

Attachment 5

Summary of Changes to PATH Study Instruments for Wave 2

June 26, 2014

Attachment 5 - Summary of Changes to PATH Study Instruments

The purpose of this attachment is to provide a high-level overview of changes to the PATH questionnaires from Wave 1 to Wave 2. This overview includes the change in total item counts per section across Waves (tables 'a'), as well as a description summary of the content that was added or deleted in Wave 2 that corresponds to the fluctuations in item counts (tables 'b').

The following tables outline changes in the (a) item counts and (b) questionnaire content across Waves for the:

- Adult Questionnaire (see Tables 1a and 1b),
- Youth Questionnaire (see Tables 2a and 2b),
- Parent Questionnaire (see Tables 3a and 3b), and
- Nicotine Exposure Questionnaire (see Tables 4a and 4b).

Table 1a. ADULT QUESTIONNAIRE - Change in Total Item Counts from Wave 1 to Wave 2

Adult Questionnaire Section	Total Number of Items per Section			Change in Total Item Count from W1 to W2	
	Wave 1	Wave 2		Extended	Aged-In
		Extended	Aged-In		
Introductory Demographics	13	3	3	-10	-10
Tobacco Use (includes ENDS items)	54	129	129	+75	+75
Cigarette	56	53	57	-3	+1
E-Cigarette	55	61	65	+6	+10
Cigar	47	42	46	-5	-1
Pipe	41	38	42	-3	+1
Hookah	53	49	53	-4	0
Smokeless Tobacco and Snus	51	47	51	-4	0
Dissolvable Tobacco	47	43	47	-4	0
Polyuse	5	5	5	0	0
Nicotine Dependence	71	72	72	+1	+1
Packaging and Health Warnings	27	17	17	-10	-10
Product Regulation	29	34	34	+5	+5
Media Use	13	15	15	+2	+2
Secondhand Smoke Exposure	8	10	10	+2	+2
Peer and Family Influences	3	4	4	+1	+1
Health (includes substance use items)	148	112	154	-36	+6
Marketing, Advertising and Promotion	16	23	29	+7	+13
Additional Demographics	17	25	25	+8	+8
Product Barcode Scanning	--	10	10	+10	+10
Contact Information	22	25	25	+3	+3
Total (Entire Questionnaire)	776	817	893	+41	+117

**Note: This table reflects total item counts; it does not account for the conditions in which the items are asked. For example, due to skip patterns, every respondent is not asked all items reflected in these counts. Consequently, the average time to complete the Adult interview remains at 60 minutes for both the Wave 1 and Wave 2 Extended instruments, and increases to 68 minutes for the Wave 2 Aged-In instrument.*

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TABLE 1b. ADULT QUESTIONNAIRE – Description of Content Changes from Wave 1 to Wave 2

Wave 2 Section	Wave 2 Change	Affected Respondent Category	Description of Questions	Rationale for Change
Introductory Demographics	Added	Adults	On respondent's marital status.	To inform Wave 2 weighting.
	Deleted	Adults	On respondent's sex, race, and ethnicity.	For adults in Wave 1, this information was used for sampling and for baseline demographic information; therefore, no need to ask again in Wave 2. For youth in Wave 1 that age-in to the adult cohort, this information was captured in the Wave 1 youth survey; therefore, no need to ask again in Wave 2.
Tobacco Use <i>(includes questions on ENDS)</i>	Added	Adults	On respondent's tobacco use status at Wave 2 to compare with tobacco use status reported at Wave 1.	For longitudinal assessment of change in tobacco use status and to reconcile different information on tobacco use status at Wave 1 versus Wave 2.
	Added	Young adults	On non-user respondent's susceptibility to becoming a tobacco user.	Young adults aged 18-to-24 initiate tobacco use at higher rates than older adults; susceptibility to initiate tobacco use is assessed among youth in Wave 1 and Wave 2; assessing susceptibility in young adults will help to elucidate its role in the initiation process during late adolescence/ early adulthood.
	Added	Adults	On respondent use of electronic nicotine delivery devices (ENDS), including e-hookahs, e-cigars, and e-pipes, including on whether they have heard of these products.	To assess patterns of use of new and emerging electronic nicotine delivery devices, and to help inform the interpretation of bio-specimen data.
	Deleted	Adults	On whether respondent has heard of a given product.	All products were described to respondents at Wave 1; thus it is not necessary to ask this again of any adult respondents in Wave 2. For products that are added to the PATH study in Wave 2 and beyond, these items will be retained for those products.
Cigarette	Added	Adults	On specific flavors of cigarettes used, including first flavored cigarette used, regular brand used, and product used in past 30 days.	To assess for use of flavored cigarettes and/or roll-your-own cigarette tobacco; and its association with tobacco product use and cessation or initiation within persons, across the cohort and over time.
	Added	Young adults	On the initiation process and experience associated with use of first cigarette.	To assess the process and experience of tobacco use initiation among young adults aged 18-to-24, a group that initiates tobacco use at higher rates than older adults; similar to assessments of the process and experience of tobacco use initiation among youth in the Youth cohort at Wave 1, and specifically among those youth who age-in to the adult cohort at Wave 2.
	Added	Adults	On perceived harm of using menthol cigarettes compared to non-menthol cigarettes.	To inform understanding of adults' perceptions of harm in use of menthol-flavored cigarettes versus non-mentholated cigarettes relative to tobacco product use patterns.

