Strategic planning in hospitals in two Australian States: An exploratory study of its practice using planning documentation

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Abstract

Hospitals are under pressure to respond to new challenges and competition. Many hospitals have used strategic planning to respond to these environmental changes. This exploratory study examines the extent of strategic planning in hospitals in two Australian States, New South Wales and Victoria, using a sample survey. Based on planning documentation, the study indicated that 47% of the hospitals surveyed did not have a strategic or business plan. A significant difference was found in the comprehensiveness of the plans between the two States. Plans from Victorian hospitals had more documented evidence of external/internal analysis, competitor orientation and customer orientation compared with plans from New South Wales hospitals. The paper discusses the limitations of the study and directions for future research.

Introduction

Hospitals worldwide are under pressure to respond to challenges in the environment such as changes in the health needs, new technology, competition with other hospitals and a shrinking allocation of public funds for health services. The business environment for hospitals in the United States (where a large proportion of hospitals are privately funded) has become increasingly competitive, with greater emphasis on efficiency and adaptation (Cleverly & Harvey 1992). Even in other countries where a large proportion of hospitals belong to the public sector, hospitals need to respond to the environment (Denis,

Langley & Lozeau 1995; Longley & Warner 1995). The change from cost-based reimbursement to fixed-fee payment structures has forced hospitals to place more emphasis than ever before on the efficiency of patient care delivery processes (Reynolds 1986). There is increasing attention given to strategic planning as one of the ways to respond to these challenges. A growing recognition of the importance of strategic planning for the survival of the hospitals was reflected in the literature and in a proliferation of conferences on strategic planning in the 1980s (Files 1988).

A survey of hospitals in Canada in 1988 found that 73% of hospitals had either written a strategic plan or were preparing one (Denis, Langley & Lozeau 1991). This was not the case in Australia for the same period. In 1988 the Victorian Hospitals Association recommended that strategic planning be undertaken before making any organisational structural changes (Braithwaite 1993). In New South Wales, many of the hospitals in the public sector were required to prepare strategic plans only when the State funding organisations began to develop similar plans in the early 1990s. It has been said that the lack of formal strategic planning in Australian hospitals was due to health service executives believing that it was a superfluous activity (Braithwaite 1993). However, there are no published empirical studies that provide evidence of the extent and use of strategic planning in private and public hospitals in Australia.

This paper reviews the literature on strategic planning in hospitals with a view to identifying features that will be suitable to identify variables to measure (operationalise) strategic planning for research. The paper discusses and identifies criteria to measure comprehensiveness of strategic planning and to differentiate strategic planning from long-range planning. It reports on an exploratory study conducted in New South Wales and Victoria that used planning documentation to ascertain the extent of strategic planning in hospitals.

Strategic planning in hospitals

Business organisations have been using strategic planning since the 1960s. There are also empirical studies in business literature on strategic planning and performance, but this is minimal in the case of the health care industry. Reviewing the literature, Bruton, Oviatt & Kallas-Bruton (1995) state that, though there is an abundance of literature that discusses how to plan strategically in hospitals, there is a paucity of empirical studies that test, for example, whether hospitals which strategically plan do better than those which do not. Empirical results from the business sector may not be applicable to the health care industry. Key reasons that do not allow the extrapolation of findings from business to the health industry are as follows.

- 1. It is difficult to measure the products of hospitals and health services. In the case of business, the effectiveness of planning can be measured in terms of profits and growth of the organisation. As some hospitals also engage in activities such as research and training and, in the case of the public sector, are required by legislation to serve the needs of the population, it is not possible to have common output indicators (Ozcan, Luke & Haksever 1992).
- 2. Hospitals have divergent and loosely linked sets of stakeholders comprising boards of trustees, medical staff, administrators, and so on (Shortell, Morrison & Robbins 1985). Again, in the public sector this is further complicated by political stakeholders and the influence of State and local governments. Therefore the impact of strategic planing on these stakeholders would be different from that found in business (Fitzgerald 1989).
- 3. Hospitals can be viewed as 'professional bureaucracies' (Mintzberg 1979, p 350). In such organisations, the professionals (for example, physicians) directly influence the services provided by the hospitals, and administrators may only have an indirect influence on the choice of strategies (Denis, Langley & Lozeau 1991).

