Playing all the right notes: improving medication reconciliation

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- *Medicines reconciliation is of critical importance when patients are admitted to hospital or discharged back to Primary Care. Electronic messaging can make this task easier and safer and new developments are underway to coordinate this across all organisations and in all 4 Nations in the UK.*

Key Messages

- What is medicines reconciliation?
- Why is it important
- Current plans
- ECS and SCR
- Way forward
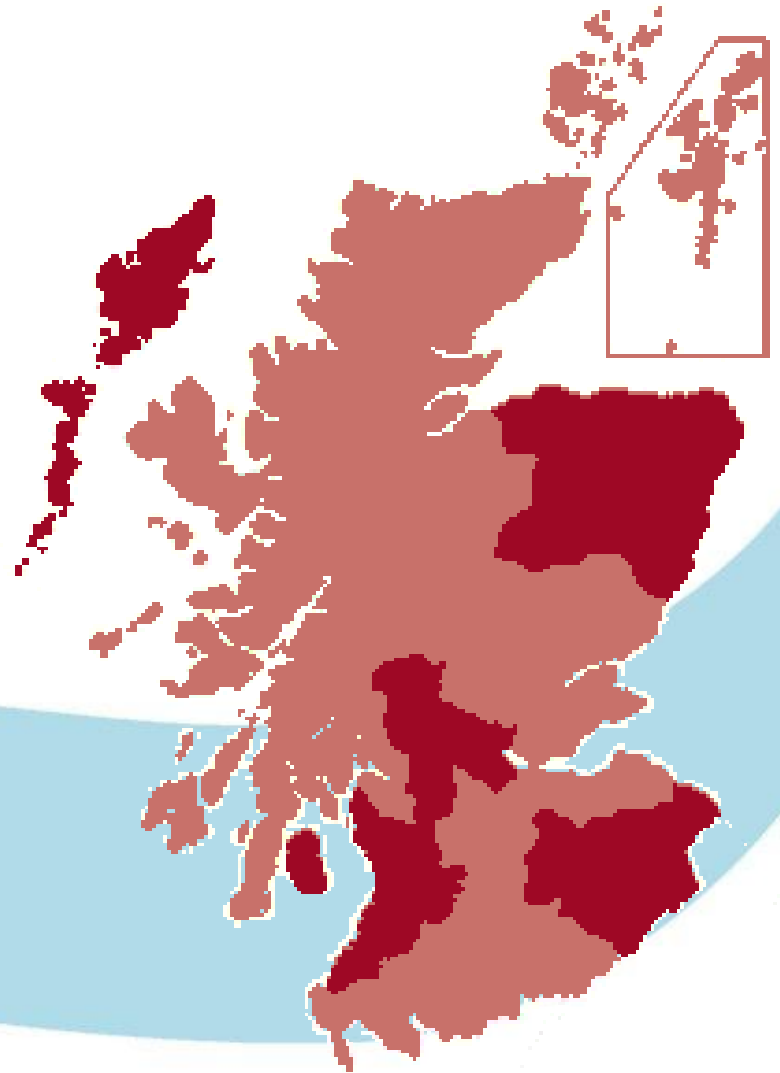
Historical Background

- GP records – Read codes, drug dictionaries, formularies, acutes, repeats, 'just in case'.
- Nursing – extended prescribers, specialist prescribers, palliative care
- Psychiatric clinics, CPNs
- Drug clinics, sexual health clinics, pharmacy
- Community prescribers – paper or individual developments
- Each designed by separate teams
- Similar, but not identical message content
- None of them interchangeable

Secondary Care

- Need structured messages
- Need to define common medication standards
- Allergies and adverse reactions
- GP2GP leading the way
- Need a way of maintaining any new requirements rather than inventing even more ways of doing things

