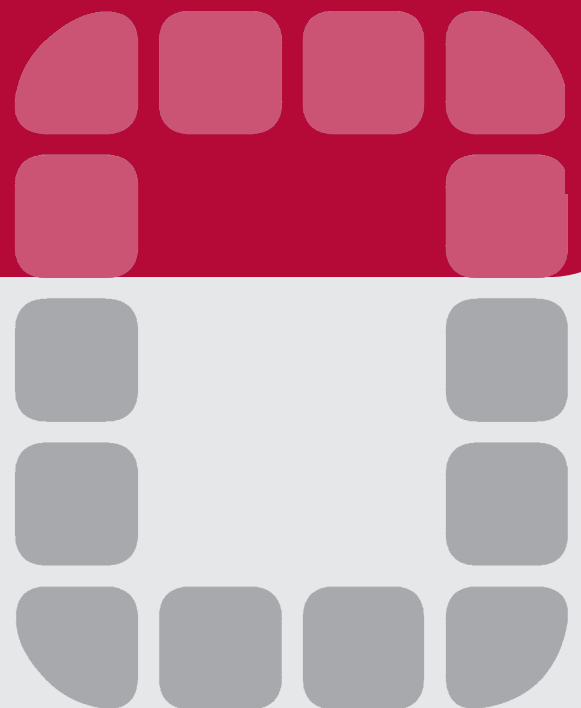


# WoundsWest Wounds Prevalence Survey 2007

## State-wide Report Overview



## **Acknowledgements**

WoundsWest acknowledges the generous effort and commitment of the staff and patients who contributed to the successful achievements of the first Western Australian State-wide Wound Prevalence Survey conducted in 2007.

## **Suggested citation**

Strachan V., Prentice J., Newall N., Elmes R., Carville K., Santamaria N. & Della P. WoundsWest Wound Prevalence Survey 2007 State-wide Report Overview. Ambulatory Care Services, Department of Health 2007: Perth, Western Australia.

## Foreword

There's a lot of truth in the old adage that you can't manage something if you can't measure it. Health reform is like that too. Information is a powerful tool for change.

Everyone working in health realises that wound care is a major component of daily service delivery for public hospitals.

The trouble is that, until now, quantifiable data of how, and how many, wounds are treated in our public hospitals has not been available.

The state-wide WoundsWest Wound Prevalence Survey 2007 changes that by providing a 'snapshot' of wound and contextual data that can be used to influence positive change in hospital wound management.

The survey is also a national first. Its successful completion and the delivery of all anticipated aims and outcomes is a key achievement for WoundsWest ... and for WA Health.

Thanks to this survey, we now know that almost half the patients in our hospitals have one or more wounds at some point during admission. We also know that we need to manage these wounds better, we need to prevent hospital-acquired injuries and we need to heal all other wounds faster.

Putting such a system fully in place will require a lot of work. Collaborative action across the state, with strong clinical leadership, will be required to implement and sustain the recommendations of the WoundsWest initiative.

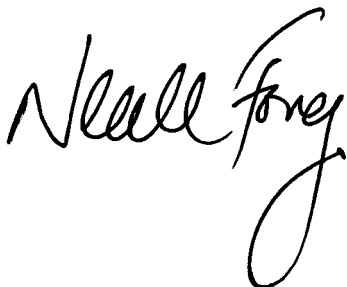
However, a lot can be done now.

I encourage all WA Health staff to see the publication of this report as an opportunity. I encourage them to use the data to commit to evidence-based improvement in prevention and better management plans for patients, particularly the reduction of hospital-acquired injuries.

Congratulations to the WoundsWest team and thank you to the entire staff of WA Health who have been overwhelmingly supportive of the project.

WoundsWest is a partnership between WA Health (Ambulatory Care and the Office of the Chief Nurse), Silver Chain and Curtin University School of Nursing and Midwifery.

It will continue to add significant value to the provision of wound care for health services and will position WA Health as world leaders in wound prevention and management.



Dr Neale Fong  
DIRECTOR GENERAL



## Table of Contents

Project background	5
Prevalence survey aims	5
Prevalence survey outcomes	6
1. Quantify the prevalence of wounds in consenting patients in all WA public hospitals	7
2. Obtain contextual data on how organisations currently prevent and manage wounds	12
3. Provide data to inform strategic planning for improving the prediction, prevention and management of wounds	13
4. Introduce the WoundsWest audit process and other project elements to WA Health	15
Conclusion	16
Recommendations	16
Appendix A - Project governance & membership	21
Appendix B - Definitions & keys	22
References	23

## List of Tables

Table 1. Summary of wound prevalence survey deliverables and outcomes	6
Table 2. Survey population and wound prevalence by regional group	7
Table 3. Wound prevalence by medical specialty	9
Table 4. Proportion of wounds and hospital-acquired wounds by wound category	10
Table 5. Wound prevalence by wound category	11
Table 6. Quantitative contextual data	12
Table 7. Pressure ulcer risk assessment	14
Table 8. Summary of key recommendations	17

## List of Figures

Figure 1. State-wide wound prevalence	8
Figure 2. Wound prevalence by age group	8
Figure 3. Wound prevalence by medical specialty	9
Figure 4. Proportion of wounds and hospital-acquired wounds by wound category	10
Figure 5. WoundsWest project governance	21



## Project background

The WoundsWest Project is an Ambulatory Care Services initiative that aims to provide Western Australian (WA) health care practitioners, health consumers and the community with an evidence-based system for the prediction, prevention and management of wounds<sup>1</sup>.

Once established, this wound management system will improve patient outcomes, reduce demand on Emergency Departments, hospital inpatient beds and outpatient clinics and realise significant cost savings across WA. This will be achieved by reducing preventable hospital-acquired wounds and improving the management and healing rates of all other wounds.

WoundsWest will develop and implement state-wide:

- A process for auditing the number and types of wounds found in WA health facilities;
- An education program and evidence-based clinical guidelines in wound management;
- An electronic wound imaging and remote referral system supported by expert wound management clinicians; and
- A repository for wound data.

A crucial first step in developing the wound audit process was the undertaking of the inaugural WoundsWest state-wide wound prevalence survey in May 2007. The survey, the first of its kind to be completed in Australia, involved the 100% participation of WA acute public health services with 220 clinical staff completing a skin examination of 2,777 inpatients across 85 hospitals over a 4 week period.

This report summarises the key outcomes from the first WoundsWest wound prevalence survey. A comprehensive report covering all wound categories and more information on WoundsWest can be viewed at [www.health.wa.gov.au/woundswest](http://www.health.wa.gov.au/woundswest).

'Wounds' in the context of WoundsWest are defined as "a break in the skin (epidermis or dermis) that can be related to trauma (including surgical intervention) or to pathological changes within the skin and body" [1]. For this report wounds are categorised as either: acute (includes surgical and traumatic), burns, leg ulcers, malignant, pressure ulcers, skin tears or other wounds.

'Wound prevalence' is the proportion of patients identified with 1 or more wounds in the total cohort of patients surveyed (see Appendix B - Definitions & keys).

## Prevalence survey aims

The WoundsWest state-wide wound prevalence survey aimed to:

- Quantify the prevalence of wounds in consented patients (neonatal, paediatric and adult) in all WA public hospitals;
- Obtain contextual data<sup>2</sup> on how organisations currently prevent and manage wounds;
- Provide data to inform strategic planning for improving the prediction, prevention and management of wounds; and
- Introduce the WoundsWest audit process and other project elements to WA Health.

<sup>1</sup> Appendix A notes the WoundsWest project governance and membership relative to the state-wide wound prevalence survey.