These differences from business and other industries have implications for strategic planning in health care. In the case of hospitals, there are also widely differing organisations that may need to be taken into account in any empirical studies. While differences between the private and public sector have been alluded to, there are also differences between the types of hospitals and nursing homes (Smith, Piland & Funk 1992).

Definitions and criteria for strategic planning in hospitals

Approaches to the study of strategy range from the prescriptive (for example, Grant 1998) to the very descriptive and behavioural (for example, Aldrich 1979; Mintzberg & Quinn 1996). The definition used for this study is prescriptive to facilitate the study using planning documentation.

Strategic planning has been defined as a 'formal, systematic and rational process for making strategic decisions' (Denis, Langley & Lozeau 1991, p 72). Though there are many variations and models for strategic planning, Shortell and colleagues (1985, p 220) defined strategy as:

plans and activities developed by an organisation in pursuit of its goals and objectives, particularly in regard to positioning itself to meet external demands relative to its competitors.

The purpose of strategic planning may be instrumental, political or symbolic in nature (Denis, Langley & Lozeau 1994). Most of the research in health settings emphasises the instrumental purposes for planning, which are to respond to environmental changes and set priorities in the light of resource constraints (Shortell, Morrison & Robbins 1985). Before the popularisation of strategic planning, most organisations in business and health care practised long-range planning.

Strategic planning is distinguished from long-range planning in four fundamental ways (Bryson 1988, p 7).

- 1. Strategic planning relies on identifying and resolving strategic issues while long-range planning focuses on specifying the goals and objectives and preparing budgets and work plans.
- 2. Strategic planning places greater emphasis on assessing the environment both outside and inside the organisation.
- 3. Strategic planning is guided by a long-term vision of success and emphasises shifts in direction, while long-range planning is based on linear extrapolation of the present.
- 4. Strategic planning considers a range of possible futures while long-range planning assumes a most likely future.

In a study of strategic planning in state agencies in the United States, Berry (1994) used the following basic criteria (based on Bryson's (1988) definition) to identify whether the plans reflect strategic planning and to ascertain their comprehensiveness.

- 1. A clear statement of the organisation's mission.
- The identification of the agency's external constituents or stakeholders and the determination of their assessment of the agency's purposes and operations.
- 3. The delineation of the agency's strategic goals and objectives, typically in a three to five-year plan.
- 4. The development of strategies to achieve the goals and objectives.

In considering the distinction between strategic planning and long-range planning given above, the first two features are the key features of strategic planning. The first important criterion for a strategic plan has been identified as the mission statement. However, there is no clear consensus of what it encompasses (Campbell & Yeung 1991). One definition (Pearce 1982, p 15) is:

a broadly defined but enduring statement of purpose that distinguishes a business from other firms of its type and identifies the scope of its operations in products (services) and market terms.

Two schools of thought have been identified: one approach that describes the mission in terms of business strategy and another that describes the mission in terms of philosophy and ethics (Campbell & Yeung 1991). In a study of 200 of the Fortune 500 companies, Pearce and David (1987) identified a clear mission statement to consist of specific components. The components they identified are as follows.

- 1. Identifies target customers and markets.
- 2. Indicates the principal services delivered by the organisation.
- 3. Specifies the geographical area in which the organisation intends to concentrate.
- 4. Identifies the organisation's philosophy.
- 5. Specifies the organisation's desired public image.
- 6. Confirms the organisation's preferred self-image.

The second important criterion in a strategic plan is identification of the organisation's external constituents and stakeholders. In the current literature, the need for both external and internal analysis is identified as an integral component of strategic planning (Wheelan & Hunger 1995; Grant 1998).

More recently, Bruton and colleagues (1995) reviewed the literature on planning in hospitals and identified two principal types, long-range planning and strategic planning, situated along a continuum of planning. They identified that hospital planning is typically situated at the long-range planning end of the continuum. The authors also suggested a list of criteria to situate hospital plans on a point in the continuum (see Table 1). The list did not include 'Environmental scanning', which is essential in strategy formulation. Strategy formulation involves the plans for effectively managing environmental opportunities and threats in light of the organisation's strengths and weaknesses (Wheelan & Hunger 1995, p 10).

