

University of Wollongong - Research Online

Thesis Collection

Title: A critical review of the use in New South Wales mental health services of the principles of psychiatric epidemiology to guide the setting of clinical priorities, resource allocation and outcomes evaluation

Author: Paul Fanning

Year: 2001

Repository DOI:

Copyright Warning

You may print or download ONE copy of this document for the purpose of your own research or study. The University does not authorise you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site.

You are reminded of the following: This work is copyright. Apart from any use permitted under the Copyright Act 1968, no part of this work may be reproduced by any process, nor may any other exclusive right be exercised, without the permission of the author. Copyright owners are entitled to take legal action against persons who infringe their copyright. A reproduction of material that is protected by copyright may be a copyright infringement. A court may impose penalties and award damages in relation to offences and infringements relating to copyright material.

Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.

Unless otherwise indicated, the views expressed in this thesis are those of the author and do not necessarily represent the views of the University of Wollongong.

Research Online is the open access repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

2001

A critical review of the use in New South Wales mental health services of the principles of psychiatric epidemiology to guide the setting of clinical priorities, resource allocation and outcomes evaluation

Paul Fanning

Follow this and additional works at: <https://ro.uow.edu.au/theses>

University of Wollongong

Copyright Warning

You may print or download ONE copy of this document for the purpose of your own research or study. The University does not authorise you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site.

You are reminded of the following: This work is copyright. Apart from any use permitted under the Copyright Act 1968, no part of this work may be reproduced by any process, nor may any other exclusive right be exercised, without the permission of the author. Copyright owners are entitled to take legal action against persons who infringe their copyright. A reproduction of material that is protected by copyright may be a copyright infringement. A court may impose penalties and award damages in relation to offences and infringements relating to copyright material.

Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.

Unless otherwise indicated, the views expressed in this thesis are those of the author and do not necessarily represent the views of the University of Wollongong.

Recommended Citation

Fanning, Paul, A critical review of the use in New South Wales mental health services of the principles of psychiatric epidemiology to guide the setting of clinical priorities, resource allocation and outcomes evaluation, Doctor of Public Health thesis, Graduate School of Public Health, University of Wollongong, 2001. <https://ro.uow.edu.au/theses/2157>

NOTE

This online version of the thesis may have different page formatting and pagination from the paper copy held in the University of Wollongong Library.

UNIVERSITY OF WOLLONGONG

COPYRIGHT WARNING

You may print or download ONE copy of this document for the purpose of your own research or study. The University does not authorise you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site. You are reminded of the following:

Copyright owners are entitled to take legal action against persons who infringe their copyright. A reproduction of material that is protected by copyright may be a copyright infringement. A court may impose penalties and award damages in relation to offences and infringements relating to copyright material. Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.

**A critical review of the use in New South Wales
Mental Health Services**

**of the principles of psychiatric epidemiology
to guide the setting of clinical priorities,
resource allocation and outcomes evaluation**

A thesis submitted in (partial) fulfilment
of the requirements for the award of the degree of:

DOCTOR PUBLIC HEALTH

from

UNIVERSITY OF WOLLONGONG

by

Associate Professor Paul Fanning MHA, B.Ed., Dip Teach, RPN, RGN

Graduate School of Public Health

CERTIFICATION

I, Paul Fanning, declare that this thesis, submitted in partial fulfilment of the requirements for the award of Doctor of Public Health, in the Graduate School of Public Health, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Associate Professor Paul Fanning

May 2001

TABLE OF CONTENTS

CHAPTER 1:	Page
An overview of epidemiology as utilised within a public health model to guide the development of health services internationally.	
INTRODUCTION.....	1
· A Brief Description and History of Epidemiology	2
AN EVOLVING DISCIPLINE.....	4
THE VALUE OF EPIDEMIOLOGY.....	8
· A Widening Focus	10
· To study the history of the health of populations and the rise and fall of diseases and changes in their character.....	12
· To diagnose the health of the community and to measure the present dimensions of ill health, to define problems for community action, their relative importance and priority, to identify vulnerable groups needing special care	12
· To study the working of health services with a view to their improvement ..	13
· To estimate from the group experience the individual risks and chances, on average, of disease, accident and defect.....	14
· To complete the clinical picture of chronic disease and describe its natural history.....	14
· To identify syndromes by describing the distribution, association and dissociation of clinical phenomena in populations.....	15
· To search for causes of health and disease	16
THE LINK WITH HEALTH SERVICES PLANNING AND RESOURCE ALLOCATION.....	17
THE WAY AHEAD.....	24
SUMMARY OF FINDINGS.....	28
CONCLUSION.....	30

