

Key Additions and Revisions Across Reporting Periods

Biannual report surveys and variables were modified over the 5-year data collection to streamline collection efforts, reduce reporting burden, and address changing contexts. Key additions and revisions to the surveys across reporting periods are included in Table 5 below. Please note that this (Table 5) is not an exhaustive list of all modifications to the biannual report over time, but rather a description of the most significant changes in survey methods to provide context for analyses and interpretations of the data. The codebook provides inclusion/exclusion information for all variables in all reporting periods.

Methodological shift of note. Starting with survey label 7 (the July 1–December 31, 2020, reporting period) the Coordinating Center pre-populated each funded center’s unique Qualtrics template with responses from their previous report and added a validation step after each pre-populated item requiring respondents to confirm that the responses reflect the current reporting period. The goal of this approach was to significantly reduce the reporting burden for cancer center survey respondents. Reducing burden was prioritized in these latter waves of data collection to enhance response rates, particularly for the Cohort 1 and 2 centers that were no longer receiving C3I funding to support report preparation or submission. This change may have affected the variability observed in reported data and increased consistency in reporting across waves. [This methodological change and its potential attendant limitations should be noted in analyses and interpretations of the data.](#)

Key Additions and Revisions Across Reporting Periods			
Description	Variables	Change	Context
Survey Data			
EHR system and patient data collection			
Electronic Nicotine Delivery Systems (ENDS)	ends_ehr ends_ehr_freq ends_ehr_freq_other ends_ehr_wording ends_required ends_required_dk	Added in survey label 4.	C3I was primarily focused on addressing combustible tobacco cigarette use. As many C3I TTPs also addressed ENDS use, these questions were added.
EHR data collection options	smokopt_1 through smokopt_10 othsmokstat race_report_1 through race_report_8 othrace cate_1 through cate_6	Only collected in survey label 1a.	Survey label 1a, the pre-grant baseline report for Cohort 1, assessed patient data collection options in the EHR. These were removed to reduce reporting burden and make baseline reports for future cohorts more consistent with reports for the funded period.
EHR demographics data collection	record_insurance record_employment record_education record_literacy record_financial record_food record_ehraccess record_race record_ethnicity record_gender record_sexorient record_language	Only collected in survey label 8.	In 2020, the Coordinating Center established 5 C3I Working Groups around grantee-identified areas of focus. The goal of the groups was to collaborate on cross-center activities to advance the science of tobacco cessation in each of these areas. Each group was given a one-time opportunity to add topic-specific questions to survey label 8. The Diversity, Equity, & Inclusion Working Group added these questions assessing which demographics data are collected in the EHR as a standard of care.

	record_citizen record_geo record_psych record_relation		
Tobacco treatment program services			
Point-of-care counseling	service_3	Added in survey label 4. Not included in survey label 8 in error.	Point-of-care counseling was added as a distinct service delivery model in survey label 4. The response choice was not included in survey label 8 in error.
Telehealth services	service_5 indcoun_inperson indcoun_tele indcoun_vid grpcoun_inperson grpcoun_tele grpcoun_vid	Service_5 was used through survey label 7 and replaced with the other variables starting in survey label 8.	Telehealth services expanded greatly at C3I centers after the onset of the COVID-19 pandemic, with most TTPs offering both telephone- and video-based counseling delivery. Prior to survey label 8, the report only assessed whether centers offered in-house telephone-based counseling. At survey label 8, that response option was removed and replaced with survey logic to first assess whether centers offered individual, group counseling, or both and then, if so, how that counseling was delivered (in-person, by telephone, and/or by video).
How long services had been offered	service_1_time through service_14_time	Only collected in survey label 5.	In survey label 5, these measures were added to assess how long each TTP service had been offered by the centers. These variables were removed as reporting was too burdensome, and the information could be assessed through longitudinal analyses.
Adoption of services	service_1_adopt through service_adopt_else	Only collected in survey label 5.	In survey label 5, these measures were added to assess how widely each TTP service had adopted across the centers' settings. These variables were removed as reporting was too burdensome, and adoption of the TTP generally could be assessed more easily.
Implementation across center			
Adoption of the TTP	adoption_1 through adoption_6	Added starting in survey label 4. Omitted in survey label 5.	In survey label 4, these measures were added to assess how widely the TTP had adopted across the centers' settings. The measures were omitted in survey label 5 in an attempt to assess adoption of each TTP service (see "Adoption of services above). In survey label 6, these measures were reinstated. "Non-oncology specialty clinics" (adoption_6) was added as a

