The value of the Victorian Audit of Surgical Mortality (VASM)

Knowledge-based sharing in the health industry
The Royal Australasian College of Surgeons
Presented By: Claudia Retegan

Date: 16 June 2017

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Presentation outline

- Overview of the VASM audit process,
- Results and benefits from the audit,
- Tools to monitor patient safety,
- Potential impact,
- Recommendations and
- Future directions.

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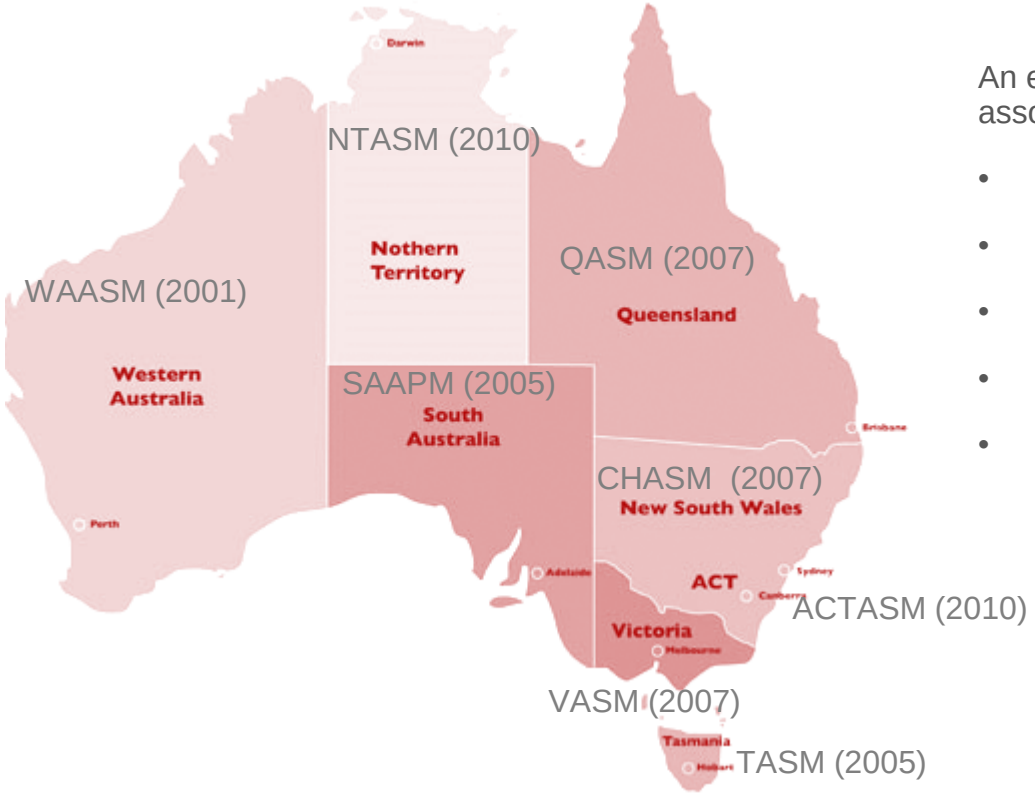
Origins



An external, peer-reviewed audit of the process of care associated with surgically related deaths.

- Modelled on the Scottish Audit of Surgical Mortality (1994).
- Protected by Qualified Privilege.
- National program management transferred to RACS (2005),
- All States and Territories under ANZASM (2010),
- CHASM administered by the Clinical Excellence Commission (CEC).

