



Timely and Accurate Quality Improvement Data

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Heartland Kidney Network

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Agenda

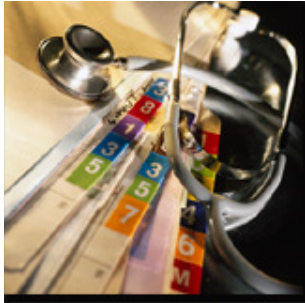
- What is data quality?
- Background on data quality problems
- How to improve your data quality
- ESRD Medical Evidence Report (CMS form-2728)
- Common Form 2728 Errors
- Open for questions



What is data quality?

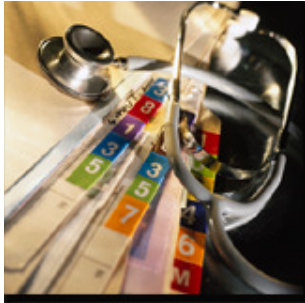
- Data quality is defined as follows:
 - Data has quality if it satisfies the requirements of its intended use. It lacks quality to the extent that it does not satisfy the requirement. In other words, data quality depends as much on the intended use as it does on the data itself. To satisfy the intended use, the data must be accurate and valid, reliable, complete, legible, current and timely, accessible, meaningful and useful, and secure.





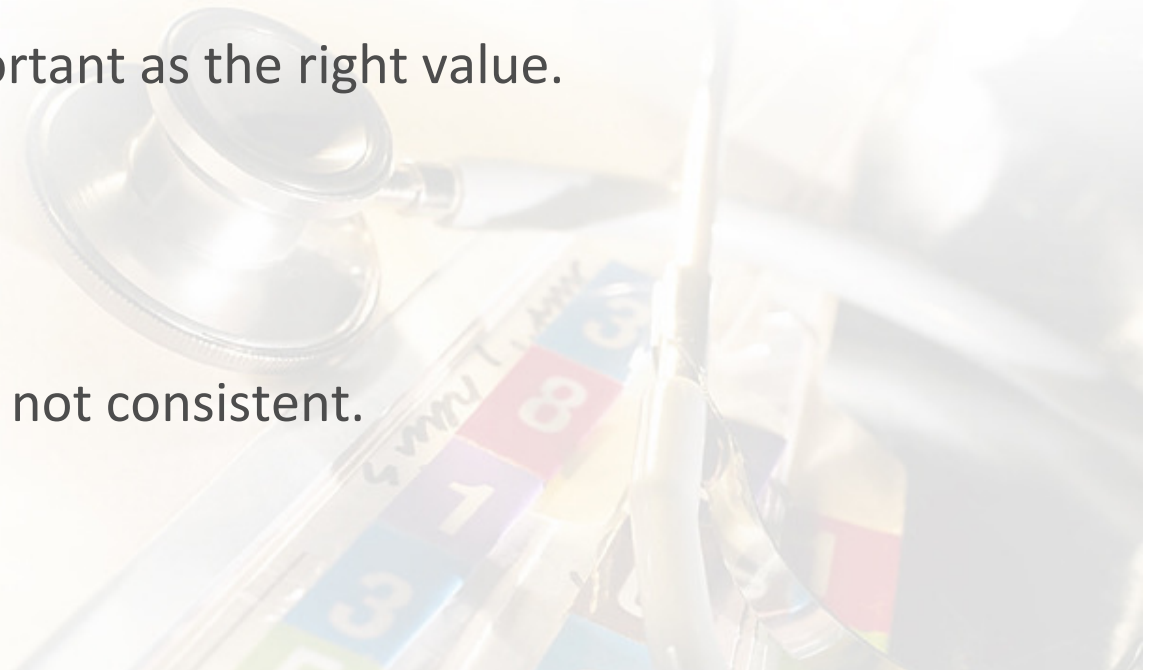
Aspects of data quality

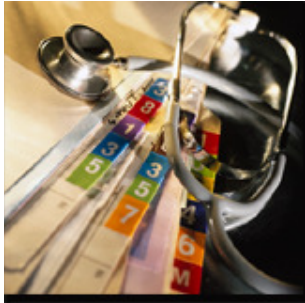
- **accuracy and validity** – of the original source data;
- **reliability** – data are consistent and information generated is understandable;
- **completeness** – all required data are present;
- **legibility** – data are readable;
- **currency and timeliness** – data are recorded at the time of observation;
- **accessibility** – data are available to authorized persons when and where needed;
- **meaning or usefulness** – information is pertinent and useful
- **confidentiality and security** – both important particularly to the patient and in legal matters.



