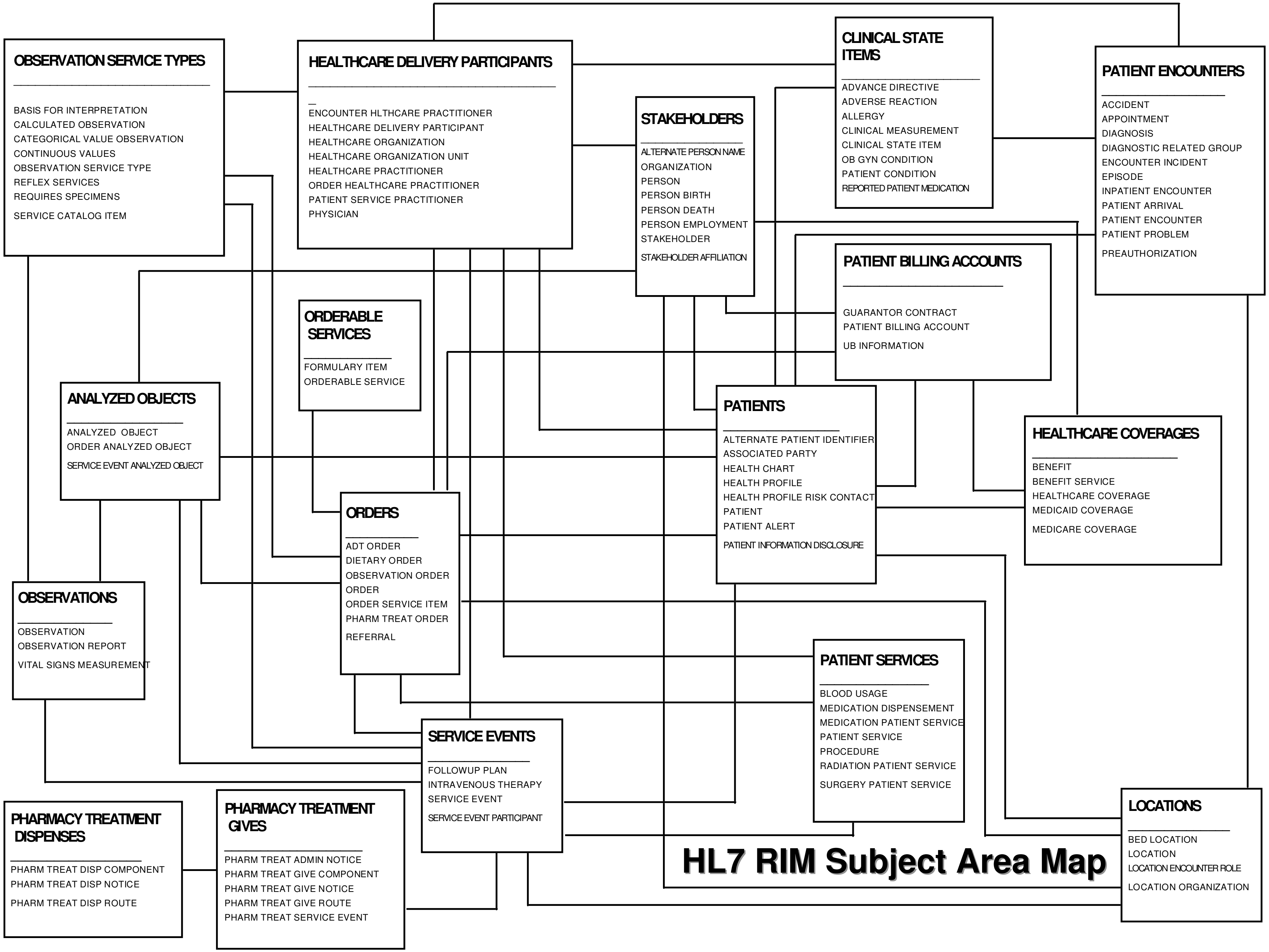
HL7 Reference Information Model Diagrams

QA/DM Committee

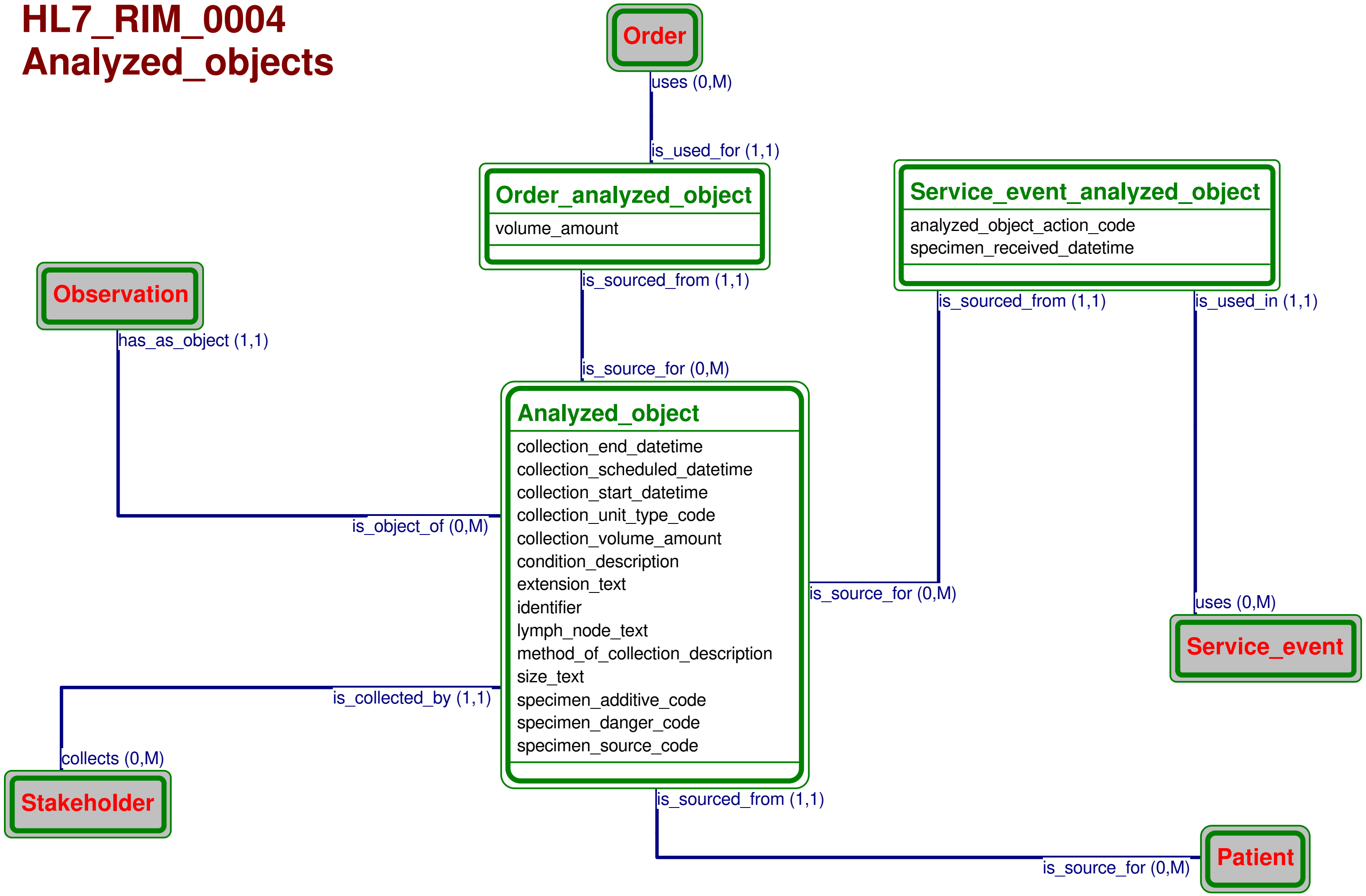
August, 1996

HL7 RIM Version 4 Diagrams Included

- Overall Subect Area Map
- Analyzed Objects
- Attribute Groups
- Clinical State Items
- Healthcare Coverages
- Healthcare Delivery Participants
- Locations
- Observations
- Orders
- Observation Service Types
- Orderable Services
- Patients
- Pharmacy Treatment Gives
- Pharmacy Treatment Dispenses
- Patient Billing Accounts
- Patient Encounters
- Patient Services
- Service Events
- Stakeholders


HL7 RIM Subject Area Map
OBSERVATION SERVICE TYPES
BASIS FOR INTERPRETATION
CALCULATED OBSERVATION
CATEGORICAL VALUE OBSERVATION
CONTINUOUS VALUES
OBSERVATION SERVICE TYPE
REFLEX SERVICES
REQUIRES SPECIMENS
SERVICE CATALOG ITEM
HEALTHCARE DELIVERY PARTICIPANTS
ENCOUNTER HLTHCARE PRACTITIONER
HEALTHCARE DELIVERY PARTICIPANT
HEALTHCARE ORGANIZATION
HEALTHCARE ORGANIZATION UNIT
HEALTHCARE PRACTITIONER
ORDER HEALTHCARE PRACTITIONER
PATIENT SERVICE PRACTITIONER
PHYSICIAN
CLINICAL STATE ITEMS
ADVANCE DIRECTIVE
ADVERSE REACTION
ALLERGY
CLINICAL MEASUREMENT
CLINICAL STATE ITEM
OB GYN CONDITION
PATIENT CONDITION
REPORTED PATIENT MEDICATION
PATIENT ENCOUNTERS
ACCIDENT
APPOINTMENT
DIAGNOSIS
DIAGNOSTIC RELATED GROUP
ENCOUNTER INCIDENT
EPISODE
INPATIENT ENCOUNTER
PATIENT ARRIVAL
PATIENT ENCOUNTER
PATIENT PROBLEM
PREAUTHORIZATION
STAKEHOLDERS
ALTERNATE PERSON NAME
ORGANIZATION
PERSON
PERSON BIRTH
PERSON DEATH
PERSON EMPLOYMENT
STAKEHOLDER
STAKEHOLDER AFFILIATION
PATIENT BILLING ACCOUNTS
GUARANTOR CONTRACT
PATIENT BILLING ACCOUNT
UB INFORMATION
ORDERABLE SERVICES
FORMULARY ITEM
ORDERABLE SERVICE
ANALYZED OBJECTS
ANALYZED OBJECT
ORDER ANALYZED OBJECT
SERVICE EVENT ANALYZED OBJECT
PATIENTS
ALTERNATE PATIENT IDENTIFIER
ASSOCIATED PARTY
HEALTH CHART
HEALTH PROFILE
HEALTH PROFILE RISK CONTACT
PATIENT
PATIENT ALERT
PATIENT INFORMATION DISCLOSURE
HEALTHCARE COVERAGES
BENEFIT
BENEFIT SERVICE
HEALTHCARE COVERAGE
MEDICAID COVERAGE
MEDICARE COVERAGE
ORDERS
ADT ORDER
DIETARY ORDER
OBSERVATION ORDER
ORDER
ORDER SERVICE ITEM
PHARM TREAT ORDER
REFERRAL
OBSERVATIONS
OBSERVATION
OBSERVATION REPORT
VITAL SIGNS MEASUREMENT
PATIENT SERVICES
BLOOD USAGE
MEDICATION DISPENSEMENT
MEDICATION PATIENT SERVICE
PATIENT SERVICE
PROCEDURE
RADIATION PATIENT SERVICE
SURGERY PATIENT SERVICE
SERVICE EVENTS
FOLLOWUP PLAN
INTRAVENOUS THERAPY
SERVICE EVENT
SERVICE EVENT PARTICIPANT
PHARMACY TREATMENT DISPENSES
PHARM TREAT DISP COMPONENT
PHARM TREAT DISP NOTICE
PHARM TREAT DISP ROUTE
PHARMACY TREATMENT GIVES
PHARM TREAT ADMIN NOTICE
PHARM TREAT GIVE COMPONENT
PHARM TREAT GIVE NOTICE
PHARM TREAT GIVE ROUTE
PHARM TREAT SERVICE EVENT
LOCATIONS
BED LOCATION
LOCATION
LOCATION ENCOUNTER ROLE
LOCATION ORGANIZATION

