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Reducing the Incidence of Adverse Events in Australian Hospitals: An Expert Panel Evaluation of Some Proposals

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ABSTRACT

Objective:

The aim of this paper is to demonstrate a method for identifying policy options for reducing adverse events in Australia's hospitals, which could have been adopted, but was not adopted, in the wake of the landmark 1995 'Quality in Australian Health Care' study, and to indicate the lapse time before these measures could be expected to have a major effect.

Method:

The study used a quasi Delphi technique that first elicited options for reducing adverse events from an expert panel and then collated and returned them for re-consideration and comment.

Results:

Completed responses from both stages were obtained from 20 experts selected on the basis of their expertise, position and publications in the area of adverse events and quality assurance. Forty-one options were identified with an average lapse time of 3.5 years. Hospital regulation had the least delay (2.4) years, and out of hospital information the greatest (6.4 years).

Conclusion:

Following identification of the magnitude of the problem of adverse events in the 'Quality in Australian Health Care' study a more rapid response was possible than occurred. Viable options for reducing adverse events remain.

Reducing the Incidence of Adverse Events in Australian Hospitals: An Expert Panel Evaluation of Some Proposals

Introduction

Results from the 1995 'Quality in Australian Health Care' (QAHC) study suggested that the quality of health care in Australia is a problem that overshadows all others in the health sector. In the initial study, reported by Wilson, Runciman et al. (1995), medical records for more than 14,000 admissions to 28 hospitals in NSW and SA in 1992 were individually examined to determine whether or not an adverse event (AE) was associated with the admission (prior to or during the episode of hospitalisation). A team of medical officers then made a judgment concerning the degree of preventability of the AE.

By extrapolating results the authors estimated that about 470,000 admissions were associated annually with an AE and that these would have resulted in 18,000 deaths and 50,000 cases of permanent disability. In a subsequent report, Runciman, Webb et al. (2000) estimated that 50 per cent of the AEs in the QAHC study had a high preventability score. Sixty per cent of deaths could have been avoided. In this latter study, incidence and not prevalence scores were reported as part of the effort to standardise the methodology with an earlier Harvard Medical Practice Study (HMPS) reported by Brennen, Leape et al. (1991). This reduced the annual rate of AEs to 10.6 per cent of admissions.

The direct hospital costs of adverse events, both fatal and non-fatal, was estimated in the QAHC study at A$900 million per annum. This was likely to have been conservative 'as the costs of such problems arising in mental health, nursing homes, domiciliary care, day patients, and general or specialist practice outside such hospitals were not included' (Rigby, Clark et al. 1999, p. 7). Moreover, the cost was based on each hospital day attributed to an adverse event costing the same as the average of all hospital days, whereas the evidence from other studies suggests that hospital stays associated with adverse events cost more than average. Using data from the study, Rigby, Clark et al. estimated that the cost of treating 12 conditions, representing just 22 per cent of the adverse event categories, was A$483 million (Rigby, Clark et al. 1999, p. 9).

Subsequent studies have confirmed the existence of a major problem. For example, using Victorian Department of Human Services data, representing 90 per cent of the direct hospital expenditure in Victoria, Ehsani, Jackson et al. found that 6.88 per cent of routine admissions were associated with a coded adverse event (Ehsani, Jackson et al. 2006). The discrepancy in the incidence of the problem reported in the latter study, and that reported in the original QAHC study, is undoubtedly attributable in part to the methodology. In principle, the dedicated Wilson, Runciman et al. (1995) method of screening, and the individual, multi-speciality examination of each record, should identify a larger number of AEs than the routine classification of records by hospital staff. Ehsani, Jackson et al. also confirmed the financial consequences of AEs.

According to their calculations, separations associated with an AE had an additional cost of $2 billion nationally per annum, or an additional 18.6 per cent of the total inpatient hospital budget. If 50 per cent of these were preventable (the figure used by Runciman, Webb et al. based on the QAHC data) this would represent $1 billion nationally.

Following the QAHC study an advisory body was established that evolved into the Australian Council for Safety and Quality in Health Care (ACSQHC), which has in turn been replaced by the Australian Commission on Safety and Quality in Health Care. The activities of ACSQHC are summarised in a number of annual reports. In addition, the Australian Health Care agreement between the Commonwealth and State governments allocated budgets of $680 million and $785 million for quality assurance activities for the periods 1998–2003 and 2003–2008. In each of the States, sub-committees and working groups were created which, along with the ACSQHC, have resulted in a large number of reports, publications, some legislation and local initiatives. State activities are summarised in the ACSQHC's *Safety Innovations in Practice (SIIP) Program Mark II, Compendium of Project Reports* (Australian Council for Safety and Quality in Health Care 2004b).[1]

Despite this level of activity, the response to what might justifiably be described as a crisis in Australian hospitals has been cautious and incremental. Presumably the results of the QAHC study were known for some time before publication as the admissions data used in the study was from 1992. It is scarcely surprising that in 1999 an editorial in the *Medical Journal of Australia* commented that, although the various initiatives are welcome, 'the pace of change nevertheless seems slow given the stark message of the original QAHC study four years ago.... 50,000 Australians suffer permanent disability and 18,000 die at least in part as a result of their health care' (Vincent 1999). By 2002 Siddons could still comment that, 'On the 10th anniversary of the study year, the most striking outcome has been the paucity of reform currently exhibited at the coalface of tertiary health care' (Siddins 2002, p. 823) and by 2005 an MJA editorial could still question whether or not any improvement had been achieved in the previous 10 years (Wilson and Van Der Weyden 2005).

While the exact dimensions of the problem were debated there was no suggestion at any stage that Australia did not face a very serious problem. One of the themes of the present paper is that the response to this problem could have, and should have, been significantly faster and more effective. Some of the problems responsible for AEs addressed below were self-evident, and immediate administrative and possibly legislative action might have been justified, albeit with close monitoring and review following confirmation of the causal factors: with preventable deaths reportedly occurring at a rate equivalent to a Bali bombing every 3 days, haste was justified but did not occur. For purposes of comparison, a timeline of major initiatives for the first eight years following release of the QAHC study is presented in Appendix 1. Recommendations from key reports are presented in appendices 2–8.

One simple methodology demonstrating how this might have been achieved is described below. We report the results of a survey conducted among professionals diversely associated with the health industry that sought to canvass practical measures for addressing the problem of adverse events in hospitals. The purpose was not to create a comprehensive check-list of possible interventions but, rather, to act as a conduit for channelling options to policy makers and legislators. Some of these have subsequently been adopted into policy but we have made no attempt to screen these out as they indicate advice that was immediately available but often not acted upon. Other potentially important measures have still not been adopted. A second reason for the study is the belief that the identification of even modest new options, or the circulation of

1. For example, in 2004 the Clinical Excellence Commission (CEC) was launched, as part of the New South Wales Patient Safety and Clinical Quality Program. It's mission is 'to build confidence in healthcare in NSW, by making it demonstrably better and safer for patients and a more rewarding workplace' (http://www.cec.health.nsw.gov.au).

proposals currently under discussion, along with expert opinion about their feasibility, may be of value due to the size of the problem being addressed and the magnitude of benefits from even incremental improvements.

Methods

We consulted a number of Australian experts in health safety and quality issues. Their names were gleaned from public domain resources: authors of published articles on safety and quality issues, departmental officials in the area of safety, those on relevant committees, conference participants, and researchers known to the investigators. The study adopted a modified Delphi methodology using a two-stage procedure. First, we sent a questionnaire describing a number of proposals for improving safety and quality and asked recipients to comment on the options and to make additional suggestions. The questionnaire was divided into 7 sections. These were (1) error learning (2) hospital accreditation (3) hospital information systems (4) out of hospital information (5) other hospital regulation (6) doctors and (7) system level reform. New proposals from the first round were added to the original list and returned to the experts for comment on their feasibility and potential impact. Specifically, they were asked in the second stage to rate on a six-point scale (i) the potential effect of each proposal (very high, high, low, very low, none, negative), how quickly they believe it could be implemented (immediate, one month, six months, one year, five years, ten years (or more)), and the time before the option would be likely to have a major effect (immediate, one month, six months, one year, five years, ten years (or more)). They were also asked to write comments on the proposals, including arguments for and against their adoption.[2]

The analysis was essentially qualitative, not quantitative, and hypothesis testing of the results is therefore not appropriate. The objective was to illicit potentially good ideas and to determine their feasibility according to the prevailing views of a group of experts. A single idea from a single person might be more fruitful than the shared beliefs of a majority. For this reason, survey response rates, respondent characteristics and representativeness of respondents are of little interest for the main purposes of the study.

Results

The initial questionnaire was sent to 76 experts. Of these, completed results from both stages of the survey were obtained from 20. For the reasons noted above this relatively low response rate does not invalidate the results or subtract from the potential value of the suggestions made.

(1) Error Learning and Mandatory Disclosure

The first section dealt with error learning and mandatory disclosure. The proposals in this section were rated close to 'high' in terms of their potential effect. The highest score reported in Table 1 was associated with the collection and reporting of information on preventable post- discharge complications after elective surgery (P 1.9). There was also support for the mandatory reporting of adverse events (P 1.2), for the mandating of procedures that would facilitate and

2. Terminology in this area is not uniform. In articulating the proposals we adopted the preferred terms and definitions used by the ACSQHC (Runciman 2006). In particular, the following definitions were given along with the proposals. 'Adverse Event': An incident in which harm resulted to a person receiving health care. 'Incident': An event or circumstance which could have, or did lead to unintended and/or unnecessary harm to a person, and/or complaint, loss or damage. 'Harm': Death, disease, injury, suffering, and/or disability experienced by a person. 'Health Care': Services provided to individuals or communities to promote, maintain, monitor, or restore health. Health care is not limited to medical care and included self-care.

