

Objectives

Sections of the Presentation:

1. Develop familiarity with the breadth and depth of data available through IPUMS Time Use
2. Assess the appropriateness of the American Time Use survey (ATUS), the American Heritage Time Use surveys (AHTUS), and Multinational Time Use surveys (MTUS) for specific research topics
3. Learn how to navigate the IPUMS Time Use web-based extract system and create custom extracts that include user-defined time use variables

IPUMS provides census and survey data from around the world integrated across time and space. IPUMS integration and documentation makes it easy to study change, conduct comparative research, merge information across data types, and analyze individuals within family and community context. Data and services available free of charge.



U.S. Census and American Community Survey microdata from 1980 to the present.

[VISIT SITE](#)



Current Population Survey microdata including basic monthly surveys and supplements from 1980 to the present.

[VISIT SITE](#)



Census microdata covering 82 countries from 1980 to the present. IPUMS IARR offers microdata from the 19th and early 20th centuries.

[VISIT SITE](#)



Demographic and Health Surveys integrated for analysis across time and space from 1980 to the present.

[VISIT SITE](#)



Tabular U.S. Census data and GIS boundary files from 1990 to the present.

[VISIT SITE](#)



Integrated data on population and the environment from 1980 to the present.

[VISIT SITE](#)



Historical and contemporary time use data from 1980 to the present.

[VISIT SITE](#)



Health survey data from the National Health Interview Survey from the 1980s to the present.

[VISIT SITE](#)



Survey data on the science and engineering workforce in the U.S. from 1990 to the present.

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RESEARCH AWARDS

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CALENDAR

APRIL 27, 2017

Population Association of America

Hilton Chicago

JUNE 25-27, 2017

Academy Health

Hyatt Regency, New Orleans, LA

JULY 18-21, 2017

81st ISI World Statistics Congress (WSC)

Marrakech, Morocco

[VIEW MORE EVENTS](#)

<http://www.ipums.org/>



THREE RESOURCES TO STUDY TIME USE.

These projects provide free individual-level time use data for research purposes. The data extract systems make it easy to create data sets containing time use and other variables a user needs.

ATUS

AMERICAN TIME USE SURVEY EXTRACT BUILDER

Annual American Time Use Survey (ATUS) data from 2003 forward.

[GET DATA](#)

AHTUS

AMERICAN HERITAGE TIME USE STUDY EXTRACT BUILDER

Historical American time use data since 1965 harmonized for comparison over time, including the ATUS samples.

[GET DATA](#)

MTUS

MULTINATIONAL TIME USE STUDY EXTRACT BUILDER

MTUS is a project dedicated to making it easy for researchers to use data from around the world.

[GET DATA](#)

SUPPORTED BY





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AMERICAN TIME USE SURVEY EXTRACT BUILDER

The ATUS is a nationally representative U.S. time diary survey for period since 2003. IPUMS Time Use harmonizes these data and provides a data extract builder that allows users to create custom time use variables and data extracts for analysis. ATUS-X is a collaboration of the Minnesota Population Center and the Maryland Population Research Center.

TIME IS OUR SCARCEST RESOURCE...USE IT WISELY!

CREATE AN EXTRACT

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WHAT IS IPUMS?

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NEW USERS

[CREATE AN ATUS-X ACCOUNT](#) | [NAVIGATING THE SITE](#)

TIME USE NEWS

IPUMS Time Use Registration

- <https://www.ipums.org/timeuse.shtml>
- Select “Get Data” Under ATUS
- Click on “Registration”
 - Log in with your IPUMS account information
 - Or
 - Apply for access: fill out form to register for access
- Can explore data archive without an account but cannot save variables or an extract



IPUMS Time Use Team

University of Maryland
& Maryland Population
Research Center



Sandra Hofferth

University of Oxford
& Centre for Time Use
Research



Ewa Jarosz

University of Minnesota
& Minnesota Population
Center



Sarah Flood



Liana Sayer



Margarita Vega Rapun



Dan Backman



Web-Based Data Access System

- Why use IPUMS Time Use archive (ATUS-X, AHTUS-X, MTUS-X)?
 - Lowers barriers to access – much is done for the user behind the scenes so you don't have to
 - Lowers learning time – everything in one place
 - Simplifies use of complex time diary data
- What does it deliver? Customized data set with
 - Years of data and countries you want
 - Data **harmonized** across time and countries
 - Variables you care about and defined the way you want
 - User-defined measures of time in specific activity aggregations
 - Dataset and variable-level documentation in one place and connected to your variables, plus variable-level frequencies
 - Data in multiple formats (SAS, STATA, SPSS)
- **Email helpline:** ipums@umn.edu



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ATUS - X

- Data from the American Time Use Survey from 2003 to the present
- Survey of persons age 15 and older interviewed with a 20-minute computer-assisted interview conducted by telephone by the U.S. Census Bureau for the Bureau of Labor Statistics
- Annual data released in summer each year
- Occasional supplements with focused items:
 - Eating and Health, Well-Being, Leave, Elder Care

Example: Diary

So let's begin. Yesterday, Monday, at 4:00 AM, what were you doing?

- Use the slash key (/) for recording separate/simultaneous activities.
- Do not use precodes for secondary activities.

- | | | |
|------------------------------|---------------------------------|------------------------------------|
| 1. Sleeping | 8. Cleaning kitchen | 30. Don't know/Can't remember |
| 2. Grooming (self) | 9. Laundry | 31. Refusal/ None of your business |
| 3. Watching TV | 10. Grocery shopping | |
| 4. Working at main job | 11. Attending religious service | |
| 5. Working at other job | 12. Paying household bills | |
| 6. Preparing meals or snacks | 13. Caring for animals and pets | |
| 7. Eating and drinking | | |

