FURTHER EXPERIMENTATION-SimXHCOME+

PD

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| GOLD | GPT4 | GPT3.5 | GEMINI | CLAUDE |
| Observation(?obs) ^ onto:hasBradykinisiaOfUpperLimp(?obs, true) ^ sosa:observedProperty(?obs, onto:BradykinisiaUpperLimpForPDpatient) ^ onto:obsAfterDosing(?obs, true) -> onto:sendNotification(onto:MissingDoseNotification, true) ^ onto:PDpatientMissingDoseEventObservation(?obs) | Patient(?p) ^ hasObservation(?p, ?o) ^ BradykinesiaOfUpperLimb(?o) ^ observedAt(?o, ?obsTime) ^  DailyDosagePlan(?d) ^ partOfDailyPlan(?med, ?d) ^ hasPrescription(?p, ?med) ^  isSupposedToTakeMedicationAt(?med, ?medTime) ^ swrlb:greaterThan(?obsTime, ?medTime) ->  Notification(?n) ^ generatesNotification(?o, ?n) ^ MissingDoseEvent(?e) ^ hasObservation(?p, ?e) | Observation(?obs) ∧ hasBradykinesia(?obs, ?bradykinesia) ∧ BradykinesiaOfUpperLimb(?bradykinesia) ∧ hasPatient(?obs, ?patient) ∧ PDPatient(?patient) ∧ hasAssessmentDate(?obs, ?date) ∧ DosageTime(?dosageTime) ∧ hasPatient(?dosageTime, ?patient) ∧ hasAssessmentDate(?dosageTime, ?dosageDate) ∧ swrlb:dateTime(?date, ?dateTime) ∧ swrlb:dateTime(?dosageDate, ?dosageDateTime) ∧ swrlb:greaterThan(?dateTime, ?dosageDateTime) →  MissingDoseEventObservation(?missedDoseEvent) ∧ hasPatient(?missedDoseEvent, ?patient) ∧ hasObservation(?missedDoseEvent, ?obs) ∧ NotifyDoctor(?notification) ∧ hasPatient(?notification, ?patient) | pd:MissingDoseEventRule a swrl:Rule;  [  rdfs:comment "PD Patient Missed Dose Event Rule"^^xsd:string ,  swrl:body (  [  pd:hasObservation ?obs ?data ,  pd:BradykinesiaOfUpperLimb ?data ,  pd:hasPatient ?patient ?obs ,  pd:PDPatient ?patient ,  # Check for medication schedule after expected dosage time  (  [ pd:hasMedicalPrescription ?patient ?prescription ]  [ pd:hasDosageTime ?prescription ?dosageTime ]  # This part requires additional information/reasoning about time  # Replace with appropriate time reasoning based on your system  [ ?current\_time SWRLDatetimeOperator ?dosageTime ]  )  ]  ) ,  swrl:head (  [  pd:PDPatientMissingDoseEventObservation ?obs ,  pd:triggers ?obs ?notification ,  pd:NotifyDoctor ?notification  ]  )  ] | PDPatientObservation(?observation) ^  bradykinesiaOfUpperLimb(?observation, true) ^  hasMotorSymptom(?observation, :BradykinesiaOfUpperLimb) ^  hasObservation(?patient, ?observation) ^  PDPatient(?patient) ^  hasDailyDosagePlan(?patient, ?dosagePlan) ^  dosageTime(?dosagePlan, ?dosageTime) ^  observationTimestamp(?observation, ?observationTime) ^  swrlb:greaterThan(?observationTime, ?dosageTime)  -> requiresNotification(?observation, :AlertingNotification) ^  rdf:type(?observation, :PDPatientMissingDoseEventObservation) |