Table 1: Error Learning and Mandatory Disclosure

Proposals	Effect[a] [1=v.high 6=negative] Mean (std dev)	Implement[b] (months)	Impact[c] (months)	Total[d] (years)
1.1 Providers, including doctors and hospitals, should receive immunity against litigation relating to adverse events that have been reported, and compensation to an injured party or parties should be paid for from a subsidised government or privately run claims-fund where compensation is not contingent upon blame.	2.17 (.79)	42	55	8.38
1.2 Reporting of adverse events should be mandatory.	2.29 (1.45)	9	9	1.5
1.3 Remedial or punitive action against service providers should be independent of compensation paid, and all providers should be affiliated with an accredited body which reviews, collates and provides summary information about adverse events to providers.	2.35 (1.00)	26	26	4.3
1.4 Procedures should be mandated that facilitate and encourage the reporting of incidents by patients.	2.19 (1.11)	9	8	1.4
1.5 There should be mandatory incident reporting not just mandatory disclosure of adverse events, and mandatory review of systems following an unexpected increase in the frequency of incidents, in all public and private hospitals.[e]	2.18 (1.29)	11	9	1.7
1.6 There should be complete reporting of all patient outcomes, not only incident reporting.	2.41 (1.66)	64	28	7.7
1.7 All hospital deaths should be reviewed by an independent clinical governance department and deaths suspected of being related to an adverse event, plus any action taken to prevent such events in the future, should be reported.[f]	2.31 (1.08)	10	18	2.3
1.8 All implanted devices, such as pace makers, should have a unique identifier. Whenever a clinician or patient reports a problem, or when a device is removed, or a patient dies with a device in place, this should be recorded on an electronic data base. This data base should be continually monitored for patterns that might indicate a problem.[g]	2.33 (.97)	10	21	2.6
1.9 Hospitals should collect and report data on preventable post-discharge complications after elective surgery.	1.93 (.59)	11	21	2.7

a Respondents were asked to rate the potential effect of the option on a six-point scale: 1=very high, 2=high, 3=low, 4=very low, 5=none, 6=negative. Lower scores indicate a higher potential effect.

b How quickly it could be implemented. First the mean was calculated using the following scale: 1=immediate, 2=one month, 3=six months, 4=one year, 5=five years, 6=ten years (or more). Then the result was converted into months. For example, a mean score of 4.63 = 1yr + 63% of 48 months (5yrs – 1yr) = 42 months (1yr + 30.24 months).

c Time before the option would be likely to have a major effect: 1=immediate, 2=one month, 3=six months, 4=one year, 5=five years, 6=ten years (or more). See above for method of converting into months.

d Implementation time plus impact time.

e In Victoria mechanisms are currently in place to ensure that Root Cause Analysis (RCA) is conducted following an increase in the frequency of incidents in public hospitals.

f The Quality and Safety Branch of the Victorian Department of Human Services and the State Coroners Office already carry out these functions in Victoria with full investigation and recommendations are promulgated.

g To some extent this already occurs – e.g. in the case of heart valves (Hughes and Mackay 2006) and joint replacements (Graves, Davidson et al. 2004).

encourage the reporting of incidents by patients, (P 1.4), and for mandatory incident reporting and mandatory review of systems following an unexpected increase in the frequency of incidents (P 1.5). The degree of support among experts for mandatory measures has not been systematically investigated, but the results reported here suggest that it may be strong. Those consulted thought it would take less than a year to implement the proposals dealing with compulsory disclosure and less than another year before they would have a major effect.

(2) Hospital Accreditation and Audit

Responses to proposals concerning the hospital accreditation and auditing process are summarized in Table 2. Undertaking regular anonymous surveys of medical and nursing staff for feedback on the safety and quality climate in the hospital was rated high in terms of its potential effect, to be capable of implementation within six months, and was thought likely to have a major impact within a year. Confirming the support for mandatory procedures evident in the last section, there was support for compulsory accreditation (P 2.1) and for the mandatory auditing of identified high-risk hospitals (P 2.6).

Table 2: Hospital Accreditation and Audit

Proposals	**Effect** [1=v.high 6=negative] mean (std dev)	**Implement** (months)	**Impact** (months)	**Total** (years)
2.1 Accreditation should be compulsory for all public and private hospitals and day surgery facilities.	2.16 (.83)	9	26	2.9
2.2 There should be a review of the criteria for achieving accreditation. Criteria should be expanded to include more stringent procedures relating to safety.[a]	2.17 (.99)	18	30	4.0
2.3 Accreditation should be more focused on measurable outcomes which should be standardised to allow benchmarking against other hospitals.	2.65 (1.06)	12	41	4.4
2.4 Hospitals should undertake regular anonymous surveys of medical and nursing staff to get feedback on the safety and quality climate in the hospital.[b]	2.22 (.94)	6	11	1.4
2.5 There should be no forewarning of the date on which the accreditation review occurs. Accreditation should include follow-up reviews on random dates. All hospitals should be subject to random audit of facilities and procedures.	2.89 (1.66)	9	12	1.8
2.6 The audit procedures used in the Quality in Australian Health Care Study[c] should be introduced as a permanent feature of the public and private hospital systems, with mandatory auditing of identified high-risk hospitals, and random auditing of the remainder.	2.33 (.97)	12	24	3.0
2.7 The criteria for accreditation should be subject to evaluation against known standards for the achievement of safety and quality. Where possible, the results of random control trials should be the basis for the inclusion or rejection of criteria and standards.	2.33 (.84)	26	42	4.8

a The Australian Health Ministers have recently endorsed the release of a Discussion Paper on National Safety and Quality Accreditation Standards as the basis for consultation with stakeholders (Australian Commission on Safety and Quality in Health Care 2006).

b We note that some hospitals already do this – e.g. the Royal Children's Hospital in Victoria.

c Wilson, R. M., W. B. Runciman, R. W. Gibberd, B. T. Harrison, L. Newby and J. D. Hamilton (1995). 'The Quality in Australian Health Care Study.' *Medical Journal of Australia* 163(9): 458-471.

(3) Hospital Information Systems

The third section, summarized in Table 3, contained four proposals dealing with in-hospital information systems. The idea of tailoring clinical pathways to individual patients (P 3.2) received less support in terms of its potential effect than the other proposals, and was judged to require a longer period before a major effect would be felt, possibly because the requirement that pathways be based on 'full information regarding patient history and co-morbidities' was thought to impose an excessive burden on clinical staff. In general, however, the four proposals dealing with in-hospital information systems were rated high in terms of their potential effect, albeit with varying implementation and impact times.

Table 3: Hospital Information Systems

Proposals	**Effect** [1=v.high 6=negative] mean (std dev)	**Implement** (months)	**Impact** (months)	**Total** (years)
3.1 As a condition of accreditation all hospitals meeting designated criteria with respect to patient numbers and case complexity should have an appropriate internal information system for recording patient history, treatment (including drugs), digitized radiological imaging, pre- and post-discharge requirements.	2.11 (.68)	33	26	4.9
3.2 Clinical pathways should be tailored to individual patients and based on full information regarding patient history and co-morbidities, and not be geared to the average patient.[a]	2.71 (1.10)	30	35	5.4
3.3 All medical handovers should be documented in writing to minimise errors due to lack of continuity of care.	2.39 (1.14)	8	10	1.5
3.4 All hospitals should have systems in place to identify patients who become acutely ill and to summon appropriate expertise to the bedside within minutes.	2.00 (.89)	8	12	1.7

a The Victorian Department of Human Services has pointed out that 'clinical pathways', by their nature, are geared to the average patient, which ensures that core sets of tools are utilised. However, they agree that 'the clinical pathway should allow for variances based on clinical judgement and patients within a known Diagnosis Related Group (DRG)'.

(4) Out of Hospital Information

Among other things, Table 4 reveals the potential effect of a non-compulsory 'smart card' (P 4.1). This card would allow aspects of a patient's medical history to be accessed by health care providers at the patient's discretion. Voluntary ownership of such a card, and control over the amount and type of information disclosed, eliminates some of the privacy concerns associated with such measures, and the proposal received a 'high' rating from our experts in terms of its potential effect. Like the other proposals in this section, our respondents believed it would take several years to implement, but, unlike the other proposals, it would have a major impact in less than a year once implemented. By contrast, the positive effect of making information on comparative risk adjusted mortality and adverse event rates available to the public (P 4.2) or Private Health Insurance Funds (P 4.3) received the lowest effect ratings in the survey – both 'Low'. This may reflect the tendency to deal with safety and quality problems 'in-house' rather than expose doctors and hospitals to criticism from without. Alternatively, and as suggested by more than one of our respondents, such information might be difficult for private insurance organizations to interpret and measure.

Table 4: Out of Hospital Information

Proposals	**Effect** [1=v.high 6=negative] mean (std dev)	**Implement** (months)	**Impact** (months)	**Total** (years)
4.1 All Australians registered with Medicare should be offered the option of a smart card which contains the patient's full medical history, and/or the option of having their medical history kept on a centralized database. As an option, the card or database should have a 'secure' record of personal information which the patient wishes to keep confidential under normal conditions and which can be transferred from the patient to the doctor using a confidential PIN. All health care providers should have (subsidized) facilities for accessing information which is not confidential.	2.00 (.71)	47	9	4.7
4.2 Comparative risk adjusted mortality and adverse event rates should be on the provider website and freely available to the public. Providers should be allowed to comment on these data when the comment is informational and not marketing for the practice. The date by which this information must be posted should be determined by the volume of procedures and the elapsed time until the numbers allow the information to be statistically reliable. In the interim, process information should be provided.	3.06 (1.14)	43	52	7.9
4.3 The government should provide summary hospital data to Private Health Insurance Funds. Funds should be encouraged to use this data when contracting with hospitals.	3.27 (1.10)	33	50	6.9
4.4 Each State and Territory Health Department should routinely link discharge and re-admission data to determine the likelihood of an incident-related re-admission within a defined period. This provision should, subsequently, be extended to include data from the Health Insurance Commission and individual-level mortality statistics. Criteria should be developed to identify hospitals, hospital teams, and individual practitioners with an atypically high level of adverse events, to report on between-hospital variation, and to identify areas for improvement.[a]	2.78 (1.17)	40	30	5.8
4.5 As in parts of the United States and the United Kingdom, information should be available to the public, including on the internet, regarding risk-adjusted mortality and adverse event by cause for all public and private hospitals. Data should only be posted where the number of cases is sufficiently large that a statistically significant pattern could be expected to emerge. When case loads are below this threshold, this fact and other process information should be made available. Independent groups (such as consumer organisations) should be funded to interpret and disseminate this information. (This later step is needed or, as in some US states, there will be minimal impact of information.)	2.94 (1.14)	35	43	6.5

a It should be noted that re-admission is not always related to an adverse event, and therefore is not a reliable indicator on its own.

(5) Other Hospital Regulation

Section five dealt with other hospital regulation. (See Table 5.) In terms of its potential effect, the proposal that new or extant procedures should be formalised to guarantee anonymity and/or protection for whistle blowers (P 5.2) was rated third among all proposals, casting doubt on the suggestion above that respondents believe safety and quality problems should be dealt with 'in-house'. Also receiving strong support was the idea that hospital staff should assume 'ownership' of safety and quality issues (P 5.4), and that this can be encouraged by training staff in risk management.

Table 5: Other Hospital Regulation

Proposals	**Effect** [1=v.high 6=negative] mean (std dev)	**Implement** (months)	**Impact** (months)	**Total** (years)
5.1 Regulation should require a defined minimum complement of qualified staff *in situ* (or in close proximity) following defined procedures in all public and private hospitals, where the required minimum is determined by patient safety during the high-risk period of recuperation.	2.00 (.79)	12	9	1.8
5.2 All hospitals should have in place a risk management system that ensures personnel can initiate action to prevent and/or reduce the impact of risks. Whistle-blower procedures should be formalised to guarantee anonymity and/or protection for whistle blowers.	1.82 (.73)	8	10	1.5
5.3 All hospitals should have trained, specialized risk management staff.	2.24 (.75)	9	11	1.7
5.4 *All* hospital staff should be trained in risk management, so that all staff assume 'ownership' of safety and quality issues.[a]	2.00 (.94)	12	11	1.9
5.5 All hospitals should have in place an equipment replacement program and dedicated funding should be made available annually to replace unsafe equipment. This funding should not be part of the overall budget.	2.19 (.91)	11	31	3.5
5.6 All university hospitals should have medical education departments for (a) education, (b) credentialing and (c) simulation.	1.94 (.57)	31	19	4.2

a There is some scope for disagreement about what this might mean in practice. For example, the Victorian Department of Human Services believes 'that all staff should be aware of RCA processes (Root Cause Analysis) but need not be fully trained in conducting a RCA'.