<sup>2</sup> 'Contextual data' incorporated quantitative and qualitative information to identify factors that influenced the delivery of evidence-based wound management from an organisational perspective.

## Prevalence survey outcomes

The successful completion of the WoundsWest wound prevalence survey and delivery of all anticipated aims and outcomes for this component is a key achievement for the project and for WA Health (Table 1).

As well as accomplishing the primary aims of the survey, the completion of this major project task supports and informs the overall strategic direction of the WoundsWest project to improve wound prevention and management across the state. The survey has quantified the magnitude of wounds found on inpatients, in particular those that are hospital-acquired wounds and ascertained the current compliance to evidence-based clinical practice guidelines required to reduce the prevalence of preventable wounds such as pressure ulcers and skin tears.

There is still a large body of work required to deliver a sustainable wound management improvement program with continuity of wound care for patients across health sectors. However, the survey information and the achievement of aims under the other WoundsWest project elements (interactive wound education modules and an information technology platform to support continuity of patient care, remote referral and data storage) coupled with the enthusiasm and commitment shown for the project from staff at all levels of WA Health indicate the WoundsWest project will continue to add significant value to the provision of wound care for health services.

As a direct consequence of the prevalence survey outcomes WoundsWest has secured \$2.5 million to purchase pressure reducing/relieving equipment for WA health services that will improve clinicians' ability to prevent and manage hospital-acquired pressure ulcers or patients admitted to these facilities with pressure ulcers.

**Table 1. Summary of wound prevalence survey deliverables and outcomes**

Wound prevalence survey deliverables	Outcome
1. Quantify the prevalence of wounds in consented patients (neonatal, paediatric and adult) in WA public hospitals	Achieved Prevalence = 49% Established baseline data from which improvement in wound prevention and management can be tracked Highlighted the magnitude of preventable hospital-acquired injuries = 19%
2. Obtain contextual data on how organisations currently prevent and manage wounds	Achieved Identified that coordinated planning is required to develop and direct resources to improve current wound management Highlighted opportunities to reduce hospital-acquired injuries through implementation of evidence-based initiatives state-wide
3. Provide data to inform strategic planning for improving the prediction, prevention and management of wounds	Achieved Reliable state and organisation-wide data provided to participating health services and WA Health to inform strategic planning for improving prediction, prevention and management of wounds Confirmed wound management forms a major component of daily service delivery for public hospitals
4. Introduce the WoundsWest audit process and other project elements to WA Health	Achieved Staff from all 85 WA public health services informed about WoundsWest with 220 staff receiving direct education on how to recognise and classify wounds according to survey criteria

## 1. Quantify the prevalence of wounds in consenting patients in all WA public hospitals

### Health services

All 85 public hospitals in WA agreed to participate in the 2007 WoundsWest wound prevalence survey and supply contextual data (17 hospitals had no eligible patients on survey day and were unable to contribute patient data). Metropolitan health services represented 83% of the surveyed patient population and regional health services 17% (Table 2).

### Patients

WoundsWest surveyors approached 2,979 inpatients who were on site on the day of survey and 2,777 (93%) consented to a skin inspection (Table 2). All adult, paediatric and neonatal inpatients including qualified newborns and Emergency Department patients flagged for admission were eligible for inclusion in the survey. Psychiatric, unqualified newborns (a well newborn accompanying its mother but not admitted as a patient), hospital in the home, day surgery and day procedure patients were excluded.

### Prevalence

The prevalence of wounds in the surveyed population was 49%, that is 1,363 of the 2,777 inpatients surveyed had 1 or more wounds identified during the survey period (Figure 1). On average patients had 2 wounds and 26% (n = 355) of patients had 3 or more wounds.

Patients admitted to inpatient beds via Emergency Departments formed the largest proportion (45%) of the surveyed population and these patients accounted for 41% of all wounds identified (n = 1,175).

Table 2 shows the survey population and prevalence of patients with wounds by regional group.

**Table 2. Survey population and wound prevalence by regional group**

Group	Total patients approached	Total patients consented to skin inspection	Response fraction	Patients with 1 or more wounds of any category	Prevalence
<b>Metropolitan</b>					
Other metropolitan	241	228	95%	123	54%
SMAHS <sup>1</sup>	1,248	1,176	94%	631	54%
NMAHS <sup>2</sup>	883	770	92%	365	47%
PMH <sup>3</sup>	136	125	92%	50	40%
Subtotal metropolitan	2,458	2,299	93.5%	1,169	51%
<b>WACHS<sup>4</sup></b>					
Integrated district health services	179	165	92%	75	45.5%
Regional health services	251	234	93%	96	41%
Small hospitals	91	79	87%	23	29%
Subtotal WACHS	521	478	92%	194	41%
State total	2,979	2,777	93%	1,363	49%

#### Notes:

<sup>1</sup> SMAHS = South Metropolitan Area Health Service

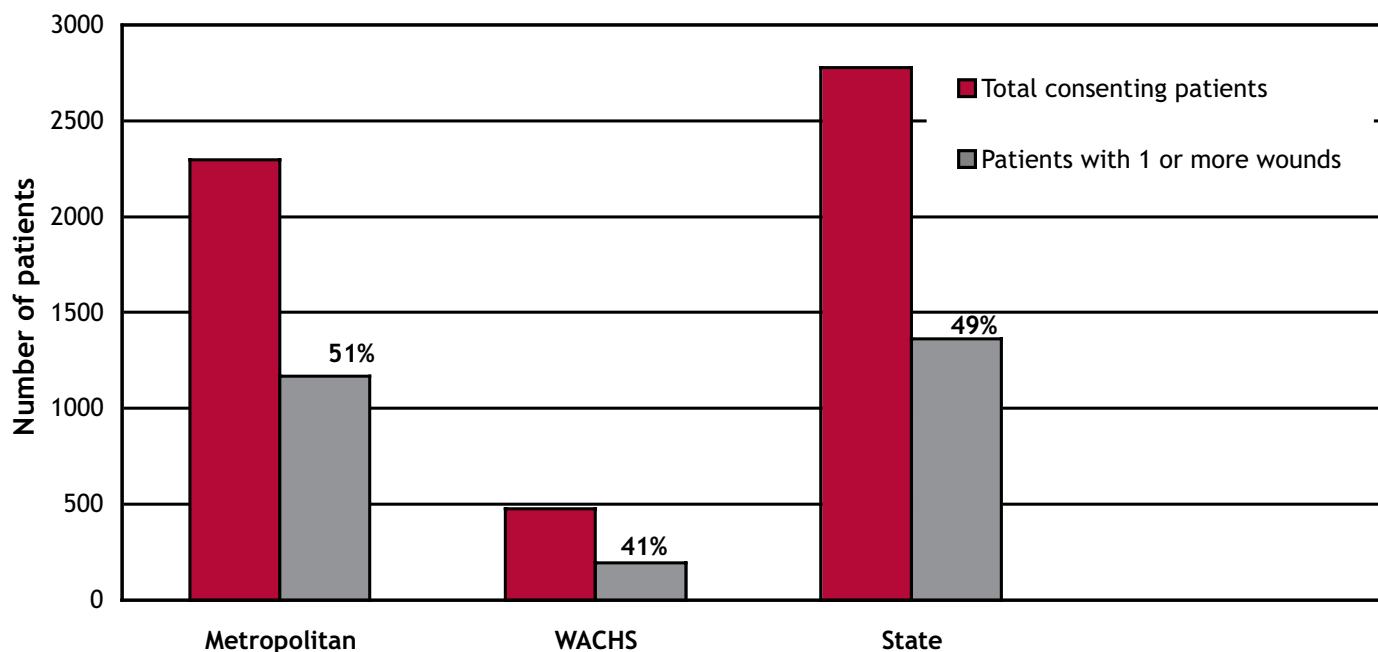
<sup>2</sup> NMAHS = North Metropolitan Area Health Service

<sup>3</sup> PMH = Princess Margaret Hospital for Children

<sup>4</sup> WACHS = Western Australian Country Health Service

Figure 1 shows the state-wide wound prevalence by major regional group.

