Letters to the Editor JAMIA

Standardized Coding of the Medical Problem List

To the Editor:—We strongly support the position that many of the potential benefits of computerized medical records will not be achieved unless standard coding schemes are used to represent the medical concepts therein, as presented in *JAMIA*'s first issue.[1] We believe that pointing out reasonable options for standard coding schemes will assist developers and will promote consensus development. Also, pointing out where reasonable options are not yet available will help direct research efforts.

We were surprised that, of the many categories of medical concepts listed, the medical problem list was not mentioned as a domain suitable for standardization. We feel that this represents an important omission. A problem list is a key aspect of both inpatient and outpatient medical records (computerized as well as paper-based). Projects that have demonstrated the benefits of computerized patient records[2] have made explicit use of coded problem lists, and these data are fundamentally important to health services research. However, developing codes to use in a computerized problem list remains a nontrivial effort. An institution wishing to add a coded list of problems to its information system has no easy options from which to choose. At the 1993 Spring AMIA Meeting, a panel on on-line problem lists underscored the many diverse schemes in current use. Some institutions are using one of a number of existing coding schemes (e.g., ICD-9, SNOMED), while others have created their own proprietary schemes. While many of the items on medical problem lists are common to other domains (e.g., diagnoses, procedures, symptoms, etc.), it is not clear that even the union of existing schemes will suffice to describe all of the items that may appear on a problem list (e.g., social situations).[3] Developing proprietary schemes involves enormous effort, runs counter to the need for standards, and precludes the possibility of data sharing in the future.

We urge the AMIA Board of Directors to acknowledge the need for a standardized scheme to represent medical problems in the computerized medical record. We further encourage the organization to review existing candidate coding schemes and to endorse one if appropriate or to state that none of the currently available schemes is suitable. Progress in this area will speed the realization of benefits from computerized medical records.

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References ■

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■ **In reply:** Drs. Kuperman and Bates are correct in identifying the need to develop consensus standards for coding schemes for the medical problem list as a high priority.

The problem list is a "table of contents and an index combined" of the medical record.[1] It is a summarization of information about the patient's medical and psychosocial history. As such, its coding scheme must permit representation of any concept that can be represented within the medical record itself. It is thus unlikely that a new set of codes will be needed just to represent the problem list.

An alternative course would be to develop consensus on a framework of the types of information that should be included in the problem list. A code system could then be selected for each type of information. For

example, a patient's allergy to penicillin should be included in his or her problem list. Rather than developing a code for allergy to penicillin, a code for allergy could be combined with the World Health Organization (WHO) or National Drug Code (NDC) code for penicillin. The code systems identified in Table 1 of the AMIA position paper on standards[2] should be taken as a starting point in developing a code scheme for the problem list.

The AMIA position paper on standards was a call to embrace existing standards and approaches in an effort to progress quickly. Kuperman and Bates point out one of the many areas where we need to build on and to move beyond those approaches. The "strategic plan" of AMIA[3] contains two very powerful statements supporting AMIA's concern about and commitment to further development of standards:

> *Goal B.7.* Promote adoption of consensus standards. Example: Promote published consensus standards about medical records, messages, vocabularies. (p 266)
>
> AMIA should take an activist role in promoting standardization efforts. (p 270)

It is heartening to see members of AMIA coming together around the Board of Directors' strong statement on standards. Standard development is a long and tedious process. The work of standard development cannot be delegated to the uninitiated. Standard development is generally carried out by "volunteers" who seldom get paid for their work, either in dollars or in professional recognition. We support the needs outlined by Kuperman and Bates. We *must* move forward as an organization and as volunteers to develop better standards, including those for the patient problem list.

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