(6) Doctors

Responses to the suggestions directly effecting doctors are reported in Table 6. Three of the proposals in this section were rated in the top five overall in terms of their potential effect. The proposal that the supervision and support of junior doctors should be improved (P 6.4) was rated highest overall. This was also judged to be quickly implementable - within nine months - and would be likely to have a major impact upon AEs within another seven months. Also rated high was the potential effect of credentialing medical students who become interns before conducting

unsupervised procedures (e.g. inserting nasogastric tubes). There was also support for centres of excellence that are dedicated to certain procedures – e.g. colon cancer surgery - when it is known that the outcome of such procedures is influenced by the quality of the practice setting or the case load of the unit or doctor (P 6.2). The establishment of such centres would of course be a long-term goal, thus explaining the longer estimated implementation and impact times.

Table 6: Doctors

Proposals	**Effect** [1=v.high 6=negative] mean (std dev)	**Implement** (months)	**Impact** (months)	**Total** (years)
6.1 Criteria should be mandated to determine a doctor's right to perform some procedures. These should require periodic review of death rates and adverse events (inter alia). When adverse events and mortality are associated with an attribute of a practice that is known to increase risk (such as small numbers of patients, service delivery to inappropriate patients, or where clinical indicators suggest the procedure is unwarranted) review might be followed initially by advice to alter the unsafe practice or procedure and subsequently, if appropriate, by disaccreditation for that procedure.	2.00 (.73)	22	22	3.7
6.2 Centres of excellence should be established that are dedicated to certain procedures – e.g. colon cancer surgery - when it is known that the outcome of such procedures is influenced by the quality of the practice setting or the case load of the unit or doctor.	1.81 (.75)	45	18	5.3
6.3 All medical students who become interns should be 'credentialed' before they are allowed to do any unsupervised procedures (e.g. inserting nasogastric tubes).	1.94 (.77)	9	9	1.5
6.4 The supervision and support of junior doctors should be improved.	1.56 (.63)	9	7	1.3
6.5 All new graduates and all new entrants into the system (e.g. foreign graduates) should have regular performance reviews by medical educators - say, every three months.	2.20 (.68)	9	11	1.7
6.6 All hospital doctors should provide e-mail addresses so that hospitals can communicate new protocols, safety rules, etc.	2.33 (.82)	7	10	1.4

(7) System Level Reform

The final section of the survey dealt with system level reforms. (See Table 7.) Not surprisingly, it was thought these options, in general, would take longer to implement, and that their effect would take longer to be felt. Among proposals aimed at system level reform, the idea that higher payments should be made for practices that are known to improve safety - e.g. the use of approved protocols (P 7.1) – rated highest in terms of potential effect.

Table 7: System Level Reform

Proposals	Effect [1=v.high 6=negative] mean (std dev)	Implement (months)	Impact (months)	Total (years)
7.1 Higher payments should be made throughout the public and private system for practices that are known to improve safety. Private insurance companies should be mandated to comply with this regulation. Practices known to improve safety might include (a) the use of approved protocols, (b) the performance of procedures in a hospital or facility specifically accredited for the procedure, (c) conduct of the procedure by a specifically accredited provider (several accreditation categories may be desirable).	2.13 (.92)	24	31	4.6
7.2 There should be independent analysis at the national level, as well as individual hospital analysis, of adverse events, to assist in the identification of rare but catastrophic events.	2.50 (.86)	11	27	3.2
7.3 A National Benchmarking Centre for Clinical and Public Health Outcomes should be established to provide hospitals and clinical managers with ready access to standardised outcomes measures for all treatments, particularly major adverse-event causing treatments.	2.41 (.80)	35	32	5.6
7.4 A National Centre for The Development of Clinical Guidelines and Clinical Pathways should be established to (a) promote evidence-based practice, (b) fund, support and disseminate evidence-based clinical guidelines, and (c) prepare model clinical pathways to assist hospitals plan and organise care.	2.27 (.88)	26	31	4.8

Discussion

The purpose of this survey was twofold. First, it sought to demonstrate that a method was available - and remains available - for identifying reform options that may be fairly rapidly implemented; that is, it is not always necessary or appropriate to follow exhaustive processes employing existing channels. Secondly, it sought to demonstrate this by identifying options that might have been – and in most cases still may be – considered for reducing AEs. For these purposes we did not need a large number of experts and we have not attempted to identify options that have subsequently been considered and adopted, or partly adopted, in different States.

While the response rate to our initial questionnaire was of limited relevance, it was rather disappointing. Postal surveys commonly obtain response rates of between 25 and 35 per cent; ours was 26 per cent. We expected that, given the gravity of the subject, we might have obtained a higher rate. Informal feedback suggested one likely reason: the authors, being social scientists rather than physicians, would be perceived as having little authority, creditability or a legitimate role in the field of service delivery and safety. This response may be indicative of a ‘closed shop’ culture: the safety of our health services is a matter for accredited medical experts operating from within approved institutions with approved channels for effecting reform. If widespread, this

attitude, in conjunction with inadequate governance of quality, might go some way towards explaining the sluggish response in the field to the QAHC report.

In contrast with the view that little can be done quickly, a number of suggestions were raised in the present study which, according to our experts, could effect significant and effective change fairly rapidly. In Table 8, which summarises the results, the average lapse time of the 41 interventions before having a significant impact was 3.5 years. The 19 options expected to have an impact within 3 years had an average time of 1.8 years before having a significant effect. Measures affecting doctors directly and the regulation of hospitals had a particularly small delay time (2.5 years and 2.4 years respectively). At the other extreme, out of hospital information was felt to have a slow effect.

Table 8: Summary of Lapse Time Before Significant Effect

Category	Number of Proposals		Average lapse time (years)	Category	Number of Proposals		Average lapse time (years)
	Impact < 3 years	**Total in this category**			**Impact < 3 years**	**Total in this category**	
1. Error Learning and Mandatory Disclosure	6	9	3.6	**5.** Other Hospital Regulations	4	6	2.4
2. Hospital Accreditation and Audit	3	7	3.2	**6.** Doctors	4	6	2.5
3. Hospital Information Systems	2	4	3.4	**7.** System Level Reform	0	4	3.6
4. Out of Hospital Information	0	5	6.4	**Total**	0	4	3.5

A distinguishing feature of some of the suggestions is that they involve regulatory enforcement which appears to be inconsistent with the apparent emphasis upon persuasion and voluntary culture-change evident in many of the initiatives suggested in official reports. In some cases, mandated options gained support in preference to the approach that 'treats the health provider as if it exists in isolation from its environment, oblivious to the institutional, social and economic pressures that drive organisational willingness to contemplate internal reforms' (Healy and Braithwaite 2006, p. S56).

Healy and Braithwaite articulate a 'pyramid' of regulatory mechanisms with 'soft' options at the bottom (personal monitoring, continuing education ...), which progresses through increasingly more stringent regulatory measures (peer review, published performance indicators, external clinical audit ...), up to 'command and control' at the top (criminal or civil penalty, licence revocation or suspension ...). The pyramid consists of 27 'mechanisms', 14 of which fall within the general categories of 'voluntarism', 'market mechanisms' or 'self-regulation'. It is doubtful that these mechanism alone will have the desired effect, but rather that, for example, 'dependence on voluntary reporting systems will lead to a gross and inconsistent underestimate of the size of the problem' (Marshall, Shekelle et al. 2003, p. 261). Responses to the proposals raised in the present study, particularly those relating to mandatory measures, suggest that the employment of more demanding strategies further up the pyramid might be warranted. As Healy and Braithwaite emphasize, the ideal is not to *replace* persuasion with punishment, but to move up the pyramid

when, and for as long as, mechanisms lower down fail to be effective. Many of the suggestions made by our expert panel indicate how this might be done.

(1) Error Learning and Mandatory Disclosure

At the time of the QAHC study, it was not compulsory for hospitals and doctors to register AEs and routinely provide feedback to facilitate error learning. This means that the most important vehicle for improving quality and reducing patient risk was not compulsory. While open disclosure is mostly implemented in public hospitals now, the opportunity for error leaning is almost certainly under-utilised in some hospitals. Legislation might ensure the universality of this critical reform, given sufficient data processing mechanisms to enable policing. The adverse events register could be linked to individual doctors and medical teams where appropriate, and suitable threshold levels installed that sequentially trigger information feedback for the purposes of review, followed by more active intervention. Despite this, nine years after publication of the QAHC study the chairman of the ACSQHC noted that 'we have insufficient accurate data for fully appreciating the current size of the multiple causes of this problem ... we need the data from multiple sources, including incident monitoring systems, routine administration data sources and the use of screening tools to practically identify areas that may cause harm' (Australian Council for Safety and Quality in Health Care 2003a, p. 5). The mandatory reporting of AEs rated high among our experts in terms of its potential effect.

The published research on 'high reliability organizations' suggests that it is wise to separate information-gathering and inquisitorial processes from punishment such as dis-accreditation. Adverse events are unlikely to be reported if there is a financial incentive to hide the AE. For this reason legislative protection of doctors from the financial outcome of litigation is a reasonable prerequisite for a comprehensive, on-going process of error learning. The consequences for a doctor associated with an AE should be based upon medical criteria and uncoupled from the social mechanism for compensating patients, except where damage occurs due to negligence. In brief, 'the challenge for health care is to shift from a blame culture to a learning culture, in order to learn from adverse events' (Healy and Braithwaite 2006, S57), as has occurred, for instance, in the aviation industry (Helmreich and Merritt 1998). This was the view of our experts, who gave a high effect rating to the proposal that doctors and hospitals should receive immunity against litigation relating to adverse events, and compensation to an injured party or parties should be paid for from a subsidised government or privately run claims-fund where compensation is not contingent upon blame. In the context of quality assurance activities the States and Territories have all now implemented measures to provide this protection.

(2) Hospital Accreditation and Audit

For decades health professionals have believed that a significant number of small hospitals are dangerous. However, with full knowledge of the QAHC results, hospital accreditation remains voluntary in all States except Victoria. Although most public and private hospitals undergo formal accreditation procedures, the danger of self-selection remains. Low quality hospitals will not opt for accreditation and poorly qualified doctors will seek out these hospitals. Multiple accreditation teams could have the power to randomly inspect all hospitals or units within hospitals and (in the most extreme cases) close those judged to be dangerous – as occurs with restaurants with sub-standard hygiene.[3] The proposal that universal accreditation should be mandated was rated 'high' by our experts in terms of its potential effect (P 2.1).

