**Entities**

medical\_device (serial\_number, description)

actuator (serial\_number)

serial\_number: FK (medical device)

sensor (serial\_number)

serial\_number: FK (medical device)

low\_period (s\_week\_day, s\_time\_zone, s\_date\_time, e\_week\_day, e\_time\_zone, e\_date\_time)

high\_period (s\_date\_time, e\_date\_time)

PAN (domain, phone\_number)

patient (NHS\_number, name, address)

municipality (digit\_code, name)

**Weak entities**

settings (week\_day, time\_zone, date\_time, value, serial\_number)

serial\_number: FK (actuator)

readings (week\_day, time\_zone, date\_time, serial\_number)

serial\_number: FK (sensor)

pairs (name, value, week\_day, time\_zone, date\_time, serial\_number)

week\_day, time\_zone, date\_time, serial\_number: FK (readings)

**Relationships**

connects (serial\_number, s\_week\_day, s\_time\_zone, s\_date\_time, e\_week\_day, e\_time\_zone, e\_date\_time, domain)

serial\_number: FK (medical\_device)

s\_week\_day, s\_time\_zone, s\_date\_time, e\_week\_day, e\_time\_zone, e\_date\_time: FK (low\_period)

domain: FK (PAN)

wears (NHS\_number, s\_week\_day, s\_time\_zone, s\_date\_time, e\_week\_day, e\_time\_zone, e\_date\_time, domain)

or

wears (domain, s\_week\_day, s\_time\_zone, s\_date\_time, e\_week\_day, e\_time\_zone, e\_date\_time, NHS\_number)

NHS\_number: FK (patient)

s\_week\_day, s\_time\_zone, s\_date\_time, e\_week\_day, e\_time\_zone, e\_date\_time: FK (low\_period)

domain: FK (PAN)

lives\_with (NHS\_number1, NHS\_number2, s\_date\_time, e\_date\_time)

NHS\_number1: FK (patient)

NHS\_number2: FK (patient)

s\_date\_time, e\_date\_time: FK (high\_period)

lives\_in (NHS\_number, digit\_code, s\_date\_time, e\_date\_time)

NHS\_number: FK (patient)

domain: FK (municipality)

s\_date\_time, e\_date\_time: FK (high\_period)