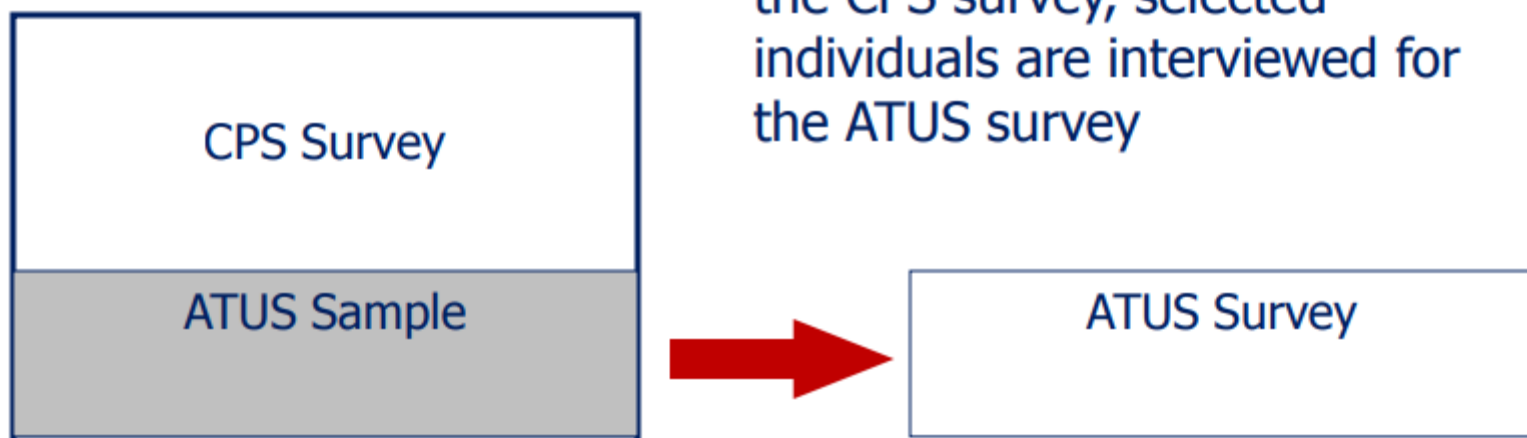
	Start	ID	Activity	TIME	Hrs	Mins	Stop	Who	Who_2	Where	Where specify
[1]	4:00AM		Sleeping	2	8	0	12:00PM				
[2]	12:00PM		Preparing meals and snacks	1	1	0	1:00PM	0		1	Respondent's home
[3]	1:00PM		playing with kids	1		1	1:01PM	2		1	Respondent's home
[4]	1:01PM		Grooming	1	2	0	3:01PM				



ATUS Sampling Frame

- People are selected from households that recently completed the monthly labor force survey—the Current Population Survey (CPS)

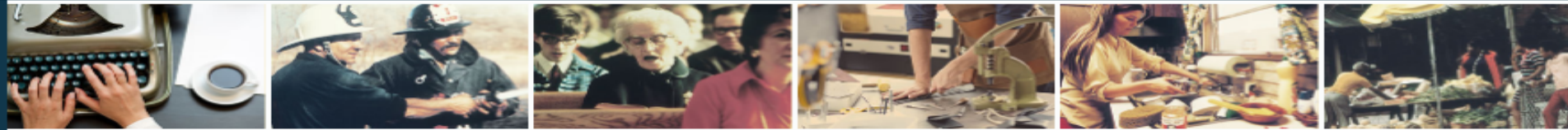
2 to 5 months after the end of the CPS survey, selected individuals are interviewed for the ATUS survey



ATUS Sample Allocation

- The ATUS sample is split evenly between weekdays and weekend days
 - ▶ 10 percent of designated persons are asked about a weekday
 - ▶ 25 percent of designated persons in the sample are asked about a Saturday, and 25 percent are asked about a Sunday

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25%	10%	10%	10%	10%	10%	25%



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AMERICAN HERITAGE TIME USE STUDY EXTRACT BUILDER

The AHTUS is a harmonized collection of time diary data from the U.S. for the period 1965 to 2012. AHTUS-X is a data extract builder that allows users to create custom time use variables and data extracts for analysis. This project is a collaboration of the Minnesota Population Center, the Maryland Population Research Center and the Centre for Time Use Research.

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CREATE AN EXTRACT

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OTHER TIME USE EXTRACT BUILDERS

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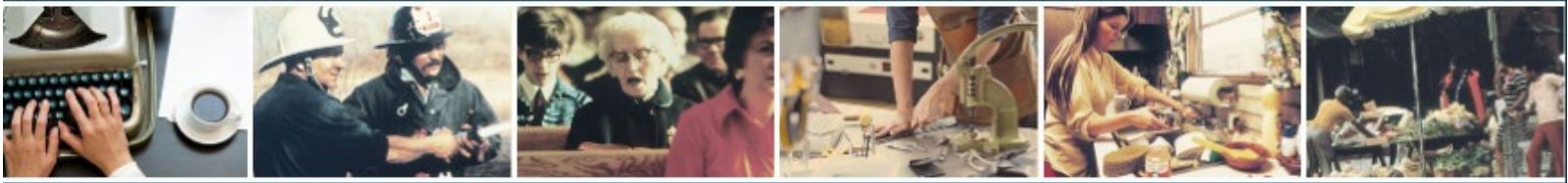
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TIME USE NEWS



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SAMPLE-LEVEL INFORMATION

View sample-level information by sample or by type of information.


BY SAMPLE

- [1965-66](#)
- [1975](#)
- [1985](#)
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- [1994-1995](#)
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- [2003](#)
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- [2005](#)
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- [2009](#)
- [2010](#)
- [2011](#)
- [2012](#)


BY TYPE OF INFORMATION

- [Description](#)
- [Questionnaire/Codebook](#)
- [Harmonization syntax](#)


1965-1966 the Multinational Comparative Time-Budget Research Project

- [Sample Description](#)
- [User guide/codebook](#) 
- [Harmonization syntax](#)

1975 American's Use of Time: Time Use in Economic and Social Accounts

- [Sample Description](#)
- [User guide/codebook](#) 
- Harmonization syntax
 - [Part 1](#)
 - [Part 2](#)
 - [Part 3](#)
 - [Part 4](#)


1985 American's Use of Time Project

- [Sample Description](#)
- [User guide/codebook](#) 
- [Harmonization syntax](#)

1992-1994 National Human Activity Pattern Survey

- [Sample Description](#)
- User guide/codebook (*not available*)
- [Harmonization syntax](#)

1994-1995 National Time-Diary Study

- [Sample Description](#)
- [User guide/codebook](#) 
- [Harmonization syntax](#)

1998-2001 Family Interaction, Social Capital, and Trends in Time Use Study and National Survey of Parents

- [Sample Description](#)
- [User guide/codebook](#) 
- [Harmonization syntax](#)

2003+ American Time Use Survey



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MULTINATIONAL TIME USE STUDY EXTRACT BUILDER

MTUS is a collection of time diary data from a growing number of countries that are harmonized for compatibility across time and space. MTUS-X is a data extract builder that allows users to create custom time use variables and data extracts for analysis. This project is a collaboration of the Minnesota Population Center, the Maryland Population Research Center and the Centre for Time Use Research.