3. In a written response to our survey, the Victorian Department of Human Services expressed the view that formal accreditation should occur on pre-arranged dates 'as this provides value in allowing hospitals to independently check, maintain, improve their systems prior to accreditation'. Another expert thought the proposal unfeasible because 'hospitals take up to 12 months to self-evaluate'. Of course, non-random accreditation also allows hospitals 'to independently check, maintain, improve their systems prior to

It is unclear whether or not present accreditation is sufficiently rigorous to reduce preventable adverse events significantly. There appears little reason why the accreditation process should not itself be reviewed to ensure that credentialed hospitals satisfy rigorous safety standards in their facilities and procedures. The proposal that there should be a review of the criteria for achieving accreditation, and that the criteria should be expanded to include more stringent procedures relating to safety (P 2.2), received a high effect rating from our experts.

To date, the majority of the reforms contemplated in government-commissioned reports represent process measures of success. However, their objective is to reduce adverse events and for this reason medical record analysis of the form conducted by the QAHC study should arguably be an on-going feature of the system. The QAHC study was relatively expensive, but these costs are small compared to the importance of the surveillance, the costs, the morbidity and the deaths averted. The proposal that the audit procedures used in the QAHC study should be introduced as a permanent feature of the public and private hospital systems, with mandatory auditing of identified high-risk hospitals, and random auditing of the remainder, was also judged favourably by our experts.

In 2005 the new Australian Commission on Safety and Quality in Health Care commissioned an advisory group to examine what data might be used to create a national dataset. The advisory group considered whether the QAHC study might be repeated, but concluded 'that the major difficulty of achieving consistent and reproducible definitions of "adverse event" and "preventable adverse event" would seriously hinder accurate comparisons of any new study with those of the past' (Smallwood 2006, p. S40). However, it seems inappropriate to allow such semantic obstacles to stand in the way of an important study that could produce independently important data. Any new study must be explicit about the definitions used, so that it is clear where comparisons are valid, where they are not, and where they are doubtful. But as Wilson and Van Der Weyden note, 'the absence of recent system-wide data on patient safety seriously hinders our ability to manage the problem and make improvements. Its absence makes a mockery of the tenets of continuous quality improvement' (Wilson and Van Der Weyden 2005, p. 260). This is not to deny that there may be cheaper ways of gaining the same information than repeating the ACSQHC.4

(3) Hospital Information Systems

Patient notes are still transferred within hospitals using 19th Century clipboards. It is known that this commonly causes potentially lethal errors. The mandated use of (long available) electronic forms of transmission could alert staff to the risk of inappropriate procedures, the administration of conflicting drugs or the failure to administer a drug. Likewise X-ray films are sometimes misplaced or lost. The consequences may again be lethal. Legislation could mandate the use of digital technology (with appropriate back-up systems and staff training) to ensure immediate access to results. New wireless technologies make it possible for roving staff – doctors and other professionals – to have constant access to text and basic technical data. There is no reason why much of the health system should have missed the IT revolution which has transformed other

accreditation'. But the problem with accreditation on pre-arranged dates is that it may give an atypical picture of a hospital during the much longer non-review period. The time-consuming nature of the review process should not be underestimated but neither should the human cost of sub-standard hospitals. The Victorian DHS agrees that 'follow-up review and spot checks should be carried out on random dates'.

4. For example, valuable information on adverse event rates can be obtained from routinely collected admissions data (Ehsani, Jackson et al. 2006; Jackson, Duckett et al. 2006; Moje, Jackson et al. 2006), although this method has its inherent limitations – e.g. adverse events that only manifest after discharge are likely to be missed.

parts of the community. In relation to the size of the AE problem, the cost of implementing 21st Century information technology throughout the health system is likely to be small relative to the human and financial cost of AEs averted. Making it a condition of accreditation that 'all hospitals … should have an appropriate internal information system for recording patient history, treatment (including drugs), digitized radiological imaging, pre- and post-discharge requirements' (P 3.1) was rated 'high' by our experts in terms of its potential effect.

(4) Out of Hospital Information

A persuasive argument can be made that the public has a right to information relating to the performance of hospitals and individual doctors, provided 'that it is of high quality and able to be benchmarked in a valid way' (Barraclough and Birch 2006, p. S50). There can be little doubt that, if consulted, the public would overwhelmingly endorse the need for this information. Additionally, the provision of information is an effective method for affecting change and it is likely that the pace of reform would be accelerated if the public was aware of the safety record of various health care providers. One argument against this is that the provision of information might result in a loss of confidence in hospitals and doctors. However, this fear seems to be unfounded (Marshall, Shekelle et al. 2003). The argument that the public should be kept in ignorance to engender unjustified confidence is, at best, dubious, and if this ignorance allows an inadequate policy response then it is additionally dangerous. In some states of the USA, and most notably New York, severity adjusted mortality rates are available for every hospital and for every doctor. This has not resulted in a significant change in the pattern for public demand but it has galvanised doctors and hospital staff to successfully review and upgrade their procedures (Chassin, Kosecoff et al. 1987). League tables have recently been introduced in England to allow doctors and patients to evaluate the performance of particular hospitals (Anderson 1999). From late 2004 the performance of individual surgeons will probably be available (Medical News Today 2004). The impact of these measures can be expected to depend, inter alia, on public education.

As noted, our experts were circumspect on the question of public access to the safety record of hospitals and providers of medical care (P 4.2), and thought it would take several years before any measures along these lines would have a major impact. Several of those surveyed indicated a particularly long timeframe – ten years or more – one suggesting that data regarding risk-adjusted mortality and adverse event by cause are slow to identify problems, both requiring more than 7 years to gain statistical significance. As noted earlier, the rather negative response to this proposal might, in part, be attributable to a desire to keep problems and solutions 'in-house' rather than tarnish professional reputations through publicity. However, it is hard to reconcile this with the later support for whistle blowing among our experts, and a more likely explanation is a belief that the public is ill-equipped to deal appropriately with the information. For example, as the Victorian Department of Human Services commented: 'There is not a sufficient level of sophistication or understanding of risk-adjusted mortality and adverse event by cause to make the information available to the public'. Arguably, however, this indicates the need for simple presentation of data, the provision of explanatory notes and public education. There is little reason to believe the Australian public is less able to appreciate this type of information than the UK and the US public. The important lesson from the latter experience is that publication of this data has not resulted in a negative response from the public but appears to have provided motivation for professional self-improvement.

More generally, access to data relating to health system performance, other than the material routinely published by government, is very difficult to obtain. As an example, access to Australia-wide, de-identified public hospital records requires the separate consent of all States and Territories as well as the co-operation of the Commonwealth Department of Health or AIHW.

Data linkage to determine the consequences of different treatment patterns – who lives and who dies – is so difficult that the research is effectively proscribed for most researchers.

(5) Other Hospital Regulation

There is no regulation that links on-site expertise and the complexity or riskiness of the procedures that may be undertaken in a hospital. For example, it is possible for a hospital to permit significant surgery but have no on-site medical practitioner post-operatively. It was not until 2003 that the ACSQHC released a paper considering issues of staff rostering, skill mix, staff numbers, staff supervision and team functioning (Australian Council for Safety and Quality in Health Care 2004b). While endorsing the AMA (voluntary) code of practice (Australian Medical Association 1999), it comments – almost 8 years after the QAHC study – that 'responsibility for improving the management of staffing variables cannot [i.e. should not but still is being] left to individuals. It is a governance responsibility...' (Australian Council for Safety and Quality in Health Care 2003e, p. ii). The proposal that regulation should require a defined minimum complement of qualified staff in situ (or in close proximity) following defined procedures in all public and private hospitals was judged by our experts to have a potentially high effect upon the reduction of AEs.

The proposal that all hospitals should have in place a risk management system that ensures personnel can initiate action to prevent and/or reduce the impact of risks, backed up by whistle-blower procedures that guarantee anonymity and/or protection (P. 5.2), received a 'high' effectiveness rating from our respondents, and in fact now exists in many hospitals. In general, the potential role of staff in adopting 'affirmative action' to reduce AEs was viewed very positively. This included support for the idea that all hospital staff should be trained in risk management so that staff assume 'ownership' of safety and quality issues (P 5.4).

(6) Doctors

Patterns of private practice are already subject to scrutiny in Australia. But the chief purpose is to detect medical fraud. Legislation could require the examination of practices to detect those that deviate significantly from evidence-based guidelines constructed by the relevant Royal Colleges. When there is a known relationship between the small number of procedures carried out by a doctor and negative outcomes, as occurs with some types of surgery, critical annual procedure rates may be established that trigger the provision of information to the doctor, the mandatory review of the practice and finally, in the most extreme cases, the disaccreditation of the doctor for the conduct of these procedures, perhaps contingent upon re-training. While it is true that some doctors take on the hard cases, partial standardisation for case complexity is possible, and this would obviously be taken into account by those conducting a review. Along these lines, a detailed national standard for credentialing and defining the scope of clinical practice has been produced by the ACSQHC (Australian Council for Safety and Quality in Health Care 2004c).

The single proposal judged by our panel to have highest potential effect concerned the supervision and support of junior doctors (P 6.4). This was judged to be implementable within nine months and likely to have a major effect upon AEs within another seven months. Similarly, the proposal that all medical students who become interns should be 'credentialed' before being allowed to undertake any unsupervised procedures was rated high (P 6.3). While flawed systems and procedures are clearly implicated in the occurrence of AEs, these latter results suggest that human error still plays an important role in the occurrence of AEs.

(7) System Level Reform

Financial incentives are one of the most effective, non-coercive ways of achieving desired outcomes and numerous economic studies have demonstrated their effectiveness. In Australia there has been limited use of this powerful instrument and the financing of medical services has generally been perceived as a reward for providers doing what they select to do rather than as an opportunity for influencing what is done. This is an important missed opportunity.[5] Financial incentives are non-coercive and avoid the head-to-head conflict between 'clinical autonomy' and the 'patient's right to evidence-based medicine' that may accompany direct regulation. The proposal that higher payments should be made throughout the public and private system for practices that are known to improve safety received a high potential effect rating, but with implementation and impact times stretching into years rather than months.[6]

In its Fourth Report, the ACSQHC notes a number of State initiatives aimed at the reduction of AEs (Australian Council for Safety and Quality in Health Care 2003a). But there is no reference to national legislative action to enforce safety. As Healy and Braithwaite note: 'there are no national published measures of adverse events, despite the beginnings of state-based monitoring of sentinel events. Without some form of standardised reporting, there is no way to benchmark performance and to systematically trace progress' (Healy and Braithwaite 2006, p. S57). Indeed, there is some evidence that the ACSQHC was itself frustrated with the scale of the national effort. For example, in a recent *Medical Journal of Australia* article its Chairman comments: 'one might assume that systematic improvements within the health system are either happening or, at the least, well advanced. Regrettably, improvements are still patchy. The greatest challenge for all remains how to achieve universal and systemic changes to the health system within a federated system' (Barraclough and Birch 2006, p. S49).

Among our experts there was support for such leadership - for example, the establishment of a National Centre for The Development of Clinical Guidelines and Clinical Pathways, which would promote evidence-based practice, disseminate evidence-based clinical guidelines, and prepare model clinical pathways to assist hospitals plan and organise care.