Accuracy and Validity

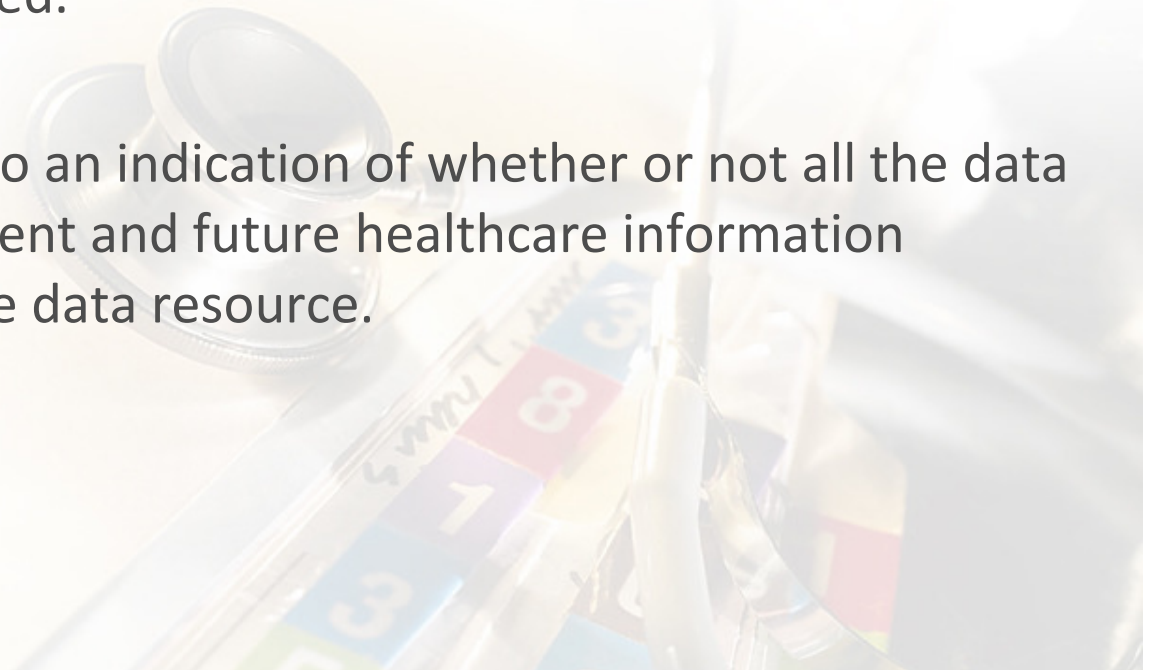
- Data accuracy is the foundation dimension of data quality. If the data is wrong, the other dimensions matter little.
- Accuracy refers to whether the data correctly records the event it represents. It has two requirements: it must be the right value and it must represent the value in a consistent form with all other representations of the same value.
- Data consistency is as important as the right value.
 - Missouri
 - MO
 - missouriAll are correct but are not consistent.





Reliable and Complete

- Data reliability is a state that exists when data is sufficiently complete and error free to be convincing for its purpose and context.
- In any data resource, it is essential to meet requirements of current as well as future demand for information. Data completeness assures that the above criterion is fulfilled.
- Data completeness refers to an indication of whether or not all the data necessary to meet the current and future healthcare information demand are available in the data resource.

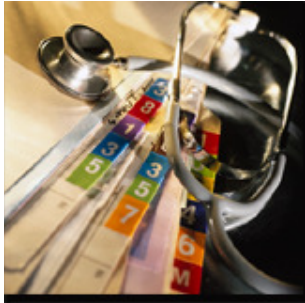




Legible

- Documentation in the patient record must be clearly readable to support all uses. The illegibility of entries found in patient records, however, has long been a challenging issue for Healthcare Information Management professionals. Illegibility poses serious risks to patient care, drains valuable healthcare resources, jeopardizes optimal reimbursement, and carries potentially disastrous legal ramifications for healthcare organizations.

