UnderStandingAmericaStudy

EMA BURST FILE DESCRIPTION & CODEBOOK

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1. INTRODUCTION

This document describes the Ecological Momentary Assessment (EMA) Burst File of the Understanding America Study (UAS), which was created at the University of Southern California's Center for Economic and Social Research (CESR). Support for this data set is provided by the National Institute on Aging (5U01AG054580), "Toward Next Generation Data on Health and Life Changes at Older Ages." The project aimed to collect a variety of data (EMA, End of day surveys, recordings, accelerometer) at varying frequencies (several times daily, once a day, once a week, once a month). This project was reviewed and approved by the USC IRB (UP-14-00148).

Participants in the UAS EMA Burst project who contributed the data in the EMA Burst File are members of the UAS internet panel: https://uasdata.usc.edu. The UAS is a nationally representative panel of American households randomly recruited from United States Postal Service delivery sequence files. UAS members are adults aged 18 or older who agree to answer surveys, on average, once or twice monthly via an online interface.

All UAS members who were 50 years of age or older at the time were invited to fill out an EMA Burst project consent online survey[1] where they were screened for eligibility. Eligibility required access to a working smartphone with an iOS or Android operating system and a service contract. Out of the 2,914 UAS panel members who were asked through the consent surveys to participate in the project, 1,317 of them initially consented.[2]

The UAS EMA Burst File is a collection of data based on participants' answers to 7-day "bursts." Each day during a burst, prompts (phone beeps, texts) are sent to UAS panel members on their smartphone through the UAS EMA app. Upon receiving a prompt, participants answer about 2 minutes of questions. Burst participants received six prompts in each 24-hour period for seven days. Participants who consented to participate, downloaded the UAS EMA app, and responded to at least one prompt during at least one seven-day burst period are included in this dataset. Prior to April 5, 2021 participants were dropped for a lack of participation during the first three days of the burst project and then reinvited.[3] After April 5, 2021 participants were no longer dropped for a lack of participation but were instead compensated based on how much or how little they participated in the project.

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[1] Consent surveys for the burst project were UAS 224, UAS 225, and UAS 234. Participants also had the ability to consent through the UAS help desk.

[2] Out of these 1,317, 885 completed at least one burst. This number is larger than the number of participants in this dataset because a portion of them were part of the "Covid Cohort," described in note 4.

[3] These participants were officially dropped after the third day of the random burst. If the dropped participants responded to the re-invitation and completed a burst their prior incomplete burst data was replaced. If not, the incomplete burst remains in the dataset with variables indicating that they were dropped and the reason why they were dropped. This pertains only to a small number of respondents.

Some UAS EMA project participants completed more than one week-long burst period. In this case, one of these bursts is a "random" burst and one of these bursts is a "triggered" burst.[4] "Random" bursts occur when UAS panel members who consented to participate in the burst project are chosen to answer a week-long burst through random selection. "Triggered" bursts occur based on UAS participant answers to the "Life Experiences" section of the UAS Monthly Events Survey. This survey is fielded at the start of each month to all UAS members who consented to join the project, as well as other UAS participants who are 50 or older. If UAS EMA participants who have completed a random burst indicate that they have experienced a financial setback, a positive financial development, a serious illness or injury, retirement, or a death of a close friend or relative in the Monthly Events Survey, they become eligible to be invited to participate in a second week-long triggered burst.

Once a participant completes the triggered burst, they are removed from the pool, so every participant answers at most one triggered burst. However, participants who had been invited to participate in a triggered burst and declined remain in the pool and may be invited again to participate in subsequent trigger bursts if their answers to the UAS Monthly Events Survey made them eligible.

The structure and questions of random and triggered bursts are identical. In addition to EMA prompts, participants were invited to complete an end of day (EOD) survey in the evening of each day during the weeklong burst period. The EOD comprises questions that are similar to the EMA prompts but pertain to the entire day rather than a specific moment during the day. The final EOD survey includes additional questions asking participants to reflect on their mood, activities, and social interactions for the entire week that the burst took place. Data from the EOD surveys is also included in the UAS EMA Burst File.

The UAS EMA Burst File can be linked with any UAS survey not already included, as well as other data collections from the UAS EMA Burst project such as the Monthly Event surveys. How to perform that linkage is described later in this document. Available data from the UAS EMA project is listed on the UAS EMA Project page. An updated listing of all available UAS data sets is available on the [UAS All Surveys page](#).

Please send all questions about the data set or this data description to uas-l@mymaillists.usc.edu.

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[4] A number of those who completed the random burst were recruited as part of the "Covid Cohort Burst File." These respondents completed up to six waves of bursts. Their burst data is not included in this dataset, as they were not eligible for trigger bursts. If one wishes to analyze all random bursts, including those given to the Covid Cohort they can append "Burst 1" of the Covid Cohort Burst File to the EMA Burst File. In that case, we would strongly recommend dropping the trigger bursts from the analysis.

2. OVERVIEW OF THE UAS EMA BURST FILE

2.1 UAS Input Files

The UAS EMA Burst File is a dataset that consists primarily of survey responses from week-long bursts. The first burst was fielded in March of 2020 and bursts continued to be fielded through March 2022. The dataset is structured based on burst dates and times. The dataset is constructed as a participant – prompt level dataset. Each row corresponds to a single prompt answered by a UAS participant. Therefore, each participant who completes a weekly burst (6 prompts a day for 7 days) will contribute up to 42 rows of data corresponding to the burst period.[5]

Attached to each participant – prompt row is also data from the EOD survey that corresponds to the day that the prompt was answered. As such, all six participant-prompt rows from a single day will contain the same EOD data. Participants had the ability to answer EOD surveys one day after corresponding burst day. Consequently, the date of the prompt and the date the attached EOD survey was started and completed may not always match.[6]

The EMA burst dataset contains 44,226 observations (participant – prompts), with 710 participating in the random bursts and 343 participating in the triggered bursts. Table 1 presents information on total observations and compliance rates by burst. Random bursts have a compliance rate of 77.5%, while triggered bursts have a compliance rate of 74.2%. Compliance is defined as the participant responding to the prompt by opening the UAS EMA app (98.5% of participants who open the app complete the survey).

Table 1: Burst Statistics

Quantity	Random	Triggered	Overall
Total Observations (Prompts)	29,820	14,406	44,226
Total Bursts	710	343	1,053
Compliance Rate (Prompts)	77.50%	74.27%	76.45%

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[5] Those who were dropped by UAS also have 42 rows of data, although they did not actually receive any more prompts on their phone after their drop date.