One of the criteria used to distinguish a strategic plan from a long-range plan identified by Bruton and colleagues (1995) was the external versus the internal orientation of the plans. External orientation is specifically identified in the marketing literature as 'market orientation'. Narver and Slater (1990) identified three behavioural components of market orientation as customer orientation, competitor orientation and inter-functional coordination.

Table 1: Criteria for strategic planning

Suggested criteria

Rating of external versus internal orientation of the plans

Degree of attention given to marketing by the plans

Length of planning horizon

Nature of objectives

Number of actual plans specified for each objective

Degree of involvement by hospital board in hospital planning

Time spent by hospital administrator

Time spent by other hospital personnel

Percentage of departmental and business functions covered by the plan

Degree to which methods are specified for evaluating the results of plans

Source: Bruton, Oviatt & Kallas-Bruton 1995.

In considering the length of the planning horizon, Bruton and colleagues (1995) argue that a longer time frame of three to five years reflects strategic planning. The significant involvement of key stakeholders such as hospital boards, top management and clinicians also reflects the strategic nature of plans. They state that the best method of collecting data on most of the criteria (in Table 1) would be to elicit the information from hospital executives and by direct examination of plans by a panel of experts.

Denis and colleagues (1991) examined the nature of strategies in 66 hospitals in Canada using content analysis of planning documentation. They found that hospitals using strategic planning for purely symbolic purposes were less successful than hospitals which used it for more substantive technical or political purposes. Berry (1994), in studying adoption of strategic planning in state agencies in the United States, found that the adoption by 'sister' agencies in the neighbourhood had a positive effect. A similar 'network' effect was found where outside agencies that dealt with hospitals expected well-managed hospitals to have strategic plans (Denis, Langley & Lozeau 1995).

Studies in organisational literature have shown that formalisation and standardisation increase with organisational size (Hickson, Pugh & Pheysey 1979). Size is also an indicator of complexity (Hage & Aiken 1970). Berry (1994) used the number of full-time equivalent staff in state agencies as a proxy of size and found a positive relationship between the size of the agency and adoption of strategic planning.

The evidence of the relationship between size of an organisation and use of strategic planning in hospitals is mixed. Breindel (1980) used a proxy dimension of ability to plan (including manpower) and found that as hospital size increased so did the capacity to plan. Pitts (in Bruton, Oviatt & Kallas-Bruton 1995) did not find any difference by size. In a study of rural hospitals, Smith, Piland and Funk (1992) found that hospitals with a highly developed strategic plan had a higher number of licensed beds. They also found that these hospitals had a higher occupancy rate. Their explanation was that larger hospitals were able to attract managers supportive of strategic planning and that such hospitals needed more strategic planning as a result of their complexity. Therefore the cause and effect relationship between strategic planning and hospital size is difficult to tease out. There is also insufficient evidence to verify the rational argument that hospitals need to strategically plan to increase utilisation (high occupancy rates) (Smith, Piland & Funk 1992).

Methodology

The data for the study are drawn from a survey of hospitals in two Australian states, New South Wales and Victoria, conducted in 1994–95. The sample frame for the survey was obtained from a list of all registered hospitals in the two States. A stratified sample was selected to enable a sufficient number of sample hospitals to ascertain differences by hospital size and State. All large-sized hospitals (over 300 beds), 20% of intermediate-sized hospitals (100–300 beds) and 10% of small hospitals (less than 100 beds) were included in the sample. The sampling plan and number selected are given in Appendix 1.

As this was an exploratory study, it was decided that strategic planning in hospitals would be surveyed from planning documents produced by the hospitals. A similar methodology has been used to study strategic planning (Denis, Langley & Lozeau 1991; Berry 1994). This methodology is useful to provide initial and easily available data on strategic planning for analysis in an exploratory study. However, its limitations need to be acknowledged. Strategic plans may not necessarily reflect the actual strategic process and behaviour that are behind the published plans. Our objective is to provide preliminary data for more in-depth research.

The selected hospitals were initially sent a letter explaining the purpose of the study, assuring them of the confidential nature of the study (where individual data will not be divulged) and requesting them to send their latest strategic or corporate plans. The letter was followed up with a phone call to the chief executive officer or the most appropriate senior person, for example, in the

Hospital Development Unit. The hospitals that did not have such a plan or were in the process of making one were identified. The number of hospitals sampled, number contacted and the status of plans are presented in Table 2.