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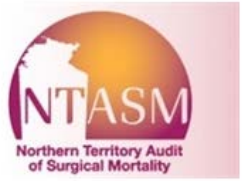
VASM Collaboration

192 Victorian surgical sites

2400 Victorian Fellows



The Royal Australian and New Zealand College of Obstetricians and Gynaecologists

The Victorian Surgical Consultative Council

The Victorian Consultative Council on Anaesthetic Mortality and Morbidity

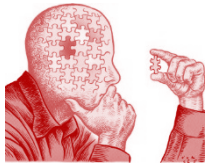
VASM Audit Flow

Notification

ASM receives notification of death

Surgical case form sent to Fellow for completion

Reflection



Completed surgical case form returned to ASM and de-identified

Assessment

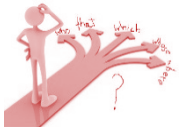
Case form sent for FLA

SLA required?

No

Yes

SLA



Reporting

Feedback to Fellow

Appeal lodged?

No

Case closed

Management issues classification (ACONS)

- An area for CONSIDERATION is where the clinician believes areas of care COULD have been IMPROVED or DIFFERENT, but recognizes that it may be an area of debate.

- An area of CONCERN is where the clinician believes that areas of care SHOULD have been better.

- An ADVERSE EVENT is an unintended injury caused by medical management rather than by disease process, which is sufficiently serious to lead to prolonged hospitalization or to temporary or permanent impairment or disability of the patient at the time of discharge, or which contributes to or causes death.

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VASM findings

Audit numbers
- 12,346 reported
- Approx. 2,000 deaths/year
- Approx. 680,000 surgeries/year
- 54% audited
- 12% pending review
- 15% terminal
- 29% excluded

Compliance
- 100% Surgical site
- 93% Fellows

Demographics
- Mean age 73
- 43% female & 57% male
- 84% emergency
- 21% transfers

Operations
- 91% operative sessions
- 15% unplanned return to theatre
- 9% with >1 operative procedures
- 64% emergency admissions

Risk factors
- 91% with >1 comorbid factors
- 86% moderate to high risk profile

Top comorbid factors
- 23% cardiovascular
- 20% age
- 12% respiratory

Trauma
- 87% falls
- 10% road accident
- 3% violence

Infections
- 32% clinically significant

Type of infection
- 15% pneumonia
- 8% septicaemia
- 5% intra abdominal sepsis

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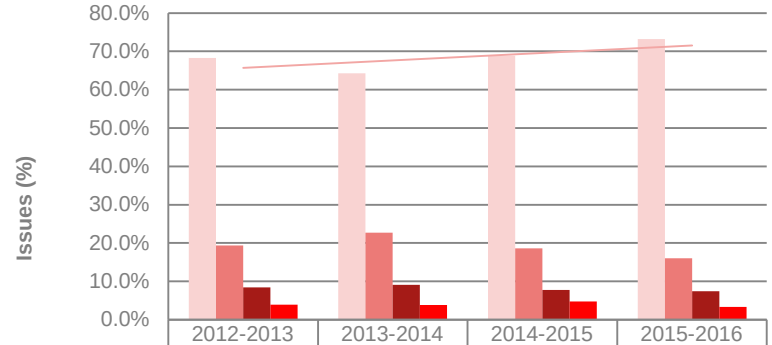
VASM outcomes as assessed by assessors

