"Not-for-resuscitation" orders in Australian public hospitals: policies, standardised order forms and patient information leaflets

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ABSTRACT

Objective: To determine the prevalence and content of policies, standardised order forms (SOFs) and patient information leaflets (PILs) pertaining to "not-for-resuscitation" (NFR) orders in Australian public hospitals.

Design and setting: Cross-sectional postal survey conducted across Australia from August to December 2005, using a one-page questionnaire.

Participants: Directors of Medical, Nursing or Clinical Services of all public hospitals in Australia with 60 or more beds, excluding psychiatric, military and private hospitals.

Main outcome measures: Prevalence of documented NFR policies, by hospital characteristics, and content of these policies, SOFs and PILs.

Results: 222 hospitals were surveyed, and 157 responded (71%). Of these, 85 (54%) had NFR policies, 62 (39%) had SOFs, and four (3%) had PILs. Hospitals with more than 200 beds were more likely to have NFR policies than those with 60–200 beds ($P = 0.04$). More metropolitan than rural hospitals had NFR policies ($P = 0.01$). More hospitals with 60–100 beds had SOFs than hospitals with 101–200 beds ($P = 0.03$). "NFR" was defined in 53% of policies, while 97% of policies explicitly stated where NFR orders were to be documented, 89% stated who was allowed to make them, 37% stated that advanced care directives ("living wills") were to be respected, and 89% stated that competent patients should be involved in discussions regarding their NFR status. The most common items noted in SOFs were the name and signature of the issuing medical practitioner (92%) and documentation of the discussion with the patient (81%).

Conclusions: There was wide variation in the content of hospital policies, SOFs and PILs pertaining to NFR orders. Aspects of current polices show room for improvement.

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"Not-for-resuscitation" (NFR) orders are a necessary aspect of current medical practice in Australia.[1] They are implemented to prevent the use of cardiopulmonary resuscitation (CPR) in situations when it is deemed futile or unwanted. The term CPR refers to a range of resuscitative efforts, including basic and advanced cardiac life support to reverse a cardiac or pulmonary arrest.

NFR ordering procedures vary considerably between institutions worldwide.[2-4] Similarly, there is no universal term for NFR, with terms such as "do not resuscitate" (DNR), "do not attempt resuscitation" (DNAR) and "not for CPR" also used.

A standardised order form is a pre-printed form used to document an NFR order, sometimes complementing clinical note entries. Patient information leaflets on NFR decision making have been made available to patients and families. Various Australian and British health bodies recently recommended the implementation of hospital NFR policies, standardised order forms and patient information leaflets, also providing a framework for policy content.[1,5-7]

The prevalence of these documents in Australia and their content have not been evaluated in detail (as shown by a search of PubMed and Ovid MEDLINE databases, using the search terms "resuscitation orders", "policies", "prevalence", and "content", from 1966 to December 2005).

The purpose of this study was to determine the prevalence and analyse the content of hospital policies, standardised order forms and patient information leaflets for the use of NFR orders in Australia.

METHODS

All Australian public hospitals with 60 or more beds were included in the study. Hospital details were obtained from the Australian Hospitals Directory.[8] Private, psychiatric and military hospitals were excluded. Hospitals were stratified by bed numbers, academic status and location.

The Director of Medical Services of each hospital was mailed a letter explaining the purpose of the study and including a one-page questionnaire, asking if they had policies or guidelines, a standardised order form or patient information leaflets pertaining to NFR orders used at an institutional level. If so, they were asked to provide copies of the documents.

Hospitals were given the option of responding via mail or email. If the hospital did not have a Director of Medical Services, then the letter was addressed to the Director of Clinical or Nursing Services. Hospitals that did not respond within 6 weeks were contacted again by mail and provided with the extra option of faxing their replies. Data were collected between August and December 2005.

Data collection

For the purpose of this study, an NFR policy was defined as a written protocol pertaining to the implementation of NFR orders at an institutional level. A standardised order form (SOF) was a preprinted form that documented the NFR order and required completion for the order to be valid. A patient information leaflet (PIL) was a separate document containing information pertaining to NFR orders that could be given to and understood by a patient and their family.

Each document was independently analysed by at least two of the study authors using a preformed structured list of items that was developed based on available literature.[1,2,5-7,9-11] Differences were resolved by consensus or a third reviewer.

