

# %xuvisit - SDTM Visit and Visit Number Derivation Utility

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## Overview

The `%xuvisit` macro derives VISIT and VISITNUM variables for SDTM datasets using Trial Visits (TV) and Subject Visits (SV) domains as references. It handles both scheduled and unscheduled visits, ensuring proper visit numbering and naming according to SDTM standards.

## Version Information

- **Version:** 1.0
- **Last Updated:** 19JUL2022
- **Author(s):** Atorus Research

## Dependencies

- SAS version: SAS 9.4 V9
- Required macros:
  - xuload.sas - For loading reference domains
- Required datasets:
  - TV domain in SDTM library
  - SV domain in SDTM library

## Parameters

Parameter	Required	Default	Description
inds	Yes	-	Name of the input dataset
dtcdate	Yes	-	Name of the date variable for visit timing
outds	No	&inds	Name of the output dataset
debug	No	N	Whether to retain temporary datasets (Y/N)

## Return Values/Output

Creates a dataset containing:

- All variables from input dataset
- Derived VISIT variable:
  - From TV for scheduled visits
  - From SV for unscheduled visits
- Derived VISITNUM variable:
  - Numeric visit identifier
  - Matches TV/SV reference data
  - Properly sequenced for unscheduled visits

## Processing Details

### 1. Input Validation:

- Verifies required parameters
- Checks for non-empty values

### 2. Reference Data Processing:

- Loads TV and SV domains
- De-duplicates visit information
- Prepares unscheduled visit data

### 3. Visit Assignment:

- Merges scheduled visits from TV
- Identifies unscheduled visits
- Assigns visit numbers and names
- Handles date-based visit timing

## Examples

### Basic Usage

```
%xuvisit(vs, vsdtc);
```

### Custom Output Dataset

```
%xuvisit(  
    inds=vs,  
    dtcdate=vsdtc,  
    outds=vs_visit  
);
```

### Debug Mode

```
%xuvisit(  
    inds=lb,  
    dtcdate=lbdtc,  
    debug=Y  
);
```

## Common Issues and Solutions

Issue	Solution
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Issue	Solution
Missing TV/SV data	Ensure reference domains are in SDTM library
Unmatched visits	Check visit naming consistency
Date misalignment	Verify date variable format

## Notes and Limitations

- Requires TV and SV domains in SDTM library
- Unscheduled visits identified by "UNS" (case-insensitive)
- Uses date substring (first 10 characters) for timing
- Preserves original dataset structure
- Debug mode retains intermediate datasets
- Assumes consistent visit naming across domains
- Handles both scheduled and unscheduled visits
- Maintains SDTM compliance

## See Also

- [%xuseq](#): Sequence number generation
- [%xupload](#): Dataset loading utility
- [%xusave](#): Dataset saving utility

## Change Log

Version	Date	Author	Changes
1.0	19JUL2022	Atorus Research	Initial version