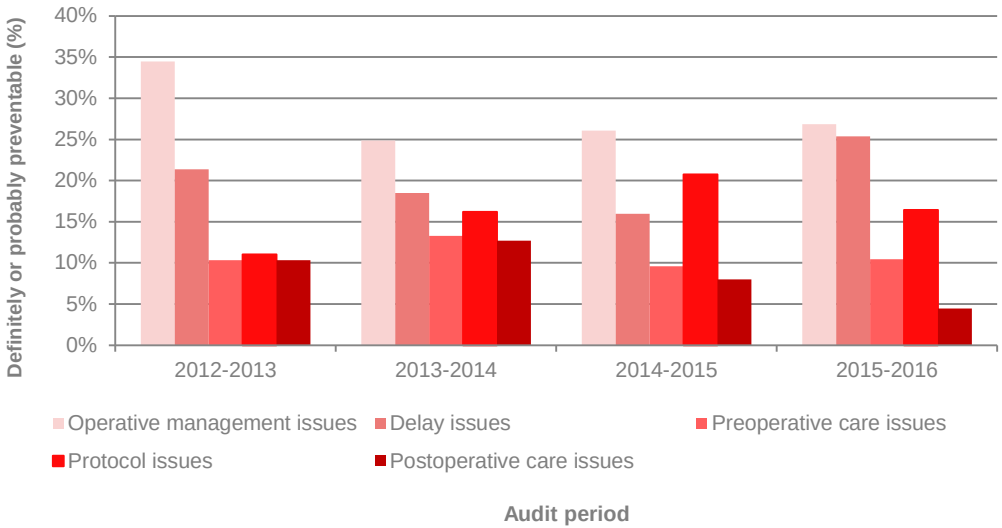
Trends of clinical management issues



	2012-2013	2013-2014	2014-2015	2015-2016
None	68.2%	64.3%	68.9%	73.2%
Consideration	19.4%	22.7%	18.6%	16.0%
Concern	8.5%	9.1%	7.7%	7.4%
Adverse event	3.9%	3.9%	4.8%	3.4%

Audit period

Trends in top five preventable clinical management issues



Audit period

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Concordance

Concordant validity between the treating surgeon and second-line assessor

Concord area	n	Concord	Gwet's AC score	95% CI	p value
ICU care benefit if not received	95	84.21%	0.81	0.71-0.91	<0.0001
HDU care benefit if not received	90	77.78%	0.71	0.57-0.85	<0.0001
Fluid balance	523	84.70%	0.80	0.76-0.85	<0.0001
Clinical management issues	**623**	**57.14%**	**0.17**	**0.09-0.25**	**<0.0001**
Preoperative management/ preparation	570	75.44%	0.64	0.58-0.70	<0.0001
Decision to operate at all	572	80.77%	0.75	0.70-0.80	<0.0001
Choice of operation	574	82.75%	0.79	0.74-0.83	<0.0001
Timing of operation	564	83.69%	0.79	0.74-0.83	<0.0001
Intraoperative/technical management	565	82.12%	0.77	0.72-0.82	<0.0001
Grade/experience of surgeon deciding	562	96.44%	0.96	0.95-0.98	<0.0001
Grade/experience of surgeon operating	563	95.38%	0.95	0.93-0.97	<0.0001
Postoperative care	554	77.44%	0.67	0.61-0.73	<0.0001

Individual Surgeon's Report

Deficiencies of care identified by the peer review assessors

Clinical management issues	Your cases %	Cases in VIC %	Cases nationally %
Yes	**50% (1/2)**	**43% (29/68)**	**40% (65/161)**
No	0% (0/2)	41% (28/68)	47% (76/161)
Data not provided	50% (1/2)	16% (11/68)	12% (20/161)