MEDICINE PRESCRIPTION SHEET

KEY: O ORAL   SL SUBLINGUAL   PR PER RECTUM
      IM INTRAMUSCULAR   ID INTRADERMAL   PV PER VAGINA
      IV INTRAVENOUS   INH INHALATION   IT INTRATHECAL
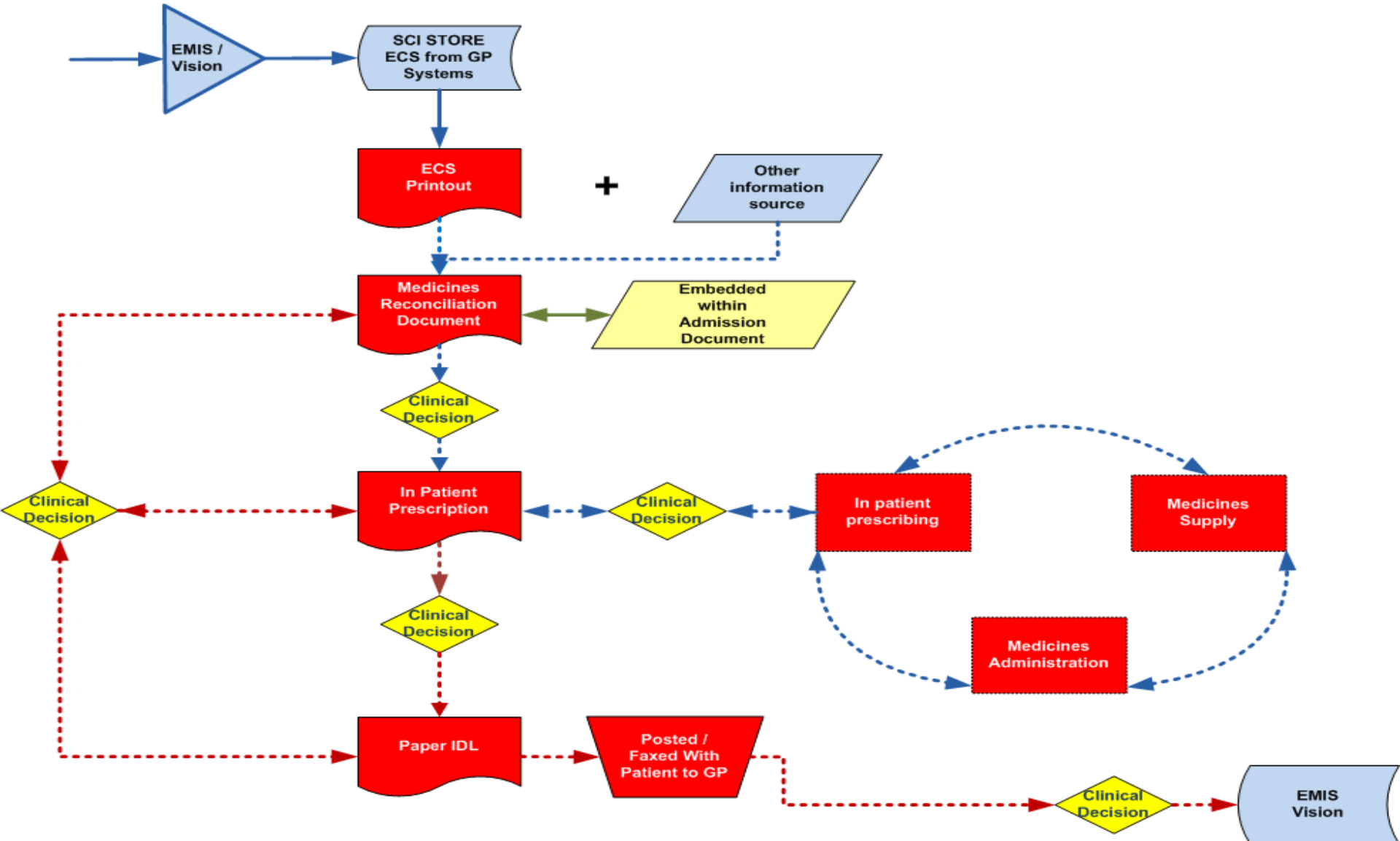   SC SUBCUTANEOUS   NEB NEBULISED

	KNOWN SENSITIVITY	
No. _____	1.	2.
Ip _____	SUSPECTED ADVERSE REACTION	
B. _____	MEDICINE	ADVERSE EFFECT
	1.	
pt. _____	2.	

PHARM.	Date Commenced	APPROVED NAME OF MEDICINE	DOSE	TIMES OF ADMINISTRATION								OTHER	ROUTE (see key)	OTHER INSTRUCTIONS	DOCTOR'S SIGNATURE	DISCONTINUED	
				4 am	6 am	10 am	12 pm	2 pm	6 pm	8 pm	12 pm/11 pm					DATE	INITIAL
		PETHIDINE	70 mg										IM		CSL	15/1	
		STEMETIL	12.5 mg										IM			16/1	
		COPROXAMOL	2 tab		PRN PAIN								O			14/1	
		PREDNISOLONE	20 mg										O			9/1	
		GLICLAZIDE	160 mg										O				
		GLICLAZIDE	80 mg										O				
		~~ZOCOR~~											O			8.1	
		FINASTERIDE	5 mg										O				
		PRAVASTATIN	10 mg										O				
		METFORMIN											PO				
		METFORMIN	500 mg										PO				
		Tramadol	50 mg			PRN pain							O			14/1	
		BUSCOPAN	20 mg										O			14/1	
		BRUFEN	300 mg										O			15/1	
		DF-118	30-60 mg		PRN								O				
		LACTULOSE	20 ml										oral				
		VOLTAROL	50 mg										O				
		SENNA	2 tab										O				

Paper Based

A wider issue..

- Medication 'muddle' is replicated for all clinical content
  - Not unique to NHS Scotland!

