

Preparing Your Records: Record Layout and Coding Specifications

1. Records of study subjects must be created in a **standard TEXT FILE** (flat file) format.
Note: DO NOT put any header lines or other extraneous information in the file. Only DATA should be in each file.
2. Each record must contain **exactly 100 positions** (containing letters, numbers, or blanks) and should have one carriage return (ENTER key) at the end.
3. To be **eligible** for an NDI search, each record must contain **at least one** of the following combinations of data items:
 - **FIRST and LAST NAME and SOCIAL SECURITY NUMBER**
 - **FIRST and LAST NAME and MONTH and YEAR OF BIRTH**
 - **SOCIAL SECURITY NUMBER and full DATE OF BIRTH and SEX**

These combinations of items are part of the NDI Edit requirements that determine whether a user's record has sufficient data to qualify for a search. These combinations should not be confused with the NDI matching criteria described in [Chapter 4](#).
4. **DO NOT USE ANY DELIMITERS SUCH AS TABS, COMMAS, OR ANY OTHER PUNCTUATION TO SEPARATE THE DATA ELEMENTS.**
5. Each data element must be entered in its specified positions. See [Exhibit 1](#) for sample user records in the required record layout.
6. Refer to [Exhibit 2](#) for the file format and coding specifications for each data element.
7. Coding instructions for **NAMES** appear in [Exhibit 2A](#).
8. State codes appear in [Exhibit 2B](#).
9. A separate **NDI Transmittal Form** must accompany **each** file submitted for an NDI search. A blank NDI Transmittal Form(s) containing your assigned NDI search numbers will be sent to you with the letter approving your NDI search. Note: A SEPARATE FILE must be created for each type of search: unknown, known, and certificate.
10. Submit your records **only** on a CD-ROM. If you put more than one file on the CD, it is helpful to use your assigned NDI numbers in your file names. Print your assigned NDI numbers on the outside of your CD. **NCHS requires that you password-protect your file(s) using any self-decrypting software.**
11. Express mail your files, NDI Transmittal Form(s), fee worksheet, and check, purchase order, or credit card receipt to:

**NATIONAL DEATH INDEX
National Center for Health Statistics
3311 Toledo Road, Room 7318
Hyattsville, MD 20782
Phone: 301-458-4444**
12. E-mail ndi@cdc.gov to confirm that your file(s) was received. Include your NDI number, the date the file was sent, and your express-mail tracking number. Be sure to include the password(s) to be used in opening your password-protected files(s).
13. A check, purchase order, or interagency agreement (for federal agencies) must be received by NCHS before you will be sent the NDI search results. (Contact NDI staff regarding credit card payments that do not exceed \$1,500.)

EXHIBIT 1

NDI User Records, Sample Format

Create your records in a standard **text file** format with **100 positions** per record, with no tabs, commas, delimiters, or other punctuation. Statistical software such as SAS is recommended to create a text file and to position each data element in the exact record positions described below. **DO NOT** include any header lines or other extraneous information in the file. Only **DATA** should be in each file. If you are submitting only a small number of records and plan to key your data into a text file, text file software such as **Microsoft Notepad** is recommended. In Notepad you can click on **VIEW** and activate the **STATUS BAR**, which enables you to see the line and column numbers at the bottom of the screen. Change the font to a proportionately spaced font such as Lucida Console, which will ensure that each data item aligns properly. Make sure you create a separate file for each type of search: unknown, known, and certificate.

Positions of NDI data items

(1-20)	LAST NAME	(73-74)	NUMBER OF AGE UNITS (at death)
(21-35)	FIRST NAME	(75)	SEX
(36)	MIDDLE INITIAL	(76)	RACE
(37-45)	SOCIAL SECURITY NUMBER	(77)	MARITAL STATUS
(46-47)	MONTH OF BIRTH	(78-79)	STATE OF RESIDENCE
(48-49)	DAY OF BIRTH	(80-81)	STATE OF BIRTH
(50-53)	YEAR OF BIRTH	(82-91)	CONTROL/ID NUMBER
(54-71)	FATHER'S SURNAME	(92-97)	OPTIONAL USER DATA
(72)	AGE UNIT (at death)	(98-100)	BLANK FIELD

