72z, 73a, 73b, 73c, 73d, 73e, 73f, 73g, 73h, 73i, 73j, 73k, 73l, 73m, 73n, 73o, 73p, 73q, 73r, 73s, 73t, 73u, 73v, 73w, 73x, 73y, 73z, 74a, 74b, 74c, 74d, 74e, 74f, 74g, 74h, 74i, 74j, 74k, 74l, 74m, 74n, 74o, 74p, 74q, 74r, 74s, 74t, 74u, 74v, 74w, 74x, 74y, 74z, 75a, 75b, 75c, 75d, 75e, 75f, 75g, 75h, 75i, 75j, 75k, 75l, 75m, 75n, 75o, 75p, 75q, 75r, 75s, 75t, 75u, 75v, 75w, 75x, 75y, 75z, 76a, 76b, 76c, 76d, 76e, 76f, 76g, 76h, 76i, 76j, 76k, 76l, 76m, 76n, 76o, 76p, 76q, 76r, 76s, 76t, 76u, 76v, 76w, 76x, 76y, 76z, 77a, 77b, 77c, 77d, 77e, 77f, 77g, 77h, 77i, 77j, 77k, 77l, 77m, 77n, 77o, 77p, 77q, 77r, 77s, 77t, 77u, 77v, 77w, 77x, 77y, 77z, 78a, 78b, 78c, 78d, 78e, 78f, 78g, 78h, 78i, 78j, 78k, 78l, 78m, 78n, 78o, 78p, 78q, 78r, 78s, 78t, 78u, 78v, 78w, 78x, 78y, 78z, 79a, 79b, 79c, 79d, 79e, 79f, 79g, 79h, 79i, 79j, 79k, 79l, 79m, 79n, 79o, 79p, 79q, 79r, 79s, 79t, 79u, 79v, 79w, 79x, 79y, 79z, 80a, 80b, 80c, 80d, 80e, 80f, 80g, 80h, 80i, 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95t, 95u, 95v, 95w, 95x, 95y, 95z, 96a, 96b, 96c, 96d, 96e, 96f, 96g, 96h, 96i, 96j, 96k, 96l, 96m, 96n, 96o, 96p, 96q, 96r, 96s, 96t, 96u, 96v, 96w, 96x, 96y, 96z, 97a, 97b, 97c, 97d, 97e, 97f, 97g, 97h, 97i, 97j, 97k, 97l, 97m, 97n, 97o, 97p, 97q, 97r, 97s, 97t, 97u, 97v, 97w, 97x, 97y, 97z, 98a, 98b, 98c, 98d, 98e, 98f, 98g, 98h, 98i, 98j, 98k, 98l, 98m, 98n, 98o, 98p, 98q, 98r, 98s, 98t, 98u, 98v, 98w, 98x, 98y, 98z, 99a, 99b, 99c, 99d, 99e, 99f, 99g, 99h, 99i, 99j, 99k, 99l, 99m, 99n, 99o, 99p, 99q, 99r, 99s, 99t, 99u, 99v, 99w, 99x, 99y, 99z, 100a, 100b, 100c, 100d, 100e, 100f, 100g, 100h, 100i, 100j, 100k, 100l, 100m, 100n, 100o, 100p, 100q, 100r, 100s, 100t, 100u, 100v, 100w, 100x, 100y, 100z	20 Images of resources for FIT/DOT/Fap (including brochures)	Image with color-coded information chart	Images of tests (FIT, FIT-DNA, FIT-DNA)	Images for materials - create	
For patients	42a, 42b, 42c, 42d, 42e, 42f, 42g, 42h, 42i, 42j, 42k, 42l, 42m, 42n, 42o, 42p, 42q, 42r, 42s, 42t, 42u, 42v, 42w, 42x, 42y, 42z, 43a, 43b, 43c, 43d, 43e, 43f, 43g, 43h, 43i, 43j, 43k, 43l, 43m, 43n, 43o, 43p, 43q, 43r, 43s, 43t, 43u, 43v, 43w, 43x, 43y, 43z, 44a, 44b, 44c, 44d, 44e, 44f, 44g, 44h, 44i, 44j, 44k, 44l, 44m, 44n, 44o, 44p, 44q, 44r, 44s, 44t, 44u, 