



Final Report

Counting the Cost of Homelessness: A Systematic Review of Cost Effectiveness and Cost Benefit Studies of Homelessness

Prepared for the
**Commonwealth National Homelessness
Strategy**

by
**Mike Berry, Chris Chamberlain, Tony Dalton,
Michael Horn and Gabrielle Berman**

Of the
RMIT-NATSEM Research Centre

July 2003

ISBN: 1 920758 50 X (project)
ISBN: 1 920758 51 8 (final report)



ACKNOWLEDGEMENTS

This material was produced with funding from the Commonwealth of Australia. AHURI gratefully acknowledges the financial and other support it has received from the Commonwealth, without which this work would not have been possible.

DISCLAIMER

AHURI Ltd is an independent, non-political body which has supported this project as part of its programme of research into housing and urban development, which it hopes will be of value to policy-makers, researchers, industry and communities. The opinions in this publication reflect the views of the authors and do not necessarily reflect those of AHURI Ltd, its Board or its funding organisations. No responsibility is accepted by AHURI Ltd or its Board or its funders for the accuracy or omission of any statement, opinion, advice or information in this publication.

* This format for the methodology of the review is based on the Cochrane/Campbell Systematic Review Protocols

TABLE OF CONTENTS

1.	Background	1
2.	Objectives	3
3.	Criteria for inclusion of studies	4
4.	Search strategy for identification of studies	6
5.	Methods of the review	8
5.1	Selection of Studies.....	8
5.2	Assessment of Methodological Quality	8
5.3	Data Management.....	8
5.4	Potential conflict of interest	8
6.	The Findings	9
6.1	Methodological Issues.....	9
6.2	Findings.....	12
6.3	Implications	14
7.	References	16
	APPENDIX A.....	17
	HOMELESSNESS STUDIES MATRIX (Areas of social and economic life)	17
	APPENDIX B.....	26
	Bibliography Of Type B Studies (Not Included In Matrix).....	26
	Abbreviations	29
	APPENDIX C.....	30
	Critical Summaries Of Included Studies (Type A And Type B)	30
	Summaries Group A: Financial Costings: Quantitative Studies.....	30
	Summaries Group B: Non Financial Costings: Quantitative Studies	53

1. BACKGROUND

There are at least three features of the policy environment in Australia that have led to an interest in the cost of homelessness met by service system budgetary expenditures and the broad cost of homelessness to society through lost productivity and reduced social cohesion.

First, homelessness has become an entrenched feature of Australian society. Against the background of the idea of primary, secondary and tertiary homelessness, the SAAP Data and Research Advisory Committee (SAAP Data and Research Advisory Committee, 2000) states:

Estimates based on these definitions put the number of people experiencing homelessness in Australia on any given night somewhere between 60,000 and 105,000, of whom less than half experience primary homelessness or chronic homelessness of any kind.

Second, there is increased awareness of the way in which the needs of homeless people place additional demands not only on homeless persons services but also on other human service systems. This is why the chairperson of the Commonwealth Advisory Committee on Homelessness (Commonwealth Advisory Committee on Homelessness, 2001) argues that 'the relatively recent shift towards developing whole-of-government approaches is particularly critical in the area of homelessness'. There is a similar awareness of the links between homelessness and demands on other service systems and an argument for a whole of government approach in Victoria following the work of the Victorian Homelessness Strategy (2002). At an agency level there can also be an awareness of this issue (Hanover Welfare Services, 1997).

Third, there is the continuing broad consensus that the growth in homelessness in Australian society is a bad thing. The Commonwealth Advisory Committee on Homelessness (2001) has recently summed up this consensus with its statement: 'It is not acceptable for people in Australia to be homeless'.

It is largely acknowledged that assessing the costs of homelessness is difficult and there are different views about the extent to which these costs can be quantified. For example, Hartley (1993) argues in her discussion of 'social costs' experienced by individuals and society, that 'these costs are better considered in a social rather than an economic framework'. In the same book Dixon (1993) argues that the economic costs can be identified and that this quantification can be used to show that 'homelessness, particularly that of young people, inflicts substantial economic costs on the community as well as personal costs on the individuals and families concerned'. It is generally acknowledged that the most straight forward type of economic measurement of the cost of homelessness is through cost effectiveness studies where the direct costs to the budgets of government and non-government agencies can be attributed to the additional services provided to homeless people. Cost effectiveness studies are largely carried out by analysing agency accounts. For example, this is the approach taken by the recent British Columbia study by Eberle, Kraus et al. (2001a; 2001b; 2001c, 2001d), an earlier Toronto study (Pomeroy and Dunning, 1998) and the New York–New York study of the impact of supportive housing for homeless people with severe mental illness (Culhane, Metraux et al., 2002). Cost benefit analyses, on the other hand, also place values on a range of indirect, difficult to quantify effects and intangible costs and benefits as well as making assumptions about longer run interactions in the broader economy. Cost benefit studies are therefore more data dependent and open to challenge, and their possible implications for policy more easily rejected, than cost effectiveness studies. As (Hogwood and Gunn, 1991:187) note 'the seeming objectivity and precision of quantified 'answers' may conceal highly arguable predictions, assumptions, and attributions of value'. In the area of homelessness a prominent Australian cost benefit study is the one by Pinkney and Ewing (1997) who argue that the lost economic output due to youth homeless is demonstrable.

This report presents a 'systematic review' of relevant studies (published in English) that attempt to provide **quantitative measures** of the costs of homelessness and/or the benefits from interventions to reduce homelessness. The review is (loosely) based on the protocols for systematic research reviews established by 'the Cochrane collaboration', an international group of medical researchers who instituted what has become a continuing review of key studies and findings in specific areas of medical research. Cochrane reviews (the principal output of the Collaboration) are published electronically in successive issues of *The Cochrane Database of Systematic Reviews*. Preparation and maintenance of Cochrane reviews is the responsibility of international collaborative review groups. At the beginning of 2001, the existing review groups covered all of the important areas of health care. The members of these groups - researchers, health care professionals, consumers, and others - share an interest in generating reliable, up-to-date evidence relevant to the prevention, treatment and rehabilitation of particular health problems or groups of problems. Details of the approach and program can be found on the web: www.cochrane.de/

This approach has been adopted here, modified to suit the broader scope and range of research methodologies current in the social and economic research fields.

The structure of the report is as follows. *Section 2* states the objectives and research questions for the review, identifying two types of relevant study and a number of 'domains' of impact. *Section 3* lists the criteria for determining which studies are to be included in the review. *Section 4* outlines the search strategy used to locate the relevant studies. *Section 5* discusses the methodology or approach adopted for the review. *Section 6* presents an overview of the findings and implications of the review for possible future Australian studies in this field. The appendices provide detailed bibliographic and descriptions of the individual studies included in the review.

A draft of this report was distributed to invited experts in the field and a seminar discussion held on 2 December 2002 at RMIT to discuss the findings. Some of the outcomes from this discussion were subsequently incorporated in this report by the researchers. The researchers bear all responsibility for all included material. Details of the seminar participants are included in Appendix D.

2. OBJECTIVES

It is against this background that we reviewed a broad range of approaches in the literature and assessed the state of knowledge about the costs of homeless and benefits of its amelioration, by using a matrix that recognises three types of costs/benefits and four areas (domains) of social and economic life. This is represented in the following table

	Areas of social and economic life			
Type of cost	Housing	Health/Welfare	Justice	Education, Training and Unemployment
Individual				
Government budget				
Society				

Each study entered into the above matrix is categorized into A and B type studies. The former are those studies that quantify the costs/benefits of homelessness in financial terms, and the latter include all studies that measure non-financial but quantifiable costs or impacts. Hence, a Type B study may estimate the number of days of hospital care for homeless people, while a Type A study would do this but also place a dollar cost on their use. The typical output measures used in such studies are listed in section 3, below. Appendix A distributes the 39 included studies across the cells of the above matrix, to illustrate where extant studies are concentrated. Where a study substantively covers more than one domain – e.g. health and criminal justice – it is placed in a fifth domain in Appendix A – i.e. ‘integrated costing’.

In the context of this matrix we pose two key research questions for the systematic review. They are:

- What are the costs of homelessness to (a) the individual (b) governments (c) and the broader community of contemporary patterns and levels of homelessness in advanced industrial countries?
- What are the costs and benefits of alternative policy interventions by government to reduce homelessness in the portfolio areas of (a) housing and homelessness services (b) health, including mental health and welfare services (c) justice and (d) education, training and unemployment?

This study will systematically establish the manner in which and the extent to which prior studies answer these two questions, and identify for each study reviewed, (a) the soundness of the approach (b) the strengths and weaknesses (c) the main gaps in analysis and findings and (d) any biases or limitations in the data used.

3. CRITERIA FOR INCLUSION OF STUDIES

Types of participants

People who are homeless or in the at-risk population.

Types of intervention

Alternative housing options; support services, health services, early intervention programs.

Types of study

All Type A and B studies (see section 5.1, below). Only those studies that actually identified quantitative impacts of homelessness and/or of the specific benefits arising from amelioration were included. This means that general program evaluations or impact studies – e.g. the various evaluations of programs like SAAP – are excluded.

Types of outcome measures

The relevant types of outcomes included the following, and may appear in studies that pertain to one or more of the four areas of economic and social life (housing, health/welfare, justice, education, training and unemployment) considered to be affected by homelessness.

Housing

- Costs of accommodation provision
- Costs of housing support services
- Costs of welfare services attached to accommodation provision

Health/Welfare

- Death (including suicide)
- Diagnosis of mental illness
- Psychiatric service contacts.
- Cost of psychiatric service contacts
- Days of inpatient service use
- Cost of inpatient service use
- Days of outpatient service use
- Cost of outpatient service use
- Days of hospitalisation
- Cost of Hospitalisation
- Ambulatory Care visits
- Cost of Ambulatory Care Visits
- Emergency department encounters
- Cost of emergency department encounters
- Prevalence of various medical conditions (respiratory conditions, sexually transmitted diseases, musculoskeletal problems etc..)
- Prevalence of various medical conditions compared to general populace.
- Vineland Adaptive Behaviour Scales
- Substance Abuse behaviour
- Children's Depression Inventory

- Number of homeless clients utilising case management services
- Costs for case management services (mean or total).

Justice

- Days use of corrections facilities
- Cost of use of corrections facilities
- Differential incidences of crimes in the domiciled and homeless population
- Levels of victimisation of homeless persons
- Nature of offences committed by homeless persons
- Number of arrests per annum.
- Percentage of defendants found to be homeless at the time of arrest

Education, Training and Unemployment

- Enrolment
- School Attendance
- Academic Achievement
- Wechsler Individual Achievement Test Screener
- Kaufman Brief Intelligence Test
- Raven Coloured Progressive Matrices (tests nonverbal reasoning)
- Peabody Picture Vocabulary Test
- Employment status
- Unemployment level

4. SEARCH STRATEGY FOR IDENTIFICATION OF STUDIES

All studies (published and unpublished) were sought that seek to determine the costs of homelessness and the benefits of its alleviation. This was done through a systematic identification and use of 43 electronic databases. These databases are sorted, where possible, according to the matrix categories or where appropriate, according to discipline.

Health

- BioMed Central
- APAIS-Health
- CINCH - Health
- Cochrane Library
- Elsevier BIOBASE
- EMBASE
- New England Journal of Medicine
- ProQuest Health & Medical Complete
- PubMed

Education, etc.

- AEI - Australian Education Index
- ERIC
- ProQuest Education Complete
- ProQuest Education Complete

Justice:

- CINCH - Australian Criminology Database
- Criminal Justice Abstracts
- Criminal Justice Periodical Index

Social Sciences

- AHSearch - Arts & Humanities Search
- APA Full-Text - Australian Public Affairs Full-Text
- SIRS Researcher - Social Issues Resource Series Researcher
- Social Sciences Citation Index
- Social Sciences Index/Fulltext
- Australian Family and Society Abstracts

Multidisciplinary:

- Current Contents Connect
- Digital Dissertations Complete
- Electric Library Australasia
- Kinetica
- PerContentsIndx -Periodicals Contents Index (Subset File)

- Science Direct
- Web of Science
- PANDORA Archive
- Wiley-Interscience
- Academic Research Library
- ARC - Cross Archive Searching Service
- Catchword
- Current Contents Connect
- Journal Citation Reports
- Project Muse
- Serials in Australian Libraries
- PerAbs - Periodical Abstracts
- ABI/INFORM Global

Economics:

- BPO - Business Periodicals on Disc
- Econlit - Economic Literature Index
- Wilson Business Abstracts

Additionally, informal University networks with state and commonwealth government departments and local NGOs will be used to obtain unpublished reports, predominantly within Australia. All studies identified by the methods described in the search strategy will be scrutinized by the reviewer for applicability to the characteristics of included studies. We will begin with the following terms to search the 43 data bases listed above:

- homeless
- homelessness
- homeless(ness) costs
- homelessness social costs
- homeless(ness)economic costs
- homeless(ness) education
- homeless(ness) justice
- homeless(ness) incarceration
- homeless(ness) enrollment
- homeless(ness) academic achievement
- homeless(ness) expenditure
- homeless(ness) welfare
- homeless(ness) unemployment
- homeless(ness) training

5. METHODS OF THE REVIEW

5.1 Selection of Studies

Reviewers screened abstracts or leads to potentially eligible studies, and indicated which full text reports should be pursued. The criteria for inclusion are: all type A studies, that is all studies that attempt to quantify and monetarise the costs of homelessness or the benefits of programs designed for its alleviation; a range of type B studies reflecting (a) a diversity of developed country studies (from the literature published in English) (b) a diversity of methodologies (c) contemporary studies where possible. The reviewers independently assessed the full text of studies, avoiding where possible, repetition of methodologies or over representation of certain countries within a particular matrix category. (A listing of sourced but excluded studies may be found in Appendix B).

5.2 Assessment of Methodological Quality

For each study, the reviewers assessed methodological quality for 3 key characteristics. These are: (1) the presence of quantitative outcomes (2) relevance, consistency and robustness of methodology and (3) the potential applicability to a national Australian setting.

5.3 Data Management

The reviewers independently assessed the relevance of the selected studies. The relevant studies and their abstracts were then manually entered into Endnote, to allow the classification of studies into the four areas of economic and social life.

The data was then entered into a matrix (Appendix A) divided into four potential areas where housing the homeless may have benefits or where homelessness may incur costs (housing, welfare/health, justice system, education,).

5.4 Potential conflict of interest

None

6. THE FINDINGS

This section of the review provides an overview of the Type A and Type B studies, as detailed in Appendix C (and defined in section 5.1, above). In all, 13 Type A and 26 Type B studies are included. The aim here is to step back and attempt to succinctly encapsulate the main issues and impacts identified by these studies – i.e. to comment on the main findings with respect to the costs of homelessness and the benefits of its alleviation, when taking a whole-of-government view. This discussion will target both the methodological features and the substantive results and implications of the studies in question.

6.1 Methodological Issues

- Each of the studies is assessed with respect to their methodological quality, particularly the extent to which the study findings are ‘relevant, consistent and robust’.
- A *relevant* study is one that attempts to quantify the costs of homelessness or benefits of intervention with respect to one or more of the specified domains or impact areas – housing, health/welfare, justice and education/employment.
- A *consistent* study systematically applies the quantitative indicators/measures elected in a logical manner to the various cost /benefit areas.
- A *robust* study is one in which the data and approach are verifiable in some context, either through the use of self reported data confirmed by administrative data or in the sense that the analytic approach has been supported by the literature and prior empirical testing such that the outcomes produced are comparable.

A relevant, consistent and robust study would therefore be one that clearly identified the impact areas and costs/benefits, systematically measured the costs/benefits across the areas and did so by drawing on accurate and complete data using standard quantitative analytical methods.

In general, the studies included in this review rate as “fair or better” on these methodological criteria, though due to the different subjects and approaches taken, some are better or less problematic than others. The included studies all applied their selected methodologies in a technically competent manner, suggesting that, given the qualifications noted with respect to each study (in Appendix) C, their findings are firmly based.

A number of methodological issues and limitations recur in the studies reviewed.

- The studies rely heavily on administrative and/or survey data. The problem with the former is that there may be significant gaps in past data capture. The problem with survey data, on the other hand, is that it is usually dependent on self-reporting, with the attendant inconsistencies, lack of verifiability and biases that this approach entails.

