

Characteristics of IT systems which affect clinical risk?

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System and functional characteristics

Clinical dependency

Workaround availability

Detectability

Exposure

Complexity

Novelty

Clinical dependency

The more a system or function is relied upon, the greater the potential impact on care

The system...	Clinical decisions are...
Co-exists with care delivery	Independent of system
Influences care delivery	Supported by system
Guides care delivery	Steered by system
Drives care delivery	Reliant on system

It's not wrong to rely on a system but it does change the potential risk.

Workarounds

Can the information or function be accessed in the system by some other means?

Can the information be gleaned from sources that don't rely on the system?

Workarounds

Is the workaround realistic?

How obvious is it?

Is it overly time-consuming

Is it complicated?

Can it be easily communicated to users?

Might it have unwanted effects?

Will it divert the user's attention?

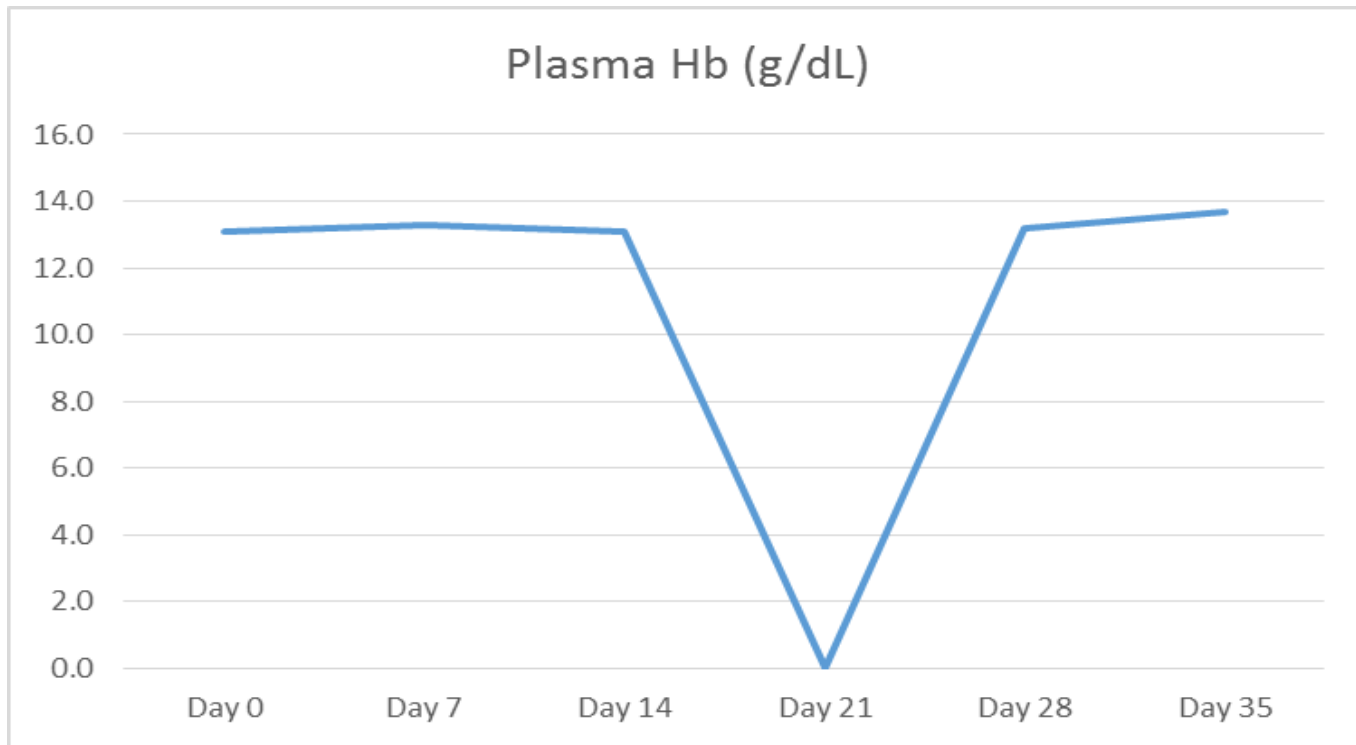
Detectability

A workaround is only realistic if the user can detect there is a problem.