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CREATE AN EXTRACT

Get Data

OTHER TIME USE EXTRACT BUILDERS

ATUS

AHTUS

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Harmonization

From [Businessdictionary.com](https://www.businessdictionary.com):

- Adjustment of differences and inconsistencies among different measurements, methods, procedures, schedules, specifications, or systems to make them uniform or mutually compatible.

DATA CART

YOUR DATA EXTRACT
 VARIABLES
 TIME USE VARIABLES
 SAMPLES

SELECT VARIABLES

PERSON ▾ ACTIVITY ▾ TIME USE ▾ SEARCH

CREATE TIME USE VARIABLE

SELECT SAMPLES

CHANGE DATA STRUCTURE

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AN "X" INDICATES THE VARIABLE IS AVAILABLE IN THAT DATASET.

CORE DEMOGRAPHIC VARIABLES -- PERSON [\[TOP\]](#)

Add to cart	Variable	Variable Label	Type	austria	bulgaria	canada	finland	finland	france	france	hungar	hungar	israel	italy	nether	nether	nether	nether	nether	nether	nether	spain	spain	uk	uk	uk	uk	uk
				1992	2001	2010	1979	2009	1985	1998	1999	2009	1991	2002	1975	1980	1985	1990	1995	2000	2005	2002	2009	1974	1983	1987	1995	2000
	AGE	Age	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	SEX	Sex	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	CITIZEN	Diarist is citizen/native of country	P	X	.	X	.	.	X	X	.	.	.	.	.	.	.	.	.	X	X	X	X	.	.	X	.	X
	CIVSTAT	Diarist is in a couple	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	COHAB	Diarist cohabiting	P	X	X	X	.	X	X	X	X	.	.	X	.	.	.	.	X	.	.	X	X	.	X	X	X	X
	EDTRY	Harmonized highest level of education	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	EDUCA	Education-original study codes	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	CARER	Adult provide adult care	P	X	.	.	X	.	.	X	.	.	X	X	.	.	.	.	X	X	X	X	X	.	X	X	.	X
	WHERBORN	Born in country	P	.	.	X	.	.	X	X	.	X	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
	YRIMM	Year of immigration (born abroad)	P	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	BTHPL	Country of birth	P	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	PABTHPL	Father's country of birth	P	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

EDTRY

[ADD TO CART](#)[SELECT SAMPLES](#)

Harmonized highest level of education

Group: [Core Demographic — PERSON](#)

CODES

DESCRIPTION

COMPARABILITY

UNIVERSE

AVAILABILITY

Description

EDTRY indicates the respondent's highest level of education based on the [International Classification of Education \(ISCED\)](#).

Users may also be interested in [EDUCA](#) which is unharmonized and indicates the highest level of education attained. A cross tabulation of EDTRY and EDUCA shows how EDTRY was constructed for each sample.



DATA CART

YOUR DATA EXTRACT

- 0 VARIABLES
- 0 TIME USE VARIABLES
- 0 SAMPLES

EDTRY

ADD TO CART

SELECT SAMPLES

Harmonized highest level of education
 Group: [Core Demographic — PERSON](#)

CODES	DESCRIPTION	COMPARABILITY	UNIVERSE	AVAILABILITY
-------	-------------	---------------	----------	--------------

Comparability – Index

[GENERAL](#) [Italy](#)

Comparability

EDTRY is comparable across all samples. See [EDUCA](#) for further information about the source data on education.

Comparability – Italy [\[top\]](#)

In 2002, respondents aged 10 or less do not have data for this variable.



ATUS

AHTUS

MTUS

MULTINATIONAL TIME USE STUDY EXTRACT BUILDER

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DATA CART

YOUR DATA EXTRACT

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EDUCA

[ADD TO CART](#)
[SELECT SAMPLES](#)

Education-original study codes

Group: [Core Demographic — PERSON](#)

CODES	DESCRIPTION	COMPARABILITY	UNIVERSE	AVAILABILITY
	Austria 1992			
	1 Elementary school			
	3 Neduyn vocational			
	4 Higher general			
	5 Higher vocational			
	6 University			
	7 Child aged 10-14			
	Canada 2010			
	1 Doctorate/masters/some graduate			
	2 Bachelor's degree			
	3 Diploma/certificate from community college			
	4 Diploma/certificate from trade/technical			
	5 Some university			
	6 Some community college/CEGEP/nursing			
	7 Some trade/technical			
	8 High school diploma			
	9 Some secondary/high school			
	10 Elementary school/no schooling			
	Spain 2002			

Spain 2009

- 1 No formal education, not able to read or write
- 2 Did not complete primary school
- 3 Completed primary school
- 4 Completed secondary school
- 5 Post-secondary qualification
- 6 Teaching qualification
- 7 Professional qualification
- 8 University degree
- 9 Higher university degree

France 1985

- 0 no diploma
- 1 CEP, DFEO
- 2 BEPC
- 3 BE BEPS
- 4 Baccalaureat 1ere partie CFES
- 5 Baccalaureat series 2eme
- 6 Diplome universitaire du 1er cycle - DUEL DUES
- 7 Diplome universitaire du 2eme cycle - license, maitrise
- 8 Diplome universitaire du 3eme cycle - DES DEA doctorat
- 9 Autre preciser

France 1998

- 0 Without a diploma or not declared
- 1 CEP, DFEO
- 2 BEPC
- 3 CAP, BEP
- 4 Bac technique
- 5 Bac general
- 6 Bac + 2
- 7 Superieur a Bac + 2