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Wave 2 Section	Wave 2 Change	Affected Respondent Category	Description of Questions	Rationale for Change
	Deleted	Adults	On past use of cigarettes (age at first use and use patterns 12 months ago).	For adults in Wave 1, this information was captured in the Wave 1 adult survey; therefore, no need to ask again in Wave 2. For youth in Wave 1 that age-in to the adult cohort, this information was captured in the Wave 1 youth survey; therefore, no need to ask again in Wave 2.
E-Cigarette	Added	Adults	On specific flavors of e-cigarette products used (first flavored e-cigarette product, regular brand and past 30 day use).	To assess for use of flavored e-cigarettes and/or e-liquid; and its association with product use and cessation or initiation within persons, across the cohort and over time.
	Added	Adults	On use of types of e-cigarette devices, including the tank system; and on the respondent's experience with refills and types of modifications that can be made to a device.	To assess use of new and emerging types of e-cigarette devices, the refill experience, and the nature of any modifications respondents make to their e-cigarette devices.
	Added	Adults	On whether anyone else who lives in the household owns an e-cigarette.	To assess the presence of e-cigarettes in the respondent's household to inform the social context of use patterns.
	Added	Adults	On cost of usual or last purchase of e-cigarettes, e-cigarette cartridges, or e-liquid.	To provide information on purchasing behavior and its association with patterns of tobacco use.
	Deleted	Adults	On past/previous use of e-cigarettes (age at first use and pattern of use 12 months ago).	For adults in Wave 1, this information was captured in the Wave 1 adult survey; therefore, no need to ask again in Wave 2. For youth in Wave 1 that age-in to the adult cohort, this information was captured in the Wave 1 youth survey; therefore, no need to ask again in Wave 2.
Cigar	Added	Adults	On specific flavors of cigars used (first product, regular brand and past 30 day use).	To assess for use of flavored cigars; and its association with tobacco product use and cessation or initiation within persons, across the cohort and over time.
	Added	Adults	On perceived harm; expanded to cover each cigar type.	To acquire data on harm perceptions for each cigar type.
	Deleted	Adults	On past use of cigars (age at first use and pattern of use 12 months ago).	For adults in Wave 1, this information was captured in the Wave 1 adult survey; therefore, no need to ask again in Wave 2. For youth in Wave 1 that age-in to the adult cohort, this information was captured in the Wave 1 youth survey; therefore, no need to ask again in Wave 2.
Pipe	Added	Adults	On use of flavored pipe tobacco (including first use of flavored pipe tobacco, regular flavor or brand of pipe tobacco used, and past 30 day use).	To assess for use of flavored pipe tobacco; and its association with product use and cessation or initiation within persons, across the cohort and over time.