HL7_RIM_0004
Analyzed_objects



HL7_RIM_0004
Attribute_groups

Ag_address

address_line_text
care_of_name
census_tract_code
city_name
country_name
county_code
effective_date
identifier
postal_zone_code
province_name
seasonal_indicator
state_code
street_name
suite_number
termination_date

Ag_amount

number
unit_of_measure_code

Ag_code

code_value
coded_value
coded_value_description
coding_system_name

Ag_datetime

date
time

Ag_person_name

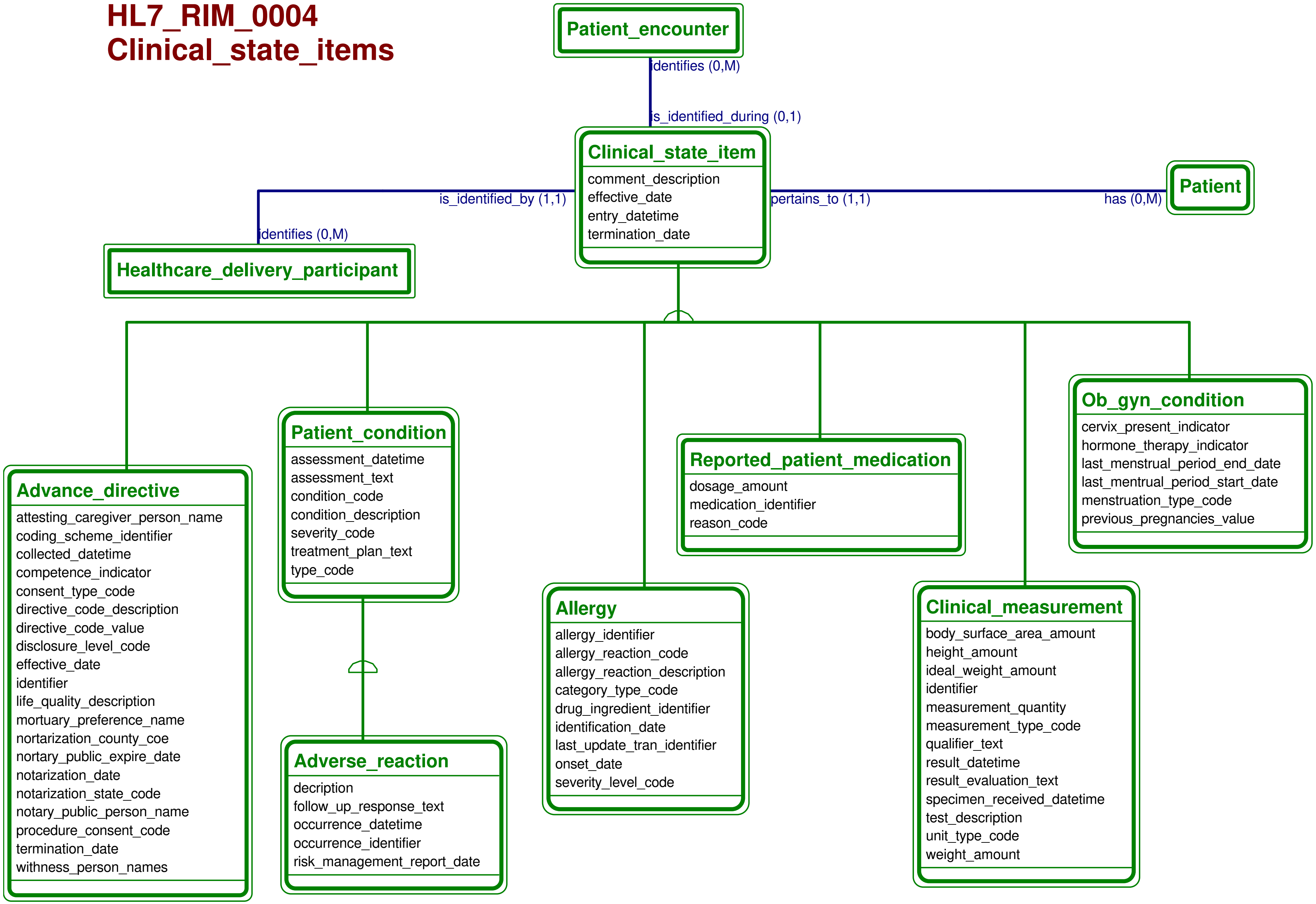
end_datetime
first_name
identifier
last_name
middle_names
start_datetime
suffix_name
title_text

