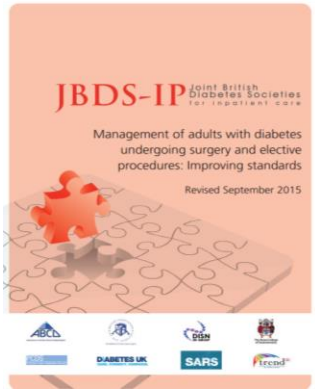
# Making Surgery Safer in Patients with Diabetes

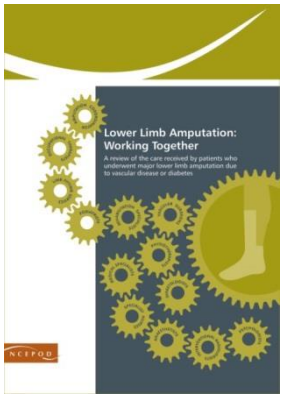
## An example of success through collaboration and integrated leadership

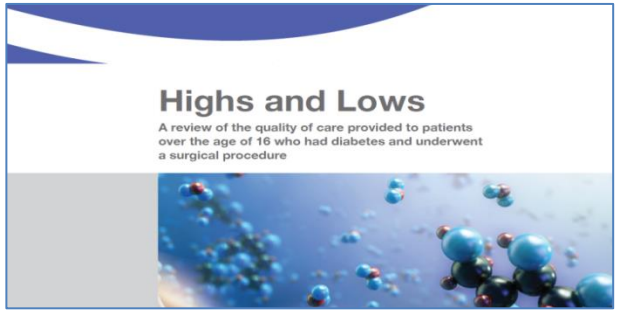
# National priority and patient need

- In-patients with diabetes = £10 billion
- 1 in 6 beds
- Surgical wards unsafe (NADIA 2010-18)





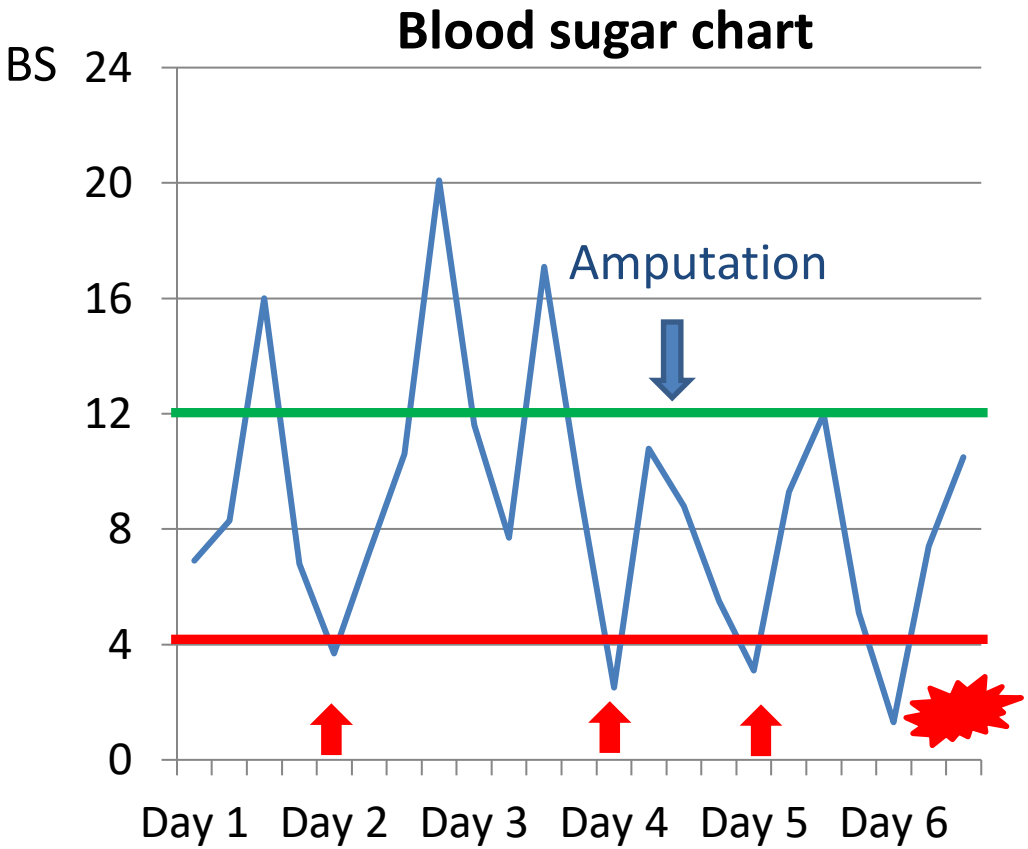


# What are the risks across the country for patients with diabetes on surgical wards?

| Patients with diabetes | Patient safety risk NaDIA 2018 |
|---|---|
| 1 in 3 | Medication error |
| 1 in 6 | Hypoglycaemia |
| 1 in 12 | Severe hypoglycaemia |

# Patient harm event




Type 1 diabetes patient

Recurrent hypoglycaemia not treated = **insulin error**

Day 6 – patient found comatose 02.00, BM 1.3.

