

Transition to Palliative Care for People with Metastatic Prostate Cancer & their Caregivers: A Population Cohort Study

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Background

Metastatic prostate cancer (mPCa) associated with significant morbidity for individuals and healthcare system

- **Second leading cause of cancer death in males**
- **Median survival after refractory mPCa < 18 mths for those treated with docetaxel-based chemotherapy (1)**
- **Associated with significant healthcare expenditure, with 60% of total costs occurring in last 6 months of life (2)**
- **Few studies (small samples n <280) on the specific palliative care needs and access to services by men with mPCa**

1. Tannock et al., NEJM 2004; 2. Krahm et al, BJU International 2010; 3. Hwang et al, Cancer investigation 2004

Background

Increasing evidence of benefits associated with palliative care

- ✓ **Patients:** improved symptom relief, QOL, mood, communication, satisfaction with care, survival
- ✓ **Carers:** improved QOL, mood & bereavement outcome
- ✓ **Health system:** reduced aggressive EOL care and ED presentation, increased deaths outside hospital

1. Batikas JCO 2015; 2. Zimmermann Lancet 2014 3. Higginson, Lancet Res Med 2014; 4. Temel NEJM 2010; 5. Dionne-Odom, JCO 2015; 6. Hudson, Psycho-Oncology 2015; 7. Wright, JCO 2010; 8. Christakis, Soc Sci Med 2003. 9. Abernethy et al, JPSM 2013

Background

Variability in access to palliative care

- **Several barriers associated with PC introduction**
Both patient & health system factors
- **Variable engagement with PC**
Access rates ~ 30 – 70%) (1-2)
- **Often late engagement**
Median time to death = 22 – 42 days (3-4)
- **Current ‘needs-based’ models of PC delivery**
Can lead to late or ad-hoc referral

1. Philip et al, MJA 2015; 2. Hui et al, The Oncologist 2012; 3. Christakis, Soc Sci Med 2003; 4. Osta et al, J Palliat Med 2008.

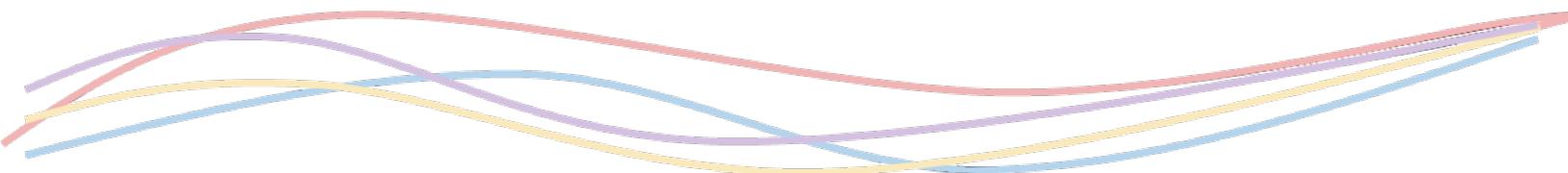
Background

Timeliness of referral important to achieve benefits

- **Perception of being referred “too late”** associated with higher unmet needs/reported concerns, & lower satisfaction (1)
- **PC referral (IP &/or OP setting) > 1-3 months** associated with fewer: ED visits, hospitalisations, hospital deaths (2-4)
- **Hospital PC consultation within 6 days of admission** reduces overall costs by 14% (-\$1,312) (5)
- **PC referral within 30-60 days of adv. dx:** improved 1-year survival (15% difference compared to 3-mth waitlist control) (6) and improved caregiver mood (7)

1. Teno et al JPSM 2007; 2. Sundararajan et al, J Neuro Oncol 2014; 3. Hui et al, Cancer 2014; 4. Poulose et al, 2013 JPSM; 5. May et al, JCO 2015; 6. Batikas et al JCO 2015; 7. Dionne-Odom et al, JCO 2015.

Aims



To describe the illness trajectory of people who die from metastatic prostate cancer (mPCA), with a view to identify transition points for optimal integration of palliative care.