Operationalising criteria for strategic planning

The criteria used by Berry (1994) to identify whether the plans reflect strategic planning were utilised to operationalise the comprehensiveness of strategic planning (see above). The plans were searched for a statement that fulfilled the components of a clear mission statement as specified by Pearce & David (1987). The last component of their list, 'Confirms the organisation's preferred self-image', was left out as it overlaps with 'Specifies the organisation's desired public image' (Item 5 of the list) and, in the case of public hospitals, would not be of critical value. A scaling method was used to score the comprehensiveness of the mission statement. Scaling was also performed for the other three criteria for strategic planning (see Appendix 2 for details).

In addition, the survey also tried to determine whether long-range planning or strategic planning was used by searching for the presence or absence of:

- length of planning horizon (three years or more)
- documentation of involvement of hospital board/management
- customer orientation of plans (presence of one or more items)
- competitor orientation of plans (presence of one or more items).

The presence of these items represented strategic planning rather than long-range planning (Bruton, Oviatt & Kallas-Bruton 1995). For the purposes of operationalising the concept of 'orientation', items were selected from the work of Narver and Slater (1990). The following items from their scale were used to measure 'customer orientation':

- indication of customer commitment
- creation of customer value
- understanding/analysis of customer needs.

'Competitor orientation' was operationalised using the following three items from the Narver and Slater (1990) instrument:

- identification of competitors
- response to competitor action
- discussion of competitor strategies.

Data collation and analysis

Each plan was read by one investigator and a summary document prepared that contained verbatim sections with material on the mission statement, goals, objectives and strategies. Based on the textual material extracted from the plans, a score for comprehensiveness of strategic planning was given (see Appendix 2).

Following the initial rating of the plans by one of the investigators, they were rated by an independent expert who was not involved in the study. The results of inter-rater reliability were found to be satisfactory for such an exploratory study -76% on the Reliability Index (I₂) of Perreault and Leigh (1989).

Non-parametric tests such as Wilcoxon's rank sum test and chi square tests were used to find associations between strategic plans and contextual variables such as State and hospital size.

Results

The final sample suitable for analysis and the number of hospitals without plans are presented in Table 2.

The original sample selected on the basis of the hospital list was 101, but only 96 hospitals were surveyed (as the effective sample) due to amalgamations and closures at the time of the survey. Of the 96 hospitals in the sample, 45 (47%) did not have a strategic or business plan or were in the process of making one. Fifteen (16%) of the plans submitted were not suitable for analysis – seven were not strategic plans (but were, for example, annual reports, role and function statements) and eight (from New South Wales hospitals) were area health service strategic plans which incorporated the hospital. These plans were found to reflect a 'population-based strategy' and the hospitals were only a part of the area plan. These were excluded from the rest of the analysis. Therefore, only 36 (38%) of the 96 hospitals in the sample submitted a strategic plan or stated that they had a strategic plan for their hospital. Ten (11% of the total sample) of the large hospitals (seven in New South Wales and three in Victoria) did not submit plans (that they said were available), despite three follow-up contacts over a period of six months. Therefore, 26 plans were available for content analysis. This accounted for 72% of the strategic plans in the sample.

The results of the survey indicated that there is an apparent lack of hospital strategic planning, as shown in the 'no plan' column of Table 2, with results ranging from 11% to 75% depending on the State and the size of the hospitals. The lack of strategic plans seems to decrease with hospital size. Overall, the percentage of strategic plans by hospitals did not differ between the two States.

Table 2: Status of strategic planning, by State and hospital size

	Number in sample (Number in effective sample)	No plans	Plans received – unsuitable (area plans)	Plans not received	Plans received suitable for analysis
Victoria					
<100¹	18 (16)	12	2	0	2
100-300	11 (11)	5	0	0	6
>300²	21 (19)	10	0	3	6
Subtotal	50 (46)	27	2	3	14
NSW					
<100 ³	20 (19)	10	6(4)	0	3
100-300	12 (12)	6	2	0	4
>300	19 (19)	2	5 (4)	7	5
Subtotal	51 (50)	18	13 (8)	7	12
Total	101 (96)	45	15 (8)	10	26

Notes:

- 1. One refusal. One regional plan.
- 2. Two amalgamations.
- 3. Two hospitals in one group plan.