CHAPTER 2:	Page
An overview of the current role of psychiatric epidemiology in Australia and internationally.	
INTRODUCTION.....	31
EPIDEMIOLOGY AND PSYCHIATRY.....	34
THE POTENTIAL CONTRIBUTION OF JEREMY MORRIS TO PSYCHIATRY	41
· The Study of the Health of Communities and the Rise and Fall of Diseases in the Population.....	43
· Epidemiology Used to Describe Chronic Mental Illness and Improve Service Functioning.....	44
EVIDENCE-BASED PURCHASING- LINKING RESOURCE ALLOCATION TO OUTPUTS AND OUTCOMES IN MENTAL HEALTH	50
THE BURDEN OF MENTAL ILLNESS	53
· The Paradox of Care Provision	53
· The Paradox of Development Programs	54
· The Paradox of Administrative Structure.....	55
· The Paradox of the Relationship with Medicine.....	56
LIMITATIONS TO AN EPIDEMIOLOGICALLY-DERIVED EVIDENCE-BASED APPROACH	57
· Outcomes are Generally Based on Group Data and Ignores Individual Differences.....	57
· Outcomes are Dependent on the Local Context. Hence, Poor Outcomes May Accrue from Good Services and Vice Versa.....	58
· Absence of Evidence Does Not Necessarily Mean that an Intervention is Unimportant or Ineffective.....	58
· Service Users and Carers May Have Different Approaches to Researchers.....	59
· Demonstrated Effectiveness Is No Guarantee of Deployment in Practice.....	60
THE EVOLUTION OF MENTAL HEALTH CARE AND IMPLICATIONS FOR EPIDEMIOLOGY	62

	Page
THE CURRENT STATUS OF PSYCHIATRIC EPIDEMIOLOGY	68
EPIDEMIOLOGICAL STUDIES OF INTERNATIONAL SIGNIFICANCES FOR MENTAL HEALTH	70
· Chicago study	70
· Monroe County Study	71
· Midtown Manhattan Study	71
· New Haven Study	72
· Stirling County Study	72
· NIMH Epidemiological Catchment Area Survey	73
· Contemporary Epidemiological Studies	74
APPLICATION OF RESEARCH FINDINGS TO CLINICAL PRACTICE	77
SUMMARY OF FINDINGS	79
CONCLUSION	81

Current approaches to clinical priority setting, resource allocation and outcome evaluation in New South Wales Mental Health Services.

INTRODUCTION	83
CURRENT FUNDING MODELS IN NSW AND AUSTRALIA	87
· Resource Allocation Formulas	89
· Needs Index Mental Health	93
· Index of Disadvantage	94
· Urban Index of Advantage	94
· Rural Index of Advantage	94
· Economic Resources Index	95
· Education and Occupation Index	95
· Mental Health Classification and Service Costs Project	97
· National Mental Health Strategy Priorities for Resource Allocation	102
· Resource Allocation at the NSW Area Health Service Level	104
LINKING RESOURCE ALLOCATION AND EPIDEMIOLOGICAL ASSESSMENTS OF NEED IN TREATED POPULATIONS	107
· Defining the Need for Treatment	107
· Mental Health Information Development in Australia	110
· Current Reporting Systems in New South Wales	112
· New South Wales Mental Health Information Development Program	114
· An Increasing Emphasis on the Mentally Ill	117
· The Growing Burden of Mental Illness - The Epidemiological Significance	120
LINKING RESOURCE ALLOCATION TO OUTCOMES EVALUATION IN TREATED POPULATION	124
· The Extent of Psychiatric Disability	124
· Rehabilitation - A Place and a Process	126
· Excess in Standardised Mortality Rates	132
· Reduction in Disablement and Morbidity at Primary Care Level	133

	Page
· Reduction of Disablement and Morbidity at Specialist Level	133
· Ensuring Quality of Life	134
· District, Regional and National Administrative Targets in the UK.....	134
· The ACHS Care Evaluation Program.....	136
· Outcomes Management Systems	139
· Methods of Assessing Outcomes in Community Mental Health Systems.....	140
· Multiple Domains for Evaluation	146
· Persistent Illness	147
· Differences in Point of View.....	147
· Self Reports	148
· Methodological Issues.....	148
· The Differing Views of Outcome Assessment	149
· National Mental Health Standards	152
SUMMARY OF FINDINGS	155
CONCLUSION.....	159

CHAPTER 4:

Page

A critical evaluation of the application of Morris' uses of epidemiology within an Area Mental Health Service.

