

CDC Suspected Sex Trafficking v1
Definition Factsheet & Technical Brief

Authors: Cynthia Nicole White, PhD¹, Ruth Leemis, PhD¹, Zachary Stein, MPH², Yushiuan Chen, MS¹, Lakshmi Radhakrishnan, MPH², Alexis Candia Griffin, MPH³, Rachel Berg, BS³, Fatema Mamou, MPH⁴, Roselyn Thalathara, MPH⁵, Stacey Hoferka, MPH, MSIS⁶

¹ CDC National Center for Injury Prevention and Control, Division of Violence Prevention

² CDC Office of Public Health Data, Surveillance, and Technology, Division of Health Informatics and Surveillance

³ Arizona Department of Health Services

⁴ Michigan Department of Health and Human Services

⁵ New Mexico Department of Health

⁶ Illinois Department of Public Health

Points of contact:

Cynthia Nicole White (twp2@cdc.gov) – NCIPC/DVP

Definition Purpose: The purpose of this definition is to assist state, local, tribal, territorial, and federal public health practitioners in detecting and monitoring trends of suspected sex trafficking among emergency departments and ambulatory healthcare settings for adult and minor patients. The definition is not intended to be used for case-finding, which has the potential to unintentionally place trafficking victims at risk, but instead for monitoring trends.

Use-Cases for Definition:

- Case-finding
- Trend monitoring
- Early outbreak detection

New or Revised Definition: New Definition

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Development Methods: CDC subject matter experts on sex trafficking from the Surveillance Branch of the Division of Violence Prevention worked with scientists from the CDC Division of Health Informatics and Surveillance’s National Syndromic Surveillance Program and several state health departments, to create the definition.

1. Using the current best-practices literature, the CDC team reviewed diagnosis codes (International Classification of Diseases, 10th Revision (ICD-10-CM) and Systematized Nomenclature of Medicine (SNOMED)) related to human trafficking and sexual exploitation and assessed whether the codes helped to identify suspected sex trafficking cases. The team also assessed the appropriateness of additional codes not identified in the current literature.
2. The CDC team created a list of chief complaint terms based on cases with sex trafficking diagnosis codes and common keywords related to sex trafficking in the literature. The team assessed whether each keyword should be included as an inclusion term.
3. Negation terms were determined based on common misinterpretations (e.g., traffic accident or drug trafficking), as well as careful review of chief complaint data (e.g., when providers documented that the patient used the term “sex trafficking” during a psychotic episode and the provider did not subsequently assign a sex trafficking-related diagnosis code).
4. Four participating jurisdictions from Arizona, Michigan, New Mexico, and Illinois classified visits into true and false positives and ‘unknown’ and determined the positive predictive value of the definition; jurisdictions’ validation results were analyzed and resulted in the finalized definition (described in detail below).

Definition Fields and Structure: The Chief Complaint Discharge Diagnosis Parsed (CCDDParsed) and Chief Complaint History fields are used to query both the discharge diagnosis codes and chief complaint free text to develop the syndrome definition.