In the case of administrative data, practical and resource issues limit the scope and coverage of relevant data bases. Problems here include lack of quality data sets on program use, difficulty in gaining consent to access data and fragmented data within large agencies (e.g. Health departments). Most of the administrative data is drawn from public agencies; whereas outcome data accessed from relevant non-government agencies may provide necessary supplementary and more complete information, as well as providing a cross-check on the official data.

In the case of survey approaches, apart from the problems of sampling, the main issue is the reliability and completeness of participant recall. What is a reasonable maximum period of recall? Homeless people with long term health problems or disabilities may not have strong recall ability.

Dependence on incomplete and/or biased data reduces the validity of the resulting findings. To varying degrees, all the included studies suffered from this basic methodological limitation. Examples of studies that present as ‘fair to poor’ on this score

are: A2; A5; A6; B1; B5. Studies that were 'fair to good' here include: A1; A8; A10; B2; B9; B11; B18.

- The studies rely mainly on cost analysis and comparisons. This approach is generally characterised as 'cost effectiveness' analysis. Only one of the studies (A10) presented a conventional 'cost benefit analysis' where both the costs of homelessness to, for example, government service providers and the benefits to individuals or communities are included – and, as noted in Appendix C, this study covered only a limited range of impacts. This approach bias can be explained, in part, by the complex nature of the costs and benefits involved in the area of homelessness and its alleviation – and the very significant data demands a full cost benefit analysis makes.

In the case of the cost findings, most studies adopt a simplistic, short term focus. That is, costs are estimated on a one or two year time frame, before they have necessarily stabilised; such approaches, of course, ignore the time value of money, the need to discount future costs (and benefits) to present value terms. Examples of studies that present as 'fair to poor' on this score are: A3; A7. The best study on this score was the Australian study A10; A8 was the best international study in this respect.

- While most studies carefully assess the savings per client to government (and less commonly, non-government) service providers, few address the issue of increasing the access of the homeless to stable housing leading to an *increase* in the utilisation of support and other services – and, hence, to an increase in total fiscal costs (and, presumably the extra benefits accruing). The narrow focus of most of the extant studies precludes assessment of these higher order effects. It is not possible to point to any study that would rate as 'good' on this score, though A12 does explicitly deal with this increased service utilization issue, albeit only with respect to specialist medical services.
- There is a dearth of studies that include the financial costs actually borne by the homeless themselves – costs that are saved when they are successfully placed in a housing program. These costs may be relatively small but they include payments for short term hostel accommodation and transport from one shelter location to another. A3 provides some benefit data with respect to the homeless individual (employment income) as an input into calculating the service/income support savings to government.
- Many studies are based on small samples, especially those that track particular groups and attempt to include a range of service supports and costs. This raises the obvious limitation of non-generalisability of the findings of such studies. The main gains, however, relate to the light cast by such cases on the complex factors and interactions impinging on the problems of being homeless and the challenges of intervening to improve outcomes. That said, the problem of small and unrepresentative samples bedevils many of the extant studies, notably: A2; A9; B4; B20.
- The key issue raised by studies such as A10 is: when taking a longer term, lifetime perspective, is there sufficient quality data to forecast (over a lifetime) the relevant costs and benefits based on prevalence comparisons between the housed and homeless groups across each domain (health, justice, etc.)?

The provision of stable housing may, as noted, lead to an increased use of a range of support services for a period of time. Some of these services may be costly in the immediate term – e.g. drug treatment – but together with continuing housing stability result in a reduction in total government program expenditure in the longer term. Considerable variance is to be expected across the different categories of homelessness. For example, the temporal pattern of housing and support cost interrelationships for a homeless drug dependent person will be different to a homeless person with an intellectual disability. A key question for research in this field is to establish a reasonable time frame for the identification and measurement of costs/savings across the segmented categories of the homeless population.

A major concern raised by the studies reviewed is the issue of selection and bias. The table below summarises the distribution of the Type A and B studies across the matrix presented on page 4 (see Appendix A for details).

Distribution of All Type A and B Studies (number)

Type of cost	Housing		Health/Welf.		Justice		Education, Employ., etc.		Integrated*	
	A	B	A	B	A	B	A	B	A	B
Individual				10				8		
Government budget	2	1	5			4		1	6	1
Society						1		1		

* studies in this column include cost/benefits in more than one of the four impact areas (e.g. both health and criminal justice system costs).

Distribution of Australian Type A and B Studies (number)

Type of cost	Housing		Health/Welf.		Justice		Education, Employ., etc.		Integrated*	
	A	B	A	B	A	B	A	B	A	B
Individual				4				1		
Government budget	1	1						1	1	1
Society										

* studies in this column include cost/benefits in more than one of the four impact areas (e.g. both health and criminal justice system costs).

Most particularly:

As the tables above and Appendix A illustrate, Type A studies are very heavily concentrated in the health/welfare, especially mental health category. Moreover, the studies here are overwhelmingly American. There have been far fewer studies focused on these concerns in other English-speaking countries. The country break-up is:

- United States: 8 Type A; 11 Type B
- Australia: 2 Type A; 8 Type B
- United Kingdom: 1 Type A; 7 Type B
- Canada: 2 Type A; 0 Type B

After health, education, etc. forms the focus for analysis, though all are Type B studies. There are no Australian studies in the justice domain (though A10 has a justice component). Seven studies cross-cut the health, housing and justice domains (including A10) at the 'government cost' level; six are Type A,. There are fewer studies concerned specifically with housing. Education, employment and training has been approached in Type B studies only, possibly due to the complexities involved in sorting out and placing values on the quantitative interrelationships and impacts. In short, the matrix of studies presented in Appendix A is 'unbalanced', with respect to area of intervention, country and type of study.

As the matrix also demonstrates, Type A studies primarily concern the 'government' sector, rather than the 'individual' and 'society' categories. A full cost benefit analysis of this area would deal with all three levels of impact. In the Justice domain there are, as noted, no

Australian studies (other than A10). In the Education domain, the studies focus at the individual level but were overwhelmingly Type B.

The studies reviewed overwhelmingly focus on government programs and agencies, presumably reflecting the source of research funding. The important role of non-government agencies in dealing with the problems facing and providing services to the homeless is virtually missing from the extant studies. In part, this may reflect the large number and small scale nature of NGOs in the field – i.e. the fragmented nature of the sector – and the associated difficulties in accessing (and gaps) in the relevant data.

Two possible approaches to filling this gap are as follows. A sample of relevant NGOs could be drawn, using a consistent template to gather a range of specified costs of operation. Alternatively, the aggregate subsidies paid to relevant NGOs by government could be used to proxy NGO support. Both approaches are problematic. The former may not capture all the cost categories or include a sufficient number or range of agencies. The latter approach would entail adding some estimate of non-government funding sources used to support programs (e.g. from charitable gifts) and assumptions necessary to calculate the unit costs of the relevant services.

Virtually all type A studies focus on the situation of the adult homeless individual. There is no recognition that families can be homeless and require appropriate support services. Where families are targeted, the emphasis tends to be on children. This is a large limitation of the existing knowledge in the field.

6.2 Findings

The highly diverse scope and methodologies adopted by the studies reviewed make it very difficult to identify clear trends in findings. This outcome contrasts with most systematic (Cochrane/Campbell) reviews carried out in the health and medical research area, where randomised, double-blind trials represent a common approach. For this reason, details of the findings are summarised for each of the 39 studies in Appendix C. With this observation in mind, a number of significant findings are advanced below, with reference to the particular studies. Attention is here focused on the Type A studies which attempted to quantify the level of dollar costs/benefits across the various domains.

- Providing stable housing for homeless people generated cost savings in a range of support services areas. In some cases the savings paid for most if not all of the housing expenditure (A1); in other cases (A2), the gains exceeded the costs. Any other benefits to society or the individuals would be in addition. For example:
 - A1 calculated that the net cost of housing a homeless person was \$US995 per year. This was the cost of housing less the savings on mental health services.
 - A2 found a positive savings on housing and service (mainly criminal justice) costs when housing the homeless – in the order of 30 per cent.
 - A5 found that the mental health and substance abuse costs of dealing with U.S. veterans were \$US3,196 lower for those housed, compared to those homeless (though, as noted above, this study has methodological limitations).
 - A10 calculated the total cost of youth homelessness in Australia (in net present value terms) to be \$574 million and the net benefit of successfully intervening to be \$474 million – a benefit/cost ratio in excess of 5.
- Housing the homeless also significantly increases the likelihood of employment and, hence, increased income. Individual and society benefit through increased income (productive output) and reduced government expenditure on unemployment benefits) (A3; A8; A13). Further indirect benefits also arise – e.g. positive schooling effects for the children of the previously unemployed homeless people. For example:

- A8 calculated that the acute medical costs of 430 homeless people housed in a demonstration project over a 30 month period declined by \$US72 million. Tenant satisfaction also increased (this was not quantified in financial terms).
- The Australian study A13 found that housing people in public housing (some of whom would have been or become homeless) generated an economic gain equivalent to between 7.7 and 12.1 per cent of tenant income. This gain offset about three-quarters of the cost of providing the public stock. Other unmeasured (and non-marketed) benefits of secure, affordable housing are likely to more than offset the residual (25 per cent) cost of public housing provision, in this case.
- Homeless people with complex health needs, especially in the mental health area, impose greater cost burdens on support services, compared to housed clients with similar needs (A5; A6; A7; A8). There is some evidence (A9) that stable independent living arrangements are most cost effective in this regard. For example:
 - A6 found that homeless patients, on average, stay 4 days longer in New York hospitals than low income tenants; the average extra cost to the hospital system and/or patients was \$US2,414 (\$US4,094 for psychiatric patients).
 - A7 found that annual hospital inpatient days fell by 57 per cent for people after they moved into supported housing. Average health care costs savings were \$US53,400.

However, in some cases, improved housing for homeless people can increase their access to and therefore use of support services. A12 found that the cost of medical care and support increased by 35 per cent for homeless mentally ill veterans entering supported accommodation. In such cases, the critical question is – does increase support lead to improved health, employment prospects, family stability and so on? And – what value can be placed on such benefits?

- Where benefits are explicitly measured (e.g. A10), there are significant net gains; i.e. the benefits to individuals and society through completed schooling and enhanced lifetime productivity clearly outweigh the costs to government of keeping homeless youth at school (see amounts noted, above).
- on government support services to include amenity losses to other residents and associated tax revenue losses to government (A11). These costs are reflected in (measured by) depressed property values; i.e. \$US4 million was lost in property tax income to the City Council due to the concentration of homeless persons and shelters in the southern region of the city. This revenue loss, in turn, reflects a larger negative impact on local property values; effects on property values are used by economists as a proxy measure of changes in amenity and related values consumed by residents, owners and workers.
- The great gap, evidenced by this review, is that most extant studies do not adequately address the range and scale of the benefits arising from successful policy interventions to reduce homelessness. The research questions and methodologies adopted bias outcomes to a consideration of cost impacts (especially fiscal impacts on government agencies) and cost effectiveness. This is the major negative finding of the review – and the main challenge for future research (see below).

The range of Type B studies reviewed generally supported the reality and significance of discernable deleterious impacts on the health, welfare and educational situations of the homeless. The criminal justice system appears to act as a major avenue of admission to hospital and other support services. Australian studies tended to reproduce the international findings. With one exception (A10) and an out-dated economic analysis (A13), the Australian studies reviewed were all Type B.

6.3 Implications

A key question arising from this review is: “is there a methodology or approach that can be simply transferred from one of the existing international studies and applied in a new Australian study?” The short answer is – “no”. As a detailed consideration of Appendix C reveals, all of the extant studies suffer from limitations and gaps, both with respect to the robustness of the methodology and the scope of the findings.

The reason why this is the case is also clear. Homelessness is a complex social and economic condition, with several domains of impact and interaction. A full and adequate approach would require a very large study and entail a very significant commitment of resources. In particular, a concerted effort would need to be made to measure the benefits across the domains of successful interventions, using the traditional methods for evaluating non-marketed outcomes. Appropriate sets of assumptions would need to be drawn and tested. Relevant data or proxy data would have to be gathered, again across all the impact areas and domains. Finally, for a complete social cost benefit analysis, an appropriate discount rate would need to be applied to both the estimated costs and benefits.

Failing the implementation of such a ‘first-best’ approach, what would a ‘second-best’ alternative look like in the Australian context? Some of the key issues that would need to be addressed to answer this question are:

- How inclusive is the scope? That is, will the study be ‘integrated’ in the sense of including a number of domains or should it focus the effort and resources on one domain area – e.g. health? In part the answer here will depend on the available level of resources. But also critical is the policy intent of the study. Which areas of intervention are most vital – to the homeless, to homeless support agencies, to government – and why?
- The perennial problem of defining homelessness and delimiting the homeless population.
- The sampling framework and recruitment of the sample.
- Should we use a conventional experimental and control procedure by comparing the housed and unhoused homeless – or follow a particular model of supported housing to gauge the changes in outcomes?
- Should the study focus on the retrospective or prospective monitoring of service use by the homeless? What is the appropriate timescale for the study?
- Should we rely on administrative data sets, self-reporting or both? To what extent should the current availability of data determine the scope of the study?
- How can the resources, data and detailed experiences of relevant NGO agencies be drawn upon to assist in the specification and implementation of the study?
- What techniques are to be used to gauge costs and benefits? In particular, what approaches can be developed to get at impacts under-valued or ignored by the extant studies?
- How can the study take into account the long term movements in costs as service usage/take-up changes, reflecting behavioural change among homeless clients?
- What are the trade-offs between defensible research outcomes and the level of study costs? Who pays?

This review suggest that any adequate – relevant, consistent and robust – new Australian study aiming to quantify the various costs of homelessness and the benefits of successful intervention would need to obey a number of key guidelines, as follows.

- An extensive mapping of the extant administrative data sets of relevant support services is essential.

- The services included must cover the major domains or programs: housing assistance, health, welfare, justice, education and employment assistance.
- Complementary survey or diary approaches are necessary to ensure coverage of the use of NGO and informal services.
- A multi-pronged approach to data collection is advisable, so that data gathered from, for example, service providers can be cross-checked or validated by self-recorded data.
- Use of a control group of formerly homeless housed people will enable a comparison of service use with the homeless.
- Primary data collection should extend over a time period long enough for service usage to stabilize.
- The assumptions and input data used to estimate/predict the long term costs/benefits beyond the period covered by the data should be made explicit and tested.
- A range of household types should be included in the study, including families with children. As near as possible, the households included should reflect the overall homeless population in Australia.
- The segmented sampling frame should include people at different points on the homelessness continuum, but concentrate on those in or at imminent risk of primary or secondary homelessness.
- If resources or policy priorities dictate a focus on a restricted segment(s) of the total homeless population – the chronically homeless with complex needs, as in mental health – appropriate caveats on the generalisability of the findings would need to be explicit.
- The unit costs for government and NGO services must be calculated on explicit and defensible assumptions and any limitations or exclusions documented.
- The study should be resourced and managed to ensure that the methodologies chosen meet acceptable ethical research standards and comply with privacy legislation and rights.

7. REFERENCES

Commonwealth Advisory Committee on Homelessness (2001). Working Towards a National Homelessness Strategy. Canberra, Department of Family and Community Services.

Culhane, D., S. Metraux, et al. (2002). "Public Service Reductions Associated with the Placement of Homeless Persons with Severe Mental Illness in Supportive Housing." *Housing Policy Debate* 13(1): 107-163.

Dixon, D. (1993). Economic Benefits of Supporting Homeless Young People. *Youth Homelessness: Courage and Hope*. H. Sykes. Melbourne, Melbourne University Press.

Eberle, M., D. Kraus, et al. (2001a). Homelessness: causes & effects. Volume 1. The relationship between homelessness and the health, social services and criminal justice systems : a review of the literature. Vancouver, British Columbia, Ministry of Community, Aboriginal and Women's Services.

Eberle, M., D. Kraus, et al. (2001b). Homelessness: causes & effects. Volume 4. Background report: a profile and policy review of homelessness in the provinces of Ontario, Quebec and Alberta: final report. Vancouver, British Columbia, Ministry of Community, Aboriginal and Women's Services.

