

# National Health and Nutrition Examination Survey

## 2015-2016 Data Documentation, Codebook, and Frequencies

### Human Papillomavirus (HPV) - Oral Rinse (ORHPV\_I)

Data File: ORHPV\_I.xpt

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Last Revised: NA

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## Component Description

The human papillomavirus (HPV) in oral rinse estimates the prevalence and determinants of oral HPV infection in the United States population. Oral HPV infection is newly appreciated as a strong risk factor for a distinct type of oropharyngeal squamous cell carcinoma that is rising in incidences in the United States. It has been estimated that oral HPV16 infection confers an approximate 15-fold increase in risk for oropharyngeal cancer. Despite these strong risks, little is known about the epidemiology of oral HPV infection. No population-based surveys of oral HPV infection, type distribution and determinants, have been performed in any population worldwide.

## Eligible Sample

Examined participants, aged 14-69 years, were eligible. The public-use data file includes data for persons 18-69 years of age. Please see *Analytic Notes* about the release of data for adolescents 14-17 years of age.

## Description of Laboratory Methodology

Samples were centrifuged at 4,000 x g for 10 minutes at 4°C; the pellet was resuspended in 1 ml of Puregene cell lysis solution and incubated at 37°C for 15 min followed by DNase-free RNase a (5µg/ml) digestion for 30 min at 37°C. Proteinase K (20 mg/ml) digestion will be performed overnight at 55°C followed by heat inactivation for 10 min at 95°C. Protein precipitation solution (340 µL) will be added and sample will be further purified according to the Puregene DNA purification kit protocol.

Purified DNA were analyzed for 37 types of HPV by means of a multiplex polymerase-chain-reaction (PCR) assay targeted to the conserved L1 region of the viral genome, using PGYM09/11 primer pools and primers for β-globin (33). PCR products were denatured in 0.13 N NaOH and hybridized to an immobilized HPV probe array (Roche Diagnostics) using an extended line-blot assay for genotyping of 37 HPV types, including HPV-6, -11, -16,

-18, -26, -31, -33, -35, -39, -40, -42, -45, -51, -52, -53, -54, -55, -56, -57, -58, -59, -61, -62, -64, -66, -67, -68, -69, -70, -71, -72, -73, -81, -82 (MM4 and IS39 subtypes), -83, -84 and -89, and  $\beta$ -globin (Roche Molecular Systems, Inc., Alameda, CA). Positive controls, consisting of 10 and 100 HPV-16 (SiHa) or HPV-18 (C4-2)-positive cells diluted in a background of HPV-negative cells (K562), and a negative control (K562 cells), in addition to the manufacturer's controls, were included in each experiment. Samples positive for  $\beta$ -globin were considered of sufficient quality for analysis. The HPV type were reported for positive samples.

Refer to the Laboratory Method Files section for a detailed description of the laboratory methods used.

There were no changes to the lab method, lab equipment, or lab site for this component in the NHANES 2015-2016 cycle.

## Laboratory Method Files

[Human Papillomavirus - Oral Rinse Laboratory Procedure Manual](#) (January 2019)

## Laboratory Quality Assurance and Monitoring

Oral rinse specimens were processed, stored, and shipped to The Ohio State University – Gillison Laboratory, Columbus, Ohio for analysis.

Detailed instructions on specimen collection and processing are discussed in the NHANES [Laboratory Procedures Manual \(LPM\)](#). Vials were stored under appropriate refrigerated (2-8°C) conditions until they were shipped to The Ohio State University for testing.

The NHANES quality assurance and quality control (QA/QC) protocols meet the 1988 Clinical Laboratory Improvement Act mandates. Detailed QA/QC instructions are discussed in the [NHANES LPM](#).

### Mobile Examination Centers (MECs)

Laboratory team performance is monitored using several techniques. NCHS and contract consultants use a structured competency assessment evaluation during visits to evaluate both the quality of the laboratory work and the quality control procedures. Each laboratory staff person is observed for equipment operation, specimen collection and preparation; testing procedures and constructive feedback are given to each staff. Formal retraining sessions are conducted annually to ensure that required skill levels were maintained.