- Ineffective 'clinical content' standards development
  - unresponsive to projects, vendor requests
  - which are forced to bypass 'standards' process

- Unsustainable
  - Re-duplication of clinical requirements gathering
  - Impedes and delays information sharing efforts

"I am playing all the right notes"…

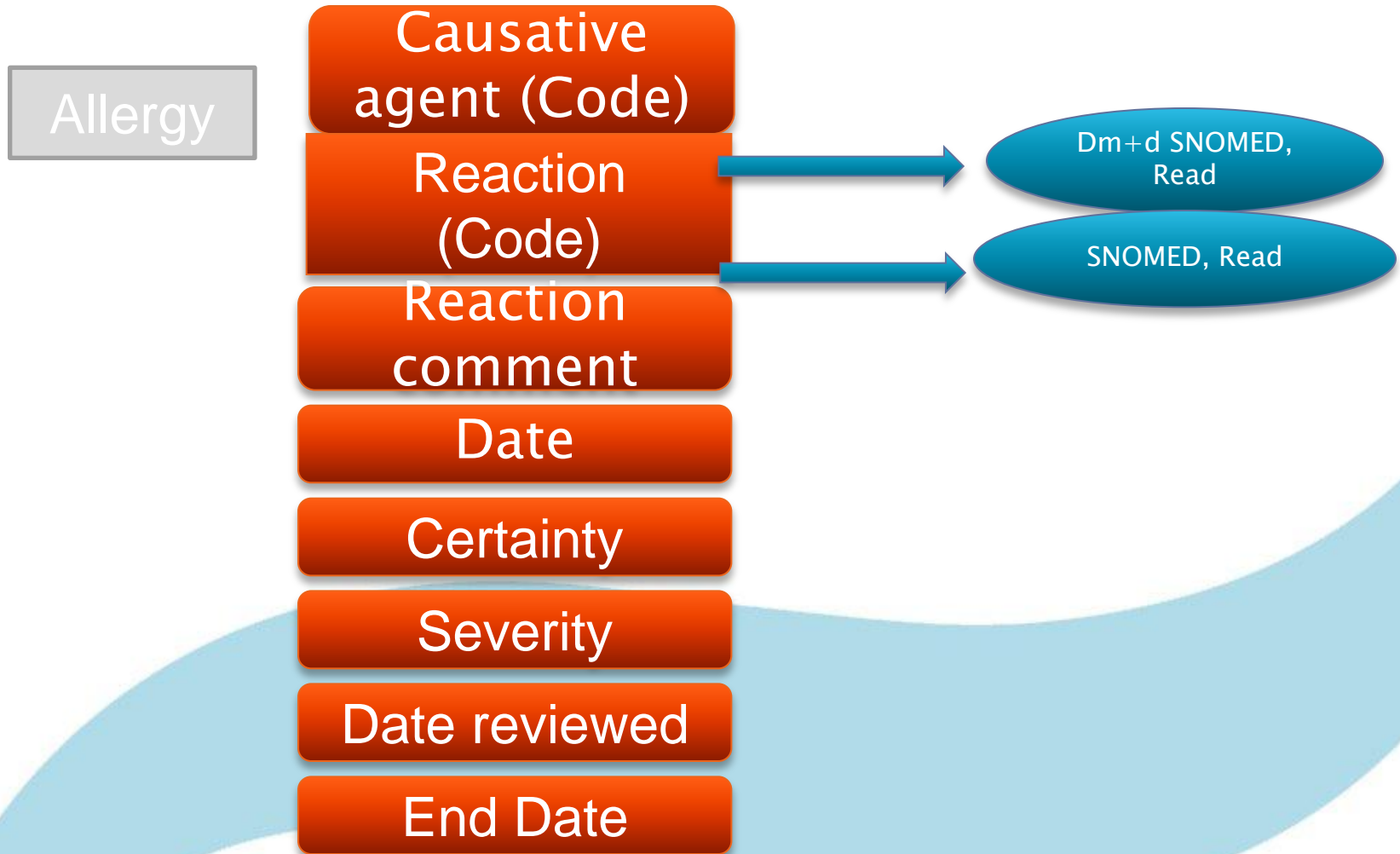- "but not necessarily in the right order"."