[6] Users will be able to ascertain if the date of the EMA and the prompt were completed on the same day by comparing the variable alarmdate variable and EOD_start_date within the same row. These variables are described later in the document. Researchers will have to exert their own judgement regarding the validity of EOD survey responses that pertain to the day prior or later.

Table 2: Compliance Rate (Prompts) by Burst Day

Burst Day	Random	Triggered	Overall
Day 1	70.56%	62.54%	66.55%
Day 2	78.66%	75.61%	77.13%
Day 3	80.42%	80.56%	80.49%
Day 4	79.84%	79.15%	79.49%
Day 5	79.15%	74.88%	77.01%
Day 6	76.71%	73.23%	74.97%
Day 7	77.16%	73.91%	75.53%

Table 2 contains compliance rates by day of burst in the participant's week-long burst sequence. Compliance rates are lowest on the first day of the burst for both random and triggered burst participants. After the first day, random burst participants have a response rate that hovers around 79%, although it declines during the final two days of the burst. Triggered bursts participants have lower compliance rates for nearly every day of the burst. Additionally, triggered burst participants reach a peak compliance rate of 80.5% on day four of the burst and then decline to a compliance rate of about 74% for the remainder of the burst period.

In addition to responses to week-long bursts, each participant – prompt row contains participant information related to the timing and date of the prompt, the burst type, demographic and other variables taken from the UAS Monthly Events Panel Dataset, and data on life experiences from the exact UAS Monthly Events Survey that triggered the burst (for triggered bursts) or that the participant experienced prior to being randomly selected for a burst (for random bursts).[7] Information on demographic variables included in the dataset can be found in the MyHousehold Codebook.[8] Demographic and other variables taken from the UAS Monthly Events Survey are constant within bursts but time-varying across bursts for participants that have completed multiple bursts.

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[7] A small number of random burst participants had not completed a UAS Monthly Events Survey prior to being selected for a random burst. In those cases, variables are taken from the first UAS Monthly Events Survey they answered after being selected for a random burst.

[8] The My Household survey is administered quarterly to all participants. To provide background information about the participant and household, the survey asks about key demographics, including age, ethnicity, education, marital status, work status, state of residence, and family structure.

2.2 Obtaining the UAS EMA Burst File

The UAS EMA Burst File is available for download in STATA format from the UAS website. If you would like the data in a different format, such as SAS, please email your request to uas-l@mymaillists.usc.edu.

Before accessing the UAS EMA Burst File or other UAS data, one must first obtain permission by registering on the UAS site to download the UAS public release files. Registering with UAS is considered agreeing to the "conditions of use" governing access and usage of the data.

2.3 Merging with other UAS Data Sets

Each UAS file is merged with other files using the unique person identifier variable, *uasid*. This variable, assigned to a participant at recruitment into the UAS panel, stays fixed for each survey taken. For more information about default identification variables included in each survey, such as household identifier, *uashhid*, please visit the UAS standard variables page.

3. VARIABLES

The variables included in the UAS EMA Burst File are distinguished both by source and content. Data originating from participant answers to prompts and the End of Day survey in a week-long burst are directly collected from the participant. Variables from the UAS Monthly Events Panel Dataset are either participant answers to questions from the UAS Monthly Events Survey or derived variables created during the construction of the UAS Monthly Events Panel Dataset. Visit the UAS Monthly Events Panel [page](#) or refer to the [UAS Monthly Events Panel Dataset Description](#) (link downloads pdf) for more information about those data.

For the purposes of this codebook, variables are grouped into four content groups: (1) identifying and metadata variables, (2) participant answers to prompt questions (3) participant answers to the corresponding EOD survey (4) monthly life events and issues variables, and (5) demographic variables (listed in the Appendix, further information on demographic variables can be found in the My Household Codebook).

3.1 Identifying and Metadata Variables

3.1.1 UAS Standard Identifying Variables
Three identifier variables are included in the UAS EMA Burst File that are standard UAS Standard Variables. 1) Each participant is uniquely identified with uasid. The uasid is assigned to a participant at recruitment into the UAS panel, stays fixed across surveys and is the key for linking this dataset to any other UAS file. 2) Households are identified with uashhid (original household identifier), which also stays fixed, and 3) survhhid (survey-specific identifier), uniquely identifies the household a panel member belongs to at the time of a given survey, and thus can change for participants if they change households (e.g. after divorce). These variables are included in the appendix.

3.1.2 UAS Standard Metadata Variables
The UAS EMA Burst File contains variables describing when the participant's corresponding Monthly Events survey started and ended (start_date, end_date, start_year, end_year, etc.). Versions of these variables with the prefix EOD correspond to the participant's end of day survey. These variables are listed in the appendix.

3.1.3 EMA Burst & Monthly Events Panel Dataset Metadata Variables
The UAS EMA Burst File contains variables that describe information about the burst, such as burst type (random or triggered) and describe information about when the burst was started and completed (Table 3). Additionally, the dataset includes similar variables (Table 4) from UAS Monthly Events Panel Dataset related to the Monthly Events Survey the participant took prior

to the week-long burst period (for random bursts) or the Monthly Events Survey from which the participant was recruited (for triggered bursts).

Table 3. Burst Identifying and Metadata Variables

Variable Name	Description
Burst	Type of burst: 1. Random 2. Triggered
inschedule	Yes, indicates that beep answered was part of the beep schedule: 1. Yes 2. No Participants have the option to reset their schedule. When that occurs the previous beeps are no longer part of the active schedule (the new schedule) and are marked as "no."
alarmtime	Time that the survey beep was received by the participant (local time).
alarmflags	Indicates if the participant opened the prompt. If the first letter of the four letter code code = T then the participant received the prompt and attempted to answer the survey. If the first letter = F they did not.

pingindex	The pingindex is a unique code for the beep.
ema_primkey	Unique identifying number containing the participant's uasid and the number of prompts they have answered (throughout the project), including the current prompt.
begintime	The date and time that the participant started the survey (Pacific time).
endtime	The data and time that the participant finished the survey (Pacific time).
alarmdate	The calendar date the survey prompt took place.
burstdate	The calendar date the weekly burst started (first day of burst).
week_days	Day of the week when the survey prompt took place. 0 = Sunday 1 = Monday 2 = Tuesday 3 = Wednesday

	4 = Thursday 5 = Friday 6 = Saturday
burstrowrandom	The prompt number (1-42) in the overall burst sequence for random burst participants.
burstrowtrigger	The prompt number (1-42) in the overall burst sequence for triggered burst participants.
randomburstday	The day number (1-7) in the overall burst sequence for random burst participants.
triggerburstday	The day number (1-7) in the overall burst sequence for triggered burst participants.
dropped_UAS	Binary variable indicates whether or not respondents dropped after the third burst day by UAS (prior to April 5, 2021).
dropped_reason	Variable indicates the reason why respondents were dropped: 1. Low compliance