- ⇒ Health service use
- ⇒ Disease- and treatment- related complications
- ⇒ Diagnostic & therapeutic procedures
- ⇒ Quality end-of-life care characteristics

Design



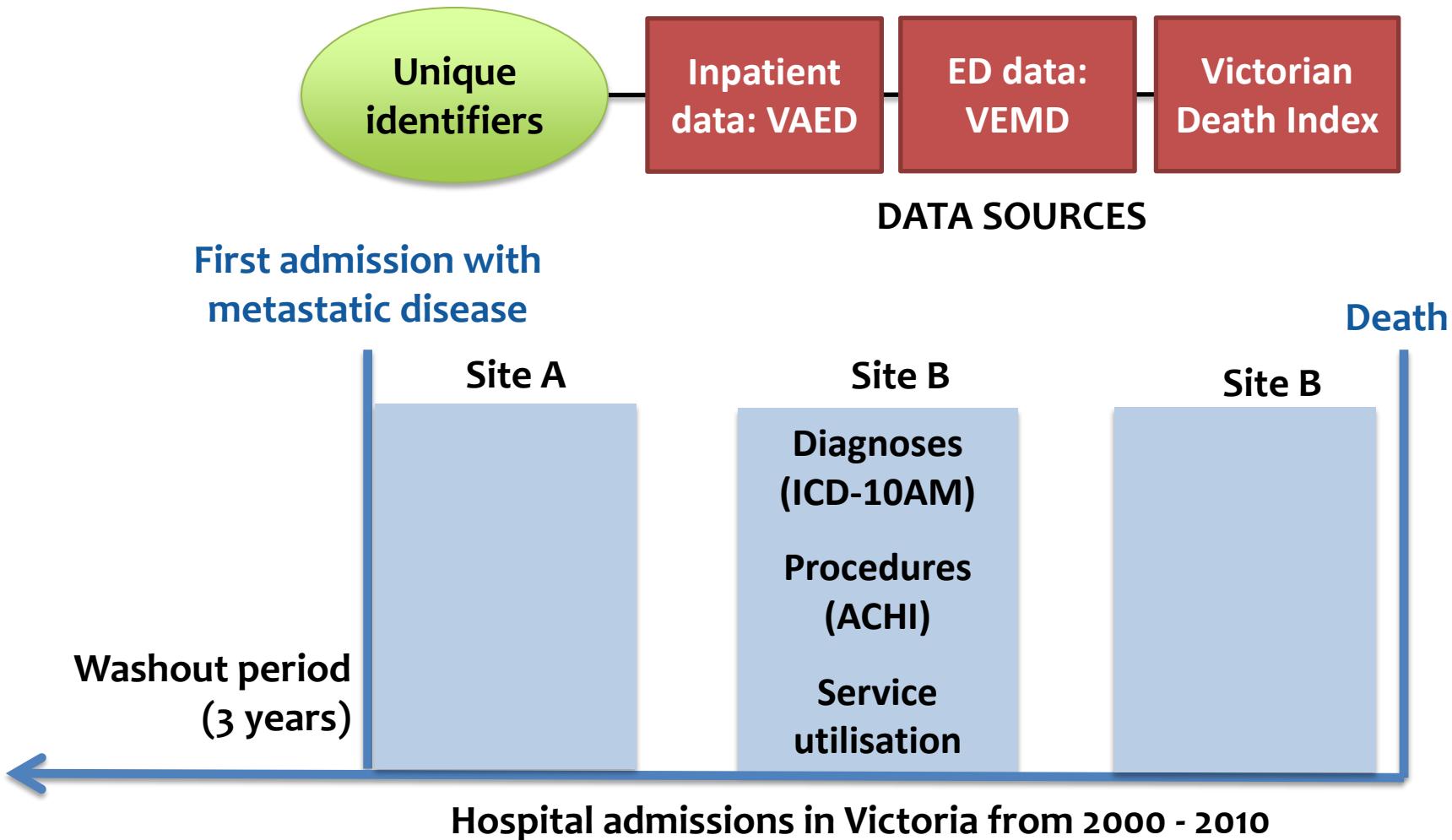
Mixed Method Study

1. **Population cohort study:** using 10 years of linked hospital, emergency and death data.
2. **Qualitative study:** interviews with patients, current/bereaved caregivers and health professionals.
3. **Delphi study:** set of recommended points drafted by a core group will be subjected to a two-round online survey of experts to build systematic consensus.