Eberle, M., D. Kraus, et al. (2001c). Homelessness: causes & effects. Volume 2. A profile, policy review and analysis of homelessness in British Columbia: final report. Vancouver, British Columbia, Ministry of Community, Aboriginal and Women's Services.

Eberle, M., D. Kraus, et al. (2001d). Homelessness: causes & effects. Volume 3. The Costs of Homelessness in British Columbia. Vancouver, British Columbia, Ministry of Community, Aboriginal and Women's Services.

Hanover Welfare Services (1997). Homelessness in the Suburbs: Hanover Stats and Facts. Melbourne, Hanover Welfare Services.

Hartley, R. (1993). The Social Costs of Youth Homelessness. *Youth Homelessness*. H. Sykes. Melbourne, Melbourne University Press.

Hogwood, B. W. and L. A. Gunn (1991). Policy Analysis for the Real World. Oxford, Oxford University Press.

Pinkney, S. and S. Ewing (1997). Responding to Youth Homelessness: The economic costs and benefits of school based early intervention. Melbourne, Centre for Youth Affairs Research and Development in association with the Queen's Trust for Young Australians.

Pomeroy, S. and W. Dunning (1998). Housing Solutions to Homelessness: Cost-Benefit Analysis of Different Types of Shelter. Preliminary Assessment. Toronto, Mayor's Homelessness Action Task Force.

SAAP Data and Research Advisory Committee (2000). Homelessness Information in Australia. Canberra, Department of Family and Community Services.

Victorian Homelessness Strategy (2002). Directions for change: a collaborative approach to improving our response to homelessness. Melbourne, Housing and Community Building Division, Department of Human Services.

APPENDIX A

HOMELESSNESS STUDIES MATRIX (Areas of social and economic life)

AREA OF COST	HOUSING		
	STUDY	TYPE OF HOUSING	TYPE OF COST/ TYPE OF STUDY
Individual			
Government budget	(Pomeroy, 1998) (Toronto) (Agrawal, 1988) (Australia) (McCormick et al, 2000) (Melbourne)	private room accommodation, mini suite, fully self contained public housing Housing establishment Funds Usage for Private rental accommodation emergencies	monetary (A) (monetary) (A) proportion and period of individuals remaining in private rental accommodation after HEF assistance. (B)
Society			

AREA OF COST	WELFARE/HEALTH		
	STUDY (LOCATION)	MEDICAL CONDITION	TYPE OF COST
Individual	(Kushel, 2002) (San Fransico) (Kleinman, 1996) (Los Angeles) (Efron, Sewell, 1996) (Melbourne) Bines, 1994) (England)	various: emergency services usage physical/mental health mental health/physical health . mental health/physical health	proportion of homeless respondents which had emergency department encounters in the previous year (B) prevalence of certain health conditions. (B) Percentage of children from homeless families with Child Behaviour Checklist in the deviant range, compared with percentages from the normative population. Prevalence of certain physical conditions compared with normal population. (B) prevalence of certain health conditions, use of prison or remand centres. (B) prevalence of certain health conditions, substance abuse. (B) life expectancy, suicide, drug use. (B)

	<p>(Forst, 1994) (San Francisco)</p> <p>(Grenier, 1996) (England)</p> <p>(Babidge et al., 2001) (Sydney)</p> <p>(Sibthorpe et al., 1995) (ACT)</p> <p>(Weinreb et. al, 1998)) (Massachusetts)</p> <p>(Nicholson, 2000) (Melbourne)</p>	<p>mental health/physical health, drug use</p> <p>physical health, drug use</p> <p>mental health</p> <p>substance abuse</p> <p>Child health and service usage</p> <p>Womens Health</p>	<p>Mortality (B)</p> <p>substance abuse and suicidal tendencies. (B)</p> <p>emergency department visits, hospitalisation, outpatient visits. (B)</p> <p>percentage intravenous drug users, percentage with respiratory illness, hepatitis etc. (B)</p>
Government budget	<p>(Salit, 1998) (New York)</p> <p>(Rosenheck et al., 1993) (USA)</p> <p>(Dickey, 1997)</p>	<p>substance abuse, medicine, trauma, surgery, AIDS, mental illness</p> <p>Veterans, psychiatric and substance abuse</p> <p>mental illness</p>	<p>monetary (A)</p> <p>monetary (A)</p> <p>monetary (A)</p>

	<p>(Massachusetts)</p> <p>(Proscio, 2002)</p> <p>(San Francisco)</p> <p>(Rosenheck, 1998)</p> <p>(USA)</p>	<p>Emergency room usage, inpatient and mental health treatment</p> <p>Veterans, psychiatric and substance abuse</p>	<p>monetary (A)</p> <p>monetary (A)</p>
Society			

AREA OF COST		JUSTICE
	STUDY	TYPE OF COST
Individual		I
Government budget	<p>(James, 1999) (London)</p> <p>(Ballintyne, 1999) (London, Glasgow, Swansea)</p> <p>(Fischer, 1988) (Baltimore)</p> <p>(McCarthy and Hagan, 1991) (Toronto)</p>	<p>admission rates to criminal justice system and hospitalisation (B)</p> <p>levels of offences committed by rough sleepers and nature of offences, contact and nature of contact with police (B).</p> <p>levels and types of offences committed by the homeless in comparison to the general populace. (B)</p> <p>Proportion of respondents partaking in illegal activities while at home.</p> <p>Proportion of respondents partaking in corresponding illegal activities while homeless.</p> <p>Significance of difference per and during homeless episode (B)</p>
Society	<p>(Martell, 1995) (NY)</p>	<p>% of defendants found to be homeless at the time of arrest. The differential incidence of crimes in the domiciled and homeless population. The degree to which the homeless were over represented for each type of offence (B)</p>

AREA OF COST	EDUCATION, TRAINING AND EMPLOYMENT	
	STUDY (LOCATION)	TYPE OF COST/OUTCOMES
Individual	<p>(Buckner, Bassuk, et al. 2001) (Massachusetts)</p> <p>(Masten, Arturo, 1996) (Minneapolis)</p> <p>(Cumella, Grattam, 1995) (Birmingham)</p> <p>(Zima, 1994) (Los Angeles)</p> <p>(Bailis et. al, 1991) (USA)</p> <p>Anderson and Quilgers, 1995</p>	<p>WIAT-S scores, KBIT scores (various aptitude tests) (B)</p> <p>WIAT-S scores, Teachers Report Form of the Child Behaviour Checklist Rating, Teacher rating: Academic Progress, Teacher rating: Academic Potential, Vocabulary Score, Raven Score, Parents Rating: School Grades, Parent Rating: Learning Problems (B)</p> <p>VABS, ISSI, CBCL, GHQ (aptitude, psychological and physical health tests) (B)</p> <p>Presence of depression, Presence of behavioural problems, Presence of receptive vocabulary delay, Presence of reading delay, Schooling missed over 3 month period. (B)</p> <p>Number of homeless participants served, Number of homeless participants placed in jobs, Average length of training time under the project, Average training cost under the project, Number of project participants trained, Average Hourly wage rate at placement, Number of project participants placed by job, Number of project participants with upgraded housing (B)</p> <p>No. of young people in the hostels utilising Job Search, Employment Training, Employment Action, Youth Training. No. of young people in the hostels who gained work experience utilised numeracy and literacy classes, obtained temporary work, fulltime work and part time work within 18 months from the inception of the program (B)</p> <p>No. of recipients of JSA homeless (by definition these are those between the ages of 16-17) rate, Proportion of individuals on the JSA homeless rate who left school at age 15 or younger. No. of JSA homeless recipients who held a job for more than 3 months or more. Median duration of</p>

	(England) (King and Payne, 1993) (Sydney)	receipt of unemployment benefit for JSA Homeless recipients. DSS Mean benefit income received for JSA Homeless recipients. DSS Base benefit income received for JSA Homeless recipients Proportion of JSA Homeless recipients receiving private income. Mean amount received per week for JSA Homeless recipients from private income from parents, Mean of total income less expenditure for Mean board payment per week for JSA Homeless Recipients per week. (B)
Government budget	(Parkinson and Horn, 2002) (Victoria)	unemployment, receipt of newstart, use of intensive Assistance and Jobsearch. (B)
Society	(National Centre for Homeless Education, 2000)	school enrolment, school attendance (B)

AREA OF COST	INTEGRATED COSTING		
	STUDY (LOCATION)	TYPE OF HOUSING (SERVICES COSTED)	TYPE OF COST
Individual			
Government budget	<p>(Culhane, 2002) (New York)</p> <p>(Eberle et al., 2001) (British Columbia)</p> <p>(Lewis and Rowlatt, 1996) (UK)</p>	<p>Supported Housing (shelter utilization, psychiatric hospitalisation, Veteran Affairs shelter utilization, prison utilization, inpatient/outpatient healthcare).</p> <p>Health Care: hospital admissions, hospital emergency, physician billings, prescription drugs, mental health services, ambulance services, fire emergency response and health clinics. Social Services: British Columbia Benefits, child protection, drug and alcohol treatment. Criminal Justice: correctional institutions, community supervision and police services</p> <p>Weekly income from various sources (theft, charities etc..) cost of police costs per homeless person per week (based on assumption that one in ten crimes are perpetrated by the homeless and actually investigated), increased health care (on the assumption that there is a greater likelihood of usage of emergency and other more expensive forms of services for unattended conditions), weekly income support</p> <p>Use of substance abuse inpatient services, pharmacy services, homecare services, psychiatric outpatient services, substance abuse outpatient services, medical</p>	<p>monetary (A)</p> <p>monetary (A)</p> <p>monetary (A)</p>

	<p>(University of Pennsylvania Centre for Mental Health Policy and Services Research, 2002) (Connecticut)</p> <p>(Pinkney and Ewing, 1997) (Australia)</p> <p>(Weinstein and Clower, 2000) (Dallas)</p> <p>(AIHW, 2001) (Australia)</p>	<p>outpatient services, case management assessment and monitoring, physician care, care by other providers, dental care, self reported health status, employment status, income sources.</p> <p>potential loss in lifetime earnings, Health related costs, Crime and criminal justice related costs</p> <p>Health, Welfare, Criminal costs</p> <p>Shelter, housing, various services</p>	<p>monetary(A)</p> <p>monetary (A)</p> <p>Monetary (A)</p> <p>Monetary (B)</p>
Society			

APPENDIX B

Bibliography Of Type B Studies (Not Included In Matrix)

1. Wood, D., Valdez R., Hayashi T., Shen, A. (1990) Health of Homeless Children and Housed Poor Children, *Pediatrics*, 86: 858: 866. **(CH)**
2. Brake W. R., P.J. Fischer, M. Kramer, et al. (1989) "Health and Mental Health Problems of Homeless Men and Women in Baltimore." *Journal of the American Medical Association*, 262 (10): 1352-57. **(MH)**
3. Brickner, P. W, L. K. Scharer, B. A. Conanan, M. Savarese, and B. C. Scanlan (1990). *Under the Safety Net: The Health and Social Welfare of the Homeless in the United States*. New York: W W Norton & Co., Inc. **(GH)**
4. Gelberg, L., and L. S. Linn.(1989a) Assessing the Physical Health of Homeless Adults. *Journal of the American Medical Association*, 262: 1973-79. **(GH)**
5. Gelberg, L., L. S. Linn, R. P. Usatine, and M. H. Smith. (1990) Health, Homelessness, and Poverty: A Study of Clinic Users." *Archives of Internal Medicine*, 150 (11) (November): 2325-30. **(GH)**
Padgett DK, Struening EL, Andrews H, Pittman J. (1995) Predictors of emergency room use by homeless adults in New York City: the influence of predisposing, enabling and need factors. *Soc Sci Med.*, 41: 547-556. **(GH)**
6. Brickner PW, Scanlan BC, Conanan B, et al. (1986) Homeless persons and health care. *Ann Intern Med.*, 104:405-409. **(GH)**
7. Padgett DK, Struening EL. (1992) Victimization and traumatic injuries among the homeless: associations with alcohol, drug, and mental problems. *Am J Orthopsychiatry*, 62:525-534 **(DRUG MH)**
8. Hibbs JR, Benner L, Klugman L, et al. (1994) Mortality in a cohort of homeless adults in Philadelphia, *N Engl J Med*. 331:304-309 **(GH)**
9. O'Toole TP, Gibbon JL, Hanusa BH, Fine MJ.(1999) Utilization of health care services among subgroups of urban homeless and housed poor. *J Health Polit Policy Law*, 24:91-114 **(GH)**
10. Amery, J., Tomkins A. and Victor, C. (1995) The prevalence of behavioural problems amongst homeless primary school children in outer London borough. *Public Health*, 109:421-424. **(CMH)**
11. Fox, S., Barnett, R., Davies, M. and Bird, H. (1990) Psychopathology and developmental delay in homeless children: a pilot study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 29: 732-735. **(CMH)**
12. Lissauer, T., Richman, S., Tempia, M., Jenkins S. and Taylor, B. (1983) Influence of homelessness on acute admissions to hospital. *Archives of Disease in Childhood*, 61: 335-343. **(CH)**
13. Page, A., Ainsworth, A., and Pett, M. (1993) Homeless families and their children's health problems: A Utah urban experience. *The Western Journal of Medicine*, 158: 30-35 **(CH)**
14. Parker, R., Resorla, L., Finkelstein, J., Barnes, N., Holmes, J. and Stolly, P. (1991) A survey of Health of homeless children in Philadelphia shelters. *American Journal of Disease in Childhood*. 145: 520-526. **(CH)**
15. Scott, J. (1993) Homelessness and mental illness. *British Journal of Psychiatry*, 162:314-324. **(MH)**
16. Victor, C. (1992) Use of hospital services by homeless families in an inner London health district, *British Medical Journal*, 299:725-727. **(GH)**
17. Rubin, D., Erickson, C., San Agustin, M., Cleary, S., Allen, J. and Cohen, P., (1996) Cognitive and academic functioning of homeless children compared with housed children. *Pediatrics*, 93:289-294. **(ED)**
18. Shanks (1988) Medical morbidity of the homeless, *Journal of Epidemiology and Health*, 42: 183-186. **(GH)**
19. Victor (1992) Health status of the temporarily homeless population and residents of North West Thames region, *British Medical Journal*, 305: 387-391. **(GH)**