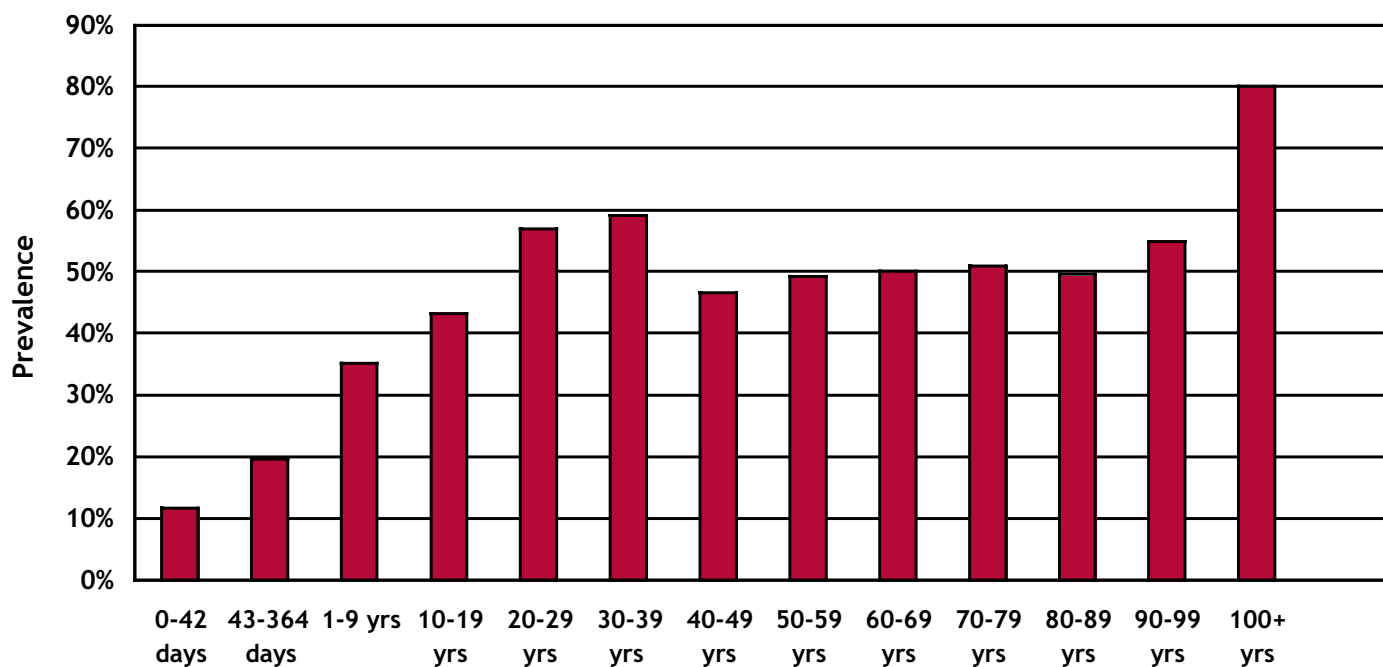
**Figure 1. State-wide wound prevalence**



### Prevalence by age group

Patients 60 years and over accounted for 55% (n = 1,539) of the surveyed population and 59% (n = 1,684) of all wounds identified. Figure 2 shows the prevalence of wounds by age group.

**Figure 2. Wound prevalence by age group**



### Prevalence by medical specialty

Wound prevalence was highest in the surgical group at 72% (n = 763) with patients in this group accounting for 27.5% of the surveyed population but 40% of patients with 1 or more wounds.

Medical patients had a prevalence of 34.5% (n = 1,112) and accounted for 40% of the population and 28% of patients with wounds.

Obstetric patients, representing 8% of the surveyed population and 10% of patients with wounds, had a prevalence of 61% (n = 220) see Table 3 & Figure 3.

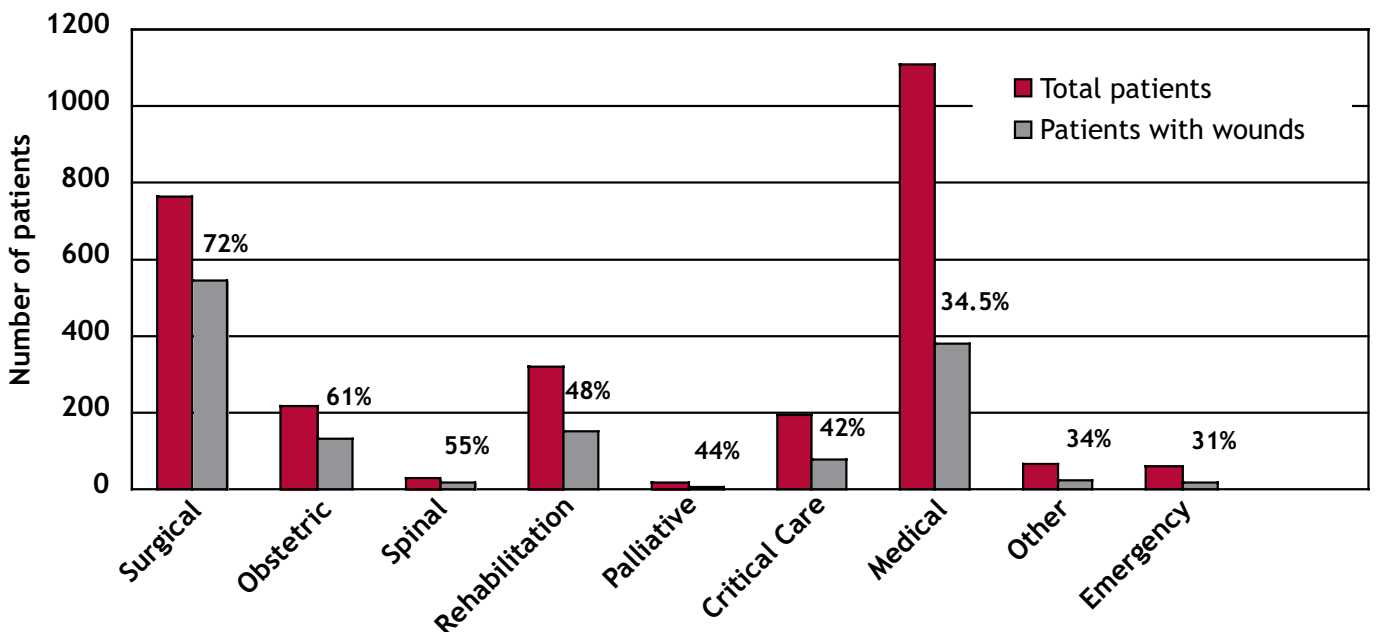
**Table 3. Wound prevalence by medical specialty**

Medical specialty group <sup>1</sup>	Total patients	Proportion total patients	Patients with 1 or more wounds present	Proportion of patients within this specialty with 1 or more wounds	Proportion of total patients with 1 or more wounds
Surgical	763	27.5%	547	72%	40%
Obstetric	220	8%	134	61%	10%
Spinal	31	1%	17	55%	1%
Rehabilitation	319	11.5%	7	48%	11%
Palliative	16	1%	152	44%	0.5%
Critical Care	191	7%	81	42%	6%
Medical	1,112	40%	384	34.5%	28%
Other	64	2%	22	34%	2%
Emergency	61	2%	19	31%	1%
<b>Total</b>	<b>2,777</b>	<b>100%</b>	<b>1,363</b>	<b>49%</b>	<b>100%</b>

**Note:**

<sup>1</sup> Medical specialty group membership is noted in Appendix B

**Figure 3. Wound prevalence by medical specialty**



## Wounds

Across the state 2,867 wounds were identified on 1,363 patients. Wounds were categorised as acute (included surgical and traumatic wounds), burns, leg ulcers, malignant, pressure ulcers, skin tears or other wounds (Table 4). Acute wounds accounted for 54% of the wounds identified (n = 1,555). Wound categories are described or measured as a proportion of the total wounds rather than the measure of prevalence which is used for patients.

