# Is Anyone Listening?

Factors affecting time to resolution of healthcare complaints received in a diverse NSW rural public healthcare service.


CLINICAL GOVERNANCE UNIT
Ph: 02 69 339 197(B) 0428 167 555 (M)
Nicole.smith@gsahs.health.nsw.gov.au

**Nicole Smith**

Quality Systems & Complaints Manager

NSW GOVERNMENT Health
Murrumbidgee
Local Health District

HETI
HEALTH EDUCATION & TRAINING INSTITUTE

## ACKNOWLEDGEMENTS

This project was sponsored and supported through the NSW Health Education and Training Institute Rural Research Capacity Building Program.

The author wishes to acknowledge the following people without whom this project would not have been realised. **Dr Sharyn Kelleher PhD,** Health Research & Governance Officer, Murrumbidgee Local Health District for her unerring faith in the project, good humour, boundless wisdom and constant support.

**Dr David Buckley**, Senior Analyst & Statistician, Murrumbidgee Local Health District for his guidance, enduring patience and teachings on the wonders of statistical analysis.

**David Schmidt, Dr Emma Webster and Kerith Duncanson** Rural Research Capacity Building Program leaders. The support of this team cannot be overstated. They provided advice, guidance and propped us up when we doubted ourselves. Thank you.

**Dr Margaret Rolfe, Biostatistician, Research Fellow University centre for Rural Health, University of Sydney** for making the time to assist and support all candidates in this program. Her insight and advice were invaluable.

**The Murrumbidgee Local Health District, particularly Mr Ken Hampson and Ms Jill Reyment,** Director and Deputy Director of Clinical Governance Murrumbidgee Local Health District for providing support for this project and flexibility around research hours.

**Bev Bennie,** Deputy Quality Systems & Complaints Manager Murrumbidgee Local Health District for her support and resilience in taking on the extra workload with extraordinary good humour.

**Jenny Price** Librarian, Wagga Wagga Base Hospital for her valued assistance, knowledge and advice in conducting literature searches.

## ABBREVIATIONS

- **IIMS - Incident Information Management System**
- **MLHD - Murrumbidgee Local Health District**
- **SAC - Severity Assessment Code**

## GLOSSARY

| | |
|---|---|
| SAC | Severity Assessment Code – NSW Health Matrix to score the severity of an actual outcome of an incident between 1 and 4 with 1 being the most serious. |
| Acknowledgement | Contact made by the Health Service to the complainant to confirm receipt of complaint and inform of commencement of investigation. |
| Resolution | The process whereby concerns raised in the complaint are addressed and appropriately responded to, with the complainant indicating satisfaction with the outcome of the investigation into their concerns and actions taken. |
| Engagement | Communication and consultation with the complainant by the Health Service's nominated representative. The assigned representative maintains contact with the complainant throughout the investigation process. |
| Escalation | The process of referring the complaint to another service (e.g.: Local Health District, Minister for Health, Health Care Complaints Commission) for investigation. This normally arises from the complainant being dissatisfied with the investigation process and/or outcomes of the initial investigation. |
| Complainant | The person who raises a concern with the service. This person may also be the subject of the complaint. |
| Subject | The person or persons affected |

**Keywords**
Consumer complaint, resolution, escalation, acknowledgement, data mining, open disclosure.

## TABLE OF CONTENTS

## ABSTRACT

### Aim

The study aimed to examine the factors impacting complaint resolution in a rural health service.

### Methods

A total of 1266 complaints registered on the Incident Information Management System (IIMS) within Murrumbidgee Local Health District (MLHD) between January 2008 and December 2013 were reviewed. A cox proportional hazard regression model was used with time to complaint resolution as the outcome variable. Potential predictor variables were: time to acknowledgment, severity, age and sex of subject, relationship of complainant to subject and service type.

### Results

Resolution was achieved in 82.6% (95%CI 80.4% to 84.7%) of complaints, with a mean time to resolution of 28.8 days. The majority of complainants were female (74.4%, 95%CI 71.9% to 76.8%). Most complaints were received from the patient (40.3%), a relative (22.1%), or parent (17.7%). The emergency departments (22.8%), medical services (12.3%) and surgical services (8.1%) received the majority of complaints.

On average, each additional day's delay in acknowledgment reduced the probability of resolution by a factor of 2.8% per day (95%CI 1.2% to 4.3%).

Odds of resolution where no harm occurred were 38% higher than for a severe incident. Complaints regarding surgical services were 75% less likely to resolve.

### Discussion

This study has quantified the relationship between the time to complaints acknowledgement and time to resolution. These findings reinforce the ethical imperative for prompt acknowledgement of complaints.

Further research is warranted to examine factors impacting resolution of complaints regarding severe events or surgical services and those which may prevent under-represented groups such as carers or other advocates from raising concerns.

## EXECUTIVE SUMMARY

### Background

Public healthcare services deliver thousands of episodes of care each day. Inevitably, a proportion of these care episodes result in complaints from consumers relating to standards of service. With more healthcare services being provided the literature shows a corresponding rise in consumer complaints(1.2).

Learning from mistakes identified through incidents and complaints is a key component in improving quality of care. The manner in which complaints are received and managed by an organisation is vital to improving public confidence in the system and reducing costs. The literature(20,22,23,24) suggests that if complaints are not received and managed appropriately, what may begin as a minor issue can quickly escalate if the complainant feels that their concerns have; not been acknowledged, disregarded or inadequate response has been provided by the organisation.

Health care organisations are required to comply with State benchmarks in complaint management(43). Existing policies and literature(26,27) provide advice on best practice in complaint management, however there is a paucity of quantitative studies into the factors impacting on complaint resolution. Identification of these factors could assist healthcare organisations in improving processes which would potentially reduce costs and restore trust within the communities they service.

Escalated complaints have a deleterious effect on the healthcare organisation, requiring intensive management and often necessitating the involvement of staff from medico-legal, patient safety, professional practice, senior management or the health district executive(20,21,23). This results in significantly increased financial expenditure, particularly if the complaint progresses to litigation.

### The Study

A total of 1266 complaints logged to the IIMS within MLHD between January 2008 and December 2013 were analysed.

To examine the relationship between a number of covariates and the time taken to resolve a complaint a cox proportional hazard regression model was used. Predictor variables considered in the statistical model were: the time to acknowledgement of the complaint, the Severity Assessment Code (SAC), the service from which the complaint derived, the outcome sought by the complainant, the age of the patient in years, the patient's gender and the relationship of the complainant to the subject (eg: self, parent, partner).

### Outcomes

The study identified that more severe incidents, complaints about surgical services and delays in acknowledging the complaint all had a statistically significant relationship with the time taken to resolution.