Finland 1979

- 1 Matriculation
 - 2 Middle / Comprehensive
 - 3 Primary / Middle
-

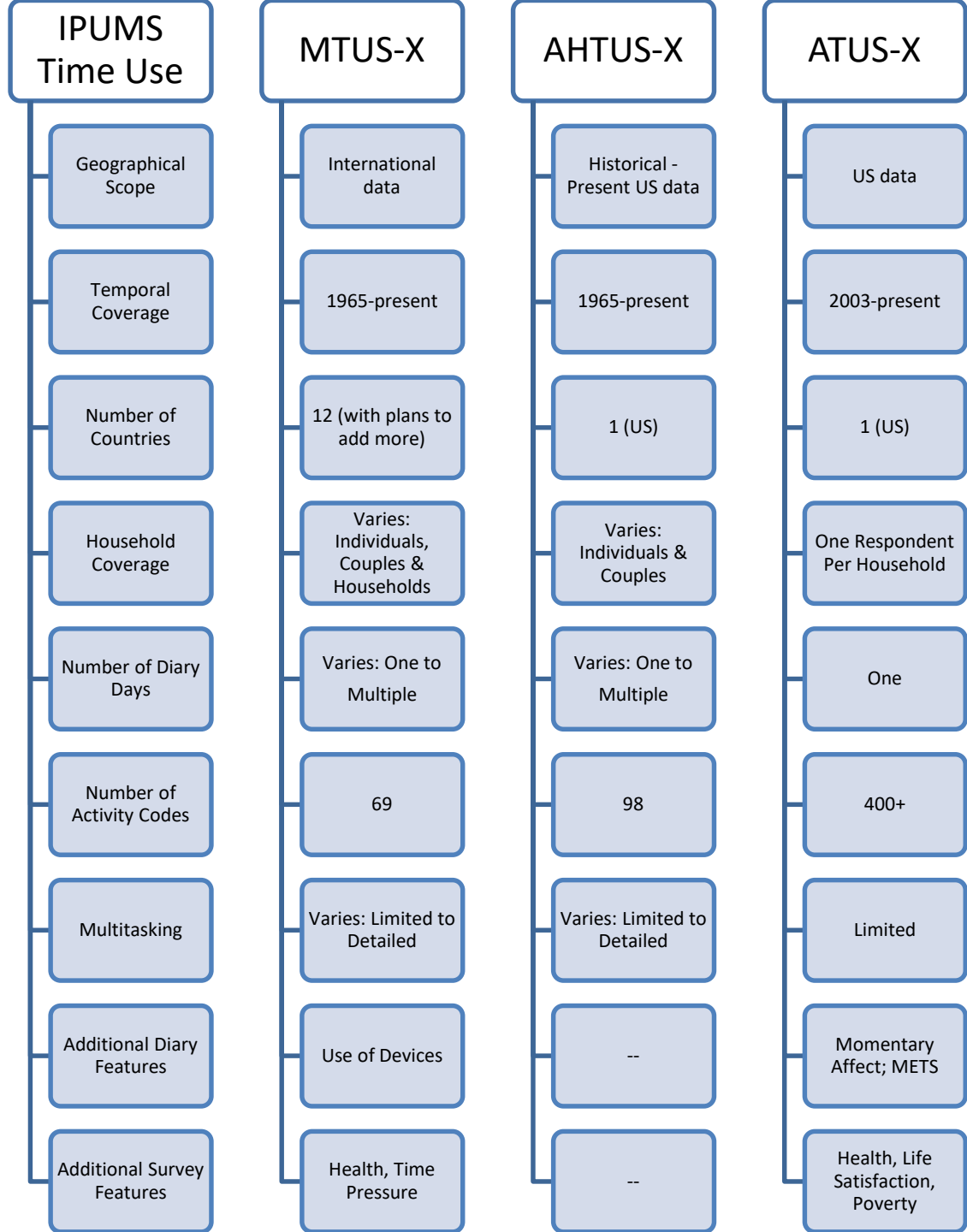
Policy Applications of Time Use Research





Time Diary Archive Differences

- With Whom
 - ATUS
 - [WHO ASK](#)
 - [Technical Who Variables](#) (hierarchical)
 - Create Own Time Use Variable (rectangular)
 - AHTUS
 - [Who else is present during activity](#)
 - [Who Variable Availability Grid](#)
 - MTUS
 - <https://www.mtusdata.org/mtus-action/samples>
 - [Who else is present during activity](#)



QUESTIONS?

Online Demo

- ✓ Logged in or finished registration
- ✓ Selected topic and the archive to use
- ✓ Viewed documentation
 - Create a time use variable
 - Add demographic variables
 - Make an extract
 - Download data
 - Create an analysis file
 - Get help



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AMERICAN TIME USE SURVEY EXTRACT BUILDER

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YOUR DATA EXTRACT

10 VARIABLES
3 TIME USE VARIABLES
6 SAMPLES

VIEW CART

SELECT VARIABLES

HOUSEHOLD ▾	PERSON ▾	ACTIVITY ▾	WHO ▾	ELDERCARE ▾	TIME USE ▾	SEARCH
-------------	----------	------------	-------	-------------	------------	--------

CREATE TIME USE VARIABLE

CHANGE SAMPLES

CHANGE DATA STRUCTURE



START HERE

SELECT SAMPLES

Variable documentation on the web site can be filtered to display only material corresponding to chosen datasets ([more information](#) on this feature).

SUBMIT SAMPLE SELECTIONS

Select / Unselect All Module Topics

[Eating and Health](#)

[Leave](#)

[Well Being](#)

Select All Samples

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

2017

Sample Members

Respondents [\[?\]](#)

Respondents and Household Members [\[?\]](#)

Respondents and Non-respondents [\[?\]](#)

Respondents and Non-respondents plus Household Members [\[?\]](#)

Caution

- Will need to go back to the Select variables page after each selection (slide 28). That step is not included here to avoid duplication.

DATA CART
YOUR DATA EXTRACT

10 VARIABLES
3 TIME USE VARIABLES
6 SAMPLES

VIEW CART

SELECT VARIABLES

HOUSEHOLD ▾ PERSON ▾ ACTIVITY ▾ WHO ▾ ELDERCARE ▾ TIME USE ▾ SEARCH

CREATE TIME USE VARIABLE

CHANGE SAMPLES

CHANGE DATA STRUCTURE

[HELP](#)
[DISPLAY OPTIONS](#)

START HERE

DATA STRUCTURE FOR EXTRACT TO BE GENERATED

- Rectangular
 - person (recommended) activity
- Hierarchical
 - include eldercare

DATA CART

YOUR DATA EXTRACT

- VARIABLES
- TIME USE VARIABLES
- SAMPLES

SELECT VARIABLES

HOUSEHOLD ▾ PERSON ▾ ACTIVITY ▾ WHO ▾ ELDERCARE ▾ TIME USE ▾ SEARCH

CREATE TIME USE
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START HERE

DATA STRUCTURE FOR EXTRACT TO BE GENERATED



- Rectangular
 - person (recommended) activity
- Hierarchical
 - include eldercare



DATA CART

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SELECT VARIABLES

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"X" INDICATES THE VARIABLE IS AVAILABLE IN THAT DATASET.

