

Cancer Information Seeking, Healthcare Contact, and Awareness of Multi- Cancer Early Detection Tests: A Nationally Representative Analysis of HINTS 7

Running head: CANCER INFORMATION SEEKING AND MCED AWARENESS

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Research Article

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Abstract

Purpose

Multi-cancer early detection (MCED) blood tests are entering public awareness ahead of guideline endorsement. About one in six U.S. adults has heard of MCED testing and four in ten consider it very valuable, but its correlates are unexamined: is early awareness associated more with cancer-information seeking or with recent healthcare contact, and does it differ socioeconomically?

Methods

Cross-sectional analysis of HINTS 7 (2024; $n = 6,623$ adults 18 + with awareness data). The exposure was cancer-information seeking; past-year provider contact the comparator. Survey-weighted logistic regression used 50 jackknife replicate weights, joint Wald omnibus and interaction tests, a Wald contrast of the exposures, and marginally standardized probabilities.

Results

Awareness was independently associated with cancer-information seeking (aOR 1.51, 95% CI 1.17–1.95) but inversely with provider contact (aOR 0.57, 0.33–0.98), and more strongly with seeking than provider contact (ratio of aORs 2.65, 1.46–4.81; $p = .001$). It showed no adjusted association with income, insurance, or race/ethnicity (race $\chi^2(4) = 3.4$, $p = .50$). Standardized awareness was 19.3% among seekers versus 13.7% among non-seekers (+ 5.6 points, 2.3–8.8) with no detected heterogeneity by education, income, race/ethnicity, or age (all interaction $p \geq .61$); among adults aged 50–79 the association remained positive but less precise (aOR 1.36, 0.93–1.98). Among adults rating it very valuable, 83.5% had not heard of it, similarly across groups.

Conclusion

Early MCED awareness was associated more strongly with cancer-information seeking than with provider contact, which was inversely associated; a large, socially broad group was unaware yet rated the tests very valuable.

Introduction

Multi-cancer early detection (MCED) tests — blood-based assays that screen for many cancers simultaneously — are among the most consequential technologies approaching cancer control [1–3]. None is yet FDA-approved or guideline-recommended; the tests are currently offered as laboratory-developed tests, evidence on mortality benefit is pending, and questions about false positives, overdiagnosis, and downstream diagnostic burden remain open [3, 4, 5]. The National Cancer Institute's

Cancer Screening Research Network is evaluating MCED performance in the multi-site Vanguard Study [6]. Public awareness, however, is forming now, ahead of that evidence and ahead of professional consensus.

The prevalence of that early awareness is now well described. Three national analyses of HINTS 7 (2024) — Xie and Hong in the *Journal of General Internal Medicine* [7], Bather and colleagues in *Cancer Causes & Control* [8], and NCI's HINTS Brief 59 [9] — independently report that approximately 16–17% of U.S. adults have heard of MCED tests and that roughly 42% consider them "very valuable," with perceived value elevated among Black and Hispanic adults and among those with family cancer history. Our own weighted estimates reproduce these figures closely (awareness 16.6%, 95% CI 14.9–18.3; very valuable 41.9%, 39.8–44.0), and we therefore treat the prevalence picture as established background rather than as a new finding.

The open question is not how many people have heard of MCED tests, but how that awareness is socially patterned. Diffusion of innovations and the knowledge-gap hypothesis predict that information about a new technology is absorbed first by those who actively seek it, seeding gaps that widen as the technology matures [10, 11]. Communication inequality — systematic differences in the generation, manipulation, and use of health information across social groups — is a recognized mechanism by which cancer-control advances reach advantaged populations first [12, 13], and earlier cancer-screening technologies developed racial and socioeconomic gradients in use [14]. Whether MCED awareness is associated more strongly with cancer-information seeking or with routine contact with the healthcare system is relevant to where equity efforts might be aimed, and whether the emerging awareness structure already varies by socioeconomic position.

Using HINTS 7, we asked: (1) Is MCED awareness associated more strongly with reported cancer-information seeking than with recent healthcare contact? (2) Does that association differ by education, income, or race/ethnicity? and (3) How large, and how socially distributed, is the group that rates MCED testing very valuable after a brief description despite not previously having heard of it? Perceived personal value is examined as a secondary outcome to characterize where favorable views concentrate. Unlike prior HINTS 7 studies that estimated awareness and perceived value across population characteristics, this study directly compares cancer-information seeking with recent healthcare contact, tests socioeconomic heterogeneity in the seeking–awareness association, and quantifies the previously unaware population expressing high perceived value after standardized information exposure.