The results of the analysis of the plans for comprehensiveness of the strategic plans are presented in Table 3.

Overall, the comprehensiveness of strategic planning on criteria 3 (strategic goals and objectives) and 4 (strategies to achieve objectives) was higher than on criteria 1 (mission statement) and 2 (environmental analysis). The mean score on criteria 1, 2 and 4 was lower in New South Wales than in Victoria. Of the four criteria for comprehensiveness, there was a significant difference between the States only on criterion 2 (external/internal environmental analysis). Analysis showed that there was no significant difference on any of the criteria by hospital size.

The results on the assessment of plans for strategic planning and long-range planning are presented in Table 4. In all four criteria, the plans from Victoria have a higher percentage, indicating evidence of more strategic planning rather than long-range planning. The differences between the States were significant in all criteria except on the length of planning horizon.

Table 3: Comprehensiveness of strategic plans, by State and hospital size¹

Criteria	New South Wales			Victoria			
	Number of beds						
	<300 n = 7	>300 n = 5	Total n = 12	<300 n = 8	>300 n = 6	Total n = 14	
Clear statement of the organisation's mission	2.86	2.60	2.75	3.00	4.17	3.50	
Evidence of external/ internal environmental analysis	1.71	1.00	1.42 ²	3.88	3.50	3.71 ²	
The plan delineates strategic goals and objectives	4.14	3.60	3.92	3.75	4.17	3.93	
The plan identifies strategies to achieve the objectives	3.00	4.80	3.75	4.25	4.50	4.36	

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- 1. Mean score (on a continuum of 1 to 5).
- 2. Significant difference (on Wilcoxon's rank sum test) P<0.05.

Table 4: Assessment of plans for long-range planning versus strategic planning, by State¹

Criteria	New South Wales n = 12	Victoria n = 14	Difference P value ²
Length of planning horizon (three years or more)	6 (50%)	9 (64%)	0.736
Documentation of involvement of hospital board/management	2 (17%)	11 (79%)	0.002
Customer orientation	5 (42%)	10 (71%)	0.009
Competitor orientation	0	7 (50%)	0.005

Notes:

- 1. Scored as present or absent.
- 2. Chi square test.

Discussion

This survey of a sample of hospitals indicated the state of strategic planning in Victorian and New South Wales hospitals as revealed in the documentation of strategic plans. Although the true extent of strategic planning in these hospitals

could not be estimated by using planning documentation and due to problems faced in data collection, the results showed that, at the time of the survey (1995), 47% of hospitals surveyed did not have a strategic or business plan. A selection bias in the results that needs to be acknowledged is that a number of large hospitals (>300 beds) in both States did not supply their documents. Hence this study provides a better indication of the status of strategic planning in small and intermediate-sized hospitals in the two States.

It was found that the New South Wales Health Department's initiative to develop area-based corporate plans may have resulted in a number of hospitals in that State relying on such plans to provide them with strategic direction. In the case of small hospitals (<100 beds), a majority in both States did not have strategic plans. This may reflect that strategic planning was not seen as an important (or essential) activity by these small hospitals or that they did not have the expertise and/or resources to develop such plans.

This exploratory study had as one of its objectives to test criteria for comprehensiveness of strategic planning (Berry 1994) in a health care setting. The criteria selected were found to be relatively reliable for coding from documented plans (an inter-rater reliability of 76%). However, the investigators found that information on these criteria would be more complete if collected directly from health planners and hospital managers using field interviews.

Some of the main findings on hospital strategic planning between the two States were as follows.

1. If the criterion of environmental scanning and analysis was taken as a key feature that differentiated between strategic plans and long-range plans, there was a significant difference between the hospitals in the two States, with Victorian hospitals placing greater emphasis on this aspect in the documentation of plans.