	2. Technical issues
	3. Requested termination
	4. Other

Table 4. Monthly Events Panel Dataset Identifying and Metadata Variables

Variable Name	Description
wave	Wave of the Monthly Event Survey in which non-burst variables were collected.
uas_surv_num	UAS survey number for the Monthly Event Survey in which non-burst variables were collected.
yrmo_covered	The time period (year-month) that the survey questions in the Monthly Event Survey ask about.
yrmo_fielded	The time period (year-month) in which this wave of the Monthly Event Survey was fielded.
sampleinvite_wave	The first wave in which the participant entered the sample of the Monthly Events Survey

sampleinvite_surv	The UAS survey number of the first Monthly Events Survey the participant was invited to participated in.
sampleinvite_yrmo	The time period (year-month) when the participant first entered the Monthly Events Survey sample.
n_co_by_r	The number of Monthly Events Surveys completed by the participant at the time they were recruited for the burst.
cs_001	Interest in the survey: 1. Very interesting 2. Interesting 3. Neither interesting nor uninteresting 4. Uninteresting 5. Very uninteresting

3.2 Participant Answers to Burst Survey Questions

3.2.1 EMA Burst Emotion Variables

When participants answer a burst prompt, a number of questions ask participants about their emotional and physiological state before they received the prompt. The variables created from these responses can be found in Table 5.

3.2.2 EMA Burst Activity Variables

After participants complete questions regarding their emotional state they are asked questions related to their activity and thoughts prior to receiving the prompt. These include questions concerning what activity they were engaged in, who they were interacting with, and thoughts about specific issues (like money and stressful events). The variables created from these responses can be found in Table 6.

3.2.3 EOD Emotion Variables

At the end of the day, participants are invited to complete a final survey reflecting on the day as a whole. The EOD survey is similar to the burst prompts in that it asks participants about their emotional and physiological state, but the participant is asked to reflect on their entire day rather than the exact moment they are taking the survey. On the last day of the burst, participants are also asked additional questions that pertain to the entire week-long burst period. The variables created from these responses can be found in Table 7.

3.2.4 EOD Activity Variables

In the EOD survey, participants are also asked about activities, interactions, and thoughts they had throughout the corresponding burst day. The variables created from these responses can be found in table 8.

Table 5. EMA Burst Emotion Variables

Variable Name	Description
happy	How happy a participant felt before the prompt on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
frustrated	How frustrated a participant felt before the prompt on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
cheerful	How cheerful a participant felt before the prompt on a 0-100 scale from 0 being "not at all" and 100 being "extremely."

dejected	How dejected/blue/downhearted a participant felt before the prompt on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
lonely	How lonely a participant felt before the prompt on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
relaxed	How relaxed a participant felt before the prompt on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
stressed	How stressed a participant felt before the prompt on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
angry	How angry a participant felt before the prompt on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
bodily	How intense a participant's bodily pain was before the prompt on a 0-100 scale from 0 being "not at all" and 100 being "extremely."

	How fatigued a participant felt before the prompt on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
fatigued	

Table 6. EMA Burst Activity Variables

Variable Name	Description
stressful	Any stressful event occurred before the prompt: 1. Yes 2. No
economic	Worried about money before the prompt: 1. Yes 2. No
activity	Activity a participant was engaged in before the prompt: 1. Work 2. Chores 3. Leisure 4. Inactive 5. Interact with others 6. Eating 7. Drinking 8. On the telephone 9. Other

location	Participant was at one of the following locations before the prompt:
	1. Home
	2. Work place
	3. Others' home
	4. Bar or restaurant
	5. Vehicle
	6. Outside
	7. Other
argument	If participant had an argument with someone close to them:
	1. Yes, spouse/ partner / boyfriend / girlfriend
	2. Yes, close friend or family member
	3. No
social	Who participant interacted with before the prompt:
	1. With your spouse or partner, in person
	2. With your spouse or partner, through email, online, or phone
	3. With your children, in person
	4. With your children, through email, online, or phone
	5. With other family, in person

	6. With other family, through email, online, or phone
	7. With close friends, in person
	8. With close friends, through email, online, or phone
	9. With other people, in person
	10. With other people, through email, online, or phone
	11. With coworkers/colleagues, in person
	12. With coworkers/colleagues, through email, online, or phone
	13. No interactions

Table 7. EOD Emotion Variables

Variable Name	Description
ed001	How happy a participant felt that day on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
ed002	How frustrated a participant felt that day on a 0-100 scale from 0 being "not at all" and 100 being "extremely."

ed003	How cheerful a participant felt that day on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
ed004	How dejected/blue/downhearted a participant felt that day on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
ed005	How lonely a participant felt that day on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
ed006	How relaxed a participant felt that day on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
ed007	How stressed a participant felt that day on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
ed008	How angry a participant felt that day on a 0-100 scale from 0 being "not at all" and 100 being "extremely."

ed009	How intense a participant's average bodily pain was that day on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
ed010	How fatigued a participant felt that day on a 0-100 scale from 0 being "not at all" and 100 being "extremely."
fi001	How happy a participant felt over the past week on a 0-100 scale with 0 being "not at all" and 100 being "extremely"
fi002	How sad a participant felt over the past week on a 0-100 scale with 0 being "not at all" and 100 being "extremely"
fi003	How lonely a participant felt over the past week on a 0-100 scale with 0 being "not at all" and 100 being "extremely"
fi004	How relaxed a participant felt over the past week on a 0-100 scale with 0 being "not at all" and 100 being "extremely"
fi005	How cheerful a participant felt over the past week on a 0-100 scale with 0 being "not at all" and 100 being "extremely"

fi006	How frustrated a participant felt over the past week on a 0-100 scale with 0 being "not at all" and 100 being "extremely"
fi007	How much bodily pain a participant felt over the past week on a 0-100 scale with 0 being "not at all" and 100 being "extremely"
fi008	Average level of bodily pain a participant felt over the past week on a 0-100 scale with 0 being "not at all" and 100 being "extremely"
fi009	Usual level of fatigue a participant felt over the past week on a 0-100 scale with 0 being "not at all" and 100 being "extremely"
fi010	How energetic a participant felt over the past week on a 0-100 scale with 0 being "not at all" and 100 being "extremely"
fi011	How often a participant experienced stress over the past week on a 1-6 scale.
fi012	Participant response to "Over the past week, I had trouble sleeping": 0. Strongly disagree 1. Disagree