20. Lehman, A., Cordray, D. (1993) Prevalence of alcohol, drug and mental disorders among the homeless, *Contemporary Drug Problems*, 20: 355-83. **(DRUG MH)**
21. Mulkern, V., Bradly, V. (1986) Service utilisation and service preferences of homeless persons, *Psychosocial Rehabilitation Journal*, 10: 23. **(W)**
22. Breakey, W., Fischer, P., Kramer, M., et al. (1989) Health and Mental health problems of homeless men and women, *Journal of the American Medical Association*, 262: 1352-7. **(GH MH)**
23. Struening, E., Padgett, K., (1990) Physical Health Status, substance use and abuse, and mental disorders among homeless adults, *Journal of Social Issues*, 46: 65-81. **(GH DRUG MH)**
24. Gelberg, L. and Linn, S. (1989) Assessing the physical health of homeless adults, *Journal of the American Medical Association*, 262: 1973- 1739. **(GH)**
25. Alperstein, G., Rappaport, C., & Flanigan, J. M. (1988). Health problems of homeless children in New York City. *American Journal of Public Health*, 78, 1232-1233. **(CH)**
26. Cohen, P., & Schwab-Stone, M. (1990). Assessing mental health status among children who are homeless. In J. Morrissey & D. Dennis (Eds.), *Proceedings of a NIMH sponsored conference* (pp. 78-87). Rockville, MD: National Institute of Mental Health, Office of Programs for the Homeless Mentally Ill. **(CMH)**
27. Miller, D. S., & Lin, E. H. B. (1988). Children in sheltered homeless families: Reported health status and use of health services. *Pediatrics*, 81,668-673. **(CH)**
28. Paone, D., & Kay, K. (1988, November). Immunization status of home- less preschoolers. Paper presented at the meeting of the American Public Health Association, Boston. **(CH)**
29. Roth, L., & Fox, E. R. (1988, November). Children of homelessfamilies.- Health status and access to health care Paper presented at the meeting of the American Public Health Association, Boston. **(CH)**
30. Wagner, J., & Menke, E. (1990). The mental health of homeless children. Paper presented at the meeting of the American Public Health Association, New York City. **(CMH)**
31. Whitman, B. (1987, February 24). The crisis in homelessness: Effects on children and families (Testimony presented before the U.S. House of Representatives Select Committee on Children, Youth, and Families). Washington, DC: U.S. Government Printing Office. **(W)**
32. Whitman, B., Accardo, P., Boyert, M., & Kendagor, R. (1990). Homelessness and cognitive performance in children: A possible link. *Social Work*, 35, 516-519. **(ED)**
33. Wright, J. (1990). Homelessness is not healthy for children and other living things. *Child and Youth Services*. 14(l), 65-88. **(CH)**
34. Wright, J. (1991). Poverty, homelessness, health, nutrition, and children. In J. H. Kryder-Coe, L. M. Salamon, & J. M. Molnar (Eds.), *Homeless children and youth: A new American dilemma* (pp. 71-104). New Brunswick, NJ: Transaction. **(CH)**
35. Weinreb, L., Goldberg, R., Perloff, J. (1998) Health Characteristics and Medical Service Use Patterns of Sheltered Homeless and Low-Income Housed Mothers, *Journal of General Internal Medicine: official Journal of the Society for Research and Education in Primary Care Internal Medicine*. 13, (6),: 389-399. **(GH)**
36. Zima, B, Wells, K, Benjamin, B., et al. (1996) Archives of General Psychiatry. Mental Health Problems Among Homeless Mothers: Relationship to Service Use and Child Mental Health Problems, 53 (4): 332-339 **(CMH MH)**
37. Caton, C., (1995) Mental Health Service Use Among Homeless and Never-Homeless Men With Schizophrenia, *Psychiatric services*, 46, (11): 1139-1144. **(MH)**
38. Lam, J. and Rosenheck, R., (1999) Social support and service use among homeless persons with serious mental illness. *The International Journal of Social Psychiatry* 45 (1) (Spring):13-28. **(MH)**
39. Applewhite, S. (1997) Homeless veterans: perspectives on social services use. *Social Work* 42 (Jan):19-30 **(W)**
40. Breakey, W.R. Fischer, P. Nestadt, G., and Ross, A. (1990) Psychiatric morbidity in homeless and housed low income people in Baltimore. Paper presented at the meeting of the American Public Health Association, New York. September. **(MH)**

41. Fischer, P. (1988) Criminal activity among the homeless. A study of arrests in Baltimore. *Hospital and Community psychiatry*. 39(1), 46-51. **(CRIME)**
42. Gelberg, L., Linn, L., and Leake, B. (1988) Mental health , alcohol and drug use and criminal history among homeless adults. *American Journal of Psychiatry*. 145: 191-196. **(MH DRUG CRIME)**
43. Hanzlick, R. (1984) Deaths among the homeless. Atlanta. Georgia. *Morbidity and Mortality Weekly Report*, 36 (9): 297-299. **(GH)**
44. Koegel, P., and Burnam, M. (1987) The epidemiology of alcohol abuse and dependence among homeless individuals: Findings from the inner city of Los Angeles. Los Angeles: University of California, Department of Psychiatry. **(DRUG)**
45. Koegel, P., and Burnam, M., and Farr, R. (1988) The prevalence of specific psychiatric disorders among homeless individuals in the inner city of Los Angeles. *Archives of General Psychiatry*, 45: 1085-1092. **(MH)**
46. Koegel, P., and Burnam, M. (1988) Alcoholism among homeless adults in the inner city of Los Angeles. *Archives of General Psychiatry*, 45: 1011-1018. **(DRUG)**
47. Lubran, B. (1989) Alcohol and other drug problems among the homeless population. *The Nation's Health*, pp. 23-25. **(DRUG)**
48. Milburn, N. and Booth, J. (1988) Drug abuse among sheltered homeless people: preliminary findings from a Washington DC sample. Paper presented at the meeting of the American public Health Association, Boston, November. **(DRUG)**
49. Robertson, M., Koegel, P., (1989) Alcohol use and abuse among homeless adolescents in Hollywood. *Contemporary Drug Problems*, 196:415-452. **(DRUG)**
50. North, C., Moore, H., Owens, C. (1996) *Go Home and Rest? The Use of an Accident and Emergency Department by Homeless People*, Shelter, London. **(GH)**
51. Fisher, K., Collins, J. (1993) *Homelessness, Health Care and Welfare Provision*, Routledge, London. **(GH W)**
52. Kershaw, A., Singleton, N., and Meltzer, H. (2000), *Survey of the health and well-being of homeless people in Glasgow*, National Statistics, London. **(GH)**
53. Scott, J., (1993), Homelessness and mental health, *The British Journal of Psychiatry*, 162:314-324. **(MH)**
54. McCabe, A., Stanyer, A., and Commander, M. (1999) Youth homelessness and mental health in Birmingham, *Social Services Research*, 4: 1-19. **(MH)**
55. Finn, William., Hyslop, J., Truman, C. (2000) Mental health, multiple needs and the police: findings from the Revolving Doors Agency Link Worker Scheme, Revolving Doors Agency, London. **(MH CRIME)**
56. Cohen, C., and Crane, M. (1996) *Old and homeless in London and New York City: a cross-national comparison*, Cambridge University Press, Cambridge, 150-169. **(GH)**
57. Dexter, R. (1990) Treating homeless and mentally ill substance abusers in Alaska. In M. Argeriou and D. McCarty (Eds) *Treating alcoholism and drug abuse among the homeless: Nine community demonstration grants*. Binghamton, Haworth Press, NY. pp.25-30. **(DRUG)**
58. Fischer, P. Estimating the prevalence of alcohol, drug and mental health problems in the contemporary homeless population, *Contemporary Drug Problems*, 16: 333-389. **(DRUG)**
59. Wright, J., and Knight, J., Weber-Bardin, E. and Lam, J. (1989) Ailments and alcohol: health status among the drinking homeless, *Alcohol Health and Research World*, 11 (3): 22-27. **(DRUG GH)**
60. Teeson, M. and Buhrich, N. (1993) Prevalence of cognitive impairment among homeless men in a shelter in Australia, *Hospital and Community Psychiatry*, 44 (12): 1187-1189. **(MH)**
61. Forst, M. (1994) A substance use profile of delinquent and homeless youth, *Journal of Drug Education*, 24 (3): 219-231 **(DRUG)**.

62. Koegel, P. Sullivan, G., Burnam, A., Morton, S. and S. Wenzel (1999) Utilization of mental health and substance abuse services among homeless adults in Los Angeles. *Medical Care*. 37 (3): 306-317. **(MH DRUG)**
63. Pilivin, I. Westerfelt, A, Wong, Y.L. and A. Afflerbach (1994) Health care status and health care utilization among the homeless, *Social Service Review*, 68 (2):237-253. **(GH)**
64. Bines, W. (1994) The health of single homeless people, Centre for Housing Policy, Discussion Paper 9, University of York, York.

Abbreviations

GH = General health

CH = Child Health

MH = Mental Health

ED = Education.

W = Welfare

APPENDIX C

Critical Summaries Of Included Studies (Type A And Type B)

Summaries Group A: Financial Costings: Quantitative Studies

A1. Culhane, D., S. Metraux, et al. (2002). "Public Service Reductions Associated with the Placement of Homeless Persons with Severe Mental Illness in Supportive Housing." Housing Policy Debate 13(1): 107-163.

Research Question: Is there a cost reduction to; shelter services costs, inpatient psychiatric costs, hospital utilisation costs, inpatient hospital costs, outpatient hospital costs, costs to the US Department of Veterans Affairs (VA) for inpatient services and incarceration costs for severely mentally ill homeless people housed via supported housing?

Methodology:

Data: The data used for the study come from administrative databases maintained by 8 different government agencies. Individuals who were placed in a supportive housing program called NY/NY (4,679 persons) were tracked through the system, two years prior and two years post. Each person placed in the housing was matched to an individual control observation with similar characteristics to assess service use in the absence of a supporting housing placement. Given the difficulty of inconsistently pairing cases and control groups, different control groups were used for different systems. The characteristics of control groups used to provide control observations were; demographics, indicators of mental illness and substance abuse and similar service use for the two year period up to the placement.

Analysis Methods:

Each analysis (across each system) followed a parallel set of procedures. Descriptive statistics compared raw pre and post intervention service use among the aggregate NY/NY group. Secondly, descriptive statistics compared raw pre and post intervention service use for the case and control groups, with paired comparison t tests used to assess whether the difference between and within the groups across intervention periods are statistically significant. Following these two analyses, the effect of a NY/NY housing placement on the reduction of post intervention service use, measured in days, is estimated with multivariate least squares regression models, using a generalised estimating equations methodology. (GEE can accommodate non independent observations such as matched pairs).

Dependent variable = difference for each observation in the number of days accrued in each service system across the pre to post intervention periods.

Independent variables = variables used to match the control groups, a set of dichotomous variables to control for the year of NY/NY placement, a set of measures for pre-period service use (including service episodes, service days consumed and cost of services calculated by service days use times average cost per diem/2), as well as measures of pre-period Department of Human Services shelter use.

The cost of housing was determined by the annualised cost per placement (annualised cost per housing unit by the average annual length of tenure) and compared with the cost savings from government services.

Area of Economic/Social Cost/Benefits: Housing, Welfare/Health, Justice

Outcome measures used:

1. mean days use of shelter services in two year period pre and post intervention
2. mean days use of hospital inpatient services in two year period pre and post intervention
3. mean days use of inpatient psychiatric services in two year period pre and post intervention
4. mean days use of hospital outpatient services in two year period pre and post intervention

5. mean days use of hospital inpatient services in two year period pre and post intervention for those registered under Veterans Affairs (VA).
6. mean days use of state corrections facilities in two year period pre and post intervention.
7. mean days use of city corrections facilities in two year period. pre and post intervention
8. mean cost of shelter services in two year period pre and post intervention
9. mean cost of hospital inpatient services in two year period pre and post intervention
10. mean cost of inpatient psychiatric services in two year period pre and post intervention
11. mean cost of hospital outpatient services in two year period pre and post intervention
12. mean cost of hospital inpatient services in two year period pre and post intervention
13. mean cost of state corrections facilities in two year period pre and post intervention.
14. mean cost of city corrections facilities in two year period pre and post intervention.
15. mean days saved through use of sheltered housing in shelter services in two year period
16. mean days saved through use of sheltered housing use of hospital inpatient services in two year period
17. mean days saved through use of sheltered housing of inpatient psychiatric services in two year period
18. mean days saved through use of sheltered housing of hospital outpatient services in two year period
19. mean days saved through use of sheltered housing of hospital inpatient services in two year period for those registered under VA.
20. mean days saved through use of sheltered housing of state corrections facilities in two year period.
21. mean days saved through use of sheltered housing of city corrections facilities in two year period.
22. mean cost of days saved through use of sheltered housing in shelter services in two year period
23. mean cost of days saved through use of sheltered housing use of hospital inpatient services in two year period
24. mean cost of days saved through use of sheltered housing of inpatient psychiatric services in two year period
25. mean cost of days saved through use of sheltered housing of hospital outpatient services in two year period
26. mean cost of days saved through use of sheltered housing of hospital inpatient services in two year period for those registered under VA.
27. mean cost of days saved through use of sheltered housing of state corrections facilities in two year period.
28. mean cost of days saved through use of sheltered housing of city corrections facilities in two year period.
29. total cost savings for government services through use of sheltered housing for the homeless

Findings:

Regression results revealed that persons placed in supportive housing experience marked reductions in shelter use, hospitalisation, and time incarcerated. Before placement, homeless people with severe mental illness used about \$40,451 per person per year in services (1999 dollars). Placement was associated with a reduction in service use of \$16,281 per housing

unit per year. Annual unit costs were estimated at \$17,277 for a net cost of \$995 per unit per year over the first two years.

Strengths:

This study provides a relatively rigorous examination of costs incurred to the VA system. While there are limitations to the methodology the research question is concise, the output measures justifiable and a general estimate of the savings to the system from supported housing clearly provided.

Gaps and Limitations:

Methodology:

The limited time series implied that there is no acknowledgment that over time costs in terms of service use may further decrease in response to regular, periodic case management, nor that the reduction pre and post may be partly attributable to higher pre-placement costs as people may have engaged in services more heavily to prepare for the placement.

A further problem is the lack of discounting over the period. While costs are denoted in terms of the base year (1999), this still fails to account for the changes in interest rates and hence the full economic cost of expenditure and savings.

Further to this, the study did not include all direct or indirect costs associated with service use by the homeless, and in this particular instance homeless veterans. Street outreach services, soup kitchens, and services provided by drop in centres were not included. Other federal homeless programs were not costed nor were services provided by nonprofits funded by public or government funds.

Additionally, social costs of homelessness were not included (victims costs, court costs and police costs, as well as the cost of accommodating the homeless in public spaces).

Finally no income supports were added or tracked.

Many of the benefits were not included, benefits to the homeless and the community that derive from the provision of housing. Aspects such as an increased quality of life for the homeless, a potential increase in the probability of employment (through the presence of a fixed address) and an increased sense of safety in the community to name but a few of the more intangible benefits.

Findings:

It is likely that in fact, the cost savings/benefits of the program were underestimated due to the above reasons.

Australian applicability:

The methodology may be applied in Australia, however it would be decidedly incomplete if nonprofit providers' indirect and direct costs were not factored in given the current contracting environment in this country.

A2. Eberle, M., D. Kraus, et al. (2001). Homelessness: causes & effects. Volume 3. The Costs of Homelessness in British Columbia. Vancouver, British Columbia, Ministry of Community, Aboriginal and Women's Services.

Research Question:

What is the cost of homelessness in terms of the British Columbia health care, social services and criminal justice systems? Would provision of stable housing for the homeless reduce costs to the above system?

Methodology:

A case history method was adopted using a cross sectional sample of homeless and housed individuals from which volunteer cases were sought. The sample of homeless included both genders, different ages and family types, different ethnicities, a range of homeless experiences, and both serious mental illness and addiction problems. Fifteen personal interviews with selected individuals 5 housed (all previously homeless but with stable

accommodation for the past three years), 10 homeless were carried out to determine, to the extent possible based on recall, their service use over the past year. Interventions included:

- Health Care: hospital admissions, hospital emergency, physician billings, prescription drugs, mental health services, ambulance services, fire emergency response and health clinics.
- Social Services: British Columbia Security Benefits, child protection, drug and alcohol treatment.
- Criminal Justice: correctional institutions, community supervision and police services.

After the interviews requests were made to government service providers seeking administrative records detailing the use of the services. Data for the previous five years were provided, with two distinct time periods-one and four years considered.

Cost estimates for the services were calculated in a number of ways. Some providers offered a specific cost per service. In other cases the provider offered an estimate of the per diem or per service cost. In other cases the consultants developed an estimate of service cost based upon published research. The community mental health services provided data allowing estimates of treatment costs per client. All costs were determined on a per client per day basis. For each of the housing options the cost of both the residential and support services are calculated on a per diem basis for comparability.

Area of Economic/Social Cost/Benefits: Health/Welfare/Justice

Outcome measures used:

1. Cost per residential housing facility and services per day
2. Average cost per homeless person of service use for one year
3. Average cost per housed person of service use for one year
4. Average cost per homeless person of service use for four years
5. Average cost per housed person of service use for four years
6. Highest and lowest total cost per homeless person of service use and shelter for one year
7. Highest and lowest total cost per housed person of service use and shelter costs for one year

Findings:

The major cost category for the homeless in the sample was criminal justice. The major cost category for the housed individuals in this study was social services, consisting primarily of income benefits. The homeless individuals in the study had annual service costs ranging from \$4,000 to \$80,000. The costs for the housed ranged from \$12,000 to \$24,000. Service and shelter costs for the homeless ranged between \$30,000 and \$40,000, and for those housed \$22,000 to \$28,000.

	Minimum (Canadian Dollars)	Maximum (Canadian Dollars)
Annual Service Costs- Homeless (H)	4000	80,000
Annual Service Cost- Domiciled (D)	12,000	24,000
Service and Shelter Costs – (H)	30,000	40,000
Service and Shelter Costs – (D)	22,000	28,000

This study suggests that cost savings in the order of 30% accrue from providing stable housing to the homeless.