⇒ Leading to guidelines on integration of palliative care in advanced cancer

Method

Population cohort study (2000 – 2010)



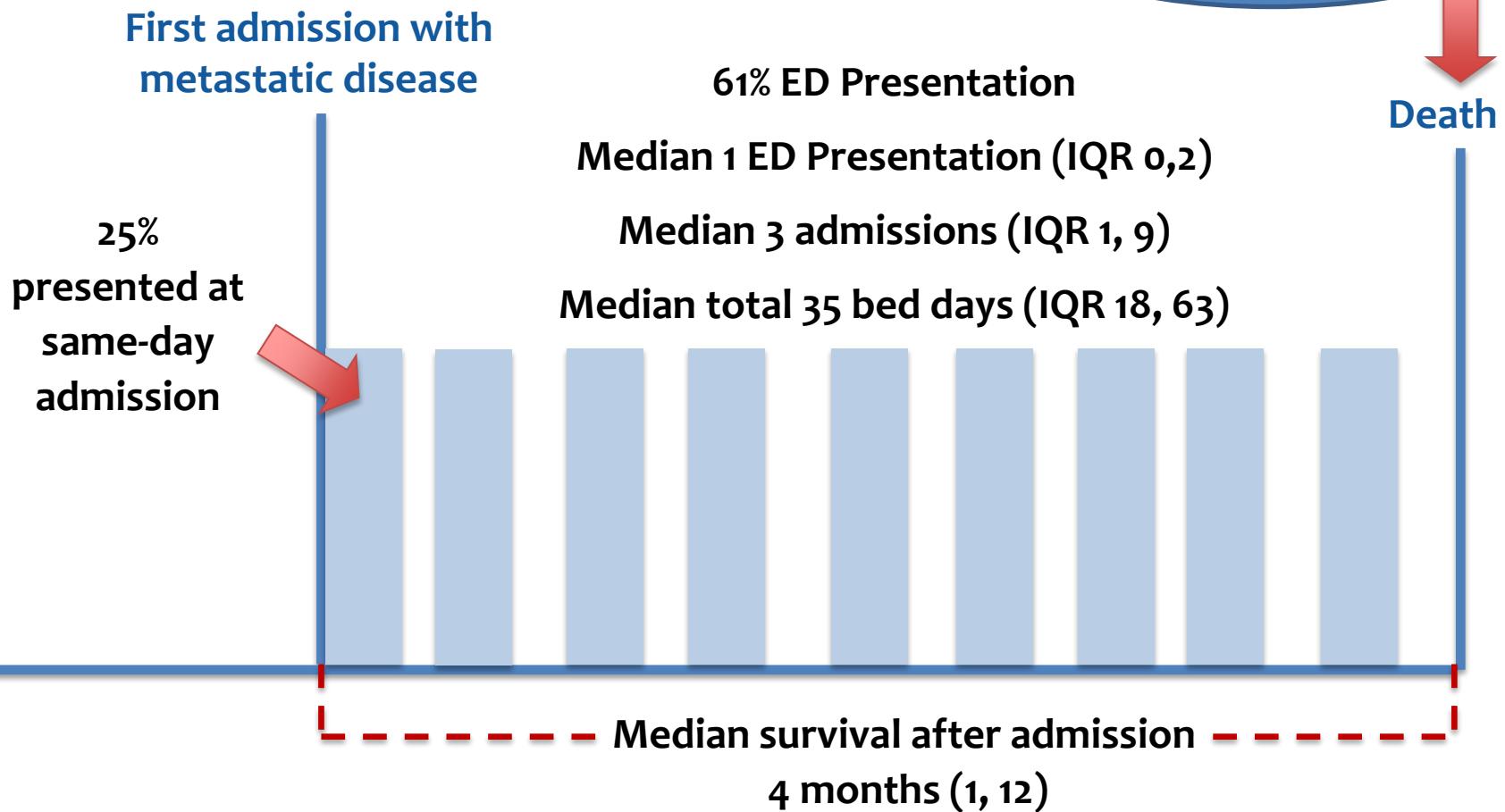
Results



- **Description of the cohort (N = 4,436)**
 - **64% Australian born**
 - **91% ≥ 65 years**
 - **49% living in major city**
 - **76% partnered**
 - **53% utilised some private health insurance**
- **At first admission:**
 - **28% Charlson comorbidity index >1**
 - **84% had mets to bone, 11% lymph nodes, 8% lung, 8% liver;**
 - 19% had ≥ 2 metastatic sites**