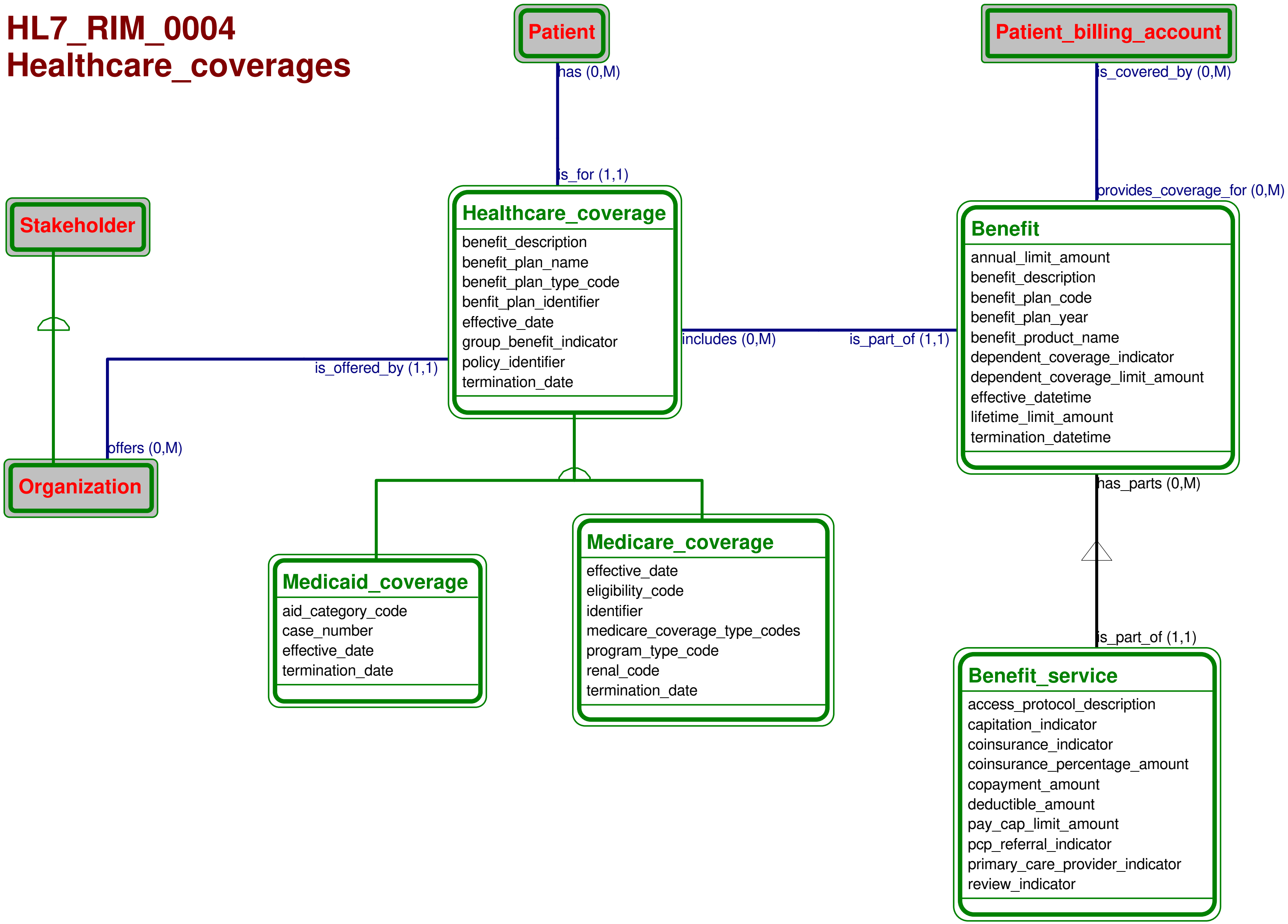
Ag_identifier

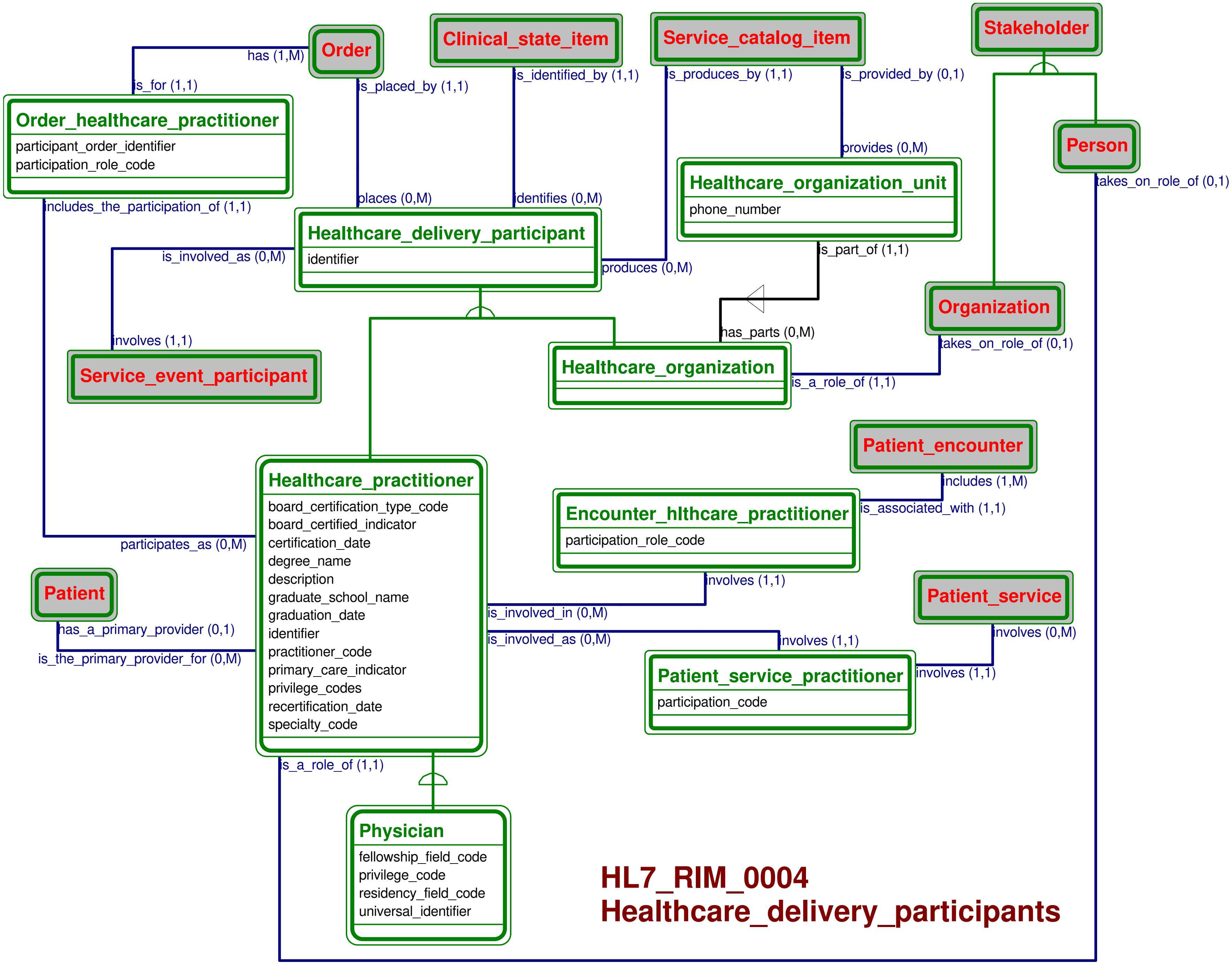
effective_date
identification_number
issued_date
issuing_authority_name
termination_date

Ag_phone_number

area_code
begin_date
device_type_code
end_date
extension_number
international_area_code
telephone_number
type_code

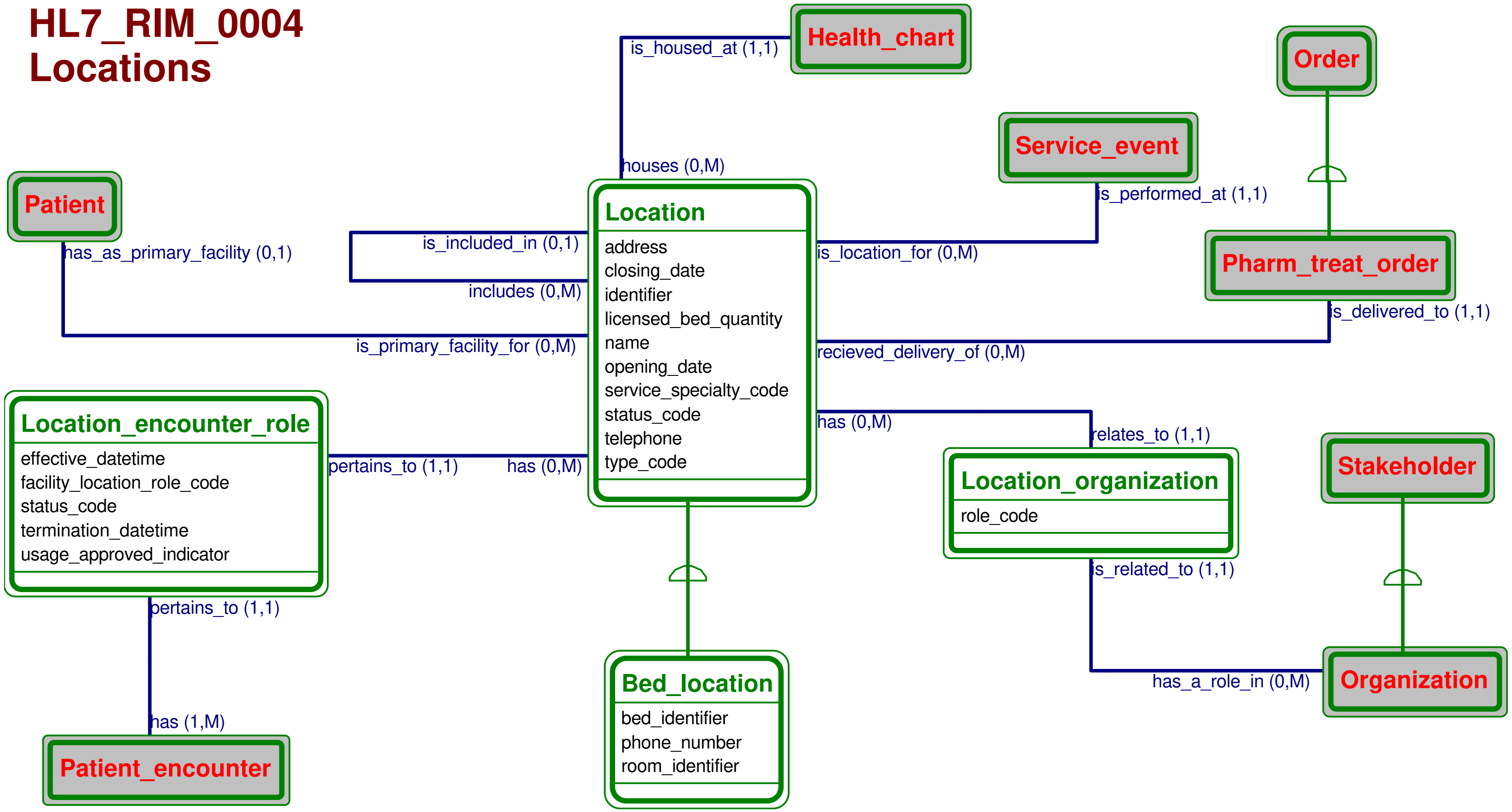

HL7_RIM_0004
Clinical_state_items
Patient_encounter
identifies (0,M)
is_identified_during (0,1)
Clinical_state_item
comment_description
effective_date
entry_datetime
termination_date
is_identified_by (1,1)
identifies (0,M)
Healthcare_delivery_participant
pertains_to (1,1)
has (0,M)
Patient
Advance_directive
attesting_caregiver_person_name
coding_scheme_identifier
collected_datetime
competence_indicator
consent_type_code
directive_code_description
directive_code_value
disclosure_level_code
effective_date
identifier
life_quality_description
mortuary_preference_name
nortarization_county_coe
nortary_public_expire_date
notarization_date
notarization_state_code
notary_public_person_name
procedure_consent_code
termination_date
withness_person_names
Patient_condition
assessment_datetime
assessment_text
condition_code
condition_description
severity_code
treatment_plan_text
type_code
Adverse_reaction
decription
follow_up_response_text
occurrence_datetime
occurrence_identifier
risk_management_report_date
Allergy
allergy_identifier
allergy_reaction_code
allergy_reaction_description
category_type_code
drug_ingredient_identifier
identification_date
last_update_tran_identifier
onset_date
severity_level_code
Reported_patient_medication
dosage_amount
medication_identifier
reason_code
Clinical_measurement
body_surface_area_amount
height_amount
ideal_weight_amount
identifier
measurement_quantity
measurement_type_code
qualifier_text
result_datetime
result_evaluation_text
specimen_received_datetime
test_description
unit_type_code
weight_amount
Ob_gyn_condition
cervix_present_indicator
hormone_therapy_indicator
last_menstrual_period_end_date
last_mentrual_period_start_date
menstruation_type_code
previous_pregnancies_value


HL7_RIM_0004
Healthcare_coverages
Patient
Patient_billing_account
has (0,M)
is_covered_by (0,M)
is_for (1,1)
provides_coverage_for (0,M)
Stakeholder
Healthcare_coverage
benefit_description
benefit_plan_name
benefit_plan_type_code
benfit_plan_identifier
effective_date
group_benefit_indicator
policy_identifier
termination_date
Benefit
annual_limit_amount
benefit_description
benefit_plan_code
benefit_plan_year
benefit_product_name
dependent_coverage_indicator
dependent_coverage_limit_amount
effective_datetime
lifetime_limit_amount
termination_datetime
includes (0,M)
is_part_of (1,1)
is_offered_by (1,1)
offers (0,M)
Organization
has_parts (0,M)
Medicare_coverage
effective_date
eligibility_code
identifier
medicare_coverage_type_codes
program_type_code
renal_code
termination_date
Medicaid_coverage
aid_category_code
case_number
effective_date
termination_date
is_part_of (1,1)
Benefit_service
access_protocol_description
capitation_indicator
coinsurance_indicator
coinsurance_percentage_amount
copayment_amount
deductible_amount
pay_cap_limit_amount
pcp_referral_indicator
primary_care_provider_indicator
review_indicator