Statistical analysis

Statistical analysis was performed with GraphPad (GraphPad Software, San Diego, Calif, USA) using Fisher's exact test. A two-tailed P value < 0.05 was considered statistically significant.

As this study was an analysis of current practice, formal ethics approval was not sought.

RESULTS

Of the 222 hospitals that satisfied the inclusion criteria, 157 responded (71%). There was no significant difference in the response rate based on hospital size, academic status or location. Hospitals that indicated they

had relevant documents but did not provide them or provided documents that did not meet the criteria for an NFR policy, SOF or PIL were categorised as "responding hospitals without policies/forms".

Prevalence of NFR policies and documents

Of the 157 respondents, 93 reported having NFR policies, and 85 provided copies (54% of respondents). Sixty-eight respondents indicated that their hospitals used SOFs, and 62 provided copies (39% of respondents). Sixteen hospitals reported having PILs, and four (3% of respondents) were valid for analysis (seven hospitals provided no copies, and five provided documents that did not meet the criteria for a PIL).

Of the 72 respondents categorised as not having an NFR policy, 21 (29%) indicated that they were in the process of formulating a policy. Fifteen of the 95 respondents without SOFs (16%), and 12 of the 153 respondents without PILs (8%) stated the same for those documents.

Hospital characteristics relating to the presence of NFR policies and SOFs are shown in Box 1. Hospitals with more than 200 beds were more likely to have an NFR policy than those with 60–200 beds ($P = 0.04$). We found no significant relationship between hospital location (metropolitan or rural) and the presence of an SOF, but a greater proportion of metropolitan than rural hospitals had NFR policies ($P = 0.01$). There was no significant relationship between the academic status of the hospital and the presence of either NFR policies or SOFs.

Content of NFR policies and documents

Aspects of NFR policies examined in the study are shown in Box 2, Box 3 and Box 4. Almost half the policies (46%) addressed partial NFR orders, with 44% stating that the intended level of intervention should be documented. Most policies (94%) did not address the issue of NFR orders in patients undergoing a procedure under general anaesthesia. If a patient had an NFR order from a previous admission, 34% of policies indicated that a new order was required, with none indicating that the old order would be valid. Only 3% of policies addressed the issue of receiving a patient from another institution with a standing NFR order.

The content of SOFs in Australian hospitals is outlined in Box 5.

Of the four PILs analysed, two explained CPR, and three outlined possible reasons why an NFR order might be required. One PIL stated that CPR would be attempted unless an NFR order was in place. The process by which a patient is declared NFR was stated in three PILs. Two PILs included a statement about reviewing NFR orders or the patient or family changing their wishes. Only one PIL stated that comfort care and other appropriate interventions would continue to be provided. All four PILs stated who to contact if the reader needed clarification.

DISCUSSION

Just over half the hospitals surveyed (54%) had NFR policies, in line with other developed countries.[2,9] Fewer hospitals (39%) used SOFs, and only four of the 157 respondents (3%) had PILs that we could analyse. If hospitals that were in the process of formulating the above documents were included as already using them, then the prevalence would increase to 68% for NFR policies, 49% for SOFs and 10% for PILs.

Larger and metropolitan hospitals were more likely to have NFR policies, possibly reflecting their larger budgets and greater awareness of the need for such policies. Introduction of an institutional NFR policy results in increased patient involvement,[12] improved documentation[13] and comprehension[12] of NFR orders, and fewer inappropriate resuscitative efforts in terminally ill patients.[14,15]

Almost half the policies analysed (47%) did not define an NFR order. This is a concern, as it has been shown that Australian doctors and nurses differ in their perception of NFR orders.[1] Furthermore, 38% of policies did not indicate the person responsible for documenting orders. More policies should provide a proper definition and clear delegation of responsibility to avoid confusion between medical and nursing staff.

While a high proportion of policies did not address the issue of disagreements within the medical team (79%) or between the medical team and the patient or family (60%), these figures are lower than those in comparable studies of Dutch and Canadian hospitals.[2,9] Existing policies should be reviewed to outline mechanisms for conflict resolution.