## Hospital-acquired wounds

Wounds were defined as being hospital-acquired if there was no documentation recording the pre-admission presence of the wound within the first 24 hours of admission. Hospital-acquired wounds accounted for 66% of the 2,867 wounds identified. Two thirds of the pressure ulcers and skin tears identified were hospital-acquired, accounting for 19% of total wounds (n = 553). Table 4 & Figure 4 show the proportion of wounds and hospital-acquired wounds by wound category.

**Table 4. Proportion of wounds and hospital-acquired wounds by wound category**

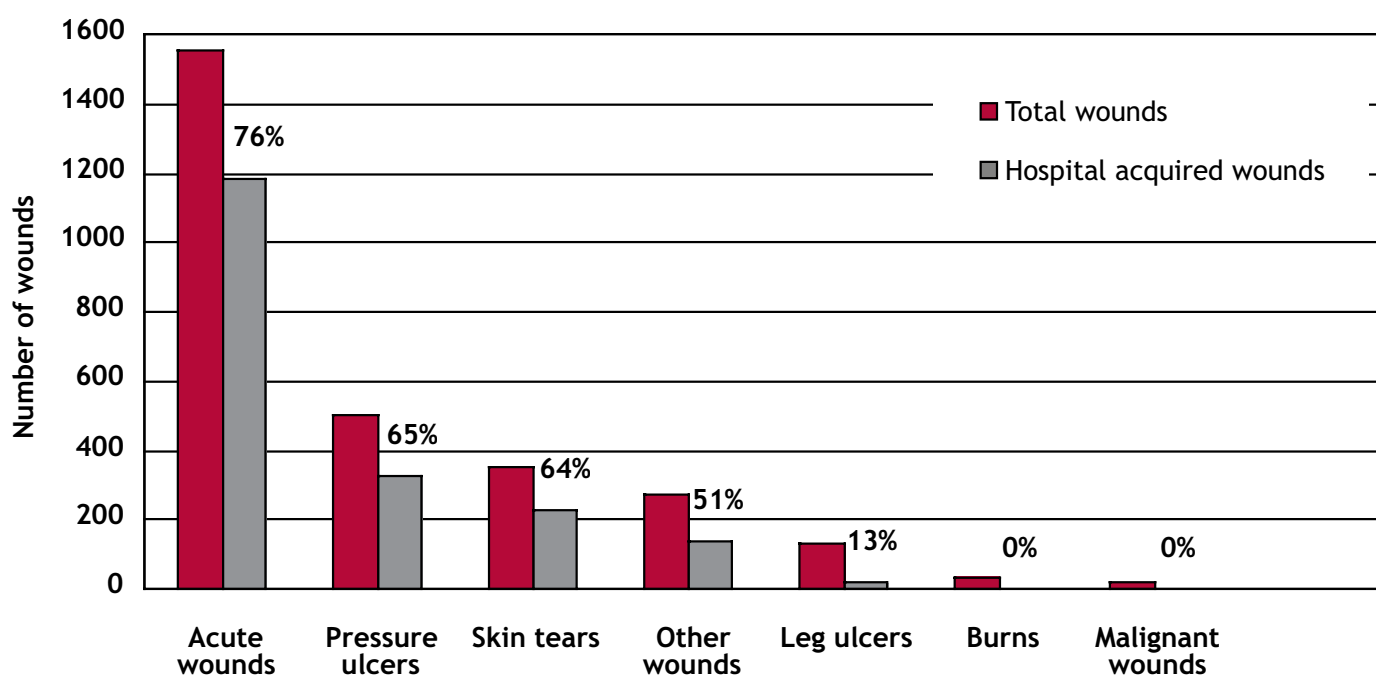
Wound category	Number of wounds	Proportion of total wounds <sup>1</sup>	Number of hospital-acquired wounds	Proportion of hospital-acquired wounds <sup>2</sup>
Acute wounds	1,555	54%	1,181	76%
Pressure ulcers	502	17.5%	328	65%
Skin tears	354	12%	225	64%
Other wounds	272	9.5%	138	51%
Leg ulcers	131	5%	17	13%
Burns	33	1%	0	0%
Malignant wounds	20	1%	0	0%
<b>Total wounds</b>	<b>2,867</b>	<b>100.0%</b>	<b>1,889</b>	<b>66%</b>

### Notes:

<sup>1</sup> Proportion of total wounds = number of wounds identified in that wound category/total number of wounds identified in the consenting population

<sup>2</sup> Proportion of hospital-acquired wounds = number of hospital-acquired wounds in that wound category/total number of wounds identified in that category

**Figure 4. Proportion of wounds and hospital-acquired wounds by wound category**



## Prevalence by wound category

Table 5 shows the prevalence of patients with wounds and hospital-acquired wounds by wound category within the cohort of patients examined.

**Table 5. Wound prevalence by wound category**

Wound Category	Patients	Prevalence	Patients with hospital-acquired wounds	Hospital-acquired prevalence
Patients with acute wounds	869	31%	673	24%
Patients with pressure ulcers	303	11%	217	8%
Patients with skin tears	220	8%	153	5.5%
Patients with other wounds	186	7%	89	3%
Patients with leg ulcers	71	3%	9	1%
Patients with burns	17	1%	0	0%
Patients with malignant wounds	15	0.5%	0	0%
<b>Total patients with 1 or more wounds<sup>1</sup></b>	<b>1,363</b>		<b>979</b>	

Note:

<sup>1</sup> Total patients is not the sum of the 'Patients' column as patients with multiple wounds may appear in more than one row

In 2006 a Victorian state-wide survey of public hospitals completed using the same methodology, reported pressure ulcer prevalence of 17.6%, with a hospital-acquired pressure ulcer prevalence of 11.9% (n = 6,936) [2].

## Summary

WoundsWest has quantified the prevalence of wounds across WA health services. Of the 2,777 patients examined in the survey 49% of patients had 1 or more wounds as determined by the wound definition used. The results highlighted that almost 19% of the total wounds were preventable hospital-acquired injuries.

This survey has established the baseline data required to evaluate if future initiatives and interventions in WA Health facilities achieve an improvement in wound prevention and management.

## 2. Obtain contextual data on how organisations currently prevent and manage wounds

Contextual information gathered from all 85 health services covered the services current:

- Wound management practices;
- Data collection/reporting processes (prevalence, incidence or incident data);
- Wound prevention and management education for staff;
- Existing resources (staff and equipment); and,
- Existing strategies for improvement in wound prevention and management.

Table 6 summarises the quantitative contextual responses received.

