

**IHI Global Trigger Tool (GTT)  
for Measuring Adverse Events -  
The Hawke's Bay DHB Experience**



11<sup>th</sup> April 2014, National GTT Workshop

# Hawke's Bay GTT Team

Penny Pere, Service Improvement Manager, GTT Coordinator

John Gommans, Chief Medical Officer, Programme Sponsor

David Gardner, Physician

Ben Robertson, Pharmacist

Barb Ryan, Quality & Risk Coordinator

Sue Sinclair, Clinical Audit Coordinator

Mike Connolly, CNS Mental Health

Janine Palmer, CNS Renal

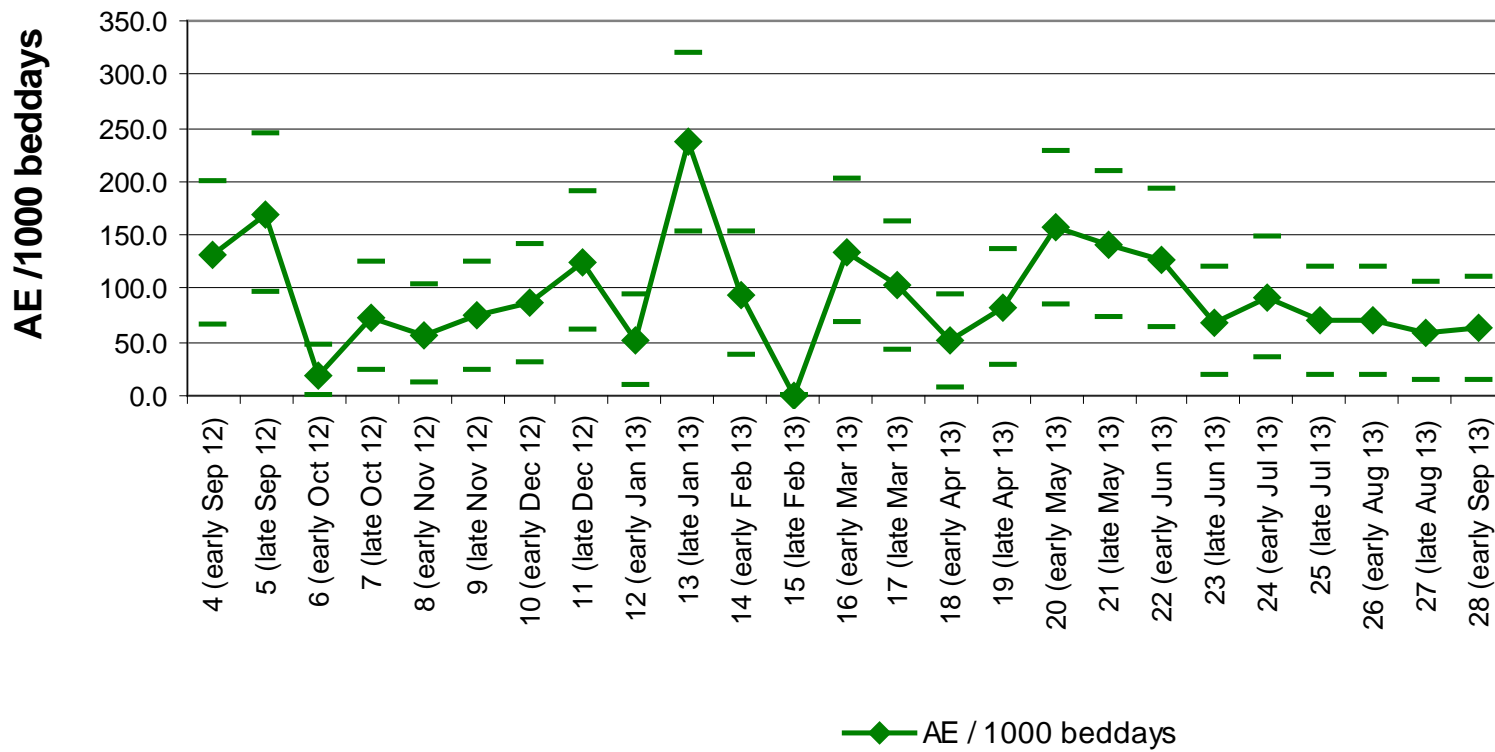
Alison Wallis, CNS Orthopaedics

# Hawke's Bay Results

- ☞ 354 files reviewed over 18 month period
- ☞ 160 adverse events
- ☞ 5 severe events – categories G, H and I
- ☞ 33 adverse events prior to admission