Sample format for 100-position user records (data are hypothetical)

1	2	3	4	5	6	7	8	9	0
1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890									
WASHINGTON	GEORGE	T28516085604081731	WASHINGTON	075121013059A536a58	060183				
WASHINGTON	MARTHA	Q34465413601211922	Adams	075121013059387	052880				
Franklin	Benjamin	D28878210405221701	Franklin	10111216NH49596DUP	120998				
ROOSEVELT	ELEANOR	26270217111231926	ARIAS	029211NVCA62345	122296				
Barton	Clara	A34445464407041961	Brown	035222MDMD59387	100889				

EXHIBIT 2

NDI User File Format and Coding Specification

DATA ELEMENTS	POSITIONS	CODE STRUCTURE	CODING INSTRUCTIONS	
1. Name of person in study group				
Last Name	1–20	Alpha, left justified	* See EXHIBIT 2A for instructions on coding surnames, first names, and middle initials.	
First Name	21–35	Alpha, left justified	* Both LAST name and FIRST name must be provided or the record will automatically be rejected, unless the record contains a Social Security Number, a date of birth, and a sex code. An initial in the FIRST name field is permitted.	
Middle Name	36	Alpha or blank		
2. Social Security Number				
	37–45	Alpha/Numeric or blank	<ul style="list-style-type: none"> * Must have 9 digits. Do not drop any leading zeroes. * If less than 9 digits or a partial number, leave the field blank. * If more than 9 digits, enter the first 9 digits. * If two SOCIAL SECURITY NUMBERS, enter the first or create a duplicate record. * If the number is unknown or not provided, leave the field blank. * If SOCIAL SECURITY NUMBER is not provided, the MONTH and YEAR OF BIRTH must be provided or the record will automatically be rejected. 	
3. Date of birth				
Month	46–47	January	01	<ul style="list-style-type: none"> * The months of January–September and the days 1–9 must have leading zeros. * If either MONTH or YEAR of birth is not provided, the SOCIAL SECURITY NUMBER must be provided or the record will automatically be rejected. * If only a person's YEAR of birth is known (and MONTH of birth is unknown), consider the merits of preparing 12 duplicate records, one for each possible MONTH of birth. This is especially important when the SOCIAL SECURITY NUMBER is not known. (There is no charge for duplicate records.)
		February	02	
		March	03	
		April	04	
		May	05	
		June	06	
		July	07	
		August	08	
		September	09	
		October	10	
		November	11	
		December	12	
Day	48–49	Days	01–31	
		Unknown or not stated	Blank or 99	
Year	50–53	1850–20xx Blank or 9999 if unknown		

EXHIBIT 2

NDI User File Format and Coding Specification—Cont.

DATA ELEMENTS	POSITIONS	CODE STRUCTURE	CODING INSTRUCTIONS
4. Father's surname			
	54–71	Alpha, left justified or blank if unknown	<ul style="list-style-type: none"> * Follow the coding instructions for surnames as specified in EXHIBIT 2A. * For females, provision of the FATHER'S SURNAME is encouraged. * For males, the FATHER'S SURNAME is preferred only when it differs from the LAST NAME.
5. Age at death			
Unit	72	Year: Less than 100 0 Years: 100 or more 1 Months 2 Weeks 3 Days 4 Hours 5 Minutes 6 Age unknown Blank or 9	<ul style="list-style-type: none"> * Code the ACTUAL age at death if it is already known. An estimated age at death may be used only when deaths for one year are being searched. * The "unit" field identifies the type of units for which age at death is measured. Example: Age 65 Unit = 0 Number of units = 65 Example: Age 105 Unit = 1 Number of units = 05 Example: Age 8 months Months unit = 2 Number of units = 08 Example: Age unknown Unit = blank or 9 Number of units = blank or 99
Number of units	73–74	Enter age 00–99 Age unknown Blank or 99	
6. Sex			
	75	Male 1 or M Female 2 or F Unknown Blank or 9	

EXHIBIT 2

NDI User File Format and Coding Specification—Cont.