	2. Neither agree or disagree 3. Agree 4. Strongly agree
fi013	Participant response to "Over the past week, I got drowsy during times when sleeping was not allowed:" 0. Strongly disagree 1. Disagree 2. Neither agree or disagree 3. Agree 4. Strongly agree

Table 8. EOD EMA Burst Activity Variables

Variable Name	Description
ed013_2	Did participant do 30 minutes or more of physical activity that day: 1. Yes 2. No
ed013a	How much fun or enjoyment one got from physical activity on 0-100 scale with 0 being "not at all" and 100 being "extremely"

ed013b	How much fun or enjoyment one wanted to get from physical activity on 0-100 scale with 0 being "not at all" and 100 being "extremely"
ed015	Any stressful event occurred that day: 1. Yes 2. No
ed016	Who participant interacted with that day: 1. With your spouse or partner, in person 2. With your spouse or partner, through email, online, or phone 3. With your children, in person 4. With your children, through email, online, or phone 5. With other family, in person 6. With other family, through email, online, or phone 7. With close friends, in person 8. With close friends, through email, online, or phone

	9. With other people, in person 10. With other people, through email, online, or phone 11. With coworkers/colleagues, in person 12. With coworkers/colleagues, through email, online, or phone 13. No interactions
ed017	If participant had an argument with someone close to them that day: 1. Yes, spouse/ partner / boyfriend / girlfriend 2. Yes, close friend or family member 3. No
ed018	Did participant worry about money that day: 1. Yes 2. No
ed019	Did participant have enough money to do everything they wanted to that day 1. Yes 2. No

ed020	Did participant feel useful or productive that day?
	  1. Yes
	  2. No

ed022	Did participant eat well that day?
	  1. Yes
	  2. No

ed023	Did participant skip meals that day?
	  1. Yes
	  2. No

ed024	How was participant health that day?
	  1. Excellent
	  2. Very good
	  3. Good
	  4. Fair
	  5. Poor

ed025	Did participant feel well rested that day?
	  1. Yes
	  2. No

ed026	Did participant agree or disagree with the statement "I had trouble sleeping" that day:
	  1. Strongly disagree
	  2. Somewhat disagree

	3. Neither agree nor disagree 4. Somewhat agree 5. Strongly agree
ed027	Did participant agree or disagree with the statement "I got drowsy during times when sleeping was not allowed" that day: 1. Strongly disagree 2. Somewhat disagree 3. Neither agree nor disagree 4. Somewhat agree 5. Strongly agree
ed029	Eat breakfast with family members that day?: 1. I ate breakfast alone 2. I ate breakfast with family members 3. I ate breakfast with people I am close to 4. I ate breakfast with non-family or people I am not close to 5. I did not eat breakfast
ed029b	Eat dinner with family members that day?: 1. I ate dinner alone 2. I ate dinner with family members

	3. I hate dinner with people I am close to 4. I ate dinner with non-family or people I am not close to 5. I did not eat dinner
ed030	How pleased participant is in the way the functioned with family or close relationships that day on 0-100 scale with 0 being "not at all" and 100 being "extremely"
ed031	How satisfied participant is with their social interactions that day on 0-100 scale with 0 being "not at all" and 100 being "extremely"
ed032	How satisfied participant is with social support that day on a 0-100 scale with 0 being "not at all" and 100 being "extremely"
ed032_rev	Did participant feel like there was enough time to do what they wanted to do that day: 1. Yes 2. No
ed033	How connected participant felt connected to family/social network that day on a 0-100 scale with 0 being "not at all" and 100 being "extremely"

ed034	How pleased participant is with job function that day on a 0-100 scale with 0 being "not at all" and 100 being "extremely"
ed035	Asks participant if they received exactly six prompts that day. 1. Yes 2. No 3. Not sure
ed036	Asks participant how many prompts they received that day (if they did not receive six). 0. None 1. One 2. Two 3. Three 4. Four 5. Five 6. Six 7. More than six
ed037	Asks participant if they were able to use the app to answer every prompt that day. 1. Yes 2. No

3.3 Monthly Life Events and Issues Questions

3.3.1 Event Variables

Event variables are indications of significant positive or negative life events that are derived from participant answers to the UAS Monthly Events Survey. There are three basic variable types. The first type (event_health, event_death etc.) pertains the month in which the burst occurred. The second type (event_health_m1, event_death_m1 etc.) applies to the month immediately preceding the month of the burst. The last type (Itrig_health, Itrig_death etc.) indicates events that "triggered" the burst (meaning events that resulted in the participant being invited to complete a burst). For the latter version, this may have occurred in the same month of the burst or in the month immediately preceding the burst. These variables can be found in Table 9.

3.3.1 Life Circumstance Variables

The UAS Monthly Events Survey includes questions asking about health, finance, family matters, and retirement. These participant answers are later used to derive event, trigger variables, and other derived variables in the UAS Monthly Events Panel Dataset. These Variables are included in the UAS EMA Burst File. Variables based on participant answers to the UAS Monthly Events Survey prior to their random or triggered burst are listed in Table 10.

3.3.1 Derived Circumstance Variables

Variables related to finance, health, and other events are coded in different ways or derived in the construction of the UAS Monthly Events Panel Dataset. These variables are included in the UAS EMA Burst File and are listed in Table 11.

Table 9. Derived Event and Trigger Variables

Variable Name	Description
event_health	Dummy variable = 1 if participant had a serious illness/injury in the month in which the burst occurred.
event_unempfinshock	Dummy variable = 1 if participant had a negative financial shock in the month in which the burst occurred.

event_death	Dummy variable = 1 if participant had a death of a close friend or relative in the month in which the burst occurred.
event_retire	Dummy variable = 1 if participant retired in the month in which the burst occurred.
event_positivefin	Dummy variable = 1 if participant had a positive financial shock in the month in which the burst occurred.
any_event	Dummy variable = 1 if any "trig_" variable = 1 in the month in which the burst occurred.
event_health_m1	Dummy variable = 1 if participant had a serious illness/injury in the month that preceded the month in which the burst occurred.
event_unempfinshock_m1	Dummy variable = 1 if participant had a negative financial shock in the month that preceded month in which the burst occurred.
event_death_m1	Dummy variable = 1 if participant had a death of a close friend or relative in the month that preceded the month in which the burst occurred.