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Wave 2 Section	Wave 2 Change	Affected Respondent Category	Description of Questions	Rationale for Change
	Added	Adults	On the cost of usual or last purchase of pipe tobacco.	To provide information on purchasing behavior and its association with patterns of tobacco use.
	Deleted	Adults	On past use of pipe tobacco (age at first use and pattern of use 12 months ago).	For adults in Wave 1, this information was captured in the Wave 1 adult survey; therefore, no need to ask again in Wave 2. For youth in Wave 1 that age-in to the adult cohort, this information was captured in the Wave 1 youth survey; therefore, no need to ask again in Wave 2.
Hookah	Added	Adults	On use of flavored hookah tobacco (including first use of flavored hookah tobacco or shisha, regular flavor or brand of hookah tobacco used, and past 30 day use).	To assess for use of flavored shisha or hookah tobacco; and its association with tobacco product use and cessation or initiation within persons, across the cohort and over time.
	Added	Adults	On smoking marijuana in a hookah pipe.	To assess use of hookah to smoke marijuana in addition to or instead of tobacco for the analysis of tobacco product use patterns; and to inform the interpretation of bio-specimen data.
	Added	Adults	On the cost of usual or last purchase of shisha tobacco.	To provide information on purchasing behavior and its association with patterns of tobacco use.
	Added	Adults	On whether anyone else living in the household owns a hookah.	To assess the presence of a hookah in the respondent's household to inform the social context of use patterns.
	Deleted	Adults	On past/previous use of hookah (age at first use and pattern of use 12 months ago).	For adults in Wave 1, this information was captured in the Wave 1 adult survey; therefore, no need to ask again in Wave 2. For youth in Wave 1 that age-in to the adult cohort, this information was captured in the Wave 1 youth survey; therefore, no need to ask again in Wave 2.
Smokeless Tobacco and Snus	Added	Adults	On use of specific flavors of smokeless tobacco (first use of flavored smokeless tobacco, regular flavor or brand used, and past 30 day use).	To assess for use of flavored smokeless tobacco; and its association with tobacco product use and cessation or initiation within persons, across the cohort and over time.
	Deleted	Adults	On past/previous use of smokeless tobacco (age at first use and pattern of use 12 months ago).	For adults in Wave 1, this information was captured in the Wave 1 adult survey; therefore, no need to ask again in Wave 2. For youth in Wave 1 that age-in to the adult cohort, this information was captured in the Wave 1 youth survey; therefore, no need to ask again in Wave 2.
Dissolvable Tobacco	Added	Adults	On use of specific flavors of dissolvable tobacco (first use of flavored dissolvable tobacco, regular flavor or brand used, and past 30 day use).	To assess for use of flavored dissolvable tobacco; and its association with tobacco product use and cessation or initiation within persons, across the cohort and over time.

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Wave 2 Section	Wave 2 Change	Affected Respondent Category	Description of Questions	Rationale for Change
	Deleted	Adults	On past/previous use of dissolvable tobacco (age at first use and pattern of use 12 months ago).	For adults in Wave 1, this information was captured in the Wave 1 adult survey; therefore, no need to ask again in Wave 2. For youth in Wave 1 that age-in to the adult cohort, this information was captured in the Wave 1 youth survey; therefore, no need to ask again in Wave 2.
Nicotine Dependence	Added	Adults	On peer or family use of e-cigarettes.	To elucidate the role of social context in relation to the use of e-cigarettes. This item is associated with the WISDM scale which is used to measure dependence.
Packaging and Health Warnings	Deleted	Adults	On health warning labels on cigarette packs and smokeless tobacco containers, including how often a respondent looks closely at them; tries to avoid looking at or thinking about them; how believable they are; how they make a respondent feel about use or the health risks associated with use; and if they affect the likelihood of initiation.	Asked in Wave 1 and removed for Wave 2; may be considered again in a future wave depending on regulatory changes regarding health warning labels.
Product Regulation - Modified Risk Tobacco Products	Added	Adults	On perceived harm/risk in using modified risk tobacco products.	To assess respondents' understanding and perceptions of harm/risk associated with use of modified risk products.
	Added	Adults	On perceived link between cigarette smoking and diabetes and liver cancer.	To assess respondents' understanding and perceptions of harm associated with smoking and its now documented link to diabetes and liver cancer.
Media Use	Added	Adults	On use of various technologies to access the internet.	To assess the technologies respondents use to access the internet to better understand modes of exposure to messages and advertising that is health and/or tobacco focused.
	Added	Adults	On respondents' use of tobacco cessation smart phone applications.	To contribute to understanding what types of tobacco-related information/applications respondents' access with smartphone technology.
	Added	Young adults	On exposure to tobacco brands on various social media.	To assess the extent to which young adults are exposed to tobacco product advertising through various social media.
	Added	Adults	On exposure to tobacco brands in online games.	To assess the extent of tobacco brand exposure from advertisements placed in online games.
	Deleted	Adults	On the number of texts sent on a typical day.	This item is no longer of research priority to the PATH Study; therefore it is not necessary to ask again in Wave 2 of any respondent category.
Secondhand Smoke Exposure	Added	Adults	On whether respondent lives alone.	To drive a skip pattern in the absence of updated household member size being collected in Wave 2.