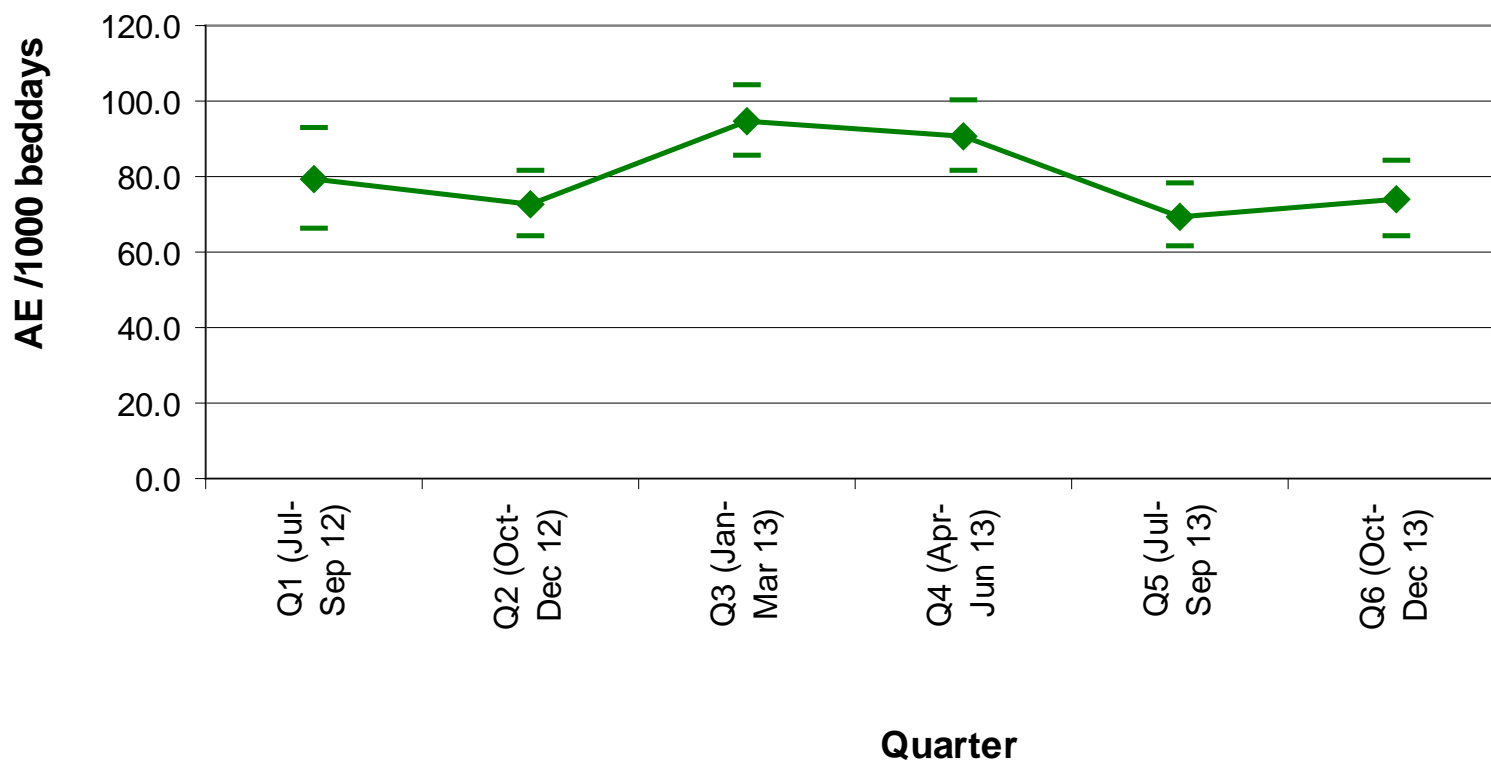
# Results

## Adverse Events / 1000 beddays (Cycles 1 - 28)



