Towards an Ontology to Support Decision-making in Hospital Bed Allocation (TSE)

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I. OBJECT PROPERTIES

We created 85 relationships between the classes, and they are detailed in Table I. We have not included all possible relationships between classes, only those we consider interesting for this domain, so we could see clearly how the classes relate to each other, to help us test the rules.

TABLE I
HOSPITALAR ONTOLOGY OBJECT PROPERTIES

Domain	Object Property	Range	Inverse of
Companion	accompanies	Patient	is-accompanied-by
Attendance	happens-in	Temporal_concept	
Nurse	allocates	Hospital_Bed	is-allocated-by
Health_Professional	analyzes	Document	is-analyzed-by
Patient	presents	Symptom	is-presented-by
Patient	presents-one	Disease	
Employee	attend	Patient	is-attended-by
Health_Professional	evaluates	Patient	is-evaluated-by
Patient	consumes	Medication	is-consumed-by
Patient	have_appointment	Doctor	
Doctor	discharges	Patient	
Patient	vacates-one	Hospital_Bed	is-vacated-by
Doctor	diagnoses-one	Patient	is-diagnosed-by
Attendance	is-associated-to	Risk rating	
State	is-assigned-to	Patient	
Disease	is-characterized-by	Symptom	
Hospitalization	is-made-in-one	Hospital_Bed	
Patient	is-medicated-by	Nursing_Technician	
Patient	is-moved by	Health_Professional	
Patient	is-observed-by	Health_Professional	
Doctor	is-responsible-by	Patient	
Hospital_Bed	is-in	bedroom	
Furniture	is-in-a	Local	
Bedroom	is-in-one	Hospitalization_Unit	
Pharmacy	make-dispensation-of	Medication	
Radiologist	make-report-of	Image_Exam	is-reported-by
Patient	makes-one	Exam_Type	
Janitor	sanitizes-one	Local	is-sanitized-by
Doctor	indicates-one	Treatment	
Patient	occupy-one	Hospital_Bed	is-occupied-for
Hospital_Bed	may-have	Restriction	
Hospital_Bed	own-one	State	
Employee	fill-one	Document	is-filled-by
Doctor	prescribes	Medication	is-prescribed-by
Image_Equipment	performs	Image_Exam	is-performed-on
Patient	has-one	Attendance	
Hospital_Bed	has-a	Bed	
Symptom	characterizes-a	Disease	is-characterized-by
Patient	is-diagnosed-by-one	Doctor	