INTRODUCTION.....	162
EPIDEMIOLOGICAL PROFILING	165
· Service Gaps.....	166
· Limited Access to Acute Beds	166
· Community Services as Gatekeepers	166
· Inadequate Case Management Systems.....	167
· Insufficient Emphasis on Rehabilitation and Personal Recovery.....	167
· Undeveloped Special Needs Services.....	167
MORRIS' MAJOR USES OF EPIDEMIOLOGY	170
MID WESTERN AREA HEALTH SERVICE - AN OVERVIEW.....	172
· Transport	173
· Institutions.....	173
· Population Size.....	173
· Population Size.....	174
· Socio-economic Factors.....	174
· Health Status.....	175
· Service Utilisation	176
· Leading Causes of Death.....	176
· Disabling Conditions	178
KEY REPORTING ROLE OF AREA PUBLIC HEALTH UNITS.....	179
PRIORITY TARGET POPULATIONS FOR AREA HEALTH SERVICES.....	181
AREA MENTAL HEALTH SERVICES DATA COLLECTION	185
· Current Status.....	185
· Deficiencies in Information Systems for Population Groups	189
A HISTORY OF AREA HEALTH SERVICE DEVELOPMENT IN MENTAL HEALTH	192
· Overview.....	192

	Page
EVALUATION OF MORRIS' USES OF EPIDEMIOLOGY IN MID WESTERN AREA MENTAL HEALTH SERVICE	195
THE CONSEQUENCES OF FAILING TO ADOPT A EPIDEMIOLOGICAL APPROACH TO PLANNING, PRIORITY-SETTING AND RESOURCE ALLOCATION	233
· Linking Need and Workforce Requirements.....	235
· Implications for Training of Mental Health Staff	239
· The Neglect of High Risk Populations	241
· Evaluation of the Outcomes of Treatment Programs	245
· The Status of Epidemiological Research Within the Mid Western Area Health Service	251
MENTAL HEALTH DATA COLLECTION AT THE AREA HEALTH SERVICE LEVEL - A NEW APPROACH	253
· Financial Data	253
· Clinical and Epidemiological Data	255
· Output and Administrative Data.....	257
RESOURCE ALLOCATION AT THE AREA HEALTH SERVICE LEVEL	267
PLANNING MENTAL HEALTH SERVICES AT THE AREA HEALTH LEVEL	271
BUILDING AN INFORMATION SYSTEM	274
1. HISTORY OF THE HEALTH OF THE POPULATION, THE RISE AND FALL OF DISEASES AND CHANGES IN THEIR CHARACTER	279
2. DIAGNOSIS OF THE ILL HEALTH OF COMMUNITIES, MEASUREMENT OF THE DIMENSIONS OF THIS ILLHEALTH, DEFINING PROBLEMS FOR COMMUNITY ACTION, THEIR IMPORTANCE AND PRIORITY. TO IDENTIFY VULNERABLE GROUPS NEEDING SPECIAL CARE	281
3. STUDY THE WORKING OF HEALTH SERVICES WITH A VIEW TO THEIR IMPROVEMENT	286
4. TO ESTIMATE FROM THE GROUP EXPERIENCE WHAT ARE THE INDIVIDUAL RISKS AND CHANCES, ON AVERAGE, OF DISEASE, ACCIDENT AND DEFECT.....	289

	Page
5. TO COMPLETE THE CLINICAL PICTURE OF CHRONIC DISEASE AND DESCRIBE ITS NATURAL HISTORY	291
6&7. TO IDENTIFY SYNDROMES BY DESCRIBING THE DISTRIBUTION, ASSOCIATION AND DISSOCIATION OF CLINICAL PHENOMENA IN POPULATIONS. TO SEARCH FOR CAUSES OF HEALTH AND DISEASE	294
MENTAL HEALTH CLINICAL CARE AND PREVENTION MODEL (MH-CCP).....	299
SUMMARY OF FINDINGS	305
CONCLUSION.....	308

	Page
DISCUSSION	309
RESULTS	315
RECOMMENDATIONS	320
REFERENCE LIST	i-xii
APPENDIX A (APPROVED RESEARCH PROPOSAL).....	1-38