			response option starting in survey label 9, based on grantee feedback.
Tobacco treatment program referral and follow-up processes			
Program initiated referral (proactive outreach)	referral_7	Added starting in survey label 6.	Proactive outreach was added as a referral process model in survey label 6.
Manual chart audit	follow_6	Added starting in survey label 6.	Manual chart audit was added as a follow-up process model in survey label 6.
Follow-up protocol description	follow_8	Added starting in survey label 6.	A text response question asking centers to describe their protocol collecting 6-month follow-up data in more detail was added starting in survey label 4.
Tobacco treatment program patient eligibility			
Family involvement in care	family_1 through family_4	Added in survey labels 4a and 7, which were fielded at the same time.	Questions assessing family involvement in tobacco treatment were added in survey labels 4a and 7, which were fielded at the same time, based on grantee feedback. These questions were refined and expanded by the Family & Social Support Systems Working Group (see below).
Secondhand smoke exposure	secondhand	Added in survey labels 4a and 7, which were fielded at the same time.	A question to determine whether centers routinely assess secondhand smoke exposure was added in survey labels 4a and 7, which were fielded at the same time, based on grantee feedback. This question was refined and expanded by the Family & Social Support Systems Working Group (see below).
Implementation activities			
Progress of implementation activities	activity_1 through activity_16_other	Assessed in all surveys except the Cohort 1 and 2 pre-grant baseline reports, survey labels 1a and 2a.	Progress of implementation activities was assessed at all reports for the funded period. These measures were not included in the Cohort 1 and 2 pre-grant baseline reports, survey labels 1a and 2a. Because some centers had implemented programs prior to funding, the measures were included in the Cohort 3 pre-grant baseline report, survey label 4a.
Tobacco treatment program billing			
Billing practices	billing_none billing_med billing_anycoun billing_counin	Billing_none was omitted from survey label 5 in error.	Telehealth services expanded greatly at C3I centers after the onset of the COVID-19 pandemic, with most TTPs offering both telephone- and video-based counseling delivery.

	billing_countel billing_counvid billing_other billing_other_text	Billing_counin, billing_countel, and billing_counvid were added starting in survey label 8. Billing_other and billing_other_text were included in survey labels 2, 2a, 3, and 5.	Prior to survey label 8, the report only assessed whether centers billed for counseling generally. Starting in survey label 8, billing_counin, billing_countel, and billing_counvid were added to assess whether centers billed for counseling delivered in person, by telephone, and/or by video. Billing_none was omitted from survey label 5 in error. Billing_other and billing_other_text were included in survey labels 2, 2a, 3, and 5.
Tobacco treatment program material creation, targeting, and tailoring			
Material creation	materials_1 through materials_7	Assessed in all surveys except the Cohort 1 and 2 pre-grant baseline reports, survey labels 1a and 2a.	Creation of materials (e.g., marketing, cessation education, training, and EHR scripting materials) was assessed at all reports for the funded period. These measures were not included in the Cohort 1 and 2 pre-grant baseline reports, survey labels 1a and 2a. Because some centers had implemented programs prior to funding, the measures were included in the Cohort 3 pre-grant baseline report, survey label 4a.
Tailored cessation materials	tailor_1 through tailor_10	Added in survey labels 4a and 7, which were fielded at the same time.	In survey labels 4a and 7 (which were fielded at the same time), survey logic was added to assess, if centers created tailored cessation materials, to which patient populations were they tailored. This addition was based on grantee feedback and was refined and expanded by the Diversity, Equity, & Inclusion Working Group (see “Targeted services and outreach” below).
Targeted services and outreach	target_income target_uninsured target_rural target_black target_aian target_asian target_hisp target_nhpi target_othsex target_mental target_deaf target_language target_other target_language_text	Only collected in survey label 8.	In 2020, the Coordinating Center established 5 C3I Working Groups around grantee-identified areas of focus. The goal of the groups was to collaborate on cross-center activities to advance the science of tobacco cessation in each of these areas. Each group was given a one-time opportunity to add topic-specific questions to survey label 8. The Diversity, Equity, & Inclusion Working Group added this question assessing to which special patient populations TTPs offer targeted services or outreach, if any.