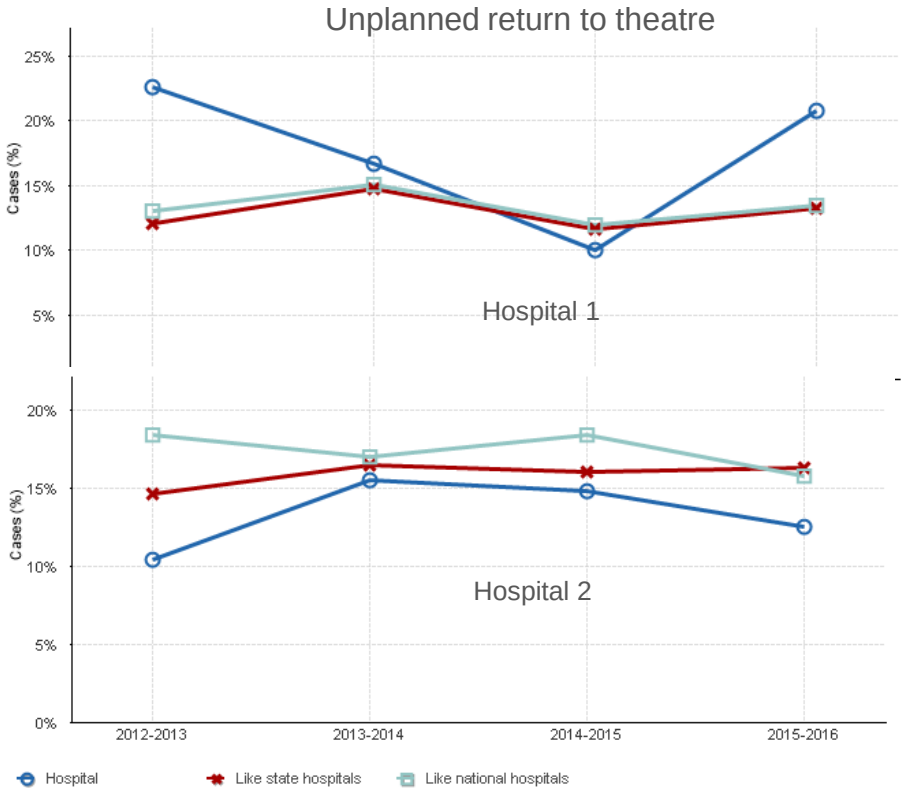
Area	Events % of your patients	Events in VIC % of patients	Events nationally % of patients
Consideration	0% (0/2)	40% (27/68)	37% (59/161)
Concern	0% (0/2)	13% (9/68)	13% (21/161)
Adverse event	**0% (0/2)**	**6% (4/68)**	**6% (9/161)**
Data not provided	0% (0/2)	0% (0/68)	2% (3/161)

Preventable	Events % of your patients	Events in VIC % of patients	Events nationally % of patients
Definitely	**0% (0/2)**	**6% (4/68)**	**5% (8/161)**
Probably	0% (0/2)	28% (19/68)	29% (46/161)
Probably not	0% (0/2)	15% (10/68)	12% (20/161)
Definitely not	0% (0/2)	0% (0/68)	1% (2/161)
Data not provided	0% (0/2)	10% (7/68)	10% (16/161)

Hospital Clinical Governance Reports

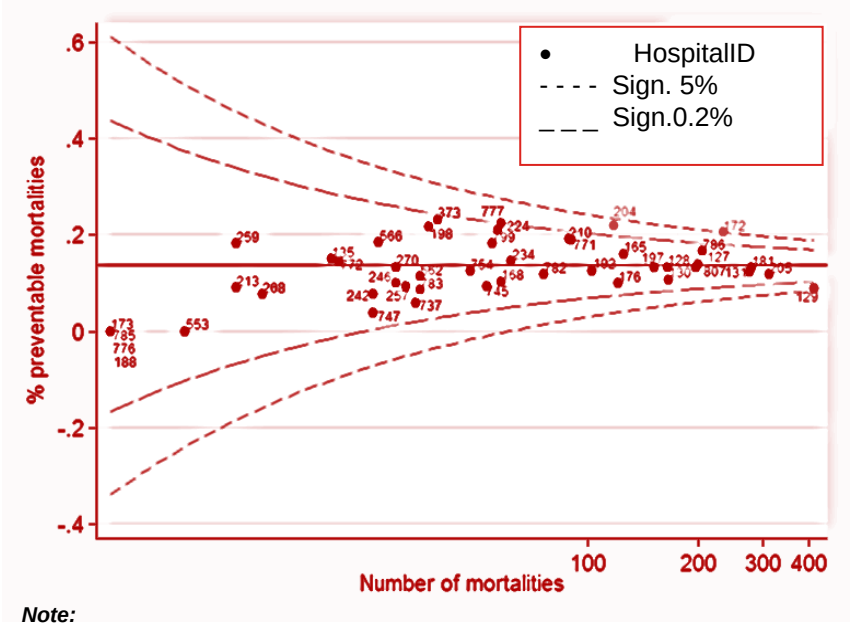
Potentially preventable deficiencies of care identified at your site