The more rapidly a complaint was acknowledged, the shorter the period to resolution. On average, each additional day's delay in acknowledging a complaint reduced the probability of resolution by a factor of 2.8% (95%CI 1.2% to 4.3%). Thus acknowledging a complaint at 5 days can reduce the probability of successful resolution by as much as 14%.

The emergency department received the majority of complaints (22.8%). However, complaints regarding the emergency department were not found to be any less likely to resolve than those regarding other departments.

Complaints relating to near misses or no harm incidents were found to be 3.97 times more likely to resolve than those relating to severe events. The severity of harm underlying the complaint is not modifiable by complaints staff and it appears that such complaints are more difficult and protracted to resolve. This warrants adjustment of criteria for complaints management to reflect the severity of the underlying adverse events.

Most complaints (90.4%) were received from the patient themselves, a relative, parent, wife or husband. Medical practitioners and other advocates accounted for the remainder (9.6%).

## Conclusions

**Prompt acknowledgement of consumer complaints and clear communication throughout the investigation process will increase the chance of satisfactory resolution and decrease the likelihood of escalation**. This is likely to result in increased patient satisfaction, restoration of trust, improved staff morale and reduced costs for the health service by minimising litigation and work hours.

**This study has quantified the relationship between the time to acknowledgement of a complaint and the time to resolution**. These findings reinforce the ethical imperative for prompt acknowledgement of complaints and supports the use of time to acknowledgement as a performance metric.

**Severe events and those from surgical services require specific management by healthcare organisations**.

**Complaints relating to surgical services take longer to resolve**. Further research could potentially elucidate the obstacles to resolution of these complaints. There could possibly be operational or cultural factures that make it more difficult to satisfy complaints regarding these services.

**Increased efforts to facilitate mechanisms for medical practitioners and other advocates to lodge complaints are warranted**.

## Recommendations

**Healthcare organisations should:**

- Increase efforts to facilitate and publicise mechanisms for consumers and advocates to raise concerns regarding care provision.
- Acknowledge all complaints as soon as they are received.
- Undertake open disclosure as part of normal feedback processes.
- Assign a relevant staff member to engage with the complainant and maintain contact with them throughout the investigation process.
- Ensure complaints relating to serious adverse events and surgical services are given high priority and investigations resourced appropriately.

## INTRODUCTION

More people than ever before are complaining about their care and treatment(1) and investigations of patient complaints are increasing, both in total number and countries represented(2). It has been suggested that the increasing complexity of healthcare is one reason for the increased number of complaints(3). The management of consumer complaints is an integral part of healthcare administration from both a regulatory and service perspective. The issues leading consumers to complain about healthcare services and the means by which an organisation receives, investigates and responds to these issues have been the subject of many studies(4,5,6,7,22,24).

### Complaints in healthcare

It is inevitable that some patient dissatisfaction can occur in clinical care and most healthcare providers have designated individuals to receive and address complaints(4). A "complaint" is an expression of dissatisfaction, which can be made orally or in writing. The dissatisfaction may be about the patient's care or that received by someone else, such as a relative or close friend(4). Concerns may also be raised by community members relating to general service provision(4). Motives for filing a complaint may differ; a wish for an explanation, someone to be accountable for what happened, financial compensation or receiving an apology(5, 6, 7). When feedback is received, the expression of dissatisfaction has been found to be firmer and more reliable than that of satisfaction(8,9,10).

### Nature of Complaints

Complaints received by healthcare services typically relate to perceived deficiencies in care provision. Common reasons for lodging a complaint include: medical care(5, 11), nursing care(11), availability of service(5), clinical delays(11), attitudes of staff(5, 11), poor communication(11) and monetary issues(5). There is consistent evidence that failure to adequately communicate is a reason for a significant portion of complaints across many healthcare jurisdictions(11-14). In an Australian context, Anderson 2011(15) observed, in a major Australian teaching hospital over a 30 month period, that 71% of complaints related to poor communication.

### Analysing Complaints

Patient complaints are a growing priority for healthcare systems. While they reflect patient experiences and dissatisfaction they are also considered a useful indicator of service quality, can indicate strategies to improve care(3, 15, 16) and provide a means to restore trust in the system(17). The information provided in a complaint differs to that provided by surveys as complaints are spontaneous and provided in the patient's own language and terms(18). Each patient who complains offers information on patient satisfaction, a key quality measure(18). Analysis of the nature of complaints is important to identify problems and assist in their elimination(13).

While health practitioners often regard complaints about the quality of patient care in a negative light, complaints are potentially useful quality assurance tools and can identify remediable system flaws(15). Aggregation of complaint data can also be used to follow-up the effect of changes introduced by policy decisions(19) or assist in the management of disciplinary proceedings(16).

**Managing Complaints**

Efficient complaint management systems are essential for maximising positive outcomes, prevention of complaint escalation and avoidance of litigation(21,22,23,24). There is significant evidence to suggest that poor processes in the solicitation, handling, and analysis of complaints inevitably lead to substantial negative consequences for an organisation(20). Complaint management has evolved primarily to reduce the deleterious effects of complaints, such as patient non-compliance, breakdown of the physician patient relationship and litigation(21). Kent 2008(22) asserts that when patients fail to find anyone prepared to take responsibility for errors, to apologize, explain and to prevent recurrence, what may have begun as inadvertent injury, quickly festers into an enduring wound. Hence, all complaints should be investigated promptly and adequately reviewed, with consumers kept informed of progress(23). McClinton 2007(24) suggests the worst mistake any provider can make is to ignore a complaint. The dissatisfaction will spread well beyond the complaint, damaging the reputation of the health service as complainants will tell between 10 and 25 other people of their dissatisfaction(25).

Numerous publications(22,24,23,25,26,27,28) have made suggestions as to factors necessary for successful complaint resolution and prevention of escalation. These include: the development of a written complaints procedure, having staff trained in complaint management, the acknowledgement of any complaint in as short as possible time and learning from previous complaints(26, 27).

Anecdotal observations by MLHD complaints staff suggest that common reasons for escalation can be: consumers believe their concerns are not being acknowledged or addressed in a timely manner or they believe that information is being withheld by the organisation and they are not being provided with open and honest information. Avoiding escalation of complaints is best achieved by prompt, honest responses from the staff undertaking the complaint investigation. When phone calls are not returned, letters go unanswered or no reaction is forthcoming, the lack of response not only compounds the original complaint, but becomes an added source of anger, frustration and dissatisfaction in its own right(28).

With respect to timely complaint management, acknowledging the complaint promptly and sensitively sends a clear message to the consumer that their concerns are being taken seriously. By acknowledging concerns and setting clear expectations, the level of anxiety is immediately reduced(29). Estelami 2000(30) asserts that as consumer complaints may be a result of a perceived shortcoming of the firm, a lack of a prompt response reinforces a negative consumer perception of the firm and may result in escalating dissatisfaction. Thus the promptness of the firm's response to consumer complaints significantly improves evaluations of the resolution process.