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Wave 2 Section	Wave 2 Change	Affected Respondent Category	Description of Questions	Rationale for Change
	Added	Older adults	On multi-unit housing.	To inform secondhand smoke exposure. (Note: There is a separate question in the instrument on residence type that captures this information for Young Adults)
Peer and Family Influences	Added	Adults	On peer or family disapproval of using e-cigarettes.	To elucidate the role of social context in relation to the use of e-cigarettes.
Health <i>(formerly named "Health Effects Outcome")</i>	Added	Adults	On physical activity levels.	Physical activity level may be an intermediate measure subject to change with changes in tobacco use and disease state and may be used to help interpret biomarker data; asthma/respiratory health conditions and rapid vision loss can be possible outcomes subject to change as tobacco use status changes; in utero exposure and family history data are covariates that may impact one's risk of various health conditions. These additions will obtain more granular information on the respondent's health and the health effects associated with use of tobacco products; asking these in Wave 2 will permit analysis of within-person change over the past year; data will also support the analysis and interpretation of bio- specimen data.
	Added	Adults	On asthma and respiratory health conditions.	
	Added	Adults	On rapid vision loss.	
	Added	Adults	On in-utero exposure to tobacco.	
	Added	Adults	On family history of high blood pressure and high cholesterol.	
	Deleted	Adults	On height.	Asked in Wave 1; not necessary to ask older adults again in Wave 2 given the relative stability of height after young adulthood; will continue to be asked of young adults in Wave 2, including youth that age-in to the adult cohort.
	Deleted	Adults	On disability status.	The HHS Standard Disability items were asked at Wave 1; not necessary to ask again in Wave 2; however, they will be asked of youth who age-in to the adult cohort. In Wave 2, there are other measures in this section that can inform respondents' disability status in the absence of these items.
	Deleted	Adults	On age of diagnosis of specified health condition.	Asked at Wave 1; not necessary to ask again in Wave 2; however, will be asked of youth who age-in to the adult cohort.
Marketing, Advertising and Promotion <i>(formerly named "Industry Advertising and Promotion" section)</i>	Added	Adults	On exposure to tobacco-related public education campaigns.	To assess a respondent's exposure and familiarity with national tobacco-related public education campaigns over the past year via various media outlets such as TV, radio, the internet, etc.
	Added	Adults	On ever receiving free samples of e-cigarettes, e-liquid and other tobacco products.	To assess a respondent's extent of exposure to tobacco product marketing, advertisements, promotions, and sweepstakes.
	Added	Adults	On the placing of tobacco product advertisement.	

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Wave 2 Section	Wave 2 Change	Affected Respondent Category	Description of Questions	Rationale for Change
	Added	Adults	On participation in tobacco-sponsored sweepstakes.	
	Deleted	Adults	On exposure to images of tobacco product advertisements and specific advertisements.	Asked in Wave 1 and removed for Wave 2; may be considered again in a future wave depending on research priorities for PATH.
Additional Demographics	Added	Adults	On home ownership.	To inform Wave 2 weighting.
	Added	Young adults	On residence type, socio-economic status, parent education levels, and parent household income.	To characterize the socio-economic status of the young adult respondent; to inform the analysis of these factors in association with tobacco product use behaviors in late adolescence/young adulthood.
	Added	Adults	On gender identity (transgender).	From the Massachusetts' "State Optional Module" for the 2014 BRFSS; to better characterize tobacco use among transgender population.
	Deleted	Adults	On respondent's main job title or occupation.	Asked in Wave 1; given the resources required to create occupational codes for this analysis, not asked again in Wave 2.
Product Barcode Scanning Module <i>(formerly embedded in Additional Demographics)</i>	Added	Adults	On whether the last product used was from the scanned package or container.	To inform the interpretation of bio-specimen. Note: This question is asked for each tobacco product the respondent agrees to have scanned. We scan up to 10 tobacco product packages. It is unlikely that a respondent would receive all 10 questions in this section.
Contact Information	Added	Adults	On second home ownership.	To aid contacting and tracing efforts for Wave 3.

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Table 2a. YOUTH QUESTIONNAIRE - Change in Total Item Counts from Wave 1 to Wave 2

Youth Questionnaire Section	Total Number of Items per Section			Change in Total Item Count from W1 to W2	
	Wave 1	Wave 2		Extended	Aged-In
		Extended	Aged-In		
Introductory Demographics	4	0	3	-4	-1
Cigarette	43	47	49	+4	+6
Electronic Nicotine Delivery Systems (ENDS)	46	60	63	+14	+17
Cigar	46	66	70	+20	+24
Pipe	38	12	13	-26	-25
Hookah	50	56	59	+6	+9
Smokeless Tobacco and Snus	44	49	52	+5	+8
Dissolvable Tobacco	43	4	5	-39	-38
Bidis and Kreteks	41	4	5	-37	-36
First Tobacco Product	1	1	1	0	0
Reasons to Use Tobacco	17	17	17	0	0
Nicotine Dependence	11	12	12	+1	+1
Cessation / Quitter	8	8	8	0	0
Packaging and Health Warnings	26	16	26	-10	0
Product Regulation	3	3	3	0	0
Media Use	16	16	18	0	+2
Secondhand Smoke Exposure	4	4	4	0	0
Health	50	46	57	-4	+7
Marketing, Advertising and Promotion	11	26	26	+15	+15
Peer and Family Influences	--	8	8	+8	+8
Accessibility	1	3	3	+2	+2
Psychosocial	14	12	12	-2	-2
Substance Use	32	18	29	-14	-3
Additional Demographics	14	17	17	+3	+3
Contact Information (Emancipated Youth)	21	25	25	+4	+4
Total (Entire Questionnaire)	584	530	585	-54	+1