Methods

Data and sample. HINTS 7 is a nationally representative cross-sectional survey of U.S. adults fielded in 2024 (n = 7,278) [15, 16]. Of 7,278 respondents, we analyzed adults 18 and older with observed awareness data (n = 6,623); the reduction reflects a web-administration skip and item nonresponse on the awareness item. Regression samples were smaller still (awareness model n = 6,126; perceived-value model n = 6,120) because of missing covariate data, and models were fit on complete cases.

Respondents were asked, "Before today, had you ever heard of Multi-Cancer Early Detection tests?" and, after a short, favorably worded description of the tests, "How valuable do you think it would be for you to have a Multi-Cancer Early Detection test?" (not at all / a little / somewhat / very). Because the study examines population awareness rather than clinical eligibility or test uptake, the full adult population was retained as the primary analytic sample, with adults aged 50–79 years examined in a sensitivity analysis.

Measures. The primary outcome was awareness (heard: yes vs. no). The principal exposure was reported cancer-information seeking (ever looked for information about cancer). The secondary comparator was any past-year provider visit. Covariates were age, sex, race/ethnicity, education, household income (HINTS-imputed, grouped as < \$35,000 / \$35,000–\$74,999 / ≥ \$75,000), insurance, personal cancer history, and family cancer history (first- or second-degree relative). Sex was recorded in HINTS 7 as birth sex (coded 1 = female, 2 = male; a small number reporting neither were set to missing). The secondary outcome, perceived personal value, was analyzed as rating MCED testing "very valuable" versus less (with "somewhat/very" reported descriptively).

Statistical analysis. HINTS 7 was fielded by mail with a push-to-web option and achieved a weighted response rate of 27.3% [15]. All estimates used the HINTS person-level final weight with the 50 delete-one jackknife replicate weights (coefficient 0.98) [15]. Design-weighted logistic models were fit by iteratively reweighted least squares under each replicate weight (all fits converged). We report joint Wald omnibus tests for the race/ethnicity (4 df), education (3 df), and income (2 df) blocks. To test whether the information-seeking pathway differed by socioeconomic position, we added seeking-by-education (3 df), seeking-by-income (2 df), and seeking-by-race/ethnicity (4 df) interaction blocks, each evaluated by a joint Wald test. To compare the two exposures directly, we tested the equality of the seeking and provider-contact coefficients in the awareness model with a one-degree-of-freedom Wald contrast. Because perceived value was common, we estimated its adjusted associations as prevalence ratios using modified Poisson (log-link) regression with the same jackknife variance, alongside odds ratios. We computed marginally standardized (g-computation) awareness probabilities under seeking = 1 versus seeking = 0, overall and within education strata, standardizing over the covariate distribution of the target population, with jackknife confidence intervals for probabilities and their differences. Finally, we cross-classified awareness by perceived value to quantify the group that rated MCED very valuable after the survey description but had not previously heard of the tests, overall and by race/ethnicity and education. Regression models were fit on complete cases; in sensitivity analyses we refit the awareness model restricted to adults aged 50–79 years and without the provider-contact covariate, and compared respondents included in the awareness regression with those excluded for missing covariates. We also tested a seeking-by-age-group interaction, coded as a binary indicator for ages 50–79 years versus all other adults (younger than 50 or older than 79), to assess whether the seeking–awareness association differed between screening-relevant and other adults. Analyses were conducted in Python 3.11. As a secondary analysis of de-identified public data, this study was not human subjects research; analysis code is available from the author.

Results

Awareness is associated with information seeking more than clinical contact. In the adjusted awareness model (Table 2), the strongest independent correlate of having heard of MCED tests was reported cancer-information seeking (aOR 1.51, 95% CI 1.17–1.95). Past-year provider contact was inversely associated with awareness (aOR 0.57, 0.33–0.98); this cross-sectional association should not be interpreted as evidence that healthcare contact reduces awareness, and because relatively few respondents reported no past-year visit the estimate is imprecise and warrants cautious interpretation. HINTS did not measure the source of respondents' MCED information, so the underlying pathway cannot be observed directly. A direct test of the two exposures confirmed that awareness was associated more strongly with seeking than with provider contact (ratio of adjusted odds ratios 2.65, 95% CI 1.46–4.81; Wald $\chi^2(1) = 10.3$, $p = .001$). We found no statistically significant adjusted associations of awareness with income (omnibus $\chi^2(2) = 1.9$, $p = .38$), insurance, or race/ethnicity (omnibus $\chi^2(4) = 3.4$, $p = .50$). The one exception was educational: awareness was lower among high-school graduates (aOR 0.52, 0.37–0.75; education omnibus $\chi^2(3) = 12.9$, $p = .005$). Personal and family cancer history were unrelated to awareness.