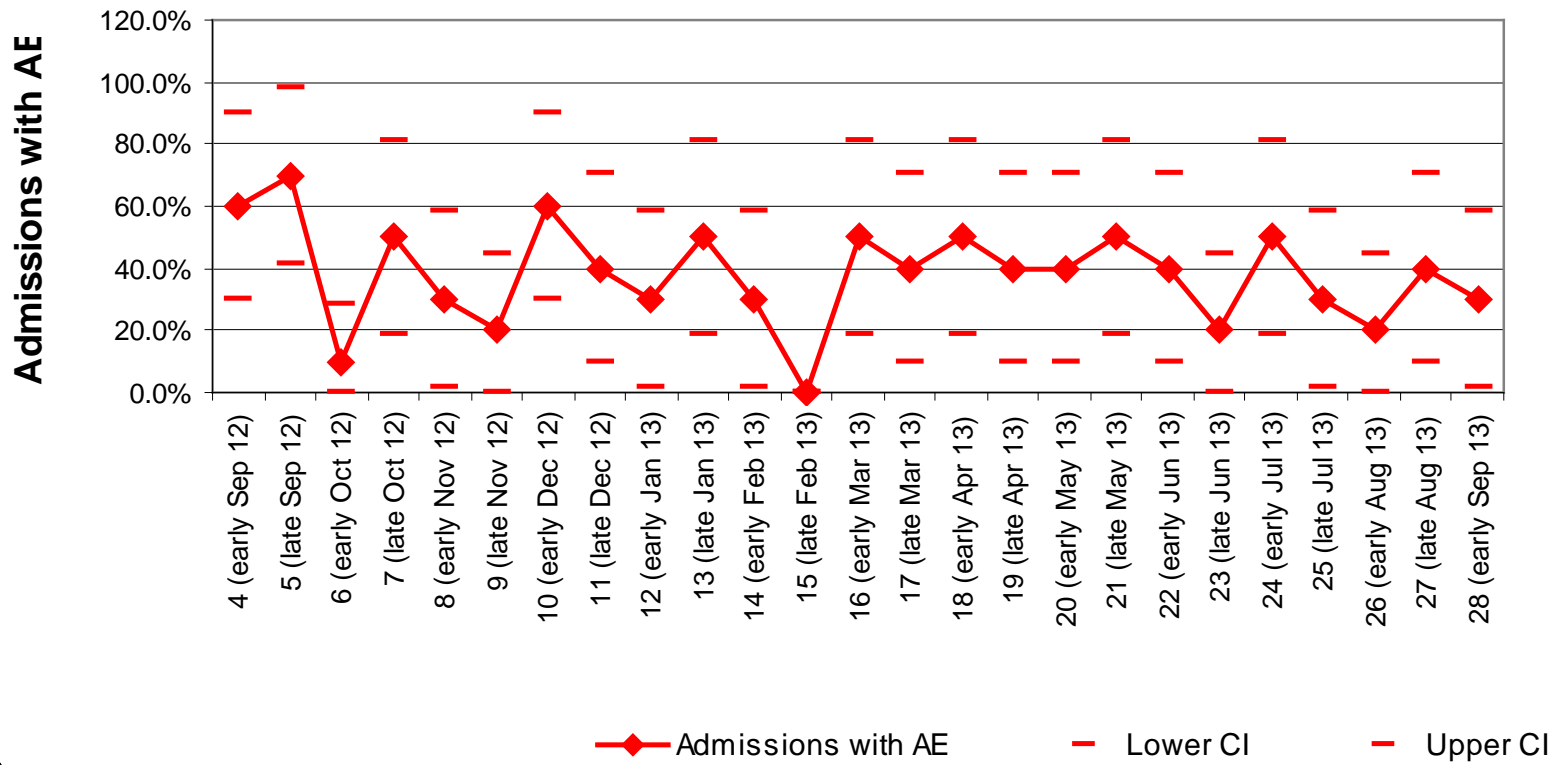
# Results

Adverse Events / 1000 beddays: Q1 (Jul-Sep 12) - Q6 (Oct-Dec 13)