CORE DEMOGRAPHIC VARIABLES -- PERSON [\[TOP\]](#)

Add to cart	Variable	Variable Label	Type	06	07	08	14	15	16
<input checked="" type="checkbox"/>	AGE	Age	P	X	X	X	X	X	X
<input checked="" type="checkbox"/>	SEX	Sex	P	X	X	X	X	X	X
<input type="checkbox"/>	RACE	Race	P	X	X	X	X	X	X
<input type="checkbox"/>	HISPAN	Hispanic origin	P	X	X	X	X	X	X
<input type="checkbox"/>	ASIAN	Asian origin	P	.	.	.	X	X	X
<input type="checkbox"/>	MARST	Marital status	P	X	X	X	X	X	X
<input type="checkbox"/>	YRIMMIG	Year of immigration	P	X	X	X	X	X	X
<input type="checkbox"/>	CITIZEN	Citizenship status	P	X	X	X	X	X	X
<input type="checkbox"/>	BPL	Birthplace	P	X	X	X	X	X	X
<input type="checkbox"/>	MBPL	Mother's birthplace	P	X	X	X	X	X	X
<input type="checkbox"/>	FBPL	Father's birthplace	P	X	X	X	X	X	X
<input type="checkbox"/>	RELATE	Relationship to ATUS respondent	P	X	X	X	X	X	X
<input type="checkbox"/>	AGE_CPS8	Age (CPS)	P	X	X	X	X	X	X
<input type="checkbox"/>	SEX_CPS8	Sex (CPS)	P	X	X	X	X	X	X
<input type="checkbox"/>	RELATE_CPS8	Relationship to CPS respondent	P	X	X	X	X	X	X
<input type="checkbox"/>	POPSTAT	Adult civilian, armed forces, or child (CPS)	P	X	X	X	X	X	X
<input checked="" type="checkbox"/>	GENHEALTH	General health	P	X	X	X	X	X	X
<input type="checkbox"/>	HEIGHT	Height (in inches)	P	X	X	X	X	X	X
<input type="checkbox"/>	WEIGHT	Weight (in pounds)	P	X	X	X	X	X	X
<input checked="" type="checkbox"/>	BMI	Body Mass Index	P	X	X	X	X	X	X

DATA CART

YOUR DATA EXTRACT

 10 VARIABLES
 3 TIME USE VARIABLES
 6 SAMPLES

[VIEW CART](#)
[CREATE TIME USE VARIABLE](#)
[CHANGE SAMPLES](#)
[CHANGE DATA STRUCTURE](#)
SELECT VARIABLES

HOUSEHOLD ▾	PERSON ▾	ACTIVITY ▾	WHO ▾	ELDERCARE ▾	TIME USE ▾	SEARCH
-----------------------------	--------------------------	----------------------------	-----------------------	-----------------------------	----------------------------	------------------------

AN "X" INDICATES THE VARIABLE IS AVAILABLE IN THAT DATASET.

WEIGHTS VARIABLES -- PERSON [\[TOP\]](#)

Add to cart	Variable	Variable Label	Type	06	07	08	14	15	16
<input checked="" type="checkbox"/>	WT06	Person weight, 2006 methodology [preselected]	P	X	X	X	X	X	X
<input type="checkbox"/>	RWT06	Replicate weight, 2006 methodology [multiple variables]	P	X	X	X	X	X	X
<input type="checkbox"/>	BWT	Base weight	P	X	X	X	X	X	X
<input type="checkbox"/>	RBWT	Replicate weight, base weight [multiple variables]	P	X	X	X	X	X	X
<input checked="" type="checkbox"/>	EHWT	Eating and Health Module weight	P	X	X	X	X	X	X
<input type="checkbox"/>	REHWT	Replicate weight, eating and health module weight [multiple variables]	P	X	X	X	X	X	X



ATUS AHTUS MTUS

AMERICAN TIME USE SURVEY EXTRACT BUILDER

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DATA CART

YOUR DATA EXTRACT

10 VARIABLES
3 TIME USE VARIABLES
6 SAMPLES

VIEW CART

CREATE TIME USE VARIABLE

CHANGE SAMPLES

CHANGE DATA STRUCTURE

SELECT VARIABLES

Navigation bar with dropdown menus: HOUSEHOLD, PERSON, ACTIVITY, WHO, ELDERCARE, TIME USE, SEARCH

AN "X" INDICATES THE VARIABLE IS AVAILABLE IN THAT DATASET.

TECHNICAL ACTIVITY VARIABLES -- ACTIVITY [TOP]

Table with columns: Add to cart, Variable, Variable Label, Type, 06, 07, 08, 14, 15, 16. Rows include ACTLINE, ACTIVITY, WHERE, DURATION_EXT, DURATION, METVALUE, WHO_ASK, START, STOP.

Caution

- You cannot select technical activity variables for your file unless you select the rectangular (activity) or the hierarchical option for the file structure. You will be reminded and get the option of changing your structure.
- If you wish to use a rectangular (person) file structure you will have to create all your time variables within the archive. This will probably be sufficient for most research projects.



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AMERICAN TIME USE SURVEY EXTRACT BUILDER

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DATA CART

YOUR DATA EXTRACT

10 VARIABLES
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6 SAMPLES

VIEW CART

SELECT VARIABLES

HOUSEHOLD ▾	PERSON ▾	ACTIVITY ▾	WHO ▾	ELDERCARE ▾	TIME USE ▾	SEARCH
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CREATE TIME USE VARIABLE

CHANGE SAMPLES

CHANGE DATA STRUCTURE



START HERE



ATUS AHTUS MTUS
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DATA CART
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VIEW CART

CREATE TIME USE VARIABLE

Variable documentation on the web site can be filtered to display only material corresponding to chosen datasets ([more information](#) on this feature).

CREATE VARIABLE FROM SCRATCH

QUIT MAKING TIME USE VARIABLE

MY TIME USE VARIABLES

Create Copy	Name	Label
Load	HOMEWORK	homework at home
Load	SPORTS	sports_afterschool
Load	SPORTS_PART	sports participation
Load	CHILDCARE_TIME	child care time
Load	work	all work related activities
Load	Housework	Household activities plus travel time
Load	employment	work plus travel time
Load	carehhmember	care for household member plus travel
Load	carenonhhmember	care for non hhmember plus travel
Load	school	school time plus travel to school
Load	homeworkt	homework plus travel
Load	sportst	sports plus travel
Load	schoolrev	school time plus travel to school
Load	CareHHchildren	care for household children plus travel
Load	CarenonHHchildren	care for non hhchildren plus travel
Load	exermornalone	ACT: exercise morning alone
Load	exerafteralone	ACT: exercise, afternoon, alone
Load	exernightalone1	ACT: exercise, night, alone1
Load	exertotal	ACT: exercise total
Load	exeralone	ACT: exercise alone
Load	exermooth	ACT: exercise, morning, with others
Load	exeraftoth	exercise, afternoon, with others
Load	exeroth	exercise, any time, with others
Load	exerniteoth2	exercise, night 4-6 am, with others
Load	exernightalone2	exercise, at night 4-6 am, alone
Load	exniteoth1	exercise, night6-4am, with others
Load	exaftoth	exercise, afternoon, with others
Load	exmornoth	ACT: exercise, morning, with others

ACTIVITY

TIME OF DAY

SECONDARY ACTIVITY

LOCATION

WITH WHOM

NAME AND LABEL

SUMMA

Respondent activities are recorded as six-digit numbers ([ACTIVITY](#)). The first two digits correspond to a broad category, the middle two to a more detailed subcategory, and the final two to a specific activity within those categories. Users may select any combination of activities from the activity hierarchy to create time use variables.