Results

Health Service Use



Results

Treatment- or disease- related complications

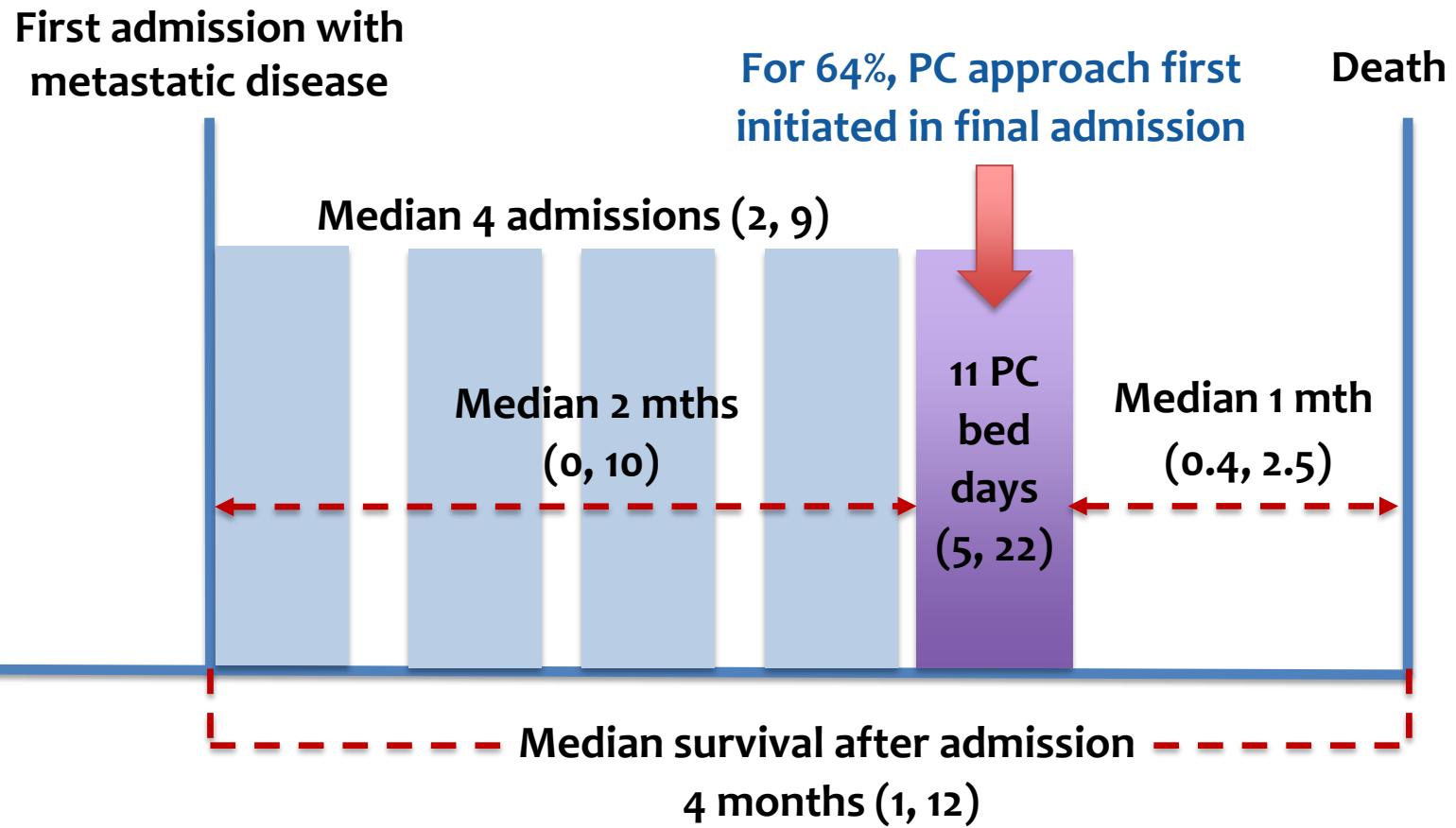
Across metastatic illness trajectory:

Diagnoses	Inpatient procedures
<p>Median 5 complications (3, 8)</p> <p>33% ≥ 7 complications</p> <ul style="list-style-type: none">• LUTS (50%)• Infections (52%)• Anaemia (43%)• Skeletal events (21%)• Constipation (32%)	<p>73% therapeutic procedure</p> <p>45% ≥ 2 procedures</p> <ul style="list-style-type: none">• Blood transfusions (48%)• Chemotherapy (38%)• Local procedures (27%) eg. TURP (11%)• Radiotherapy (16%)