# Patient harm

# Newcastle 2015

- Surgical wards unsafe
- High rates insulin errors and hypoglycaemia
- High patient harm events
- Inadequate planning and delivery high quality peri-operative care throughout pathway
- Inadequate handover
- Excessive length of stay

Primary care referral
Surgical outpatients
Pre-operative assessment
Hospital admission
Theatre and recovery
Post-operative care
Discharge



















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JBDS-II

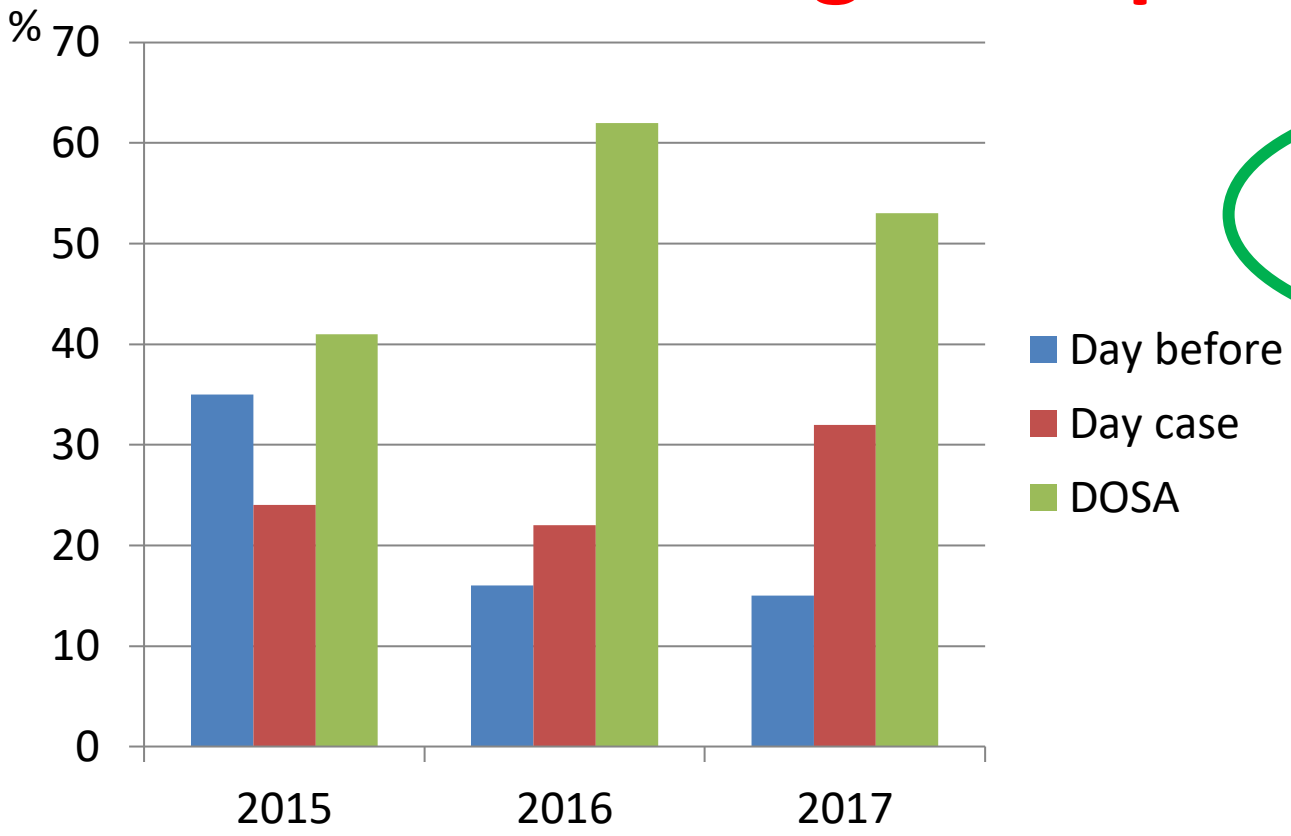

Surgical outpatients
Hospital admission
Theatre and recovery
Discharge
Primary care referral
Pre-operative assessment
Post-operative care


guidelines
Review + improve
Feedback
Education
Documentation

# Pre-operative planning

| | 2015 | 2017 |
|---|---|---|
| Peri-op plan | 34% | 82% |
| First third list | 48% | 64% |
| Hypo on admission | 14% | 0% |
| Hyper on admission | 58% | 1% |