Conclusion

Relative to the size of the problem, the response to the QAHC study was surprising. The study authoritatively documented what was arguably the most dramatic and serious problem ever found in the health system – and possibly the nation as a whole. Annual deaths from AEs were initially estimated to be equivalent to 13 jumbo jet crashes each year, each resulting in 350 deaths as a consequence of events that would surely have galvanized rapid and decisive action. The lack of effective action that followed publication of the QAHC study revealed a fundamental failure of governance by both the State and the Commonwealth governments and an apparent lack of willingness to respond appropriately at both the bureaucratic and political levels.

In terms of the magnitude of death and injury involved, an analogy with a war casualty rate is not unjustified. In the face of ongoing casualties, decision makers in war time must exercise judgement and take responsibility for a rapid response. With an estimated 50 Australians dying daily and another 140 sustaining permanent injury, at the time of the QAHC study, the

5. As one of our experts pointed out, retrospective payment for safety-related practices will probably reward well-endowed hospitals, providing one reason for using prospective payment.

6. For example see (Meredith, Rushika et al. 2004; Ettner and Schoenbaum 2006; Grabowski and Norton 2006).

appropriate criteria for immediate action should have been 'likely cause' and 'likely solution' not 'confirmed, demonstrated cause' and 'solution based on professional consensus'. This type of decision making clearly did not occur in Australia following the release of the QAHC study.

Historically, safety and quality control of the health system has relied on internal rather than external monitoring: 'the state generally has left the regulation of health care performance to the medical profession' (Healy and Braithwaite 2006, p. S56). However, the reliance on voluntary regulation has seen public confidence in the health system shaken, particularly in the wake of media reports highlighting some very upsetting healthcare 'scandals' (Chandler 2005). The result has seen the emergence of new regulatory bodies, the production of numerous reports, and the expenditure of millions of dollars, but the rate of change still appears to be slow. As the Chairman of the ACSQHC commented: 'the new Commission [on Safety and Quality in Health Care] must not only recommend reforms to ministers, but be able to push jurisdictions to move at a faster pace than in the past' (Barraclough and Birch 2006, p. S49).

The ACSQHC faced numerous obstacles during its six-year tenure (Barraclough and Birch 2006), and worked hard to improve the safety and quality of health care in Australian hospitals. Its achievements should not be underestimated. Despite this, systematic change has been slow in coming. In an Editorial in the *Medical Journal of Australia* in 2005, a member of the Council asked, 'Ten years on can we confidently state that healthcare is safer for patients?' and answered forthrightly, 'There is insufficient information at a state or national level to determine whether any or all of the efforts over the past 10 years have increased safety in our hospitals' (Wilson and Van Der Weyden 2005). The purpose of the present paper was not simply to demonstrate the possibility of a more vigorous response to the challenge of AEs but to raise some practical suggestions, which, we hope, may still give further impetus to the effort to improve the safety and quality of health care in Australia.

Appendix 1

Timeline of major initiatives for the first eight years following release of the QAHC study.

1995 (i) Publication of the Quality in Australian Health Care Study (Wilson, Runciman et al. 1995). Approximately 16.6 per cent of hospital admissions associated with an adverse event. Fifty-one per cent preventable.

(ii) The Health Industry and Investment Division of the Commonwealth Department of Health and Family Services starts the quarterly newsletter *Better Health Outcomes*. It provides up-to-date information on the promotion of safety and quality, clinical excellence, and consumer information and choice in the Australian health system.

1996 (i) Release of the Taskforce on Quality in Australian Healthcare final report (Taskforce on Quality in Australian Healthcare 1996). (See Appendix 1)

(ii) The Commonwealth Department of Health and Family Services, via the National Hospital Outcomes Program, funds the Australian Patient Safety Foundation (APSF) to undertake an Australian Incident Monitoring Study (AIMS) and develop a Generic Occurrence Classification (GOC) system over the next two years to record adverse events.

(iii) The National Health and Medical Research Council (NHMRC) establishes the Quality of Care and Health Outcomes Committee (QCHOC) to work with the clinical colleges and other expert groups to encourage and facilitate the development of guidelines and outcomes measures by these groups.

(iv) The Commonwealth Department of Health and Family Services funds a study to review, document and evaluate various methods of obtaining consumer feedback in hospitals (Draper and Hill 1996).

1997 (i) In its 1997-98 Budget the Commonwealth Government announces a $40 million Acute Health Care Reform Program. Work to be concentrated in the following areas: (1) improving consumer participation in the planning, delivery and evaluation of health care; (2) strengthening hospital accreditation processes; (3) implementing clinical practice guidelines; (4) performance measures and benchmarking; (5) encouraging innovation in service provision; (6) health information technology initiatives.

(ii) The New Children's Hospital, Westmead, implements a paperless medical record system in its paediatric and neonatal intensive care units. 'Monitoring of patient vital signs and various life support systems information is linked directly from bedside monitoring systems to 64 workstations across the units, and information from pathology tests and blood gas monitoring is also available on line. Work is well underway on the integration of data from intravenous fluid infusion regimes and medication prescriptions into the electronic medical record, and the introduction of electronic clinical pathways, protocols and guidelines (*Better Health Outcomes*, Vol. 3, No. 1, 1997).'

(iii) The Department of Health and Family Services, via the Health Service Outcomes Branch, pledges $15 million over four years to assist the development of integrated clinical decision support systems, including: (a) electronic patient record format: to develop national specifications and format for electronic patient record for the health sector including resolution of coding, legal, privacy, confidentiality and security issues; (b) electronic clinical decision support systems: to develop, pilot and evaluate electronic clinical support systems including clinical guidelines and practice protocols and alert systems; (c) and electronic links between providers: develop national industry standards and specifications, resolve legal, privacy and confidentiality issues.

(iv) Commonwealth and State Government health officials, along with a health service provider, consumer and industry body, meet to consider improvement to the way accreditation of health services can contribute to safety and quality of care. The group recommends the holding of a national workshop on accreditation, involving all the major stakeholders.

(v) The National Mental Health Working Group of the Australian Health Ministers' Advisory Council developes national standars for mental health services (Australian Health Ministers Advisory Council Mental Health Working Group 1996).

(vi) The Consumer Focus Collaboration established in April in response to the recommendations of the Taskforce on Quality in Australian Health Care. The role of the Consumer Focus Collaboration is: (1) to progress work at a national level on consumer issues, including: consumer feedback, patient satisfaction and complaints information; performance information including the development of the Health Service Standards Report; and participative models to improve consumer and community participation and involvement in the acute health care setting; (2) to report to Health Ministers through the National Expert Group on Safety and Quality on these issues.

(vii) The Commonwealth Government funds a National Health Complaints Information Project through the State and Territory Health Complaints Commissioners. The Commissioners' Management Project Group produces a discussion paper on issues involved in sharing and analysing complaints information on a national basis.

(viii) The NSW Health Department commence an audit of its own programs and practice concerning consumer participation. It engages the NSW Council of Social Services to find out what people think about current ways the community is involved in the health system and how they would like to be involved in decision making about the public health system in NSW in the future.

1998 (i) Release of the National Expert Advisory Group on Safety and Quality in Australian Health Care interim report (National Expert Advisory Group on Safety and Quality in Australian Health Care 1998). The Health Minister, Dr Woolridge, comments on the report: 'This important report stresses the need for governments to provide leadership in improving safety and quality practices, and that these issues are not just the responsibility of governments but must also be addressed by hospital administrators, doctors and nurses in the front line of health care.' (Media Release MW167/98, 30 July 1998)

(ii) The Commonwealth Department of Health and Ageing funds the Australian Resource Centre for Hospital Innovations (ARCHI). The Centre promotes the implementation of effective and high-quality innovations in clinical care in the Australian healthcare sector.

(iii) The Commonwealth Department of Health and Ageing funds the Australian Safety and Efficacy Register of New Interventional Procedures - Surgical (ASERNIP-S), a programme of the Royal Australasian College of Surgeons (RACS). ASERNIP-S aims to improve the quality of health care through the dissemination of evidence-based research to surgeons, health care providers and consumers. ($1.3 million over next three years.)

(iv) Release of the The Pilot Hospital-Wide Clinical Indicators Project Final Report (Ibrahim, Majoor et al. 1998). The report found that: (a) the indicators studied in the project were not accurate guides to the quality of care provided by hospitals and were therefore unsuitable for national monitoring purposes; and (b) the proposed indicators could not be easily or efficiently extracted from available administrative databases. The indicators evaluated were: (1) 'rate of unplanned hospital readmissions within 28 days of separation'; (2) 'rate of hospital-acquired bacteraemia'; (3) 'rate of post-operative wound infection following clean and contaminated surgery'; (3) 'rate of unplanned return to an operating room.'

The National Health Information Management Advisory Council (NHIMAC) is established by the Australian Health Ministers as the peak body for progressing key issues regarding the use of information in the health sector. Among its terms of reference is to advise Health Ministers on options to promote a nationally uniform approach to more effective information management within the health sector.

1999 (i) Release of the National Expert Advisory Group on Safety and Quality in Australian Health Care final report (National Expert Advisory Group on Safety and Quality in Australian Health Care 1999). (See Appendix 2)

(ii) Publication of *Iatrogenic Injury in Australia* for the National Health Priorities and Quality Branch of the Department of Health and Aged Care in Australia (Australian Patient Safety Foundation 2001). (See Appendix 3)

(iii) The medical device Incident Reporting Investigation Scheme (IRIS) begins. The Scheme, a joint venture between the Australian Therapeutic Goods Administration and New Zealand's Medsafe, aims to minimise the adverse effects of problems with medical devices through the investigation of incidents associated with their use.

(iv) Release of the first edition of Health Online: A Health Information Action Plan for Australia, by the National Health Information Management Advisory Council (NHIMAC), in collaboration with Commonwealth, state and territory governments.

2000 (i) Australian Council for Safety and Quality in Health Care established in January. The Council to receive $5 million in core funding from all Commonwealth, state and territory governments. The Health Minister, Dr Woolridge, comments: 'This Council's charter is to provide national leadership to improve the safety and quality of care in hospitals and other health settings and help reduce the risk of things going wrong.' (Media Release MW003/00, 21 January 2000)

(ii) Release of Safety First, the first report of ACSQHC to the Health Ministers' Conference (Australian Council for Safety and Quality in Health Care 2000a) (See Appendix 4). The Health Ministers agree in principle that funding of $50 million will be provided for the Australian Council for Safety and Quality in Health Care to lead a five year national program of work to improve the safety and quality of care. (Media Release, 31 July 2000)

(iii) The ACSQHC releases its first national action plan: National Action Plan – 2001 (Australian Council for Safety and Quality in Health Care 2000b). The Plan identifies four priority areas: (1)better use of data and information throughout the system to support safer patient care; (2)strengthening mechanisms to ensure safer clinical and organisational environments; (3)actively promoting opportunities for consumer feedback and participation; (4)redesigning systems and processes of care to promote a strong culture of reliability and safety.

(iv) Collaborative Australian/US study concludes that there is no evidence for health care in Australia being less safe than in America (although the findings of the 1995 QAHCS suggested that the rate of adverse events in Australia was five-times that estimated by a similar US study), and that approximately 10.6 per cent of acute-care hospital admissions are associated with a potentially preventable adverse event (Runciman, Webb et al. 2000; Thomas, Studdert et al. 2000).