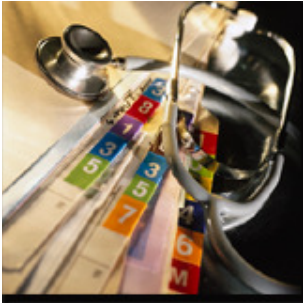




Current and Timely

- In general, the longer the time differences between the event and the actual recording of the event, the greater the chance for errors. If the time lag is long enough, it also lends itself to missing or late information. Examples of long durations are cases in which forms are completed and mailed to a data entry location. The accuracy and timeliness would be enhanced if the time difference were eliminated.





Accessible

- If the person entering the information has no access to the event, to the person who created or observed the event, or to databases containing important auxiliary information, they cannot fill in missing information or challenge information they see.
- Data must be available to those who use the data.





Meaningful and Useful

- **Inputs**

- *Data must be entered into the information system to be processed.*

- Data are the facts that are collected and processed by the information system. Data are meaningless and useless, which, therefore, should be processed and transformed to meaningful, organized, and useful form that is called **information**.

- **Output**

- *Output is the meaningful and useful information produced by the information system.*

- For example, weekly payroll report produced by the information system is an output.



Secure

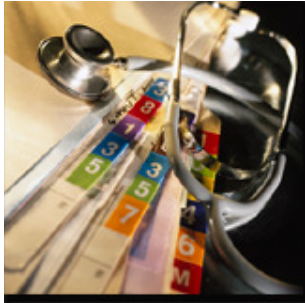
- In simple terms, **data security** is the practice of keeping data protected from corruption and unauthorized access. The focus behind data security is to ensure privacy while protecting personal or corporate data.
- **Data** is the raw form of information stored as columns and rows in our databases, network servers and personal computers. This may be a wide range of information from personal files and intellectual property to market analytics and details intended to top secret. Data could be anything of interest that can be read or otherwise interpreted in human form.



Garbage in—Garbage out (GIGO)

- As statistics are only as accurate as the original documents from which they are produced, the person responsible for collecting and processing the data must ensure that the original source documents are accurate, complete and readily available.
- A computer can calculate statistics only from the data entered. As the final report is dependent on the original source data, whether produced by a computer or manually, if data are NOT correct, the information generated will be incorrect.





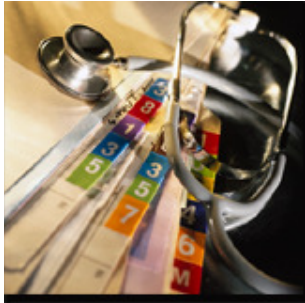
Background on Data Quality Problems

- The starting points for health care information are data and the collection of data, whether maintained manually or electronically at a large teaching hospital, health centers or outlying clinic. Demographic and clinical data stored in a patient's medical/health record are the major source of health information and are of no value to medical science or health care management if they are not accurate, reliable and accessible.
- Accurate and reliable health care data are used by:
 - **doctors, nurses and other health care professionals**
 - **health insurers**
 - **legal representatives and courts**
 - **the state and/or federal entities**
 - **quality assurance committees and medical staff**
 - **researchers**
 - **health care facility accreditation and licensing agencies**



What data does the Network use?

- Vascular Access Data
- Clinical Performance Measures (changing to elab data)
- Facility Specific Data—hours, types of dialysis, personnel
- Patient Demographics
- Physician database



How does the Network use the data?

- Development of the Quality Improvement Work Plan
- Development of specific facility interventions
- Development of Network-wide interventions
- Development of possible sanctions/alternate sanctions





How does CMS use the data

- CMS determines the annual Network Fistula First Goal from FF data.
- CMS uses the data in the Dialysis Facility Compare tool.
- CMS uses the data to develop and provide direction to the national ESRD Network program via the current Scope of Work.
- CMS **will be** using the data when pay for performance begins January 2011.