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event_retire_m1	Dummy variable = 1 if participant retired in the month that preceded the month in which the burst occurred.
event_positivefin_m1	Dummy variable = 1 if participant had a positive financial shock in the month that preceded the month in which the burst occurred.
any_event_m1	Dummy variable = 1 if any "trig_" variable = 1 in the month that preceded the month in which the burst occurred.
burst_b4_events	Dummy variable = 1 if individual was selected for burst prior before participating in a UAS Monthly Events Survey (in which case non-burst variables are taken from the first UAS Monthly Events Survey they complete).
invited_fromsameME	Dummy variable = 1 if individual was invited to the trigger burst in the same month that the UAS Monthly Events Survey was administered.
invited_frompriorME	Dummy variable = 1 if individual was invited to the trigger burst from the UAS Monthly Events Survey that was administered in the month prior to the burst.
invited_frompriorEXC	Dummy variable = 1 if individual was invited to the trigger burst in the same month that the UAS Monthly Events Survey was administered but did not complete the burst until the subsequent month (this was an option for participants in March and April of 2021).

missing_middlewave	Dummy variable = 1 if individual did not complete the UAS Monthly Events Survey in the month that they completed the burst.
extempburst	Dummy variable = 1 if individual completed the burst after their last UAS Monthly Events Survey.
Itrig_health	Dummy variable = 1 if participant had a serious illness/injury that triggered burst
Itrig_unempfinshock	Dummy variable = 1 if participant had a negative financial shock that triggered burst
Itrig_death	Dummy variable = 1 if participant had a death of a close friend or relative that triggered burst.
Itrig_retire	Dummy variable = 1 if participant retired that triggered burst.
Itrig_positivefin	Dummy variable = 1 if participant had a positive financial shock that triggered burst.

Iany_trig	Dummy variable = 1 if any "Itrig_" variable = 1 that triggered burst.

Table 10. Life Circumstance Variables

Variable Name	Description
le_hrs_s1	Please think about your life-as-a-whole. How satisfied are you with it? Are you completely satisfied, very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied? 1. Completely satisfied 2. Very satisfied 3. Somewhat satisfied 4. Not very satisfied 5. Not at all satisfied
le_hrs_srh1	Would you say your health is excellent, very good, good, fair, or poor? 1. Excellent 2. Very good 3. Good 4. Fair 5. Poor

le001	Did you experience any NEW illnesses or injuries last month?
	1. Yes, I experienced the onset of a new illness or injury last month
	2. No, I did not have any new illnesses or injuries last month, or had only ongoing illnesses or injuries last month
le_hrs001a	**Serious illness suffered**
	1. I fell down
	2. I was injured in an accident at home
	3. I was injured in an accident at work
	4. I was injured due to an accident elsewhere (not at home or work).
	5. I was assaulted
	6. I suffered a heart attack, or was diagnosed with coronary heart disease, angina, congestive heart failure, or other heart problems
	7. I was diagnosed with heart disease

	8. I was diagnosed with cancer or a malignant tumor
	9. I was diagnosed with dementia senility or any other serious memory impairment
	10. I was diagnosed with diabetes
	11. I contracted influenza
	12. I contracted pneumonia
	13. I was diagnosed with kidney disease
	14. I was diagnosed with a chronic lung disease such as chronic bronchitis or emphysema
	15. I was diagnosed with arthritis or rheumatism
	16. A doctor told me I have osteoporosis
	17. I had surgery or any joint replacement because of arthritis
	18. A doctor told me that I have high blood pressure or hypertension
	19. I contracted shingles
	20. A doctor told me that I have an emotional,

	nervous, or psychiatric problem
	21. A doctor or other health professional told me that I have a sleep disorder
	22. I was diagnosed with an illness not listed above
	23. A doctor or another healthcare professional diagnosed me with the Coronavirus (COVID-19)
	24. I was told by a doctor or another healthcare professional that I may have contracted the Coronavirus (COVID-19)
le011_1_	Date (year-month-day) on which most serious new illness or injury occurred
le002	Did a close relative suffer the ONSET of a serious illness, or was a close relative injured, or assaulted? 1. Yes 2. No

le_hrs001a_rel	Serious illness suffered by relative
	1. He/she fell down
	2. He/she was injured in an accident at home
	3. He/she was injured in an accident at work
	4. He/she was injured due to an accident elsewhere (not at home or work)
	5. He/she was assaulted
	6. He/she suffered a heart attack, or was diagnosed with coronary heart disease, angina, congestive heart failure, or other heart problems
	7. He/she was diagnosed with heart disease
	8. He/she was diagnosed with cancer or a malignant tumor
	9. He/she was diagnosed with dementia senility or any other serious memory impairment
	10. He/she was diagnosed with diabetes
	11. He/she contracted influenza

	12. He/she contracted pneumonia
	13. He/she was diagnosed with kidney disease
	14. He/she was diagnosed with a chronic lung disease such as chronic bronchitis or emphysema
	15. He/she was diagnosed with arthritis or rheumatism
	16. A doctor told him/her he/she has osteoporosis
	17. He/she had surgery or any joint replacement because of arthritis
	18. A doctor told him/her that he/she has high blood pressure or hypertension
	19. He/she contracted shingles
	20. A doctor told him/her that he/she has an emotional, nervous, or psychiatric problem
	21. A doctor or other health professional told him/her that he/she has a sleep disorder

	22. He/she was diagnosed with an illness not listed above
	23. A doctor or another healthcare professional diagnosed him/her with the Coronavirus (COVID-19)
	24. He/she was told by a doctor or another healthcare professional that he/she may have contracted the Coronavirus (COVID-19)
le011_2_	Date (year-month-day) on which the relative's most serious new illness or injury occurred.
le012	Did you get married last month? 1. Yes 2. No
le011_12_	Date (year-month-day) on which the participant indicates they got married last month.

le003	Was there a death of someone close to you last month? 1. Yes 2. No
le011_3_	Date (year-month-day) on which there was a death of someone close to the participant.
le013	Did you have a positive change in your financial situation last month? 1. Yes 2. No
le013_2	Nature of positive financial change 1. I got financial assistance from friends or family 2. I was repaid a loan I had made 3. I sold property 4. I changed residence to somewhere with lower rent 5. I started receiving payments from pension and/or Social Security benefits 6. I started receiving payments from government/welfare program

	7. I got a raise at my job
	8. I had higher than usual earnings from business or self-employment
	9. I started a new job
	10. I finished paying mortgage
	11. I finished paying off a car loan
	12. I finished paying off a student loan
	13. I completed medical treatment /finished paying medical-related debt
	14. I finished paying off some other debt
	15. I obtained a high return to a financial investment
	16. My spouse got a job/raise
	17. A child became financially independent, reduction in school/college expenses
	18. Something else, please specify:
	19. The benefits I receive from a government or welfare program

	increased or were higher than expected 20. I received financial help from a someone outside my household (other than the government)
le011_13_	Date (year-month-day) on which there was a positive financial change.
le004	Did you have the ONSET of serious marital difficulties (for example, a separation with your spouse or partner)? 1. Yes 2. No
le011_4_	Date (year-month-day) on which participant had onset of marital difficulties.
le014	Did you go on a special vacation last month? 1. Yes 2. No
le011_14_	Date (year-month-day) on which participant went on a special vacation.