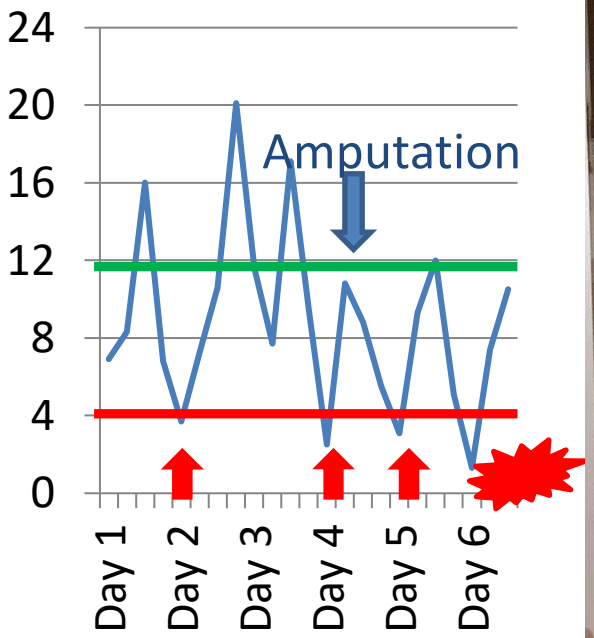
# Improved day of surgery admission rates for high risk patients




**£0.25 million in 3 years**

| Metric | Source and year of current report | Value | England | Position | Variation chart |
|---|---|---|---|---|---|
| Mean length of stay for patients with or without diabetes* | | | | | |
| Patients with diabetes | HES Apr 2016 - Mar 2017 | 8.80 | 8.44 | 84 of 136 |  |
| Patients with type 1 diabetes | HES Apr 2016 - Mar 2017 | 7.71 | 6.81 | 110 of 136 |  |
| Patients with type 2 diabetes | HES Apr 2016 - Mar 2017 | 8.91 | 8.60 | 80 of 136 |  |
| Patients without diabetes | HES Apr 2016 - Mar 2017 | 6.32 | 6.17 | 75 of 136 |  |
| Mean length of stay for patients with or without diabetes admitted for surgery* | | | | | |
| Patients with diabetes | HES Apr 2016 - Mar 2017 | 8.56 | 9.88 | 15 of 136 |  |
| Patients with type 1 diabetes | HES Apr 2016 - Mar 2017 | 8.95 | 9.85 | 44 of 136 |  |
| Patients with type 2 diabetes | HES Apr 2016 - Mar 2017 | 8.53 | 9.89 | 15 of 136 |  |
| Patients without diabetes | HES Apr 2016 - Mar 2017 | 6.70 | 6.84 | 64 of 136 |  |

# Making the connection…




# Electronic Whiteboard Alerts

| Alert | What for? | Intended Action |
|---|---|---|
|  | Active significant hypoglycaemia | Manage hypoglycaemia. **Reduce insulin** |
|  | Active hyperglycaemia | Consider **increasing insulin** (2 x BS > 12 in 24 hours, persistent or progressive hyperglycaemia) |
|  | Poor glycaemic control with hypoglycaemia | Review BS daily - **check insulin reduced** to avoid recurrence/patient harm |
|  | Poor glycaemic control with hyperglycaemia | Review BMs daily – **check insulin increased** if required |

# NaDIA: Surgical Ward Medication Errors

| | Newcastle Surgical 2016 | Newcastle Surgical 2017 | Newcastle Surgical 2018 | UK 2018 |
|---|---|---|---|---|
| Medication errors | 40.8% | 33.1% | 17.6% | 31.3% |
| Prescription errors | 10.2% | 10.1% | 7.4% | 19% |
| Management errors | 32.7% | 26.1% | 11.8% | 24% |
| Insulin errors | 30.6% | 24.6% | 10.3% | 22.7% |