Clinical content definition is not a technical problem

- Clinical content standards must underpin sharing of computable information

- Clinical practices and needs often overlap and sometimes contradict
  - alignment can only be achieved by communication and discussion by all stakeholders
  - evolution is the norm and must be managed
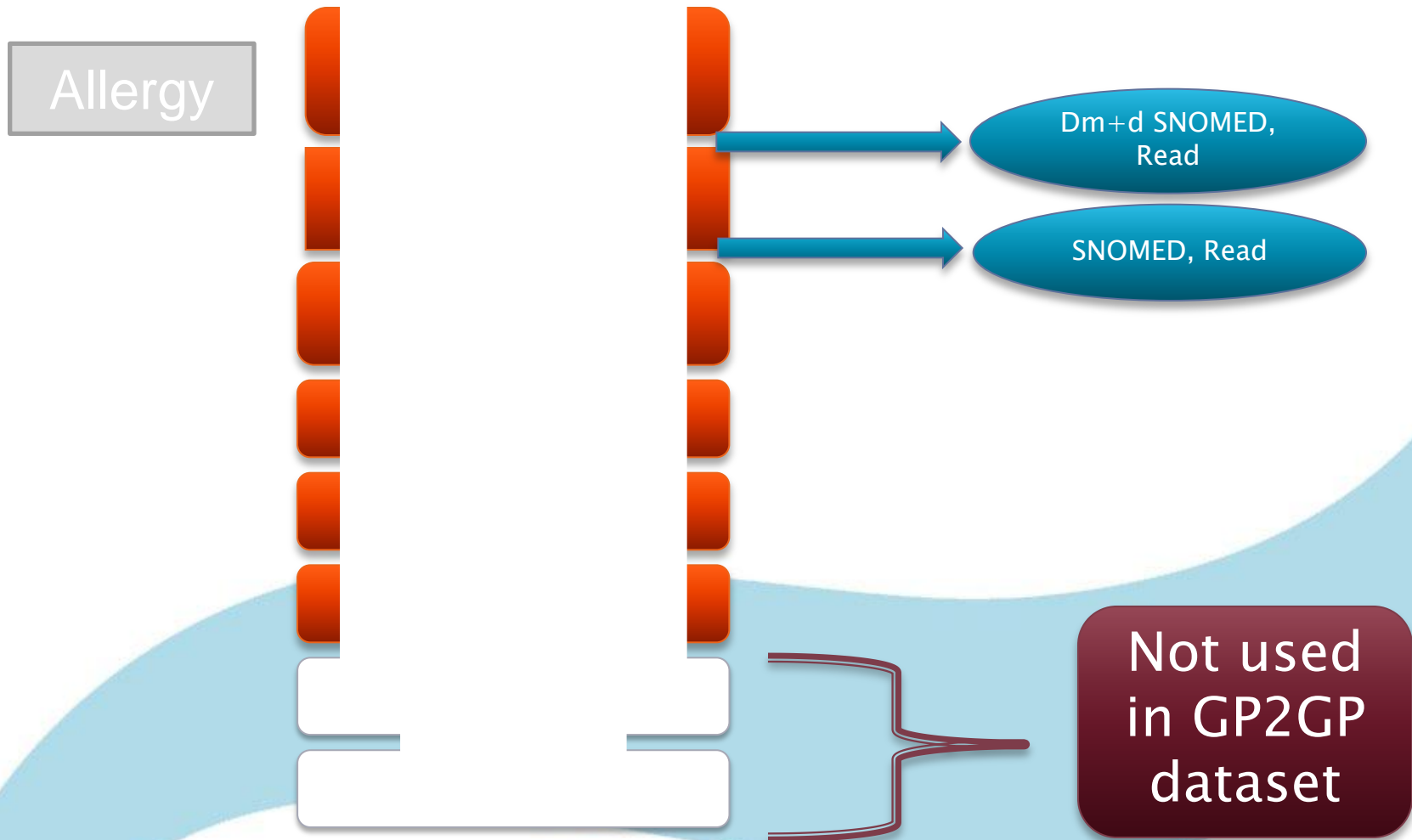
Medication 'archetypes'

eHealth

Better eHealth: Better Care

Medication Item		CLUSTER.MedicationItem.v1.1.1draf
Element	**Description / Notes**	**Technical / Termset**
Medication Product	**Mandatory** medication name, form and strength, coded using dm+d terms where possible, allowing plain text for historical or patient reported items	MedicationName CD **1..1**
	e.g."Citalopram tab 20mg" Consider CUI display formatting	dm+d VMP,AMP terms preferred
Dosage Instructions	Multiple dosage and administration instructions, including Dose, Frequency, Route and Site. Currently expressed as plain text but the ED datatype allows for more complex structured instructions using the CfH Dose Syntax	DosageInstructions ED 0..*
	e.g. "I tablet at night"	
Additional Instructions	Multiple additional dosage or administration instructions as plain text.	AdditionalInstructions ST 0 .. *
	e.g. "Omit morning dose on day of procedure"	
Dispensing Instructions	Multiple plain/structured text to record complex dispensing arrangements, particularly for Controlled Drug instalment dispensing.	DispensingInstructions ED 0..*
	e.g. "Dispense weekly"	
Controlled Drug Schedule	The internal dm+d number indicating the controlled Drug schedule which applies to this medication.	ControlledDrugSchedule INT
	e.g. "0" = No controlled drug status	0 = No controlled drug status 1 = Schedule 1 (CD Lic) 2 = Schedule 2 (CD) 3 = Schedule 2 (CD Exempt Safe Custody) 4 = Schedule 3 (CD No Register) 5 = Schedule 3 (CD No Register Exempt Safe Custody)

"Maximal dataset" Allergy archetype

Allergy

Causative agent (Code)

Reaction (Code) → Dm+d SNOMED, Read

→ SNOMED, Read

Reaction comment

Date

Certainty

Severity

Date reviewed

End Date

Allergy for GP2GP

Allergy

Dm+d SNOMED, Read

SNOMED, Read

Not used in GP2GP dataset

eHealth

Better eHealth: Better Care

A Plan

- Technical standards
  - High-level, strategic choices
    - SNOMED, dm+d, Ensemble, HL7, CDA, openEHR
- Professional standards
  - e.g. Royal colleges
  - High-level clinical assurance
  - 'Endorse' emerging e-standards
 - **Web based tools for collaboration and development**