Strengths

The strength of this particular study is its more holistic approach to costing homelessness across a series of public institutions. The approach provides a good example of a potentially larger survey. Methodologically, the separate examination of costs of different providers also allows the tracking of the substantial cost areas incurred by the homeless.

Gaps and Limitations:

Method:

Lack of indirect homelessness costs such as soup kitchens, employment services, community safety etc. Additionally, this study does not measure all government related services incurred by these individuals. The study uses an unrepresentative and very small sample. Finally, the control group was not matched for similar demographics, case history or similar sexual representation.

Findings:

The findings simply cannot be generalised to a larger population as the sample method was neither random nor statistically representative. There is little to indicate whether the majority of the homeless in BC have services use costs akin to the homeless in the lower end of the total costs scale in the sample. If this is in fact the case then the conclusions must be reversed (if purely financial costs are taken into account).

Australian applicability:

For the study to be viable, a much larger and geographically diverse sample would be needed. Utilising this approach would therefore require a significant commitment of research resources.

A3. Lewis, D. and P. Rowlett (1996). Estimating the Costs and Benefits of Youth Homelessness. A. Evans (Ed.) We Don't Choose to be Homeless: The Inquiry into Preventing Youth Homelessness. London, CHAR: 155-167.

Research Question: What are the possible costs and benefits to society over a two year period of a youth who becomes homeless as opposed to one who has been provided with housing benefits?

Methodology:

A simple model (for England) was constructed of the impact of potential homelessness on the financial flows associated with a young person who has no particular special needs. The model allowed estimates to be made of the costs and benefits which accrue over a two year period depending on whether the person actually becomes homeless or whether support is provided. The costs included weekly income from various sources (theft, charities, etc.) police costs per homeless person per week (based on assumption that one in ten crimes are perpetrated by the homeless and actually investigated), increased health care (on the assumption that there is a greater likelihood of usage of emergency and other more expensive forms of services for unattended conditions), weekly income support (assuming that the homeless person is re-housed after a year). The benefits were calculated at a 37% probability that they would not work during the year and if they did work they would be employed for 27 weeks. During this time they would still receive income and there would be a benefit in terms of taxation revenue which was again calculated on a weekly basis. For those who received housing benefits there would be the weekly costs of income support and housing benefits. The benefits would be in terms of income from employment (calculated for a period of 60 weeks, based on the assumption of 20% likelihood of unemployment and 15% of remaining potential work time spent unemployed as shifts occur from one job to the next).

Area of Economic/Social Cost/Benefits: Health/Welfare/Justice.

Outcome measures used:

- Total weekly benefit (to individual and employer)
- Total weekly benefit to taxpayer

Findings:

Society benefits overall by around 2,200 pounds during the period when the person initially received Housing Benefit. If instead, the person became homeless there was a cost of about 5,500 pounds over the period. The net benefit to society of making housing benefit available to a potentially homeless young person was therefore estimated to be around 7,700 pounds over a two year period, the benefits being derived from increased taxable income and reduced unemployment benefits.

If the question is viewed solely from the tax payers' perspective the difference is smaller but still significant. Costs to the taxpayer amount to 1,700 pounds over the two years if the person received Housing Benefit and 4,100 otherwise, a saving of around 2,400. In other words, the analysis suggested that providing Housing Benefit in this situation actually reduces costs to the tax payer by over 50% over a two year period.

Strengths:

The main strength of this particular study was the introduction of loss of taxation and income as a cost of homelessness.

Gaps and Limitations:

Method:

The assumptions underpinning the cost benefit analysis are strong (unemployment period, wages etc.) and hence require a number of scenarios to be presented to provide a more comprehensive assessment of the potential costs and benefits. A further limitation to this particularly methodology is the absence of discounting with respect to costs and this oversight makes this a somewhat limited cost Benefit Analysis.

Findings:

As mentioned above the assumptions are strong (particularly for the instance of homelessness); this being the case a relaxation or change in any of the assumptions is likely to cause a substantial deviation in the results.

Australian applicability:

This study approach could be applied at the Commonwealth level in Australia, focusing on the rent assistance program delivered through the social security system and selected state jurisdictions in areas like criminal justice. If however, this type of study was to be adopted, costs associated with the implementation of a program that provides greater housing benefits to a greater number of potential homeless people must be recognised. The value of this type of costing is limited to the extent that not all homeless people apply for income support, due in part to the inability to register a permanent address. The costs required (at least initially) to improve information regarding benefits as well as accessibility are likely to be high. Estimating these expenses will be difficult. In the Australian context there are also limited data on the informal/illegal income sources of homeless people. Further to this, given that there are a number of permutations of possible costs and benefits under various assumptions for a simple case of a young homeless individual who has no special needs, there are likely to be an even larger number of permutations and cases for the rest of the homeless population with special needs.

A4. Pomeroy, S. and W. Dunning (1998). Housing Solutions to Homelessness: Cost-Benefit Analysis of Different Types of Shelter. Preliminary Assessment. Toronto, Mayor's Homelessness Action Task Force.

Research Question:

What are the costs of a number of housing solutions for the homeless in Toronto, Canada?

Methodology:

The report provided estimates of the costs for a variety of solutions that were currently available for the homeless and at risk populations. The report developed estimates for a simplified set of solutions that could be provided in the future. This set included three housing

options (communal dwelling, mini-suite/single room and fully self contained unit) and three levels of supports (no support, light support, moderate and intensive support). This analysis also included costing existing options (especially for support services) as well as new options that appeared to have the potential to cost-effectively address the needs of some segments of the homeless and at risk populations. The housing component was relatively fixed and included the physical structure and maintenance, the support services however, varied according to the intensity required. Housing costs were largely based on the costs of existing housing programs (total costs) while services were determined by the government subsidy costs. Thus, these costs are based on current revenues received by the provider excluding those received from its clients (in the form of rents, user fees and donations).

Area of Economic/Social Cost/Benefits:

Housing, Health/Welfare

Outcome measures used:

costs per program

Findings:

The result is that there is very little difference in the costs of the various housing options. Costs are often similar to the shelter component of welfare, indicating that rents are determined by the ability of clients to pay.

On the other hand, costs for support services vary considerably, which reflects the range of types and intensities of services that are provided.

Annual Cost of Housing and Support Services

Level of Support Services

Housing Platform	No Supports	Light	Moderate	Intensive
Private Room	\$3,600-\$5,000	\$4,600-\$8,500	\$7,600-\$10,000	\$13,600+
Mini-Suite	\$4,000-\$5,500	\$5,000-\$9,000	\$8,000-\$10,500	\$14,000
Fully Self-Contained	\$8,250-\$18,000	\$9,250-\$21,500	\$12,250-\$23,000	\$18,250

Strengths:

The strength of this particular study is that it provides a range of costings for various accommodation and services options. Most studies in this area while examining the effectiveness of various housing options already in existence fail to provide an examination of options that are possible, yet not already established.

Gaps and Limitations:

Method:

This is fundamentally a static analysis as estimates are derived largely from existing programs. The key problem with such a study is that the (subsidy) costs are likely to change substantially over time as government programs change, as well as accessibility to credit and thus interest rates.

Findings:

As above

Australian applicability:

This was not intended to be a holistic study of the costs of homelessness but rather to focus on current potential costs to the government of housing the homeless. A study of total government costs would have to be far wider in scope and actually cost each and every type of housing currently in existence for the homeless. Using this methodology however would only cost the government budget component of homelessness.

A5. Rosenheck, R. and C. Seibyl (1998). "Homelessness: Health Service Use and Related Costs." Medical Care 36(8): 1256-1264.

Research Question:

What is the health service use and costs for homeless and domiciled veterans hospitalised in psychiatric and substance abuse units at Department of Veteran Affairs (VA) nationwide in the United States?

Methodology:

A national survey of residential status at the time of admission was conducted on all VA inpatients hospitalised in acute mental health care units on a specific day. According to the survey, the homeless were registered as either homeless, doubled up (living temporarily with family members or friends) or domiciled. Survey data was merged with computerized workload databases to assess service use cost during the six months before and after the date of discharge from hospitalisation. Data on the use of VA health services were obtained from two national VA computerised files on inpatient and outpatient treatment. Health care costs were determined by multiplying the units of service by the average national cost of each service (estimated using the VA's national Cost Distribution Report, which distributes both direct and indirect costs to each health care program at each facility). To more precisely estimate the overall impact of homelessness on health care costs an analysis of covariance was used to compare costs between the homeless and doubled up and domiciled VA service users, with adjustments made for differences in sociodemographic, income and diagnostic characteristics.

Area of Economic/Social Cost/Benefits:

Health

Outcome measures used:

1. average length of stay of inpatient general psychiatric patients for homeless, doubled up or domiciled individuals.
2. Average annual cost of VA care for homeless veterans with psychiatric or substance abuse
3. Average annual cost of VA care for domiciled veterans with psychiatric or substance abuse
4. The difference between the average annual cost of VA care for homeless veterans with psychiatric or substance abuse and the Average annual cost of VA care for domiciled veterans with psychiatric or substance abuse.
5. Psychiatric inpatient days before discharge for literally homeless, doubled-up and domiciled veterans
6. Psychiatric outpatient contacts before discharge for literally homeless, doubled-up and domiciled veterans
7. Psychiatric inpatient days after discharge for literally homeless, doubled-up and domiciled veterans
8. Psychiatric readmission within 30 days for literally homeless, doubled-up and domiciled veterans
9. Psychiatric or outpatient contacts after discharge for literally homeless, doubled-up and domiciled veterans
10. Substance abuse inpatient days before discharge for literally homeless, doubled-up and domiciled veterans
11. Substance abuse outpatient contacts before discharge for literally homeless, doubled-up and domiciled veterans
12. Substance abuse readmission within 30 days for literally homeless, doubled-up and domiciled veterans

13. Substance abuse outpatient contacts after discharge for literally homeless, doubled-up and domiciled veterans

14-26. Costings for all of the above

Strengths:

This study provided a relatively rigorous examination of costs incurred to the VA system. While there are limitations to the methodology, the research question is concise, the output measures justifiable and a defensible estimate of the additional costs incurred for the homeless clearly provided.

Findings:

Combining patients from general psychiatry and substance abuse programs, the average annual cost of care for homeless veterans, after adjusting for other factors, was \$27,206; \$3,196 higher than the cost of care for domiciled patients. The explanation for this increased cost for homeless veterans derives from the greater use of inpatient services both pre and post general psychiatry programs, as well as the greater use of inpatient services both pre and post discharge from substance abuse programs.

Gaps and Limitations:

Method:

The main limitation was that the cross sectional nature of the sample resulted in an over representation of acute care patients with high levels of service need, as opposed to those who were in long term inpatient programs.

Findings:

It is difficult to discern if the findings are applicable to other health care systems. In order to ascertain the validity of findings across the board, other comparable studies are required of treatment of homeless persons in other safety net health care systems.

Australian applicability:

The intensity of resources required to perform this study, implies that, unless there are institutions and health care systems that perform annual surveys of this nature it is simply not tenable to provide such an analysis across the spectrum of health and other service systems used by the homeless. This would ultimately be dependent on the administrative data available.

A6. Salit, A., E. Kuhn, et al. (1998). "Hospitalization Costs Associated with Homelessness in New York City." The New England Journal of Medicine 338(24): 1734-1740.

Research Question:

What are the hospitalisation costs associated with homelessness?

Methodology:

Discharge data on 18,864 homeless patients and 383,986 non-maternity low income patients were obtained from New York City's public and private hospitals. The homeless patients' diagnoses and lengths of stay were compared with those of the low income patients. Comparisons of the length of stay were adjusted for the severity of illness, co-existing illnesses prevalent among the homeless (substance abuse, mental illness and HIV) and demographics. The homeless were identified as patients whose addresses were recorded by staff as homeless, undomiciled, in shelter type housing, or whose addresses corresponded with a shelter address (excluding pregnant women). The mean length of stay for the homeless, in public and private hospitals was determined after adjusting for patients' characteristics (diagnosis related group, principle diagnosis, co-existing illnesses and demographic characteristics) using analysis of covariance. Those not in the identified categories of DRG (diagnosis related groups including AIDS, respiratory illnesses, trauma, skin conditions, substance abuse and mental illness), as well as those who terminated their stay prematurely (death, discharges against medical advice etc.) were not included, such that

13,690 homeless patients, 161,397 public hospital patients and 94,473, private hospital patients remained.

To eliminate outliers, hospital days were truncated at 150 days. Data was also truncated and analysed at 60 days. For a given medical service the cost per day was obtained by multiplying the cost per day for public hospital patients for all public patients. For those patients who used the facilities post 60 days, their costs were calculated at 60% marginal cost rate to the average cost per day.

Area of Economic/Social Cost/Benefits:

Health

Outcome measures used:

Adjusted Mean Length of Hospital Stay according to the principle diagnosis category.

Findings:

The homeless patients stayed 4.1 days, or 36 % longer per admission on average than other patients, even after adjustments were made for differences in the rates of substance abuse and mental illness and other clinical and demographic characteristics. The costs of the additional days per discharge averaged \$4,094 for psychiatric patients, \$3, 370 for patients with AIDS and \$2,414 for all types of patients.

Adjusted Mean Length of Hospital Stay According to Principle Diagnosis Category (PDC).

PDC	Homeless Patients	Public Hospital Patients	Private Hospital Patients	Difference between homeless and public hospital patients	Difference between homeless and private hospital patients
All Categories	15.6	12.5	10.5	3.1	5.1
Mental Illness	36.2	29.9	21.3	6.4	14.9
AIDS	25.4	20.1	19.4	5.3	6.0
Surgery	17.0	11.5	9.9	5.5	7.1
Trauma	6.7	5.7	4.9	1.0	1.8
Medicine	10.7	9.1	8.8	1.6	1.9
Substance Abuse	9.2	9.3	6.8	-0.1	2.4

(Salit et. al, p.1738)

Strengths:

The strength of this study is that it clearly contrasts the costs involved in servicing the homeless to the domiciled population. The research question is clear and the methodology rigorous.

Gaps and Limitations:

Method:

A main limitation of this study is the exclusion of pregnant women which is likely to have caused a gender bias in the sample. Another important limitation is that the study costs a specific episode of patient care; repeated use of the health system by homeless people with chronic health care needs is excluded.

Findings:

The applicability of the findings to the larger population of homeless persons must acknowledge the limitation mentioned above.

Australian applicability:

This type of study would be replicable in an Australian context if the respondents could be tracked across the services used. Again, it is a matter of administrative data being available and whether these individuals have common identifiers in the various systems. Additionally, different control groups would be required. A further issue is whether these individuals who use these services are in fact, really representative of the homeless community. This study, like many included in this review, focuses on the situation of the single adult. Families, especially single parent families, tend to be ignored.

A7. Proscio, T. (2002) Supportive Housing and Its Impacts on the Public Health Crisis of Homelessness. Corporation for Supportive Housing.

<http://www.csh.org/supportiveimpact-final.pdf> [Accessed 27/08/02]

Research Question: What were the costs of utilisation of; emergency room, inpatient stays and psychiatric health care for one to two years prior to tenancy in Supportive Housing of participants in the California Health, Housing and Integrated Services Network, compared to the costs incurred one year after moving in?

Methodology:

The data was based on individuals who moved into two supportive housing (SH) arrangements in San Francisco at least 12 months prior to the data analysis performed in March 1999. The data was sourced from San Francisco General Hospital on inpatient and emergency room care and from San Francisco Community Mental Health Services on mental health care. Researchers from UC Berkley compiled medical care data on 253 residents of the two SH programs and medical health care data on a subset of residents between 1992 and March 2000. Total costs were either calculated on;

1. an average costs per person per health facility times the average annual visits to the facility or;
2. average costs per person per health facility times the total days usage of facilities for the sample. These costs were compared pre and post placements.

