PITAC Draft Recommendation on ICD-10/SNOMED (4/13/04)

(1) "A specific study should reassess the cost-benefit of the planned conversion of diagnosis and procedure coding requirements for Federal programs from the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) to ICD-10-CM, compared to the potential alternative of moving directly to reporting diagnoses and procedures coded for clinical purposes in the Systematized Nomenclature of Medicine, Clinical Terms (SNOMED CT). This might provide incentives for standardized EHR implementations."

Response to the Draft Recommendation:

The recommendation above refers to the use of SNOMED CT as an "alternative" to ICD-9-CM or ICD-10-CM.[1] This has generated much concern, particularly among those who create and use the ICD classification system. As representatives from AHIMA and other organizations have correctly stated, there will always be a need for classification systems, and ICD has to its credit world wide acceptance and use. The US will continue to be required to submit cause of death information to the WHO based on the base ICD-10 codes. Beyond that, however, the various national clinical modifications are not directly comparable.

SNOMED CT on the other hand consists, at its most basic level, of formal definitions linked by description logic into relationships. It is not primarily a classification of diseases or procedures, although it can be used to be used to map to other classifications and potentially to generate its own aggregations.[2] In addition, the diagnostic content coverage of SNOMED CT significantly exceeds that of ICD-9-CM[3] and, it appears, ICD-10.

There is a long history of discussion regarding the vision of an interconnected group of non-overlapping classification systems, resting on top of a single, ontologically sound, detailed reference terminology. This paradigm was perhaps most clearly described by the three Terminology Summit conferences in the early 1990s. It is in just the last two years, however, that there has been a significant quickening of steps in this direction, including:

- the designation of the NLM as the lead government agency in creating mappings of the ICDs to the UMLS (previously this lead role belonged to NCHS)
- the purchase by the United States of a national site license to SNOMED CT, making it available for widespread use, and
- the specification of SNOMED CT as the preferred terminology for a majority of the CHI domains, including the standard for clinical diagnoses and problem lists[4]

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[1] We assume it is implicit in the PITAC proposal that SNOMED CT is also being proposed as an alternative to ICD-10-PCS for procedures codes for inpatients.

[2] The intermediate "hierarchy" content implicitly aggregates content below it, although no formal study has yet been done to evaluate the appropriateness and consistency of such internal aggregations.

[3] Chute et al. Content Coverage.

[4] Although these standards are being mandated only for use within the government, CHI standards are intended to influence standards adoption in the private sector as well. As most electronic record systems that have problems lists now base them on the ICDs, the CHI recommendations appear to suggest continuation of the ICDs for financial

- the recent progress made by CAP on the explicit task of mapping SNOMED to the ICDs
- the current initiative within HL7 to develop a standardized data structure for the use of terminologies within electronic health records that is based upon a foundation allowing for inter-terminology mappings
- the inclusion among the technical requirements enumerated at the first NHII conference, the requirement not only for standardized terminologies, but also for mappings between them.

It may be that the time to pause and take a practical look at the "long term" vision is "now."

There are two key questions.

The first key question is, can data collected in SNOMED CT terms, be automatically[5] translated into ICD-9-CM or ICD-10-CM? If so, is it as simple as "flipping a switch" to do this, or is it more complicated: is specialized user interface software needed? Are there characteristics of the ICDs (e.g. the fact they only roll up one way; the use of "excludes", "includes," "not elsewhere classified") that make this difficult, or indeed, impossible. It should be possible to come up with an explicit, technical, agreed-up answer to this question since it is a factual question and given the current state of terminology science and the existence of expertise in the mechanics of how these coding systems work. This would require the work of a group of experts versed in the mechanics of the terminologies.

The second key question has to do with whether the ICDs are needed at all. This alternative should not be discarded without consideration. A brief look at the evolution of the ICD clinical modifications themselves may be required. Though first introduced in 1972, a significant change took place in 1983 when, with the introduction of DRGs, ICD-9-CM codes began to be used for reimbursement. This not only led to the proliferation of ICD-9-CM codes in financial and administrative (and, indeed, clinical) systems, but also led to the subtle transformation of the codes, through the on-going update process. The ICD-9-CM codes have evolved to reflect, in addition to clinical description, reimbursement considerations. This has led to the perception among some physicians that the coding system has not enough to do with clinical description and much to do with financial priorities. A question arises: if freed from the current widespread requirements for the ICDs for reimbursement, is it the ICDs per se that are required or would another classification – perhaps a roll-up within SNOMED itself rather than into another coding system, suffice?[6] This seems closest to PITAC's Draft Recommendation #1, as presently stated. However, it appears that this could entail profound changes to the reimbursement system and is intimately tied to question of the nation's long-term approach to paying for health care for its citizens

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uses but encounrages the implementation of new SNOMED-based problem lists. This would be a duplicative (problem lists could no longer drive reimbursement), and likely, confusing.

[5] Study of total effort should be considered. It may be that it is not possible for cross-correlation to take place with no human intervention whatsoever; but it may be that software to offer assistance in the process could be used to assist coders, billing professionals, as well as direct care providers with an overall savings of effort and while bringing the capture of standardized information closer to the physician and patient.

[6] Indeed, in principle, it may be possible to use aggregation logics to derive DRGs directly from SNOMED codes. Hopefully the additional granularity already in SNOMED would avoid the post facto hairsplitting of codes which has made managing ICD-9 periodic updates so difficult.

The NCVHS report and the AHIMA and RAND studies on ICD-10 assumed the main option under consideration was the proposed move from ICD-9-CM to ICD-10-CM/PCS. However, it may no longer be appropriate to consider this as the only option. Indeed, if either of the above approaches is deemed desirable and achievable, it becomes clear that implementing ICD-10-CM/PCS in the traditional manner, while at the same time encouraging the adoption of SNOMED-CT for clinical applications, could be, of the three, the most duplicative, expensive, and cumbersome of approaches. Indeed, it can be expected that stakeholders in all health care sectors would need to make such major investments in moving to ICD-10-CM/PCS that simultaneous adoption of SNOMED-CT may be seriously hindered, under-budgeted, perhaps even derailed.

To not consider these two options (A and B below) at this time – this critical juncture – may be to sell short the possibility of rapid progress toward higher quality, more clinically useful, and more cost-effective healthcare for a generation of Americans.

Alternative Approaches:

- **Approach A (SNOMED → ICD)**: Appoint a "blue ribbon" panel of experts in the mechanics of the ICD-10s and SNOMED to address the technical question of whether ICD-10-CM/PCS codes can be generated automatically from SNOMED terms, which could, if implemented, allow stakeholders to focus on implementing SNOMED while retaining ICD-based functionality
- **Approach B (SNOMED ONLY)**: Consider whether the ICD line of classifications should continue to be used for reimbursement (plus its myriad post hoc uses), or if instead it might be replaced by a simpler system of handling reimbursement (perhaps using SNOMED structures to group cases), while the full SNOMED terminology emerges as the principal foundation for clinical communication (the PITAC recommendation), or
- **Approach C (SNOMED + ICD)**: Proceed with the current NCVHS proposal to replace ICD-9-CM with ICD-10-CM/PCS, while simultaneously encouraging (e.g. by mechanisms like CHI) the adoption of SNOMED-CT for clinical uses (the default path).

If Approach C is pursued without consideration of Approaches A and/or B, some time will be saved in moving to ICD-10-CM/PCS. But forging ahead with so many unanswered – but answerable – questions regarding the potential interoperability of ICD-10 and SNOMED risks the potential waste of resources, diminished speed of adoption of SNOMED-CT, and continuing debate. Perhaps we need to take some time out to look at the alternatives.