**Note: This table reflects total counts of items; it does not account for the conditions in which the items are asked. For example, due to skip patterns, every respondent is not asked all items reflected in these counts. Consequently, the average time to complete the Youth interview remains at 32 minutes for both the Wave 1 and Wave 2 Extended instruments, and increases to 42 minutes for the Wave 2 Aged-In instrument.*

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TABLE 2b. YOUTH QUESTIONNAIRE – Description of Content Changes from Wave 1 to Wave 2

Wave 2 Section	Wave 2 Change	Affected Respondent Category	Description of Questions	Rationale for Change
Introductory Demographics	Deleted	Youth	On race and ethnicity.	For youth in Wave 1, this information was used to capture baseline demographic information; therefore, no need to ask again in Wave 2. These items will be retained and asked of youth who 'age-in' to the youth cohort as new respondents in Wave 2.
Cigarette	Added	Youth	On ever smoking cigarettes regularly and at what age.	To assess regular smoking and at what age in association with progression of use over time.
	Added	Youth	On specific flavors of cigarettes smoked in the past 30 days.	To assess for use of flavored cigarettes; and its association with patterns of tobacco use, cessation or initiation within persons, across the cohort and over time.
	Added	Youth	On the cost of last cigarette purchase.	To provide information on purchasing behavior and its association with patterns of tobacco use.
	Added	Youth	On perceived harm of using menthol cigarettes compared to non-menthol cigarettes.	To inform understanding of youths' perceptions of harm associated with use of menthol-flavored cigarettes versus non-mentholated cigarettes.
	Deleted	Youth	On the respondent's age when first smoked a cigarette.	Asked at Wave 1; not necessary to ask again in Wave 2; however, these will continue to be asked of youth who 'age-in' to the youth cohort as new respondents in Wave 2.
Electronic Nicotine Delivery Systems (ENDS) <i>(formerly named "E-Cigarette")</i>	Added	Youth	On whether respondent has heard of and used electronic nicotine delivery devices, including e-cigarettes, e-hookahs, e-cigars, and e-pipes.	To assess the youth respondent's use of new and emerging electronic nicotine delivery products.
	Added	Youth	On non-user respondent's susceptibility to becoming a user of any electronic nicotine products.	To assess susceptibility to initiation of electronic nicotine products.
	Added	Youth	On use of types of e-cigarette devices, including the tank system; and on the respondent's experience with refills and types of modifications that can be made to a device.	To assess use of new and emerging types of e-cigarette devices, the refill experience, and the nature of any modifications respondents make to their e-cigarette devices.
	Added	Youth	On ever using e-cigarettes regularly and at what age.	To assess regular use of e-cigarettes and at what age in association with progression of use over time.

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Wave 2 Section	Wave 2 Change	Affected Respondent Category	Description of Questions	Rationale for Change
	Added	Youth	On use of specific flavors of e-cigarettes or e-liquid in the past 30 days.	To assess for use of flavored e-cigarettes and/or e-liquid; and its association with product use and cessation or initiation within persons, across the cohort and over time.
	Added	Youth	On the cost of last e-cigarette, e-cigarette cartridge, or e-liquid purchase including the unit size of the purchase (box or pack, singles, etc.).	To provide information on purchasing behavior and its association with patterns of tobacco use.
	Added	Youth	On whether anyone else living in the household owns an e-cigarette.	To assess the presence of e-cigarettes in the respondent's household to inform the social context of use patterns.
	Deleted	Youth	On whether respondent has heard of e-cigarettes.	All products were described to respondents at Wave 1; thus it is not necessary to ask this again in Wave 2; however, these will continue to be asked of youth who 'age-in' to the youth cohort as new respondents in Wave 2.
	Deleted	Youth	On how old the respondent was when first used an e-cigarette.	Asked at Wave 1; not necessary to ask again in Wave 2; however, these will continue to be asked of youth who 'age-in' to the youth cohort as new respondents in Wave 2.
Cigar	Added	Youth	On non-user youth respondent's susceptibility to using a cigar/cigarillo/filtered cigar.	To help elucidate the role of susceptibility in the youth respondent's process and experience of initiation of cigars, cigarillos and filtered cigars.
	Added	Youth	On ever smoking cigars/cigarillos/filtered cigars regularly and at what age.	To assess regular smoking and at what age in association with progression of use over time.
	Added	Youth	On the specific flavors of cigars/cigarillos/filtered cigars used in the past 30 days.	To assess for use of flavored cigars; and its association with patterns of tobacco use, cessation or initiation within persons, across the cohort and over time.
	Added	Youth	On the cost of last cigars/cigarillos/filtered cigars purchase, including the unit size of the purchase (box or pack, singles, etc.).	To provide information on purchasing behavior and its association with patterns of tobacco use.
	Deleted	Youth	On whether respondent has heard of cigars/cigarillos/filtered cigars.	All products were described to respondents at Wave 1; thus it is not necessary to ask this again in Wave 2; however, these will continue to be asked of youth who 'age-in' to the youth cohort as new respondents in Wave 2.