Deficiency of care	2012-2014	2014-2015	2015-2016	Total
Pre-operative assessment inadequate	0	2	0	2
ADVERSE FACTORS IN MANAGEMENT	0	2	0	2
Decision to operate	0	0	1	1
Drug interaction	0	1	0	1
Treatment did not conform to guidelines/protocols	0	0	1	1
Unsatisfactory medical management	0	1	0	1
Delay to surgery (ie earlier operation desirable)	0	0	1	1
Total	**0**	**6**	**3**	**9**



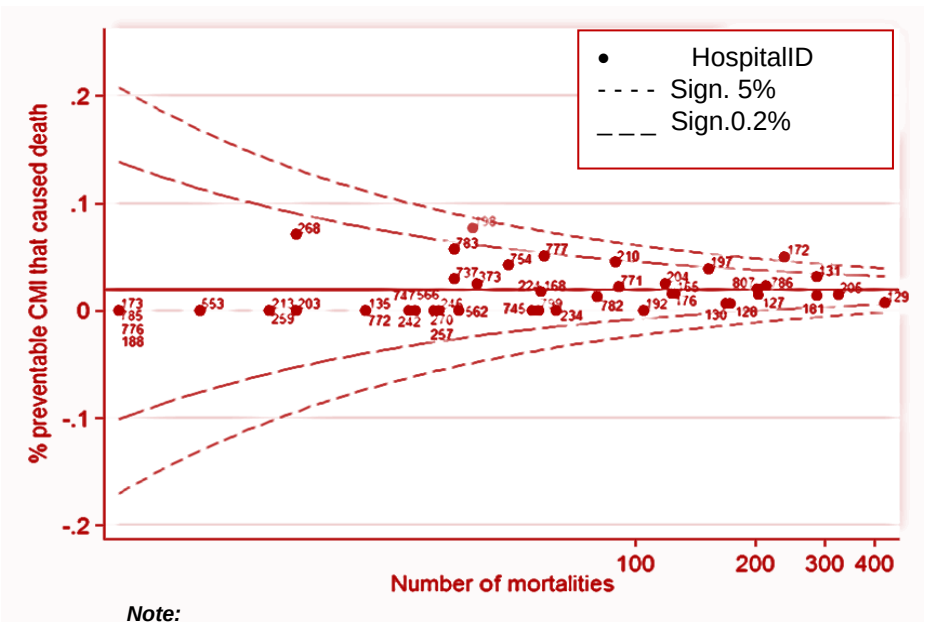
Hospital Surgical Performance Reports

Preventable mortalities



Note:
Sig: significant contour overlay
> 0.2% Sig = 204, 172 (negative outlier)
< -0.2 % Sig = 129 (positive outlier)

Preventable clinical management issues



Note:
Sig: significant contour overlay
> 5% Sig. = 172 (negative outlier)
> 0.2% Sig.= 198 (negative outlier)

Recommendations for clinical stakeholders

- Improved leadership in patient care,
- Improved perioperative management,
- Improved protocol compliance,
- Action on evidence of clinical deterioration,
- Futile surgery and end of life care,
- Improved awareness of surgical emergencies, transfers and sharing of care,
- Infection control,
- In-hospital fall prevention and
- Improved communication.

