Section C

HL7 Data Types
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Basic Types

- BL Boolean
  - true or false

- TS Time Stamp
  - YYYYMMDDhhmmss.SSS+/-hhmm
  - Optional Precision and Timezone

- INT and REAL

- ST String
Null Flavors (9 Different Ways to Say “I don’t know”)

- NI - No Information
- UNK - I don’t Know
  - ASKU - I asked but still don’t know
  - NASK - I don’t know and didn’t ask
  - NAV - Temporarily Not available
- NA - Not Applicable
- OTH - Not in allowed Range
  - PINF - Positive Infinity
  - NINF - Negative Infinity

Supported on all data types
Identifiers

- II - Instance Identifier

- Two required parts:
  - Extension: locally unique identifier
  - Root: part to make it globally unique
    - Uses either an ISO Object Identifier or a UUID
  - Extension may be omitted
Codes

- CD - Concept Descriptor, supports post-coordination
- CV - Coded Value, no support for post-coordination
- CE - Coded Element, no alternate codes

Two required parts:
- code: identifies concept
- codeSystem: an OID identifying the coding system

Think of code as an identifier for a concept in a code system
- code is like extension
- codeSystem is like root
PQ - Physical Quantity

Used to record most measurements; two main parts:
- Value - records the measurement
- Unit - records the units

PQ is like a vector with magnitude (value) and direction (unit)

Two PQs can be operated on mathematically according to those rules with a few exceptions
Dates and Times

- **IVL_TS** - Interval of Time
- **EIVL_TS** - Event driven Interval of Time
  - Morning, noon, night, meals, sleeping, etc.
- **PIVL_TS** - Periodic Intervals
  - BID (twice a day), TID (three times a day), Q12H (every twelve hours), Q6H (every six hours), etc.
  - Phase can be specified (starting at 9:00 am)
  - Duration can be specified (for twelve minutes)
- **GTS** - General Timing Specification
  - Supports every Monday at 1:00 pm and every Wednesday at 11:00 am between Labor day and Memorial day
Communications

- **TEL - Telecommunications Address**

- Based upon URLs
  - `http:` - the Web
  - `mailto:` - e-mail
  - `tel:` - telephone numbers
  - `im:` - instant messaging
ADD supports address with multiple parts
- streetAddressLine (can repeat)
- city
- state
- postalCode
- country
- county
Names

- PN - Personal Name
  - prefix
  - given
  - family
  - suffix

- Appears in display order

- Western concepts of “first” and “middle” are equivalent to “given”
  - My second given name is my middle name

- Other attributes of names and name parts can be specified
  - e.g., Preferred, Legal, Alias, or Birth names; type of prefix/suffix (academic or professional)
Collections

- BAG - collection with unordered members that can repeat
- LIST - collection with ordered members that can repeat
- SET - collection with unordered members that cannot repeat
- IVL - interval
  - A range (set contained) between two quantities
### Additional Resources

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