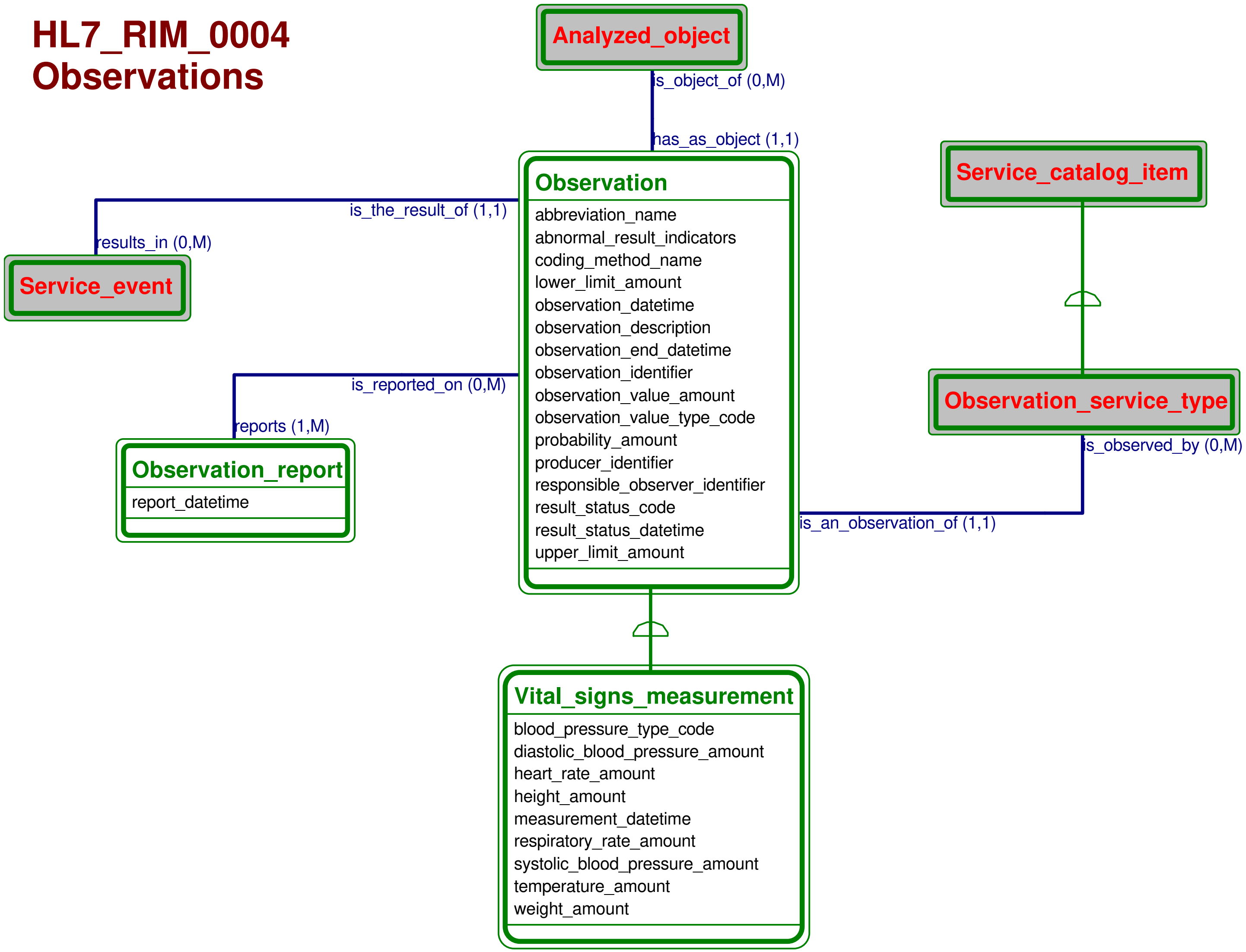


HL7_RIM_0004
Healthcare_delivery_participants

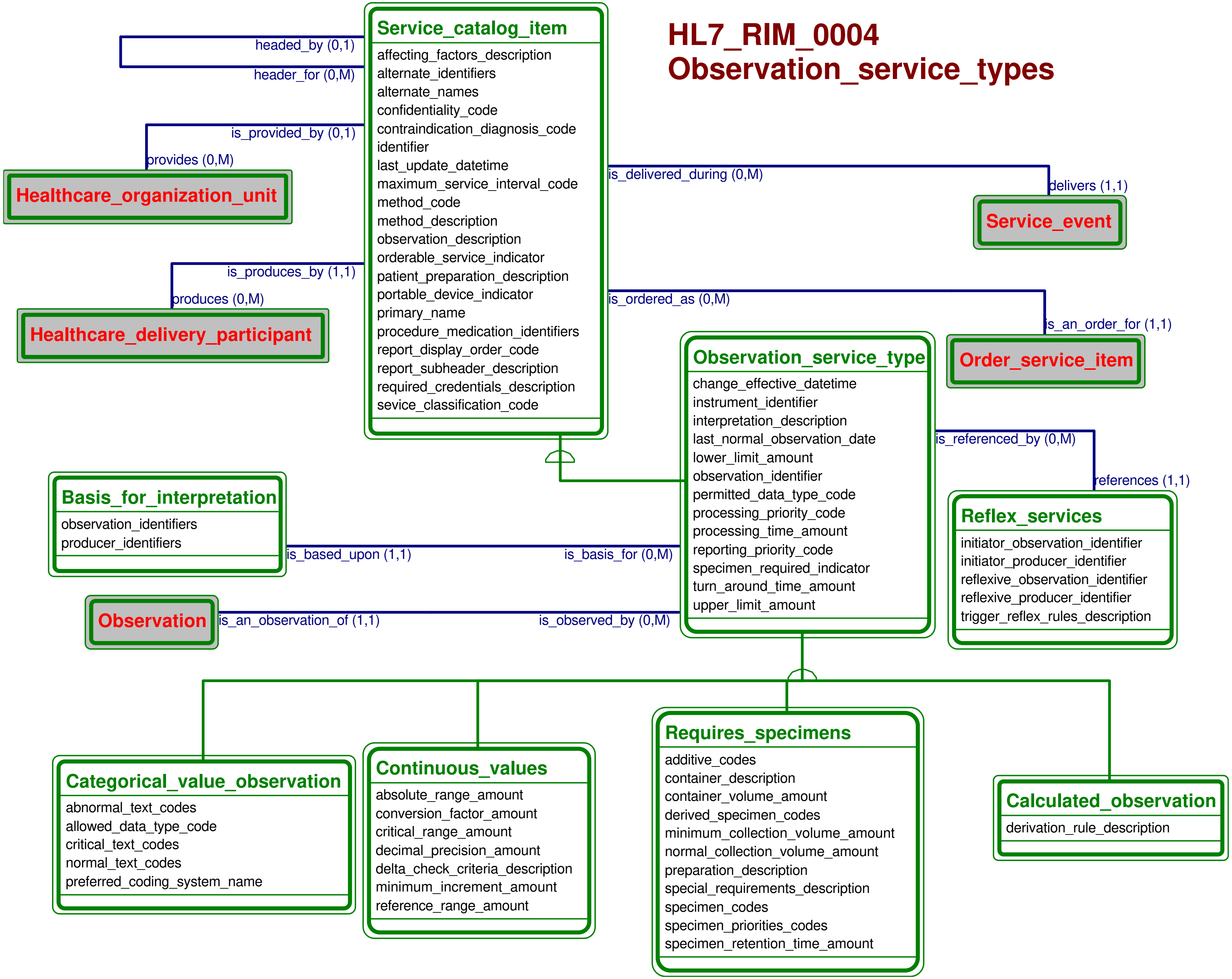
HL7_RIM_0004 Locations

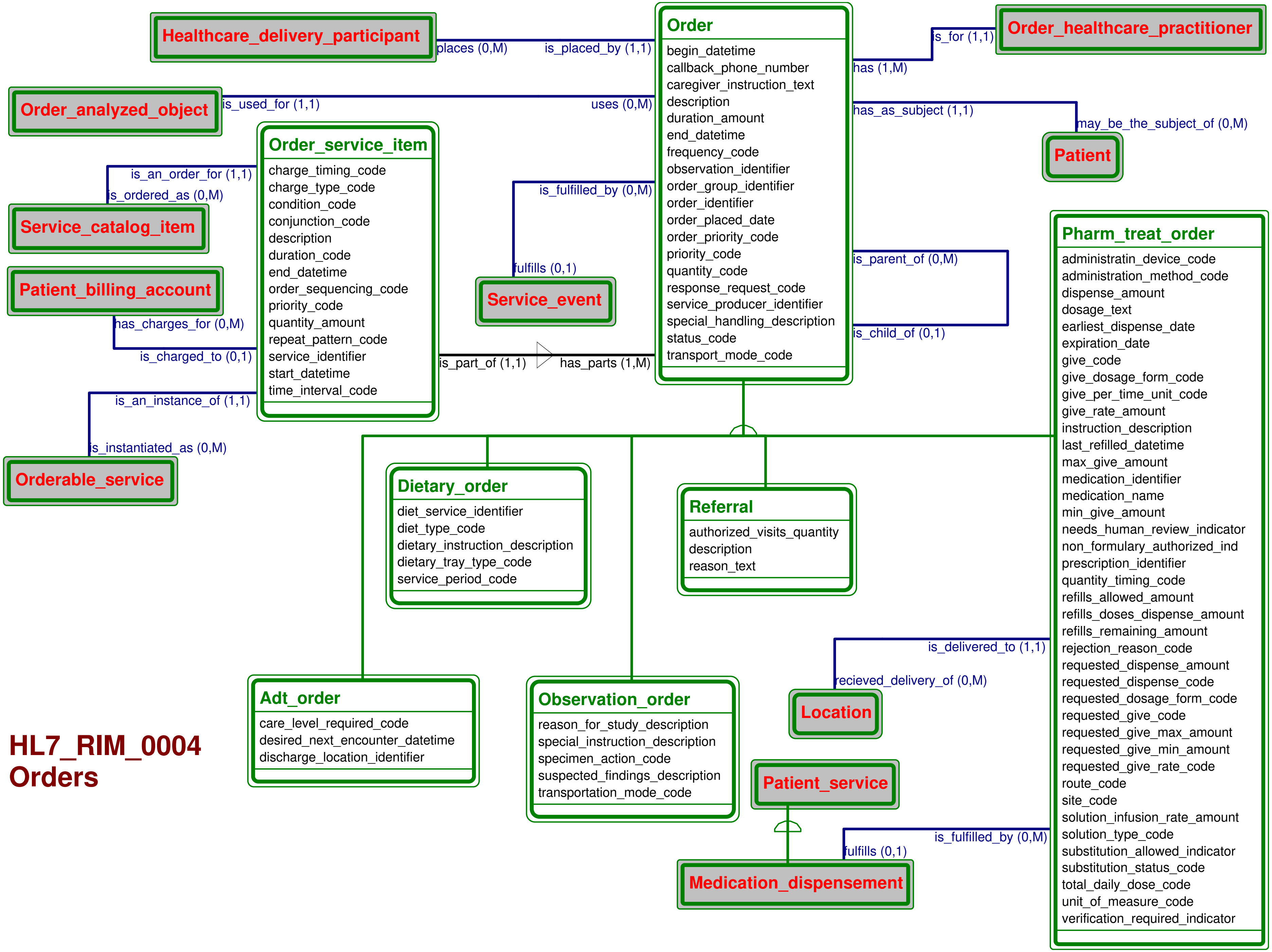


HL7_RIM_0004
Observations

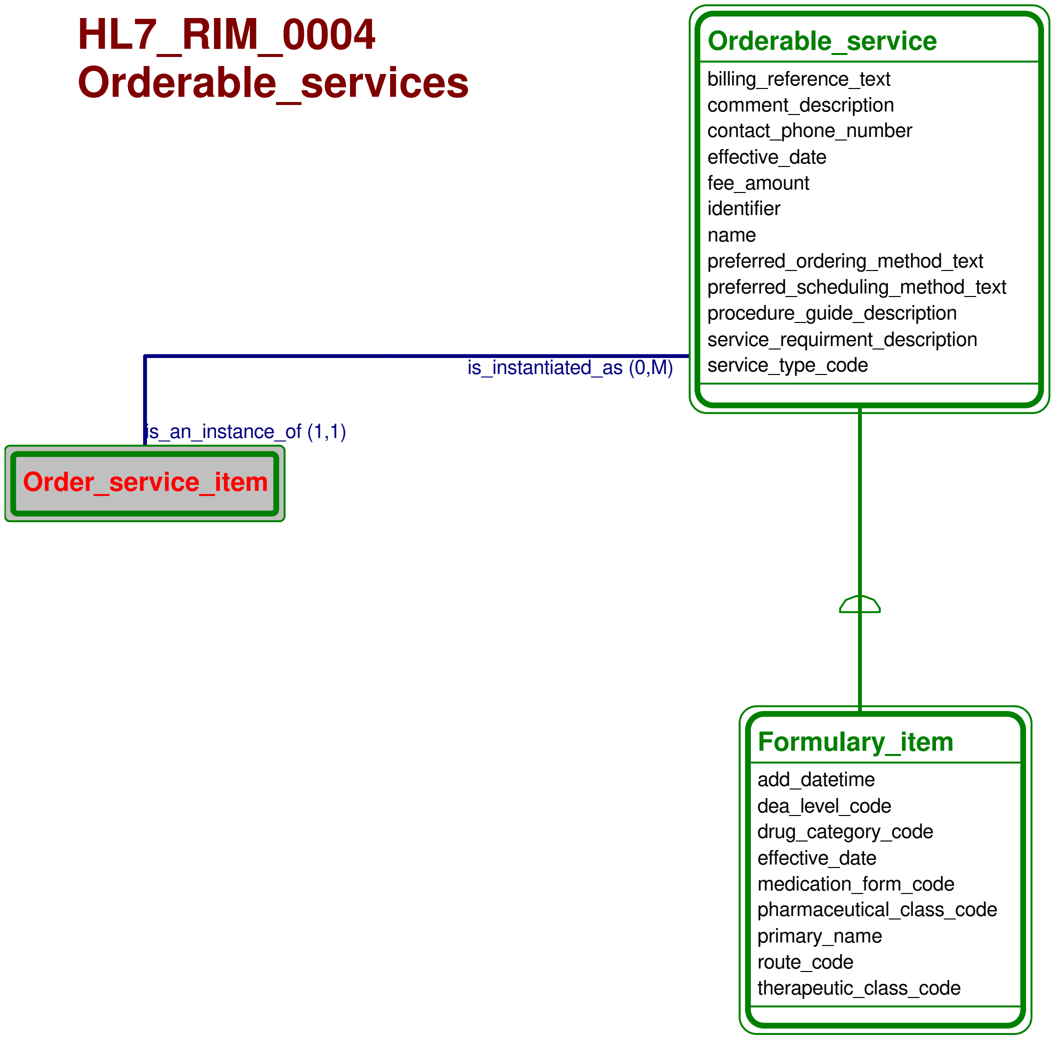


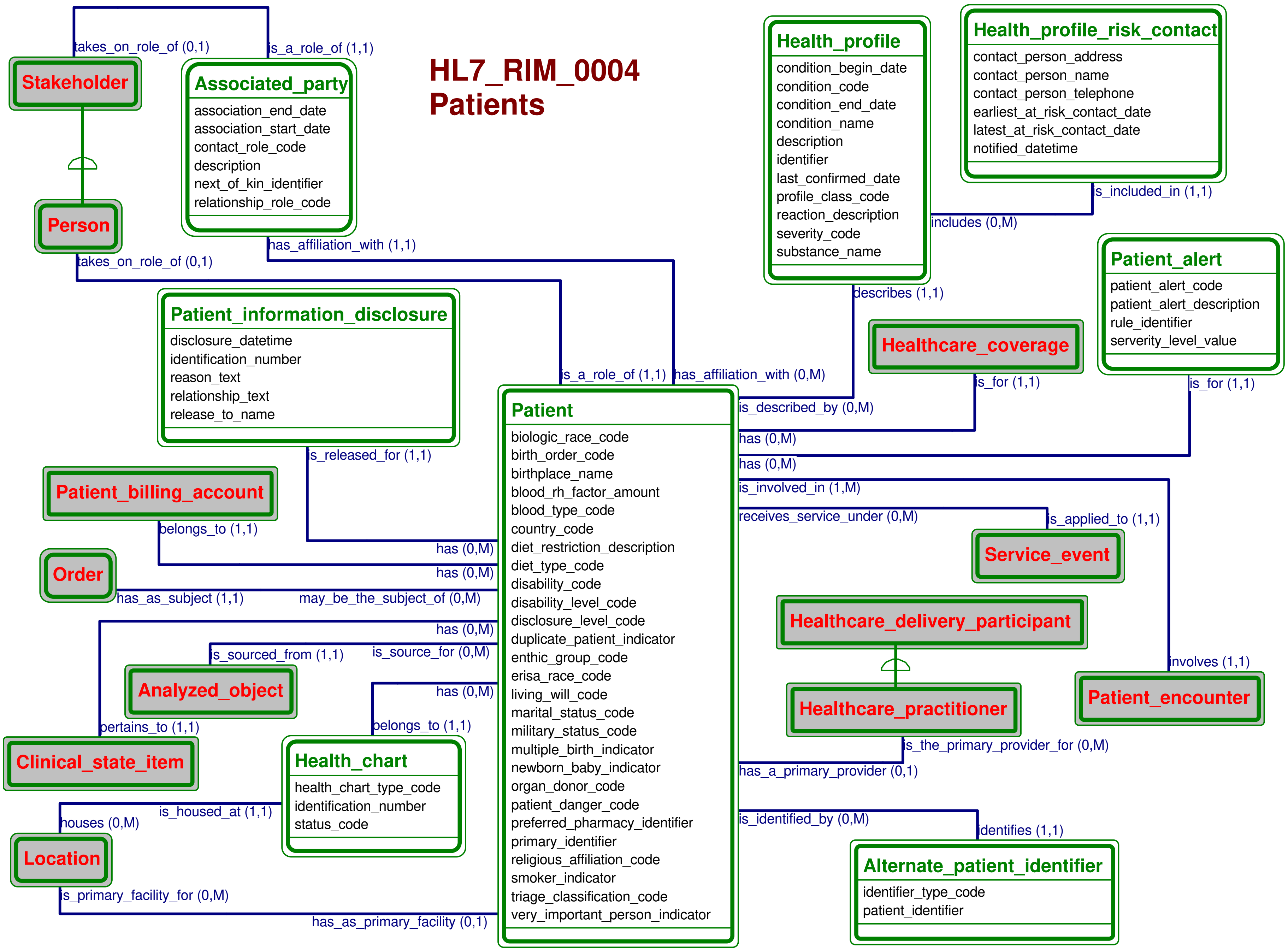
HL7_RIM_0004 Observation_service_types



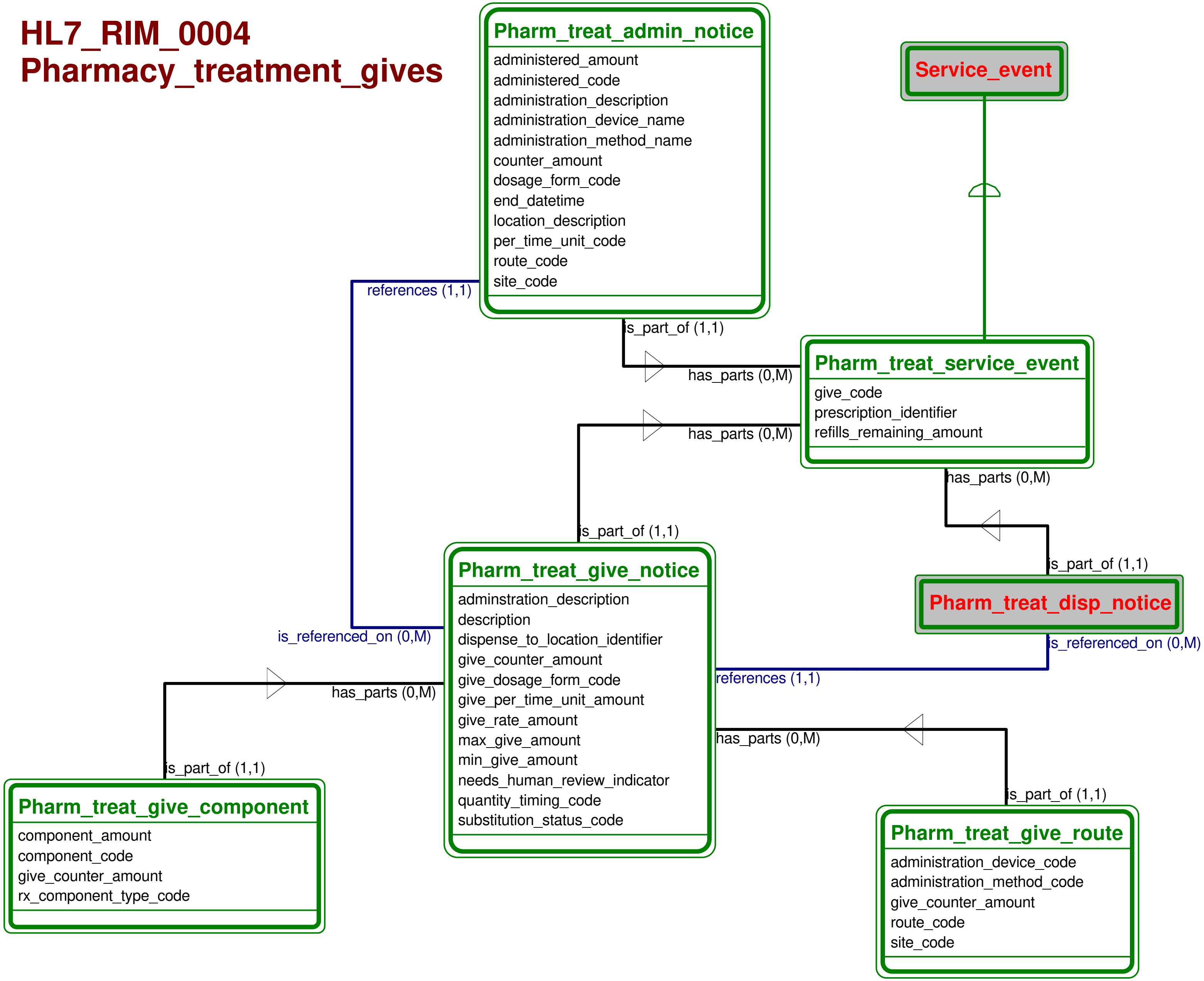

HL7_RIM_0004
Orders
Healthcare_delivery_participant
places (0,M)
is_placed_by (1,1)
Order
begin_datetime
callback_phone_number
caregiver_instruction_text
description
duration_amount
end_datetime
frequency_code
observation_identifier
order_group_identifier
order_identifier
order_placed_date
order_priority_code
priority_code
quantity_code
response_request_code
service_producer_identifier
special_handling_description
status_code
transport_mode_code
is_for (1,1)
has (1,M)
Order_healthcare_practitioner
Order_analyzed_object
is_used_for (1,1)
uses (0,M)
has_as_subject (1,1)
may_be_the_subject_of (0,M)
Patient
Order_service_item
charge_timing_code
charge_type_code
condition_code
conjunction_code
description
duration_code
end_datetime
order_sequencing_code
priority_code
quantity_amount
repeat_pattern_code
service_identifier
start_datetime
time_interval_code
is_an_order_for (1,1)
is_ordered_as (0,M)
Service_catalog_item
Patient_billing_account
has_charges_for (0,M)
is_charged_to (0,1)
is_fulfilled_by (0,M)
fulfills (0,1)
Service_event
is_parent_of (0,M)
is_child_of (0,1)
is_part_of (1,1)
has_parts (1,M)
is_an_instance_of (1,1)
is_instantiated_as (0,M)
Orderable_service
Pharm_treat_order
administratin_device_code
administration_method_code
dispense_amount
dosage_text
earliest_dispense_date
expiration_date
give_code
give_dosage_form_code
give_per_time_unit_code
give_rate_amount
instruction_description
last_refilled_datetime
max_give_amount
