ACHIEVING REAL TIME MEDICATION ERROR SOLUTIONS THROUGH IT INTEGRATION

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Agenda

- Medication Error – Generic Background

- B. Braun Experience

- Project Management – Learned Best Practice with IT interaction

- EPR Example

- IT Integration Service

- Summary

MEDICATION ERROR

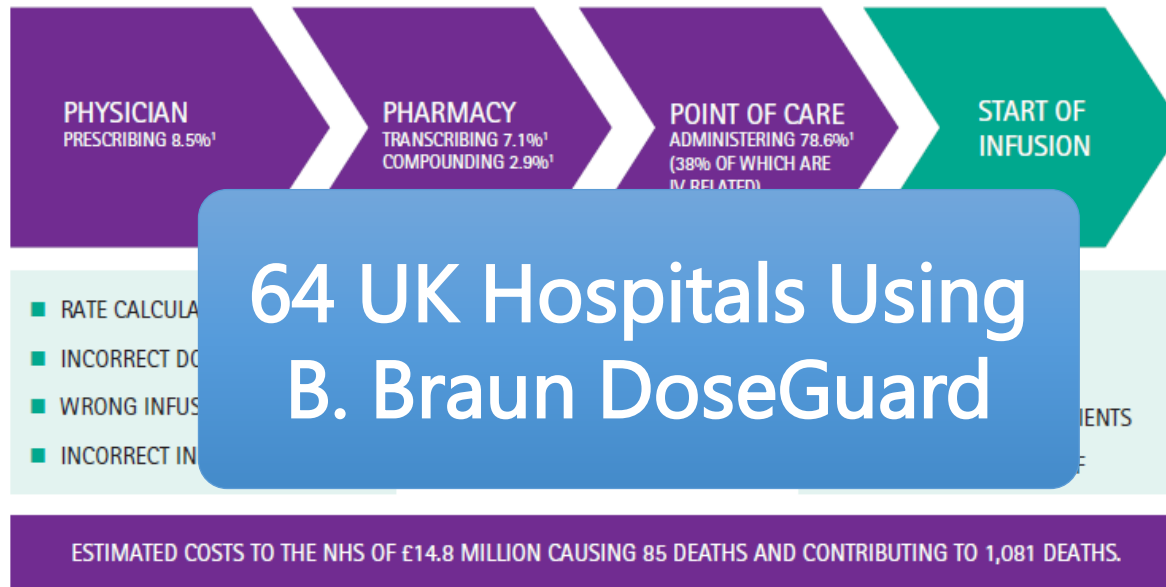# Medication Safety – A challenge to the NHS

- The medicines use process is quite complex, starting with prescribing, but also including dispensing, administration and monitoring, involving different healthcare professionals and other key players at each stage.

Why is the NHS giving it focus?

PHYSICIAN	PHARMACY	POINT OF CARE	START OF
PRESCRIBING 8.5%[1]	TRANSCRIBING 7.1%[1]	ADMINISTERING 78.6%[1]	INFUSION
	COMPOUNDING 2.9%[1]	(38% OF WHICH ARE IV RELATED)	

- RATE CALCULA...
- INCORRECT D...
- WRONG INFUS...
- INCORRECT IN...

64 UK Hospitals Using B. Braun DoseGuard

...IENTS

ESTIMATED COSTS TO THE NHS OF £14.8 MILLION CAUSING 85 DEATHS AND CONTRIBUTING TO 1,081 DEATHS.

[1]Elliott R, et al. (2018). Prevalence and Economic Burden of Medication Errors in The NHS in England. Rapid evidence synthesis and economic analysis of the prevalence and burden of medication error in the UK.

DoseGuard
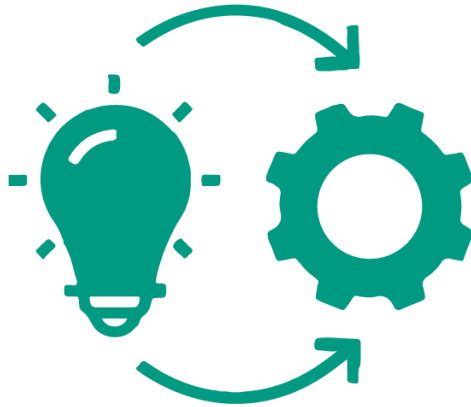

A combination of smart pump technology utilising standard concentrations of drugs reported a **73% reduction in administration errors[2]** relating to continuous infusion of medication

2 Standard Drug Concentrations and Smart-Pump Technology Reduce Continuous-Medication-Infusion Errors in Pediatric Patients
Gitte Y. Larsen, Howard B. Parker, Jared Cash, Mary O'Connell, MaryJo C. Grant

HARD LIMITS: Rate changes that **exceed** the set hard limits will be rejected.