**A matter of trust**

Development of trust in health services has been found to be important for a number of reasons, including concordance with statutes and ultimately for patient safety(5). A Swedish study in 2010(5) found a strong correlation between a general negative experience and low trust in healthcare on the one hand and a general positive experience and high trust on the other (OR= 21, 95% CI 11.1 to 40.3). Low levels of trust can be changed, and improved trust might well reduce disparities, increase access, and improve health outcomes(31).

Having a system where full disclosure and apology occurs following identified medical errors reduces the likelihood that patients will change physicians, improves patient satisfaction, increases trust in the physician, and results in a more positive emotional response(17). Full disclosure may also reduce the likelihood that patients will seek legal advice under some, but not all, circumstances(17). For example, an open disclosure policy and early resolution program implemented at the University of Michigan saw a decrease in claims from three million dollars to one million dollars in a one year period(32).

By ensuring an organization wide commitment to resolving complaints immediately, the time and money involved in making additional contacts with the dissatisfied customer can be reduced(33). If a complaint escalates, the financial impact can be significant, as more staff hours are required to be invested to resolve the matter and particularly if the dissatisfied consumer seeks to litigate.

Besides the ethical imperative that health services have to manage complaints from consumers, many healthcare providers have statutory imposed complaints management benchmarks. In New South Wales, the Ministry of Health has mandatory targets that health districts must achieve. These include: acknowledging 100% of complaints within five days, and resolving 80% within thirty days. An understanding of the factors that affect the time taken to resolve a complaint could potentially enable complaints staff to modify management processes so as to minimise complaint resolution times.

There is comprehensive literature describing the nature of complaints, complaint handling procedures and the relationship between complaints and patient safety and quality. Many of these papers have been reviewed by Reader, Gillespie and Roberts(2). However, there is a dearth of quantitative studies examining the relationships between complainant factors and complaint resolution. An understanding of potentially modifiable factors, which increase the probability of resolution of a complaint would assist health services to satisfy their ethical and statutory imperative while potentially reducing associated costs.

## CONTEXT

### Objectives

This paper describes the retrospective statistical analysis of complaints logged to a database (n=1266) in the Murrumbidgee Local Health District over a six year period between January 2008 and December 2013 to better understand the factors associated with timely complaint resolution.

### Setting

Murrumbidgee Local Health District (MLHD) is a statutory health care provider in a rural area of south-eastern Australia. The area has 47 healthcare facilities:

- 1 Regional Referral Base Hospital
- 1 Rural Base Hospital
- 8 District Hospitals
- 9 Community Level Hospitals
- 12 Multi-Purpose Services
- 2 Affiliated Health Organisations
- 14 Community Health Posts

These facilities are spread over an area of 125,561 square kilometres with a population of 297,476 persons and a fulltime equivalent of 2782 staff (3597 Persons)

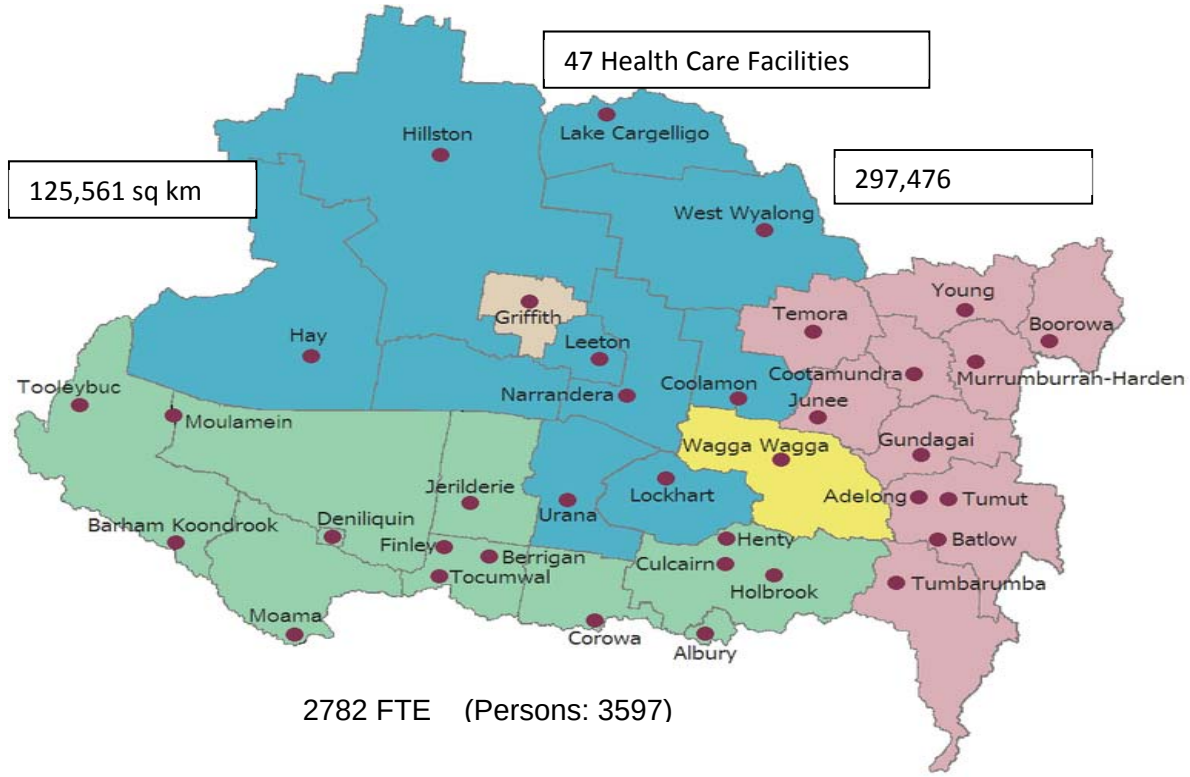


**Figure 1: Map of the Murrumbidgee Local Health District**

The MLHD provides a toll free seven day a week complaints service through which any member of the public can provide feedback about healthcare services provided by the district. Complaints received are all logged to a database; the New South Wales Ministry of Health Incident Information Management System (IIMS).

The IIMS was implemented in NSW Public Health Services in 2005 and is the mandated data custodian for consumer complaints. This system allows for collation of complaint data that includes: the severity of the concern, timeframes for acknowledgement, investigation, complaint management and whether or not the incident was escalated or resolved.