[\[more info\]](#)

[expand all](#) | [collapse all](#)

- All
 - Personal Care (010000)
 - Household Activities (020000)
 - Caring for and Helping Household Members (030000)
 - Caring for and Helping Non-Household Members (040000)
 - Work and Work-Related Activities (050000)
 - Education (060000)
 - Consumer Purchases (070000)
 - Professional and Personal Care Services (080000)
 - Household Services (090000)
 - Government Services and Civic Obligations (100000)
 - Eating and Drinking (110000)
 - Socializing, Relaxing, and Leisure (120000)
 - Sports, Exercise, and Recreation (130000)
 - Participating in Sports, Exercise, or Recreation (130100)*
 - Attending Sports or Recreational Events (130200)
 - Waiting Associated with Sports, Exercise, and Recreation (130300)
 - Security Procedures Related to Sports, Exercise, and Recreation (130400)
 - Sports, Exercise, and Recreation, n.e.c. (139900)
 - Religious and Spiritual Activities (140000)
 - Volunteer Activities (150000)
 - Telephone Calls (160000)
 - Traveling (180000)
 - Data Codes (500000)

CREATE TIME USE VARIABLE

ACTIVITY

TIME OF DAY

SECONDARY ACTIVITY

LOCATION

WITH WHOM

NAME AND LABEL

SUMMARY

Name indicates what your variable will be called in your data file. **Label** is the label associated with the variable you created. **Description** is not delivered with your data file; it is an optional field that you may use to describe the variable in greater detail and to store relevant notes.

Name

Label

Description

[SAVE TIME USE VARIABLE](#)

[QUIT MAKING TIME USE VARIABLE](#)

1-- **Sports, Exercise, and Recreation (130000)**

Participating in Sports, Exercise, or Recreation (130100)

- Doing aerobics (130101)
- Playing baseball (130102)
- Playing basketball (130103)
- Biking (130104)*
- Playing billiards (130105)
- Boating (130106)
- Bowling (130107)
- Climbing, spelunking, caving (130108)
- Dancing (130109)
- Participating in equestrian sports (130110)
- Fencing (130111)
- Fishing (130112)
- Playing football (130113)
- Golfing (130114)
- Doing gymnastics (130115)
- Hiking (130116)
- Playing hockey (130117)
- Hunting (130118)
- Participating in martial arts (130119)
- Playing racquet sports (130120)
- Participating in rodeo competitions (130121)
- Rollerblading (130122)
- Playing rugby (130123)
- Running (130124)
- Skiing, ice skating, snowboarding (130125)
- Playing soccer (130126)
- Playing softball (130127)
- Using cardiovascular equipment (130128)
- Vehicle touring or racing (130129)
- Playing volleyball (130130)
- Walking (130131)*
- Participating in water sports (130132)
- Weightlifting or strength training (130133)
- Working out, unspecified (130134)
- Wrestling (130135)
- Doing yoga (130136)
- Playing sports, n.e.c. (130199)

CREATE TIME USE VARIABLE

VIEW CARD

ACTIVITY

TIME OF DAY

SECONDARY ACTIVITY

LOCATION

WITH WHOM

NAME AND LABEL

SUMMARY

Respondent activities are recorded as six-digit numbers ([ACTIVITY](#)). The first two digits correspond to a broad category, the middle two to a more detailed subcategory, and the final two to a specific activity within those categories. Users may select any combination of activities from the activity hierarchy to create time use variables.

[\[more info\]](#)

[expand all](#) | [collapse all](#)

- All**
- Personal Care (010000)**
- Household Activities (020000)**
- Caring for and Helping Household Members (030000)**
- Caring for and Helping Non-Household Members (040000)**
- Work and Work-Related Activities (050000)**
- Education (060000)**
- Consumer Purchases (070000)**
- Professional and Personal Care Services (080000)**
- Household Services (090000)**
- Government Services and Civic Obligations (100000)**
- Eating and Drinking (110000)**
- Socializing, Relaxing, and Leisure (120000)**
- Sports, Exercise, and Recreation (130000)**
- Religious and Spiritual Activities (140000)**
- Volunteer Activities (150000)**
- Telephone Calls (160000)**
- Traveling (180000)***
- Data Codes (500000)**

ACTIVITY

TIME OF DAY

SECONDARY ACTIVITY

LOCATION

WITH WHOM

NAME AND LABEL

SUMMARY

The location filter ([WHERE](#)) allows users to restrict the time use variable currently being created to a particular set of places or modes of transportation. The default selection is all locations, meaning that the times spent in each of the selected activities (given other filter selections) are added together regardless of where the activities occurred. When a location filter is applied, only times spent in the activities (given other filter selections) and locations specified are added together.

[\[more info\]](#)

Location Filter All Locations
 Specified Locations

Locations

- All**
- Place (0100)**
- Mode of Transportation (0200)**
 - Car, truck or motorcycle (driver) (0230)
 - Car, truck or motorcycle (passenger) (0231)
 - Walking (0232)*
 - Bus (0233)
 - Subway, train (0234)
 - Bicycle (0235)*
 - Boat, ferry (0236)
 - Taxi, limousine service (0237)
 - Airplane (0238)
 - Other mode of transportation (0239)
 - Unspecified mode of transportation (0240)
 - Don't know (9997)
 - Refused (9998)
 - NIU (Not in universe) (9999)



ATUS

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AMERICAN TIME USE SURVEY EXTRACT BUILDER

HOME | SELECT DATA | MY DATA | FAQ | HELP

DATA CART

YOUR DATA EXTRACT

10 VARIABLES
3 TIME USE VARIABLES
6 SAMPLES

VIEW CART

SELECT VARIABLES

HOUSEHOLD ▾	PERSON ▾	ACTIVITY ▾	WHO ▾	ELDERCARE ▾	TIME USE ▾	SEARCH
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CREATE TIME USE VARIABLE