**Table 6. Quantitative contextual data**

Factors	Number of hospitals with a positive response <sup>1</sup>	Proportion of total hospitals with a positive response
<b>Wound management practices</b>		
Existing protocols and policies on wounds in place	55	65%
Evidence-based clinical guidelines (or similar) used for policy development	50	59%
Pressure ulcer risk assessment tool completed on admission	59	69%
Individual wound prevention and management plans developed	80	94%
Patient literature regarding wound prevention and/or care in use	40	47%
<b>Data collection/reporting processes</b>		
Wound data collected as part of clinical risk management program	29	34%
<b>Wound prevention and management education for staff</b>		
Access to education program on wound prevention and management	57	67%
<b>Existing resources</b>		
Executive or senior manager responsible for wound prevention and management	17	20%
Active wound committee	25	29%
Specialist wound management staff with allocated time	10	12%
Static pressure reduction foam mattress replacement program	15	18%
<b>Existing strategies</b>		
Organisation-wide strategy to improve general wound management	23	27%
Organisation-wide strategy to reduce preventable wounds	24	28%
Participation in SQulRe Clinical Practice Improvement in pressure ulcers	21	25%
Wound prevention and management improvement initiatives planned	21	25%

Note:

<sup>1</sup> n = all participating hospitals whether or not they had eligible patients on survey day (n = 85)

### Summary

The contextual data identified that few hospitals had comprehensive strategies, resources or regular reporting of clinical risk wound data to inform initiatives or monitor the effect of interventions and sustainable improvements. Coordinated organisational clinical risk management planning is required to develop and direct resources to improve current wound prevention and management processes.

The data highlighted opportunities to introduce policies, practices and resources that would reduce preventable hospital-acquired wounds which represented 19% of all wounds identified in the survey.

### 3. Provide data to inform strategic planning for improving the prediction, prevention and management of wounds

Both patient and contextual data can be used to inform strategic planning on a state-wide and local organisational level to reduce preventable hospital-acquired wounds and improve the management of all wounds.

#### State-wide level

On a state-wide basis the information obtained from the WoundsWest survey has:

- Confirmed that wound care is a major component of daily service delivery for public hospitals;
- Assisted in prioritising the order in which the WoundsWest education modules are developed;
- Established a baseline from which to measure and track improvement in wound prevention and management;
- Highlighted areas for further investigation and improvement opportunities;
- Provided information to strengthen clinical governance<sup>1</sup> in wound prevention and management [3]; and
- Resulted in a successful funding application for \$2.5million in pressure reducing/relieving equipment for health services.

Effective use of all elements of the WoundsWest system will over time: increase patient safety; reduce preventable hospital-acquired wounds; and reduce wound-related Emergency Department presentations, inpatient admissions and outpatient attendances within WA Health facilities by improving access to consistent, continuous evidence-based wound care which can increasingly be delivered locally.

#### Organisation-wide level

For participating health services WoundsWest has provided:

- Site and ward specific data on wounds that can be used to inform strategic planning for improving wound management services, resources and staff education;
- Benchmarked data to allow comparison with organisations of a similar bed size;
- Information on the lack of or current use of evidence-based wound management protocols;
- Information to highlight and prioritise areas or patient groups to target for improvement initiatives; and
- Education on identifying and classifying wounds to clinical staff involved in the survey.

Based on the information provided health services can now prioritise, develop and implement a staged wound prevention and management improvement strategy to allocate scarce health resources within their organisation.

#### Hospital-acquired wounds and wound prevention

Preventable hospital-acquired wounds such as pressure ulcers and skin tears cause physical and psychosocial harm and incur unnecessary fiscal costs for patients and health care providers. Two thirds of the pressure ulcers and skin tears identified in the survey were hospital-acquired. Overall 19% (n = 553) of the wounds identified were preventable hospital-acquired wounds.

Strong organisational leadership from WA Health and health services is needed to use the survey data to plan and support comprehensive and coordinated improvements in:

- Reducing preventable hospital-acquired wounds; and
- Where wounds exist ensuring evidenced-based interventions promote rapid healing and positive patient outcomes.

<sup>1</sup>The WA Health Clinical Governance Framework is an approach to “assurance and review of clinical responsibility and accountability that improves quality and safety resulting in optimal patient outcomes”.

An integrated interdisciplinary evidence-based approach to strategic planning is required where patients are fully informed and involved in determining treatment goals as this fosters improved patient and health provider outcomes [3-9].

The prevention of avoidable hospital-acquired injuries and the application of evidence-based clinical practice to improve wound healing rates have the potential to substantially reduce many variables impacting on the cost of patient care such as: length of hospital stay; number and frequency of outpatient visits; dressing materials; other consumables; and human resources currently expended on wound care.

The use of pressure reducing/relieving equipment to prevent pressure ulcers is an evidence-based clinical practice that could be standardised across WA [4]. Few health services had a static foam mattress replacement program (18%, n = 15) and many staff anecdotally indicated a scarcity or difficulty in obtaining additional pressure reduction equipment for patients at high risk of developing pressure ulcers. The majority of pressure ulcers (84%, n = 421) were located on the pelvic girdle and lower leg. Of the 303 patients identified with pressure ulcers, no pressure reducing/relieving device was in use in 16.5% (n = 50) of these patients.

Regular reporting of pressure ulcer data for an existing clinical indicator such as the Australian Council on Healthcare Standards (ACHS) EQuIP 4 Clinical Indicator 1.5.3 for pressure ulcers [5] would increase the value of data for sustaining improvements in preventable hospital-acquired pressure ulcers and keep the issue on health service agendas. Data was collected as part of a clinical risk management program by 34% (n = 29) of health services.

The use of a pressure ulcer risk assessment tool (RAT) is recommended by the Australian Wound Management Association's (AWMA) Clinical Practice Guidelines for the Prediction and Prevention of Pressure Ulcers as a key to shifting care from crisis intervention to preventative management [1]. Although 69% (n = 59) of health services indicated they had a policy of completing a RAT within the first 24 hours of admission, a RAT was identified for only 39% of surveyed patients (n = 1,149). The proportion of each type of RAT in use during the survey is detailed in Table 7 below. The Braden Scale for Predicting Pressure Sore Risk (Braden) was the most commonly used tool 78.5% (n = 902).

**Table 7. Pressure ulcer risk assessment**

Risk assessment tool (RAT)	Number of patients <sup>1</sup>	Proportion of total patients <sup>1</sup>
RAT present	1,149	39%
No RAT present	1,830	61%
Total	2,979	100.0%
RAT type		Proportion of total RAT used
Braden	902	78.5%
Norton	106	9%
Waterlow	102	9%
Other	39	3%
<b>Total patients with RAT</b>	<b>1,149</b>	<b>100.0%</b>

Note:

<sup>1</sup> n = all patients whether they consented to a skin inspection or not

Skin tear prevalence occurred in 5.5% (n = 153) of the survey population. Whilst in many instances these injuries can be prevented there is currently a scarcity of evidence for reliably predicting patients at risk of developing skin tears. The introduction of a single skin tear classification system will create a common language to enable improved communication and continuity of care for patients with these wounds.

## Summary

Reliable state and organisation-wide data was provided to WA Health and participating health services to inform strategic planning for improving the prediction, prevention and management of wounds.

The data has confirmed wound management forms a major component of the clinical care provided on a daily basis within WA's public hospitals.

## 4. Introduce the WoundsWest audit process and other project elements to WA Health

Data can be a powerful tool for identifying a need, informing strategic planning to manage an issue and tracking the implementation and success of an intervention. The WoundsWest survey, the first Australian state-wide wound prevalence survey, presented the WoundsWest team with a unique logistical and communication challenge to arrange education, surveyor testing and data collection using a common methodology within 85 health services across WA.