SOFT LIMITS: Rate changes that **exceed** the set soft limit will trigger an alert and require confirmation before continuing.

Why Connect Infusion Devices to the Network?

DoseGuard gives you Real-Time visibility on -
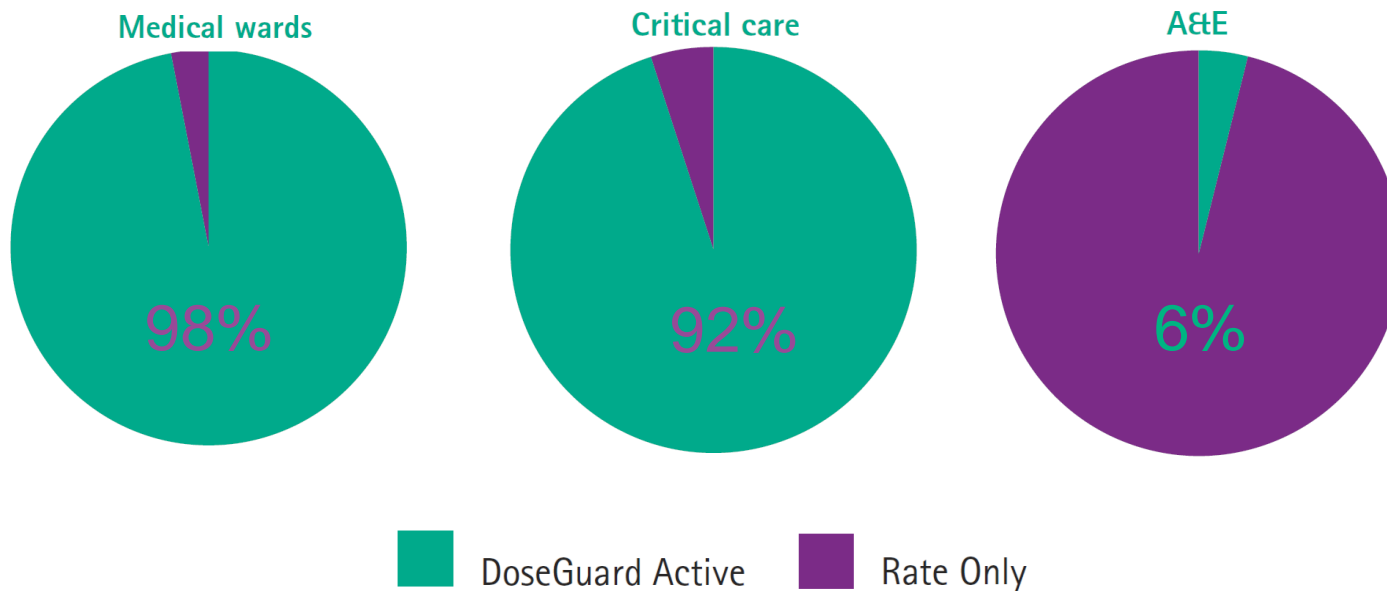

COMPLIANCE

Targeted Training

EFFECTIVITY

Patient and Nurse Safety

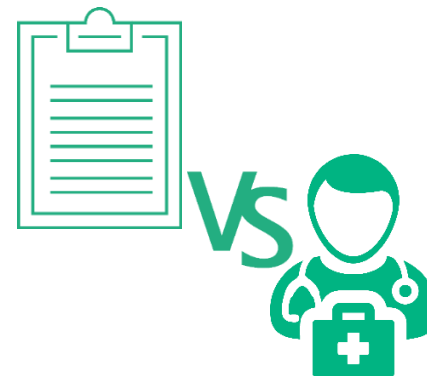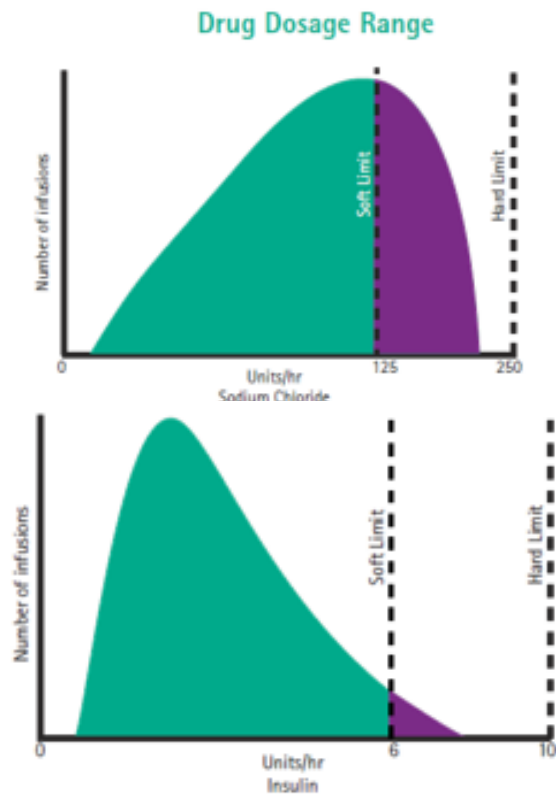**ERROR PREVENTION**