CHANGE SAMPLES

CHANGE DATA STRUCTURE



START HERE



DATA CART

[ADD MORE VARIABLES](#)[CREATE DATA EXTRACT](#)[ADD MORE SAMPLES](#)

Clear Data Cart

In cart	Variable	Variable Label	Type	06	07	08	14	15	16
<input checked="" type="checkbox"/>	YEAR	Survey year [preselected]	H	X	X	X	X	X	X
<input checked="" type="checkbox"/>	CASEID	ATUS Case ID [preselected]	H	X	X	X	X	X	X
<input checked="" type="checkbox"/>	PERNUM	Person number (general) [preselected]	P	X	X	X	X	X	X
<input checked="" type="checkbox"/>	LINENO	Person line number [preselected]	P	X	X	X	X	X	X
<input checked="" type="checkbox"/>	WTO6	Person weight, 2006 methodology [preselected]	P	X	X	X	X	X	X
<input checked="" type="checkbox"/>	ACTLINE	Activity line number [preselected]	A	X	X	X	X	X	X
<input checked="" type="checkbox"/>	RECTYPE	Record Type	H	X	X	X	X	X	X
<input checked="" type="checkbox"/>	EHWT	Eating and Health Module weight	P	X	X	X	X	X	X
<input checked="" type="checkbox"/>	AGE	Age	P	X	X	X	X	X	X
<input checked="" type="checkbox"/>	SEX	Sex	P	X	X	X	X	X	X
<input checked="" type="checkbox"/>	GENHEALTH	General health	P	X	X	X	X	X	X
<input checked="" type="checkbox"/>	BMI	Body Mass Index	P	X	X	X	X	X	X
<input checked="" type="checkbox"/>	ACTIVITY	Activity	A	X	X	X	X	X	X
<input checked="" type="checkbox"/>	WHERE	Location of activity	A	X	X	X	X	X	X
<input checked="" type="checkbox"/>	DURATION_EXT	Duration of activity (extended version)	A	X	X	X	X	X	X
<input checked="" type="checkbox"/>	DURATION	Duration of activity	A	X	X	X	X	X	X
<input checked="" type="checkbox"/>	METVALUE	Metabolic equivalent (MET) value for activity codes	A	X	X	X	X	X	X

Add to cart	Name	Label
<input checked="" type="checkbox"/>	Exercise_Tot	ACT: exerciseTot
<input checked="" type="checkbox"/>	Walkbike_nottrans	ACT: Walking/biking not as trans
<input checked="" type="checkbox"/>	walkbike_trans2	ACT: Walking/biking as trans

DATA FORMAT AND STRUCTURE [\(HELP\)](#)

Data Format

If you choose the "Fixed-width text (.dat)" data format, you will additionally receive Stata, SPSS, and SAS syntax files to load your fixed-width extract data file. Alternatively, you can receive your data in one of the formats listed below.

- Fixed-width text (.dat)
- Stata (.dta)
- SPSS (.sav)
- SAS (.sas7bdat; does not include value labels)
- Comma delimited (.csv)

Data conversion supplied by [Stat/Transfer](#)

Data Structure

- Rectangular
 - person (recommended)
 - activity
- Hierarchical
 - include eldercare

Sample Members

- Respondents
- Respondents and Household Members
- Respondents and Non-respondents
- Respondents and Non-respondents plus Household Members

SUBMIT

EXTRACT REQUEST ([HELP](#))

SAMPLES:	6	(show)	Change
VARIABLES:	17	(show)	Change
TIME USE VARIABLES:	3	(show)	Change
DATA FORMAT:	.dat (fixed-width text)		Change
STRUCTURE:	Hierarchical		Change
SAMPLE MEMBERS:	Respondents		Change

OPTIONS

SELECT DATA QUALITY FLAGS

Include data quality flags for selected variables.

ATTACH CHARACTERISTICS

Attach data from mother, father, spouse or household head as a new variable (for example, education of mother).

Describe your extract

Revision of (extract for exercise 14: time in physical activity)

SUBMIT EXTRACT

EXTRACT REQUEST ([HELP](#))

SAMPLES: 6 ([show](#)) [Change](#)

VARIABLES: 17 ([hide](#)) [Change](#)

Type	Variable	Label
H	RECTYPE	Record Type
H	YEAR	Survey year
H	CASEID	ATUS Case ID
P	PERNUM	Person number (general)
P	LINENO	Person line number
P	WT06	Person weight, 2006 methodology
P	EHWT	Eating and Health Module weight
P	AGE	Age
P	SEX	Sex
P	GENHEALTH	General health
P	BMI	Body Mass Index
A	ACTLINE	Activity line number
A	ACTIVITY	Activity
A	WHERE	Location of activity
A	DURATION_EXT	Duration of activity (extended version)
A	DURATION	Duration of activity
A	METVALUE	Metabolic equivalent (MET) value for activity codes

TIME USE VARIABLES: 3 ([hide](#)) [Change](#)

Time Use Variable	Label
Exercise_Tot	ACT: exerciseTot
Walkbike_nottrans	ACT: Walking/biking not as trans
walkbike_travel	walkbike_travel

DATA FORMAT: .dat (fixed-width text) [Change](#)

STRUCTURE: Hierarchical [Change](#)

SAMPLE MEMBERS: Respondents [Change](#)

OPTIONS

SELECT DATA QUALITY FLAGS Include data quality flags for selected variables.

ATTACH CHARACTERISTICS Attach data from mother, father, spouse or household head as a new variable (for example, education of mother).

Describe your extract

Revision of (extract for exercise 14: time in physical activity)

DATA CART

YOUR DATA EXTRACT

10 VARIABLES
 3 TIME USE VARIABLES
 6 SAMPLES

[VIEW CART](#)

DOWNLOAD OR REVISE EXTRACTS

Use the links provided below to download a data extract (right-click the links for the data, command files, and codebook) or to revise an extract (that is, use a previous extract as the extract). For instructions on downloading and opening an extract on your computer go [here](#). Note: data files will be available for 72 hours, after which they are subject to deletion.