Causes of Erroneous Data

- Reporting requirements are often poorly defined and dysfunctional
- Data collection is often incomplete and inaccurate
- Statistics come from a wide range of sources without the use of standardized collection methods, making consistency difficult
- Lack of standards for reporting statistical data



Areas that may generate incorrect data

- Time between event and recording
- Distance between event and recording
- Number of handoffs of information before recording
- Availability of all facts at recording
- Ability to verify information at recording
- Motivation of person doing recording
- Skill, training and experience of person doing recording
- Feedback provided to recorder
- Auto-assist in recording process





Time between event and recording

- In general the longer the time difference between the event and the recording of the event, the greater the chance for errors. If the time lag is long enough it lends itself to missing or late information.





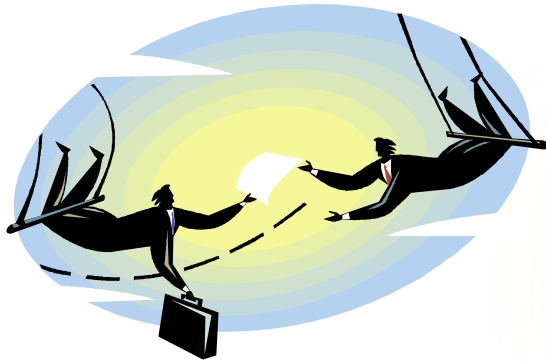
Distance between event and recording

- Long distances between the event and recording can reduce the opportunity for the person who is entering the data to verify or challenge information.
- For example , if the originator of data is in Chicago but the information is transmitted via telephone or paper to Kansas City for entry, you have a distance between the person who knows the right information and the one entering it. If there is confusion, the entry person has to either enter nulls , enter a best guess or has to verify the information before entry.



Number of handoffs of information before recording

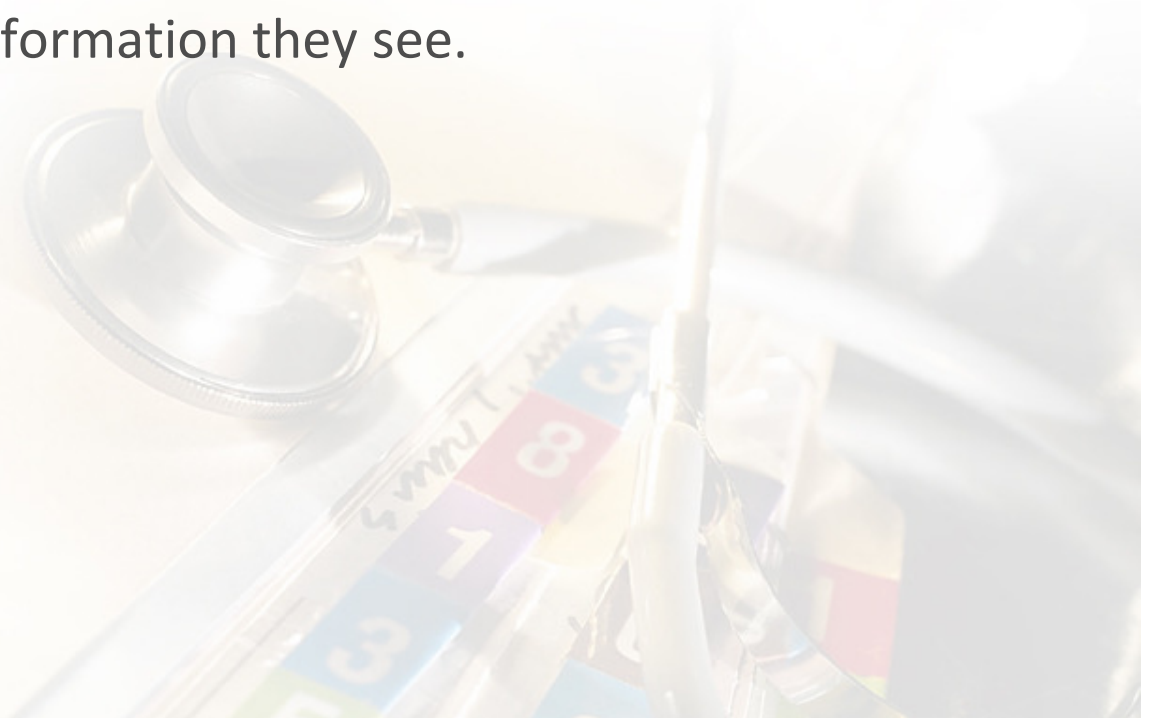
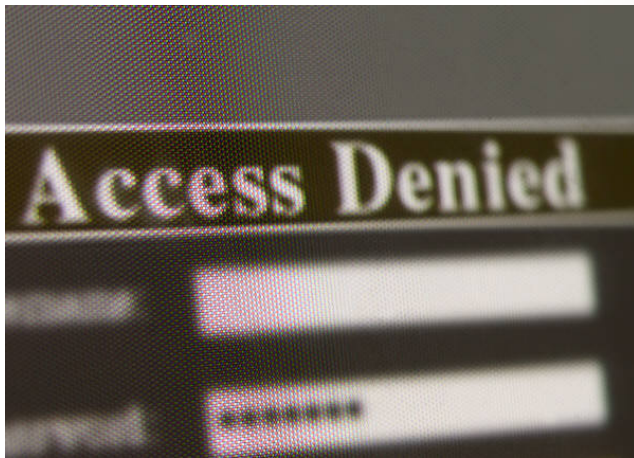
- The first person to experience the event is most likely to be the one with the most accurate description of the facts. Each handoff to another person introduces the possibility of misreading written information, misinterpreting some else 's comments, or not knowing information that was not passed on.