### Audit process

The WoundsWest audit process involved:

- Development of an audit methodology, tools<sup>1</sup> and protocols for the collection of wound prevalence data [6];
- Development of an education program for assessing the competency of audit surveyors;
- Completion of a pilot study and subsequent state-wide survey of 85 health services;
- Development of data management processes; and
- Analysis and reporting of prevalence data to inform strategic planning.

### Other project elements

In order to achieve sustainable improvement in wound prevention and management, WoundsWest is also in the process of developing and providing access to:

- Evidence-based wound education;
- An electronic wound imaging and remote referral system; and
- Clinical support for staff through the WoundsWest Consultant Team (WWCT).

A brief introduction to the education and information technology elements of the project was included in the general information and education sessions provided to all participating health services.

WoundsWest has launched the first module of a dynamic online interactive wound education program which details basic wound assessment and management. This can be accessed at [www.health.wa.gov.au/woundswest/education](http://www.health.wa.gov.au/woundswest/education).

WoundsWest will also facilitate clinical support and remote referral of complex wounds to clinicians with wound management expertise via an electronic imaging and documentation system which will be piloted at 7 WA Health sites in early 2008.

### Summary

Staff within all 85 WA public health services have been informed of WoundsWest's aims and objectives and 220 staff received direct education on how to recognise and classify wounds according to survey criteria and were deemed competent to participate as surveyors in the 2007 wound prevalence survey.

<sup>1</sup> WoundsWest partnered with Silver Chain to develop a unique mobile phone data collection application which expedited data collection and analysis by reducing documentation, minimising missing data, and electronically uploading data from each site to a central database.

## Conclusion

The management of patients with wounds places considerable demands on health resources and health budgets [7]. The nature of wounds in terms of their underlying cause, type and number found on patients and their affect on health service delivery has been poorly explored, particularly within Australia.

WoundsWest has successfully:

- Identified the prevalence of wounds in WA public hospitals;
- Obtained contextual data on how organisations currently manage wounds;
- Provided data to inform strategic planning for improving the prediction, prevention and management of wounds; and
- Introduced the WoundsWest audit process and other project elements to WA Health.

WoundsWest recommends WA Health adopt uniform policies and practices in wound management that will improve clinicians' ability to predict, prevent and manage all wounds according to current evidence. The recommendations centre on establishing state-wide and local leadership, uniform policies, collaborative interdisciplinary care and evidence-based education aimed at reducing preventable hospital-acquired wounds and improving wound management practices.

WoundsWest has achieved one of its primary objectives and all of the aims of the first state-wide wound prevalence survey. The successful attainment of the remaining WoundsWest objectives will mean that WA health is in an ideal situation to support improved continuity of wound care for patients across the spectrum of health in WA. WoundsWest has the potential to position WA Health as a world leader in wound prevention and management.

## Recommendations

The following recommendations will achieve a reduction in preventable hospital-acquired wounds and improve wound healing outcomes.

WoundsWest recommends that WA Health and health services:

- Reduce hospital-acquired pressure ulcers by 10% in the next 12 months through the introduction of evidence-based pressure ulcer prevention and management strategies;
- Reduce hospital-acquired skin tears through the introduction of a state-wide skin tear classification system and the investigation of evidence-based prevention and management strategies for skin tears; and
- Increase access to and promote the use of the WoundsWest education program, clinical expertise and evidence-based wound care for all patients across WA.

The adoption, implementation and effect of the above recommendations will be evaluated through the second state-wide wound prevalence survey in 2008.

Table 8 details the responsibilities and actions required by WA Health and individual health services in order to achieve the recommendations and improvements in wound prevention and management.

**Table 8. Summary of key recommendations**

<b>KEY RECOMMENDATION 1 - Reduce hospital-acquired pressure ulcers by 10%</b>		
WA Health and health services should work together to implement a range of evidence-based strategies aimed at working towards a 10% state-wide reduction in hospital-acquired pressure ulcer prevalence within the next 12 months.		
<b>Action</b>	<b>WA Health state-wide responsibility</b>	<b>Individual health service responsibility</b>
1.1 - Establish clinical governance and interdisciplinary leadership for pressure ulcer prevention and management initiatives	<ul style="list-style-type: none"> <li>■ Provide pressure ulcer data to health services to inform strategic planning and track reductions in hospital-acquired pressure ulcers</li> <li>■ Conduct 2nd WoundsWest state-wide wound prevalence survey in 2008</li> <li>■ Work closely with the Office of Safety &amp; Quality in Health Care SQulRe program to support clinical practice improvement</li> <li>■ Ensure interdisciplinary membership/input of working groups involved in developing wound prevention and management initiatives</li> </ul>	<ul style="list-style-type: none"> <li>■ Establish a wound management committee chaired by a senior or executive manager to plan, audit and monitor wound prevention and management for the organisation</li> <li>■ Participate in the 2008 WoundsWest state-wide wound prevalence survey.</li> <li>■ Participate in the SQulRe clinical practice improvement (CPI) pressure ulcer initiative</li> <li>■ Report on outcomes of participation and wound initiatives at health service executive level</li> <li>■ Establish interdisciplinary wound management clinics to manage complex or chronic wounds</li> </ul>
1.2 - Standardise the use of pressure ulcer risk assessment tools (RAT) and protocols across all health services	<ul style="list-style-type: none"> <li>■ In collaboration with health services identify an appropriate pressure ulcer RAT for state-wide use</li> </ul>	<ul style="list-style-type: none"> <li>■ Pilot and implement the state recommended pressure ulcer RAT and relevant protocols across the health service</li> <li>■ Link preventative and management interventions to patients' level of assessed risk</li> <li>■ Monitor the implementation and compliance of the RAT's use</li> </ul>
1.3 - Provide static pressure reduction foam mattresses for all public hospital patients at low to medium risk of developing a pressure ulcer	<ul style="list-style-type: none"> <li>■ Provide additional funding to support a static pressure reduction foam mattress replacement program for all health services</li> <li>■ Ensure evidence-based technical specifications are established to support state procurement processes</li> </ul>	<ul style="list-style-type: none"> <li>■ Establish an ongoing static pressure reduction foam mattress replacement program to ensure equipment meets appropriate specifications and is maintained to an agreed standard</li> </ul>

