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Table I: ABC classification of G data items

	A	B	C
before conversions	8	58	75
after conversions	115	5	21

Table II: Levels of conversions for data items

Levels of conversions	Number of data items
Level 0	8
Level 1	61
Level 2	46
Level 3	26
Total	141

Table III: Authorities of level 1 and level 2 conversions

Authorities	Number of conversions
Common knowledge	3
Definitions from texts or specialized societies	10
Definitions from hypertension guideline	6
Clinical point of view	2
Normal range of exam results in the HIS	12
Pharmaceutical information	27
ICD-10	37
Data processing	10
Total	107

Table IV: Typical examples of logic for level-1 and level-2 conversions

Logic categories	Variable: values(data type, unit) (HIS)	Conversion logic	Variable: values(data type, unit) (CIG)
I. example 1	Alb(test of urine): x(float mg/dl*Cr)	if (x>15) then (y=true); if (x ≤ 15) then (y=false);	urine albumin: y(boolean)
I. example 2	total cholesterol: x(float mg/dl)	if (x>232) then (y=abnormally high); if (129<x ≤ 232) then (y=normal); if (x ≤ 129) then (y=abnormally low);	total cholesterol: y(string)
II. example 3	smoking: x(smoking/no smoking/unknown)	if (x=no smoking) then (y=no smoking); if (x=smoking or x=unknown) then (y=smoking);	smoking: y(smoking/no smoking)
II. example 4	disease names: {x}(string collection)	if (y ∈ x) then (y=true); else (y=false); (ICD-10 used as controlled vocabulary)	Hypertensive retinopathy: y(boolean)
III. example 5	ECG result: {x}(text)	if (x contains any of y's synonyms or sub concepts) then (y=true); else (y=false);	Atrioventricular block: y(boolean)
IV. example 6	Drug name: {x}(string collection)	Acquire trade names of drugs {x` } from {x} using text processing; if (any one of {x` } is a kind of diuretics) then (y=true); else (y=false);	Diuretic: y(boolean)
V. example 7	Height: h(float, cm); Weight: w(float, kg);	$BSA = w^{0.425} \times h^{0.725} \times 0.007184$;	Body Surface Area: BSA(float, m ²)

Table V: Categories of G data items

Categories	Level 0,1,2	Level 3	Total
General information	7	1	8
Family history	0	2	2
Examination	33	7	40
Treatment	27	0	27
Diagnosis	37	5	42
Disease condition	10	9	19
Causal relationship	1	2	3
Total	115	26	141

Table VI: Comparison of three guidelines

	Hypertension	Diabetes	Asthma
Total number of data items	141	46	38
Coverage before conversions	8(6%)	3(7%)	2(5%)
Coverage after conversions	115(82%)	36(78%)	29(76%)

Table VII: Comparison of results of two studies

	Sonnenberg <i>et al.</i>	This research
Guidelines analyzed	2	1
Data items at level 0	42(24%)	8(6%)
Data items at level 1 and level 2	121(68%)	107(76%)
Data items at level 3	15(8%)	26(18%)
Total data items	178	141