### Analytical Laboratories

NHANES uses several methods to monitor the quality of the analyses performed by the contract laboratories. In the MEC, these methods include performing blind split samples collected on “dry run” sessions. In addition, contract laboratories randomly perform repeat testing on 2% of all specimens.

NCHS developed and distributed a quality control protocol for all CDC and contract laboratories when running NHANES specimens. Progress reports containing any problems encountered during shipping or receipt of specimens, and any special considerations are submitted to NCHS quarterly. The laboratories are required to explain any identified areas of concern.

## Data Processing and Editing

The data were reviewed. Incomplete data or improbable values were sent to the performing laboratory for confirmation.

## Analytic Notes

Exam sample weights should be used for analyses for this dataset.

Refer to the [2015-2016 Laboratory Data Overview](#) for general information on NHANES laboratory data.

### Demographic and Other Related Variables

The analysis of NHANES 2015-2016 laboratory data must be conducted using the appropriate survey design and demographic variables. The [NHANES 2015-2016 Demographics File](#) contains demographic data, health indicators, and other related information collected during household interviews as well as the sample weight variables.

This laboratory data file can be linked to the other NHANES data files using the unique survey participant identifier (i.e., SEQN).

The public release data file includes Oral HPV data for participants aged 18–69. Data for youth aged 14–17 years are available through the [NCHS Research Data Center \(RDC\)](#).

### Detection Limits

Since this data is reported as qualitative data the use of lower LLODs isn't applicable.

Please refer to the NHANES [Analytic Guidelines](#) and the on-line NHANES [Tutorial](#) for further details on the use of sample weights and other analytic issues.