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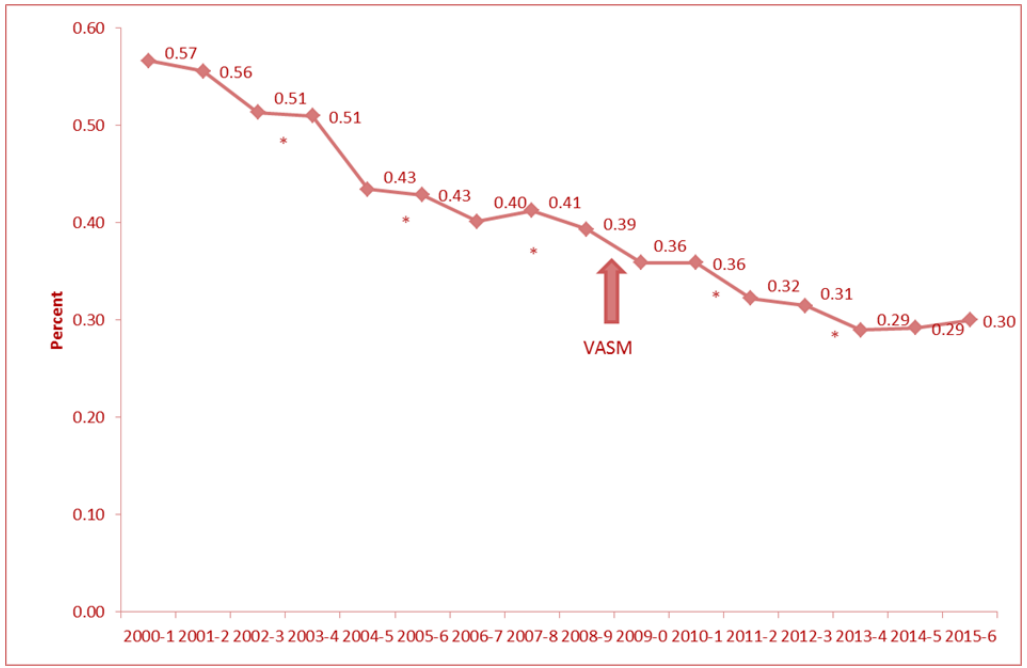
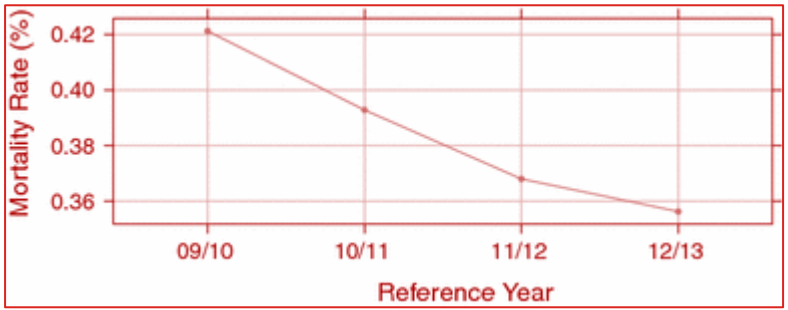
Mortality rate



Victoria



National

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Independent review of VASM

Target Zero

- VASM has credible processes and can provide conclusive evidence of preventable harm.

Aspex

- Streamlined operational processes suggest the program has reached a degree of maturity,
- Secure processes are in place,
- Inter-assessor reliability demonstrates agreement in relation to clinical management issues identified,
- Surgeon and hospital participation in the audit is strong,
- Timely and good quality feedback and
- Hospital reports generated for internal quality improvement initiatives.

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Future directions

- Maintain surgical trust and commitment in the audit,
- Continue to evaluate processes & outcomes,
- Enhance current audit processes in collaboration with SCV, VSCC, VCCAMM and surgical sites,
- Develop active educational strategies, seminars and publications,
- Continue to identify innovative methods of analysis,
- Continue to provide relevant feedback to VASM stakeholders,
- Enhance current processes and
- Monitor the audit quality loop.

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Acknowledgments

- Collaborators,
- Participating Victorian hospitals,
- Participating Victorian Fellows and IMGs,
- Participating Victorian hospital stakeholders,
- Management committee,
- Royal Australasian College of Surgeons,
- VASM and ANZASM staff.

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