



September 10, 2001
(Revised October 29, 2001)

Dear Colleague:

Recent meetings with the States and software vendors have demonstrated the need for us to clarify NCHS's position on the data-capturing components of the electronic birth and death systems being designed for the upcoming revision. This letter briefly summarizes the NCHS guidelines for these systems; more detailed information can be found in the overview of "The Specifications for Collecting and Editing The United States Standard Certificates of Birth and Death -2003 Revision" and in the specifications for the individual items. The overview and the death specifications will be available at our web site soon. We expect to post the finalized birth specifications within the next month.

In order to improve the quality of both State and national vital statistics and to promote standardization and comparability among the States, we believe it is essential that all areas incorporate certain features into their electronic systems. Data from systems which do not include these elements may not be considered comparable to that from systems which do, and ultimately may not be included in the national file or in national tabulations. We strongly encourage all States which are considering data collection or editing methods which deviate from the specifications to consult with us prior to implementation.

We hope to work closely with the software vendors to enhance understanding on both sides of data needs and system capabilities and are open to suggestions for ways to improve on these elements. We invite all vendors to meet with us within the next few months for more in-depth demonstrations and discussion.

Features integral to the electronic systems:

- **Automatic edits at time of data entry** - automatic messages which appear immediately after data is entered for a given item. The message alerts the user of data problems (i.e., data out of range or inconsistent with other information) and allows the user to immediately modify the data. The user should not have discretion as to whether the edits are run. There are two types of edits - soft edits which identify and query entries but accept the entry upon the users approval, and hard edits which identify and query entries which must be corrected before the record can be filed.

- **Ability to edit related items together** - the user should be able to readily modify data entered for all related items when an edit has identified a problem. For example, if birthweight is found to be within the allowable range, but is inconsistent with the (derived) length of gestation, the user should be able to readily correct both items since either could be inaccurate.
- **Capture of soft-edit query** - the system should track when a soft edit has been performed. This will allow States to track frequent edit failures and take corrective action. For selected variables, when a soft edit fails a second time, a by-pass variable will be set to alert States and NCHS that the out of range value has been verified as correct.
- **On screen messages** - the individual item specifications include a number of reminders/instructions. A well-designed system should be able to incorporate these messages without unduly burdening the user. Not all messages should require action on the part of the user. For example, some messages can just be flashed on the screen quickly enough to read.
- **On-line help** - definitions and more detailed instructions included in the specifications for both the EBC and the EDC, and "The Guide to Completing the Facility Worksheet" for the EBC should be available on-line to the user. NCHS expects to make an electronic version of the guide available soon.
- **Item order or flow** - systems should flow in the same order as the worksheets which were designed to encourage information to be gathered from the best sources. (Not applicable to death.)
- **Final review/query screen** - Systems should be designed to allow the user to temporarily skip certain items to allow the user additional time to gather information, especially from the medical records. The final query screen reminds the user to complete all missing information and gives them the opportunity to do so before the record can be filed or released to the State data file. It also queries rare responses, such as a response of "no prenatal care." Once a record is released to the State data file and is accepted by the State, providers should no longer have the ability to modify the record. (Not applicable to death.)
- **List of pending items** - systems should allow the user to easily access a list of incomplete items and go to the incomplete items once a record has been worked on and saved once. Prior to sending or finalizing a record, it should be mandatory that the user be presented with a list of all incomplete items.

- For items where it is only correct to choose one response (e.g. Prepregnancy or Gestational Diabetes, or The Principal Source of Payment for Delivery) systems should be designed so as to accept only one response. Two possible ways to accomplish this are via edit messages or blocking out other response categories after one has been selected.
- **Version control** - systems should include methods to track changes in software versions and notify NCHS of version change. Version changes considered necessary to track are ones which include changes to items, edits or more substantive changes to tables and format. Each record transmitted to NCHS should have a version number. This notice should greatly improve our ability to identify and fix data problems.
- **Cause of death**
 - Consistent look for cause of death- On medical examiner, coroner, and physician entry screens, it is imperative that the physician viewing the screen be able to see, at minimum, the same prompts and formatting as those physicians using the paper version of the death certificate. (Not applicable to birth).
 - Additional lines for cause- Additional lines may be added as needed in the cause-of-death statement. (Not applicable to birth).
 - Prohibition of pick lists- Physicians completing cause of death must enter medical conditions using their own terminology (e.g., pick lists or other mechanisms limiting the choice for cause are not allowed). (Not applicable to birth).
- **Electronic death registration system guidelines**- The National Association for Public Health Statistics and Information Systems' (NAPHSIS) Electronic Death Registration project has created guidelines and associated standards (see guidelines and standards at <http://www.naphsis.org>) for use in developing and implementing an electronic death registration system. The NAPHSIS document deals with broad issues while the NCHS specifications document deals with individual fields.

This list is intended to address the major issues we have encountered thus far. As we all gain more experience with the new systems new issues may arise that will also need to be addressed. We look forward to an ongoing dialogue with all parties to work towards the development of the best systems possible.

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Sincerely yours,

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