44v, 44w, 44x, 44y, 44z, 45a, 45b, 45c, 45d, 45e, 45f, 45g, 45h, 45i, 45j, 45k, 45l, 45m, 45n, 45o, 45p, 45q, 45r, 45s, 45t, 45u, 45v, 45w, 45x, 45y, 45z, 46a, 46b, 46c, 46d, 46e, 46f, 46g, 46h, 46i, 46j, 46k, 46l, 46m, 46n, 46o, 46p, 46q, 46r, 46s, 46t, 46u, 46v, 46w, 46x, 46y, 46z, 47a, 47b, 47c, 47d, 47e, 47f, 47g, 47h, 47i, 47j, 47k, 47l, 47m, 47n, 47o, 47p, 47q, 47r, 47s, 47t, 47u, 47v, 47w, 47x, 47y, 47z, 48a, 48b, 48c, 48d, 48e, 48f, 48g, 48h, 48i, 48j, 48k, 48l, 48m, 48n, 48o, 48p, 48q, 48r, 48s, 48t, 48u, 48v, 48w, 48x, 48y, 48z, 49a, 49b, 49c, 49d, 49e, 49f, 49g, 49h, 49i, 49j, 49k, 49l, 49m, 49n, 49o, 49p, 49q, 49r, 49s, 49t, 49u, 49v, 49w, 49x, 49y, 49z, 50a, 50b, 50c, 50d, 50e, 50f, 50g, 50h, 50i, 50j, 50k, 50l, 50m, 50n, 50o, 50p, 50q, 50r, 50s, 50t, 50u, 50v, 50w, 50x, 50y, 50z, 51a, 51b, 51c, 51d, 51e, 51f, 51g, 51h, 51i, 51j, 51k, 51l, 51m, 51n, 51o, 51p, 51q, 51r, 51s, 51t, 51u, 51v, 51w, 51x, 51y, 51z, 52a, 52b, 52c, 52d, 52e, 52f, 52g, 52h, 52i, 52j, 52k, 52l, 52m, 52n, 52o, 52p, 52q, 52r, 52s, 52t, 52u, 52v, 52w, 52x, 52y, 52z, 53a, 53b, 53c, 53d, 53e, 53f, 53g, 53h, 53i, 53j, 53k, 53l, 53m, 53n, 53o, 53p, 53q, 53r, 53s, 53t, 53u, 53v, 53w, 53x, 53y, 53z, 54a, 54b, 54c, 54d, 54e, 54f, 54g, 54h, 54i, 54j, 54k, 54l, 54m, 54n, 54o, 54p, 54q, 54r, 54s, 54t, 54u, 54v, 54w, 54x, 54y, 54z, 55a, 55b, 55c, 55d, 55e, 55f, 55g, 55h, 55i, 55j, 55k, 55l, 55m, 55n, 55o, 55p, 55q, 55r, 55s, 55t, 55u, 55v, 55w, 55x, 55y, 55z, 56a, 56b, 56c, 56d, 56e, 56f, 56g, 56h, 56i, 56j, 56k, 56l, 56m, 56n, 56o, 56p, 56q, 56r, 56s, 56t, 56u, 56v, 56w, 56x, 56y, 56z, 57a, 57b, 57c, 57d, 57e, 57f, 57g, 57h, 57i, 57j, 57k, 57l, 57m, 57n, 57o, 57p, 57q, 57r, 57s, 57t, 57u, 57v, 57w, 57x, 57y, 57z, 58a, 58b, 58c, 58d, 58e, 58f, 58g, 58h, 58i, 58j, 58k, 58l, 58m, 58n, 58o, 58p, 58q, 58r, 58s, 58t, 58u, 58v, 58w, 58x, 58y, 58z, 59a, 59b, 59c, 59d, 59e, 59f, 59g, 59h, 59i, 59j, 59k, 59l, 59m, 59n, 59o, 59p, 59q, 59r, 59s, 59t, 59u, 59v, 59w, 59x, 59y, 59z, 60a, 60b, 60c, 60d, 60e, 60f, 60g, 60h, 60i, 60j, 60k, 60l, 60m, 60n, 60o, 60p, 60q, 60r, 60s, 60t, 60u, 60v, 60w, 60x, 60y, 60z, 61a, 61b, 61c, 61d, 61e, 61f, 61g, 61h, 61i, 61j, 61k, 61l, 61m, 61n, 61o, 61p, 61q, 61r, 61s, 61t, 61u, 61v, 61w, 61x, 61y, 61z, 62a, 62b, 62c, 62d, 62e, 62f, 62					