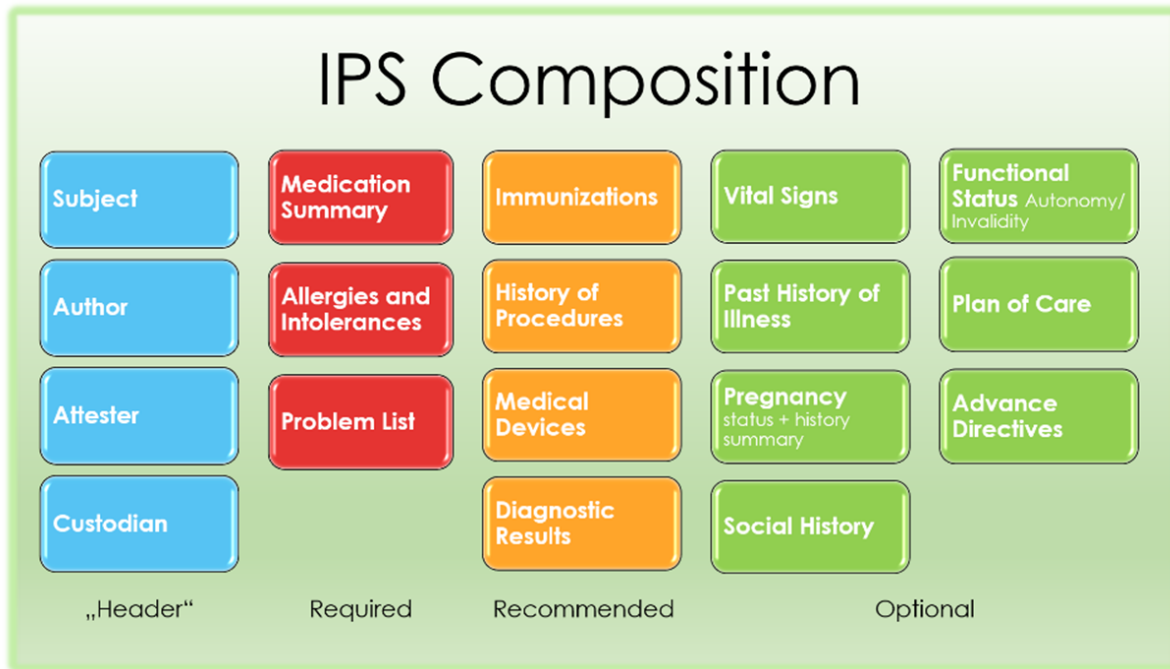# GELLO and the FHIR4 based International Patient Summary (IPS)

As has been stated previously GELLO is model agnostic. The International Patient Summary (IPS) is a health summary structure for patients who may need health care in another country.

It has the usual resources according to the '80/20 rule' .

The following diagram is taken from the home page for it located at https://hl7.org/fhir/uv/ips/ipsStructure.html

It is an ISO standard avail in Australia as **AS ISO 27269:2022**

A gello model can be made compatible with it and the FHIR4 structure it inherits. This in turn allows CDS script to run against IPS files.

Instance data has been built for the purposes of this demonstration but the model and the data are not shown here in the interests of brevity.

The following two examples show the GELLO editor script and results for two gello file executions.

First lets just see a text based view of the data, returned as a tuple:

and lets ask if their renal function is ok:

FHIR4.gello_model | renalFailure_IPS.gello ×

```gello
1  imports FHIR4 /* International Patient Summary */
2  Context Bundle
3
4  Let observations: Sequence(Observation)  = entry.resource.Observation->flatten()
5  Let recentCreatinine: Observation
6                  = observations->select(o|o.code.coding.first().code.value='14682-9')
7                       ->sortedBy(effectiveDateTime.value).last()
8  Let raised : Boolean = recentCreatinine.valueQuantity.unit.value = 'umol/L'
9              and
10             recentCreatinine.valueQuantity.value > 100
11 -------------------
12 Tuple{
13     Creatinine = recentCreatinine.valueQuantity.value.toChar()
14              + ' ' + recentCreatinine.valueQuantity.unit.value,
15     Raised = raised,
16     Comment = If raised
17              then 'Consider chronic kidney disease.'
18              else ''
19              endif
20     }
```

Results Explorer

Name	Class	Data
⊞ _Context_	Bundle	<Bundle: TRTTIClone_Bundle>
⊞ observations[8]	Sequence(Observation)	Sequence{<Observation: TRTTIClone_Observa...
⊞ recentCreatinine	Observation	<Observation: TRTTIClone_Observation>
raised	Boolean	true
⊟ _Result_	Tuple	<Tuple>
Creatinine	String	125 umol/L
Raised	Boolean	true
Comment	String	Consider chronic kidney disease.