The complaints telephone service and management of the IIMS database is undertaken by the MLHD Clinical Governance Unit (CGU). The management of complaints is typically undertaken at the relevant local facility level by the site manager or senior clinical staff unless directed to the MLHD Chief Executive either directly by the complainant, via a government department such as the NSW Ministry of Health or a statutory body such as the Health Care Complaints Commission (HCCC) or NSW Ombudsman. Complaints can also be referred on for management by the Health District if either a satisfactory outcome cannot be reached at a local level, it is expressly requested by the complainant or relates to a severe incident. In these cases review and management of the complaint is undertaken by specialist complaints management staff in the Clinical Governance Unit. The CGU complaints management staff also monitor all complaints logged to the Health District and provide assistance, support and training for facility managers in complaints management.

**Data**

A total of 2118 consumer complaint registered on the IIMS database between January 2008 to December 2013 were exported to MS Excel and then read into the R Statistical software package(34).

All complaints were initially considered as eligible for analysis however, after excluding incidents where it was unknown whether a resolution, successful or otherwise, was reached 1266 complaints remained for the final analysis.

**Statistical Analysis**

To examine the relationship between a number of covariates and the time taken to resolve a complaint a cox proportional hazard regression model was used. Survival analysis methods, such as cox's proportional hazard regression, have been previously been used to examine relationships between covariates and complaints(16). The distinguishing feature of survival data is that at the end of the study the event will probably not have occurred for all patients(35). This is true for complaints resolution as some of these events will never reach a satisfactory outcome. Cox's proportional hazard model is analogous to multiple regression and enables the difference between survival times of particular groups to be tested while allowing for other factors(36).

The time to event or the dependent variable was the time between a complaint being received and the time upon which the complaint was resolved. Variables considered for inclusion as predictor variables were: the time to acknowledgement of the complaint by the health service (continuous), the Severity Assessment Code (SAC), the service about which the complaint was lodged, the outcome sought by the complainant, the age of the patient in years, the gender of the patient and the relationship of the complainant to the subject (self, parent, partner or other). When a complaint is logged on IIMS a single field must be selected to indicate relationship of complainant to the subject of the complaint, hence these categories are mutually exclusive. However for the purposes of the statistical model the categories husband, wife and life partner were aggregated to reduce problems associated with collinearity. This aggregation was not done in the descriptive statistics.

The Severity Assessment Code (SAC) is a standard severity scoring matrix within NSW Health by which each incident is assigned a Severity Assessment Code (SAC) which is determined using a matrix of the consequence against the likelihood of the event. (http://www.health.nsw.gov.au/pubs/2005/pdf/sac_matrix.pdf).

The severity code ranges between one and four, with the most severe incidents being coded one and the least severe being coded four (near misses or incidents resulting in no injury, increased level of care of length of stay). Due to the low incidence of SAC one events the severity variable with the two most severe events (SAC1 and SAC2) was combined to create a three category score.

The model was built using a backwards stepwise approach. Each variable was examined in a univariate cox regression and considered eligible for entry to the model if its univariate P value was less than 0.2. All variables that were significant in the univariate model were entered into the model and those that were no longer significant (P>0.05) were removed. The variables were also removed if they failed significance tests of the proportional hazards assumptions using Schofield's residuals (42).

**Ethical Approval**

Approval was given by the Greater Western Human Research Ethics Committee (HREC), Project Number LNR/14/GWAHS/41 on 22 July 2014. The Site Specific Assessment (SSA) was granted on 31 July 2014.

## RESULTS

### Descriptive Statistics

Over the six year period 2118 complaints were received however after excluding incidents where it was unknown whether a resolution, successful or otherwise, was reached 1266 complaints remained for the final analysis.

Resolution was achieved in 82.6% (95%CI 80.4% to 84.7%) of complaints with a mean time to resolution of 28.8 days (interquartile range, 6 to 32 days). The majority of complainants were female (74.4%, 95%CI 71.9% to 76.8%). Most commonly the complainant was the patient themselves (40.3%), a relative (22.1%), a parent (17.7%), wife (5.5%) or husband (4.8%). These three categories accounted for 90.4% of complaints. Advocates, carers, partners, guardians, medical practitioners accounted for the remainder (Figure 2).

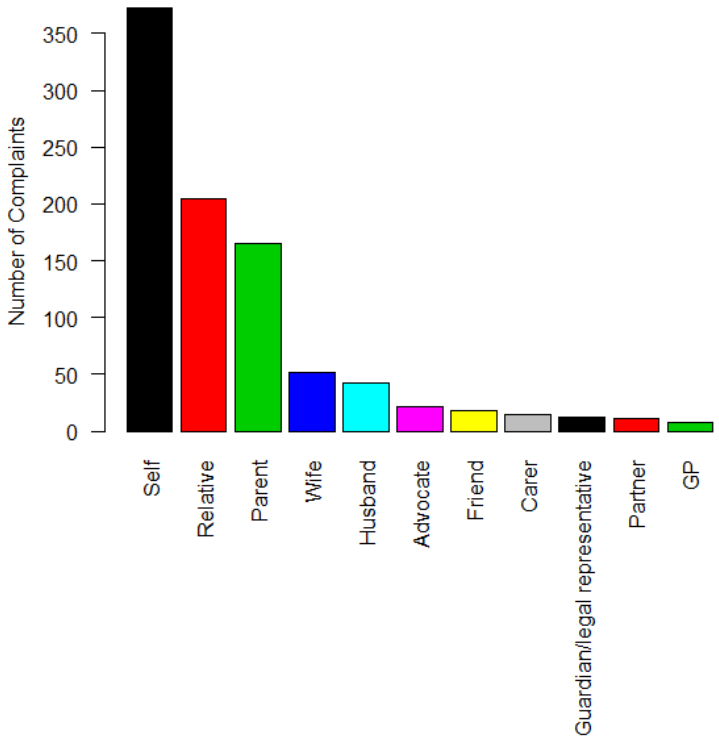


**Figure 2.** Barplot of relationship of complainant to the patient about whose care was the subject of the complaint in Murrumbidgee Local Health District January 2008 to December 2013.

The age of the subject was uniformly distributed (Figure 3) with a mean of 53.2 years (95%CI 51.1 to 49.1%).