"What? So you're going to send me all the way back there ... *again* , just to say 'O.M.G.'?"
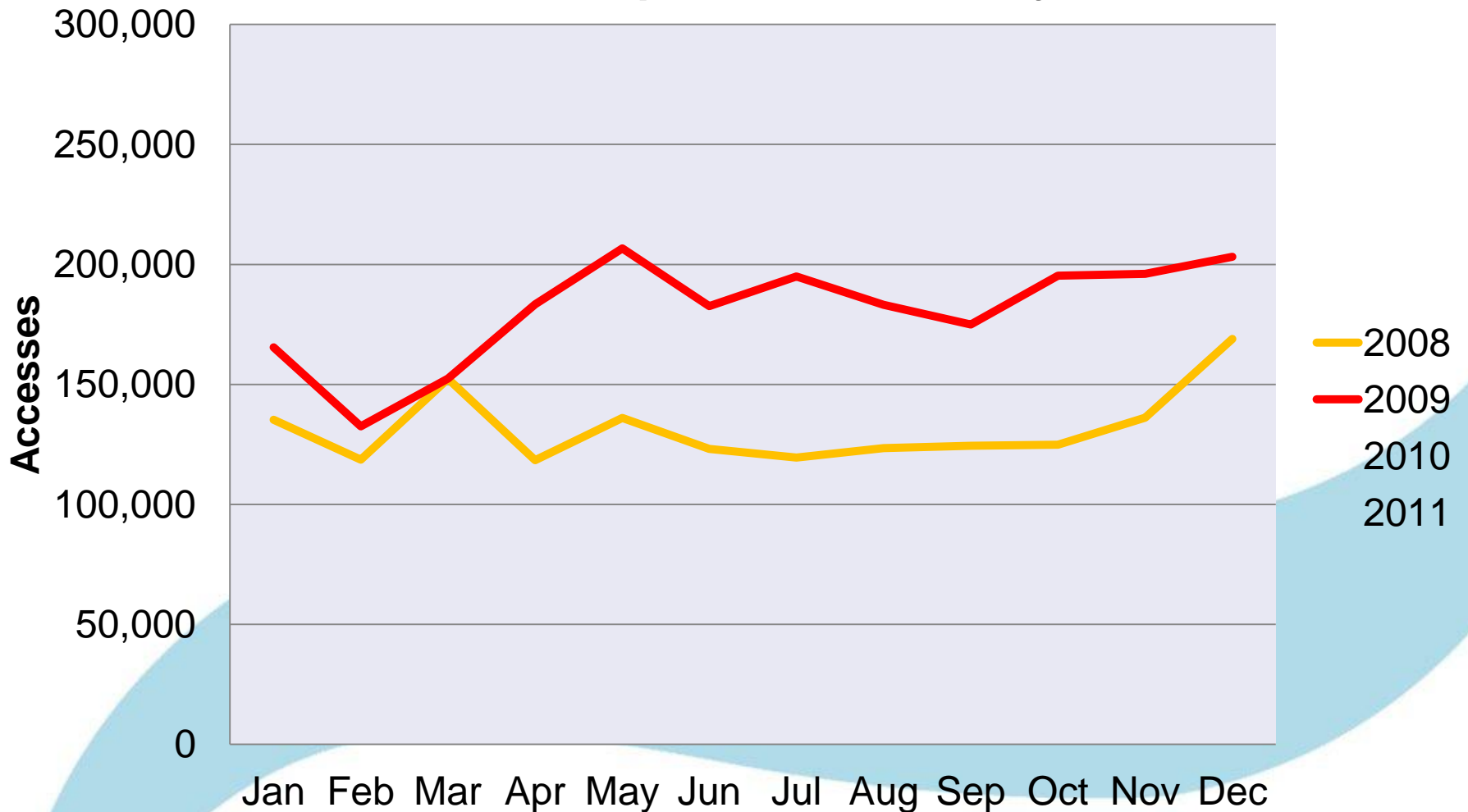
What is ECS?