le005	Did you have the ONSET of a serious problem with a close friend or relative (including children)? 1. Yes 2. No
le011_5_	Date (year-month-day) on which there was a serious problem with a close friend or relative.
le015	Did you find a new partner last month? 1. Yes 2. No
le011_15_	Date (year-month-day) on which there was a new partner found.
le006	Did you become unemployed last month, yet you wanted to be employed? 1. Yes 2. No
le011_6_	Date (year-month-day) on which participant became unemployed.

le007	Did you retire from your job last month? 1. Yes 2. No
le011_7_	Date (year-month-day) on which participant retired from job.
le008	Did you make a decision last month to retire in the next 6 months? 1. Yes 2. No
le011_8_	Date (year-month-day) on which participant made decision to retire last month
le_hrs_ia	Last month, did you become employed, change jobs, change from full-time to part-time work, get promoted, become self-employed, start a business, or did your employment status change in some other important way? 1. Yes 2. No
le_hrs_h0	Last month, did you work for at least an hour, either in a job, business or through self-employment? 1. Yes

	2. No
le_hrs_ib	How did your employment status change in last month? 1. I became employed (I was not working before) 2. I changed jobs 3. I started working full time (I was working part-time before) 4. I started working part time (I was working full time before) 5. I got promoted 6. I became self-employed 7. I started a business 8. Other 9. I got a raise 10. I started an additional job 11. I stopped working 12. I am on leave from work

le011_11_	Date (year-month-day) on which participant employment change occurred.
flweeklist(1 – 7)	Dates asked about for questions regarding hours worked (le_hrs series).
le_hrs_ic_(day1 – day7)	Hours worked (0-24) for corresponding days (flweeklist).
le_hrs_ic_(da1 – day7)_na	Indicates if participant did not work on corresponding day (flweeklist).
le_hrs_ic_total	Total hours worked last week.
le_hrs_hb	You reported that you worked about (total hours()) hours last week. Is that the typical number of hours you work in a week? 1. Yes, I usually work about (total hours()) hours 2. No, I typically work about ()hours per week

	3. The number of hours worked varies greatly from week to week
le_hrs_hb_hours	Typical hours worked in a week (if different from last week).
le_hrs_hc	Best guess for typical hours worked in a week (if it varies greatly from week to week).
uasXXX_le_hrs_hb	le_hrs_hb for corresponding UAS Monthly Events Survey.
le_hrs_ea	In the last 12 months, which of the following statements best describes how your earnings from your job (self-employment or businesses) varied from month to month, if at all? My earnings 1. Were roughly the same each month 2. Occasionally varied from month to month 3. Varied quite often from month to month

le_hrs_eb	Some people get paid at regular times: (i.e. weekly, bi-weekly, or monthly), while some other get paid when they finish a job or complete certain projects. Likewise, some businesses calculate their revenues daily whereas others do so less often. When are payments made to you from your job (or business)?(If you have multiple jobs, answer for the one that pays you more often)
	1. Daily
	2. Weekly
	3. Bi-weekly
	4. Monthly
	5. Less often than monthly
	6. Every-time I complete a job, which is often several times in a week
	7. Only once I complete a project, which is usually once every few weeks or months
	8. Other, please specify:
uasXXX_le_hrs_eb	le_hrs_hb for corresponding UAS Monthly Events Survey.

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le_hrs_id_weekly	Overall, taking into account all sources of income related to your job(s) and/or business, what was your income after taxes or "take home pay" last week?
weekly_income_range_unf	Participant confirmed minimum and maximum if did not answer le_hrs_id_weekly.
flweeklist_8_	First date (day of the week, month, day, year) of the last two weeks asked about le_hrs_id_biweekly.
le_hrs_id_biweekly	Overall, taking into account all sources of income related to your job(s) and/or business, what was your income after taxes or "take home pay" in the last two-week period (i.e. income received between ((8)) and ((7))?
biweekly_income_range_unf	Participant confirmed minimum and maximum if did not answer le_hrs_id_biweekly.
le_hrs_id	Overall, taking into account all sources of income related to your job(s) and/or business, what was your income after taxes or "take home pay" last month?

monthly_income_range_unf	Participant confirmed minimum and maximum if did not answer le_hrs_id_.
le009	Did you have the ONSET of a major financial setback or crisis last month? 1. Yes 2. No
le009_2	What was the nature of the financial setback or crisis you experienced last month? 1. I, or a spouse or partner lost a job or had work hours and/or income reduced 2. I, or a family member, had significant medical expenses 3. Got separated or divorced 4. Lost a spouse or partner 5. A need arose for long term care for self or family member

	6. I learned that I have unpaid taxes or had a problem with the IRS
	7. I was victim of financial fraud, or I entered into a major financial transaction that I did not completely understand
	8. I incurred losses in my business
	9. I incurred losses in my financial investment(s)
	10. I incurred in penalties and/or higher-than-expected interest from a loan II took
	11. I had losses from gambling
	12. Had mortgage payment higher than expected
	13. My rent was increased
	14. Automobile accident or repair
	15. I had to provide assistance to family members or friends outside your household
	16. Something else, please specify:

le011_9_	Date (year-month-day) on which participant financial setback occurred.

le016	Did you move to a new, better neighborhood last month?
	   1. Yes
	   2. No

le011_16_	Date (year-month-day) on which participant moved to a better neighborhood.

le010	Did you have the ONSET of a major legal problem last month?
	   1. Yes
	   2. No

le011_10_	Date (year-month-day) on which participant had major legal problem.

le017	Did you experience the birth of a child or grandchild last month?
	   1. Yes
	   2. No

le011_17_	Date (year-month-day) on which participant had birth of grandchild or child.

le_hrs_oopa1	Last month did you incur any expenses related to hospital stays and/or outpatient procedures?
	    1. Yes
	
	    2. No

le_hrs_oopa2	Amount expenses related to hospital bills.
le_hrs_oopb	Amount expenses related to doctor or clinic visits.
le_hrs_oopb_na	No expenses related to doctor or clinic visits.
le_hrs_oopc	Amount expenses related to dental bills.
le_hrs_oopc_na	No expenses related to dental bills.