(v) The Commonwealth Department of Health and Aged Care's web site 'Health*Insite*' begins. It provides consumer health information and links to health organisations and their websites. The information ranges from general health issues and medical conditions to health support services.

(vi) The Commonwealth Government funds the National Resource Centre for Consumer Participation in Health (NRCCPH) - a clearinghouse for information on consumer feedback and participation methodologies for health care providers and consumers.

2001 (i) Safety in Practice - Making Health Care Safer, second report of ACSQHC to the Health Ministers' Conference (Australian Council for Safety and Quality in Health Care 2001a) (See Appendix 5). The ministers 'strongly endorsed' the work of the Council, noting 'that there was no single source of data to allow collection of information in a way that was useful for improving the safety of the health system, and supported a multi faceted national approach to reporting, reviewing and acting upon information about near misses, errors and system failures.' (Media Release, 1 August 2001)

(ii) Release of the First National Report on Patient Safety by ACSQHC (Australian Council for Safety and Quality in Health Care 2001b).

(iii) The ACSQHC releases an Issues Paper, *The Public Interest in Health Care: Qualified Privilege*, which emphasis the continued need for qualified privilege to encourage greater participation by health care professionals in open and honest review of clinical processes due to concerns about potential litigation (Australian Council for Safety and Quality in Health Care 2001c).

(iv) The ACSQHC releases *Safety in Numbers*, which reviews available national data on health care safety and makes recommendations about future directions for work on monitoring adverse events (Australian Council for Safety and Quality in Health Care 2001d).

(v) The National Institute of Clinical Studies (NICS) established in January to facilitate improvements in the quality of clinical practice, and its delivery to patients in Australia. The Health Minister, Dr Woolridge, comments: 'At a practical level, the Institute will devise and implement measures to integrate existing and emerging clinical guidelines into everyday practice and facilitate the development of decision support systems for clinicians.' (Media Release MW102/00, 3 November 2000)

(vi) The Clinical Support Systems Program (CSSP), a joint initiative of the Commonwealth Government and the Royal Australasian College of Physicians, established to evaluate the effects of combining evidence based medicine with tools for clinical practice improvement.

(vii) Release of the second edition of Health Online: A Health Information Action Plan for Australia, by The National Health Information Management Advisory Council (NHIMAC), in collaboration with Commonwealth, state and territory governments.

2002 (i) Release of Safety Through Action – Improving Patient Safety in Australia, the third report of ACSQHC to the Health Ministers' Conference (Australian Council for Safety and Quality in Health Care 2002a). (See Appendix 6)

(ii) Release of Second National Report on Patient Safety by ACSQHC (Australian Council for Safety and Quality in Health Care 2002b).

(iii) The ACSQHC releases its second national action plan: National Action Plan – 2002 (Australian Council for Safety and Quality in Health Care 2002e). The Plan focuses on four key areas: (1) the development of national standards for open disclosure; (2) reducing preventable patient harm associated with medication use; (3) reducing patient harm as a result of health care associated infection; (4) coordinated national action to learn from serious adverse events.

(iv) The ACSQHC releases its National Report on Qualified Privilege, which provides an overview of the various qualified privilege schemes in operation across Australia, and demonstrates through case studies the benefits of these schemes in improving patient safety (Australian Council for Safety and Quality in Health Care 2002c).

(v) The ACSQHC releases Safety Innovations in Practice Program: Compendium of Projects, which provides a description of around 60 projects funded by the Council to support local improvements to make patient care safer (Australian Council for Safety and Quality in Health Care 2002d).

(vi) The Open Disclosure Project, a key initiative of the ACSQHC, begins consultations to develop national standards to support more open communication between health care providers and patients and their carers following an adverse event.

2003 (i) Release of Patient Safety – Towards Sustainable Improvement, the fourth report of ACSQHC to the Health Ministers' Conference (Australian Council for Safety and Quality in Health Care 2003a). (See Appendix 7)

(ii) The ACSQHC releases its *National Strategy to Address Health Care Associated Infections*, which emphasises the need to improve patient safety and reduce health-care associated infections through a nationally coordinated approach (Australian Council for Safety and Quality in Health Care 2003b).

(iii) Release in July of Open Disclosure Standard: A National Standard for Open Communication in Public and Private Hospitals, following an Adverse Event in Health Care by the ACSQHC. Designed to promote more open disclosure with respect to adverse events (Australian Council for Safety and Quality in Health Care 2003c).

(iv) Release of Improving the Consistency of Approaches to Qualified Privilege Schemes by the ACSQHC (Australian Council for Safety and Quality in Health Care 2003d). This document details six principles identified as important to the efficient and effective administration of qualified privilege legislation and proposes ten guidelines that set out legal and administrative steps and processes that are in accordance with and/or consistent with current legislation in all jurisdictions.

(v) Release in July of Safe Staffing: Discussion Paper by the ACSQHC (Australian Council for Safety and Quality in Health Care 2003e). It explores the issues around the concept of 'safe staffing' including performance issues such as fatigue, workload and staffing practices like rostering, the determination of appropriate staff skill and role mix for any function, staff numbers, staff supervision and team functioning.

(vi) Release of Standards Setting and Accreditation Systems in Health: Consultation Paper, by the ACSQHC (Australian Council for Safety and Quality in Health Care 2003f). It considers a number of issues relating to standards development processes; quality of standards; access to standards; accreditation processes; organisational impact; and responses to accreditation.

(vii) Release of Safety and Quality and the Health Reform Agenda by the ACSQHC (Australian Council for Safety and Quality in Health Care 2003g). This document outlines developments and the Council's recommended directions in relation to safety and quality in the Australian health system.

Appendix 2

The 56 recommendations made by the Taskforce on Quality in Australian Healthcare in the final report to the Minister for Health, the Hon Dr Michael Wooldridge MP.

Recommendations of the Final report to Health Ministers from the National Expert Advisory Group on Safety and Quality in Australian Healthcare - 'Implementing Safety and Quality Enhancement in Healthcare'.

Vision

1. A Statement of Health Care Safety and Quality Principles be agreed upon and endorsed by all key stakeholders in the Australian health care system including Ministers for Health, health care providers and consumer group.

The Way Forward

2. The Australian Health Ministers' Advisory Council establish a Safety and Quality in Health Care Organisation, with an initial life of five years, to co-ordinate national initiatives in improving the safety and quality of health care and oversee ongoing implementation of the Taskforce's interim report and implementation of its final report. This organisation would comprise:

    - a board representing the major health system stakeholders, including health professionals, educators, and managers, policy makers, consumers and funders, to provide strategic direction and links to stakeholders;
    - a small, dynamic, independent, operational team with experience in the delivery of health care and expertise in areas such as patient safety, quality management, clinical epidemiology, statistics and operations research, headed by an expert director and reporting to the Board;
    - an advisory group of experts actively involved in health care delivery or research and with expertise in areas including quality management, clinical epidemiology, statistics and operations research, providing assistance as required.

    The Board of the organisation would report to AHMAC probably through the chair of AHMAC and the operational team would be hosted, under a management contract, by an appropriate health care institution.

3. The Commonwealth, States and Territories continue funding for pilot projects aimed at patient safety and quality improvement in various clinical settings but with a more strategic approach including.

    - clear specification of objectives, outputs and outcomes;
    - rigorous review of each proposed project;
    - mechanisms for sharing information between project groups; and
    - methods of informing managers and clinicians of the approaches being trialed, of progress and outcomes, and for giving them access to the resulting tools for quality measurement and management.

4. The Commonwealth provide funding beyond the end of 1997 for further development of a generic occurrence classification of adverse patient events if evaluation of it in 1997 supports its potential usefulness.

5. Incentives for the provision of safe, high quality care and dis-incentives for the provision of poor quality care be an integral part of individual health care manager's contracts, all hospital service agreements and the next set of Medicare agreements between the Commonwealth and States and Territories.

6. Participation in an accreditation process be mandatory for all hospitals.

7. State, Territory and Commonwealth governments increase resources to health

professional groups to develop databases which routinely gather information on the outcomes of the care provided, and to use this information to improve safety and quality of care.

8. ccreditation of hospitals be undertaken by nationally recognised organisations that meet specified criteria.

9. Commonwealth, State and Territory governments fund the collation and provision of nationally consistent information and education about accreditation to the public.

10. Each hospital be required to release accreditation information publicly in a uniform, clearly understandable format.

11. The Safety and Quality in Health Care organisation report by February 1997 on how a mandatory system of accreditation of the type outlined in this report could be put into effect.

12. The National Health and Medical Research Council's Quality of Care and Health Outcomes Committee continue with a nationally co-ordinated approach to producing, evaluating and periodically updating clinical guidelines and protocols.

13. An additional $3,000,000, specifically targeted to priority areas for clinical guideline and protocol development, evaluation and updating, be made available to the Quality of Care and Health Outcomes Committee over the next three years.

14. The use of nationally produced clinical guidelines be promoted by a variety of strategies and the effectiveness of these strategies be evaluated.

15. Commonwealth, State and Territory Governments investigate systems of differential reimbursement for both institutional and individual health care providers according to the degree to which their care provision conforms to best practice once national guidelines have been produced.

16. learing house mechanisms for clinical protocols and pathways be funded on a trial basis for five years, with a decision about renewing funding resting on an evaluation of the usefulness of this initiative.

17. Valid safety and quality of care indicators be routinely used to monitor the care provided in hospitals and health services and definitions and approaches to measurement be agreed at a national level so that comparability between States and Territories is possible. Where potentially valid and accurately measurable indicators of safety and quality are not available in key areas of health care or the validity and accuracy of available indicators is not known, research should be commissioned to fill these gaps.

18. Further research be undertaken to assess the applicability of 'report cards' in the Australian health context.

19. Accurate measurements of valid performance indicators be made publicly available and be accompanied by appropriate explanations about their uses and limitations.

20. Research into the best ways to present performance information to the public, the effects of public release of performance information, and the ways in which health care providers response to performance information, be carried out and the Safety and Quality in Health Care Organisation recommend any action to be taken on the results.

21. Consideration be given to undertaking a comprehensive study of safety and quality in Australian health care for care delivered in 2002.

22. A study of present peer review practices be commissioned and a report prepared on:

- ways in which peer review practices can be integrated into the systemic approach to improved safety and quality that the Taskforce favours, and
- how such practices should deal with evidence of professional incompetence or negligence

23. All health professional bodies develop recertification programs and evaluate the effectiveness of the various components of these programs in ensuring competence to practise.

24. redentialing for specialised health professional practice be adopted by all health care institutions or groups of institutions, adequacy of credentialing procedures be considered as part of the accreditation process, and the effectiveness of credentialing processes be evaluated.

25. Information pertaining to settlements or judgements for injury against health professionals and health care institutions, but not the individuals or institutions involved, be made available for incorporation into a generic occurrence classification.

26. Protocols for discharge planning be introduced in hospitals throughout Australia and the adequacy and application of these protocols be assessed as part of accreditation processes; and research be undertaken into the assessment at admission of a patient's risk of adverse events so that protocols aimed at protecting high risk patients can be developed and introduced, and their adequacy assessed.