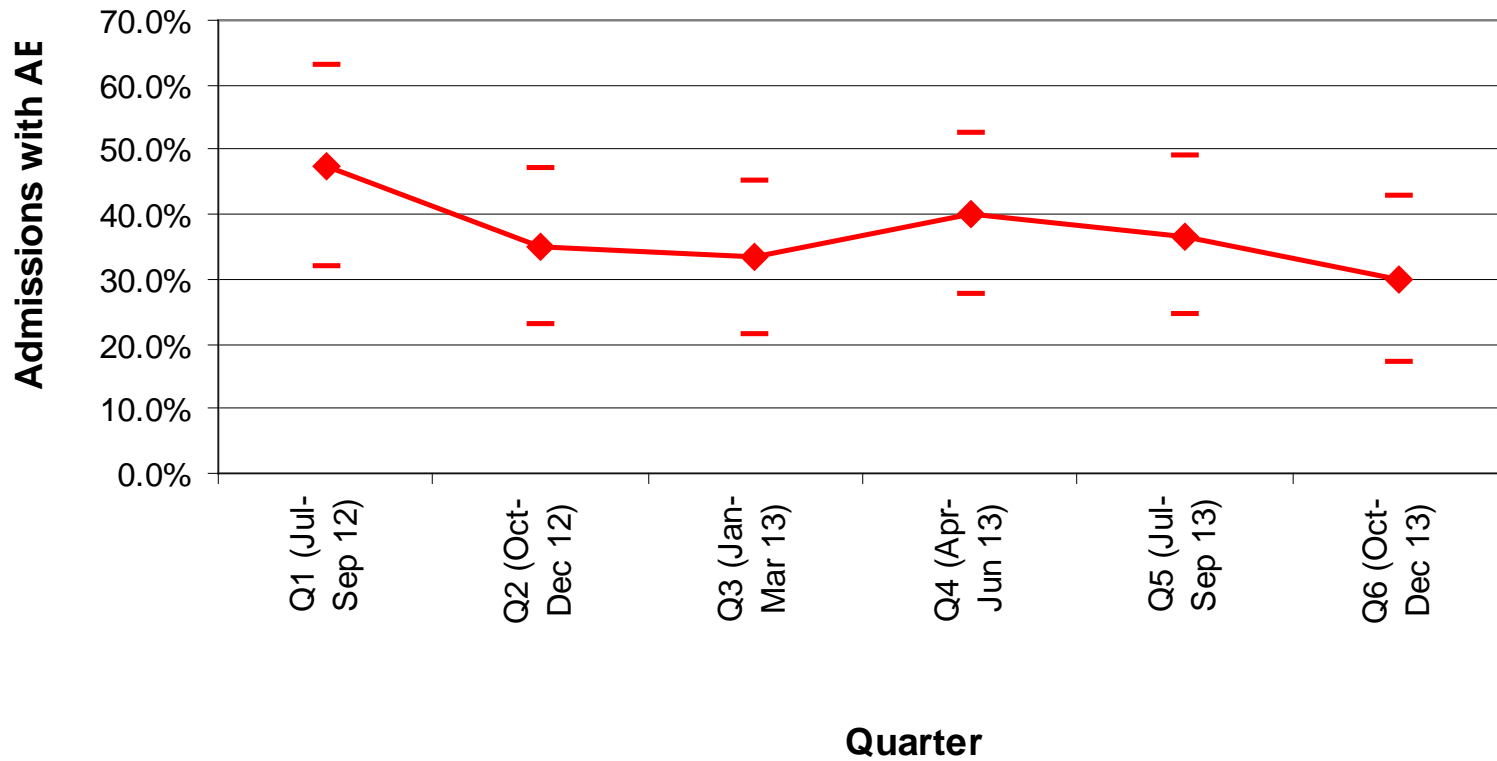
# Results

## Admissions with Adverse Events (Cycles 1 - 28)



# Results

Admissions with Adverse Events: Q1 (Jul-Sep 12) - Q6 (Oct-Dec 13)



# Adverse Events by Harm Category

Cycle 1 to 36 (late Jul 12 to early Jan 14)

Harm Category	Adverse Events	% total
Medication/IV Fluids	56	35%
Patient Care	27	17%
Hospital Acquired Infection	38	24%
Surgery or Other Procedure	37	23%
Other	2	1%
<b>Total</b>	<b>160</b>	

