

## PUPPS 2

# A short report on the model for conducting serial State-wide pressure ulcer prevalence surveys in the acute and sub-acute health sectors in Victoria

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Pressure ulcers are an internationally recognised patient safety problem, one of six being addressed by the Victorian Quality Council (VQC), which operates as an expert, strategic, ministerial advisory council with a primary role to improve safety and quality in health care<sup>1</sup>. As a consequence of conducting PUPPS 1, the acronym given to the first State-wide pressure ulcer point prevalence survey, the VQC State-wide PUPPS report 2003<sup>2</sup> made a number of recommendations aimed at improving pressure ulcer prevention and management. These included suggestions for action in the areas of pressure reducing equipment resources, wound management staff resources, education for staff and patients, risk assessment, monitoring and ongoing reporting.

Action on the PUPPS 1 recommendations to date includes: support for several of the recommendations by their inclusion in the Victorian Department of Human Services (DHS) Policy and Funding Guidelines for 2004-2005; \$2 million in funding for a State-wide mattress replacement programme; development of patient/consumer information on pressure ulcer prevention (also available in 10 alternative language versions), roll-out of a 'pressure ulcer basics' education programme State-wide; and a second State-wide recording of pressure ulcer prevalence – PUPPS 2.

This report outlines the methodology/model used by VQC for the collection of serial State-wide pressure ulcer prevalence of in the acute and subacute sectors of Victorian public health services.

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### Pressure ulcers in Victoria

The Victorian Quality Council (VQC) State-wide PUPPS report 2003, noted a baseline pressure ulcer prevalence of 26.5% (range 5.6-48.4%) for Victorian acute and subacute health services<sup>2</sup>. This result was determined through a 20 week State-wide pressure ulcer point prevalence survey across 82 metropolitan, regional and rural healthcare facilities. The PUPPS 1 result indicated that the prevalence of pressure ulcers in participating facilities was significant and higher than international studies with similar methodologies<sup>3-5</sup> or previously reported in earlier Victorian surveys<sup>6, 7</sup> but was equivalent to data collected in a national survey in 2000<sup>8</sup>.

In order to ascertain any improvement in prevalence and pressure ulcer management, to track the progress of implementation of recommendations from PUPPS 1, and to establish a model for serial State-wide data collection, VQC elected to facilitate a second State-wide survey in 2004 – PUPPS 2.

## PUPPS 2

In general, the essential elements for achieving successful prevalence survey outcomes are the adoption of a proven methodology, validated data collection tools and a common language pertaining to study definitions<sup>9-12</sup>. The tools and methodology chosen for the PUPPS 2 survey had been validated and used successfully in previous Australian prevalence surveys, as well as PUPPS 1<sup>12-14</sup>. By replicating this methodology, broad comparisons could be made between the data obtained by the VQC for PUPPS 1, PUPPS 2 and existing national and international studies.

Several elements critical to the success of PUPPS 1 were also identified – the importance of thorough planning and project management; preparation and provision of information materials for health services to enable them and their patients to make an informed decision to participate; refinement of the earlier methodology based on feedback and lessons learned from PUPPS 1; testing of and support for surveyors; and the importance of and flow-on effects of the surveyor education programme.

As well as identifying pressure ulcer prevalence, PUPPS 2 sought to determine the extent to which the strategies suggested through the PUPPS 1 recommendations have been implemented, and the influence these strategies have had on pressure ulcer prevention and management in Victoria.

PUPPS 2 was designed as a quality improvement audit and aimed to build on the experience and lessons learned from PUPPS 1, which had been based on a national, multicentre model advocated by Prentice<sup>8</sup>. The methodology from PUPPS 1 proved to be a practical and successful approach to conducting a State-wide pressure ulcer point prevalence survey. Since the release of the VQC State-wide PUPPS report 2003, the methodology initiated by Prentice and adapted by VQC has also been modified and used in a number of other health settings in Victoria, Tasmania, Western Australia and South Australia.

Permission was again obtained from Prentice to adapt and utilise the survey tool and methodology developed for her national multicentre pressure ulcer point prevalence survey conducted in 2000<sup>12</sup>. This used the Australian Wound Management Association's (AWMA) *Clinical Practice Guidelines for the Prediction and Prevention of Pressure Ulcers* as the evidence base<sup>15</sup>.