Area of Economic/Social Cost/Benefits:

Housing/Health/Welfare

Outcome measures used:

1. Average annual visits to SFGH Emergency room (2 years prior, 1 year prior and 1 year post) (n=204)
2. Cost of average annual visits to SFGH Emergency room (2 years prior, 1 year prior and 1 year post)
3. Annual total hospital inpatient days (1 year prior, 1 year post) (n=132)
4. Annual cost of total hospital inpatient days (1 year prior, 1 year post, 2 years post)
5. Annual total days of residential mental health treatment (2 years prior, 1 year prior, 1 year post) (n=95)
6. Annual cost of days of residential mental health treatment (2 years prior, 1 year prior, 1 year post)

Findings:

Average annual visits to the SFGH Emergency room declined from 2.24 to 0.99 two years pre and one year post placement, reducing health care costs from an average of \$107, 642 to 54,242 per annum. Annual total hospital inpatient days decreased by nearly 57% in a single year from 531 to 239. Annual total days of residential mental health treatment fell to zero from 316 two years prior thus reducing annual cost of days of residential mental health treatment from \$39, 195 to zero.

Strengths:

This study provides a substantial, uncomplicated assessment of the benefits of housing with respect to the reduction in expensive government service utilisation in a particular health area.

Gaps and Limitations:*Method:*

This is a very simplistic assessment of reductions in health costs, which does not take into account alternative service providers and hence future potential reductions in cost. The study focused on selected health costs only. It is not clear that the costs selected were the most important ones, either for the study group or the broader homeless population.

Findings:

The applicability of the findings to the larger population of homeless persons must acknowledge the limitation mentioned above.

Australian applicability:

This may be replicable in an Australian setting provided historical data of tenants is available from an appropriate sample of community housing projects – e.g. Victorian public tenants from segment 1 of the waiting list. Alternately, an Australian wide sample could be drawn from a population of recently housed homeless, though again, relevant administrative data would be required, supplemented by self-reported data on informal service use.

A8. University of Pennsylvania Centre for Mental Health Policy and Services Research, Anderson Consulting LLP, et al. (2002) Connecticut Supportive Housing Demonstration Program Evaluation Report. The Corporation for Supportive Housing.
<http://www.csh.org/pubs.html> [Accessed 28/08/02]

Research Question:

Does stable housing reduce the need for expensive health and social services over time?

Sub Questions:

Does this housing enhance quality of life? Were the projects financially stable over the three year period? What happens to housing prices in the surrounding areas of newly established supported housing projects?

These sub questions will not be addressed in the following summary given their tenuous relationship to costing homelessness.

Methodology:

The evaluation examined detailed data on patterns of tenants' service utilisation in Connecticut, USA. The population of tenants consisted of those who were accepted into the 281 units of service enriched rental housing for homeless and at risk populations under the Connecticut Housing Demonstration Program. For the analysis five sub-samples were used: 430 tenants who entered the housing, completed the enrolment form and consented to be in the evaluation; 54 tenants for whom there was 30 months worth of data; 126 tenants who had claimed Medicaid services over the period of five years irrespective of whether they remained in the housing over the period; a sample of 79 long-stay Medicaid tenants who stayed in the housing for at least 3 years; and a sample of tenants who were part of a "Shelter plus Care" program who agreed to take part in the evaluation and for whom there were Medicaid data. With respect to Medicaid Service utilisation, costs were ascertained according to reimbursements over a six month period. This data was then divided by the number of people who used the service to determine average costs for the service. This average cost was then applied to the various sample averages to ascertain average costs for clients in the program. Additionally, the behavioural health status, employment status, income sources and general well being of the 30 month evaluation sample were ascertained via a 6 month periodic self reporting survey.

Area of Economic/Social Cost/Benefits:

Health/Welfare

Outcome measures used:

1. Average Medicaid reimbursement for Substance Abuse
2. Average Medicaid reimbursement for Medical inpatients.
3. Average Medicaid reimbursement for Pharmacy Homecare
4. Average Medicaid reimbursement for Homecare.
5. Average Medicaid reimbursement for psychiatric outpatient services
6. Average Medicaid reimbursement for substance abuse outpatient services
7. Average Medicaid reimbursement for medical outpatient services
8. Average Medicaid reimbursement for case management assessment and monitoring
9. Average Medicaid reimbursement for physician care
10. Average Medicaid reimbursement for care by other providers
11. Average Medicaid reimbursement for dental care.
12. self reported health status
13. employment status
14. income sources
15. self reported well being and sociability.
16. Tenant turnover

Findings:

The tenants decreased their utilisation of acute and expensive health services (predominantly medical inpatient services). There was also an increase in tenants' utilisation of necessary on-going health care and support. Additionally, high rates of satisfaction were registered amongst tenants, while a marginal increase in employment was observed. In total, the development of the projects yielded \$72 million in direct and indirect economic and fiscal benefits.

Strengths:

This is a relatively thorough examination of the impact of housing on health services costs, service utilisation, quality of life and employment. The particular strength of this study is that it examines quantitative as well as qualitative impacts of housing the homeless. Health usage is divided into acute and ongoing, over time. The study adopts a longitudinal approach with 6 month self-reporting surveys.

Gaps and Limitations:

Method:

The administrative data used comes from a single provider and hence does not really account for the full potential cost savings through the provision of housing to this homeless sub-group.

Findings:

The applicability of the findings to the larger population of homeless persons must acknowledge the limitation mentioned above

Australian applicability:

As highlighted in the summary for Proscio (2002) this may be replicable in an Australian setting provided historical data of tenants is available from an appropriate sample of community housing projects. Alternately, an Australian wide sample could be drawn from a population of recently housed homeless, though again, administrative data would be required.

Additionally, given the prevalence of usage of nonprofit provision of services, pre and post service use from these providers would be required to more fully estimate the potential cost savings of housing provision.

Other comments:

This study is somewhat unique in that it acknowledges the impact of housing on rents and land prices while also calculating the full running costs of the projects. If this type of study was to be replicated then the methodology adopted provides a better example for proxying true economic costs and benefits of housing provision, than the other studies included in this review.

A9. Dickey, B., E. Latimer, et al. (1997). "Housing Costs for Adults who are Mentally Ill and Formerly Homeless." Journal of Mental Health Administration Summer: 291-305.

Research Question:

What are the costs associated with evolving consumer households or independent living apartments?

Methodology:

112 Clients of the Massachusetts Department of Mental Health living in psychiatric shelters were randomly assigned to one of two housing types; evolving consumer households (ECH) or independent living (IL) apartments. For the next 18 months each client was followed so that the cost of publicly funded treatment, case management and housing (including housing support staff) could be collected and compared. Non-project costs were assigned per unit, including: costs of shelter use, other department housing, jail, specialised substance abuse recovery houses, hospital admissions/treatment costs, etc., all calculated on an average per diem basis. With respect to ambulatory acute treatment, the Medicaid payment rate was used. The cost per unit of case management time was calculated by summing the total number of hours spent working directly or indirectly for all clients in the study, as recorded in the case management logs. The total number of hours was then divided into the total expenditures associated with project-funded case management: salaries, fringe benefits, payroll tax, administration/supervision, and agency overhead.

Costs per unit were used to calculate mean-per-person costs during the study period. The amount of each type of housing or the amount of each treatment used was multiplied by the appropriate cost per unit to arrive at the total cost of treatment and housing for each person. These costs were summed for each person, so that total housing costs, total treatment costs, and total case management costs provided a complete picture of the annual costs per person. The denominator used to calculate mean costs was the number of individuals assigned to each housing type: 61 for expenditures in the ECH column and 51 for expenditures in the IL column.

Area of Economic/Social Cost/Benefits:

Housing/Health/Welfare

Outcome measures used:

mean annual costs per person expenditures for treatment, case management and housing for IL and ECH programs.

Findings

See Table, below and following text.

Table 3
Comparison of Mean Annual Treatment, Case Management,
and Housing Costs by Original Housing Assignment

Expenditure Type	ECH ^a (N = 61)		IL ^b (N = 51)		p-Value ^c
	M	SD	M	SD	
Treatment					
Institution					
Psychiatric	\$6,959	\$11,109	\$11,409	\$16,184	
Substance abuse	\$1,574	\$4,512	\$1,110	\$5,424	
Forensic	\$458	\$3,579	\$0		
Medication					
Individual therapy	\$399	\$481	\$367	\$607	
Group therapy	\$24	\$88	\$19	\$62	
Clubhouse	\$1,244	\$2,321	\$1,038	\$1,614	
Day treatment	\$331	\$1,645	\$344	\$1,995	
Crisis visits	\$75	\$145	\$91	\$161	
Total treatment costs	\$11,293	\$14,050	\$14,541	\$17,027	.86
Case management	\$2,312	\$1,093	\$2,255	\$1,023	.78
Housing					
McKinney project	\$39,718	\$15,667	\$9,221	\$5,013	
Shelter	\$1,306	\$3,989	\$2,682	\$5,456	
DMH ^d group residence	\$1,167	\$3,526	\$428	\$2,213	
Domiciliary care	\$201	\$1,572	\$0		
Jail	\$231	\$1,308	\$155	\$769	
SA ^e rehabs	\$0		\$556	\$3,392	
Other ^f	\$206	\$1,109	\$0		
Total housing costs	\$42,829	\$12,106	\$13,042	\$6,535	.0001
Total annual expenditures	\$56,434	\$15,834	\$29,838	\$21,111	.0001

a. ECH = Evolving Consumer Household.

b. IL = Independent Living.

c. T tests on logged data.

d. DMH = Department of Mental Health.

e. SA = substance abuse.

f. Other housing includes the YMCA, the Salvation Army, and dormitories.

When all per person expenditures for treatment, case management, and housing were summed, the mean annual cost per person for those who were assigned to an IL apartment, \$29,838, was significantly less than the mean of \$56,434 for those assigned to ECHs. Of the total costs, housing represented about 44% for those assigned to apartments and 76% for those assigned to ECHs, a difference accounted for largely by the ECH staffing costs.

Because the follow-up period ended before a steady state of expenditures could be observed in all the ECH houses, expenditures were assumed to have reached the lowest monthly expenditure from the most "successful" house, \$1,835 per person. (The most successful house was the one that, in the judgment of project anthropologists, most faithfully implemented the ECH model. It is also the one that achieved the lowest staffing and expenditures.) Substituting this figure for the actual monthly housing costs when calculating the mean housing expenditures per person during the study period, annual housing costs per person for ECH residents dropped to \$ 17,748 annually. Thus, the long-run average cost in ECHs may be far less than in this study, reducing the difference between ECH and IL mean annual expenditures (housing, treatment, and case management) to less than \$5,000 a year. But even under this most favourable scenario, ECHs remained more expensive than IL

apartments by about one-third. Treatment and housing outcomes, as reported by clients and case managers, showed no differences between those assigned to ECHs or IIs.

Comparison of Expenditures: Those Who Left Assigned Housing and Those Who Did Not. There were large differences in treatment costs between those who remained in assigned housing (n = 68) and those who moved out (n = 44). Remaining where placed (regardless of the assignment) was associated with much lower annual treatment expenditures per person (x = \$8,773, Standard Deviation = \$12,333 versus. x = \$18,952, Standard Deviation = \$17,832, p = .000). Higher treatment costs were almost entirely due to more days institutionalised for those who left their assigned housing. Case management costs, housing costs, and total annual expenditures per person were not significantly different between those who stayed and those who left

Modest negative correlations were found between mean annual treatment expenditures and percentage time housed and housing stability.

Strengths:

The study attempts to examine the costs involved in two alternative housing options for mentally ill people at risk of being homeless. The strength of this study is that it not only looks at costs in terms of provision of housing and services but also in terms of expenditure on services for those who remained in the program, as opposed to those who did not. This type of case study has the advantage of not only examining the costs of homelessness but also the cost effectiveness of alternate models of housing provision.

Gaps and Limitations:

Method:

The sample size becomes a problem in the analyses of treatment use and costs, an area of study that is better carried out on larger samples. Distributions of treatment costs are always skewed, requiring transformation, but even transformations cannot entirely remove the effects of an outlier (which is more problematic in smaller data sets). The small sample also limits the ability to detect cost differences because of the large standard deviations.

The division of staff personnel into research, clinical, or administrative roles is somewhat arbitrary. It is important to be able to adequately account for staff time in the construction of the figures for cost per unit; however, in fact, roles are sometimes imprecisely defined or overlapping, especially among mid-level project staff.

Findings:

As above

Australian applicability:

This study be replicable in an Australian environment however, its significance should only be as a pre-cursor to a larger study. The limitation of this study to a wider Australian context lies in its focus on costing two projects that house and service the homeless, without taking into account any costs associated with services and shelter for those not currently in more permanent housing

A10. Pinkney, S. and S. Ewing (1997). Responding to Youth Homelessness: The economic costs and benefits of school based early intervention. Melbourne, Centre for Youth Affairs Research and Development in association with the Queen's Trust for Young Australians.

Research Question/s:

What are the potential net benefits of school based early intervention for homeless youth?
What are the economic costs of homeless youth?

Methodology:

Data was used from the 1994 national census of secondary schools and colleges on the extent and nature of homelessness in the student population (MacKenzie & Chamberlain, 1995). The census researchers estimated that 25,000 young people experienced some form

of homelessness in 1994. Based on this figure the following costs and benefits were enumerated using an output based approach to determine the economic costs of homelessness:

1. Costs of an early intervention strategy. This was calculated in terms of student welfare officers costs.

Primary Costs attributable to homelessness

2. Production Loss due to premature school leaving. This study used the potential loss in lifetime earnings as a proxy for loss of production arguing that the true economic value of the work is determined by the market in the form of wages. The fact that potential lifetime earnings are substantially reduced by a limited education, supports the rationale that homelessness causes production losses. This loss was calculated as the lifetime earnings lost (average annual lifetime earnings * average working life*discount rate*earnings increment of finishing year 12) from the students who potentially would have completed year 12 as well as those who would have completed university (as above *additional increment for completing university) had they not been homeless.

4. Net benefit at 50% effectiveness (cost of strategy-primary costs of homelessness*0.5)

5. Break even effectiveness level

Primary and secondary Costs attributable to homelessness

6. Health related costs: The health related costs are calculated based on the annual health care expenditure per person * proportion of the homeless likely to become chronically homeless* assumed percentage increase in health costs associated with homelessness* number of years likely to be spent homeless (40) discounted. In addition, the cost of the long term homeless (several months of homelessness) is added based on the formula above with a decidedly smaller homeless career used (2 years).

7. Crime and criminal justice related costs. In a similar vain to health related costs the crime and criminal justice related costs are estimated (for the chronically and long term homeless) based on estimates of the proportional representation of homeless youth amongst juvenile offenders * annual cost per juvenile offender*number of years likely to be spent homeless.

8. Net benefit at 50% effectiveness

9. Break even effectiveness level

Area of Economic/Social Cost/Benefits:

Cost Benefit Analysis/Cross sectoral: Health, Justice, Education, lifetime income.

Outcome measures used:

1. Costs of an early intervention strategy (in terms of student welfare officers costs)

2. Production Loss due to premature leaving

3. Primary potential net benefit

4. Net benefit at 50% effectiveness

5. Break even effectiveness level

6. Health related costs

7. Crime and criminal justice related costs

8. Total Secondary Costs

9. Total primary and secondary costs

10. Total potential net benefit

11. Net benefit at 50% effectiveness

12. Break even effectiveness level

Findings:

The final findings are that total primary and secondary costs of youth homelessness in Australia were estimated to be \$573,890,006. The total net benefit of placing social workers in schools to deal with homeless issues would be \$473,980,006 in 1994 dollar terms. In the final assessment, it is estimated that the program would only have to be 21.1% effective to break even.

Strengths:

The strength of this study lies in its enumeration of costs in terms of lifetime income. While there are a large number of assumptions required for this type of study, it is the only Australian study found that examines homelessness in terms of loss of lifetime income both to the individual and to the public via taxation.

Gaps and Limitations:*Method:*

The limitations within the methodology are those common to most cost benefit analysis, that is, the assumptions underlying the costings. While Pinkney and Ewing (1997) use decidedly conservative estimates, their annual costings for criminal and health costs are based on old data. Indeed, their basis for proportional representation within the health and criminal justice systems are based on data prior to the study year. Furthermore, it must be noted that the methodology is not consistent. Costings based on potential loss in productivity in the form of the impact on lifetime earnings are used to determine the costs of leaving schooling while the crime and health care costs are based on estimates of the direct cost of these services for the year.

Findings:

While the findings are in line with other studies of this nature, they suffer the same weaknesses that characterise this particular methodology.