LIST OF ABBREVIATIONS

ABS	- Australian Bureau of Statistics
ACHS	- Australian Council Healthcare Standards
AHMAC	- Australian Health Ministers Advisory Council
AIDS	- Acquired Immune Deficiency Syndrome
AIHW	- Australian Institute of Health and Welfare
AN-DRG	- Australian National Diagnosis Related Groups
AN-MDC	- Australian National Major Diagnostic Classification
CAN	- Camberwell Assessment of Need
CCO	- Community Counselling Order
CDF	- Central Drift Factor
CGAS	- Children's Global Assessment Scale
CHASP	- Community Health and Standards Program
CIDI	- Composite International Diagnostic Interview
COAG	- Council of Australian Governments
CORM	- Clinical Outcomes Resource Management
CRISP	- Computerised Record Individual Service Plan
CSRI	- Client Service Receipt Inventory
CTO	- Community Treatment Order
DOHRS	- Department of Health Reporting System
DRG	- Diagnostic Related Group

DSM-IV	- Diagnostic Statistical Manual
ECT	- Electro Convulsive Therapy
EDIS	- Emergency Department Information System
EPSILON	- European Psychiatric Services - Inputs Linked to Outcome Domains and Needs
HONOS	- Health of the Nation Outcome Scale
HONOSCA	- Health of the National Outcome Scale for Children and Adolescents
ICD-9	- International Classification of Disorders
ICIDH	- International Classification of Impairment, Disability and Handicap
IEQ	- Involvement Evaluation Questionnaire
ISC	- Inpatient Statistical Collection
LOS	- Length of Stay
LQLP	- Lancashire Quality of Life Profile
LSP	- Life Skills Profile
MBS	- Medical Benefits Schedule
MHCASC	- Mental Health Classification and Service Cost Project
MHOAT	- Mental Health Outcomes and Assessment Training Project
MHS	- Mental Health Service
NHMRC	- National Health and Medium Research Council
NHS	- National Health Service
NIMH	- National Institute of Mental Health

NMDS	- National Minimum Data Set
NMHIDP	- National Mental Health Information Development Project
PYLL	- Potential Years of Life Lost
RAF	- Resource Allocation Formula
RDF	- Resource Distribution Formula
RSI	- Relative Stay Index
RUG-ADL	- Resource Utilisation Group - Activities of Daily Living
SHIPS	- Satellite Housing Integrated Program Support
SRG	- Service Related Group
SMR	- Standardised Mortality Ratio
VSSS	- Verona Service Satisfaction Scale
WHO	- World Health Organisation

ABSTRACT

The development of mental health services in Australia and internationally is entering a new era. Due to landmark reports by the World Health Organisation (1996) and the Office of the Surgeon General of the United States, Dr David Satcher (1999) the area of mental illness has been given a much higher priority within health generally. In Australia the National Health Policy (1994) identified the area of mental illness as a national health priority but lamented the absence of epidemiological information to guide service planning and development. In New South Wales the report of the Chief Health Officer, Dr George Rubin (1996) highlighted the absence of even basic epidemiological data concerning the mental health of the community and called for a major effort to address this serious deficiency. It seemed to a large extent that mental health in sharp contrast to public health services generally had been shaped substantially by historical forces rather than scientific disciplines such as epidemiology. There had not even been a concerted effort to evaluate the rich reservoir of clinical and epidemiological information to be obtained from the hundreds of thousands of patients treated in public mental health services. While in classical epidemiological terms they may constitute the 'tip of the iceberg', they are the recipient of \$400 million worth of services annually in New South Wales alone.

The author is the longest serving Area Director of Mental Health Services in New South Wales and in 1996 was appointed as the New South Wales Health Department representative to the National Mental Health Information Modelling Project. This highlighted deficiencies, ambiguities and confusion in psychiatric nomenclature, taxonomies and service relationships. There were few 'baselines' to work from compared to the measurement systems in place in general health such as casemix and Diagnostic Related Groups.

The author was encouraged by senior public servants to examine the reasons for this situation and to propose a model or overall framework to guide future clinical priority setting, resource allocation and outcomes evaluation in mental health services. The methodology of this thesis is based therefore on a systematic review of contemporary literature and emerging expert opinion. There has been unprecedented access to national and international authorities and documentation has been drawn from the following sources:

- Commonwealth of Australia publications including planning and policy papers, independent reviews, published evaluations and critiques, Human Rights Commission reports

- New South Wales Health Department publications including policy documents, position papers, reports of expert working groups, annual reports, parliamentary reports, circulars, draft discussion papers, senior executive background and briefing papers
- a wide variety of Australian and international texts and journals on mental illness and epidemiology including the Comprehensive Textbook of Psychiatry which is generally regarded as authoritative
- university publications such as course notes for undergraduate and postgraduate epidemiology courses
- papers presented at international conferences on psychiatric epidemiology