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Wave 2 Section	Wave 2 Change	Affected Respondent Category	Description of Questions	Rationale for Change
	Deleted	Youth	On how old the respondent was when first used a cigar/cigarillo/filtered cigar deleted.	Asked at Wave 1; not necessary to ask again in Wave 2; however, these will continue to be asked of youth who 'age-in' to the youth cohort as new respondents in Wave 2.
Pipe	Deleted	Youth	On patterns of pipe use.	Asked at Wave 1; not necessary to ask again in Wave 2, except for past 30 day use and purchasing patterns.
Hookah	Added	Youth	On a non-user's susceptibility to becoming a hookah smoker.	To help elucidate the role of susceptibility in the youth respondent's process and experience of initiation of hookah.
	Added	Youth	On ever smoking hookah tobacco regularly and at what age.	To assess regular smoking and at what age in association with progression of use over time.
	Added	Youth	On the specific flavors of hookah tobacco used in the past 30 days.	To assess for use of flavored shisha or hookah tobacco; and its association with product use and cessation or initiation within persons, across the cohort and over time.
	Added	Youth	On the cost of the last hookah tobacco purchase.	To provide information on purchasing behavior and its association with patterns of tobacco use.
	Added	Youth	On setting up the hookah.	To inform understanding of hookah initiation and use.
	Added	Youth	On smoking marijuana in a hookah.	To assess use of hookah to smoke marijuana in addition to or instead of tobacco for the analysis of tobacco product use patterns.
	Deleted	Youth	On whether a respondent has heard of a given product.	All products were described to respondents at Wave 1; thus it is not necessary to ask this again in Wave 2; however, these will continue to be asked of youth who 'age-in' to the youth cohort as new respondents in Wave 2.
	Deleted	Youth	On how old the respondent was when first smoked hookah.	Asked at Wave 1; not necessary to ask again in Wave 2; however, these will continue to be asked of youth who 'age-in' to the youth cohort as new respondents in Wave 2.
Smokeless Tobacco and Snus	Added	Youth	On a non-user's susceptibility to becoming a smokeless tobacco user.	To help elucidate the role of susceptibility in the youth respondent's process and experience of initiation of smokeless tobacco.
	Added	Youth	On ever using smokeless tobacco/snus regularly and at what age.	To assess regular use and at what age in association with progression of use over time.
	Added	Youth	On the specific flavors of smokeless tobacco/snus used in the past 30 days.	To assess for use of flavored smokeless tobacco; and its association with product use and cessation or initiation within persons, across the cohort and over time.

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Wave 2 Section	Wave 2 Change	Affected Respondent Category	Description of Questions	Rationale for Change
	Added	Youth	On cost of the last smokeless tobacco/snus purchase, including the unit size of the purchase (number of pouches in container, etc.).	To provide information on purchasing behavior and its association with patterns of tobacco use.
	Deleted	Youth	On whether respondent has heard of smokeless tobacco/snus.	All products were described to respondents at Wave 1; thus it is not necessary to ask this again in Wave 2; however, these will continue to be asked of youth who 'age-in' to the youth cohort as new respondents in Wave 2.
	Deleted	Youth	On how old the respondent was when first used smokeless tobacco/snus.	Asked at Wave 1; not necessary to ask again in Wave 2; however, these will continue to be asked of youth who 'age-in' to the youth cohort as new respondents in Wave 2.
Dissolvable Tobacco	Deleted	Youth	On patterns of dissolvable tobacco use.	Asked at Wave 1; not necessary to ask again in Wave 2, except for ever and current use.
Bidis and Kreteks	Deleted	Youth	On patterns of bidi/kretek use.	Asked at Wave 1; not necessary to ask again in Wave 2, except for ever and current use.
Nicotine Dependence	Added	Youth	On peer or family use of e-cigarettes.	To elucidate the role of social context in relation to the use of e-cigarettes. This item is associated with the WISDM scale which is used to measure dependence.
Packaging and Health Warnings	Added	Youth	Health warnings on cigar packages were expanded to be asked about each specific cigar type (traditional cigars, cigarillos and filtered cigars).	To assess the level of exposure to health warning labels on cigars, cigarillos and filtered cigars, and associated perceptions of harm of tobacco use.
	Deleted	Youth	On health warning labels on cigarette packs and smokeless tobacco containers, including how often a respondent looks closely at them; tries to avoid looking at or thinking about them; how believable they are; how they make a respondent feel about use or the health risks associated with use; and if they affect the likelihood a respondent will start using the product.	Asked in Wave 1 and removed for Wave 2; may be considered again in a future wave depending on regulatory changes regarding health warning labels; however, these will continue to be asked of youth who 'age-in' as new respondents in Wave 2.
Media Use	Added	Youth	On use of various technologies to access the internet.	To assess the technologies respondents use to access the internet in order to better understand modes of exposure to messages and advertising that is health and/or tobacco focused.