Australian applicability:

The greatest problem with the application of this particular study is that it is all based on future potential increases in costs as a result of youth homelessness within the period. The difficulty arises when you begin to examine a population that is currently homeless and not potentially homeless. Examining losses of lifetime income, future health costs and crime within this methodology cannot cater for those who are already in this state and incurring costs. To do so would require substantial data on those who are currently homeless, adjusting for age, time spent homeless, current health conditions etc.

A11. Weinstein, B. and T. Clower (2000). The Cost of Homelessness in Dallas: An Economic and Fiscal Perspective, Centre for Economic Development and Research, University of North Texas, Texas.

Research Question:

What are the economic costs of homelessness in Dallas with respect to property values and service expenditure?

Methodology:

This study comprised two sections. The first concentrated on property valuation per metre in the Southern and Northern sectors of Dallas city. The impact on the Southern sector of the city in terms of the concentration of homeless persons and shelters is ascertained via a comparison of the cost per square feet of land in the two sectors. Additionally, estimated annual tax losses due to lower average property values were ascertained. The second section examined the outlays for homeless persons in terms of the service provision costs of providers. The methodology varied from organisation to organisation yet included in the costs are both fiscal expenditures outlaid in 1999-2000 by the Department of Environmental and Health Services as well as homeless program related outlays by non-profit providers; further to this, costs born by the courts and jails are calculated. Each provider was responsible for calculating the costs.

Area of Economic/Social Cost/Benefits:

Welfare/Health/Crime.

Outcome measures used:

1. Total public and private fiscal costs.
2. Estimated annual tax revenue losses due to lower average property valuations.

Findings:

It was found that over 20 million dollars was spent annually by public and private providers to service Dallas's 4,000 homeless. Additionally, it was found that 4.1 million dollars in tax revenue was lost due to depressed land prices in the southern Sector.

Strengths:

The primary strength of this research lies in its costings of non-profit provision. It is somewhat unique in its consideration of both public and private provision of services to the homeless to ascertain a more reflective indication of financial costs to the public of homelessness. A further strength of this research is that it focuses on the general homeless population, rather than a sub-population, as is often the case.

Gaps and Limitations:*Method:*

The problem with the methodology is that the basis of the calculations of the outlays by the various service providers is unknown and likely to be inconsistent.

Findings:

As above.

Australian applicability:

This methodology is one of the more applicable to the Australian context, given its inclusion of the outlays of various private providers, as well as government providers. It provides a more holistic costing than many of the other studies. However, the costing by the various agencies would have to be consistently applied across all Australian providers.

A.12 Rosenheck, R., P. Gallup, et al. (1993). "Health Care Utilization and Costs After Entry Into and Outreach Program for Homeless Mentally Ill Veterans." Hospital and Community Psychiatry 44(12): 1166-1171.

Research Question: What is the impact of an outreach and residential treatment program for homeless mentally ill veterans on service utilisation and cost of health care services provided by Veterans Affairs?

Methodology:

1,758 Veterans qualifying for the VA Homeless Chronically Mentally Ill (HCMI) Veterans Program at nine Veteran Affairs program sites were assessed. Demographics, duration of homelessness, mental health status and mode of entry into the program were recorded and collected for those entering the program at the nine locations during the period December 1987 and October 1988. The veterans' length of participation in the program and their total number of clinical contacts were documented through quarterly clinical summaries. Residential treatment services provided through the program were documented on structured discharge summaries completed at the end of every episode of treatment. Data on the veteran's use of VA health services were obtained from 3 national VA computerised files; the patient treatment file for inpatient treatment, the outpatient file for outpatient treatment, and the extended file for domiciliary treatment. Social security numbers were used to link data from clinical assessments and the national computerised files. Health care costs were determined by multiplying the units of service by the site specific cost of each service. Changes in use of services and cost of services from the year before initial contact with the program to the year after, were analysed by t test. Multivariate analysis was then used to

examine the relationship of these changes to indicators of clinical need and to participation in the outreach program.

Area of Economic/Social Cost/Benefits: Health

Outcome measures used:

1. Average inpatient days per veteran one year before initial contact with the HCMI program
2. Average domiciliary days veteran one year before initial contact with the HCMI program
3. Average outpatient visits per veteran one year before initial contact with the HCMI program
4. Average cost of inpatient services per veteran one year before initial contact with the HCMI program
5. Average cost of domiciliary services per veteran one year before initial contact with the HCMI program
6. Average cost of outpatient services per veteran one year before initial contact with the HCMI program
7. Average cost of case management per veteran one year before initial contact with the HCMI program
8. Average cost of residential treatment per veteran one year before initial contact with the HCMI program
9. Average inpatient days per veteran one year after initial contact with the HCMI program
10. Average domiciliary days veteran one year after initial contact with the HCMI program
11. Average outpatient visits per veteran one year after initial contact with the HCMI program
12. Average cost of inpatient services per veteran one year after initial contact with the HCMI program
13. Average cost of domiciliary services per veteran one year after initial contact with the HCMI program
14. Average cost of outpatient services per veteran one year after initial contact with the HCMI program
15. Average cost of case management per veteran one year after initial contact with the HCMI program
16. Average cost of residential treatment per veteran one year after initial contact with the HCMI program

Findings:

After entry into the program, use of domiciliary and outpatient services increased substantially. Total annual costs to the VA increased by 35% from \$6,414 to \$8,699 per veteran per year. Veterans with concurrent psychiatric and substance abuse problems used fewer health care services than others.

Variable	Year Before	Year After	Change	t stat
Inpatient Days	18.6	17.6	-1.0	1.1
Outpatient Days	6.1	16.2	10.1	14.2
Domiciliary Days	9.9	26.7	16.8	14.2
<u>Cost of services</u>				
Inpatient	5,750	5,591	-159	0.6
Domiciliary	249	663	414	7.0
Outpatient	414	1,015	601	13.7
Case Management	-	315	315	

Residential Treatment	-	1,115	1,115	
Total Costs	6,414	8,699	2,285	7.4

Strengths:

This study provides a relatively rigorous examination of costs incurred to the VA system following the introduction of a specific program for the chronically mentally ill homeless. While there are limitations to the methodology the research question is concise, the output measures justifiable and a reasonable estimate of greater efficiency in utilisation of service from the program clearly provided.

Gaps and Limitations:

Method:

The study failed to include data on service use from non-VA providers hence any change in usage of these services was not accounted for. The lack of this type of data implies that the overall impact of the program cannot be adequately assessed, only the impact on VA services.

Findings:

Given the absence of a control group, no definitive statement may be made about the impact of the program on utilisation of the services pre and post program. It cannot be ruled out that the individuals in the study would have increased utilisation without the program. The study does not assess the net change pre and post entry to the program.

Australian applicability:

This study may be applied in an Australian context, once again, provided the administrative data is available. It may be advisable in an Australian environment to attempt to collect data from other non Veteran Affairs providers. It is currently uncertain, however, whether an analysis of such a sub-grouping of homeless persons in Australia is worthwhile and/or representative of the larger population. It is not clear that the issue of veterans' homelessness is a major issue and policy concern in Australia.

A13. Agrawal, N. (1988). "The Economic Effects of Public Housing." Economic Record 64(187): 254-267.

Research Questions:

What are the dollar values of the public housing programs to their direct beneficiaries?

What cost is incurred by tax payers to provide these benefits?

How much better or worse housing do public tenants occupy than they would have occupied in the absence of the program?

How does tenant benefit vary amongst different types of families defined on the basis of the age of the household head, and the number of children and adults in the household?

Methodology:

A general equilibrium model (DeSalvo, 1971,1975; Olsen, 1972 and Murray, 1975) using an estimated indifference map was used to calculate the value of a government program to each direct beneficiary. The following assumptions are used to facilitate the study; there are two composite commodities called housing services and other goods, the market for these commodities are perfectly competitive and in long run equilibrium; the long run supply curves in all markets are perfectly elastic and information and transport are costless. Also assumed is that there is no difference in the quantities of other public services and that the differences in taxes do not affect the tax payments of families in public housing; public housing tenants receive no other subsidies in kind, and finally that occupants of public housing would choose the same job and work the same number of hours under all alternatives considered.

With respect to measuring costs born by taxpayers, the cost incurred is equal to the excess of the cost of providing public housing units over the rent collected from public housing tenants. This cost can be separated into the direct subsidy, the administrative cost, and the marginal welfare cost of raising funds with distorting taxes. The subsidy however can only be estimated. This is done using the service flow method. Using this method, the direct cost is measured as the difference between the annual cost of the flow of housing services provided to public housing tenants and the actual rent paid by these tenants. In this study the costs of occupying public dwellings are compared with market rents. In order to predict the market rent of public housing units, the rent is estimated for a particular type of dwelling in the private market and then this value is imputed for a similar public dwelling. This is done typically by regressing market rent on a host of housing characteristics. Given limited information this is only done for 3 characteristics; the number of bedrooms, the type of dwelling and the geographical location. The average weekly rent paid by tenants in the private market was calculated for a variety of dwellings and then these were imputed for dwellings rented from the government. The predicted rent was too low and thus rents for these categories of housing were adjusted upwards.

Individual estimates of the parameters of the indifference maps were required to calculate individualized benefits from the public housing program for the families in the sample. This would not have been possible unless there was data on pre-program consumption. In the absence of data the authors assumed that preferences of public housing tenants were the same as those of all private renters. The authors assumed that each family had a Cobb-Douglas indifference map and hence only the rent income ratio was required. This information was ascertained from private renters divided into family type by family size, the age and marital status of the head of the household, and the area they live in.

Area of Economic/Social Cost/Benefits:

Housing

Outcome measures used:

1. Mean annual housing expenditure of public housing families in absence of public housing programs.
2. Mean annual market rent of their public housing units
3. Percentage increase in aggregate consumption of housing services by these families
4. Mean annual expenditure on other goods by public housing families in the absence of these programs.
5. Mean annual expenditure on other goods by public housing families under these programs
6. Percentage increase in aggregate consumption of other goods by these families.
7. Mean annual rent paid by public housing families
8. Weighted mean percentage reduction in market price of housing services to public housing families.
9. Mean annual benefit to public housing families
10. Mean annual subsidy
11. Benefit cost ratio.

Findings:

The findings of this study show that in aggregate public housing families occupy better housing and also consume more of other goods than they would in the absence of the public housing provision program. The study estimates that there is roughly a 14-34.3 percent increase in the consumption of housing. In other words public housing was equivalent to a 7.7 to 12.1 percent increase in income. The benefit cost ratio (mean annual subsidy) ranges (dependent on estimation of market values used) from 0.75 to 0.68.

Strengths:

The strength of this particular study is that it attempts to quantify the costs and benefits of the provision of public housing on a national scale, adopting a well established economic methodology.

Gaps and Limitations:*Method:*

There are two decided limitations to this research, one pertaining to access to data and the other to the assumptions subsequently adopted. The lack of data with respect to preprogram allocation of funds towards housing and other goods as well as limited information on housing characteristics, demand quite substantial assumptions in order to justify using limited or alternate data sources. The use of alternate data sources and hence the use of different assumptions would fundamentally change the findings of the study. Additionally, non financial benefits of public housing are not assessed, neither the benefits to the individual from increased stability nor the benefit to the wider community of improved housing for members of the society. This study is relevant to the issue only if it is assumed that the main alternative to being housed in the public sector is homelessness.

Findings:

As above.

Australian applicability:

In regards to the homelessness population, the derivation of a cost benefit scenario is likely to be different in so far as the benefits to the recipients would not be as straight forward as the difference between market rental prices and public housing rental costs. It would be possible to determine average income spent on transitional shelters etc. However, this information would require self reporting and hence possible bias. The cost to the government could be calculated in the same manner, though better data on preprogram housing costs would be required.

Summaries Group B: Non Financial Costings: Quantitative Studies

B1. James, D., F. Farnham, et al. (1999). "Homelessness and Psychiatric Admission Rates through the Criminal Justice System." Lancet 353(9159): 1158.

Research Question: What is the relationship between homelessness and admission rates from the criminal justice system in three boroughs of central London?

Methodology:

The number of admissions to psychiatric hospitals from courts or prisons over a period of one year (1994-1995) was determined from an analysis of court, hospital, remand prison and purchaser records. Court and Crown Prosecution Service records were examined in order to establish residency status, and confirmation was then sought from local health purchasers returns. Estimates of the homeless population were based on a number of sources, with the underlying assumption (based on a correction formula for unobserved homelessness) that unobserved homelessness was likely to number two times that of observed homelessness. This figure was then compared to the number of housed in the area taken from a 1991 census. Those admitted through the criminal justice system were all single and hence the base population rates were adjusted accordingly. Adjustments were also made for gender and age.

Area of Economic/Social Cost/Benefits:

Criminal Justice, Health.

Outcome measures used:

Increased likelihood of usage of hospitalisation post admittance to the criminal justice system by the homeless.

Findings:

The homeless were 17 times more likely to be admitted to hospital through the justice system.

Strengths:

The main strength of this particular study is the attempt to adjust findings (through estimations of unobserved homelessness) to more fully represent the increased likelihood of usage of hospitalisation post admittance to the criminal justice system for the general population of homeless. Further to this, this type of study could lead to an estimation of total costs for these homeless, in terms of hospitalisation costs, if information on days spent in hospital post release, and the costs per day is ascertained.

Gaps and Limitations:

Method:

This is a simple study, with the population of unobserved homeless determined by assumption.

Findings:

Due to the above, the proportional representation may in fact be skewed according to the accuracy of the proportion of unobserved homeless.

Australian applicability:

This study, suffers from the above limitation and further is applied on a small local scale. The application of this study to a larger study would require a greater accuracy in estimations of the homeless, with a greater use of cross national administrative records for hospital admission and criminal justice system use.

B2. Kleinman, L. C. and et al. (1996). "Homing in on the Homeless: Assessing the Physical Health of Homeless Adults in Los Angeles County Using an Original Method to Obtain Physical Examination Data in a Survey." Health Services Research 31(5): 533-49.

Research Question:

What are the physical repercussions of homelessness?

Methodology:

The sample was determined using a combination of the service setting sample approach and the blitz method (Burnam and Koegel, 1988; Burnam and Koegel 1991). The study interviewed 1,563 participants with an overrepresentation of woman (30%, contrasted to approximately 16% as a proportion of total homeless). A stratified sub-sample of 485 persons was randomly selected, with over sampling of the newly homeless and those with serious mental illness. One year after the study, 389 persons were still active. 366 were available for the study. Physical examinations were performed examining for high blood pressure, visual impairment, abnormalities of the skin, peripheral vascular disease of the foot and ankle, conditions of the feet and tuberculosis. The Physical Exam Grid was the primary instrument for data collection. All interviewers were trained, non-medical personnel who were experienced in the collection and diagnosis of respondents. Descriptive data was reported, with demographic, mental health, and substance abuse data collected from initial study. Respondents were assigned to strata according to levels of service utilisation. Based on population estimates of these characteristics, as well as sampling weights for women and mental illness, respondents were assigned weights for data analysis.

Area of Economic/Social Cost/Benefits:

Health

Outcome measures used:

Prevalence of certain health conditions in the homeless.

Findings:

Each of the aforementioned conditions was prevalent in the homeless, with vision problems and exposure to tuberculosis found in more than one third of the population.

Strengths:

The advantage of this particular study is that through the use of non-medical personnel as interviewers, this type of survey process is less costly, and likely to be more accurate than self reporting.

Gaps and Limitations:

Method:

This particular survey is decidedly more labour intensive than self reporting of illness, however it is flexible and avoids the use of more expensive medical personnel.

Findings:

The findings are quite rigorous given the nature of the study, and the sampling methodology used.

Australian applicability:

This study would be incredibly resource intensive if the study was conducted on a national scale or in greater depth, examining for a greater number of illnesses and conditions. The advantage of such a study however would be the comparability of the prevalence of these conditions compared to the general housed population. A further advantage is that such a study captures the health costs to the homeless that are unreported due to avoidance of health service usage.

B3. Kushel, M., S. Perry, et al. (2002). "Emergency Department Use Among the Homeless and Marginally Housed: Results from a Community-Based Study." American Journal of Public Health 92(5): 778-784.

Research Question:

What is the frequency of emergency department use among the homeless and marginally housed?