DATA ELEMENTS	POSITIONS	CODE STRUCTURE	CODING INSTRUCTIONS
7. Race			
	76	White	1*
		Black	2
		Indian	3*
		Chinese	4
		Japanese	5
		Hawaiian	6*
		Other nonwhite	7*
		Filipino	8
		Other Asian or Pacific Islander	0
		Unknown, not stated, or not classifiable	Blank or 9
8. Marital status			
	77	Never married/ single	1*
		Married	2*
		Widowed	3
		Divorced	4
		Unknown	Blank or 9
9. State of residence			
	78–79	ALPHA and/or NUMERIC codes	
		States	01–51
		Puerto Rico	52
		Virgin Islands	53
		Guam	54
		Canada	55
		Cuba	56
		Mexico	57
		Remainder of world	59
		Unknown	Blank or 99

EXHIBIT 2

NDI User File Format and Coding Specification—Cont.

DATA ELEMENTS	POSITIONS	CODE STRUCTURE	CODING INSTRUCTIONS
10. State of birth			
	80–81	(Same code structure as “State of residence” above)	* See EXHIBIT 2B for the ALPHA and/or NUMERIC codes that may be used.
11. Identification (ID), control, or sequence number (OPTIONAL)			
	82–91	Any combination of ALPHA/NUMERIC, left justified. If no numbers are assigned, leave this field BLANK.	<ul style="list-style-type: none"> * This is an OPTIONAL field to assist NDI users in identifying the records they submit. Insert identification numbers or control numbers assigned to persons in the study OR assign “sequence numbers” based on the order that records appear in the file to be submitted to NCHS. * If duplicate or alias records are submitted, a flag could be put at the end of the control number (e.g., D1, D2, DUP1, or DUP2). * NOTE: The computer output will include the control or sequence number for each user record. NCHS will assign a sequence number whenever this field is left blank (e.g., ID00000001, ID00000002, ID00000003, etc.).
12. Optional user data			
	92–97	Any combination of ALPHA/NUMERIC, left justified If this field is not used, leave it BLANK	<p>This OPTIONAL field may be used for any additional information on study subjects. Examples of possible uses are:</p> <ul style="list-style-type: none"> * Date or year of last contact (e.g., 011584, or 84, or 1984). * For KNOWN decedents, date or year of death (e.g., 023091, or 91, or 1991). * To flag TEST RECORDS of known decedents (e.g., date of death, or D, or DEAD) or deaths prior to 1979 (e.g., PRE 79). * Coded information to identify special subgroups of study subjects. * To flag DUPLICATE or ALIAS records. <p>The NDI computer output will contain whatever the user decides to include in this field</p>
13. Blank field			
	98–100		* The user can include data in this field.

EXHIBIT 2A

Coding Instructions for Names

Surnames

1. If the entire surname will not fit in the 20-position field, truncate it.
2. If the surname has a space or apostrophe following a prefix, such as Van Braun, Mac Pherson, O'Toole, or O'Mally, the NDI edit program will remove the space and the apostrophe between the prefix and the name.
3. If more than one surname is given separated by a space or hyphen, type each name in the surname field but remove the space or the hyphen. The NDI edit program will also remove such spaces or hyphens on the user's record and put the two names together. You have the option of creating two or more additional alias records for each of the last names.
4. If a subject's full name appears to contain a MAIDEN name (for example, Jane Karen SMITH-Lee or Jane SMITH Lee), it is important for the maiden name also to be entered separately in the FATHER'S SURNAME field to enhance the possibility of a match. Listed below are suggestions of how user records may be prepared to cover the two different situations:

Example: Jane Karen SMITH-Lee

Key First name: JANE
Middle initial: K
Last name: SMITH-LEE
Father's surname: SMITH