medication_identifier
medication_name
min_give_amount
needs_human_review_indicator
non_formulary_authorized_ind
prescription_identifier
quantity_timing_code
refills_allowed_amount
refills_doses_dispense_amount
refills_remaining_amount
rejection_reason_code
requested_dispense_amount
requested_dispense_code
requested_dosage_form_code
requested_give_code
requested_give_max_amount
requested_give_min_amount
requested_give_rate_code
route_code
site_code
solution_infusion_rate_amount
solution_type_code
substitution_allowed_indicator
substitution_status_code
total_daily_dose_code
unit_of_measure_code
verification_required_indicator
Dietary_order
diet_service_identifier
diet_type_code
dietary_instruction_description
dietary_tray_type_code
service_period_code
Referral
authorized_visits_quantity
description
reason_text
is_delivered_to (1,1)
recieved_delivery_of (0,M)
Location
Adt_order
care_level_required_code
desired_next_encounter_datetime
discharge_location_identifier
Observation_order
reason_for_study_description
special_instruction_description
specimen_action_code
suspected_findings_description
transportation_mode_code
Patient_service
is_fulfilled_by (0,M)
fulfills (0,1)
Medication_dispensement

HL7_RIM_0004
Orderable_services

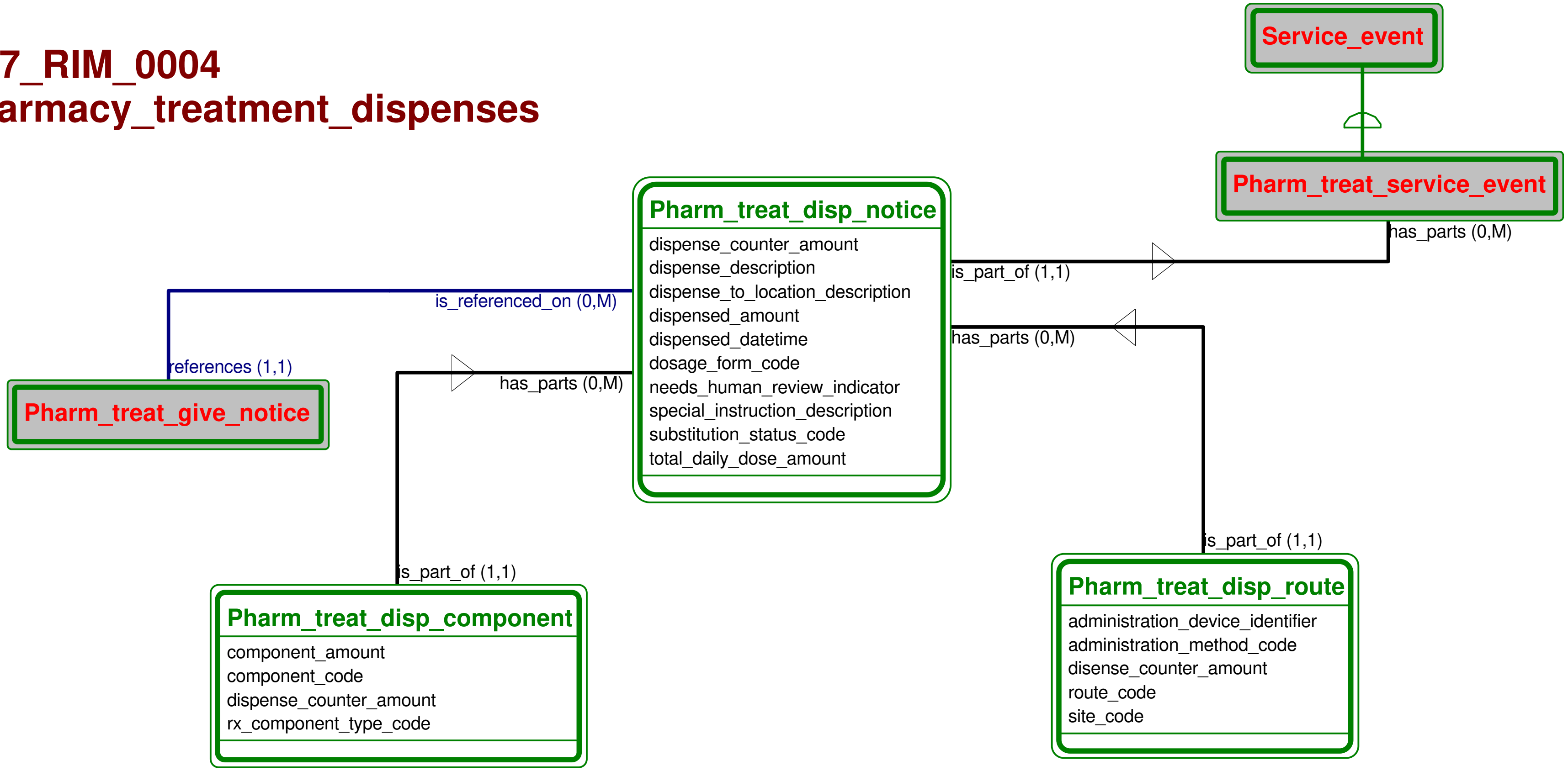



HL7_RIM_0004
Patients
Stakeholder
takes_on_role_of (0,1)
is_a_role_of (1,1)
Associated_party
association_end_date
association_start_date
contact_role_code
description
next_of_kin_identifier
relationship_role_code
Person
takes_on_role_of (0,1)
has_affiliation_with (1,1)
Health_profile
condition_begin_date
condition_code
condition_end_date
condition_name
description
identifier
last_confirmed_date
profile_class_code
reaction_description
severity_code
substance_name
Health_profile_risk_contact
contact_person_address
contact_person_name
contact_person_telephone