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	Added	Youth	On tobacco cessation smart phone apps.	To contribute to understanding what types of tobacco-related information/applications respondents' access with smartphone technology.
	Added	Youth	On online exposure to tobacco brands.	To contribute to understanding exposure to tobacco advertising, particularly through social media.
	Deleted	Youth	On visiting tobacco brand websites.	Asked in Wave 1; not necessary to ask again in Wave 2. These items will not be retained for youth that age-in to the youth cohort at Wave 2.
	Deleted	Youth	On the number of texts sent on a typical day.	This item is no longer of research priority to the PATH Study; therefore it is not necessary to ask again in Wave 2 of any respondent category.
	Deleted	Youth	On scanning a QR code, and if that code led to a tobacco company website.	Asked in Wave 1; not necessary to ask again in Wave 2; however, these will continue to be asked of youth who 'age-in' as new respondents in Wave 2.
Health <i>(formerly embedded within Demographics section)</i>	Added	Youth	On physical, mental and overall health.	Physical, mental and overall health; height and weight (to calculate BMI); and physical activity levels may be intermediate measures subject to change with changes in tobacco use and disease state. Asthma and respiratory health conditions can be possible outcomes subject to change as tobacco use status changes. These additions will obtain more granular information on the respondent's health and the health effects associated with use of tobacco products; asking these in Wave 2 will permit analysis of within-person change over the past year.
	Added	Youth	On height and weight.	
	Added	Youth	On physical activity levels.	
	Added	Youth	On asthma and respiratory health conditions.	
	Deleted	Emancipated youth	On disability status.	The HHS Standard Disability items were asked at Wave 1; not necessary to ask again in Wave 2; however, they will be asked of emancipated youth who age-in as new respondents. In Wave 2, there are other measures in this section that can inform respondents' disability status in the absence of these items.
	Deleted	Emancipated youth	On age of diagnosis of specified health condition.	Not necessary to ask in Wave 2 for youth who receive a diagnosis of a health condition since the Wave 1 interview; this can be determined administratively as having occurred in the past 12 months. These items will be retained and asked of emancipated youth who 'age-in' to the youth cohort as new respondents in Wave 2.

Attachment 5 - Summary of Changes to PATH Study Instruments

Wave 2 Section	Wave 2 Change	Affected Respondent Category	Description of Questions	Rationale for Change
Marketing, Advertising and Promotion <i>(formerly named "Marketing" and "Ad Exposure" sections)</i>	Added	Youth	On samples of e-cigarettes and e-liquid.	To assess a respondent's extent of exposure to tobacco product marketing, advertisements, promotions, and sweepstakes.
	Added	Youth	On tobacco-related public education campaigns.	To assess a respondent's exposure and familiarity with national tobacco-related public education campaigns over the past year via various media outlets such as TV, radio, the internet, etc.
	Added	Youth	On tobacco product advertisement placement.	To assess a respondent's extent of exposure to tobacco product marketing, advertisements, promotions, and sweepstakes.
	Deleted	Youth	On exposure to images of tobacco product advertisements and specific advertisements.	Asked in Wave 1 and removed for Wave 2; may be considered again in a future wave depending on research priorities for PATH.
Peer and Family Influences <i>(new section)</i>	Added	Youth	On peer use of tobacco products.	To elucidate the role of social context in relation to the patterns of tobacco use, particularly susceptibility of initiation by non-users.
Accessibility	Added	Youth	On likelihood of purchasing cigarettes or other tobacco products in the next 30 days.	To help inform the process and experience of tobacco product use among youth.
Substance Use	Deleted	Youth	On age of first use of alcohol, marijuana and other illicit substances.	Asked at Wave 1; not necessary to ask again in Wave 2; however, these will continue to be asked of youth who 'age-in' to the youth cohort as new respondents in Wave 2.
	Deleted	Youth	On sensation seeking behaviors.	Asked in Wave 1 and removed for Wave 2; will be cycled back in and asked in future waves.
Additional Demographics <i>(formerly named "Demographics" section)</i>	Added	Emancipated youth	On household income and home ownership.	To characterize the socio-economic status and home ownership of the respondent's household; and to help in the analysis of these factors in the process and experience of tobacco product use initiation and patterns of tobacco product use among youth.
	Added	Youth	On whether the youth respondent works for pay.	
Contact Information	Added	Emancipated youth	On second home ownership.	To aid contacting and tracing efforts for Wave 3.