Table 1

Awareness and perceived value of MCED tests by respondent characteristics, HINTS 7 (2024), weighted estimates

Overall	n	Heard of MCED tests, % (95% CI)	MCED "very valuable" for self, % (95% CI)	Somewhat/very valuable, % (95% CI)
	6,623	16.6 (14.9– 18.3)	41.9 (39.8–44.0)	73.5 (71.7–75.3)
Cancer information seeking				
Reported seeking	3,452	19.0 (17.0– 21.1)	48.3 (45.5–51.1)	78.8 (75.8–81.7)
No reported seeking	3,169	14.1 (11.6– 16.6)	35.1 (31.9–38.3)	67.8 (64.6–71.1)
Past-year provider visit				
Any visit	5,872	15.9 (14.4– 17.4)	42.5 (40.4–44.5)	74.8 (72.9–76.8)
No visit	720	21.8 (13.6– 30.1)	37.4 (29.9–44.9)	63.2 (56.3–70.2)
Race/ethnicity				
NH White	3,515	16.3 (14.4– 18.2)	39.3 (36.8–41.8)	73.2 (70.6–75.8)
NH Black	956	17.2 (13.6– 20.8)	48.8 (42.8–54.8)	77.9 (72.7–83.1)
Hispanic	1,294	19.2 (15.4– 23.0)	49.1 (44.4–53.9)	75.3 (70.6–80.0)
NH Asian	339	14.8 (5.2– 24.4)	41.3 (29.2–53.5)	68.0 (56.0–80.1)
Education				
Less than high school	421	15.7 (10.1– 21.2)	38.0 (30.8–45.3)	62.4 (53.3–71.5)
High school graduate	1,099	12.4 (9.4– 15.5)	42.2 (36.6–47.8)	70.7 (66.7–74.7)
Some college	1,915	17.5 (14.1– 20.8)	40.9 (37.7–44.1)	74.2 (71.2–77.3)

CI = jackknife confidence interval; NH = non-Hispanic; MCED = multi-cancer early detection. Value items asked of all respondents after a short description of MCED tests. Prevalence estimates are concordant with three prior national reports (7–9) and are shown as context; the study's inferential focus is Tables 2–3. NH Asian estimates are imprecise (n = 339).

Overall	n	Heard of MCED tests, % (95% CI)	MCED "very valuable" for self, % (95% CI)	Somewhat/very valuable, % (95% CI)
	6,623	16.6 (14.9– 18.3)	41.9 (39.8–44.0)	73.5 (71.7–75.3)
College graduate or more	3,155	18.4 (16.4– 20.5)	43.7 (41.3–46.2)	76.3 (74.2–78.4)
Household income				
Under \$35,000	1,991	16.6 (12.3– 20.8)	39.7 (35.5–43.9)	66.9 (63.0–70.7)
\$35,000–\$74,999	1,875	17.2 (13.8– 20.6)	41.2 (37.3–45.1)	74.5 (71.0–78.1)
\$75,000 or more	2,745	16.1 (14.4– 17.9)	43.7 (41.0–46.4)	76.8 (74.4–79.1)
Family cancer history				
Yes (1st/2nd- degree)	4,375	17.1 (15.2– 19.0)	44.4 (41.6–47.1)	77.1 (74.7–79.5)
No	2,096	15.7 (12.7– 18.8)	37.1 (33.2–41.0)	66.7 (62.7–70.7)
<i>CI = jackknife confidence interval; NH = non-Hispanic; MCED = multi-cancer early detection. Value items asked of all respondents after a short description of MCED tests. Prevalence estimates are concordant with three prior national reports (7–9) and are shown as context; the study's inferential focus is Tables 2–3. NH Asian estimates are imprecise (n = 339).</i>				

Table 2

Adjusted associations from survey-weighted regression models for MCED awareness and perceived value

