

Electronic Sample labelling

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Are all electronic systems the same?

• In one word

NO





More detail

- You are aiming at producing an on demand printed label which is printed an attached to the sample at the patient's bedside
- So the sample remains in the patient circle







Comparision 1

- EPR system
 - Allows patient details to be selected manually
 - Will print on demand printed labels
 - Will only print at printers on the nurses stations
 - So its not possible to label the sample at the patient bedside without pre-printing the labels
 - So NO better then an addressograph

OUH data shows EPR labelled WIBT rate to be 3.5%





Comparison 2

- Stand alone bedside system
 - Only obtains patient ID from the patient wristband
 - Will print on demand
 - Printers are portable and taken to the patient bedside
 - Print will only occur is less then a designed time since the patient wristband has been scanned
 - Encourages labelling at the bedside





- So when I argue for an electronic system I am talking about a bedside system
- NOT about an EPR system

Evidence – is manual not good enough

Summary paper in 2014 – Paula Bolton - Maggs

'Wrong blood in tube – potential for serious outcomes: can it be prevented?'

Table 1. Rates of WBIT in selected studies

Location	Rate of WBIT	Definition	Correction factor	References
UK, 27 hospitals	1 in 1303	Blood group not matching previous record	1.418	Murphy et al (2004)
International, 10 countries, 71 hospitals	1 in 1986	Blood group not matching previous record	1.6	Dzik <i>et al</i> (2003)
International, 122 institutions (95·1% USA)	1 in 2500	Blood group not matching previous record	None	Grimm et al (2010)





Electronic systems

- Many papers
- Turner et al (2003) 'Barcode technology: its role in increasing the safety of blood transfusion'
- Askeland et al (2009) Enhancing transfusion safety with an innovative bar-code-based tracking system. *Healthcare Quarterly*,





Other recommendations

• NHS QIPP – showcasing best practice!

 Oxford University Hospitals (2011) Electronic blood transfusion: improving safety and efficiency of transfusion systems. (updated 2013) Quality and Productivity: Proven Case Study. <u>http://arms.evidence.nhs.uk/resources</u> /qipp/29453/attachment





Guidelines

- BSH
 - 2014: Pre compatibility testing guidelines accept the on demand printed labels are safe and don't necessarily require a group check sample
 - 2014: included in Transfusion IT guidelines
- Netherlands
- Australian and New Zealand Society of Blood Transfusion





Recent studies

- Electronic patient identification for sample labeling reduces wrong blood in tube errors
- Kaufman et al
- Multi site study on WBIT rates in 20 institutes
- ' using electronic patient identification at the time of pretransfusion sample collection was associated with approximately five-fold fewer WBIT errors compared with using manual patient identification'





Finally OUH data

Manually labelled samples
WBIT rate : 1 in 10,510

- Electronically labelled samples
 - WBIT rate 1 in 29,775
 - We had no WBIT in 2018 (68,000 samples!)





Finally

- Like a manual system if the user doesn't follow protocol they can still get it wrong
- With an electronic system its much easier to do the right thing!
- There are also practical advantages to using electronic systems – not least the sample tubes are much easier to read so reducing the number of small typos made at data entry.