	target_other_text		
Training and staffing			
Staff training	training staff_trained	Staff_trained was collected in survey labels 2, 2a, 3, and 4 and omitted starting in survey label 5. Training was added starting in survey label 4.	Survey labels 2, 2a, and 3 asked centers the number of health care staff who were trained in referring to or delivering tobacco treatment (staff_trained) from response options. Survey label 4 asked centers whether any health care staff were trained in referring to or delivering tobacco treatment (training) and, if yes, to indicate the number of staff (staff_trained) in a text box. Starting in survey label 5, the reports only asked centers whether staff were trained (training) and no longer asked for the number of staff trained (staff_trained) to simplify the report and reduce reporting burden.
Staff FTE	staff_fte staff_part_fte staff_full_fte	Staff_part_fte and staff_full_fte were collected in survey labels 2, 2a, 3, 4, and 5 and omitted starting in survey label 6. Staff_fte was added starting in survey label 6.	Survey labels 2, 2a, 3, 4, and 5 asked for the number of part time (staff_part_fte) and full time (staff_full_fte) tobacco treatment specialists (TTSs) on staff in a text box. Starting in survey label 6, the survey asked for the total number of FTEs for TTSs on staff (staff_fte) in a text box to simplify the report and reduce reporting burden.
Implicit bias training	bias_freq bias_freq_other bias_center bias_system bias_institution bias_other bias_other_text bias_dk	Only collected in survey label 8.	In 2020, the Coordinating Center established 5 C3I Working Groups around grantee-identified areas of focus. The goal of the groups was to collaborate on cross-center activities to advance the science of tobacco cessation in each of these areas. Each group was given a one-time opportunity to add topic-specific questions to survey label 8. The Diversity, Equity, & Inclusion Working Group added these questions assessing how frequently personnel are required to complete implicit bias training, if ever, and by which entities the training is mandated.
Clinical Sustainability Assessment Tool (CSAT) readiness for sustainability			

CSAT questions	csat1_1 through csat7_5	Added starting in survey label 5. Omitted for survey labels 10 and 11.	As Cohort 1 reached in the end of their funded period in 2019, the Coordinating Center added the Clinical Sustainability Assessment Tool (CSAT) to the C3I biannual reports to assess centers' capacity for sustaining their TTPs long-term. After the Coordinating Center began using a pre-population approach to fielding the Qualtrics survey in 2020 (see additional details in the introduction of this section), we saw little variation in CSAT responses across reporting periods. Because of this and to reduce reporting burden, the CSAT questions were omitted for survey labels 10 and 11.
Impact of COVID-19			
COVID-19 questions	covid_tele covid_tele_other covid_staff covid_staff_other covid_screening covid_treatment covid_med covid_coun covid_quittext covid_ehr covid_workflow covid_training covid_follow covid_expand covid_report covid_hire covid_maintain covid_space covid_morale	All variables were added starting in survey label 6. Covid_tele and covid_tele_other were collected in survey labels 6 and 7. Covid_space was only collected in survey label 6. All variables were omitted from survey labels 10 and 11.	Starting in survey label 6 (Jan 1, 2020-June 30, 2020), the Coordinating Center added questions to the biannual report to assess the impact of the COVID-19 pandemic on centers' TTPs. Covid_tele and covid_tele_other assessed whether centers implemented telehealth or telephone counseling as a result of the COVID-19 pandemic. This question was omitted starting in survey label 8 when telehealth response options for describing tobacco treatment services offered were refined (see telehealth services above). Covid_space was only collected in survey label 6. All variables were omitted from survey labels 10 and 11 (2022) as the impact of the COVID-19 pandemic became less significant.
Family and social support systems			
Addressing patients' family and social support systems	WG_FSSS_2_1_1 through WG_FSSS_2_5	Only collected in survey label 8.	In 2020, the Coordinating Center established 5 C3I Working Groups around grantee-identified areas of focus. The goal of the groups was to collaborate on cross-center activities to advance the science of tobacco cessation in each of these areas. Each group was given a one-time opportunity to add topic-specific questions to survey label 8. The Family & Social Support Systems Working Group added these questions assessing to what extent TTPs addressed patients' family and social support systems and

			secondhand smoke exposure as a standard of care.
Telehealth			
Telehealth programs	WG_TELE_3_1_1 through WG_TELE_3_5_13_TEXT	Only collected in survey label 8.	In 2020, the Coordinating Center established 5 C3I Working Groups around grantee-identified areas of focus. The goal of the groups was to collaborate on cross-center activities to advance the science of tobacco cessation in each of these areas. Each group was given a one-time opportunity to add topic-specific questions to survey label 8. The Telehealth Working Group added these questions assessing TTPs telehealth programs.
Sustainability			
Collaboration with external programs	WG_SUSTAIN_4_1_1 through WG_SUSTAIN_4_1_17_TEXT	Only collected in survey label 8.	In 2020, the Coordinating Center established 5 C3I Working Groups around grantee-identified areas of focus. The goal of the groups was to collaborate on cross-center activities to advance the science of tobacco cessation in each of these areas. Each group was given a one-time opportunity to add topic-specific questions to survey label 8. The Sustainability Working Group added this question assessing TTPs level of collaboration with external programs as a potential indicator of sustainability capacity.