Results

Palliative Care Engagement

- 60% of men received palliative approach to care PC, 39% accessed PC bed



Results

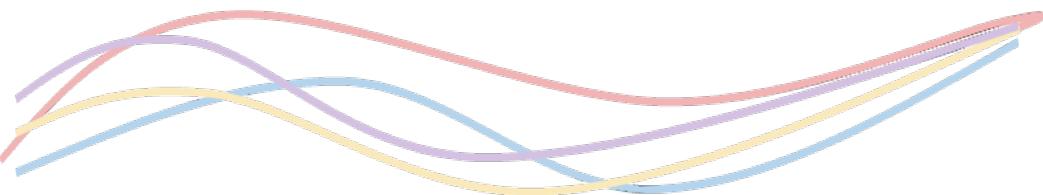
Indicators of Quality End of Life Care*

Aggressiveness of care (last 30 days of life)

> 1 ED presentation	311 (7)
> 1 acute hospital admission	2,124 (48)
Length of stay ≥ 14 days	2,451 (55)
Intensive care admission	90 (2)
Chemotherapy in last 14 days of life	527 (12)
At least one indicator	3,685 (83)
≥ 2 indicators	1,464 (33)

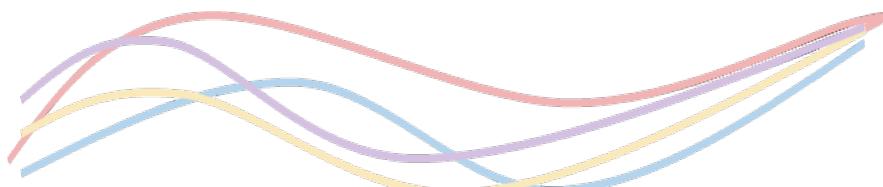
*Earle C, et al. J Clin Oncol 2008; 26: 3860-6.

Summary of Results



- Patients with mPCA experience high symptom burden, undergo multiple therapeutic interventions and have several admissions
- While 60% have a palliative approach to care in place by death, this is initiated by most (64%) in the final admission, a median of just 1 month prior to death
- Multi-day admission with metastatic disease is itself an important flag to initiate palliative care supports, if not already in place

Discussion & Future Work



- Population level data important source to capture statewide health service outcomes relating to delivery of quality care
- Data not without limitations – e.g. ideal to link to community data & routine recording of more specific palliative care referral and service information
- Interviews with consumers and other important stakeholders for more in-depth exploration currently underway
- Results expected to inform recommendations surrounding routine integration of palliative care, for inclusion in guideline document



Questions?

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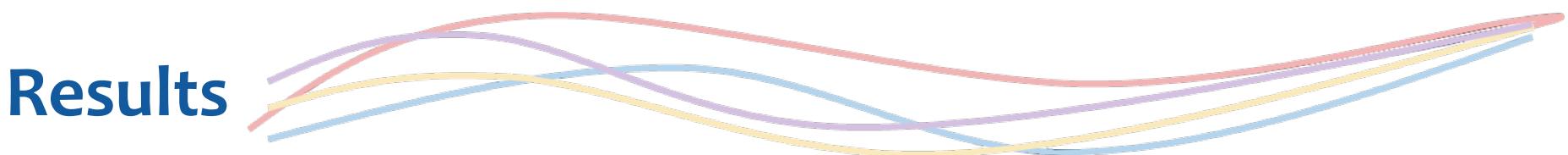
Results

Indicators of Poor Survival, Cox Proportional Hazards Model

Characteristic	Hazard Ratio (95% Confidence Interval)		p Value*
Age (years)			
< 65	0.58 (0.52 – 0.65)		<0.001*
65-74	0.69 (0.64 – 0.74)		<0.001*
75 +	1		
SEIFA index of economic disadvantage	0.95 (0.93 – 0.97)		0.001*
Multi-day admission	1.34 (1.20 – 1.50)		<0.001*
Renal failure	1.21 (1.10 – 1.32)		<0.001*
Metastasis to liver	1.98 (1.77 – 2.21)		<0.001*
Metastasis to brain	1.49 (1.25 – 1.78)		<0.001*
Metastasis to lung	1.33 (1.19 – 1.48)		<0.001*
Metastasis to lymph nodes	0.86 (0.78 – 0.95)		0.003*
Receipt of antineoplastic agent	0.87 (0.78 – 0.97)		0.012*
Fluid, electrolyte or nutritional disorder	1.20 (1.10 – 1.29)		<0.001*
Infection	1.19 (1.10 – 1.32)		0.001*



Results



Multi-day admission is itself an important flag

