Assessing the Quality of Health News Stories in the Australian Media Using the Media Doctor Website

Amanda Jane Wilson, RN BA (HONS) MCA

Submitted for the Degree of Doctor of Philosophy

Discipline of Clinical Pharmacology and Toxicology School of Medicine and Public Health Faculty of Health Sciences The University of Newcastle

Submitted June 2010

STATEMENT OF ORIGINALITY

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library**, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

**Unless an Embargo has been approved for a determined period.

ACKNOWLEDGEMENT OF AUTHORSHIP

Thesis by Publication (Refer to Rule 50 of the Rules Governing Research Higher Degrees).

I hereby certify that this thesis is in the form of a series of published papers of which I am a joint author. I have included as part of the thesis a written statement from each co-author, endorsed by the Faculty Assistant Dean (Research Training), attesting to my contribution to the joint publications.

Amanda Wilson	(Date)

ACKNOWLEDGEMENTS

Writing a thesis, like any research, is never a solitary pursuit. It is the result of input from many, many people. This thesis is a literal example of the essential ingredient of good research - collaboration - in that it presents published research papers the co-authors of which have contributed so much time, energy and knowledge in making this research project a reality.

Without the people I am about to thank, the work contained in this thesis would never have eventuated. These people have helped me conceive, conduct and analyse my research, they have inspired and humbled me with their ability, integrity, and especially generosity.

To everyone mentioned here and a host of other colleagues, family and friends, I would like to thank you all sincerely for everything you have done over the past five years. I have been constantly amazed by the kindness so freely given by so many people. Thank you all.

Firstly, my supervisors (in alphabetical order) Dr Billie Bonevski, Prof David Henry, Prof Alison Jones and Prof David Rowe.

Billie has worked on Media Doctor and contributed enormous amounts of her time and knowledge to making this thesis a reality. She is a crack researcher and editor who demands a seriously high level of application from her students (who really do appreciate it). She is also a valued friend – thanks Billie.

David Henry, who developed the concept of Media Doctor, has supported and contributed so much to this thesis, even though for most of it we were on opposite sides of the world. David has 'Skyped' at all hours of the day and night with advice, direction and occasional literary diversions. He has been a remarkable supervisor, co-author and friend.

Alison Jones is another amazing woman who's academic and life achievements leave me perpetually amazed. Despite her hard-earned successes, she remains down-to-earth, open and generous. Alison has worked constantly with me to achieve this thesis, always encouraging me to aim for a thesis I would be proud of. Thank you Alison.

David Rowe initially encouraged me to apply for a scholarship for this PhD and provided the media communications aspects of the thesis which helped provide a, hopefully, more humanity based approach to the medical model that was used. David's wealth of experience in media studies has been invaluable and I thank him for all his contributions and beautiful editing.

The members of the Department of Pharmacology and Toxicology have been a delight to work with and their friendships and reviewing efforts have made it possible for Media Doctor to proceed and succeed. Thanks to Tony Smith, Evan Doran, Barry Stokes and Rob Bell for always having open doors, time, and exceptional, not to mention, entertaining advice. Thank you to Jo Knight for help in formatting and to Mary McNamara for doing everything possible to make my life easier.

Especial thanks to Jane Robertson for the many aspects of support she has provided including her methodological acuity, razor-sharp editing skills and her role as co-author.

Without the time and knowledge of the many reviewers on the Media Dr team, there would have been no data; I owe you all a debt of gratitude. Thank you to David Henry, Paul Craven,

David Newby, Alison Jones, Julia Lowe, Ben Ewald, David Smith, Penny Warner-Smith, Marc Bevan, Jane Robertson, Trish McGettigan, Rob Bell, Billie Bonevski, Kichu Nair, David Williams, Rosemary Aldrich, Paul Craven, Dom Willson, Ian Kirkwood and a big thank you to the tireless work of Justine Smith who not only kept the Media Doctor website ticking over, but helped execute the Journalist Feedback Study. A special mention also to the many journalists, editors and producers who provided feedback, advice and insight into their work.

I am incredibly privileged to have worked so closely with all these immensely talented and knowledgeable people who are not only outstanding members of the medical, media and research community but also kind and generous. I have been so lucky.

I have also had the love of a wonderful family and great friends who have selflessly supported and encouraged me through this time. My husband Ian, thank you for all your love, endless cups of tea and the 'days off' to work on the thesis while you were solo parenting. Thank you for your journalistic knowledge which provided insights, aspects and contacts that I wouldn't have found on my own. I owe you many surfing days. A big thank you to Mum and Dad, my beautiful sisters and brothers-in-law (especially Melinda and Wayne) for believing in my ability to do this and looking after the girls when I needed even more time for study.

To my darling daughters, Matilda and Jemima, who hopefully will not remember too much of the time when I was glued to my computer and working every Sunday, thank you for your kisses, hugs, bottom-dancing and moshi monsters which are in fact the most important things of life.