Consumers

27. Professional colleges and societies, in association with other relevant parties including consumers, develop educational materials about treatment options, drugs and procedures associated with a variety of clinical conditions. Initial priority should be given to those treatments or procedures in high priority adverse event areas.

28. A nationally co-ordinated mechanism for giving consumers access to health information be funded for an initial period of five years. A decision about continuing this service beyond this period of time should depend on the outcome of an evaluation of its performance against clearly stated objectives.

29. Appropriate consumer feedback mechanisms for use in a variety of health care settings be developed and tested and the use of consumer feedback be assessed as part of accreditation processes.

30. State and Territory governments distribute the Professional Indemnity Review's draft information guidelines for patients and providers through health care services after appropriate further development by professional bodies and consumer groups.

31. All State and Territory Governments complete the process of establishing independent Health Complaints Offices as outlined in the Medicare Agreements and extend this process to cover all public and private health services.

32. All institutional health care providers be required to have consumer complaints mechanisms which are assessed as part of the accreditation process; and that the performance of these complaints systems be routinely monitored, compared and reported on.

33. Standardised data on complaints processed by health complaints offices be collated nationally and that information from these data be reported to stakeholders, including consumers, and be used to improve safety and quality of care.

34. A review be undertaken of the role, structure, composition and operation of health professional registration boards and disciplinary bodies with the objective of examining ways to improve the service they provide to consumers and ensuring that their role and methods of operation become well known to the public.

35. Consumers participate in health service quality definition, measurement, management and monitoring.

Information

36. A study be commissioned of the information technology needed to improve patient-based links between health care providers, with special attention to hospitals, general practice, pharmacies and home and community care.

37. A demonstration project be carried out in one or more Australian hospitals of a fully integrated and interactive computerised hospital information system including patient records and test results, clinical decision support systems, and quality indicators.

38. The introduction of voluntary patient held 'smart cards' for health records be the subject of feasibility and pilot studies.

39. The Australasian Cochrane Centre and the work of Cochrane Review Groups continue to be actively supported and funded.

40. Up-to-date practice guides, both loose leaf and in computerised format, be developed for each clinical discipline in areas of greatest importance, and relevant professional colleges and organisations be assisted with funding to produce and regularly distribute these guides. The guides should contain relevant guidelines and protocols and be updated regularly.

Education and Training

41. An independent review of the adequacy of training currently provided in maintaining and improving safety and quality of health care be commissioned.

42. A group representing educators at undergraduate and postgraduate levels and organisations responsible for continuing education in all health care disciplines be convened by the Safety and Quality in Health Care Organisation to report by the end of 1997 on practical strategies for incorporating priority areas relevant to the provision of safe, high quality care into education and training of health care practitioners and health care managers.

43. Formal training in planning and co-ordinating care for individual patients be given to the present and future health workforce.

Research

48. The Commonwealth fund a secretariat located at the Australian Institute of Health and Welfare with research expertise and knowledge of the Quality in Australian Health Care Study database which can assist discipline groups to gain the maximum value from further analysis of the data.

49. Defined procedures for access to and rules for use of the Quality in Australian Health Care Study data be established without further delay.

50. A comparison of the methods used in the Quality in Australian Health Care Study and the Harvard Medical Practice Study be funded.

51. The Safety and Quality in Health Care Organisation commission a scoping review to assess current research activity and provide information to set the agenda for a program of targeted research in priority areas relating to safety and quality of health care. These areas should include those identified by the Taskforce for further research and incorporate priorities identified by discipline group reviews of subsets of the Quality in Australian Health Care Study data.

52. Funding for research into safety and quality of health care initially be of the order of 0.05% of national direct funding of health care, expanding to 0.1% if review of the process shows clear benefits to patients and the health care system. Additional funding should be sought from all organisations likely to benefit from the results of such research.

53. Funds to be set aside to train health care managers and professionals in methods of evaluation of the safety and quality of care.

Funding

54. The Commonwealth Minister for Health and Family Services agree with his State and Territory counterparts on the amount and formula for funding the implementation of this report over the next five years.

55. The funds agreed at Recommendation 54 be allocated by AHMAC following its consideration of a strategic plan and annual action plans from the Safety and Quality in Health Care Organisation identifying among other things, the expenditure priorities.

56. Progress in and the results of implementation of this report be reviewed by AHMAC four years after funds are made available and recommendations be made to Health Ministers regarding:

- special activities, if any, that should continue beyond the initial five years;
- ongoing funding that should be allocated to these activities; and
- the continued oversight of these activities, including the ongoing role of the Safety and Quality in Health Care Organisation, if any.

Appendix 3

The four recommendations and the ten national actions recommended in the final report to health ministers from the National Expert Advisory Group on Safety on Quality in Health 'implementing safety and quality enhancement in healthcare'.

Recommendation 1

That Health Ministers continue to foster safety and quality improvement initiatives within their jurisdictions, in accordance with their endorsement of the Interim Report of the National Expert Advisory Group on Safety and Quality in Australian Health Care in July 1998.

Recommendation 2

That Health Ministers support the need for national actions for safety and quality enhancement in the following areas:

- strengthening the consumer voice;
- fostering best clinical practice;
- learning from incidents, adverse events and complaints;
- developing frameworks for quality improvement and management;
- developing information systems to support quality; and
- education and training for safety and quality improvement.

Recommendation 3

That Health Ministers establish an Australian Council for Safety and Quality in Health Care to facilitate national actions in those areas outlined in Recommendation 2 to improve safety and quality in health care through:

- providing national leadership in co-ordination of health care safety and quality activities;
- developing an overall coherent plan for improving the quality of health care services;
- facilitating action by dissemination of information about quality activities and their outcomes through appropriate agencies and organisations in the actions areas;
- promoting a systemic approach to safety and quality within the health care system and within the community at large;
- providing advice to Ministers and the public about the safety and quality of the Australian health care system; and
- publishing an annual report that is open and widely accessible.

Recommendation 4

That Health Ministers agree to provide funding of $17.4 million over four years to support the implementation of the national actions and the establishment of the Australian Council for Safety and Quality in Health Care.

National actions

- Support methods to enable increased consumer participation in health care.
- Facilitate implementation of evidence-based practice.
- Develop strategies and partnerships to improve information flows between all parties about areas for quality improvement, and to ensure that patients, their families and carers and health care agencies receive timely advice about incidents.
- Develop legislative changes that will allow the detailed, thorough investigation of adverse events or 'near misses' and the timely reporting of findings for the information of consumers and for action by organisations and health care providers in the system.
- Facilitate agreement on common systems for the collection and analysis of incidents, adverse events and complaints.
- Develop a national framework for health service performance measurement and reporting.
- Facilitate improvements in the quality of current accreditation mechanisms that address the safety and quality of the system in operation.
- Facilitate improvements to the design and management of the health system that promote smoother transitions for consumers across health service boundaries.
- Research and develop clinical and administrative information systems that have a system-wide focus and application.
- Agree on national requirements for education and training for all health care providers to support their involvement in quality management and collaborative approaches to health care delivery.

Appendix 4

The eighteen recommendations from the report 'Iatrogenic Injury in Australia' prepared by the Australian Patient Safety Foundation for the National Health Priorities and Quality Branch of the Department of Health and Aged Care of the Commonwealth Government of Australia.

RECOMMENDATION 1
That uniform definitions for events relevant to iatrogenic injury be developed for the National Health Data Dictionary.

RECOMMENDATION 2
That educational packages be produced for health sciences students which provide a background to 'health care as a complex system' and a basic understanding of the cognitive psychology of human error.

RECOMMENDATION 3
That easy-to-understand measures of the relative risks and benefits of available diagnostic and therapeutic options be developed, and that means of conveying these to prospective patients in lay terms be made available at the point of care (eg pamphlets, video tapes, web-site addresses, expert systems, references to other material).

RECOMMENDATION 4
That methods be developed for estimating the direct and indirect costs of each component of iatrogenic injury (including tort system costs), and that these costs be published at regular intervals.

RECOMMENDATION 5
That the tort system and methods for compensating those injured by health care management be examined with a view to reform.

RECOMMENDATION 6
That the existing State and Commonwealth legislation for protecting information brought into existence for safety and quality of care be reviewed, and that measures be taken to ensure that comprehensive protection can be provided across the entire spectrum of healthcare in all jurisdictions.

RECOMMENDATION 7
That ongoing commitment to the provision of a stable funding base for generic incident monitoring be sought, so as to allow a uniform, national incident reporting system to be established and maintained across the entire spectrum of health care in all jurisdictions.

RECOMMENDATION 8
That ongoing commitment to the provision of a stable funding base be sought as a matter of urgency so as to allow properly constituted specialty-based incident monitoring to be established and maintained for all health care specialty groups.

RECOMMENDATION 9
That a systematic process be embarked upon for trialing and progressively refining the Australian Medical Record Analysis System as the basis of a system suitable for national and international use, and for applying it annually to a randomised sample of medical records in each State and Territory.

RECOMMENDATION 10
That existing mechanisms be enhanced for linking morbidity and mortality data and that mechanisms for linking with MPS and PBS data be established, preferably by the introduction of universal unique patient identifiers.

RECOMMENDATION 11
That means be sought to classify the information in all medico-legal files into a national database so that it can be characterised and comparisons with incidents and adverse events from other sources may be made.

RECOMMENDATION 12
That the National Health Complaint Information project be further supported so that complaints data can be coded into a national database so that it can be characterised and comparisons with incidents and adverse events from other sources can be made.

RECOMMENDATION 13
That all 'things that go wrong' identified by incident monitoring, medical record review, medico-legal investigations, coronial enquiries, complaints databases, letters to the editor and case reports from selected refereed journals, be classified using the GOC+ and stored in a national database.

RECOMMENDATION 14
That a record be kept in each health facility of all the incidents that have been reported and of the steps taken to deal with them, and that accreditation of each facility is contingent on satisfactory evidence that these have been classified and stored in such a way that they can contribute to a national database.

RECOMMENDATION 15
That the top 1,000 problems that give rise to iatrogenic injury be identified and characterised, and that systematic steps be taken to identify, fund and implement strategies, co-ordinated at a national level, to deal with these problems in a risk- and cost-effective manner.

RECOMMENDATION 16
That the standard 'AS/NZS4360 – Risk Management' be used as the basic framework for addressing the problem of iatrogenic injury and that those in both clinical and corporate government systems be held accountable for ensuring that explicit clinical risk management processes be put in place, in line with this standard.

RECOMMENDATION 17
That the Commonwealth, States and other parties who may benefit from a reduction in iatrogenic injury, fund a feasibility and costing study of a linked facilitated incident monitoring and medical record review system, based on a stratified sample of health care units, to produce information on the incidence, causes and possible preventive strategies for iatrogenic injury.

RECOMMENDATION 18
That the Commonwealth, States and other parties who may benefit from a reduction in iatrogenic injury, fund an Australian Iatrogenic Injury Surveillance Unit as a Collaborating Unit with the Australian Institute of Health and Welfare to develop and co-ordinate the surveillance and monitoring of iatrogenic injury and to contribute to research relevant to iatrogenic injury in Australia.