- Inclusion based on sex trafficking or sexual exploitation discharge diagnosis codes:
 - The visit is included if it contains any of the following discharge diagnosis codes:
 1. T74.5- Forced sexual exploitation, confirmed
 2. T74.51- Adult forced sexual exploitation, confirmed
 3. T74.52- Child sexual exploitation, confirmed
 4. T74.51XS- Adult forced sexual exploitation, confirmed, sequela
 5. T74.52XS- Child sexual exploitation, confirmed, sequela
 6. T74.51XA- Adult forced sexual exploitation, confirmed, initial encounter
 7. T74.52XA- Child sexual exploitation, confirmed, initial encounter
 8. T74.51XD- Adult forced sexual exploitation, confirmed, subsequent encounter
 9. T74.52XD- Child sexual exploitation, confirmed, subsequent encounter
 10. T76.5- Forced sexual exploitation, suspected
 11. T76.51- Adult forced sexual exploitation, suspected
 12. T76.52- Child sexual exploitation, suspected
 13. T76.51XA- Adult forced sexual exploitation, suspected, initial encounter
 14. T76.52XA- Child sexual exploitation, suspected, initial encounter
 15. T76.51XD- Adult forced sexual exploitation, suspected, subsequent encounter
 16. T76.52XD- Child sexual exploitation, suspected, subsequent encounter
 17. T76.51XS- Adult forced sexual exploitation, suspected sequelae
 18. T76.52XS- Child sexual exploitation, suspected, sequelae
 19. Z04. 81: Encounter for examination and observation of victim following forced sexual exploitation
 20. 713834002- Victim of child sexual exploitation (finding)
 - The visit is included if it contains a discharge diagnosis code of 734998001 -Victim of human trafficking (finding)- **AND** the Sexual Violence v2 definition with additional bolded terms:
 1. (, (^;T742^,OR,^;T762^,OR,^;Z5681^,ANDNOT,(^;Z044[12]^,)),),OR,(^sexual ass[au]lt^,OR,^sexual ass[au][au]lt^,or,^sexual abuse^),or,(, (^ rape^,OR,^rape ^),ANDNOT,(^grape^,or,^scrape^,)),or,^sane exam^,or,^forensic nurse exam^,or,^caart ^,or,^ sane ^,or,^sane kit^,or,^sane rn^,or,(, (^punch^,or,^force^),and,(, ^sex^,)),),),
 - Diagnosis codes and keywords related to general human trafficking (rather than sex trafficking) were included if they were accompanied by any of the diagnosis codes or keywords from the Sexual Violence v2 definition because they indicate that the suspected trafficking was likely sexual in nature.
- Inclusion based on chief complaint terms for sex trafficking or sexual exploitation
 - The visit is included if it contains any of the following chief complaint terms:
 1. Sex Traf
 2. Sexual exploitation
 3. Sex Slave
 4. Forced prostitution
 5. Forced sex work
 6. Sexual servitude
 - The visit is included if it contains the chief complaint terms “human traf” or “traffick” **AND** the Sexual Violence v2 definition with additional bolded terms:
 1. (, (^;T742^,OR,^;T762^,OR,^;Z5681^,ANDNOT,(^;Z044[12]^,)),),OR,(^sexual ass[au]lt^,OR,^sexual ass[au][au]lt^,or,^sexual abuse^),or,(, (^ rape^,OR,^rape

^,),ANDNOT,(,^grape^,or,^scrape^,)),or,^sane exam^,or,^forensic nurse exam^,or,^
caart ^,or,^ sane ^,or,^sane kit^,or,^sane
rn^,or,(,^punch^,or,^force^,),and,(,^sex^,)),),),

- The above must exclude:
 1. Traffick accident
 2. Car
 3. Vehicle
 4. Drug Traf
 5. Erratic
 6. Psychosis
 7. Psychotic
 8. Delusion
 9. Illusion
 10. Halluci
 11. Denies being a victim of sex traf
 12. Denies being a victim of human traf
 13. Denies sex traf
 14. Denies human traf
 15. Labor Traf
 16. Labor Exploitation
 17. Run into traf
 18. Running in and out of traf
 19. Worried about sex traf
 20. Trying to sex traf
 21. Hearing voice
 22. Manic

Validation Results: Jurisdictions found the definition’s positive predictive value was 75.0% in Illinois (IL), 77.5% in Arizona (AZ), 96.9% in New Mexico (NM), and 98.9% in Michigan (MI). Among the validating states, the average monthly count for suspected sex trafficking-related visits was 1-2 visits per state from 1/1/2019- 12/31/2022. Most cases were identified in the emergency department as opposed to an ambulatory healthcare setting. States reported cases of minors and adult patients. The ratio of cases identified based on diagnosis codes versus chief complaint text was 57.4% vs. 42.6% for MI. In AZ and IL, 29.3% and 22.5% of cases were identified based on diagnosis codes, 56.0% and 57.5% on chief complaint text, and 14.6% and 20.0% based on both diagnosis codes and chief complaint text, respectively. Similarly, NM had 75.0% of cases identified based on diagnosis codes and 25.0% based on both diagnosis codes and chief complaint text. The proportion of cases identified based on diagnosis codes vs. chief complaint text may have accounted for the lower positive predictive value for IL and AZ. For instance, having rich text data in the chief complaint field may have led to inclusion of additional cases that upon text review were determined to be false positives. To account for this, several inclusion and exclusion terms were added after validation.