Extract Number	Date	Formatted Data	Fixed-width Text Files				Codebook ⁱ	Revise Extract	Resubmit Extract	Description (click to edit)	Hide selections		
			Data	Command Files ⁱ							Show all		
22	2019-01-09	--					revise	resubmit	Revision of (extract for exercise 14: time in physical activity) rectangular file	<input type="checkbox"/>			
21	2019-01-08	--	Download .DAT	SPSS	SAS	STATA	R	Basic	DDI	revise	extract for exercise 14: time in physical activity	<input type="checkbox"/>	
20	2018-11-20	--								revise	resubmit	--	<input type="checkbox"/>
19	2017-03-09	--	--	-	-	-	-	revise	resubmit	Revision of (Revision of (Revision of (Revision of (Revision of (Exercise 5: time spent exercising))))	<input type="checkbox"/>		
18	2017-02-23	--	--	-	-	-	-	revise	resubmit	Revision of (Revision of (Revision of (Revision of (Exercise 5: time spent exercising))))	<input type="checkbox"/>		
17	2017-02-23	--	--	-	-	-	-	revise	resubmit	Revision of (Revision of (Revision of (Exercise 5: time spent exercising)))	<input type="checkbox"/>		
16	2017-02-23	--	--	-	-	-	-	revise	resubmit	Revision of (Revision of (Exercise 5: time spent exercising))	<input type="checkbox"/>		
15	2017-02-21	--	--	-	-	-	-	revise	resubmit	Revision of (Exercise 5: time spent exercising)	<input type="checkbox"/>		
14	2017-02-10	--	--	-	-	-	-	revise	resubmit	Exercise 5: time spent exercising	<input type="checkbox"/>		
13	2016-06-10	--	--	-	-	-	-	revise	resubmit	added care for household and nonhousehold children	<input type="checkbox"/>		
12	2016-01-11	--	--	-	-	-	-	revise	resubmit	Revision of (Revision of (study of teen time use)) changed the school time use variable	<input type="checkbox"/>		
11	2016-01-11	--	--	-	-	-	-	revise	resubmit	Revision of (study of teen time use)	<input type="checkbox"/>		
10	2016-01-10	--	--	-	-	-	-	revise	resubmit	study of teen time use	<input type="checkbox"/>		
6	2012-03-16	--	--	-	-	-	-	revise	resubmit	2008,9,10 data with all household members	<input type="checkbox"/>		
5	2011-08-31	--	--	-	-	-	-	revise	resubmit	2009 data with all household members	<input type="checkbox"/>		

Next Steps

- Download data in text format and command files in your specific software package (SPSS, SAS, Stata, R)
- Download and copy codebook into Word (landscape)

Create Analytic File

- Must first extract your data from its GZ compressed format using zip software such as 7 Zip (free).
- Then change the command file program to show where the data file is located and where to deposit the analysis file after it is created.
- Instructions are on the IPUMS web site:
- https://www.atusdata.org/atus/extract_instructions.shtml

Analysis Strategy

- Use SAS, Stata, or SPSS to recode and analyze data
- Guides for using SAS, Stata, SPSS to create time diary variables are available at bottom of page: https://www.atusdata.org/atus/training_materials.shtml
- For specific SAS and STATA codes for this exercise, see workshop answers for exercise 7.
- We will be happy to spend time showing how to run specific analyses for exercise 7 in another session or one-on-one sessions



Types of Data

- **Rectangular (default)**

- Preferred by most researchers
- Ready to analyze
- Person records ONLY
- Activity and Who record information is used to create time use variables—you never actually see them

- RECTYPE Record Type

- 1 H
- 2 P
- 3 A
- 4 W
- 5 R

- **Hierarchical**

- Five record types
 - Household, Person, Activity, Who, Elder care recipient
- Select variables for each record type if you want them to be included
- More difficult to work with, but better for creating LOTS of time use variables that are only slightly different or are too complicated to do in the system
- Necessary for analyzing activity sequences

Basic Person Record for all Household Persons

Reading each record (order of main vars will vary depending upon your statistical package)

- Record type 1
- Year 2-6
- CaseID 7-20 (last 4 digits are year)
- Person number 21-22
- Line number 23-25
- Weight 26-42

Hierarchical File

Strategy:

1. Divide the hierarchical file into two:
 - the person records and
 - All activity records.
2. Create new time diary variables that summarize daily time for each person that meet specific MET criteria.
3. Merge the now person-specific time diary variables with the person record for each person.
4. Recode the demographic and health variables and conduct means (weighted by EHWT) of exercise and physical activity time by categories of self-reported health and BMI to summarize data.

Rectangular Data: What they Look Like

→ P20060101060001020069990100100033845748596070730106010030000
P20060101060014020060130100100034790679057210330206010030000
P20060101060014020060130200200000000000000000014029902299
P200601010600140200601303003000000000000000000013019902299
P20060101060025020069990100100058251654273660320106010020000
P20060101060025020069990200200000000000000000033029902199
P20060101060033020060000100100051744472741660190206010030390
P20060101060033020060000200200000000000000000041020402499
P200601010600330200600003003000000000000000000011029902599
P2006010106003302006000040040000000000000000000019902299
P20060101060038020069990100100063537485252870520201010010001
P200601010600380200699902002000000000000000000056010102099
P20060101060049020060000100100081934574764410220206010020120
P20060101060049020060000200200000000000000000025010602199
P2006010106004902006000030030000000000000000000029902299

Rectangular/Activity file

1. Create new time diary variables that meet specific MET criteria to summarize daily moderate/vigorous time for each person over all their daily activities. Retain demographic and health variables.
2. Retain one record per person.
3. Recode the demographic and health variables and conduct means (weighted) of exercise and activity time by categories of self-reported health and BMI to summarize data.

Exercise 7. Minutes Per Day Spent in Physical Activity by BMI and Health, 2006-08, 2014-16

BMI	Total Exercise	Exercise: Walking, Biking	Transportation: Walking, Biking	Moderate Activities	Vigorous Activities	Moderate or Vigorous Activities	N
Underweight	20.2	3.9	4.1	47.2	10.2	57.4	1,764
Normal	24.6	5.0	3.9	84.0	7.3	91.2	22,685
Overweight	19.2	4.7	2.5	94.1	3.9	98.0	23,124
Obese	14.1	2.6	1.6	90.8	2.3	93.2	15,819
Extremely Obese	13.5	4.0	3.5	82.6	3.0	85.6	6,488
General Health Status							
Excellent	30.9	5.2	4.1	89.9	9.6	99.4	12,747
Very Good	23.4	5.2	2.5	90.0	5.4	95.5	23,523
Good	3.2	3.8	2.3	90.2	2.3	92.5	21,260
Fair	8.7	3.2	2.8	83.0	2.3	85.3	8,612
Poor	7.3	3.0	4.6	42.5	0.4	42.9	2,941