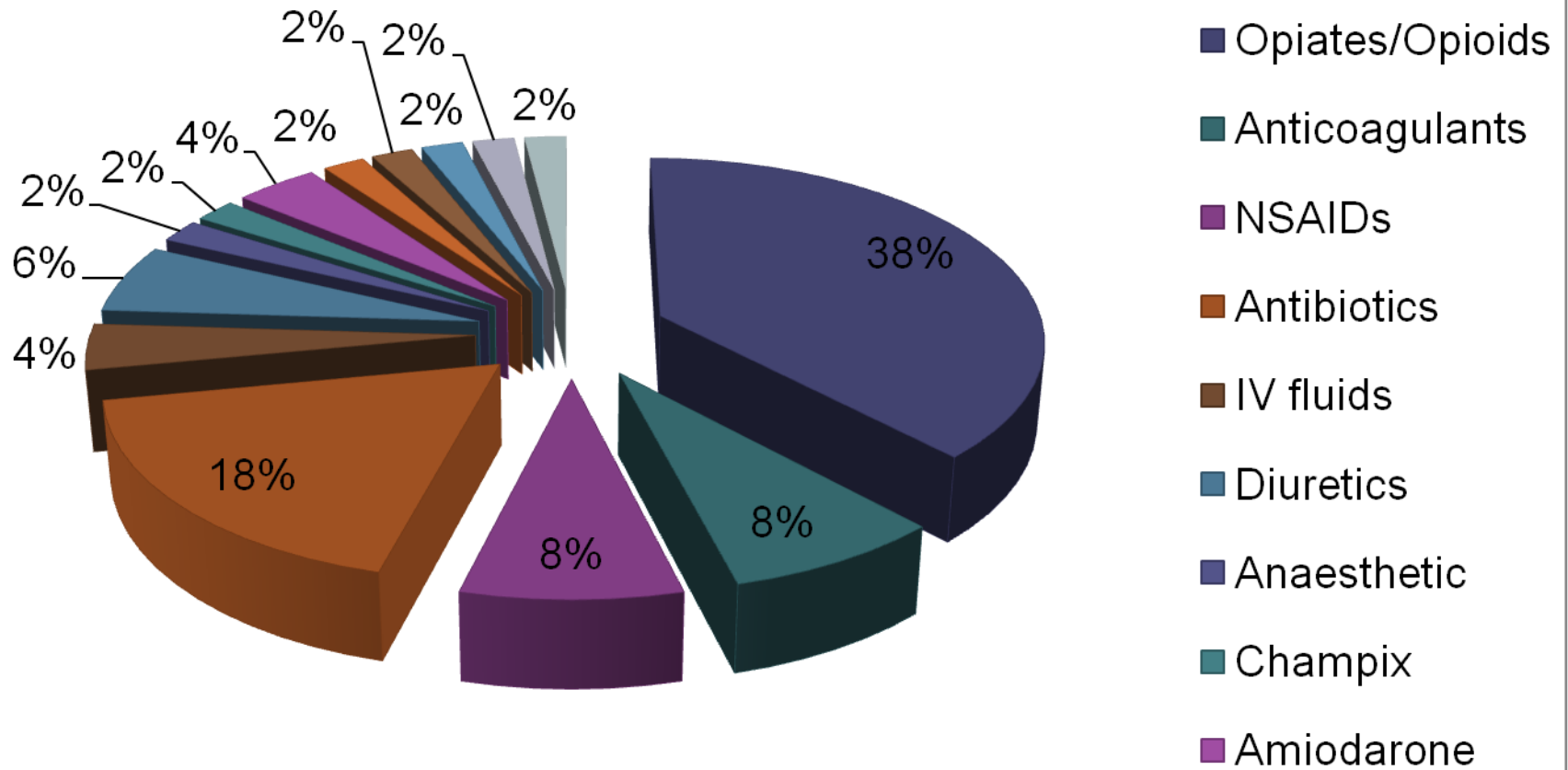


# Adverse Events by Sub-Harm Category: Medication/IV Fluids

Cycle 1 to 36 (late Jul 12 to early Jan 14)

Medication/ IV Fluid Sub-Harm Category	Adverse Events	% total
IV Volume overload/electrolyte imbalance	3	5%
Cardiac event/arrhythmia	3	5%
Renal insufficiency	1	2%
Allergic reaction	6	11%
Bleeding	7	12%
Delirium/confusion/over-sedation	12	21%
Diarrhoea	4	7%
Glycaemic events	0	0%
Hypotension	4	7%
Nausea and vomiting	9	16%
Constipation	4	7%
C. Dificile Infection	0	0%
Other	3	5%
<b>Total</b>	<b>56</b>	

