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PREDICTORS OF READMISSION TO A CARDIAC SURGICAL INTENSIVE CARE UNIT


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Implications of Readmission to a Critical care Unit

- High mortality rate**
- Expensive**
- Delay or cancellation of elective surgical procedures**


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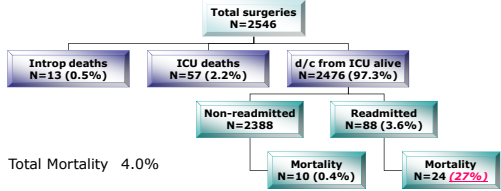
Methods

- Ethical approval for a chart review**
- Interrogation of Perioperative Database**
- Data collection**
 - Demographic
 - Clinical data relating to readmission
- Statistical analysis**
 - Chi square
 - Logistic regression analysis

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Jan 2005-Jan 2007




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            graph TD
                A[Total surgeries N=2546] --> B[Introp deaths N=13 (0.5%)]
                A --> C[ICU deaths N=57 (2.2%)]
                A --> D[d/c from ICU alive N=2476 (97.3%)]
                D --> E[Non-readmitted N=2388]
                D --> F[Readmitted N=88 (3.6%)]
                E --> G[Mortality N=10 (0.4%)]
                F --> H[Mortality N=24 (27%)]
            
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Total Mortality 4.0%


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Results

Preoperative Predictors			
Variable	Readmitted	Control	pvalue
Age (mean, yrs)	68	64	0.03
Age >70	53.4%	37.8%	0.003
Female	28.4%	27.6%	NS
BMI	28	28	NS
Diabetes mellitus	39.8%	31.4%	NS
Hypertension	75.9%	71.1%	NS
Smoking	22.7%	18%	NS
Atrial fibrillation	25%	12.1%	0.0004
COPD	22.7%	10.8%	0.0005
EtOH	10.2%	2.4%	<0.0001
Renal failure >125	29.6%	13.9%	<0.0001
LV class 3 and 4	21.4%	10.5%	0.0015


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Conclusions

- Higher mortality**
- Longer ALOS in ICU**
- Knowing the characteristics of patients that may be readmitted can lead to more effective use of resources**

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 **Implications**

Earlier intervention of deteriorating patients may lead to fewer readmissions

ICU readmission may be a marker for sub-standard care

Surrogate for accelerated discharge related to cost pressures

Further studies will be undertaken to assess the implications of intraoperative events and long-term outcome

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