**Guidelines**
**Education**
**DSN in-reach**

# Reduction in Patient Harm

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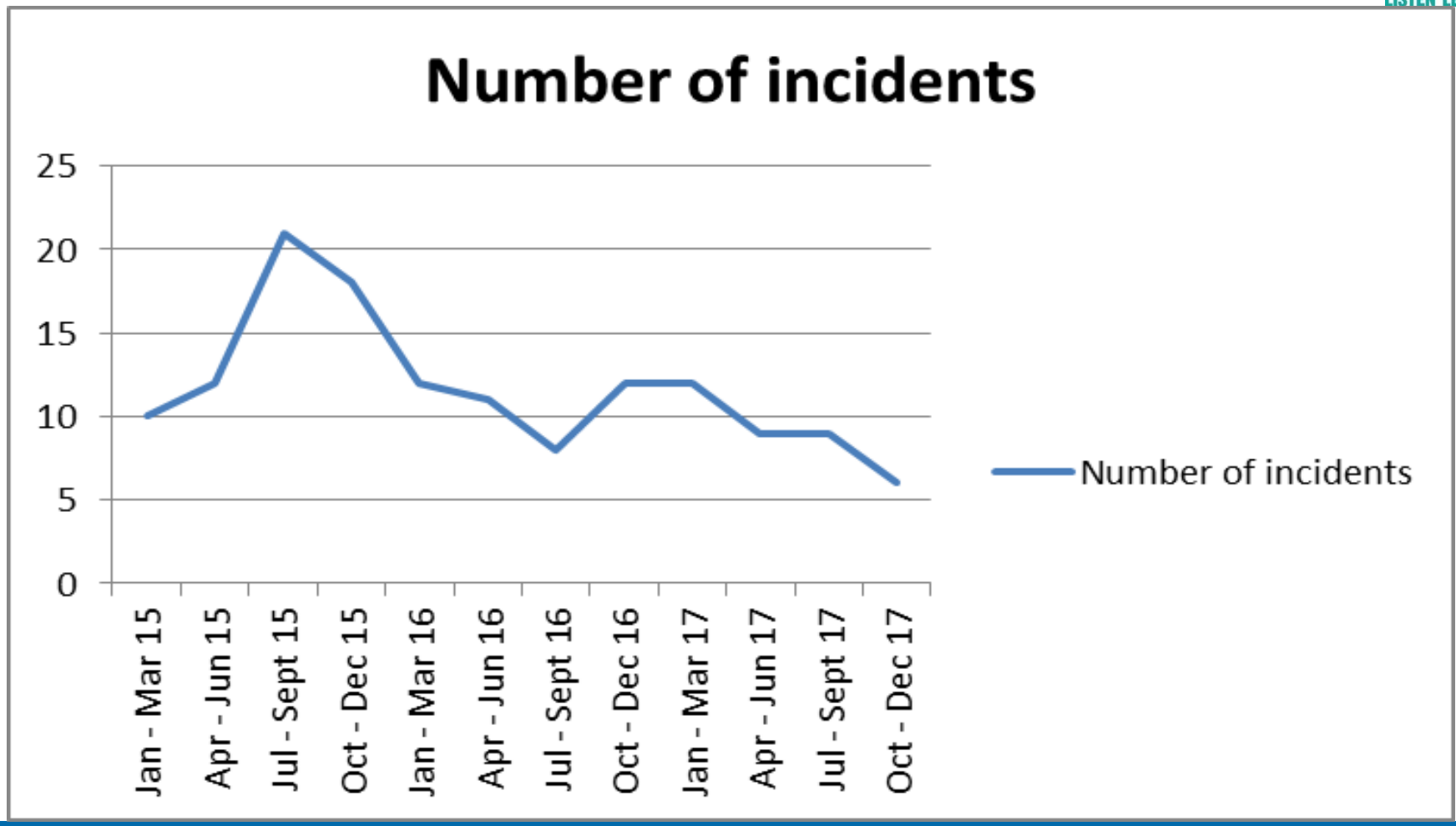

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# Patient Satisfaction

| | Newcastle Overall 2018 | Newcastle Medical Wards 2018 | Newcastle Surgery Wards 2018 | UK 2018 |
|---|---|---|---|---|
| Patient Satisfaction | 91% | 88% | 97% | 83% |

# How did we achieve success?

No specific hierarchy/ chair

Sub sections

Regular meetings/ alt sites

Colleague buy in championed by sub leader

Seeing positive results

# Why did we think it worked?

Commitment to each other

Drive and passion

Clear goals


Humour / enthusiasm

Respect and communication

# Where Next?

- Sharing good practice in regional networks
  - **T**raining and **E**ducation of **P**eri **O**perative **T**eams
- Extending focus diabetes at referral and discharge
- Surgery as a turning point for patients with diabetes


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