earliest_at_risk_contact_date
latest_at_risk_contact_date
notified_datetime
is_included_in (1,1)
includes (0,M)
describes (1,1)
Patient_alert
patient_alert_code
patient_alert_description
rule_identifier
serverity_level_value
Healthcare_coverage
is_for (1,1)
is_for (1,1)
Patient_information_disclosure
disclosure_datetime
identification_number
reason_text
relationship_text
release_to_name
is_a_role_of (1,1)
has_affiliation_with (0,M)
is_described_by (0,M)
has (0,M)
has (0,M)
is_involved_in (1,M)
receives_service_under (0,M)
is_applied_to (1,1)
is_released_for (1,1)
Patient_billing_account
belongs_to (1,1)
has (0,M)
has (0,M)
Order
has_as_subject (1,1)
may_be_the_subject_of (0,M)
has (0,M)
is_sourced_from (1,1)
is_source_for (0,M)
Analyzed_object
has (0,M)
belongs_to (1,1)
pertains_to (1,1)
Clinical_state_item
Health_chart
health_chart_type_code
identification_number
status_code
is_housed_at (1,1)
houses (0,M)
Location
is_primary_facility_for (0,M)
has_as_primary_facility (0,1)
Patient
biologic_race_code
birth_order_code
birthplace_name
blood_rh_factor_amount
blood_type_code
country_code
diet_restriction_description
diet_type_code
disability_code
disability_level_code
disclosure_level_code
duplicate_patient_indicator
enthic_group_code
erisa_race_code
living_will_code
marital_status_code
military_status_code
multiple_birth_indicator
newborn_baby_indicator
organ_donor_code
patient_danger_code
preferred_pharmacy_identifier
primary_identifier
religious_affiliation_code
smoker_indicator
triage_classification_code
very_important_person_indicator
Service_event
Healthcare_delivery_participant
Healthcare_practitioner
involves (1,1)
Patient_encounter
is_the_primary_provider_for (0,M)
has_a_primary_provider (0,1)
is_identified_by (0,M)
identifies (1,1)
Alternate_patient_identifier
identifier_type_code
patient_identifier