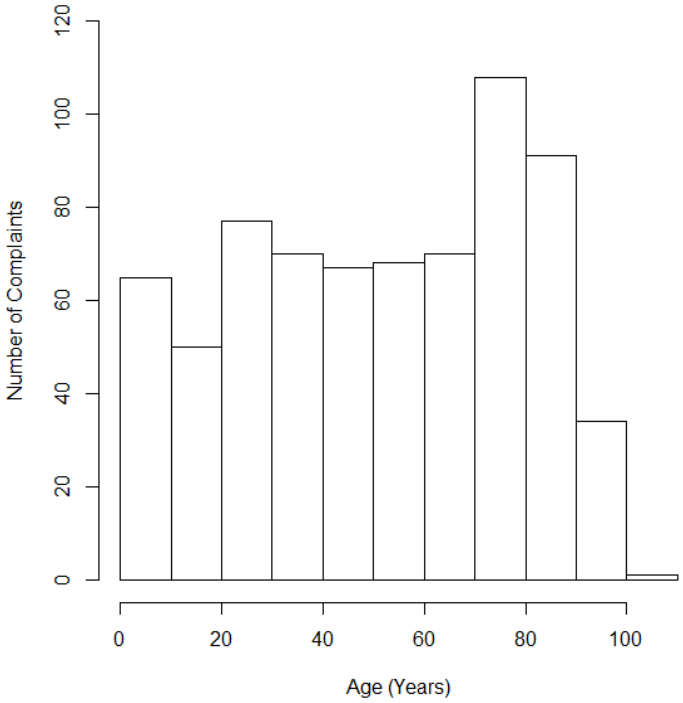


**Figure 3.** Frequency distribution bar plot of age of patient about whose care was the subject of the complaint in Murrumbidgee Local Health District January 2008 to December 2013.

The severity of complaints ranged from the death of the patient to near misses. Of the complaints analysed which had SAC score applied (n=1260) only 0.2%, 2.0%, 28.0% and 69.8% were coded one, two, three and four respectively.

The five services which received the most complaints were: the emergency department (22.8%), medical services (12.3%), surgical services (8.1%), aged care (6.6%) and mental health (6.6%).

The most common outcomes sought by the complaint were apologies, explanations and improvement in the service (Figure 4).

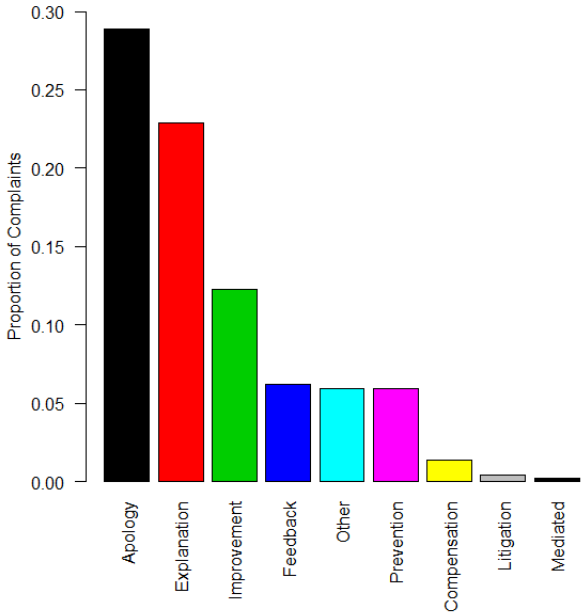


**Figure 4.** Frequency distribution bar plot of most outcomes sought by complainant in Murrumbidgee Local Health District January 2008 and December 2013.

The mean time to acknowledging complaints was 1.3 days (Figure 5) and 95% of complaints were acknowledged within 6 days.

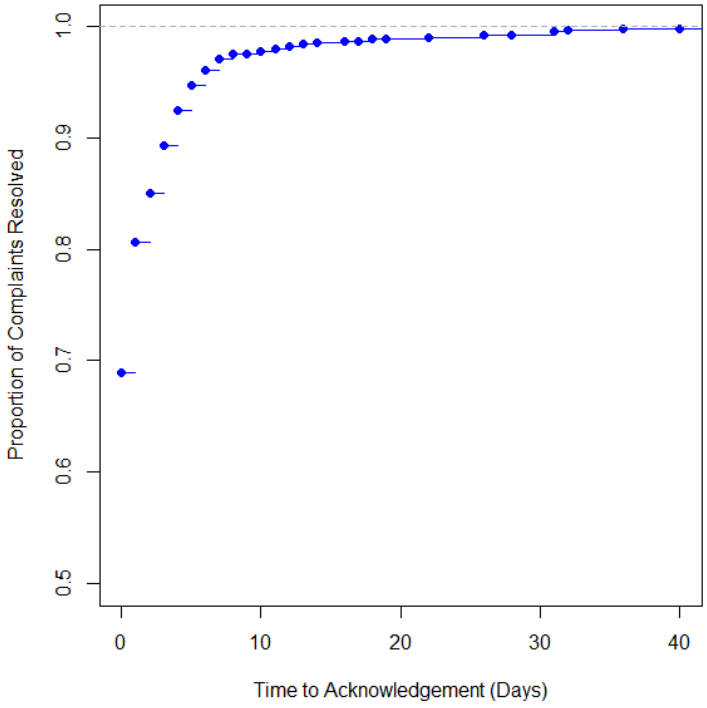


**Figure 5.** Time to the acknowledgement of a complaints within Murrumbidgee Local Health District January 2008 to December 2013.

**Time to Resolution**

Three variables had a significant relationship to the time it takes for a complaint to reach resolution. These were: the time taken to acknowledge the complaint, the severity of the incident and whether the incident involved the surgical services. The model was statistically better than the null model (Wald chi squared=62.5, P<0.0001).

(Table 1).

| Variable | Coefficient | Exp(Coefficient) | SE(Coefficient) | z | Pr(>\|z\|) |
|---|---|---|---|---|---|
| Time To Acknowledgement | -0.0283 | 0.972 | 0.00818 | 3.46 | <0.0001 |
| Moderately Severe Events (SAC3) | 0.9839 | 2.675 | 0.25860 | 3.80 | <0.0001 |
| Near Miss Events or No Harm Events (SAC4) | 1.3599 | 3.896 | 0.25468 | 5.34 | <0.0001 |
| Surgical Service | -0.2606 | 0.771 | 0.11626 | 2.24 | 0.025 |

**Table 1.** Cox regression parameters for variables with a significant relationship to the time to for a complaint to reach a resolution in Murrumbidgee Local Health District January 2008 to December 2013.

There were significant differences in the time it took to resolve an incident depending on its severity(P<0.0001). If an incident was a near miss or the patient suffered no harm the time to resolution was less than if a severe incident was involved. For example there was a significant difference between the average time to resolution for severe events (P<0.0001). The average time to resolution for severe events was 74 days (95%CI 35 to 148 days) compared to only 27 days (95%CI 23 to 29 days) for SAC3 complaints and 19 days (95%CI 17 to 20 days) for near miss or no harm incidents (SAC4) (Figure 6). Expressed in the odds ratio scale the odds of complaint resolution, where the underlying incident was a near miss or incident with no harm, were 3.97 times that of a severe event.