Attachment 5 - Summary of Changes to PATH Study Instruments

Table 3a. PARENT QUESTIONNAIRE - Change in Total Item Counts from Wave 1 to Wave 2

Parent Questionnaire Section	Total Number of Items per Section			Change in Total Item Count from W1 to W2	
	Wave 1	Wave 2		Extended	Aged-In
		Extended	Aged-In		
Family Composition	12	12	19	0	+7
School, Home, and Tobacco Use	11	9	9	-2	-2
Health	35	21	38	-14	+3
Respondent Characteristics	4	9	9	+5	+5
Contact Information	23	27	27	+4	+4
Total (Entire Questionnaire)	85	78	102	-7	+17

**Note: This table reflects total counts of items; it does not account for the conditions in which the items are asked. For example, due to skip patterns, every respondent is not asked all items reflected in these counts. Consequently, the average time to complete the Parent interview remains at 14 minutes for both the Wave 1 and Wave 2 Extended instruments, and increases to 17 minutes for the Wave 2 Aged-In instrument.*

Attachment 5 - Summary of Changes to PATH Study Instruments

TABLE 3b. PARENT QUESTIONNAIRE – Description of Content Changes from Wave 1 to Wave 2

Wave 2 Section	Wave 2 Status	Affected Respondent Category	Description of Questions	Rationale for Change
Family Composition <i>(new section)</i>	Deleted	Parent	On youth respondents that are twins or part of a multiple birth.	Asked at Wave 1; not necessary to ask again of parent respondents for youth in Wave 2; however, will be asked of parent respondents for "new baseline" youth who 'age-in' at Wave 2.
Health <i>(new section)</i>	Added	Parent	On family history of high blood pressure and high cholesterol.	Added in Wave 2 and asked of the parents because they are likely more knowledgeable of this information than the youth respondent. The data are useful as a covariate to put one at greater or lesser risk of heart disease, which is important in a long-term study assessing the health status of tobacco users.
	Deleted	Parent	On disability status of youth.	The HHS Standard Disability items were asked at Wave 1; not necessary to ask again in Wave 2; however, they will be asked of parents of youth who age-in to the youth cohort.
	Deleted	Parent	On age of diagnosis of youth's specified health condition.	Not necessary to ask parents in Wave 2 for youth who receive a diagnosis of a health condition since the Wave 1 interview; this can be determined administratively as having occurred in the past 12 months. These items will be retained and asked of parents of youth who 'age-in' to the youth cohort as new respondents in Wave 2.
Respondent Characteristics <i>(new section)</i>	Added	Parent	On the education level of the parent respondent's spouse; on household income; and on home ownership.	To characterize the socio-economic status of the parent and youth respondents' household and the association of such factors in the process of tobacco use initiation and in patterns of tobacco use.
	Added	Parent	On the parent respondent's perceived harm of using tobacco products.	To assess the parent respondent's perception of harm in tobacco use; to relate parent respondent's harm perceptions to youth respondent's perceptions and use of tobacco.
Contact Information	Added	Parent	On owning a second home.	To aid contacting and tracing efforts for Wave 3.

Attachment 5 - Summary of Proposed Changes to PATH Study Instruments

Table 4a. NICOTINE EXPOSURE QUESTIONNAIRE - Change in Total Item Counts from Wave 1 to Wave 2

NEQs	Wave 1	Wave 2	Change since Wave 1
Total (Entire Questionnaire)	28	38	+10

**Note: This table reflects total counts of items; it does not account for the conditions in which the items are asked. For example, due to skip patterns, every respondent is not asked all items reflected in these counts. Consequently, the average time to complete the Nicotine Exposure Questionnaire remains at 4 minutes for both the Wave 1 and Wave 2 Extended and Aged-In interviews. NEQs are asked of all respondents that consent to bio-specimen collection; there is no distinction made between the extended and aged-in respondent categories.*

Attachment 5 - Summary of Proposed Changes to PATH Study Instruments

TABLE 4b. NICOTINE EXPOSURE QUESTIONNAIRE – Description of Content Changes from Wave 1 to Wave 2

Wave 2 Section	Wave 2 Status	Affected Respondent Category	Changes from Wave 1	Rationale for Change
NEQs	Added	Adults	On use of electronic nicotine devices other than e-cigarettes (such as e-hookahs, e-cigars or e-pipes).	To assess whether the respondent has used an electronic nicotine delivery device before collecting the respondent's bio-specimens. Note: E-cigarettes are asked about separately.