Availability of all facts at recording

- If the person entering the information has no access to the event, to the person who created or observed the event, or to databases containing important auxiliary information, they cannot fill in missing information or challenge information they see.

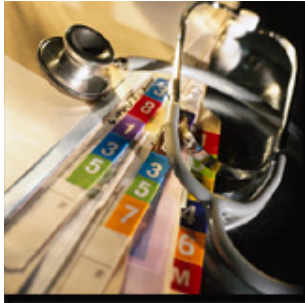




Ability to verify information at recording

- This is similar to the previous issue, but slightly different. Can the data entry person get to correct information if they think the information provided is wrong? Sometimes the process makes it impossible to make this connection. Sometimes the process penalizes the data entry person for taking the time to verify questionable information.





Motivation of person doing recording

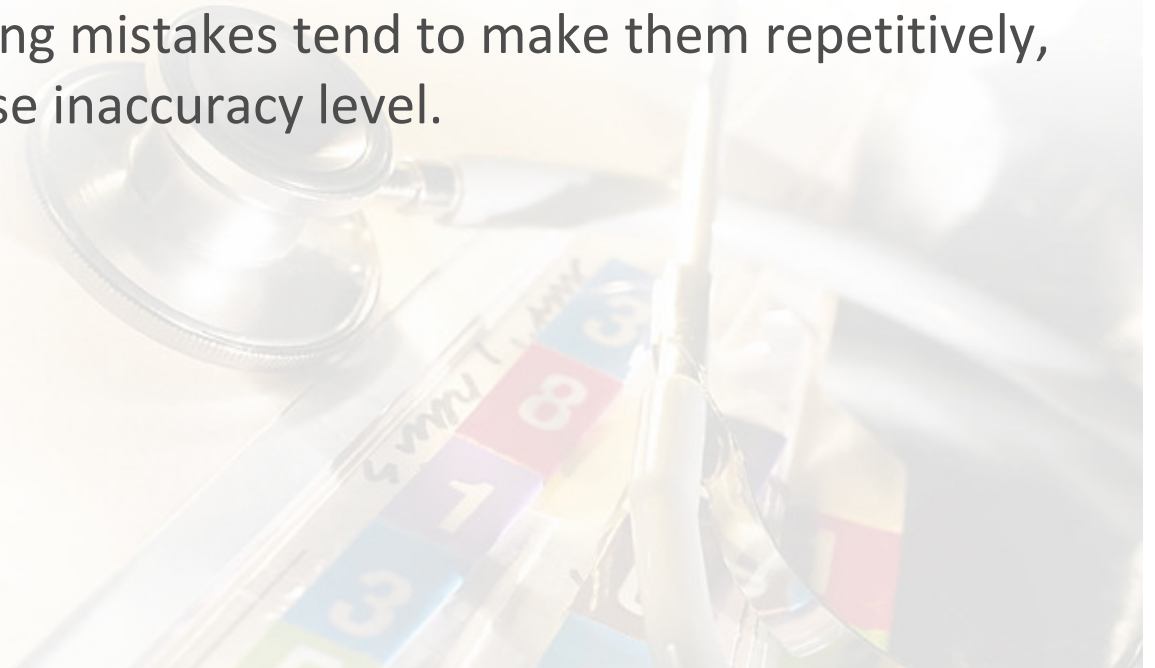
“IS THE RIGHT PERSON DOING THE JOB?” (consider the following)