Table of Contents

Syr	opsis	11
СН	APTER 1: HEALTH NEWS REPORTING	1
	INTRODUCTION	1
	HEALTH NEWS REPORTING	2
	1. Raising Risk Awareness	2
	2. Human Interest and Good News Stories	5
	3. Social and HealthCare Policy and Reform	6
	4. Case Studies	6
	5. Medical Research and Breakthrough Stories	7
	THE MEDIA	9
	Scientific Versus 'Lay' Media	11
	Health News Writers	11
	Media Outlets	13
	QUALITY of NEWS REPORTING	15
	Code of Ethics and Guidelines for Best Practice	15
	The Audience	19
	Health Literacy	20
	Theories of Media Communication	22
	Media Influence	22
	CONCLUSIONS	25
	REFERENCES	28

CH.	APTER 2: LITERATURE REVIEW	. 33
	INTRODUCTION	33
	QUALITY OF HEALTH NEWS REPORTING	36
	METHODS	38
	Literature Search	38
	Inclusion Criteria	39
	Data Extraction.	39
	Methodological Criteria	40
	RESULTS	40
	Search Results	40
	Description of Excluded Studies	41
	Description of Included Studies	42
	Quality Assessment of Included studies	42
	TYPES OF INTERVENTIONS	43
	Guidelines	43
	Individual Targeting of Reporter and Media Outlet	46
	Educational Intervention	51
	DISCUSSION	53
	REFERENCES	60
CH	APTER 3: MEDIA DOCTOR AUSTRALIA	65
	BACKGROUND	65
	PILOT STUDY	65
	Aim	66

	Methodology	66
	Literature Review	67
	Delphi Consensus Process	70
	Testing Validity and Reliability of the Media Doctor Rating Instrument	75
	Pre-testing the Rating Instrument	76
	MEDIA DOCTOR WEB SITE	81
	News Stories	82
	Gathering News Stories.	83
	Authorship	85
	Reviewers	86
	Scores	88
	Feedback	88
	CONCLUSION	88
	PAPER 1	90
	REFERENCES	106
СН	APTER 4: CHANGES OVER TIME	108
	BACKGROUND	108
	Improvements in Study Methodology	109
	HYPOTHESES	110
	Aim	110
	Methodology	111
	Results	111
	Discussion	113

PAPER 2	115
REFERENCES	135
CHAPTER 5: JOURNALISM AND HEALTH NEWS REPORTING	138
INTRODUCTION	138
ACTIVE FEEDBACK INTERVENTION (STUDY 1)	142
Aim	142
Methodology	143
Expected Outcomes	144
Results	145
Discussion	145
QUALITY OF JOURNALISM (STUDY II)	146
Aim	146
Methodology	147
Statistical analysis	148
Results	149
Discussion	149
PAPER 3	152
REFERENCES	163
CHAPTER 6: SUBANALYSES OF STORIES:	165
1) Complementary and Alternative Medicine, and	165
2) Cancer	165
INTRODUCTION	165
CAM INTRODUCTION	166

AIII	n17	U
Me	thodology17	0
Res	ults17	1
Cor	nclusions	1
CA	NCER INTRODUCTION17	13
Нуј	pothesis	<i>'</i> 4
Ain	n17	15
Me	thods17	15
Res	ults17	¹ 6
DI	SCUSSION17	19
PA	PER 4	32
PA	PER 520)5
RE	FERENCES22	21
СНАРТ	ER 7: CONCLUSION23	0
IN'	TRODUCTION23	30
Qua	ality of Reporting23	3
Tel	evision23	34
Ber	nefits and Harms23	35
Jou	rnalists23	36
Stre	engths of the Research23	38
Lin	nitations of the Research23	38
Imp	olications24	13

Appendix 1: Original Papers and Co-Author Statements247
Appendix 2
Appendix 2.1: Questionnaire for Assessing the Sensibility of an Instrument to Rate
the Quality of Health News Stories
Appendix 2.1: Statistical Calculations (kappa) for pilot testing of the Media Doctor
rating instrument
Appendix 3: Media Doctor Website
Appendix 3.1: About Media Doctor
Appendix 3.2: Media Doctor Article Search312
Appendix 3.3: Public Forum313
Appendix 3.4: Comparison of Media Sources
Appendix 3.5: Rating Information
Appendix 4: Journalists
Appendix 4.1: Journalist Feedback Study
Appendix 4:2: Journalist Responses to Media Doctor
Appendix 5
Appendix 5.1: Number of Time Different Medical Journals Were Cited in Cancer
News Stories
Appendix 5.2: Descriptions of Disease Burden of Different Cancers Cited in
Cancer News Stories

Synopsis

This thesis by publication is composed of five peer-reviewed papers reporting on findings from data collected and analysed over a five year period. Each paper relates to the theme of the Media Doctor website as a tool for assessing and improving the quality of health reporting in the general Australian news media.

The first paper (Chapter 3) "Monitoring the quality of medical news reporting: Early experience with 'media doctor'" presents early data, providing a baseline overview of health reporting using the four categories of pharmaceutical, surgical, diagnostic testing and 'other' stories. In Chapter 4, the second paper, "Media Reporting of Health Intervention: Signs of Improvement but Major Problems Persist" examines the changes in the quality of news stories in these categories. This paper also provides an analysis of how the individual items on the rating instrument differed between subject categories, outlets and over time. I Chapter 5, the third paper, "Does it matter who writes medical news stories" looks at differences in story quality by examining different author categories and whether news stories written by certain types of journalists have significant differences. The fourth and fifth papers examine the quality of news reporting of two specific types of story: 1) Complementary and Alternative Medicines (CAM) and 2) Stories about cancer (Chapter 6). "An analysis of news media coverage of complementary and alternative medicine" identified all news stories on the website that dealt with CAM interventions and analysed these in order to assess the overall quality compared with the scores of stories about mainstream health interventions. The fifth paper of the thesis "Deconstructing Cancer: What makes a good quality news story" looks at how the reporting of a specific disease, cancer, performs across both subject categories and rating items.

This thesis also examines the state of knowledge in the existing literature via extensive literature review of interventions to improve the reporting of health news stories, and the development of a validated rating instrument.

The thesis concludes by summarising the papers' findings to give an overall assessment of the quality of health news stories in Australia. The data reveals the strongest and weakest facets of health reporting and which media outlets and writers produced the 'best' and 'worst' quality health news stories in the context of the quality scores awarded using the rating instrument. It examines the impact of these findings on public health and explores interventions to improve reporting in this area.