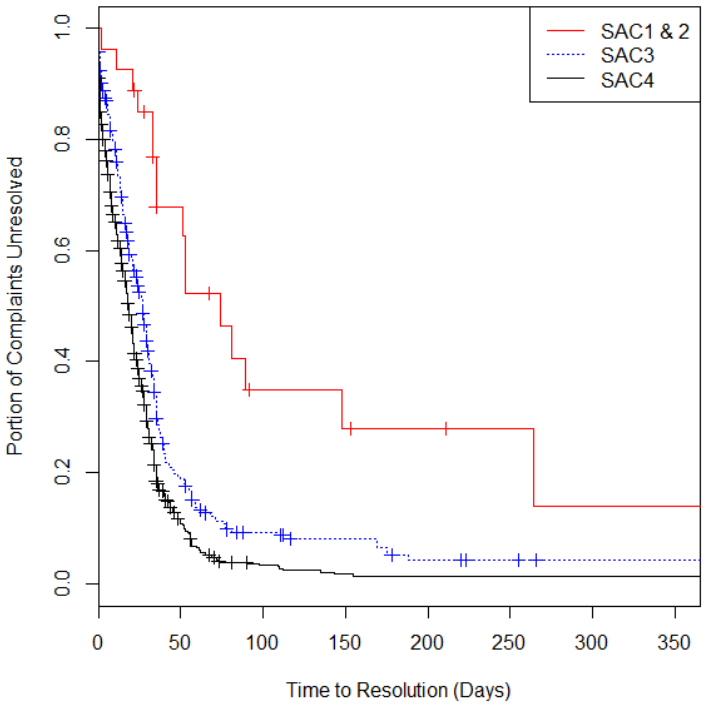


**Figure 6.** Survival curves of complaints associated with incidents of varying severity (SAC1&2, SAC3 and SAC4) complaints in Murrumbidgee Local Health District January 2008 to December 2013.

Complaints associated with surgical services also took significantly longer (P=0.025) to resolve. The average time to resolution for a surgical incident was 29 days (95%CI 24 to 34 days) compared to 20 days (95%CI 19 to 21 days) for complaints about other services (Figure 7).

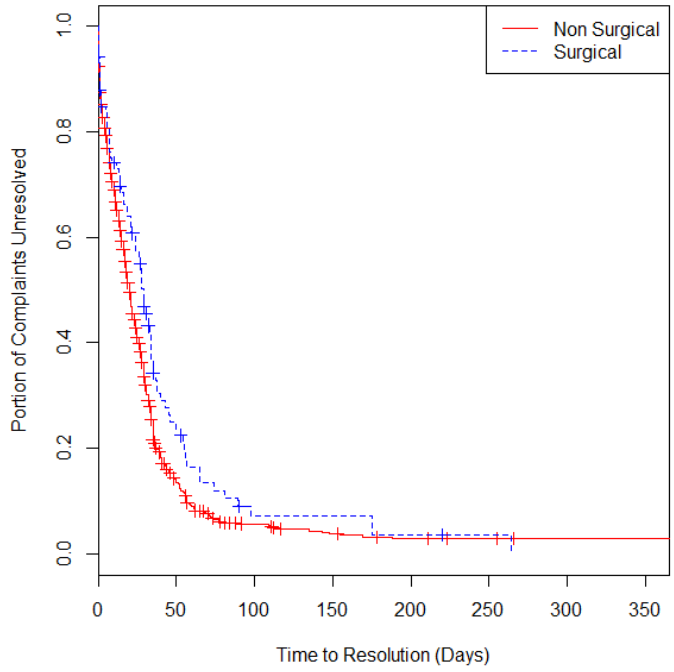


**Figure** 7. Survival curves of surgical and non-surgical complaints in Murrumbidgee Local Health District January 2008 to December 2013.

.

The effect of the time to acknowledgement is clearly visible in figure 8. Selecting incidents acknowledged at one, five and ten days after they were received, the survival curves show how a delay increases the proportion of complaints unresolved at any point in time, illustrating the 2.8% (95%CI 1.2 to 4.4%) decrease in the probability of resolution for every day's delay in acknowledging the complaint.

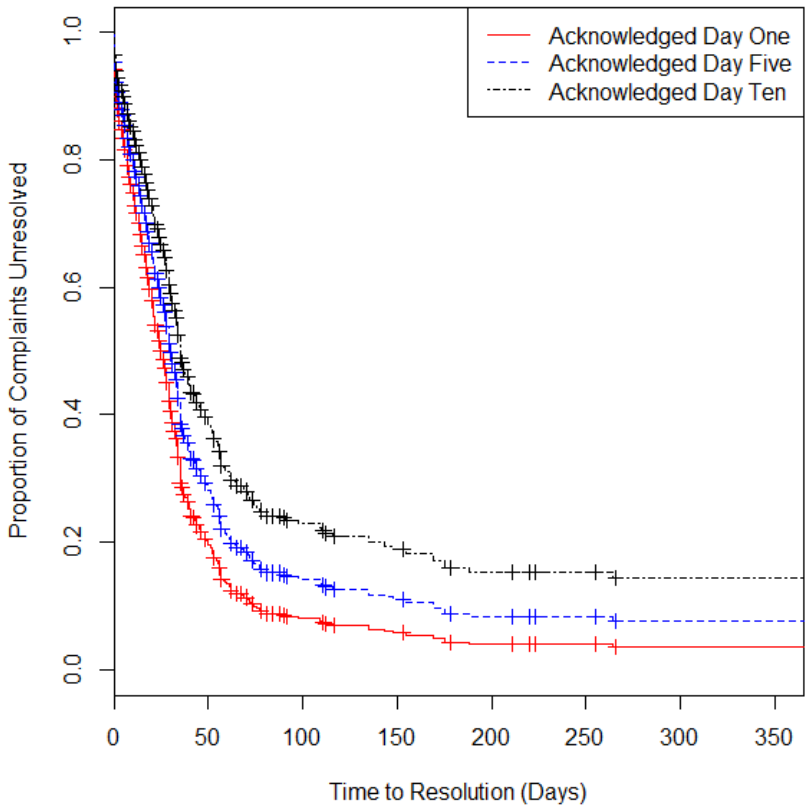


**Figure 8.** Effect of time to acknowledgement and the time to resolution of complaints as predicted by cox regression model of complaints in Murrumbidgee Local Health District January 2008 to December 2013.

## DISCUSSION

A number of factors were found to be associated with the time it takes to resolve a complaint. More severe incidents, complaints about surgical services and delays in acknowledging the complaint all had a statistically significant relationship with the time it took to resolve complaints. Of these three factors, the severity of the underlying incident and complaints relating to surgical services are not modifiable by the complaints management team. The remaining modifiable risk factor is the time between receiving the complaint and making an acknowledgement to the complainant.

The more rapidly the complaint is acknowledged the shorter the period to resolution. On average, each additional day's delay in acknowledging a complaint reduced the probability of resolution by a factor of 2.8% (95%CI 1.2% to 4.3%). Commenting on the magnitude of the effect is difficult as the author could not find any other reports in the literature where it has been quantified.