- Are they motivated to enter correct information?
- Are they motivated and empowered to challenge questionable information?
- Are they motivated to enter the information at all? Someone entering their own order is motivated to do it and get it right. Someone entering piles of form information they do not understand could not care less if the information is entered correctly or completely.
- Is feedback provided?
- Is their performance measured relative to completeness and accuracy?



Skill, training and experience of person doing recording

- People who enter the same information for a living get to learn the application, the typical content, and the data entry processes. They can be trained to do it right and to look for red flags. People who enter data on a form only one time in their life are much more likely to get it wrong. Sometimes there exists a data entry position that has not been trained in the application. This is an invitation for mistakes. Note that entry people who are making mistakes tend to make them repetitively, thus increasing the database inaccuracy level.





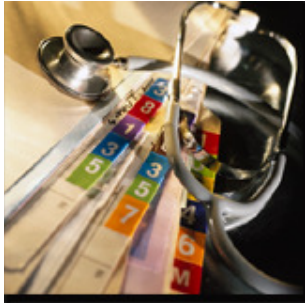
Feedback provided to recorder

- Feedback is always a good thing. And yet, we rarely provide feedback to the most important people in the data path: those entering the data. Relevant information, such as errors found in computer checks, should be collected and provided to help them improve the accuracy of data they enter.



job well done...

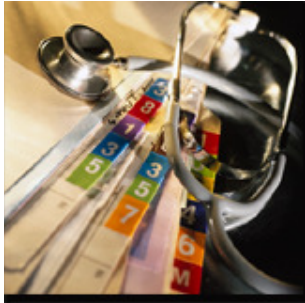




Auto-assist in recording process

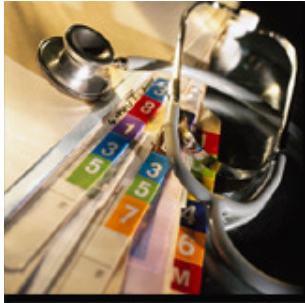
- Do the data entry programs and screens help in getting it right? A complex process can include pull-downs, file checking, suggestions on names, addresses, questioning of unusual options or entry information, and so on. Providing the current date instead of asking that it be entered can improve accuracy. There are a lot of technology best practices that can improve the accuracy of information.





Root Cause Analysis—Determine your Data Quality Issues

- It is of key importance that the root cause of the problem is identified.
 - We need to identify the originating process and find out where in the process the problem is created, and why.
 - In this step, the focus should be on the process rather than on the person. You don't want to create a blame culture within the workplace.
- Common root causes include:
 - Unclear definitions for how to enter data,
 - Lack of training for data entry employees,
 - Data entered by the wrong person (someone without the required knowledge or someone without a sense of ownership),
 - Interface problems (causing inconsistent data),
 - Workload too heavy for some individuals and
 - Speed of data entry prioritized over quality of data entered.



Plan Corrective Actions

- Prepare the steps required to fix the data quality issue. (Remember there are two aspects to this):
 - Fix the wrong data, and
 - Fix the bad process to prevent the problem from reoccurring.
- Common improvements include: more training for data entry employees, more automated validations, additional approval steps, providing meaningful feedback, change motivations to encourage quality and change of person that enters the data.
- In planning corrective actions, the impact of the data quality issue must be assessed, as this is a key parameter in deciding the type of preventive actions that are warranted.