le_hrs_oopd	Amount expenses related to other medical bills.
le_hrs_oopd_na	No expenses related to other medical bills.
le_hrs_p1	Last month were you often troubled with pain? 1. Yes 2. No
le_hrs_p2_option1	How bad was the pain most of the time? 1. Mild 2. Moderate 3. Severe
le_hrs_p3	Have you taken any over-the-counter pain medications last month? 1. Yes 2. No
le_hrs_p4	Have you taken any opioid pain medications last month? 1. Yes 2. No

le001_previous	le001 response from two months ago.
le_hrs001a_previous	le_hrs001a response from two months ago.
le001_followup	Check for participants who indicate injury 2 months ago and last month.
	1. I experienced the onset of a new illness or injury in [2 months ago] and then again in [this month]
	2. There was only one injury or illness. It started in [2 months ago]
	3. There was only one injury or illness. It started in [last month]
	4. There was only one injury or illness. I can't remember whether it started in [2 months ago] or [last month].
	5. Other. Please explain:

le002_previous	le003 response from two months ago.
le_hrs001a_rel_previous	le_hrs001a_rel_previous response from two months ago.
le002_followup	Check for participants who indicate relative injury 2 months ago and last month. 1. There were two separate events for two different close relatives 2. There were two separate events for the same relative 3. There was only one event and it started in [2 months ago] 4. There was only one event and it started in [last month] 5. There was only one event. I can't remember whether it started in [2 months ago] or [last month] 6. Other. Please explain:

le003_previous	le003 response from two months ago.
le003_followup	Check for participants who indicate death 2 months ago and last month. 1. A person closed to me passed away [2 months ago], and another one passed away [last month]. 2. Only one person close to me passed away [2 months ago] 3. Only one person close to me passed away [last month] 4. Only one person close to me passed away (I can't remember whether it was in [two months ago] or [last month] 5. Other. Please explain:
le005_previous	le005 response from two months ago.

le005_followup	Check for participants who indicate problems with close friend or relative 2 months ago and last month. 1. There were two separate problems for two different friends or relatives 2. There were two separate events for the same friend or relative 3. There was only one problem and it started [2 months ago] 4. There was only one problem and it started in [last month] 5. There was only one problem. I can't remember whether it started in [2 months ago] or [last month] 6. Other. Please explain:
le006_previous	le006 response from two months ago.
le006_followup	Check for participants who indicate they became unemployed 2 months ago and last month.

	1. I became unemployed [2 months ago]. I stopped being unemployed but became unemployed again [last month].
	2. I became unemployed only once [2 months ago]
	3. I became unemployed only once [last month]
	4. I became unemployed only once. I can't remember whether it happened [2 months ago] or [last month]
	5. Other. Please explain:
le007_previous	le007 response from two months ago.
le007_followup	Check for participants who indicate they retired 2 months ago and last month. 1. I retired from two jobs 2. I retired only once [2 months ago] 3. I retired only once [last month] 4. I retired only once. I can't remember whether I retired [two

	months ago] or [last month] 5. Other. Please explain:
le009_previous	le009 response from two months ago.
le009_2_previous	le009_2_ response from two months ago.
le009_followup	**Check for participants who indicate they had a major financial setback 2 months ago and last month.** 1. I had a major setback in [2 months ago], and another one in [last month] 2. I had a setback in [2 months ago] only 3. I had a setback in [last month] only 4. There was only one setback. I can't remember whether it happened in [2 months ago] or [last month] 5. Other. Please explain:

le013_previous	le013 response from two months ago.
le013_2_previous	le013_2_ response from two months ago.
le013_followup	Check for participants who indicate they had a positive financial change 2 months ago and last month. 1. There were two separate positive changes 2. There was only one positive change and it happened [2 months ago] 3. There was only one positive change and it happened [last month] 4. There was only one positive change. I can't remember whether it happened in [2 months ago] or [last month] 5. Other. Please explain:

le014_previous	le014 response from two months ago.
le014_followup	Check for participants who indicate they had a special vacation 2 months ago and last month. 1. I went on vacation both [2 months ago] and [last month] 2. I only went on vacation once. It started [2 months ago] 3. I only went on vacation once. It started [last month] 4. I only went on vacation once. I can't remember whether the vacation started [2 months ago] or [last month] 5. Other. Please explain:
le016_previous	le016 response from two months ago.

le016_followup	Check for participants who indicate they had moved 2 months ago and last month. 1. I moved twice (one [2 months ago] and one [last month]) 2. I moved only once ([2 months ago]) 3. I moved only once ([last month]) 4. I moved only once. I can't remember whether it was in [2 months ago] or [last month] 5. Other. Please explain:
le017_previous	le017 response from two months ago.
le017_followup	Check for participants who indicate they had the birth of a child/grandchild 2 months ago and last month. 1. Two grandchildren were born (one [2 months ago] and one in ([last month]) 2. I experienced the birth of a grandchild only once ([2 months ago])

	3. I experienced the birth of a grandchild only once ([last month])
	4. I experienced the birth of a grandchild only once. I can't remember whether he/she was born in [2 months ago] or [last month]
	5. Other. Please explain:

Table 11. Derived Circumstance Variables

Variable Name	Description
le_tothours	le_hrs_hb_hours
le_earn_m_full	Monthy earnings derived from le_hrs_id, le_hrs_id_biweekly (multiplied by 2.1), or le_hrs_id_weekly (multiplied by 4.2). If the participant only provided a range, , if the monthly amount was greater than or equal to $50,000 and less than $999,999, it was imputed to $50,000. Monthly amounts greater than or equal to $999,999 are extremely unlikely, so any values this high were assumed to be erroneous and were imputed to missing.

totevents	Sum of affirmative responses of le001- le017.
anyevent	Dummy variable that equals "1" if one of the life events variables (le001- le017) equals "1" or more.
oop_hosp	le_hrs_oopa
oop_doc	le_hrs_oopb
oop_dent	le_hrs_oopc
oop_othmed	le_hrs_oopd

Table 1A. Identifying and Metadata Variables Included in the UAS EMA Burst File

Variable Name	Description
uasid	The identifier of the participant. This identifier is assigned to a participant at recruitment into the UAS and stays with the participant throughout each and every survey he/she participates in. When analyzing data from multiple surveys, the 'uasid' can be used to merge data sets.
survhhid	Uniquely identifies the household a UAS panel member belongs to in a given survey. For instance, if the primary participant and his/her spouse are both UAS members at the time of a given survey, they both receive the same 'survhhid' identifier for that survey. If they subsequently split, they receive two different 'survhhid' in subsequent surveys. They, however, always share the same 'uashhid'. The identifier 'survhhid' is set to missing (.) if no other household members are UAS panel members at the time of the survey. Since individuals can answer the same survey at different points in time