Action	WA Health state-wide responsibility	Individual health service responsibility
1.4 - Provide access to a range of additional pressure reducing/relieving devices for patients at medium to high risk of developing a pressure ulcer	<ul style="list-style-type: none"> <li>■ Provide additional funding to support the procurement of pressure reducing/relieving devices for all health services</li> <li>■ Ensure evidence-based technical specifications are established to support state-wide procurement processes</li> </ul>	<ul style="list-style-type: none"> <li>■ Establish an ongoing pressure reduction equipment replacement program to ensure equipment meets appropriate specifications and is maintained to an agreed standard</li> <li>■ Introduce protocols and agreements for sharing pressure ulcer devices between health services to maximise use</li> </ul>
1.5 - Provide basic education on pressure ulcer prevention and management for all direct care and clinical staff	<ul style="list-style-type: none"> <li>■ Develop evidence-based pressure ulcer prevention and management education for all health care staff</li> <li>■ Provide access to evidence-based pressure ulcer education for all health care staff regardless of geographical location</li> </ul>	<ul style="list-style-type: none"> <li>■ Provide regular opportunities for all staff to access WoundsWest evidence-based pressure ulcer education</li> <li>■ Establish obligatory annual pressure ulcer education for direct care and clinical staff</li> </ul>
1.6 - Provide basic information on pressure ulcer prevention and management to all patients, their families and carers	<ul style="list-style-type: none"> <li>■ Develop patient and carer pressure ulcer prevention and management information</li> <li>■ Provide patients and carers with access to pressure ulcer prevention and management information regardless of geographical location</li> </ul>	<ul style="list-style-type: none"> <li>■ Provide all patients at risk of or those who develop pressure ulcers and their carers with information on pressure ulcer prevention and management prior to, on and during their admission</li> <li>■ Ensure at risk patients or those with pressure ulcers and their carers are consulted over care regimens</li> </ul>
1.7 - Establish regular clinical risk reporting on pressure ulcers	<ul style="list-style-type: none"> <li>■ Establish state-wide policy for management and reporting of pressure ulcers congruent with Australian Council on Healthcare Standards (ACHS) EQulP 4 Clinical Indicator 1.5.3</li> <li>■ Provide annual prevalence data through WoundsWest survey</li> </ul>	<ul style="list-style-type: none"> <li>■ Establish policy for management and reporting of pressure ulcers congruent with Australian Council on Healthcare Standards (ACHS) EQulP 4 Clinical Indicator 1.5.3</li> <li>■ Report incidence and prevalence data at ward/unit and site level to executive management</li> </ul>

**KEY RECOMMENDATION 2 - Reduce hospital-acquired skin tears**

WA Health and health services should work together to introduce a state-wide skin tear classification system and to investigate evidence-based prevention and management strategies, including an evidence-based risk prediction tool and clinical guidelines for reducing hospital-acquired skin tears.

Action	WA Health state-wide responsibility	Individual health service responsibility
2.1 - Introduce an evidence-based skin tear classification system across all health services	<ul style="list-style-type: none"> <li>■ In collaboration with health services identify an appropriate evidence-based skin tear classification tool for state-wide use</li> <li>■ Provide skin tear data to health services to inform strategic planning and track reductions in hospital-acquired skin tear prevalence</li> <li>■ Conduct 2nd WoundsWest state-wide wound prevalence survey in 2008</li> </ul>	<ul style="list-style-type: none"> <li>■ Pilot and implement the state recommended skin tear classification tool across the health service</li> <li>■ Report incidence and prevalence data at ward/unit and site level to executive management</li> </ul>
2.2 - Develop evidence-based guidelines for the prevention and management of skin tears	<ul style="list-style-type: none"> <li>■ Investigate the development of a risk prediction tool for skin tears</li> <li>■ Investigate the development of evidence-based guidelines for the prevention and management of skin tears</li> </ul>	<ul style="list-style-type: none"> <li>■ Participate in the investigation of a risk prediction tool development for skin tears</li> <li>■ Participate in the development of evidence-based guidelines for skin tear prevention and management</li> </ul>

**KEY RECOMMENDATION 3 - Increase access to wound education, clinical expertise and evidence-based wound care**

WA Health and health services should work toward increasing access to and promoting the use of the WoundsWest education program, clinical expertise and evidence-based wound care that can be delivered regardless of geographical location thereby reducing the need for patients to travel to major centres or Emergency Departments for wound care.

Action	WA Health state-wide responsibility	Individual health service responsibility
3.1 - Provide basic education on wound prevention and management for all direct care and clinical staff	<ul style="list-style-type: none"> <li>■ Progress the development of the WoundsWest online wound education program</li> </ul>	<ul style="list-style-type: none"> <li>■ Promote use of WoundsWest online wound education program for individual and group education sessions</li> <li>■ Include basic wound education in induction agendas and annual competency sessions for direct care and clinical staff</li> </ul>
3.2 - Promote the use of evidence-based clinical guidelines in policy development for wound prevention and management	<ul style="list-style-type: none"> <li>■ Establish or develop state-wide evidence-based guidelines for all wound categories</li> <li>■ Provide access to evidence-based guidelines for health care providers regardless of geographical location</li> </ul>	<ul style="list-style-type: none"> <li>■ Review existing or develop new policies for wound prevention and management aligned to evidence-based guidelines</li> <li>■ Monitor the adoption, use and effectiveness of policies for wound prevention and management</li> </ul>
3.3 - Provide access to evidence-based clinical support for all WA Health health care providers	<ul style="list-style-type: none"> <li>■ Implement state-wide wound imaging and documentation system supported by WoundsWest Consultant Team (WWCT)</li> </ul>	<ul style="list-style-type: none"> <li>■ Participate in pilots and/or state-wide implementation of WoundsWest imaging and documentation system</li> <li>■ Provide access to and use of WoundsWest imaging system and WWCT</li> </ul>

## Appendix A - Project governance & membership

Dr Neal Fong, Director General of Health is the WoundsWest project Patron.

WoundsWest Executive Steering Group members: Ms Ros Elmes (Executive Sponsor), Assoc Prof Keryln Carville, Mr Peter Collard (from October 07), Dr Phillip Della, Mr Jon Harrison (till October 07), Dr Jenny Prentice, Prof Nick Santamaria, Mrs Veronica Strachan.

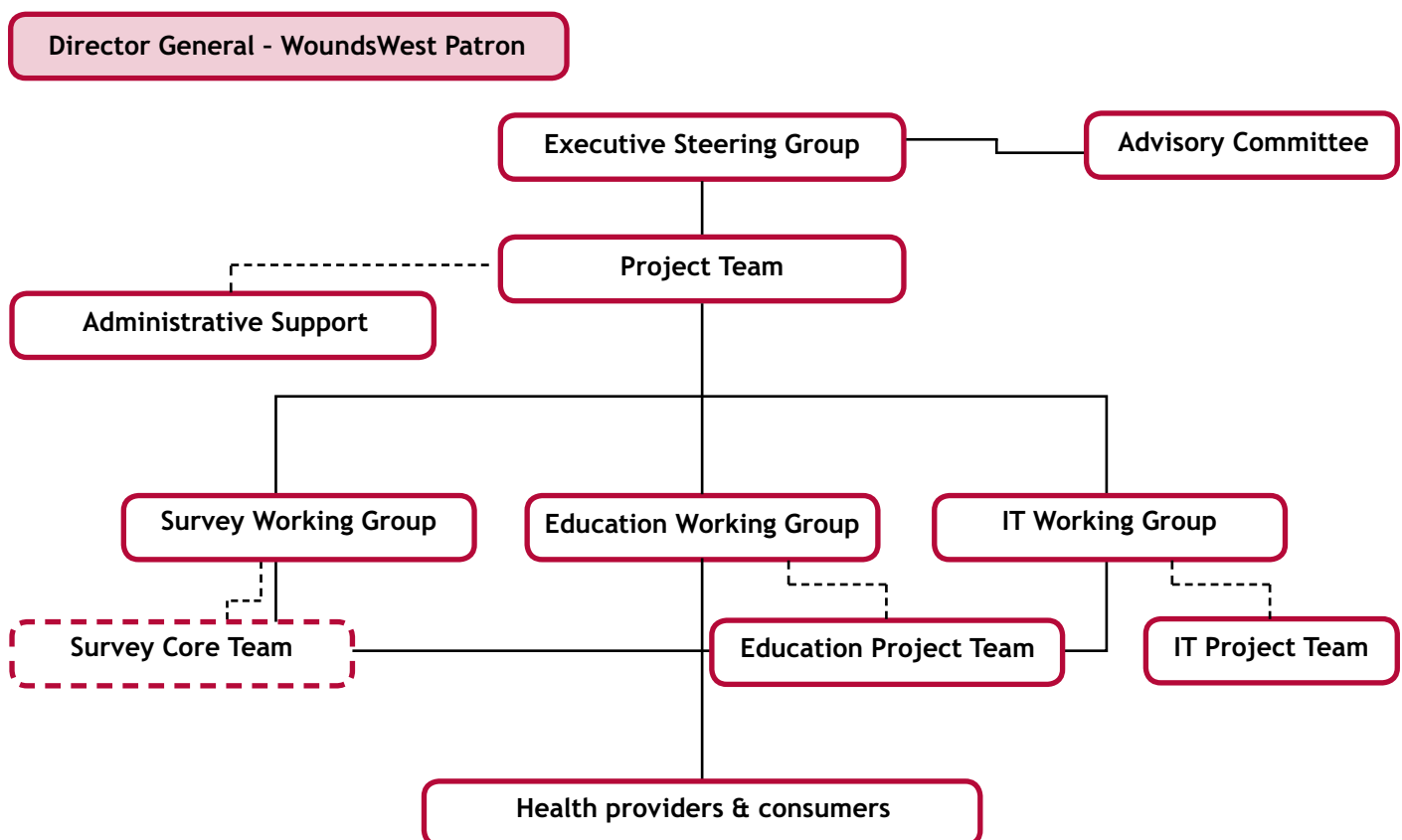
WoundsWest Advisory Committee members: Dr Phillip Della (Chair), Assoc Prof Keryln Carville, Ms Nola Cruickshank, Prof Jill Downie, Ms Ros Elmes, Mr Laurie Foley, Dr Rhonda Marriott, Ms Kathy McClure, Ms Sunita McGowan, Dr Jenny Prentice, Mr Graham Prior, Mr Sudhakar Rao, Ms Sue Robinson, Prof Nick Santamaria, Prof Michael Stacey, Ms Catherine Stoddart, Prof Bryant Stokes, Mrs Veronica Strachan, Dr Shiong Tan, Dr Helen Van Gessel, Prof Fiona Wood.