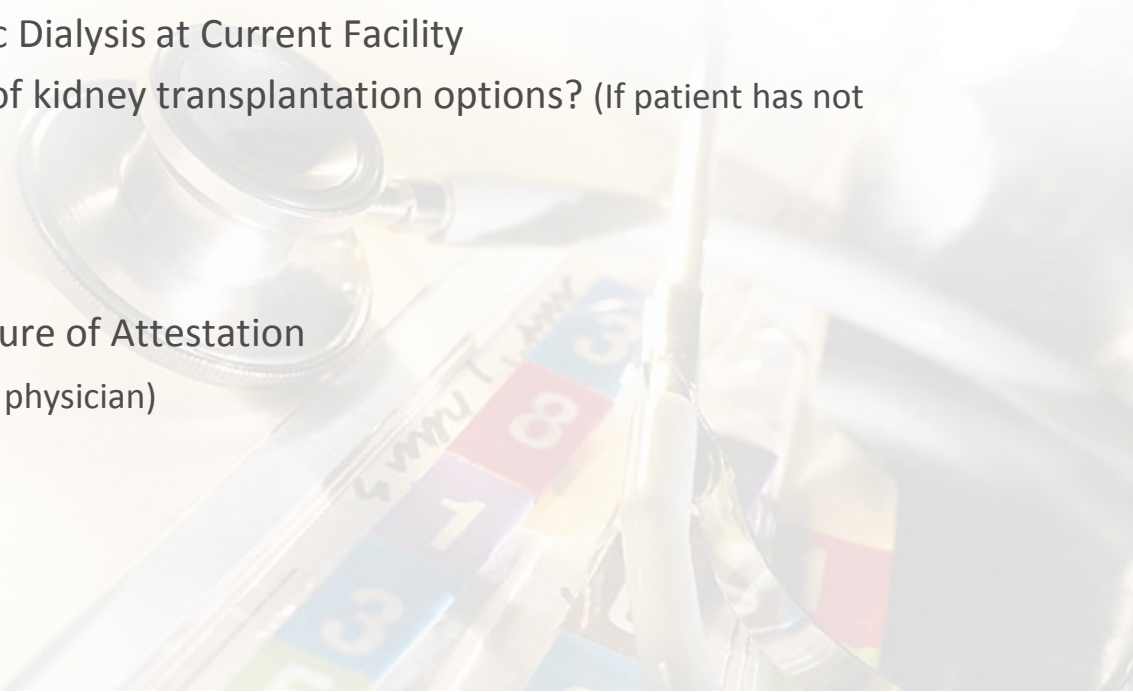


Form 2728 Mandatory Fields

- Field 1 Name (Last, First, Middle Initial)
- Field 3 Social Security Number
- Field 4 Date of Birth
- Field 5 Full Address (Include City, State, and Zip)
- Field 7 Sex
- Field 8 Ethnicity (Complete Field 9 if Hispanic or Latino) **Must be Self-Reported by patient or noted who reported.**
- Field 10 Race (Check all that apply. Complete Tribe for American Indian or Alaskan Native, complete Field 9 for Native Hawaiian or other Pacific Islander) **Must be Self-Reported by patient or noted who reported.**
- Field 11 Is Patient Applying for ESRD Medicare Coverage
- Field 12 Medical Coverage
- Field 13 Height
- Field 14 Dry Weight
- Field 15 Primary Cause of Renal Failure
- Field 16 Employment Status (Must complete both Prior to ESRD and Current)
- Field 17 Co-Morbid Conditions (Check all that apply or None if patient has no co-morbids)
- Field 18 Prior to ESRD therapy (Must complete all questions. Check Unknown if not known.)