	(which can be relatively far apart if the survey is kept in the field for a prolonged time), it may be possible that, within the same data set, household members have different 'survhhid' reflecting different household compositions at the time they answered the survey. For instance, suppose that the primary participant and his/her spouse are both UAS members. If the primary participant answers the survey when he/she is living with the spouse, but the spouse answers the survey when the couple has split, they receive different 'survhhid'. Hence, the variable 'survhhid' identifies household membership of UAS panel members, at the time the participant answers the survey. Note: in the My Household survey 'survhhid' is set to unknown (.u) for participants who last participated in the My Household survey prior to January 21, 2015.
uashhid	The household identifier of the participant. Every member is assigned a household identifier, stored in the variable 'uashhid'. For the primary participant this identifier equals his or her

	'uasid'. All other eligible members of the primary participant's household (everyone who is 18 or older in the household) who become UAS participants receive the 'uasid' of the primary participant as their household identifier. The identifier 'uashhid' remains constant over time for all participants. Thus it is always possible to find the original UAS household of an UAS panel member (even after they, for example, have moved out to form another household).
uas members	The number of other household members who are also UAS panel members at the time of the survey. Since individuals can answer the same survey at different points in time (which can be relatively far apart is the survey is kept in the field for a prolonged time), it may be possible that, within the same data set, the primary participant of a household has a value of '0', whereas the second UAS household participant has a value of '1'. Therefore 'uasmembers' should be interpreted as the number of household and UAS panel members at the time the participant answers

	the survey. Note: in the My Household survey 'uasmembers' is set to unknown (.u) for participants who last participated in the My Household survey prior to January 21, 2015.
sampletype	Indicates the sampling frame from which the household of the participant was recruited. All UAS recruitment is done through address based sampling (ABS) in which samples are acquired based on postal records. Currently, the variable 'sampletype' takes on three values reflecting three distinct recruitment categories (in future data sets the number of categories may increase due to the incorporation of new recruitment categories): 1. Nationally Representative Sample 2. Native Americans: recruited through ABS, where the probability of drawing a zip-code is a function of the percentage of Native Americans in the zip-code. Primary participants in these zip-codes who are not Native Americans are not invited to join the UAS. 3. LA County: recruited through ABS drawing from zip-codes in Los Angeles County.

batch	Indicates the batch from which the participant was recruited. There are currently the following values this variable takes (in future data sets the number of categories may increase due to the usage of new recruitment samples):
	1. ASDE 2014/01 Nat.Rep.
	2. ASDE 2014/01 Native Am.
	3. ASDE 2014/11 Native Am.
	4. LA County 2015/05 List Sample
	5. MSG 2015/07 Nat.Rep.
	6. MSG 2016/01 Nat.Rep. Batch 2
	7. MSG 2016/01 Nat.Rep. Batch 3
	8. MSG 2016/01 Nat.Rep. Batch 4
	9. MSG 2016/02 Nat.Rep. Batch 5
	10. MSG 2016/03 Nat.Rep. Batch 6
	11. MSG 2016/04 Nat.Rep. Batch 7
	12. MSG 2016/05 Nat.Rep. Batch 8
	13. MSG 2016/08 LA County Batch 2
	14. MSG 2017/03 LA County Batch 3
	15. MSG 2017/11 California Batch 1
	16. MSG 2018/02 California Batch 2
	17. MSG 2018/08 Nat.Rep. Batch 9 7

	18. MSG 2019/04 LA County Batch 4 19. MSG 2019/05 LA County Batch 5 20. MSG 2019/11 Nat. Rep. Batch 10 21. MSG 2020/08 Nat. Rep. Batch 11 22. MSG 2020/10 Nat. Rep. Batch 12 23. MSG 2021/02 Nat. Rep. Batch 13 24. MSG 2021/08 Nat. Rep. Batch 15 25. MSG 2021/08 Nat. Rep. Batch 16 26. MSG 2022/02 Nat. Rep. Batch 17 27. MSG 2022/02 Nat. Rep. Batch 18
primary_participant	Indicates if the participant was the first person within the household to become a member or whether s/he was added as a subsequent member. A household is broadly defined as anyone living together with the primary participant. That is, a household comprises individuals who live together, e.g. as part of a family relationship (like a spouse/child/parent) or in context of some other relationship (like a roommate or tenant).

hardware	Indicates whether the participant ever received hardware or not. Note: this variable should not be used to determine whether a participant received hardware at a given point in time and/or whether s/he used the hardware to participate in a survey. Rather, it indicates whether hardware was ever provided: 1. None 2. Tablet (includes Internet)
start date (start year, start month, start day, start hour, start min, start sec)	Indicates the time at which the participant started the monthly events survey.
EOD_start_date (EOD_start_year, EOD_start_month, EOD_start_day, EOD_start_hour, EOD_start_min, EOD_start_sec)	Indicates the time at which the participant started the end of day survey.
end date (end year, end month, end day, end hour, end min, end sec)	Indicates the time at which the participant completed the monthly events survey.
EOD_end_date (EOD_end_year, EOD_end_month, EOD_end_day, EOD_end_hour, EOD_end_min, EOD_end_sec)	Indicates the time at which the participant completed the end of day survey.

lastmyhh_date	Date on which the participant took their last My Household survey prior to the Monthly Events Survey

Table 2A. Demographic Variables Included in the UAS EMA Burst File

Variable Name	Label
gender	gender-male
dateofbirth_year	year of birth
age	age
agerange	age range for missing age
citizenus	us citizen

bornus	born in the us
stateborn	state born – fips coding
countryborn	country born
immigrant_status	immigrant status
statereside	state residence – fips coding
maritalstatus	marital status
livewithpartner	living with partner

education	highest level of education
hisplatino	spanish/hispanic/latino
hisplatino_group	spanish/hispanic/latino group
white	white
black	black
nativeamer	american indian or alaska native
asian	asian

pacific	hawaiian/pacific islander
race	race
working	currently working
sick_leave	on sick or other leave
unemp_layoff	unemployed – on layoff
unemp_look	unemployed - looking
retired	retired

disabled	disabled
If_other	other labor force status
laborstatus	laborstatus
employmenttype	employment type
workfullpart	work full-time or part-time
hourswork	hours of work per week
hhincome	household income

anyhhmember	whether any other hh member
hhmembernumber	number of household members besides r
hhmemberage_1 – hhmemberage_22	hh member 1 age – hh member 22 age
hhmembergen_1 – hhmembergen_22	hh member 1 gender – male – hh member 22 gender - male
hhmemberin_1 – hhmemberin_22	whether hh member 1 is in the hh – whether hh member 22 is in the hh
hhmemberrel_1 – hhmemberrel_22	hh member 1 relationship – hh member 22 relationship
hhmemberuasid_1 – hhmemberuasid_22	hh member 1 uasid – hh member 22 uasid