Appendix 5

The four recommendations in the first report to the Australian Health Ministers' Conference of the Australian Council for Safety and Quality in Health Care 'Safety First: Report to the Australian Health Ministers' Conference'.

Recommendations

That Health Ministers:

- endorse the Terms of Reference for the Council;
- agree in principle to provide $50 million for a five-year national program of work to be led by the Council, noting the intention of the Council to report on an annual basis on progress and planned actions;
- agree to make available immediately $5 million of direct funds for the first year of this national program of work; and
- agree to make this report publicly available.

Appendix 6

The five recommendations in the second report to the Australian Health Ministers' Conference of the Australian Council for Safety and Quality in Health Care 'Safety in Practice - Making Health Care Safer'.

RECOMMENDATIONS

Health Ministers are asked to agree to the following recommendations noting that the Council intends to consult widely on their implementation.

It is recommended that Health Ministers:

1. Reaffirm a strong commitment to improving the safety and quality of health care as the core focus for ongoing reform of the health care system in Australia and agree to play a leading role in implementing agreed national actions;
2. Commit further funds of $12 million for the Council's second year program of work and endorse the process for recognising 'in kind' contributions from all jurisdictions as part of this, and future funding commitments;
3. Agree to make the full Council report publicly available;
4. Actively support the Council in hosting the *1st Asia-Pacific Forum on Quality Improvement in Health Care* and take steps to ensure the greatest possible participation across Australia;
5. Note general progress in key priority areas in particular:
    a) The planned public release of the *First National Report on Patient Safety* and the intention to publicly report on a regular basis on issues, achievements and challenges for improving health care safety;

b) The proposed national approach to the use of data to improve the safety of health care;

c) The development of a vocabulary of safety and quality terms;

d) The planned development of core safety standards for health care services and facilities and Council's intention to make further recommendations to Health Ministers about mandatory requirements;

e) The development of draft national guidelines for credentialling of health care professionals to include performance assessment;

f) The development of national principles relating to qualified privilege;

g) Directions for a national approach to specialist vocational registration;

h) The development of national standards and educational activities to support more open disclosure to patients and their carers when things go wrong;

i) The development of educational programs to increase knowledge of system safety, human factors and communication;

j) Progress on specific initiatives in relation to improving medication safety and reducing health care acquired infection.

Appendix 7

The four recommendations in the third report to the Australian Health Ministers' Conference of the Australian Council for Safety and Quality in Health Care 'Safety Through Action – Improving Patient Safety in Australia'.

Recommendations to Health Ministers

That Health Ministers:

1. Reaffirm their strong commitment to improving the safety and quality of health care;
2. Note the progress of Council's work and play a leading role in implementing agreed national actions;
3. Commit further funds of $15 million for the Council's third year program of work, and;
4. Agree to make the full Council Report publicly available.

Appendix 8

The recommendations in the fourth report to the Australian Health Ministers' Conference of the Australian Council for Safety and Quality in Health Care 'Patient Safety – Towards Sustainable Improvement'.

Recommendations to Health Ministers

The establishment and support of the Australian Council for Safety and Quality in Health Care by all Health Ministers has been a landmark in leadership in safety and quality of health care in Australia. Over the last three years, the Council has provided a focus for national efforts in safety and quality, raising awareness, building consensus and clarifying the priority action needed to develop safe systems.

Health Care Reform Agenda

The Council's future progress will increasingly rely on reform in the broader health care system, particularly in areas that lie outside the Council's influence. A national health reform agenda is currently being progressed, involving all jurisdictions. This provides an opportunity to drive large scale, lasting changes which facilitate the provision of health care that is safe, effective and responsive to the needs of the Australian community. Safety and quality should be the overall objective of this agenda. It is therefore recommended that Health Ministers:

- Agree to continue their participation in national collaborative activity to improve the safety and quality of health care services; and
- Note that improving safety and quality requires alignment of governance responsibilities, standardisation of practice and investment in operational redesign.

National Action

The Council's national focus is its core strength. Its close collaboration with many key stakeholders -including jurisdictional involvement through the State Quality Officials' Forum - has helped it to successfully initiate a culture of safety through visible leadership and consistent action to promote systems improvement. It is therefore recommended that Health Ministers:

- Actively support Council activities in priority areas and in particular:
- Support principles identified to improve standards setting and accreditation processes in Australian health care as outlined in the paper *Standards Setting and Accreditation Systems in Health: Consultation Paper* and endorse the intention to extensively consult in the development and implementation of improvements;

– Endorse and support the seven priority areas for action identified in the paper *Safe Staffing:Discussion Paper*;

– Endorse and support implementation of guidelines for administering qualified privilege schemes in jurisdictions as detailed in the report *Improving the Consistency of Approaches to Qualified Privilege Schemes*;

– Endorse and support directions for a national approach to incident management;

– Endorse the *Open Disclosure Standard: A National Standard for open communication in public and private hospitals, following an adverse event in health care* and support actions at the local level to implement the Standard;

– Endorse and assist in the distribution of Council's *10 Tips for Safer Health Care – What Everyone Needs to Know*; and

– Endorse and support actions to implement a national strategy to reduce health care associated infections as recommended in the paper entitled *National Strategy to Address Health Care Associated Infections*.

Council's Role

As a national body, the Council has played a unique role in setting the agenda for change and leading progress towards improved patient safety. Consistency of purpose, alignment of agendas, integration of activity and sharing of knowledge are all important in driving the overall agenda and ensuring sustainability. It is therefore recommended that Health Ministers:

- Reaffirm their strong commitment to improving the safety and quality of health care and continue to playing a leading role, working with the Council to implement national action; and

Agree to the Council's proposed program of work over a three-year period and approve the allocation of the remaining identified funds to the Council for this program, and its operation.

References

Anderson, P. (1999). "England Publishes First Tables of Hospital Performance." *British Medical Journal* 318(7200): 1715.

Australian Commission on Safety and Quality in Health Care (2006). Discussion Paper: National Safety and Quality Accreditation Standards.

Australian Council for Safety and Quality in Health Care (2003a). Patient Safety: Towards Sustainable Improvement - Fourth Report to the Australian Health Ministers' Conference.

Australian Council for Safety and Quality in Health Care (2003e). Safe Staffing: Discussion Paper.

Australian Council for Safety and Quality in Health Care (2004b). Safety Innovations in Practice (SIIP) Program Mark II, Compendium of Project Reports.

Australian Council for Safety and Quality in Health Care (2004c). Standard for Credentialling and Defining the Scope of Clinical Practice: A National Standard for Credentialling and Defining the scope of Clinical Practice of Medical Practitioners, for Use in Public and Private Hospitals.

Barraclough, B. and J. Birch (2006). "Health Care Safety and Quality: Where Have We Been and Where Are We Going?" *Medical Journal of Australia* 184(10): S48-S50.

Brennan, T. A., L. L. Leape, et al. (1991). "Incidence of Adverse Events and Negligence in Hospitalized Patients: Results of the Harvard Medical-Practice Study." *New England Journal of Medicine* 324(6): 370-376.

Chandler, J. (2005). “The Scandal of ‘Dr Death’.” *The Age*. May 28.

Chassin, M. R., J. Kosecoff, et al. (1987). "Does Inappropriate Use Explain Geographic Variations in the Use of Health-Care Services? A Study of 3 Procedures." *Journal of the American Medical Association* 258(18): 2533-2537.

Ehsani, J. P., T. Jackson, et al. (2006). "The Incidence and Cost of Adverse Events in Victorian Hospitals 2003-04." *The Medical Journal of Australia* 184(11): 551-555.

Ettner, S. L. and M. Schoenbaum (2006). The Role of Economic Incentives in Improving the Quality of Mental Health Care. *The Elgar Companion To Health Economics*. A. M. Jones. Cheltenham, UK, Edward Elgar.

Grabowski, D. C. and E. C. Norton (2006). Nursing Home Quality of Care. *The Elgar Companion To Health Economics*. A. M. Jones. Cheltenham, UK, Edward Elgar.

Graves, S. E., D. Davidson, et al. (2004). "The Australian Orthopaedic Association National Joint Replacement Registry." *The Medical Journal of Australia* 180(5): S31-S35.

Healy, J. and J. Braithwaite (2006). "Designing Safer Health Care Through Responsive Regulation." *Medical Journal of Australia* 184(10): S56S59.

Helmreich, R. and A. Merritt (1998). *Culture at Work in Aviation and Medicine: National, Organizational and Professional Influences*. Aldershot, UK, Ashgate Publishing.

Hughes, C. and P. Mackay (2006). "Sea Change: Public Reporting and The Safety and Quality of The Australian Health Care System." *Medical Journal of Australia* 184(10): S44-S47.

Jackson, T., S. Duckett, et al. (2006). "Measurement of Adverse Events Using 'Incidence Flagged' Diagnosis Codes." *Journal of Health Services Research and Policy* 11(1): 21-25.

Marshall, M. N., P. G. Shekelle, et al. (2003). "Public Reporting on Quality in The United States and The United Kingdom." *Health Affairs* 22(3): 134-148.

Medical News Today (2004). "Publishing Surgeons' Performance Remains Controversial." (http://www.medicalnewstoday.com/medicalnews.php?newsid=12319).

Meredith, B. R., F. Rushika, et al. (2004). "Paying For Quality: Providers' Incentives For Quality Improvement." *Health Affairs* 23(2): 127-138.

Moje, C., T. Jackson, et al. (2006). "Adverse Events in Victorian Admissions for Elective Surgery." *Australian Health Review* 30(3): 333-343.

Rigby, K., R. B. Clark, et al. (1999). "Adverse Events in Health Care: Setting Priorities Based on Economic Evaluation." *Journal of Quality in Clinical Practice* 19(1): 7-12.

Runciman, W. B. (2006). "Shared Meanings: Preferred Terms and Definitions for Safety and Quality Concepts." *Medical Journal of Australia* 184(10): S41-S43.

Runciman, W. B., R. K. Webb, et al. (2000). "A Comparison of Iatrogenic Injury Studies in Australia and The USA II: Reviewer Behaviour and Quality of Care." *International Journal for Quality in Health Care* 12(5): 379-388.

Siddins, M. (2002). "Audits, Errors and The Misplace of Clinical Indicators: Revisiting the Quality in Australian Health Care Study." *ANZ Journal of Surgery* 72(11): 832-834.

Smallwood, R. (2006). "The Safety and Quality of Health Care: From Council to Commission." *Medical Journal of Australia* 184(10): S39-S40.

Vincent, C. A. (1999). "The Human Element of Adverse Events." *Medical Journal of Australia* 170(9): 404-405.

Wilson, R. M., W. B. Runciman, et al. (1995). "The Quality in Australian Health Care Study." *Medical Journal of Australia* 163(9): 458-471.

Wilson, R. M. and M. B. Van Der Weyden (2005). "The Safety of Australian Healthcare: 10 Years After QAHCS." *Medical Journal of Australia* 182(6): 260-261.