The limitations of this research may be summarised as:

- its restriction to broad planning and service development elements within the total mental health system. The aim is to postulate a credible overall framework for the future planning, development and evaluation of mental health services, guided to a large extent by Morris' (1964) uses of epidemiology on an equivalent model

- elements such as mental health casemix, disability measurement and outcome evaluation are evolving and need to be incorporated into this wider model
- the argument for Morris' uses of epidemiology is related in this review to treated prevalence rates as an example of how to better inform priority setting, resource allocation and outcomes evaluation at the national, state and most importantly the Area Health Service level through capturing critical epidemiological and clinical data from the large populations in treatment in public mental health service
- the area of prevention and early intervention is not addressed in detail
- the introductory chapter concerning the contributions of epidemiology to public health generally is limited due to the vast nature of this area and is simply meant to contextualise later chapters

The **results** of this research have significant implications for decision makers at all levels. Clearly while epidemiology is extant it has not been used to its full potential within mental health. There is an urgent requirement to draw together in a coherent fashion the full range of disparate endeavours currently being implemented within mental health services and benchmark them against Morris' uses of epidemiology or an equivalent model. This will provide a

framework to guide current and future action, establish priorities and facilitate evaluation. In effect such a model will fill the void that will undoubtedly be left following the passage of the transitional National Mental Health Plan, associated strategy and reforms. Planners, researchers, clinicians and administrators require a model in which they can believe and practically support and, above all, is sustainable. This critical review systematically describes the factors that have contributed to the development of mental health services, the complexities, associated reform process and most importantly a viable, credible model for future development. The recommendations at the conclusion of this thesis represent the preliminary steps required to ensure this occurs, and will be utilised by the Department of Health and hopefully Area Mental Health Services.

ACKNOWLEDGEMENTS

This thesis represents the culmination of six years intensive work. It is customary to acknowledge those individuals who have strongly influenced and practically supported this initiative.

As the thesis has ebbed and flowed so have the individuals who have informed my thinking and critically challenged it. Chronologically these meritorious authorities have included:

Professor Ross Harris - formerly of the University of Wollongong and now the University of Sydney for assisting in the refinement of the proposal, undertaking a critique of the first two chapters, providing supervision for the first two years and valuable advice in the latter stages.

Professor Irwin Pakula - Visiting Principal Fellow of the University of Wollongong and former long serving Area Director of Mental Health Services for the Illawarra Area Health Service. Irwin's knowledge of the 'big picture' and willingness to read and review everything I produced was invaluable. His willingness to assume responsibility for my supervision was a big task and I will always be grateful.

Dr John Hoskin - emeritus consultant psychiatrist, former researcher and Director of Clinical Services of the Mid Western Area Mental Health Service for his historical perspective, original insights and suggestions of quality references from the international literature. John's encouragement to review the 'system' with a view to what is 'most important' was salutary.

Professor Beverley Raphael - Director New South Wales Centre for Mental Health, Emeritus Professor of Psychiatry University of Newcastle and University of Sydney and researcher extraordinaire. Beverley's highly practical and theoretical support of this thesis has been invaluable. Undoubtedly her 'vision' for Australian mental health has and will continue to influence my thinking.

Dr Noel Wilton - former Director of the New South Wales Centre for Mental Health and twice President of the Royal Australian and New Zealand College of Psychiatrists. Thank you for the opportunity to serve on the national working parties including the National Mental Health Information Modelling Taskforce where the critical elements of this thesis were distilled.

Professor Geoff Shepherd - Director of the Sainsbury Centre for Mental Health, London and CEO of the Mental Health Standards Authority in the United Kingdom. For his friendship and intellectual feedback during my field trip to London in 1997 and subsequently.

Mr Gavin Stewart - senior epidemiologist New South Wales Centre for Mental Health for being my intellectual foil or, more aptly, my epidemiological muse over the years. Gavin is peerless as a critic and fearless in his determination to improve mental health services for the community.

Mr Robert MacGregor-Deputy Director General, New South Wales Health Department for his long held confidence in me and for approving my brief period of study leave to refine this work. I hope that it will provide a benchmark for future developments within New South Wales health services.

Miss Jeannie Wright - for her forbearance and professionalism. Undoubtedly the best word processor operator I have ever worked with.

Undertaking this Doctorate of Public Health is the end point of 27 years of study and experience in the Australian public health system. Throughout this period I have been supported magnificently by my family, some of whom are no longer here to savour the finale. Thank you to all.