WoundsWest Survey Working Group members: Dr Jenny Prentice, Assoc Prof Gavin Leslie, Adj Assoc Prof Gill Lewin, Ms Sunita McGowan, Ms Nelly Newall, Ms Robyn Rayner, Mr Michael Rosenberg, Mrs Veronica Strachan, Ms Jeanne Young.

WoundsWest Core Team members (group formed for undertaking the survey only): Ms Donna Angel, Mr Rob Calcraft, Ms Beth Campbell, Ms Adele Dukamp, Ms Mandy Dobbs, Ms Marg Edmondson, Ms Kit Fielder, Ms Angela Hamilton, Ms Kirsty Holding, Ms Sue Hoskin, Ms Juliet Keaton, Ms Narelle King, Ms Sharon Lobb, Ms Judy Mackintosh, Ms Sharon McDavitt, Ms Pam Morey, Ms Sarah Piesse, Ms Nelly Ogier, Ms Robyn Rayner, Ms Helma Riddell, Ms Sheilah Schmidt, Ms Kathy Smith, Ms Jenny Spencer, Ms Jemma Watson, Ms Rae Webb, Ms Teresa Williams, Mr Thomas Woodage, Ms Jeanne Young.

Further information on the WoundsWest project governance can be viewed at [www.health.wa.gov.au/woundswest](http://www.health.wa.gov.au/woundswest).

**Figure 5. WoundsWest project governance**



## Appendix B - Definitions & keys

### General definitions

WoundsWest utilised the following definitions and categories throughout the state-wide survey.

Hospital-acquired	No documentation recording the presence of the wound was identified within the first 24 hours of admission; it is presumed the wound was acquired between admission and day of survey.
Incidence	The number of new cases of a particular disease or event in a population during a specific time period [8-10].
Prevalence	The number of existing cases of a particular disease or condition in a given population at a designated time [1]. Prevalence is represented as a proportion in this report.
Wound	A break in the epidermis or dermis that can be related to trauma or to pathological changes within the skin and body [1]. For this survey - excluding punctures in the skin made for the purposes of a central venous, peripheral, intrathecal, epidural or any other access line.

### Primary medical specialty groups

Group	Includes:
Critical Care	Coronary Care, Level 2 Special Care Nurseries, High Dependency & Intensive Care Units (adult, paediatric and neonatal)
Emergency Medicine	Emergency Medicine
Medical	Cardiovascular/Cardiology, Dermatology, Detoxification, Endocrinology, Gastroenterology, General Medical, Geriatric Medicine, Haematology, Hepatobiliary, Immunology, Infectious Diseases, Interim Care, Neonatal, Neurology, Oncology, Paediatric (medical or surgical as appropriate), Renal, Respiratory Medicine, Rheumatology, Stroke, Special Care Nursery
Obstetric	Obstetric
Other	All other medical specialties
Paediatric	Paediatric patients were allocated to their appropriate medical specialty and were not considered a separate group for the medical specialty analysis
Palliative Care	Palliative Care
Rehabilitation	Rehabilitation
Spinal	Spinal
Surgical	Burns, Cardiovascular/Cardiology, Ear Nose & Throat, General Surgical, Gynaecology, Head and neck, Liver transplant, Neurosurgical, Ophthalmology, Oral facio-maxillary, Orthopaedic, Pain Management, Plastic Surgery, Thoracic Surgery, Transplant, Urological & Vascular

## References

1. Australian Wound Management Association, *Clinical Practice Guidelines for the Prediction and Prevention of Pressure Ulcers*, ed. Australian Wound Management Association. 2001, Perth, Western Australia: Cambridge Publishing.
2. Strachan, V., *PUPPS 3 - Pressure ulcer point prevalence survey state-wide report 2006*. 2006, Quality and Safety Branch, Victorian Government Department of Human Services: Melbourne, Australia.
3. Department of Health, *Western Australian Clinical Governance Guidelines Information Series No. 1.2*, Office of Safety and Quality in Health Care, Editor. 2005, Department of Health Western Australia.
4. Leape, L., Berwick, DM. & Bates, DW., *What practices will most improve safety? Evidence-based medicine meets patient safety*. *Journal of the American Medical Association*, 2002. 288(4): p. 501-507.
5. The Australian Council on Healthcare Standards. *Table of EQUIP 4 functions, standards and criteria*. 2007 [cited 2007 10/10]; Available from: <http://www.achs.org.au/>.
6. Prentice, J.L., M.C. Stacey, and G. Lewin, *An Australian model for conducting pressure ulcer prevalence surveys*. *Primary Intention* 2003. 11(2): p. 87-88,90-91,93-96,98-100,102-109.
7. Harding, K. and D.E. Boyce, *Wounds: the extent of the burden, in Wounds: Biology and Management*, D. Leaper and K. Harding, Editors. 1998, Oxford University Press: Oxford. p. 1-4.
8. Victorian Quality Council, *VQC State-wide PUPPS Report - 2003: Pressure ulcer point prevalence survey*. 2004, Department of Human Services 2004: Melbourne, Australia.
9. Victorian Quality Council, *VQC State-wide PUPPS Report - 2004: Pressure ulcer point prevalence survey*. 2005, Department of Human Services: Melbourne, Australia.
10. Victorian Quality Council. *Pressure ulcer basics. A guide to pressure ulcer prevention and management from the Victorian Quality Council*. 2005 [cited 2007 12/07/]; Available from: [www.health.vic.gov.au/pressureulcers](http://www.health.vic.gov.au/pressureulcers).





# Delivering a Healthy WA



Department of  
**Health**

Department of Health 2008