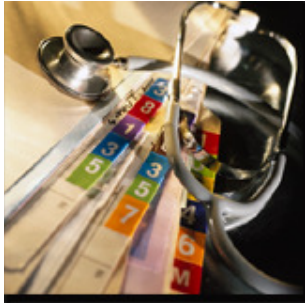
Form 2728 Mandatory Fields continued

- Field 19b Serum Creatinine value and date (Must be within 45 days PRIOR to first dialysis treatment or transplant)
 - Field 20 Name of Provider
 - Field 21 Medicare Provider Number
 - Field 22 Primary Dialysis Setting
 - Field 23 Primary Type of Dialysis (include sessions per week and hours per session for Hemodialysis)
 - Field 24 Date Regular Dialysis Began
 - Field 25 Date Patient Started Chronic Dialysis at Current Facility
 - Field 26 Has patient been informed of kidney transplantation options? (If patient has not been informed, indicate why in Field 27)
 - Field 46 Attending Physician
 - Field 48 UPIN of Physician
 - Field 49 Attending Physician's Signature of Attestation
 - Field 50 Date (Date signed by attending physician)
 - Field 54 Signature of Patient
 - Field 55 Date (Date signed by patient)
- 



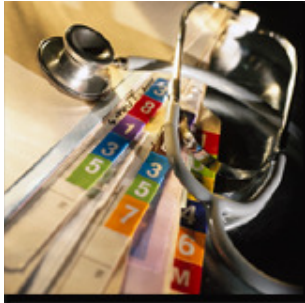
Common mistakes on form 2728

- Section A.
 - **Initial** – For patients who initially receive a kidney transplant instead of dialysis and for patients entering an outpatient dialysis setting for the first time ever.
 - **Re-entitlement** – For those patients returning to dialysis or receiving a kidney transplant after recovering kidney function for more than 12 months or having a functioning kidney transplant for more than 3 years.
 - **Supplemental** – For those patients who receive a kidney transplant or are trained for self-care dialysis within the first 3 months after the first outpatient dialysis.



Common mistakes on form 2728 continued

- Field 9--If Hispanic or Latino you must indicate country of origin.
- Fields 18a, 18b, 18c--If yes, indicate how long. Make sure you indicate how long the patient was receiving EPO (or equivalent), under the care of a nephrologist or kidney dietitian prior to beginning dialysis. If it was less than 6 months, either write in "< 6 months" or indicate that it was less than 6 months in the Remarks section.
- Field 18d--Only applies to vascular access. If peritoneal access, do not check Catheter-Leave blank.
- Field 18d--If not AVF, indicate Y/N for AVF maturing and Y/N for graft maturing.
- Field 19-- All Dates for labs must be before physician signature date in field 50.
- Field 23--If Hemodialysis, indicate Sessions per Week, Hours per Session
- Fields 26 & 27--If patient not informed of transplantation, indicate why not.




Common mistakes on form 2728 continued

- Fields 50 & 55--Physician and Patient Signature dates must be on or after the first date at the unit in field 25.
- Field 51--**Recertification** – To be signed by physician who is currently following the patient if the patient had chosen to delay applying for Medicare benefits.
- Field 53—If the patient or patient’s family is unable to self-report their ethnicity and/or race, provider are to record this information on behalf of the patient, and acknowledge the absence of the patient’s self-reported ethnicity and race in the remarks are by noting that “fields 8-10 were reported by _____”.



What we covered today

- Understanding Data Quality
 - Background on data quality problems
 - Tips on how to improve your data quality
 - Reviewed ESRD Medical Evidence Report (CMS form-2728) and required fields.
 - Common Form 2728 Errors
- 



A note on cost of inaccurate data

- An industry expert had observed that ‘If bad data impacts an operation even for five percent of the time, it still adds a staggering 45% to the cost of operations.’ Therefore, the need for data improvement is important. Although there could be several types of data inconsistencies, the primary focus should be given to the issues related to data precision as it causes greater impact than the rest.
- Remember the Network bases interventions ***with*** clinics on the analysis of data ***received from*** the clinics. If we receive bad data, we may make the incorrect choices in our Quality Improvement Work Plan.

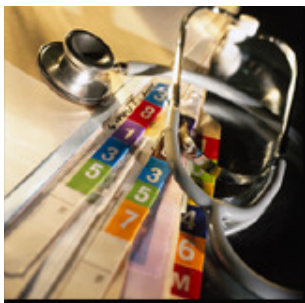




Disclaimer

- *This resource was (created, developed, compiled, etc.) while under contract with Center for Medicare and Medicaid Services, Baltimore, Maryland. Contract #HHSM-500-2006-NW012C. The contents presented do not necessarily reflect CMS policy.*





Questions and contact information



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