Given the findings of this study that the earlier a complaint is acknowledged the more rapidly complaints tend to resolve there is an imperative for healthcare providers to acknowledge complaints as promptly as possible. This observation also supports the use of the time to complaint acknowledgement as a useful metric for the complaints management team. Within New South Wales Ministry of Health complaints are required to be acknowledged within five days(43). The survival curves do not demonstrate a marked inflexion point around the cut-point of five days. Rather than this somewhat arbitrary cut point the median or mean time to acknowledgment would provide more information to management. For example two services can both achieve the 100% acknowledgement by 5 days but could well have a mean time to acknowledgement that varies by the order of days. As delay in acknowledging the complaint reduces the probability of a successful resolution by 2.8% per day it is possible that some facilities could meet the acknowledgement benchmark yet chances of resolution could be decreased by as much as 14%. However, given the complexities associated with time to event analyses the use of such a cut point provides a simple, albeit somewhat sub-optimal solution to the problem.

The more severe the event the longer the average delay to resolution. Similarly, the odds of moderately severe (SAC3) event being resolved were 2.74 times that of a severe event. This finding is consistent with existing literature(16). Bismark 2006(16) described the propensity of injured patients to complain increased steeply with the severity of the injury: odds of complaint were 11 times greater after serious permanent injuries than after temporary injuries, and 18 times greater after deaths. The harms endured are not modifiable by the complaints management team. It appears likely that severe adverse events will be accompanied by complaints that will be difficult and protracted to resolve. With this in mind it may be necessary, when designing metrics for complaints management teams, to adjust the criteria to reflect the severity of the underlying adverse events.

Complaints received from surgical services take longer to resolve. The odds of complaints about surgical services being resolved is 0.75 that of complaints from other services after adjusting for the severity of the underlying incident and the time it took for the complaint to be acknowledged. It may be that there are operational or cultural factors that make it more difficult to resolve complaints in these services. Further research could potentially expound the obstacles to resolution of surgical services complaints.

With respect to the allocation of complaint management resources, the most complained about service was the emergency department, comprising 22.8% of complaints. This is consistent with existing literature(13,27). Hence, the management of complaints from the emergency department are likely to consume a significant portion of complaint management resources. However, despite their frequency, complaints relating to emergency departments did not appear to be any less likely to resolve than those from other sources, unlike surgical services complaints.

It was interesting that the variables age, gender of patient, the relationship of the complainant to the subject or the method by which the complaint was received did not have a statistically significant effect on the time to resolution. As the data size was relatively large (n=1266), the statistical power should have been reasonable. This suggests the relationships between the variables screened and found to be non-significant are at best weak or there are other variables not included in the regression that may help describe the relationships.

Anecdotally, the MLHD complaints staff observe wide variations in the expectations and behaviours of clients, hence moving beyond a case by case approach tailored to individuals may prove difficult.

The mean age of the subject of the complaint was 53.2 years and most (40.3%) of complaints were received directly from the patient themselves, with female patients generating more complaints than male patients. This has been reported previously but the reasons were not known(13), although the bias of females in hospital demand was considered. It was, however, surprising that advocates, carers, partners, guardians or medical practitioners only generated 9.6% of complaints. This suggests that increased efforts to educate, encourage and facilitate mechanisms for these important groups to lodge complaints are warranted. In addition, further research as to the factors that may prevent them from raising concerns on behalf of patients is required.

**Strengths and Limitations**

The study has quantified the relationship between the time to acknowledging a complaint and the time to complaint resolution within healthcare.

Strengths of the study include the ability of the cox regression to quantify the relationship between the time to resolution of complaints whilst being able to handle those events where there is no outcome. The large number of observations over an extended period (six years) across a diverse range of healthcare settings are likely to ensure applicability of these finding to other healthcare settings. The complaints in Murrumbidgee Local Health District were similar to those observed in other jurisdictions. Much of the descriptive data, such as the predominance of complaints about the emergency department, more complaints received from females (74.4% 95%CI 71.9 to 76.8%), outcomes sought and the increased time taken to resolve complaints that result from severe incidents or surgical services are all consistent with the existing literature. This bodes well for the applicability of the novel findings described here to other jurisdictions.

The study had a number of limitations. Firstly, the data analysed only represented those complaints received and entered onto the incident management database hence may well underrepresent the true nature of complaints received. Secondly, the incomplete nature of the databases may have introduced selection bias. Many of the incidents that were discarded from the dataset due to the absence of a resolution date have actually been resolved but the staff managing the incident have not returned to the database to finalise the incident and complete this field. These incidents, typically of low severity, tend to managed by staff at the local sites. Unfortunately due to the retrospective nature of the study and large number of incidents involved, resources are not available to follow up each incident with incomplete data fields to attempt to elucidate a completion date. It is likely that the specialist complaints team are more thorough with field completion. This could potentially bias the data towards the more severe and difficult complaints which tend to be handled by the central health district complaints unit.

Ultimately the difficulties associated with modelling the vagaries and cognitive biases that occur in human judgement may limit the power of statistical regression models and the ability of research to accurately forecast complaints that may suffer protracted resolution.

## CONCLUSION

This paper, as far as the author can ascertain, provides the first quantification of the relationship between the time to acknowledging a complaint and the time to complaint resolution within healthcare. This is an important finding with respect to complaint management as it quantifies the ethical imperative for prompt acknowledgement of complaints. It should also be noted that this factor is one easily modifiable by an organisation to improve complaint management processes and potentially strengthen consumer trust and satisfaction. This finding also supports the use of the time to acknowledgement as a performance metric. However, the selection of cut-points such as the five day thresholds, reduces the information content of the measure.

Due to the increased probability of protracted resolution, severe events and those from surgical services will need specific management.

### Recommendations

Health Services should:

- Increase efforts to facilitate and publicise mechanisms for consumers and advocates to raise concerns regarding care provision.
- Acknowledge all complaints as soon as they are received
- Undertake open disclosure as part of normal feedback processes.
- Assign a relevant staff member to engage with the complainant and maintain contact with them throughout the investigation process.
- Ensure complaints relating to serious adverse events and surgical services are given high priority and resourced appropriately.

**Suggestions for further research**

Further research is warranted into methods to help achieve resolution in surgical services related complaints and serious adverse events and to help encourage complaints from the under-represented groups such as carers, doctors and de-facto partners.

"When patients fail to find anyone prepared to take responsibility for errors, to apologize, explain and to prevent recurrence, what may have begun as inadvertent injury quickly festers into an enduring wound"

Kent 2008 (22)

## REFERENCES


(1-41)

1. MacCallum A. Complaints Management: get it right. BJN. 2011;20(21):1401.

2. Reader TW, Gillespie A, Roberts J. Patient complaints in healthcare systems: a systematic review and coding taxonomy. BMJ Quality & Safety. 2014;23(8):678-89.