# Medications Involved in Events



# Analysis of Opiate related Events

Age	Gender	Diagnosis	Drug	Adverse Event	Department
61 f		#NOF	Opiates	Delirium/Confusion/Over-sedation	Ortho
34 f		abdo pain	Opiates	Nausea/Vomiting	Gynae
85 f		abdo pain	Opiates	Nausea/Vomiting	Surgical
92 f		vertebral #	Opiates	Constipation	Medical
77 f		pseudogout	Opiates	Delirium/Confusion/Over-sedation	Medical
19 m		leg #	Morphine	Nausea/Vomiting	Ortho
82 f		TKR	Morphine	Hallucinations	Ortho
58 f		vertebral #	Opiates	Constipation	Ortho
72 f		#NOF	Opioids	Oversedation	Ortho
72 m		TKR	Opiates	Delirium/Confusion/Over-sedation	Ortho
68 m		TKR	Opiates	Allergic reaction	Ortho
47 m		pilonidal abscess	Opiates	Nausea/Vomiting	Ortho
55 m		renal colic	Opiates	Low BP	Urology
76 f		#NOF	Opiates	Delirium/Confusion/Over-sedation	Ortho
78 f		THR	Opiates	Delirium/Confusion/Over-sedation	Ortho
57 f		metastatic RCC	Opiates	Delirium/Confusion/Over-sedation	Ortho
85 f		fall	Opiates	Sedation	Medical
71 m		THR	Opiates	Nausea/Vomiting	Ortho
76 m		reduced mobility	Opiates	Nausea/Vomiting	Medical
76 f		#NOF	Opiates	Constipation	Ortho
75 f		fall	Tramadol	Caused fall	Medical
84 m		elective surgery	Tramadol	Nausea/Vomiting	Ortho

# Adverse Events by Sub-Harm Category: Patient Care

Cycle 1 to 36 (late Jul 12 to early Jan 14)

Patient Care Sub-Harm Category	Adverse Events
DVT/VTE	1
Fall with no injury (observation only)	3
Fall with injury	5
Pressure injury	6
Skin tear, abrasion or other breakdown	7
Other	3
<b>Total</b>	<b>25</b>

# Adverse Events by Sub-Harm Category: Hospital Acquired Infection

Cycle 1 to 36 (late Jul 12 to early Jan 14)

Hospital Acquired Infection Sub-Harm Category	Adverse Events	% total
Catheter associated UTI	8	21%
Central line associated bloodstream infection	1	3%
Respiratory infection (non-ventilator)	7	18%
Ventilator associated pneumonia	1	3%
Surgical infection	14	37%
MRSA	1	3%
VRE	0	0%
Clostridium difficile	0	0%
Candida Infection	1	3%
Peripheral or CV line non bloodstream infection	3	8%
Other	2	5%
<b>Total</b>	<b>38</b>	

# Adverse Events by Sub-Harm Category: Surgery and Procedure

Cycle 1 to 36 (late Jul 12 to early Jan 14)

<b>Surgery and Procedure Sub-Harm Category</b>	<b>Adverse Events</b>	<b>% total</b>
Abnormal bleeding	5	14%
Blood clots and other occlusions	4	11%
Cardiac complications	2	6%
Complications due to peripheral venous access	3	9%
Complications due to arterial access/puncture	1	3%
Hypotension	0	0%
Acute renal failure	0	0%
Respiratory complications	2	6%
Post-op ileus	1	3%
Radiation related injury	0	0%
Removal, repair or injury of organ	3	9%
Complications related to percutaneous access	0	0%
Other	14	40%
<b>Total</b>	<b>35</b>	

# Adverse Events by Severity

Cycle 1 to 36 (late Jul 12 to early Jan 14)

Severity	Count	
E: Temporary harm requiring intervention	93	56%
F: Temporary harm requiring initial or prolonged hospitalization	69	41%
G: Permanent harm	1	1%
H: Intervention required to sustain life	3	2%
I: death	1	1%
<b>Total</b>	<b>167</b>	

# Severe Adverse Events

1. Category G

Necrotic/infected laparotomy wound

2. Category H

Re-intubation in ICU

3. Category H

Respiratory arrest post-op

4. Category H

Oversedation with morphine requiring naloxone

5. Category I

Hospital acquired pneumonia



## Adverse Events by Harm Category: Present on Admission and External Location

Harm Category	Adverse Events	On Admission	GP	Other Hospital	Rest Home	Dialysis	Other
Medication/IV Fluids	56	11	5	0	1	0	1
Patient Care	27	7	0	0	5	0	2
Hospital Infection	38	10	2	4	1	0	0
Surgery/Procedure	37	3	0	3	0	1	0
Other	2	2	0	1	1	0	0
<b>Total</b>	<b>160</b>	<b>33</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>1</b>	<b>3</b>

# Issues with External Location Data

- ∞ Events labelled as present on admission not always categorised as external sites when should have been
- ∞ 2 events did not have harm categories recorded
- ∞ Should all medication related events present on admission be attributed to the GP?