	Detectable issue	Non-detectable issue
Absent information	+	++
Misleading information	++	+++

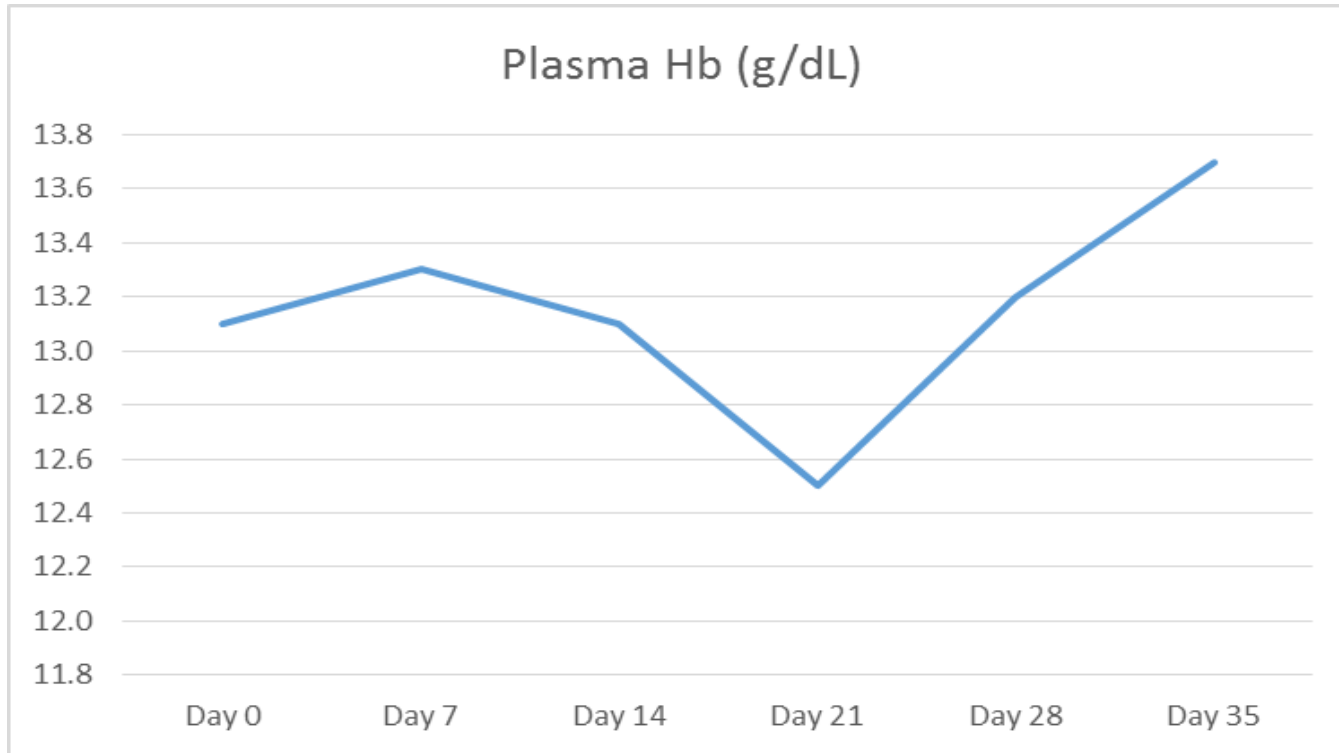
Health Information Systems: Managing Clinical Risk, Stavert-Dobson, AJ, Springer International Publishing, 2006, ISBN-10: 3319266101

Detectability



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Exposure

The more patients who are exposed to an issue the greater the risk

The number of users affected is a useful analogue

Some functions are used much more than others

Functions which affect multiple patients should be carefully examined

Complexity

Complex system are not necessarily unsafe but they do require careful assurance.

Consequences of an action may be difficult to predict

Analysing faults can be challenging. Has is been fixed?

Novelty

Novel systems or functions come with special challenges

- User unfamiliarity
- Lack of lessons learned
- Controls not established
- Control effectiveness is untested

Novelty can be related to implementation not just the product.

Why does this matter?

Dependency, workaround availability, detectability, exposure, complexity and novelty all influence risk

These characteristics are largely predictable

When things are predictable we have the opportunity to anticipate the degree of assurance rigour needed.

Questions?