This finding may have reflected the 'external environment' in Victoria. In 1993 Victoria introduced 'competition' among its public hospitals by introducing a resource allocation formula based on the number and type of patients treated by the hospital. The hospitals were grouped by size and cost overheads and receive the same amount of funding for providing the same type of services. In New South Wales this was not the case as the policy was more 'patient-focused'. This distinction may have resulted in the differences seen in the content of the strategic plans of the hospitals of the two States. Based on documentation, Victorian hospital plans from were seen to be more at the strategic planning end of the spectrum than those of New South Wales hospitals.

2. The plans from Victorian hospitals had more strategic planning orientation in terms of customer orientation and competitor orientation than did plans from New South Wales hospitals.

The operationalisation of the 'competitor' focus was based on identification, discussion of competitor strategies and response to competitor strategies in the plans (Narver & Slater 1990). These items were seen in Victorian hospital plans, reflecting a 'competitor' focus. None of the New South Wales hospital plans had documented these items. On the other hand, it would have been expected that, given the health policy in New South Wales for a 'patient (customer) focus', a higher 'customer orientation' would be documented in New South Wales hospital plans than in Victorian plans. One explanation could be that the policy in New South Wales had not been translated to strategies in hospitals.

3. Most of the plans analysed stated their goals, objectives and strategies comprehensively.

As stated by Bryson (1988), both strategic planning and long-range planning are prepared by setting goals, objectives and targets. It is the difference in the emphasis on shifts in strategic directions and response to external changes that distinguishes strategic planning from long-range planning. The analysis of plans prepared at one point in time does not enable these distinctions to be made clearly. Research on a longitudinal framework would be necessary to identify such shifts in strategic direction.

Hospitals have typically prepared long-range plans, as reflected in the literature from the United States (Bruton, Oviatt & Kallas-Bruton 1995). With the emphasis on strategic planning, it seems that many hospitals have continued to develop long-range plans and have labelled them as 'strategic plans'.

4. There seemed to be no differences between the smaller and larger hospitals in terms of comprehensiveness of strategic planning. However, some of the most comprehensive plans were typically found in the larger hospitals of the two States. This may reflect the resources available to these hospitals for strategic planning.

It had been postulated in the literature that hospital size will affect the use of strategic planning in hospitals. Though this study limited itself to documentation of strategic planning, the comprehensiveness of strategic planning (as documented in the plans) did not show a relationship to hospital size. It should be kept in mind that some selection bias may have influenced this result as a number of larger hospitals (>300 beds) did not supply the researchers with their plans. In addition, hospitals (particularly small ones) which supplied such plans may be those with very comprehensive strategic plans.

Conclusions

This exploratory study has provided some preliminary findings on strategic planning in New South Wales and Victorian hospitals based on their planning documentation. The four criteria used to measure comprehensiveness of strategic planning in this study showed relatively high inter-rater reliability and should be validated in future studies. However, the results should be tempered by the size of the sample and the methodology used. Future research should utilise field surveys questionnaires and interviews to provide more comprehensive data on strategic planning, strategic behaviour and the planning process in hospitals.

An area of useful research in the health sector is assessing the impact of strategic planning on the performance of hospitals and their long-term viability. This would be of value to health managers as they need evidence to justify investing resources for developing comprehensive strategic plans in their hospitals.

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References

Aldrich HE 1979, *Organizations and Environments*, Prentice Hall, Englewood Cliffs.

Berry FS 1994, 'Innovation in public management: The adoption of strategic planning', *Public Administration Review*, vol 54, no 4, pp 322–30.

Braithwaite J 1993, 'Strategic management and organisational structure: Transformational process at work in hospitals', *Australian Health Review*, vol 16, no 4, pp 383–404.

Breindel CL 1980, 'Hospital planning in Virginia after PL 93-641', *Inquiry*, vol 17, no 4, pp 339–47.

Bruton GD, Oviatt BM & Kallas-Bruton L 1995, 'Strategic planning in hospitals: A review and proposal', *Healthcare Management Review*, vol 20, no 3, pp 16–25.

Bryson JM 1988, Strategic Planning for Public and Non-profit Organisations, Jossey Bass, San Francisco.

Campbell A & Yeung S 1991, 'Creating a sense of mission', *Long Range Planning*, vol 24, no 4, pp 10–20.

Cleverly WO & Harvey RK 1992, 'Competitive strategy for successful hospital management', *Hospital and Health Services Administration*, vol 37, no 1, pp 53–69.