Reported cancer information seeking	Heard of MCED tests, aOR (95% CI) (n = 6,126)	MCED “very valuable”, aPR (95% CI) (n = 6,120)
	1.51 (1.17–1.95)**	1.35 (1.21–1.52)***
Any past-year provider visit	0.57 (0.33–0.98)*	0.99 (0.80–1.24)
Age (per 10 years)	1.04 (0.96–1.14)	1.06 (1.02–1.09)**
Female	0.96 (0.73–1.26)	1.14 (1.02–1.27)*
NH Black (vs. NH White)	1.06 (0.77–1.45)	1.36 (1.18–1.57)***
Hispanic	1.29 (0.97–1.73)	1.45 (1.27–1.66)***
NH Asian	0.87 (0.39–1.96)	1.23 (0.89–1.70)
< High school (vs. college+)	0.68 (0.39–1.17)	0.96 (0.77–1.19)
High school graduate	0.52 (0.37–0.75)***	1.03 (0.89–1.19)
Some college	0.89 (0.66–1.20)	0.98 (0.90–1.08)
< \$35,000 (vs. ≥ \$75,000)	1.23 (0.85–1.76)	0.91 (0.79–1.04)
\$35,000–\$74,999	1.20 (0.86–1.66)	0.95 (0.83–1.08)
Insured	1.05 (0.66–1.66)	1.02 (0.83–1.26)
Personal cancer history	1.04 (0.73–1.50)	0.95 (0.85–1.06)
Family cancer history	1.06 (0.81–1.38)	1.11 (0.98–1.26)
<i>aOR = adjusted odds ratio; aPR = adjusted prevalence ratio. Awareness estimates were obtained using logistic regression; perceived-value estimates were obtained using modified Poisson regression. *p < .05, **p < .01, ***p < .001. Reference groups: no reported seeking; no past-year visit; male; NH White; college graduate or more; ≥ \$75,000. NH Other included in models; not shown. Joint Wald omnibus tests – awareness: race/ethnicity $\chi^2(4) = 3.4, p = .50$; education $\chi^2(3) = 12.9, p = .005$; income $\chi^2(2) = 1.9, p = .38$. Perceived value: race/ethnicity $\chi^2(4) = 44.4, p < .001$; education $\chi^2(3) = 0.8, p = .85$; income $\chi^2(2) = 2.0, p = .38$.</i>		

The seeking association shows no evidence of differing across socioeconomic position. Marginally standardized awareness was 19.3% among adults reporting cancer-information seeking versus 13.7% among those not reporting it – an adjusted difference of 5.6 percentage points (95% CI 2.3–8.8) (Table 3, Fig. 1A). The estimated awareness difference associated with seeking was similar across education groups (from + 4.3 points among high-school graduates to + 6.0 among college graduates), although subgroup confidence intervals were wide, and we found no statistical evidence that the association differed by education, income, or race/ethnicity (seeking × education $\chi^2(3) = 1.8, p = .61$; seeking × income $\chi^2(2) = 0.0, p = .998$; seeking × race/ethnicity $\chi^2(4) = 2.1, p = .73$). These interaction tests had limited power (Limitations); the data are consistent with, but do not establish, a seeking–

awareness association of similar magnitude across strata. To the extent it is similar, information seeking would shift awareness across the whole population rather than differentially by group, making the reach of cancer-information seeking itself a central correlate of population awareness. In a sensitivity analysis restricted to adults aged 50–79 years — for whom MCED screening is most likely to be considered — the seeking–awareness association remained positive but was smaller and less precisely estimated (aOR 1.36; 95% CI 0.93–1.98; $n = 3,383$). A formal seeking-by-age-group interaction test showed no evidence of age-related heterogeneity (interaction $p = .75$), and the seeking-versus-provider contrast in this subgroup was also imprecise (ratio of aORs 1.67; $p = .22$); these findings do not establish that the association differs by age but indicate that its magnitude among screening-relevant adults requires confirmation in age-targeted samples. The seeking association was essentially unchanged when the provider-contact covariate was removed (aOR 1.46; 1.13–1.89). The inverse provider-contact association rested on a small group reporting no past-year visit ($n = 720$), among whom crude awareness was in fact higher (21.8% vs 15.9%) but imprecisely estimated. Respondents excluded from the regression for missing covariates ($n = 497$) were older and more socioeconomically disadvantaged than those included (for example, 47.6% vs 25.8% with household income below \$35,000), so complete-case estimates may modestly under-represent disadvantaged adults.

