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The Pathology Data Landscape
'An Overview'

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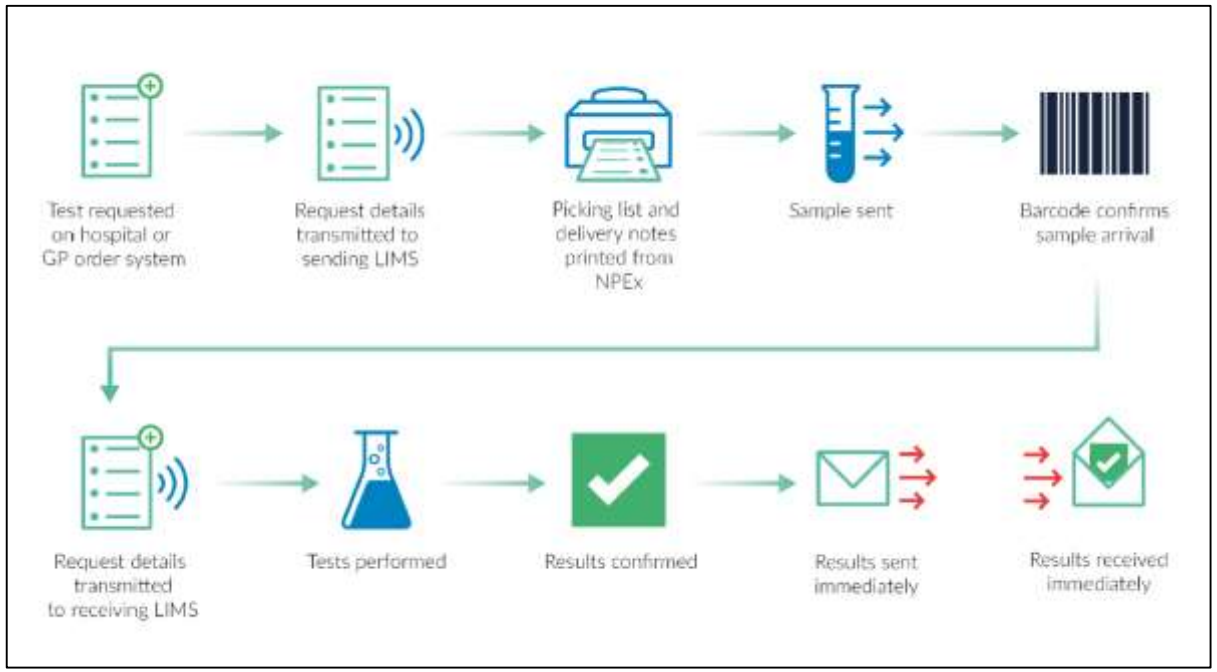
Overview of NPEx (Context / Overview)

- NPEx is connected to approximately 130 laboratories across the United Kingdom and France
  - Of these around 100 laboratories are using NPEx in a production environment, the other laboratories are in the process of deployment. NPEx has now been mandated for all NHS Laboratories as part of the Covid-19 response.
  - The high level process of requesting and resulting is summarised in the diagram below.



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Areas of Sub-Committee Interest (Monitoring / Inconsistencies)?

- NPEx is an enabler for lab-to-lab communications and is there to enhance often pre-existing business processes and relationships in order to reduce costs and improve patient safety through digitisation
- NPEx does not exist to control and restrict lab-to-lab processes through the enforcement of standards
- That said, NPEx is keen to support improvements in a number of areas
  - Units of Measure - the codes which are used to specify the scale associated with any numeric value
  - Test codes - the codes which are used to specify the requested or reported test
  - Specimens – the specimens that are tested
  - Reference ranges - the normal range of values associated with a numeric test result which can be used to indicate abnormality
  - Discipline – around 60% of NPEx traffic has an associated discipline code. These are not directly linked to the test itself as a complex discipline may request tests from other disciplines.

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Units of Measure (example for discussion)

- There appears to be good (though not perfect) consistency in that only numeric result types contain units of measure
  - The down side of this is that there are therefore many (>2m?) freetext results that include a value and a UoM, or that contain a value with no explicit UoM.
  - This is partly due to LIMS limitations (may not support numerics), so the result is provided as value + UoM in freetext.
- There is no pre-defined list of Units of Measure (UoM) within NPEx
  - The List of UoMs has been extracted from messages directly (there are some 235 UoMs!)
  - With some common sense rationalisation (such as removing leading/trailing spaces, ignoring capitalisation) this is reduced to 160 UoMs and most of these can be linked to NLMC-defined units
- In addition, these UoMs can be further reduced to base measures (such as volume/time, weight/vol).
  - This results in around 50 base measures, but with stronger clinical input, this could be reduced further.

Result Count	Units	Comments
1,211,471	AI	
451,221	kU/L	Should this be kAU/L?
398,947	kAU/L	
351,826	nmol/L	
268,336	mg/L	
244,861	u/mL	
238,923	g/L	
197,837		Space
180,738	iu/mL	
147,675	mm	
147,400	umol/L	
101,766	ug/g	
96,552	ug/L	
96,145	mmol/L	
88,967	kIU/L	Same as u/mL?
69,654	KUA/L	Should this be kAU/L?
60,086	%	
48,921	pmol/L	
46,062	mU/L	
41,233	x10^6/l	

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Thank you
Questions?

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