## Codebook and Frequencies

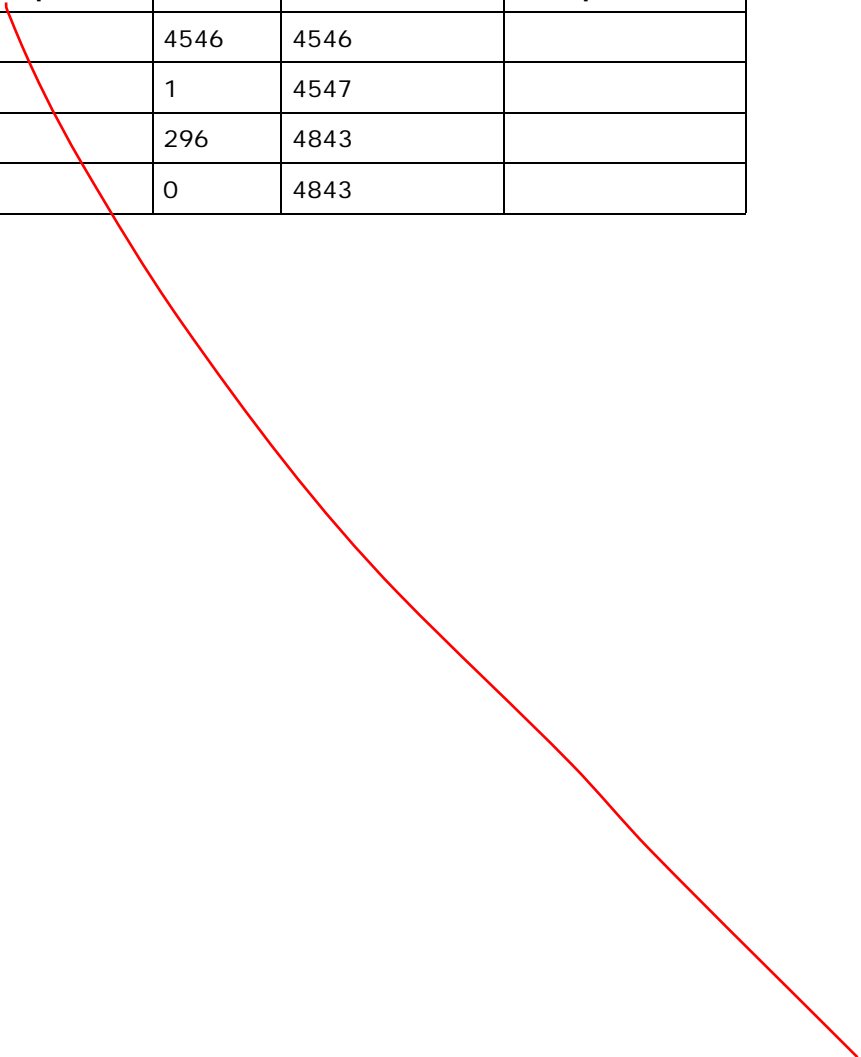
## SEQN - Respondent sequence number

<b>Variable Name:</b>	SEQN
<b>SAS Label:</b>	Respondent sequence number
<b>English Text:</b>	Respondent sequence number.
<b>Target:</b>	Both males and females 18 YEARS - 69 YEARS

## ORXGH - HPV High Globulin Band result

**Variable Name:** ORXGH**SAS Label:** HPV High Globulin Band result**English Text:** HPV High Globulin Band result**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	4546	4546	
2	Negative	1	4547	
3	Not evaluated	296	4843	
.	Missing	0	4843	



## ORXGL - HPV Low Globulin Band result

**Variable Name:** ORXGL**SAS Label:** HPV Low Globulin Band result**English Text:** HPV Low Globulin Band result**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	4546	4546	
2	Negative	1	4547	
3	Not evaluated	296	4843	
.	Missing	0	4843	

## ORXH06 - HPV Type 6

**Variable Name:** ORXH06**SAS Label:** HPV Type 6**English Text:** HPV Type 6**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	10	10	
2	Negative	4536	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH11 - HPV Type 11

**Variable Name:** ORXH11**SAS Label:** HPV Type 11**English Text:** HPV Type 11**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	4	4	
2	Negative	4542	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	



## ORXH16 - HPV Type 16

**Variable Name:** ORXH16**SAS Label:** HPV Type 16**English Text:** HPV Type 16**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	29	29	
2	Negative	4517	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH18 - HPV Type 18

**Variable Name:** ORXH18**SAS Label:** HPV Type 18**English Text:** HPV Type 18**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	6	6	
2	Negative	4540	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH26 - HPV Type 26

**Variable Name:** ORXH26**SAS Label:** HPV Type 26**English Text:** HPV Type 26**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	1	1	
2	Negative	4545	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH31 - HPV Type 31

**Variable Name:** ORXH31**SAS Label:** HPV Type 31**English Text:** HPV Type 31**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	1	1	
2	Negative	4545	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH33 - HPV Type 33

**Variable Name:** ORXH33**SAS Label:** HPV Type 33**English Text:** HPV Type 33**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	5	5	
2	Negative	4541	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH35 - HPV Type 35

**Variable Name:** ORXH35**SAS Label:** HPV Type 35**English Text:** HPV Type 35**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	11	11	
2	Negative	4535	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH39 - HPV Type 39

**Variable Name:** ORXH39**SAS Label:** HPV Type 39**English Text:** HPV Type 39**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	7	7	
2	Negative	4539	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH40 - HPV Type 40

**Variable Name:** ORXH40**SAS Label:** HPV Type 40**English Text:** HPV Type 40**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	0	0	
2	Negative	4546	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	



## ORXH42 - HPV Type 42

**Variable Name:** ORXH42**SAS Label:** HPV Type 42**English Text:** HPV Type 42**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	6	6	
2	Negative	4540	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH45 - HPV Type 45

**Variable Name:** ORXH45**SAS Label:** HPV Type 45**English Text:** HPV Type 45**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	10	10	
2	Negative	4536	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH51 - HPV Type 51

**Variable Name:** ORXH51**SAS Label:** HPV Type 51**English Text:** HPV Type 51**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	17	17	
2	Negative	4529	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH52 - HPV Type 52

**Variable Name:** ORXH52**SAS Label:** HPV Type 52**English Text:** HPV Type 52**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	10	10	
2	Negative	4536	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH53 - HPV Type 53

**Variable Name:** ORXH53**SAS Label:** HPV Type 53**English Text:** HPV Type 53**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	15	15	
2	Negative	4531	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH54 - HPV Type 54

**Variable Name:** ORXH54**SAS Label:** HPV Type 54**English Text:** HPV Type 54**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	0	0	
2	Negative	4546	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH55 - HPV Type 55