Table 3

Marginally standardized (g-computation) probability of MCED awareness by cancer-information seeking

Overall	No reported seeking, adj. % (95% CI)	Reported seeking, adj. % (95% CI)	Difference, pct. points (95% CI)
	13.7 (11.1–16.3)	19.3 (17.0–21.6)	+ 5.6 (2.3–8.8)
Less than high school	13.6 (8.0–19.2)	19.1 (11.3–26.9)	+ 5.5 (1.5–9.5)
High school graduate	9.8 (6.7–13.0)	14.1 (9.9–18.3)	+ 4.3 (1.4–7.1)
Some college	14.7 (10.8–18.6)	20.6 (16.8–24.4)	+ 5.9 (2.5–9.3)
College graduate or more	14.9 (12.0–17.8)	20.9 (18.3–23.5)	+ 6.0 (2.5–9.5)
Adjusted probabilities from the awareness model in Table 2, standardized over the covariate distribution, with jackknife 95% CIs. Seeking-by-socioeconomic-status interaction blocks were non-significant (seeking $\times$ education $\chi^2(3) = 1.8$, $p = .61$; seeking $\times$ income $\chi^2(2) = 0.0$, $p = .998$; seeking $\times$ race/ethnicity $\chi^2(4) = 2.1$, $p = .73$), indicating no detected heterogeneity in the seeking association across strata; subgroup confidence intervals were wide and these tests had limited power.			

Many previously unaware adults rated MCED testing very valuable after receiving a brief description.

Because the value item followed a short, favorably worded description, it was answered by aware and previously unaware respondents alike. Cross-classifying the two items (Fig. 1B), 6.9% of adults had heard of MCED tests and rated them very valuable, whereas 35.1% rated them very valuable after the survey description despite not previously having heard of them. Among adults rating MCED testing "very valuable," 83.5% (81.1–86.0) had not previously heard of the tests — a proportion near-identical across

racial/ethnic groups (NH White 83.8%, NH Black 83.2%, Hispanic 81.6%) and education (81.6% among college graduates to 85.1% among those with some college). Favorable value ratings among previously unaware adults were thus broadly distributed rather than concentrated in any one group.

Where perceived value concentrates. Consistent with the three prior reports [7, 8, 9], perceived value was markedly higher among NH Black (aPR 1.36, 1.18–1.57) and Hispanic adults (aPR 1.45, 1.27–1.66) than NH White adults (race/ethnicity omnibus $\chi^2(4) = 44.4$, $p < .001$), and higher among women (aPR 1.14, 1.02–1.27) and older adults (aPR 1.06 per decade, 1.02–1.09); family cancer history was positive but inconclusive (aPR 1.11, 0.98–1.26), and value was unrelated to education (omnibus $p = .85$) or income ($p = .38$). Value, like awareness, was higher among information seekers (aPR 1.35, 1.21–1.52). Prevalence ratios are reported for this common outcome because odds ratios would overstate the associations.

Discussion

Three national studies have now established how many U.S. adults have heard of MCED tests and how favorably they regard them [7, 8, 9]. This analysis addresses a different question — how that awareness is socially patterned — and yields three findings that reframe the equity stakes. First, early MCED awareness was positively associated with reported cancer-information seeking and, by a direct test, associated more strongly with seeking than with recent provider contact, which was inversely associated with awareness; among the socioeconomic factors, only an educational deficit (high-school graduates) was visible, while income, insurance, and race/ethnicity showed no adjusted association. Second, we found no evidence that the seeking–awareness association differed across socioeconomic strata; to the extent the association is similar across groups, information seeking would shift awareness across the whole population rather than differentially, making how widely cancer-information seeking is distributed a central correlate of equitable awareness — though the interaction tests had limited power. Third, a large and socially broad segment of the public — more than a third of all adults — rated MCED testing very valuable after a brief description despite not previously having heard of it.

Read together, these findings characterize an early stage of MCED information diffusion in which adjusted income and racial/ethnic awareness gradients were not detected [12, 13]. The pattern is compatible with a role for cancer-information seeking, but HINTS cannot determine whether respondents learned about MCED through consumer media, interpersonal communication, healthcare encounters, or another source; the inverse crude association with provider visits should likewise not be read as evidence that clinical contact reduces awareness. The observation is nonetheless consistent with MCED awareness developing through communication occurring beyond routine clinical encounters, in keeping with its pre-guideline, direct-to-consumer status [4, 5]. The perceived-value pattern is noteworthy: Black and Hispanic adults had higher adjusted odds of rating MCED testing "very valuable" than White adults after receiving the survey description — populations that also bear disproportionate cancer mortality [17]. If MCED use eventually shows the racial and socioeconomic gradients that earlier screening technologies developed [14], the emergence of such gradients would warrant examining how

information and access are distributed rather than assuming that they reflect lower perceived value among historically underserved groups.