It is alarming that 62% of NFR policies did not address the issue of advanced care directives or "living wills", which have been shown to affect treatment decisions.[16] The issue here is not whether they should be accepted as legal documents (which may

1 Characteristics of hospitals with written policies and standardised order forms (SOFs) for use of not-for-resuscitation (NFR) orders

Hospital characteristic	No. of hospitals	
	NFR policy	SOF
Size (beds)		
60–100 ($n = 50$)	25 (50%)	25 (50%)
101–200 ($n = 54$)	25 (46%)	15 (28%)
> 200 ($n = 53$)	35 (66%)	22 (42%)
Academic status		
Teaching ($n = 64$)	38 (59%)	24 (38%)
Non-teaching ($n = 93$)	47 (51%)	38 (41%)
Location		
Metropolitan ($n = 65$)	43 (66%)	27 (42%)
Rural ($n = 92$)	42 (46%)	35 (38%)
Total ($n = 157$)	**85 (54%)**	**62 (39%)**

2 Definitions and documentation in written hospital policies for use of not-for-resuscitation (NFR) orders

Contents of NFR policy	No. of hospitals ($n = 85$)
Definition of resuscitation	
Given	27 (32%)
Not explicitly defined	58 (68%)
Definition of decision not to resuscitate	
Given, along with statement "fully consistent with patient otherwise also receiving full therapeutic medical and nursing intervention" or similar	35 (41%)
Given, but does not include above statement	10 (12%)
Not explicitly defined	40 (47%)
Where is NFR order documented?	
Patient notes	44 (52%)
Standardised order form (SOF)	27 (32%)
Notes and SOF	11 (13%)
Not explicitly stated	3 (4%)
Responsibility to document NFR order	
Consultant/registrar or patient's general practitioner	36 (42%)
Any registered medical practitioner	15 (18%)
Nurse or registered medical practitioner	2 (2%)
Not explicitly stated	32 (38%)
Reasons/rationale for NFR order	
Must be documented	58 (68%)
Not explicitly stated	27 (32%)

3 Procedural aspects in written hospital policies for use of not-for-resuscitation (NFR) orders

Contents of NFR policy	No. of hospitals ($n = 85$)
Presumption in favour of CPR in cases where NFR status unclear?	
Yes	38 (45%)
No	47 (55%)
Who is allowed to make NFR order?	
Senior medical officer, registrar or patient's general practitioner	57 (67%)
Any registered medical practitioner	19 (22%)
Not explicitly stated	9 (11%)
Decision reviewed?	
Yes, frequency stated	26 (31%)
Yes, frequency not stated	47 (55%)
Not explicitly stated	12 (14%)
Reversing NFR orders	
Procedure outlined	36 (42%)
Not explicitly stated	49 (58%)
Methods for identifying patients as NFR, apart from plain written order in clinical notes*	
SOF placed in particular part of patient notes/folder	25 (29%)
SOF, placement not stated	21 (25%)
Tabbed/marked written order in clinical notes	11 (13%)
Sticker/mark in patient clinical notes	9 (11%)
Not otherwise stated	28 (23%)
Disagreement within medical team on patient being made NFR	
Avenues for addressing issue outlined	18 (21%)
Not explicitly stated	67 (79%)

CPR = cardiopulmonary resuscitation.
SOF = standardised order form.
* More than one answer could be given. ◆

vary from state to state, depending on legislation), but the fact that a large proportion of policies do not mention the issue. Hospitals should update existing NFR policies to reflect the current legal situation in their respective state or territory.

Most policies (79%) did not outline any criteria for labelling a patient as incompetent. Possibly, the criteria are listed in another hospital protocol, but none of these policies referred to another such document. Only 34% of policies stated that a new NFR order was needed for a patient being re-admitted to hospital who had an order from a previous admission. While this figure may be higher in practice, more policies should indicate that a new order should be sought for every admission, as the patient's health status and preference may have changed. However, it should be noted that no policy indicated that an order from a previous admission would be valid.

Among the strong points of Australian NFR policies is the fact that 89% identified the members of the medical team allowed to make NFR orders, compared with 75% of Dutch policies.[2] Also, 86% of Australian policies stated the need for NFR orders to be reviewed, which mirrors the proportion in Canada (86%)[9] but is higher than that in the Netherlands (61%).[2] Regular review of NFR orders is important because of the possibility of significant clinical improvement that may result in resuscitation no longer being considered futile. However, 58% of policies did not outline the procedures to reverse NFR orders. A high proportion of policies in Australia (89%) indicated the need for a competent patient to be involved during the process of discussing NFR orders. Similar figures are reported elsewhere,[2,9] indicating that there is global awareness about the importance of patient communication when implementing these decisions.