**Variable Name:** ORXH55**SAS Label:** HPV Type 55**English Text:** HPV Type 55**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	38	38	
2	Negative	4508	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH56 - HPV Type 56

**Variable Name:** ORXH56**SAS Label:** HPV Type 56**English Text:** HPV Type 56**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	7	7	
2	Negative	4539	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	



## ORXH58 - HPV Type 58

**Variable Name:** ORXH58**SAS Label:** HPV Type 58**English Text:** HPV Type 58**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	9	9	
2	Negative	4537	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH59 - HPV Type 59

**Variable Name:** ORXH59**SAS Label:** HPV Type 59**English Text:** HPV Type 59**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	15	15	
2	Negative	4531	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH61 - HPV Type 61

**Variable Name:** ORXH61**SAS Label:** HPV Type 61**English Text:** HPV Type 61**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	23	23	
2	Negative	4523	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH62 - HPV Type 62

**Variable Name:** ORXH62**SAS Label:** HPV Type 62**English Text:** HPV Type 62**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	25	25	
2	Negative	4521	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH64 - HPV Type 64

**Variable Name:** ORXH64**SAS Label:** HPV Type 64**English Text:** HPV Type 64**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	0	0	
2	Negative	4546	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH66 - HPV Type 66

**Variable Name:** ORXH66**SAS Label:** HPV Type 66**English Text:** HPV Type 66**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	23	23	
2	Negative	4523	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH67 - HPV Type 67

**Variable Name:** ORXH67**SAS Label:** HPV Type 67**English Text:** HPV Type 67**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	2	2	
2	Negative	4544	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH68 - HPV Type 68

**Variable Name:** ORXH68**SAS Label:** HPV Type 68**English Text:** HPV Type 68**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	7	7	
2	Negative	4539	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	



## ORXH69 - HPV Type 69

**Variable Name:** ORXH69**SAS Label:** HPV Type 69**English Text:** HPV Type 69**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	0	0	
2	Negative	4546	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH70 - HPV Type 70

**Variable Name:** ORXH70**SAS Label:** HPV Type 70**English Text:** HPV Type 70**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	8	8	
2	Negative	4538	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH71 - HPV Type 71

**Variable Name:** ORXH71  
**SAS Label:** HPV Type 71  
**English Text:** HPV Type 71  
**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	12	12	
2	Negative	4534	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH72 - HPV Type 72

**Variable Name:** ORXH72**SAS Label:** HPV Type 72**English Text:** HPV Type 72**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	21	21	
2	Negative	4525	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH73 - HPV Type 73

**Variable Name:** ORXH73**SAS Label:** HPV Type 73**English Text:** HPV Type 73**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	7	7	
2	Negative	4539	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH81 - HPV Type 81

**Variable Name:** ORXH81**SAS Label:** HPV Type 81**English Text:** HPV Type 81**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	10	10	
2	Negative	4536	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH82 - HPV Type 82

**Variable Name:** ORXH82**SAS Label:** HPV Type 82**English Text:** HPV Type 82**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	7	7	
2	Negative	4539	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXH83 - HPV Type 83

**Variable Name:** ORXH83**SAS Label:** HPV Type 83**English Text:** HPV Type 83**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	10	10	
2	Negative	4536	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	



## ORXH84 - HPV Type 84

**Variable Name:** ORXH84**SAS Label:** HPV Type 84**English Text:** HPV Type 84**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	25	25	
2	Negative	4521	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXHPC - HPV CP 6108

**Variable Name:** ORXHPC**SAS Label:** HPV CP 6108**English Text:** HPV CP 6108**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	2	2	
2	Negative	4544	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXHPI - HPV Type IS39

**Variable Name:** ORXHPI**SAS Label:** HPV Type IS39**English Text:** HPV Type IS39**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	1	1	
2	Negative	4545	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	

## ORXHPV - Oral HPV Result

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**Variable Name:** ORXHPV**SAS Label:** Oral HPV Result**English Text:** Oral HPV Result**Target:** Both males and females 18 YEARS - 69 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Positive	306	306	
2	Negative	4240	4546	
3	Not evaluated	297	4843	
.	Missing	0	4843	