The policy implication is one of timing and targeting. Because the seeking–awareness association showed no evidence of differing across groups, these findings support examining how trustworthy MCEd information is distributed through both public-facing and clinical communication channels, particularly as evidence and screening recommendations evolve; the large group rating MCEd testing very valuable after a brief description demonstrates broadly distributed favorable initial reactions, while not establishing informed demand or willingness to undergo testing. Once an awareness gradient forms it is difficult to reverse [11]; before it forms, equitable distribution is an achievable design goal. Whether that window is used is, in our view, the central equity question of MCEd’s diffusion, and one that community-level measurement of the information environment is positioned to monitor [12, 13].

Limitations

The design is cross-sectional and cannot establish how awareness was acquired; HINTS did not capture the source of MCEd information, so the seeking-versus-clinical contrast is inferential rather than a direct measure of channel. Awareness and value are self-reported, and the value item follows a short, favorably worded description that may not reflect real-world marketing exposure; perceived value should therefore not be read as warranted demand, particularly given MCEd’s unproven mortality benefit [3, 4]. The interaction analyses may have had limited power to detect modest heterogeneity, particularly within smaller racial/ethnic and education groups, so the absence of detected effect modification should not be read as evidence of strictly uniform associations. Because “very valuable” is a common outcome (about 42%), we report adjusted prevalence ratios rather than odds ratios for the perceived-value model. The primary analysis includes all adults 18 and older, appropriate to population-wide awareness, but the seeking estimate was modestly smaller and less precise in the screening-relevant 50–79 subgroup, so it should be confirmed in age-targeted samples. Regressions were complete-case analyses, and excluded respondents may differ from those analyzed. The no-past-year-visit group was small, so the provider-contact estimate is imprecise; subgroup estimates for NH Asian adults are imprecise; and the public-use file carries no geographic detail.

Conclusion

At this early stage, MCEd awareness in the United States was associated more strongly with cancer-information seeking than with recent provider contact, which was inversely associated with awareness, and showed no adjusted association with income or race/ethnicity — while a large and socially broad group rated the tests very valuable after only a brief description. Ensuring that trustworthy MCEd information is distributed equitably through both public-facing and clinical channels is the near-term opportunity these data point to, and this baseline makes the emergence — or prevention — of downstream disparities measurable.

Declarations

Competing interests:

The author declares no competing interests.

Ethics approval:

This study is a secondary analysis of de-identified, publicly available data from the National Cancer Institute's Health Information National Trends Survey (HINTS). Under the U.S. Common Rule (45 CFR 46) it does not constitute human subjects research, and institutional review board review and approval were not required.

Consent to participate:

Not applicable (secondary analysis of de-identified, publicly available data).

Consent for publication:

Not applicable.

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Author Contribution

M.A.S. is the sole author and conceived and designed the study, performed the statistical analysis, prepared the figure and tables, and wrote and approved the manuscript.

Data Availability

HINTS public-use data are freely available from the National Cancer Institute at <https://hints.cancer.gov/data>. Analysis code is available from the author on reasonable request.

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Figures

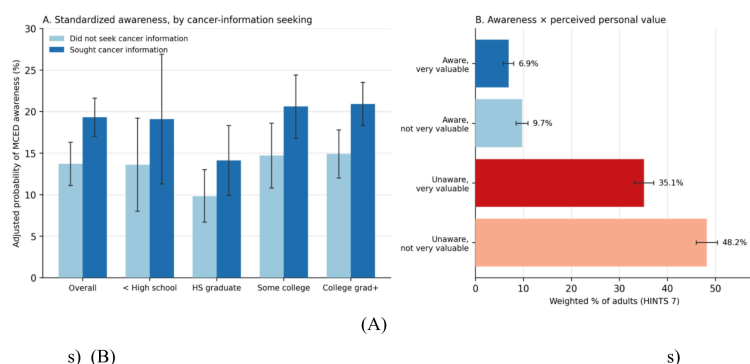


Figure 1

Information engagement and MCED awareness (HINTS 7, 2024)

(A) Marginally standardized probability of MCED awareness among adults reporting versus not reporting cancer-information seeking, overall and by education (jackknife 95% CIs). (B) Joint distribution of MCED awareness and perceived personal value; the "unaware, very valuable" cell (35.1% of adults) comprises adults who rated MCED very valuable after the survey description but had not previously heard of the tests. HINTS 7 (2024), U.S. adults 18+.