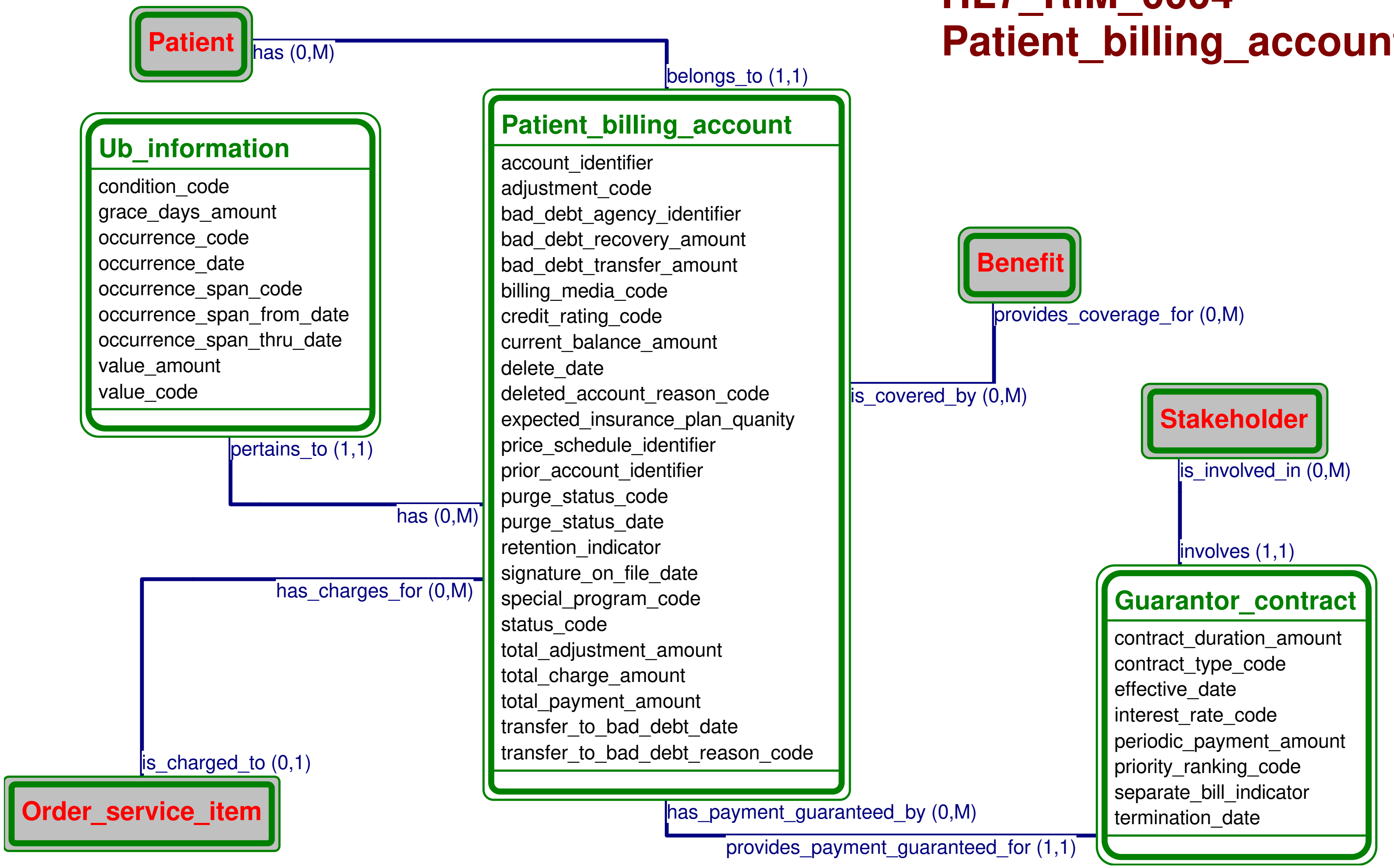
HL7_RIM_0004
Pharmacy_treatment_gives

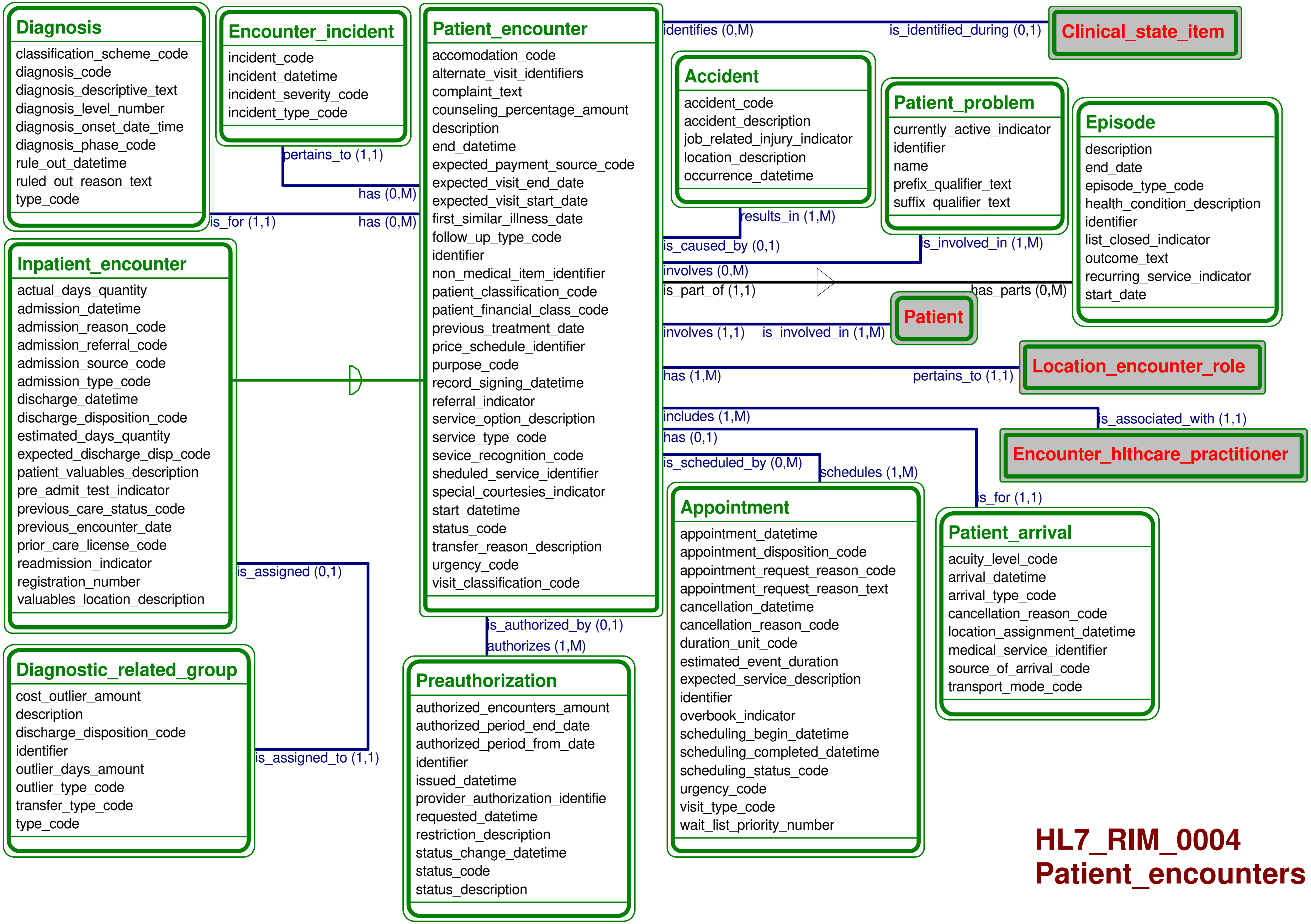


HL7_RIM_0004
Pharmacy_treatment_dispenses

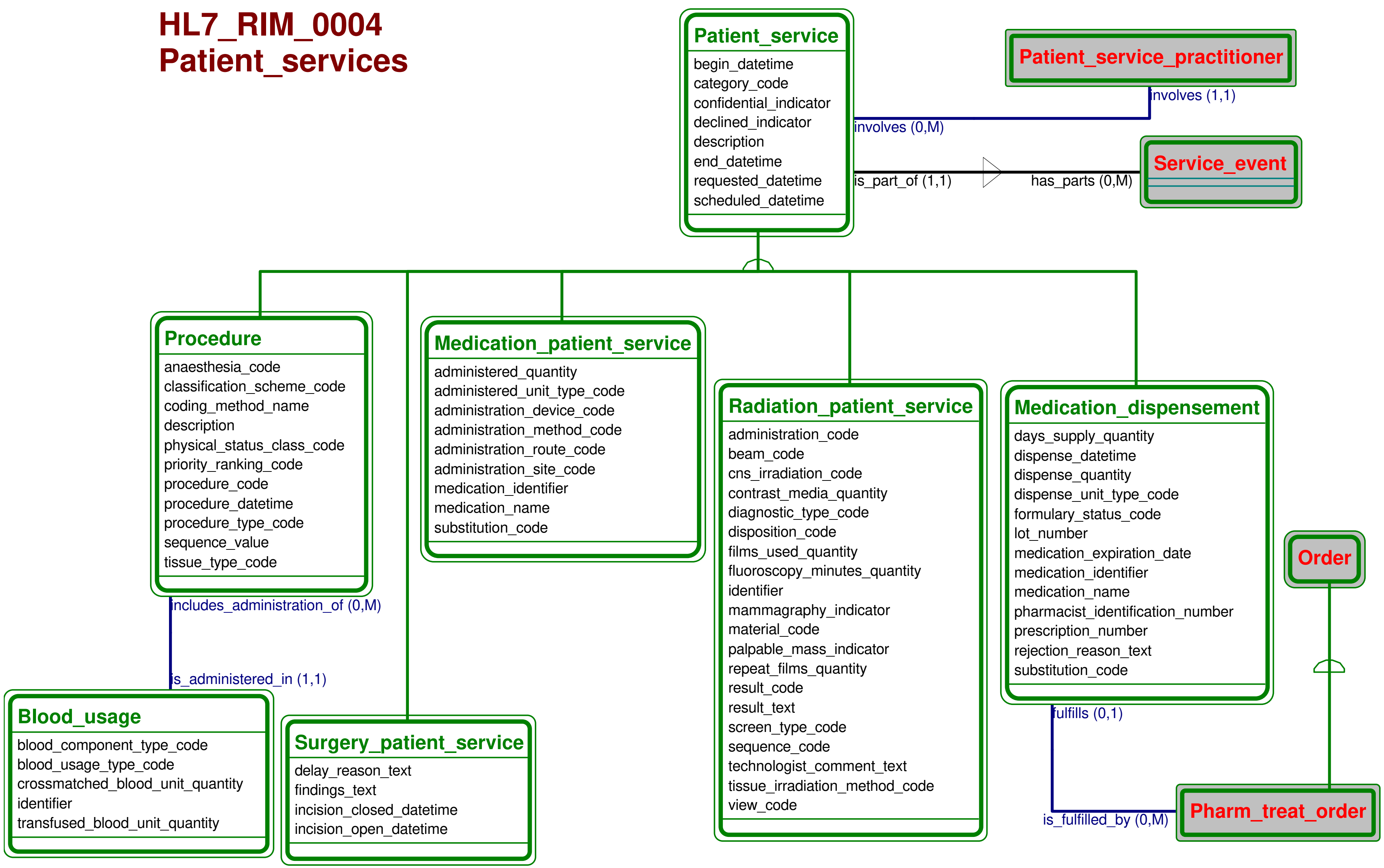


HL7_RIM_0004 Patient_billing_accounts

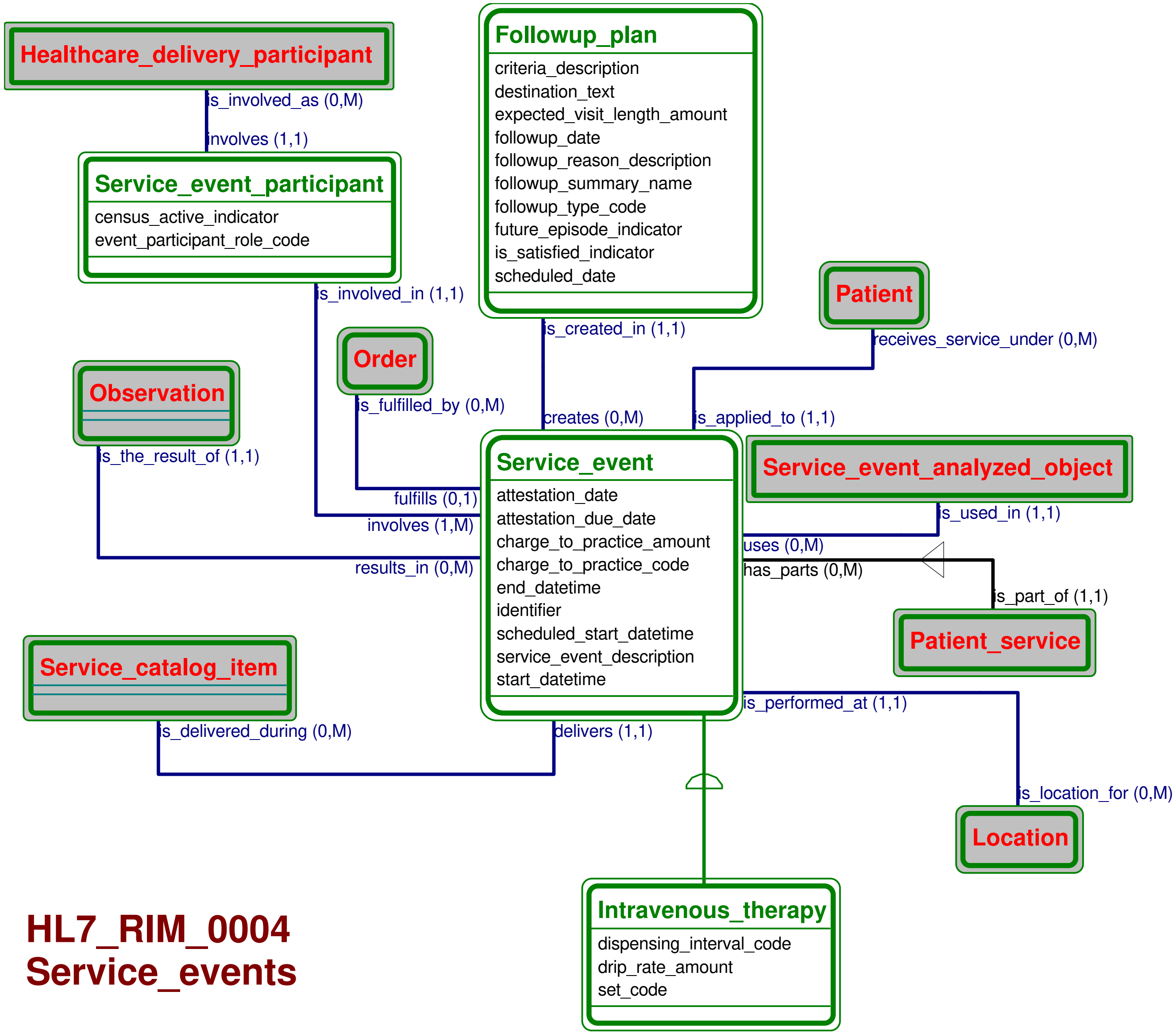




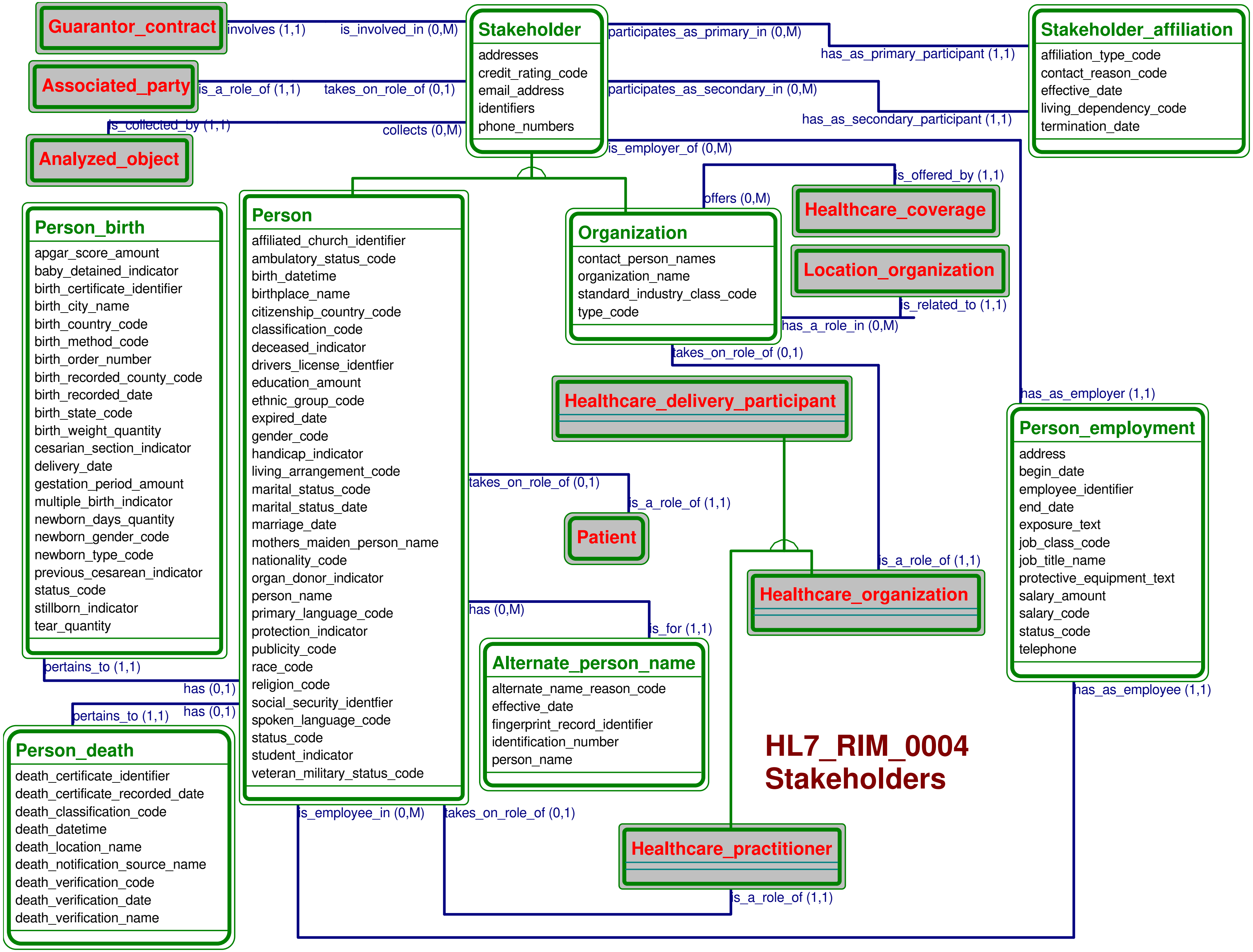
HL7_RIM_0004
Patient_encounters



HL7_RIM_0004
Patient_services
Patient_service
begin_datetime
category_code
confidential_indicator
declined_indicator
description
end_datetime
requested_datetime
scheduled_datetime
Patient_service_practitioner
involves (1,1)
involves (0,M)
Service_event
is_part_of (1,1)
has_parts (0,M)
Procedure
anaesthesia_code
classification_scheme_code
coding_method_name
description
physical_status_class_code
priority_ranking_code
procedure_code
procedure_datetime
procedure_type_code
sequence_value
tissue_type_code
Medication_patient_service
administered_quantity
administered_unit_type_code
administration_device_code
administration_method_code
administration_route_code
administration_site_code
medication_identifier
medication_name
substitution_code
Radiation_patient_service
administration_code
beam_code
cns_irradiation_code
contrast_media_quantity
diagnostic_type_code
disposition_code
films_used_quantity
fluoroscopy_minutes_quantity
identifier
mammagraphy_indicator
material_code
palpable_mass_indicator
repeat_films_quantity
result_code
result_text
screen_type_code
sequence_code
technologist_comment_text
tissue_irradiation_method_code
view_code
Medication_dispensement
days_supply_quantity
dispense_datetime
dispense_quantity
dispense_unit_type_code
formulary_status_code
lot_number
medication_expiration_date
medication_identifier
medication_name
pharmacist_identification_number
prescription_number
rejection_reason_text
substitution_code
Order
includes_administration_of (0,M)
is_administered_in (1,1)
Blood_usage
blood_component_type_code
blood_usage_type_code
crossmatched_blood_unit_quantity
identifier
transfused_blood_unit_quantity
Surgery_patient_service
delay_reason_text
findings_text
incision_closed_datetime
incision_open_datetime
fulfills (0,1)
is_fulfilled_by (0,M)
Pharm_treat_order



HL7_RIM_0004
Service_events



Guarantor_contract
involves (1,1)
is_involved_in (0,M)
Stakeholder
addresses
credit_rating_code
email_address
identifiers
phone_numbers
participates_as_primary_in (0,M)
has_as_primary_participant (1,1)
participates_as_secondary_in (0,M)
has_as_secondary_participant (1,1)
Stakeholder_affiliation