Limitations: This definition has some limitations, including some false positives that remain (though infrequently), including psychosis-related episodes, other types of sexual violence, fear of but not actual sex trafficking, and history of sex trafficking with no indication of current victimization. Additional limitations include misclassification due to provider misunderstanding or underreporting by patients.

Detailed Definition Components

Table 1. Inclusion and exclusion terms based on a case definition using sex trafficking-specific discharge diagnosis codes, CDC Sex Trafficking definition

This portion of the definition identifies visits with a discharge diagnosis code for sex trafficking. It excludes chief complaints pertaining to other forms of the word traffic, psychosis related events, and labor trafficking.

Variable Type	Terms	Description (Diagnosis Codes Only)
Inclusions		
Discharge Diagnosis code – ICD-10	T74.5*	Forced sexual exploitation confirmed
	T76.5*	Forced sexual exploitation, suspected
	Z04.81	Encounter for examination and observation of victim following forced sexual exploitation
Discharge Diagnosis code – SNOMED	713834002	Victim of child sexual exploitation (finding)
Discharge Diagnosis code – SNOMED must appear in combination with the Sexual Violence v2 definition with additional terms***	734998001**	Victim of human trafficking (finding)
Chief complaint–free text	Sex Traf	
	Sexual exploitation	
	Sex Slave	
	Forced prostitution	
	Forced sex work	
	Sexual servitude	
Chief complaint–free text must appear in combination with the Sexual Violence v2 definition with additional terms***	Human Traf**	
	Traffick**	
Exclusions		
Chief complaint–free text	Traffick accident	
	Car	
	Vehicle	
	Drug Traf	
	Erratic	
	Psychosis	
	Psychotic	
	Delusion	
	Illusion	
Halluci		

Denies being a victim of sex traf	
Denies being a victim of human traf	
Denies sex traf	
Denies human traf	
Labor Traf	
Labor Exploitation	
Run into traf	
Running in and out of traf	
Worried about sex traf	
Trying to sex traf	
Hearing voice	
Manic	

*All codes with T74.5 and T76.5 prefixes (for example, T74.5 includes all T74.5.xx diagnosis codes)

**These terms must appear in combination with the Sexual Violence v2 definition with additional terms as specified in the table

***Additional terms added to the Sexual Violence v2 definition are the inclusion of **sane, sane kit, and sane rn**

Table 2. ESSENCE syntax, CDC Suspected Sex Trafficking Definition

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(,^;T7[46]5^,or,^;Z0481^,or,^;713834002^,or,(, (^;734998001^,or,^Human
Traf^,or,^Traffick^),AND,(, (^;T742^,OR,^;T762^,OR,^;Z5681^,ANDNOT,(, (^;Z044[12]^),),OR,(, ^sexual
ass[au]lt^,OR,^sexual ass[au][au]lt^,or,^sexual abuse^),or,(, (^ rape^,OR,^rape
^),ANDNOT,(, ^grape^,or,^scrape^),),or,^sane exam^,or,^forensic nurse exam^,or,^ caart ^,or,^ sane
^,or,^sane kit^,or,^sane rn^,or,(, (^punch^,or,^force^),and,(, ^sex^),),),),or,^Sex Traf^,or,^Sexual
exploitation^,or,^Sex Slave^,or,^Forced prostitution^,or,^Forced sex work^,or,^Sexual
servitude^),ANDNOT,(, ^Traffick accident^,or,^Car^,or,^Vehicle^,or,^Drug
Traf^,or,^Erratic^,or,^Psychosis^,or,^Psychotic^,or,^Delusion^,or,^Illusion^,or,^Halluci^,or,^Denies being a
victim of sex traf^,or,^Denies being a victim of human traf^,or,^Denies sex traf^,or,^Denies human
traf^,or,^Labor Traf^,or,^Labor Exploitation^,or,^run into traf^,or,^running in and out of traf^,or,^worried
about sex traf^,or,^trying to sex traf^,or,^hearing voice^,or,^manic^,)
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