Denis J, Langley A & Lozeau D 1991, 'Formal strategy in public hospitals', *Long Range Planning*, vol 24, no 1, pp 71–82.

Denis J, Langley A & Lozeau D 1994, 'Setting priorities in public hospitals – The paradoxes of strategic planning', *in* M Malek (ed) *Setting Priorities in Health Care*, John Wiley, New York, pp 187–202.

Denis J, Langley A & Lozeau D 1995, 'The role and impact of formal strategic planning in public hospitals', *Health Services Management Research*, vol 8, no 2, pp 86–112.

Files LA 1988, 'Strategy formulation in hospitals', *Healthcare Management Review*, vol 13, no 1, pp 9–16.

Fitzgerald PE 1989, 'Strategic planning in hospitals', *in* J Rabin, G Miller & WB Hildreth (eds) *Handbook of Strategic Management*, Marcel Dekker, New York, pp 337–52.

Grant RM 1998, Contemporary Strategy Analysis, Blackwell, Malden, MA.

Hage J & Aiken M 1970, Social Change in Complex Organisations, Random House, New York.

Hickson DJ, Pugh D & Pheysey DC 1979, 'Operational technology and organisational structure: An empirical reappraisal', *Administrative Science Quarterly*, 14, pp 378–97.

Longley M & Warner M 1995, 'Future health scenarios – Strategic issues for the British Health service', *Long Range Planning*, vol 28, no 4, pp 22–32.

Mintzberg H 1979, *The Structure of Organisations*, Prentice Hall, Englewood Cliffs.

Mintzberg H & Quinn JB 1996, *The Strategy Process*, Prentice Hall, New Jersey.

Mohr L 1969, 'Determinants of innovation in organisations', *American Political Science Review*, 60, pp 111–26.

Narver JC & Slater SF 1990, 'The effects of market orientation on business profitability', *Journal of Marketing*, 54, October, pp 20–35.

Ozcan YA, Luke RD & Haksever C 1992, 'Ownership and organisational performance: A comparison of technical efficiency across hospital types', *Medical Care*, vol 30, no 9, pp 781–94.

Pearce JA 1982, 'The company mission as a strategic tool', *Sloan Management Review*, 23, Spring, pp 15–17.

Pearce JA & David F 1987, 'Corporate mission statements: The bottom line', *Academy of Management Executive*, May, pp 109–15.

Perreault WD & Leigh LE 1989, 'Reliability of nominal data based on qualitative judgments', *Journal of Marketing Research*, 26, May, pp 135–48.

Reynolds J 1986, 'Using DRGs for competitive positioning and practical business planning', *Healthcare Management Review*, vol 11, no 3, pp 37–55.

Shortell SM, Morrison EM & Robbins S 1985, 'Strategy making in health care organisations: A framework and agenda for research', *Medical Care Review*, 42, pp 219–66.

Smith HL, Piland NF & Funk MJ 1992, 'Strategic planning in rural health care organisations', *Healthcare Management Review*, vol 17, no 3, pp 63–80.

Wheelan TL & Hunger JD 1995, Strategic Management and Business Policy, 5th edn, Addison-Wesley, Reading.

Appendix 1: Sampling plan, by State and hospital size

	Total in list	Sampling fraction	Number in sample	
Victoria				
<100	188	0.1	18	
100–300	52	0.2	11	
>300	21	1	21	
Total	263		50	
New South Wales				
<100	226	0.1	20	
100–300	59	0.2	12	
>300	19	1	19	
Total	304		51	

Appendix 2: Scaling method for comprehensiveness of plans

Item		Score = 1	Score = 3	Score = 5
1.	The plan contains a clear statement of the	No mention statements;	Some mission statement	Comprehensive few features
	organisation's	mission.		iew leatures
2.	The plan contains evidence of external/internal environmental analysis.	No reference to external/internal environments	Some analysis	Comprehensive analysis (SWOT, scenario etc)
3.	The plan delineates the agency's strategic goals and objectives.	No strategic goals or objectives	Some goals or objectives indicated	Clear statement of goals and objectives
4.	The plan identifies strategies to achieve the objectives.	No strategies	Some statements	Comprehensive strategies for objectives