affiliation_type_code
contact_reason_code
effective_date
living_dependency_code
termination_date
Associated_party
is_a_role_of (1,1)
takes_on_role_of (0,1)
is_collected_by (1,1)
collects (0,M)
Analyzed_object
is_employer_of (0,M)
is_offered_by (1,1)
offers (0,M)
Healthcare_coverage
Location_organization
is_related_to (1,1)
has_a_role_in (0,M)
Person_birth
apgar_score_amount
baby_detained_indicator
birth_certificate_identifier
birth_city_name
birth_country_code
birth_method_code
birth_order_number
birth_recorded_county_code
birth_recorded_date
birth_state_code
birth_weight_quantity
cesarian_section_indicator
delivery_date
gestation_period_amount
multiple_birth_indicator
newborn_days_quantity
newborn_gender_code
newborn_type_code
previous_cesarean_indicator
status_code
stillborn_indicator
tear_quantity
Person
affiliated_church_identifier
ambulatory_status_code
birth_datetime
birthplace_name
citizenship_country_code
classification_code
deceased_indicator
drivers_license_identfier
education_amount
ethnic_group_code
expired_date
gender_code
handicap_indicator
living_arrangement_code
marital_status_code
marital_status_date
marriage_date
mothers_maiden_person_name
nationality_code
organ_donor_indicator
person_name
primary_language_code
protection_indicator
publicity_code
race_code
religion_code
social_security_identfier
spoken_language_code
status_code
student_indicator
veteran_military_status_code
Organization
contact_person_names
organization_name
standard_industry_class_code
type_code
takes_on_role_of (0,1)
has_as_employer (1,1)
Healthcare_delivery_participant
takes_on_role_of (0,1)
is_a_role_of (1,1)
Patient
is_a_role_of (1,1)
Healthcare_organization
Person_employment
address
begin_date
employee_identifier
end_date
exposure_text
job_class_code
job_title_name
protective_equipment_text
salary_amount
salary_code
status_code
telephone
has (0,M)
is_for (1,1)
Alternate_person_name
alternate_name_reason_code
effective_date
fingerprint_record_identifier
identification_number
person_name
pertains_to (1,1)
has (0,1)
pertains_to (1,1)
has (0,1)
has_as_employee (1,1)
Person_death
death_certificate_identifier
death_certificate_recorded_date
death_classification_code
death_datetime
death_location_name
death_notification_source_name
death_verification_code
death_verification_date
death_verification_name
is_employee_in (0,M)
takes_on_role_of (0,1)
Healthcare_practitioner
is_a_role_of (1,1)
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Stakeholders