Fit for purpose

COMPLIANCE

Targeted Training

Medical wards

98%

Critical care

92%

A&E

6%

■ DoseGuard Active ■ Rate Only

EFFECTIVITY

Nurse and Patient Safety

Drug Dosage Range

POLICY
V
PRACTICE

ERROR PREVENTION

Fit for Purpose

12,000 networked Space pumps within the UK

Largest account has 2,200 individual wirelessly networked pumps

Drug Name

SUCCESSFUL IMPLEMENTATIONS

IT INTEGRATION SERVICE

Initial Engagement Process
- Helping to realise a concept / aspiration
- New concept / technology /application for NHS
- No specific role within NHS

Technical Assessments
- Provision & assessment of IT specifications
- Liaise with trust IT dept. & project lead

Proof of Concept / Commissioning
- Proof of Concept
- Implementation
- Post implementation support

SPACESTATION with SPACECOM

One interface for up to 24 pumps at the bedsite

Wired & wireless ethernet interface

Pump gets connected automatically

Single data protocol for workplace & single pumps

SINGLE PUMP WIRELESS CONNECTIVITY
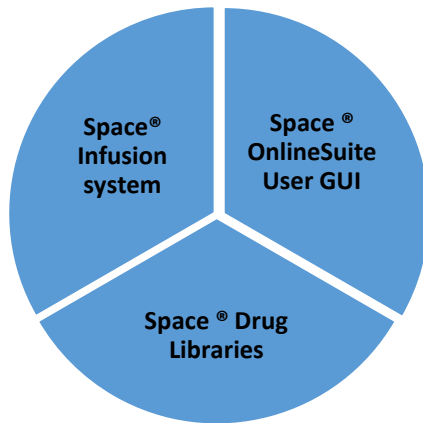

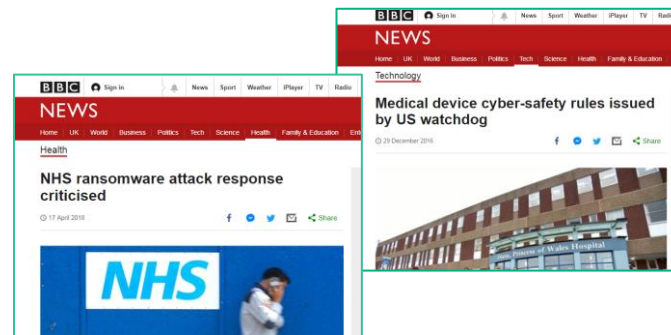| WLAN module integrated in battery module | Wireless connection during transport | Same interface protocol like Workplaces | Easy upgrade of existing pumps |

SYSTEM ARCHITECTURE - SECURITY

Space® Infusion system

Space® OnlineSuite User GUI
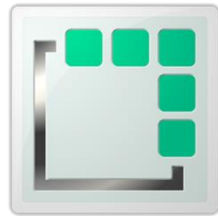
Space® Drug Libraries

B. Braun infusion devices never actually sit on the IT network. The interface units (LAN or WLAN) are connected to the network, and there is a CANBUS communication system between the Interface and the actual infusion device.

The firmware of the infusion devices does not have any content with regards to actually controlling the infusion pumps remotely

BBC NEWS — Health
NHS ransomware attack response criticised
17 April 2018

BBC NEWS — Technology
Medical device cyber-safety rules issued by US watchdog
29 December 2016

CONNECTIONS TO HOSPITAL INFORMATION SYSTEMS

IT INTEGRATION SERVICE

Initial Engagement Process

- Helping to realise a concept / aspiration
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- No specific role within NHS

SUMMARY –
TO ACHIEVE A REAL TIME ADMINISTRATION MEDICATION ERROR SOLUTION

- Multiple Stakeholder Engagement

- Planning

- Consultancy

- Confidence

Collaboration – Company/NHS Trust Team

THANK YOU, QUESTIONS?