We found wide variation in the content of SOFs for the use of NFR orders. One could argue that particular details in NFR orders not included in the SOF could have been written in the patient's clinical notes. However, only 13% of NFR policies indicated that NFR orders were to be written in both the SOF and clinical notes. A reassuring point of Australian SOFs is that 81% included documentation of discussion with the patient. Studies analysing use of SOFs show that NFR decisions are significantly more likely to be authorised by consultants,[17,18] be in accordance with hospital guidelines,[17] be reviewed when necessary,[17] show clarity of documentation,[18] have active patient participation[17] and document reasons for the decision.[18] More hospitals should therefore adopt the use of SOFs, from the current 39%.

Analysis of the content of PILs about NFR orders is limited by their low prevalence (3%) in Australian hospitals. PILs have been rated as useful and not a cause of unnecessary distress or offence.[19]

4 Aspects of patient autonomy in written hospital policies for use of not-for-resuscitation (NFR) orders

Contents of NFR policy	No. of hospitals ($n = 85$)
Living will/advanced care directive respected?	
Yes, not further defined	19 (22%)
Yes, unless obvious valid concerns evident	13 (15%)
Not explicitly stated	53 (62%)
Criteria for labelling patient as incompetent	
Clearly outlined	18 (21%)
Not explicitly stated	67 (79%)
Role of competent patient regarding decision not to resuscitate*	
Patient's wishes to be followed	50 (59%)
Opinions to be considered	14 (16%)
Involved in discussion	76 (89%)
Informed of decision	32 (38%)
Not explicitly stated	1 (1%)
Role of family for incompetent patient (excluding those with power of attorney)*	
Allowed to make decision on patient's behalf	11 (13%)
Opinions to be considered	10 (12%)
Involved in discussion	67 (79%)
Provide information regarding patient's wishes	17 (20%)
Informed of decision	21 (25%)
Not allowed to make final decision	17 (20%)
Not explicitly stated	10 (12%)
Disagreement with patient or family on patient being made NFR	
Avenues for addressing issue outlined	34 (40%)
Not explicitly stated	51 (60%)

* More than one answer could be given. ◆

Our study had several limitations. Content analysis is potentially open to subjective bias. To reduce this likelihood, all documents were analysed by two independent reviewers, with differences resolved by consensus or a third reviewer. Hospitals with fewer than 60 beds, most of which were small district hospitals and respite care centres, were not included in our study as we considered that our pre-

5 Content of standardised order forms for not-for-resuscitation (NFR) orders

Contents of standardised order form	No. of hospitals ($n = 62$)
Patient's diagnosis	24 (39%)
Reason(s) for issuing NFR order	35 (56%)
Date of next review	28 (45%)
Name (handwritten) and signature of patient/proxy	16 (26%)
Name and signature of medical practitioner issuing order	57 (92%)
Name and signature of witness (besides issuing medical practitioner)	18 (29%)
Documentation of discussion with patient	50 (81%)
Documentation of reasons for not discussing decision with patient	6 (10%)
Documentation of discussion with family	45 (73%)
Documentation of nursing staff informed of decision	39 (63%)
Documentation of consultant informed of decision	30 (48%)
Documentation of level of intended intervention in partial NFR orders	33 (53%)

formed structured list of items would not apply to most of these if they had the relevant documents. A higher response rate could possibly have been obtained by including a self-addressed stamped envelope with the survey.

A strength of our study was that there was no significant difference in the response rates based on hospital size, academic status or rural versus metropolitan location. Our findings are therefore less likely to be susceptible to non-response bias.

In conclusion, an NFR policy should be clear, concise and relevant to the hospital setting. Nevertheless, the presence of a policy does not guarantee that it will be followed.[20] Proper understanding and implementation of an NFR policy may not be possible if hospital staff are not aware of its contents or if the document is seen to be too complicated.[21] Australian hospitals should be encouraged to formulate NFR policies, utilise standardised order forms when implementing these policies and allow for the provision of patient information leaflets. The content of existing documents should be reviewed based on the findings of this study, which add an Australian perspective to an important issue. Variations in state/territory recommendations and legislation should be taken into account when formulating these documents.

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COMPETING INTERESTS

None identified.

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