## Methodology

All Victorian acute and subacute health services (87 organisations across 135 sites) elected to participate, involving over 7,500 patients.

PUPPS 2 used the PUPPS 1 model of *train, test & tabulate*. Health services were requested to nominate an onsite coordinator to work with VQC project staff to prepare for the survey as well as providing staff to act as surveyors. VQC provided funding to backfill staff involved in the project and covered all catering and education day expenses. VQC also supplied project and ethics related information to health services related to skin inspection being a non-invasive fundamental nursing function, noted that trained staff from each participating organisation would assess and access their own patients and medical records, and addressed confidentiality and security of patient information and the patient consent process.

Many site coordinators who took part in PUPPS 1 agreed to take part in PUPPS 2 and found the second survey much easier to facilitate. They were familiar with the methodology and had been able to improve pressure ulcer prevention strategies and management in their organisation as a consequence of being involved in PUPPS 1. Most site coordinators also found it easier to recruit surveyors this time as staff that had been involved in PUPPS 1 generally enjoyed the education and survey days, finding them practical and useful for the clinical setting.

The 20 week timetable used for PUPPS 1 was condensed for PUPPS 2 and scheduled to occur over a 2 week period in an effort to create a more sustainable logistical model for annual or serial prevalence to be conducted and to minimise seasonal variation. Nineteen metropolitan and rural education sessions ran concurrently over the first week and surveys were facilitated at 135 sites in geographical groups over the second week. To assist with the education and on-site survey support, a core team of 10 wound management clinical experts and educators was convened.

### Train

Prior to attending the education day each surveyor was issued with a 'surveyor's toolkit' which contained general information on the survey, pre-reading material providing background on pressure ulcer issues, surveys and classification, a survey tool, the survey protocol and patient information.

PUPPS 2 education sessions covered epidemiology and aetiology of pressure ulcers, anatomy and physiology of the skin, pressure ulcer classification, and survey protocols. An additional session on pressure ulcer prevention and management was included as a result of feedback regarding the need for this from PUPPS 1 surveyors.

## Test

As with PUPPS 1, inter-rater reliability testing was performed utilising the testing tool developed by Prentice<sup>12</sup>. The 557 surveyors were required to write responses to questions regarding staging definitions and then to appropriately stage clinical slides of pressure ulcers. Clinical assessment was not undertaken for logistical and financial reasons associated with the large number of sites and surveyors.

## Tabulate

The criteria for inclusion were all consenting adult, paediatric and neonatal inpatients on site on the day of the survey (including emergency department patients flagged for admission). Psychiatric, hospital in the home, day surgery and day procedure patients were excluded.

The key points of the PUPPS 2 protocol and guidelines included: teams of two surveyors (one team per 40 beds with additional teams for intensive care units, emergency departments and large geographical areas) performing a full body skin inspection of consenting patients. Surveyors documented their findings and completed an audit of the medical record for relevant documentation.

It was stipulated to all surveyors that, in the presence of reactive hyperaemia, patients should be repositioned off the affected area and re-checked 30 minutes later for evidence of Stage 1 pressure ulcer. Any ulcer of dubious aetiology and any finding of five or more pressure ulcers on one patient was to be discussed and checked with the site coordinator and/or a member of the PUPPS 2 core team.

Minor modifications from the PUPPS 1 survey tool were made in the areas of:

- Age – to capture neonatal and paediatric patients.
- Smoking history – to assist in a clearer determination.
- Anatomical location identifiers – to better reflect the systematic approach to skin inspection and the pressure ulcer sites identified in PUPPS 1.
- Pressure ulcers present on admission – to identify the number documented.

## Analysis, reporting and recommendations

Surveys were couriered or mailed to a central point, collated and, following an initial manual count, health services were notified of preliminary prevalence results within 2 weeks of undertaking their survey. The full analysis, reporting and recommendation development from the PUPPS 2 data are currently underway. The VQC State-wide PUPPS 2 report 2004 will be released later this year.

## Conclusion

The model used to facilitate PUPPS 2 has been shown to be practical, efficient and achievable. It provides the comprehensive data required to establish pressure ulcer prevalence, and track improvement in pressure ulcer prevention and management across a sizeable geographic area and a large number of health services of varying sizes and casemix. The sequelae associated with facilitating this second State-wide survey will be discussed more fully in the VQC State-wide PUPPS 2 report 2004.

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