3. Kline T, Willness C, Ghali W. Predicting patient complaints in hospital settings. Quality and Safety in Health Care. 2008;17(5):346-50.

4. Allsop J, Mulcahy L. Dealing with clinical complaints. Quality in Health Care. 1995;4(2):135.

5. Wessel M, Lynøe N, Juth N, Helgesson G. The tip of an iceberg? A cross-sectional study of the general public's experiences of reporting healthcare complaints in Stockholm, Sweden. BMJ open. 2012;2(1):e000489.

6. Simanowitz A. Standards, attitudes and accountability in the medical profession. The Lancet. 1985;326(8454):546-7.

7. Vincent C, Phillips A, Young M. Why do people sue doctors? A study of patients and relatives taking legal action. The Lancet. 1994;343(8913):1609-13.

8. Ashiqur Rahman Khan M, Karapetrovic S. an ISO 10002: 2004-based feedback-handling system for the emergency and inpatients care. European Accounting and Management Review. 2014;1(1).

9. Coyle J, Williams B. Seeing the wood for the trees: defining the forgotten concept of patient dissatisfaction in the light of patient satisfaction research. Leadership in Health Services. 1999;12(4):1-9.

10. Mulcahy L, Tritter JQ. Pathways, pyramids and icebergs? Mapping the links between dissatisfaction and complaints. sociology of health & illness. 1998;20(6):825-47.

11. Siyambalapitiya S, Caunt J, Harrison N, White L, Weremczuk D, Fernando DJ. A 22 month study of patient complaints at a National Health Service hospital. International Journal of Nursing Practice. 2007;13(2):107-10.

12. Jangland E, Gunningberg L, Carlsson M. Patients' and relatives' complaints about encounters and communication in health care: evidence for quality improvement. patient education and counseling. 2009;75(2):199-204.

13. Taylor DM, Wolfe R, Cameron PA. Complaints from emergency department patients largely result from treatment and communication problems. Emergency Medicine. 2002;14(1):43-9.

14. Kinnersley P, Edwards A. Complaints against doctors. BMJ. 2008;336(7649):841-2.

15. Anderson K, Allan D, Finucane P. A 30-month study of patient complaints at a major Australian hospital. Journal of Quality in Clinical Practice. 2001;21(4):109-11.

16. Bismark M, Brennan T, Paterson R, Davis P, Studdert D. Relationship between complaints and quality of care in New Zealand: a descriptive analysis of complainants and non-complainants following adverse events. Quality and Safety in Health Care. 2006;15(1):17-22.

17. Mazor KM, Simon SR, Yood RA, Martinson BC, Gunter MJ, Reed GW, et al. Health plan members' views about disclosure of medical errors. Annals of Internal Medicine. 2004;140(6):409-18.

18. Montini T, Noble AA, Stelfox HT. Content analysis of patient complaints. International Journal for Quality in Health Care. 2008;20(6):412-20.

19. Javetz R, Stern Z. Patients' complaints as a management tool for continuous quality improvement. Journal of Management in Medicine. 1996;10(3):39-48.

20. Homburg C, Fürst A. See no evil, hear no evil, speak no evil: a study of defensive organizational behavior towards customer complaints. Journal of the Academy of Marketing Science. 2007;35(4):523-36.

21. Wofford MM, Wofford JL, Bothra J, Kendrick SB, Smith A, Lichstein PR. Patient complaints about physician behaviors: a qualitative study. Academic Medicine. 2004;79(2):134-8.

22. Kent A. Dismissing the disgruntled: Swedish patient complaints management. International Journal of Health Care Quality Assurance. 2008;21(5):487-94.

23. Terentis J, Sander F, Madden M, Stone M, Cox D. Customer service, complaints management and regulatory compliance. Journal of Financial Regulation and Compliance. 2002;10(1):37-54.

24. McClinton DH. handling customer complaints. home care magazine. 2007:4.

25. Welch SJM. quality matters: service recovery boosts customer loyalty and patient satisfaction. Emergency medicine news. 2012;34(4):6.

26. Johnston R, Mehra S. Best-practice complaint management. the academy of management executive. 2002;16(4):145-54.

27. Bark P, Vincent C, Jones A, Savory J. Clinical complaints: a means of improving quality of care. Quality in Health Care. 1994;3(3):123-32.

28. Ramsey RD. how to handle customer complaints. The american salesman. 2003;48:15-20.

29. Evans P. How complaints handling can positively affect your customer relationship management. complaints pro. 2003.

30. Estelami H. Competitive and procedural determinants of delight and disappointment in consumer complaint outcomes. Journal of Service Research. 2000;2(3):285-300.

31. Thom DH, Hall MA, Pawlson LG. Measuring patients' trust in physicians when assessing quality of care. health affairs. 2004;23(4):124-32.

32. Boothman RC, Blackwell AC, Campbell Jr DA, Commiskey E, Anderson S. A better approach to medical malpractice claims? The University of Michigan experience. Journal of Health Life Sci Law. 2009;2(2):125-59.

33. Bendall-Lyon D, Powers TL. The role of complaint management in the service recovery process. Joint Commission Journal on Quality and Patient Safety. 2001;27(5):278-86.

34. Team R Core. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria, 2012. ISBN 3-900051-07-0; 2014.

35. Altman DG, Bland JM. Time to event (survival) data. BMJ. 1998;317(7156):468-9.

36. Satagopan J, Ben-Porat L, Berwick M, Robson M, Kutler D, Auerbach A. A note on competing risks in survival data analysis. British Journal of Cancer. 2004;91(7):1229-35.

37. Blodgett JG, Wakefield KL, Barnes JH. The effects of customer service on consumer complaining behavior. Journal of Services Marketing. 1995;9(4):31-42.

38. Friele RD, Sluijs EM. Patient expectations of fair complaint handling in hospitals: empirical data. Biomed central health services research. 2006;6(1):106.

39. Hughes S, Karapetrovic S. ISO 10002 complaints handling system: a study. International Journal of Quality & Reliability Management. 2006;23(9):1158-75.

40. Lariviere B, Van den Poel D. Investigating the post-complaint period by means of survival analysis. Expert Systems with Applications. 2005;29(3):667-77.

41. Wu AW, Boyle DJ, Wallace G, Mazor KM. Disclosure of adverse events in the United States and Canada: an update, and a proposed framework for improvement. Journal of Public Health Research. 2013;2(3).

42. Schoenfeld, David. "Partial residuals for the proportional hazards regression model." *Biometrika* 69.1 (1982): 239-241.

43. NSW Health (2006), Complaints Management, Policy Directive Document No. PD2006_073, NSW Health, Sydney.