Example: Jane SMITH Lee

Key First name: JANE
Middle initial: S
Last name: LEE
Father's surname: SMITH
5. If more than one surname is given and you are uncertain as to which surname to put in the last name field, consider the merits of creating a duplicate or alias record(s), *one record for each surname*. This may enhance the effectiveness of the NDI file search, especially for records without Social Security numbers. You may want to flag such duplicate records by inserting codes of your own choosing in either the control number field (positions 82–91) or the optional user data field (positions 92–97).
6. Beginning with 2010 deaths, whenever a state's NDI death record has two last names separated by a dash (-), the NDI software will remove the dash on the NDI record and merge the two names. The NDI software will then create two alias records, one with each last name. In such instances, three NDI records will have the same death certificate number (and the letter "A" should appear to the left of the death certificate number if it is the alias record that matched the user's record).
7. Suffixes or generational identifiers such as II, III, Jr., or Sr. will be removed by the NDI edit program.
8. For *religious* names such as Sister Mary Lawrence, enter LAWRENCE as the last name, SISTER MARY as the first name, and a BLANK for middle initial.

Coding Instructions for Names—Cont.

First names and middle initials

1. If the entire first name will not fit in the field, truncate it.
2. If two first names and a middle name are given, type both first given names (with or without a space between each name) in the first name field and type the middle initial in the middle initial field (truncate).

Example: MARY ANN LOUISE Jones

Key First name: MARY ANN
Middle initial: L

Example: MARY ANN Jones (Treat ANN as the middle name unless your records indicate that ANN is part of the first name.)

Key First name: MARY
Middle initial: A
3. If a person (a) goes by two distinctly different first names, (b) has a first name and a nickname, or (c) uses the shortened form of a presumed legal name (for example, Bob for Robert, Liz for Elizabeth, or Ben for Benjamin), consider the merits of creating duplicate or alias record(s), *one record for each first name*. This may enhance the matching effectiveness of the NDI file search, especially for records without Social Security numbers. You may want to flag such duplicate records by inserting codes of your own choosing in either the control number field (positions 82–91) or the optional user data field (positions 92–97).
4. If entries have a first initial and a middle name, enter an initial for the first name and an initial for middle name.
5. If entries have multiple middle names or initials, enter only the first initial (for example, for Robert M.L. Jones, type “M” as the middle initial and drop the “L”).
6. For infant deaths, names such as “Baby Girl” Jones should be entered as Baby Girl for first name and Jones for last name.

EXHIBIT 2B

State (or Foreign Country) of Residence, Birth, and Death

State ¹ or country	Alpha code	Numeric code	State ¹ or country	Alpha code	Numeric code
Alabama	AL	01	New Jersey	NJ	31
Alaska	AK	02	New Mexico	NM	32
Arizona	AZ	03	New York	NY	33
Arkansas	AR	04	North Carolina	NC	34
California	CA	05	North Dakota	ND	35
Colorado	CO	06	Ohio	OH	36
Connecticut	CT	07	Oklahoma	OK	37
Delaware	DE	08	Oregon	OR	38
District of Columbia	DC	09	Pennsylvania	PA	39
Florida	FL	10	Rhode Island	RI	40
Georgia	GA	11	South Carolina	SC	41
Hawaii	HI	12	South Dakota	SD	42
Idaho	ID	13	Tennessee	TN	43
Illinois	IL	14	Texas	TX	44
Indiana	IN	15	Utah	UT	45
Iowa	IA	16	Vermont	VT	46
Kansas	KS	17	Virginia	VA	47
Kentucky	KY	18	Washington	WA	48
Louisiana	LA	19	West Virginia	WV	49
Maine	ME	20	Wisconsin	WI	50
Maryland	MD	21	Wyoming	WY	51
Massachusetts	MA	22	Puerto Rico	PR	52
Michigan	MI	23	Virgin Islands	VI	53
Minnesota	MN	24	Guam	GU	54
Mississippi	MS	25	Canada	CN	55
Missouri	MO	26	Cuba	CU	56
Montana	MT	27	Mexico	MX	57
Nebraska	NE	28	Remainder of world	RW	59
Nevada	NV	29	Unknown		99
New Hampshire	NH	30			

¹Includes District of Columbia, Puerto Rico, Virgin Islands, and Guam.