- Emergency Care Summary
- Patient information is extracted from GP Practice computer systems
- Sent to ECS store twice daily
- **Explicit Consent** to view ECS record
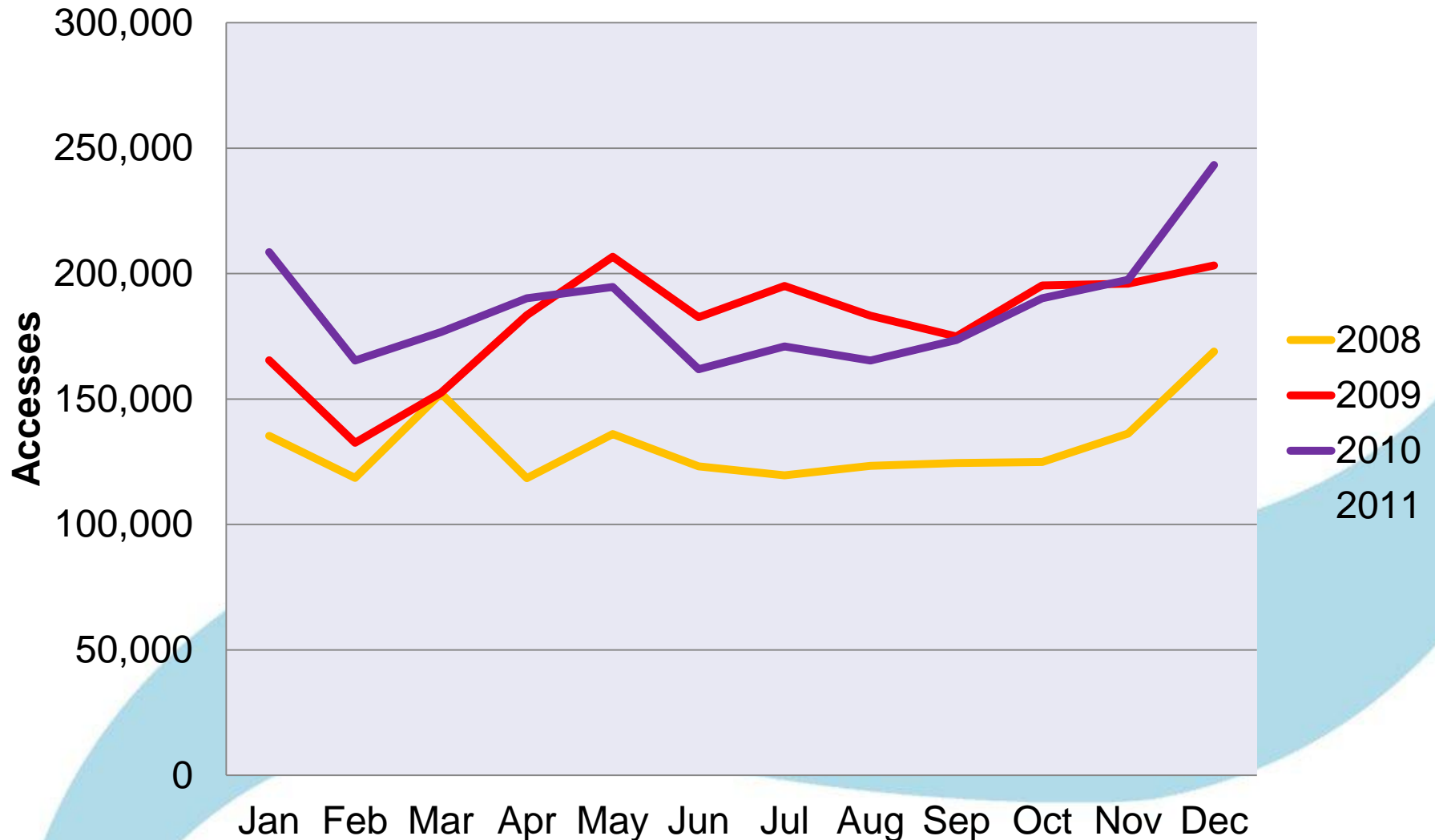- The information is 'Read only' and available to Emergency Care Providers
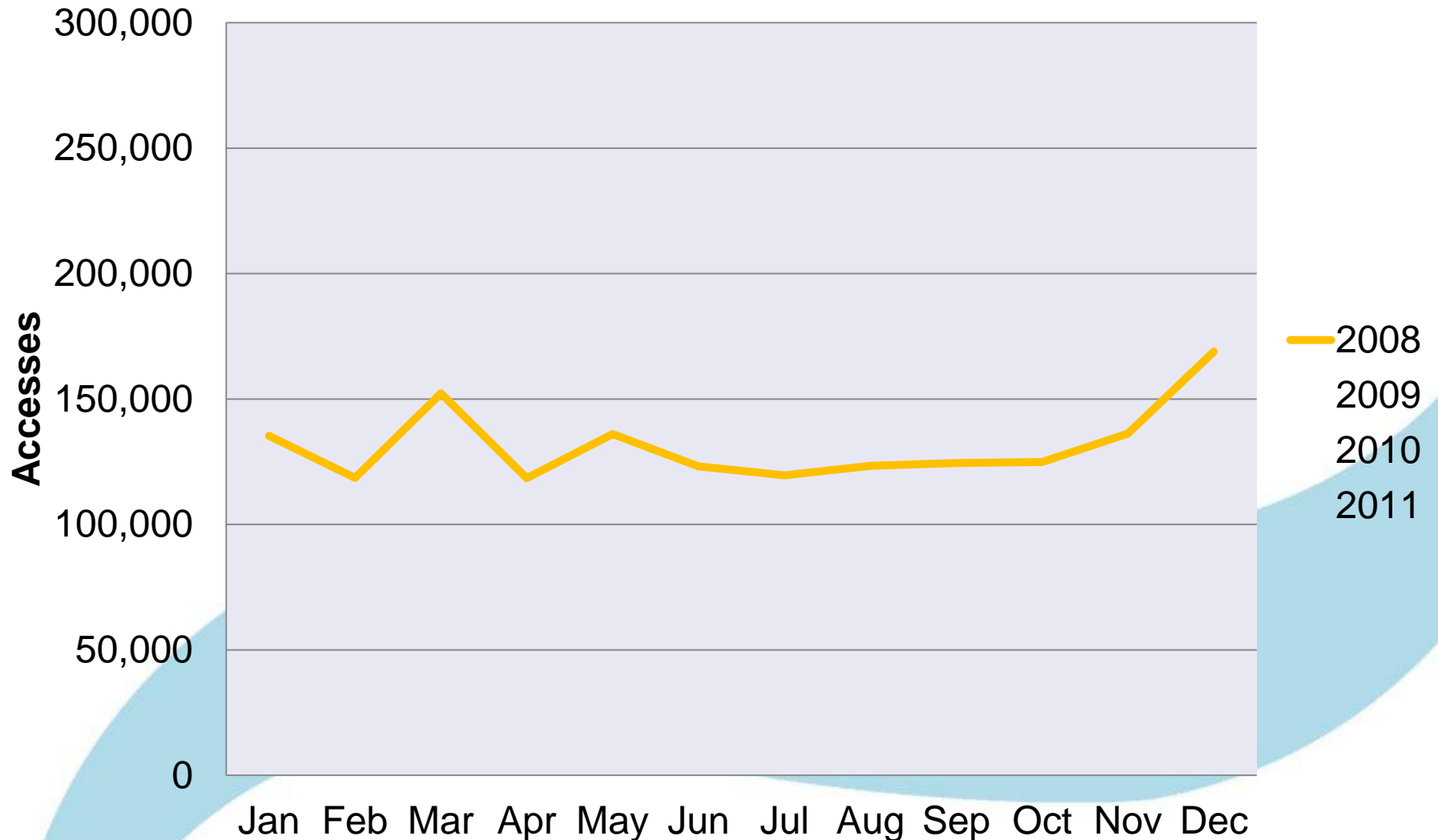
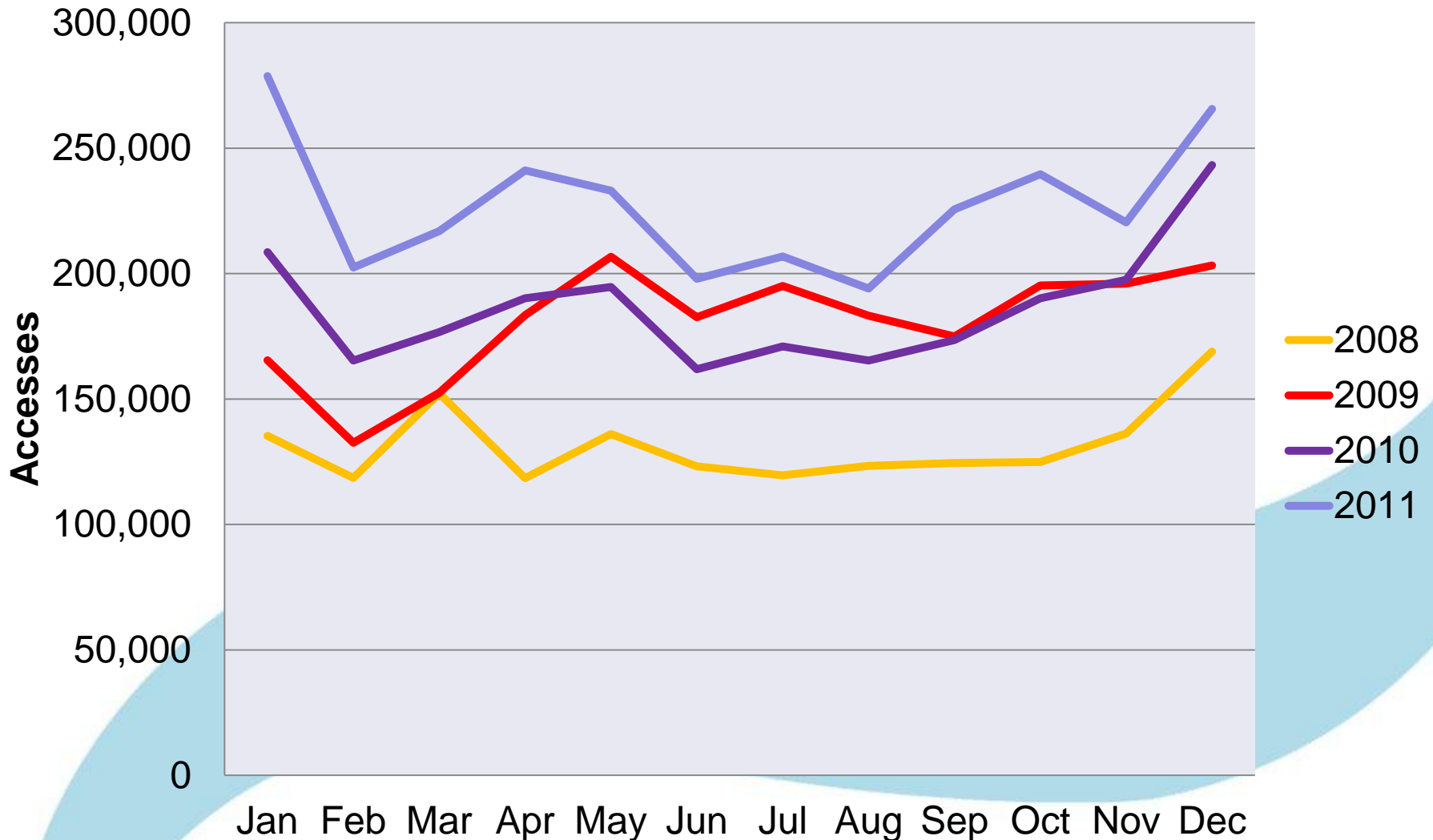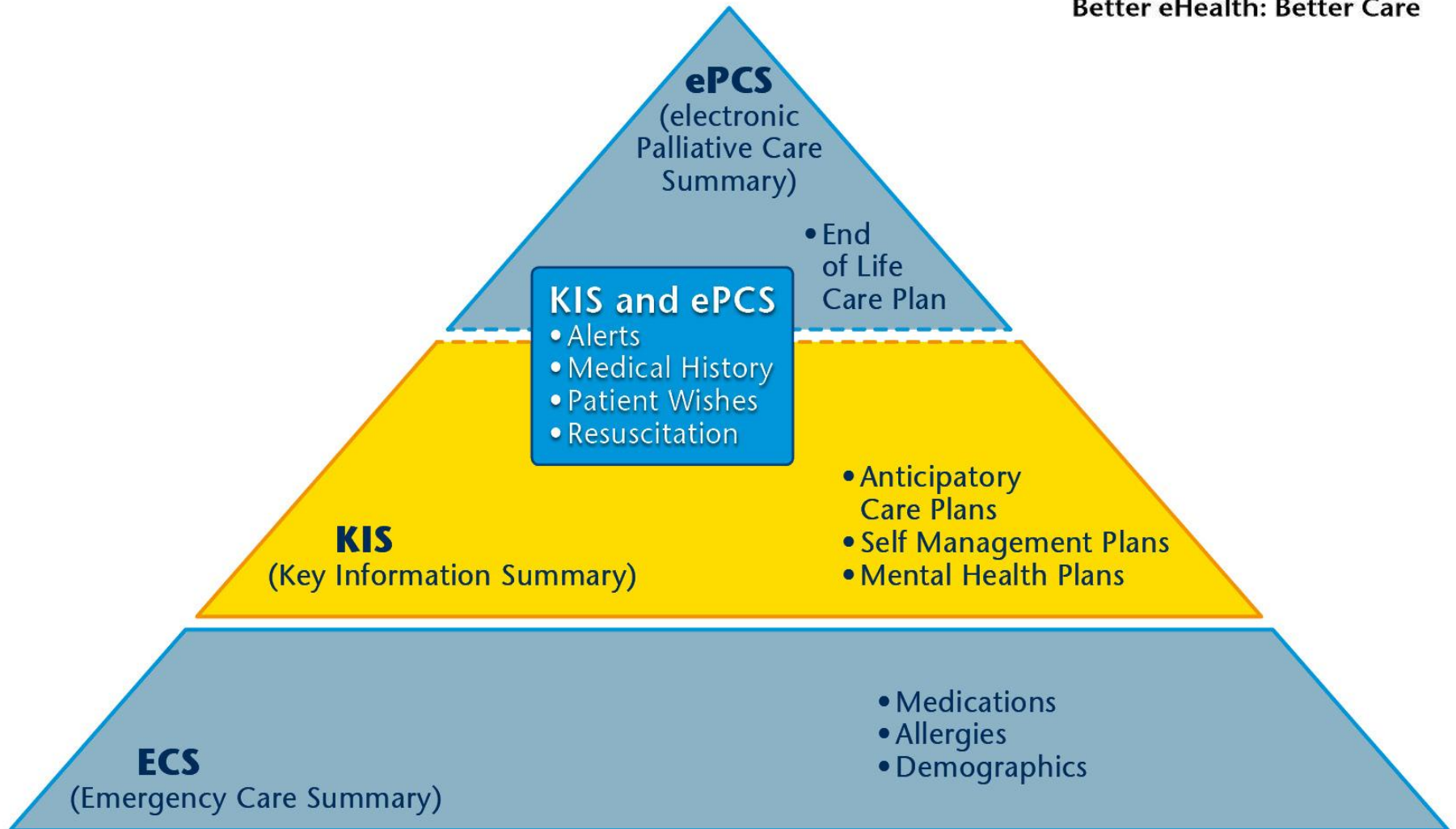**Year on Year Comparison of Monthly Totals**

Year on Year Comparison of Monthly Totals

Incremental steps

- Discussions
- Emergency Care Summary
- Palliative Care Summary
- Key Information Summary
- Aims to replace paper based faxing of "Special Notes" from GP Practices
- Better than 'the whole record'
- Structured information and summary box

eHealth
Better eHealth: Better Care

ePCS (electronic Palliative Care Summary)
• End of Life Care Plan

KIS and ePCS
• Alerts
• Medical History
• Patient Wishes
• Resuscitation

KIS (Key Information Summary)
• Anticipatory Care Plans
• Self Management Plans
• Mental Health Plans

ECS (Emergency Care Summary)
• Medications
• Allergies
• Demographics

Key Information Summary

- Contains:
  - Diagnosis and Problems
  - Contact / Carer details
  - Anticipatory Care details
- Information only sent with patient consent (in line with Palliative Care Summary)
- *Where possible, information is already captured in GP Systems*

Summary

- Medications and allergies standard
  - Front-line clinical and vendor engagement
  - Web-based collaborative tools
- Clinical content standards
  - Are vital to the aspirations of eHealth programs