Methodology:

Between April 1996 and Dec. 1997 2,578 English speaking adults from homeless shelters (but not those with in-house health services) and food lines were interviewed. Interviews were conducted twice per month, with the majority of data on usage (excluding HIV status) determined by self reporting. Health Service use was not validated with medical records. Andersen's Behavioural Model (1995) was used to determine the use of health care, according to predisposing (age, sex, ethnicity, education, housing status, criminal history, victimisation, substance abuse and mental illness), enabling (income, medical insurance, receipt of public benefits) and need (chronic illness and HIV status) factors. Factors associated with the occurrence of at least 1 ambulatory care visit in the past year were examined. Stepwise logistic regression was used to characterise adjusted odds ratios for any emergency encounter and for four or more encounters. Stepwise models were adjusted for demographic characteristics and other factors.

Area of Economic/Social Cost/Benefits:

Health

Outcome measures used:

- Housing Status (%)
- Crime and Victimization (%)
- Mental Illness and Substance abuse (%)
- Mean Monthly Income
- Emergency Department use
- Ambulatory Care Visits

Findings:

22.6% of respondents had spent time in prison, 57.2% had been a victim of a crime. Almost a quarter of the respondents reported a history of psychiatric hospitalisation, while 48.1% considered themselves to have had drug or alcohol problems. 40.4% of respondents had 1 or more emergency department encounters in the previous year, 7.9% exhibited high rates of use (more than 3 visits) and accounted for 54.5% of all visits by this sample. 40.7% of those who did not use the emergency department reported an ambulatory care visit. For those that did however, 54.4% reported such a visit.

Strengths:

The study examines not only costs in terms of usage of services (including ambulatory care visits which many studies do not) but also costs to the person in terms of victimisation.

Gaps and Limitations:

Method:

The obvious limitation to such a study is the use of self reported data.

Findings:

Given the above, the findings are slightly tenuous, and may be understated though they are consistent with other research (Rosenheck and Seibel, 1998).

Australian applicability:

Again this would be decidedly resource intensive if applied across Australia. Further to this the data would be far more reliable if sourced from administrative data rather than self reported responses.

B4. Efron, D., J. Sewell, et al. (1996). "Children in Homeless Families in Melbourne: Health Status and Use of Health Services." Medical Journal of Australia 165(11/12): 630-633.

Research Question:

What is the prevalence of health and behaviour problems in a sample of children in homeless families? What is the health service use by homeless families?

Methodology:

Thirty one families who entered supported accommodation during the period 1994-1995 were interviewed about a week after crisis support was initiated. A maximum of two children per family were surveyed. Three questionnaires were completed. The first of which was the Child Health Questionnaire. The second was the Achenbach Child Behaviour Checklist (CBCL), completed by parents. Young people over 11 years also completed the Youth Self Report. For each child, a T-score was derived for three dimensions; internalising, externalising and total score. T scores above 60 were correlated with the presence of a significant problem. The third questionnaire was a General Health Questionnaire (GHQ) for mothers of children, and this was followed by a purpose designed questionnaire devised to obtain information on socio-demographics, birthweight, vaccinations etc. Scores from the CBCL were compared with data from a CBCL study in the United States in 1992 to determine the significance of any difference from the general population. For the CHQ a 1990 community survey of 1680 Victorian 7 year olds was used as the normative sample. For the GHQ, normative data were derived from a study of 289 subjects in 1989.

Area of Economic/Social Cost/Benefits:

Health

Outcome measures used:

1. Percentage of children from homeless families with Child Behaviour Checklist in the deviant range, compared with percentages from the normative population.
2. Prevalence of certain physical conditions compared with normal population.
3. Mean General health scores for homeless parents, compared with those of parents from a community sample.

Findings:

More than one third of all homeless children had total behavioural problems scores in the "deviant range" and hence required mental health referral. Intellectual disability/delay, skin problems, vision problems, recurrent headaches and asthma or other breathing problems were more prevalent in this population than in the comparison normative group. The mothers of these children had a higher preponderance of mental health issues than the normative group most particularly in the area of "anxiety", depression. etc.

Strengths:

The methodology adopted for surveying purposes in this particular study (CBCL, GHQ, CHQ) is well established in the literature. The output results are therefore comparable across appropriate samples.

Gaps and Limitations:

Method:

The limitations of this study include; a small unrepresentative sample, use of self response questionnaires, without confirmation of validity through access to more objective health data, and case work data. The study furthermore lacks a control group of low income families to

control for income and poverty issues while adopting data from previous studies, thereby not controlling for changes over time.

Findings:

Given the above limitations, the validity of the findings, and the direct relevance of the findings specifically to the homeless is uncertain. While the authors suggest that the composition of the respondents claim that the sample is somewhat representative for the Victorian population of homeless, this lacks validity in the face of appropriate sampling procedures, most particularly with respect to isolating an appropriate control group.

Australian applicability:

It is recommended by the authors that in order to determine the health status and health service use with a greater degree of representation, administrative databases be used. This would certainly be true of an Australia wide study.

B5. Martell, D. (1995). "Base-Rate Estimates of Criminal Behavior by Homeless Mentally Ill Persons in New York City." Psychiatric Services 46(6): 596-601.

Research Question:

What are the differences between base rates for various crimes committed by the homeless and domiciled populations in New York across a six month period?

Methodology:

Data was gathered from 184 clients from a forensic psychiatry clinic attached to the Criminal and Supreme courts. These clients included those who could be clinically verified as being mentally ill and those from whom complete and reliable data were available. These clients were interviewed by two psychiatrists using a structured interview protocol. These interviews provided self reported data on homelessness, substance abuse, mental health history and psychiatric symptoms. In addition court records and records of the clinic were reviewed for data on previous psychiatric examinations, current arrest offence and previous criminal history. A six month incidence density analysis of crime by domicile status was used, followed by the computation of odds ratios to determine the degree to which homeless defendants were over represented for each type of offence.

Area of Economic/Social Cost/Benefits:

Criminal Justice/Health.

Outcome measures used:

1. % of defendants found to be homeless at the time of arrest.
2. The differential incidence of crimes in the domiciled and homeless population.
3. The degree to which the homeless were over represented for each type of offence.

Findings:

Forty three percent of the mentally disordered defendants were found to be homeless at the time of arrest. Thus the rate of homeless was 21 times higher than the rate among the city's mentally ill population and more than 40 times the rate in the general population. There were no significant differences in criminal history (with respect to mean number of arrests and convictions) between the homeless and domiciled defendants. Similarly, substance abuse showed no discernable difference in prevalence in the homeless compared to the domiciled populace. The cumulative base rate for all violent crimes was 40 times higher amongst homeless mentally ill defendants than among the domiciled mentally ill. The rate of charges for non-violent crimes was 27 higher among homeless defendants than among domiciled defendants.

Strengths:

The advantage of this type of study is that self reported data is validated by use of administrative data collected from court records as well as clinic records, hence the findings are verifiable.

Gaps and Limitations:

Method:

The study used a relatively small time frame and as a result there were small absolute numbers in the various categories of offences which may have resulted in problems with the stability of the individual base rate estimates.

Findings:

As above.

Australian applicability:

This type of study may be applicable to an Australian environment given access to administrative data from the courts and their attendant forensic psychiatric clinics. However, the use of psychiatry professionals renders the survey instrument expensive.

B6. Buckner, J., E. Bassuk, et al. (2001). "Predictors of Academic Achievement among Homeless and Low-Income Housed Children." Journal of School Psychology 39(1): 45-69.

Research Question:

Is homelessness and mobility associated with academic achievement among low income children?

Methodology:

Using a case control study design, a sample of homeless in shelters and low income housed single parent families receiving Aid to Families with Dependant Children in Massachusetts was used to conduct the survey. In total there were 80 homeless school age children and 148 housed. Children were administered the Wechsler Individual Achievement Test Screener (WIAT-S) (Psychological Corporation, 1992a) for academic achievement in reading, spelling and maths. Children were also given the Kaufman Brief Intelligence Test (KBIT) to measure cognitive abilities. Mothers were then asked a series of questions about the development and learning of their children, geographic mobility and negative life events and other stresses. A further vignette based test was applied to determine provision and quality of social support for the children. The mother's educational attainment, and current mental health status was then ascertained using the Global Severity Index. Bivariate relations among variables were examined using chi-squared tests for categorical variables, Pearson product moment correlation coefficients for variables measured on a continuous scale and t-tests when one variable was dichotomous and the other continuous. Multiple linear regression analysis was then employed to predict academic achievement.

Area of Economic/Social Cost/Benefits:

Education

Outcome measures used:

1. WIAT-S scores
2. KBIT scores
3. Significance of variables on determination of academic achievement

Findings:

The study found that both groups scored lower than average scores on both educational tests. There was little significance between the two groups. It was found that age, gender, ethnicity and school mobility were significant predictors of academic achievement but the length of time a child has been homeless is not correlated with academic achievement if race/ethnic status is statistically controlled.

Strengths:

This study, follows a relatively standard methodology that is supported by the literature in the field. Like the Efron, Sewell (1996) study the use of this type of methodology implies that the output results are comparable across appropriate samples.

Gaps and Limitations:

Method:

One of the limitations of the study was the use of screening instruments to measure academic achievement and not the full length comprehensive tests. Furthermore, the findings may not be applicable to the general populace as the area has very specific programs to serve the needs of the homeless population. Additionally, a substantial subset of the sample was not administered the academic test because they could not speak English. The final limitation is that the exclusion of families that did not participate in the study may have biased the sample.

Findings:

Given the limitations above the findings may be skewed or unrepresentative for a larger populace.

Australian applicability:

This would be decidedly more resource intensive for a National sample, though it could be applied.

B7. Masten, A., S. Arturo, et al. (1997). "Educational Risks for Children Experiencing Homelessness." Journal of School Psychology 35(1): 27-46.

Research Question:

Do children who have recently lived in a shelter have substantial academic delays as assessed by multiple perspectives?

What is the covariance of achievement and behavioural problems among children who were or had been homeless?

Method:

Families were recruited in 1993 while they were living in a shelter for families in Minneapolis. During a 3 month period parents with children aged between 6-11 years were invited to participate. The resulting sample was composed of; 73 children, 37 boys and 36 girls, 60 African American and 11 American Indian. During this period 3 intellectual aptitude tests were administered; the WIAT-S achievement test, the Raven Coloured Progressive Matrices (tests nonverbal reasoning) and a Vocabulary test.

Two Months after recruitment and testing at the shelter, families and schools were contacted for follow up assessments. At least partial information, including school records (independently judged on annual records (based on a 1-5 scale from well below average to well above), teacher ratings (1-5 scale on academic potential and academic progress), parent interviews or child assessments were obtained for 69 of the original families. School records were obtained for 53 of the African American and 9 of the American Indian children.

Area of Economic/Social Cost/Benefits:

Education

Outcome measures used:

4. WIAT-S scores
5. Teachers Report Form of the Child Behaviour Checklist Rating
6. Teacher rating: Academic Progress
7. Teacher rating: Academic Potential
8. Vocabulary Score

9. Raven Score
10. Parents Rating: School Grades
11. Parent Rating: Learning Problems

Findings:

For the African American Sample scores were significantly below normative levels for age and grade. There were significant differences in WIAT scores by sex or age. Teacher ratings were significantly below norms and 20% of the children had repeated a grade. Intercorrelations of behaviour (determined by teachers and achievement score) were significantly related to reading and spelling scores as well as teachers perceptions of current academic performance. In the American Indian sample, 10 were tested on the WIAT of which, seven scored at age and grade level.

Strengths:

This study, follows a relatively standard methodology that is supported by the literature in the field. Like the Efron, Sewell et al. (1996), Buckner, Bassuk et al.(2001) and the Masten, Arturo., et al. (1997) studies, the use of this type of methodology implies that the output results are comparable across various alternative studies in this field.

Gaps and Limitations:

Method:

The main limitation of this study is the use of a small sample without a control group. Whether this group is representative of the larger community in the US is unknown. The high correlation between the various tests however showed a high degree of validity for findings.

Findings:

The findings for the American Indians cannot be generalised given the small sample.

Australian Applicability:

This process was far too rigorous to be performed at a national level.

B8. Cumella, S., E. Grattan, et al. (1998). "The Mental Health of Children in Homeless Families and their Contact with Health, Education and Social Services." Health and Social Care in the Community 6(5): 331-342.

Research Questions:

What is the prevalence of psychiatric disorders among parents and children in homeless families?

What is the likelihood that children will have attended school or nursery school since becoming homeless?

What are the rates of contact with primary health care, social services, or special child and adolescent mental health services?

Method:

A sample of 113 homeless families were interviewed within two weeks admission to homeless centres in Birmingham. A control group was used of 29 low income families who were not homeless. Both sets of interviews included; the Child Behaviour Checklist, the Communication Domain of the Vineland Adaptive Behaviour Scales (VABS), the General Health Questionnaire, the Interview Schedule for Social Interaction (ISSI) and height and weight percentiles. The two groups were compared on the CBCL, GHQ, ISSI and VABS scores using nonparametric tests. Comparisons between the two groups with respect to dichotomised categorical variables used Fisher's exact test, while the chi-squared test was used for remaining categorical variables.

Area of Economic/Social Cost/Benefits:

Health, Education, Welfare

Outcome measures used:

1. VABS
2. ISSI
3. CBCL
4. GHQ

Findings:

Results from ISSI indicated that mothers in homeless families had lower levels of social integration than the control group. Thirty per cent of the homeless children had behavioural problems, 18% had experienced development delay, while 29% had CBCL scores that indicated that they were in the clinical range, with only 16% in the control group. Children in homeless families had lower standard scores for communication than children in the comparison sample. 49% of homeless mothers indicated a level of depression or distress of sufficient severity to require medical treatment as opposed to the domiciled who had none. At the time of interviews the children attending school had dropped to 29%, and 5% in nursery school. Rates of contact were significantly higher than the control group with 24% of parents and 15% of children seeing a GP, and 31% of parents and 22% of children seen by a social worker compared with 7% of parents who were domiciled.

Strengths:

This study, follows a relatively standard methodology that is supported by the literature in the field. Like the Efron, Sewell et al. (1996) and Buckner, Bassuk et al. (2001) studies, the use of this type of methodology implies that the output results are comparable across various alternative studies in this field. The inclusion of a control group at the time of the study however, implies a more consistent methodology allowing strong conclusions to be drawn.

Gaps and Limitations:

Method.

The response rate of the survey (67%) may have biased the sample. Furthermore, the sample size for the comparison (control) group was small. It also must be acknowledged that self reporting without validation from official records implies less certitude in the results.

Findings:

It is difficult to directly attribute the mental health findings to homelessness per se, given the factors that led to homelessness are also important risk factors for mental illness.

Australian Applicability.

This study is again, resource intensive given the administration of such a large number of tests. Further to this the data collected on service use would have to be more rigorous to gain a better representation of true nature of health and service use in the homeless population.

B9.Ballintyne, S. (1999). Unsafe streets: street homelessness and crime. Institute for Public Policy Research, London.

Research Questions:

What are rough sleepers' experiences of victimisation in London, Glasgow, Swansea?

What offences are committed by rough sleepers in London, Glasgow, Swansea?

What is the contact between rough sleepers and police in London, Glasgow, Swansea?

Methodology:

The data was primarily collected through the use of various surveys from:

Front-line voluntary sector agencies: scoping sessions exploring local issues on offending, victimisation and policing street homelessness; sector development sessions examining local practice.

Rough sleepers: 6 structured group discussions involving 42 rough sleepers; 120 structured interviews with rough sleepers by street outreach workers.

Police: a postal survey to all 53 UK Police Forces (45 responded); 35 one-to-one interviews with senior management, city centre operational management and front-line officers; 5 structured group discussions involving 24 police officers.

Area of Economic/Social Cost/Benefits:

Justice

Outcome measures used:

1. levels of victimisation amongst rough sleepers.
2. levels of offences committed by rough sleepers and nature of offences
3. contact and nature of contact with police.

Findings:

Rough sleepers reported very high, unrecorded levels of victimisation. Seventy eight per cent had been victims of a crime during their most recent period of rough sleeping, but only 21% of incidents were reported to police. Fear of crime was also high, with 69% reporting fear of being a victim of crime. Rough sleepers also reported high levels of offending, with 85% stating that they had been involved in some kind of offending. Minor offences of theft from shops and minor public order offences were most frequent, and were seen as by-products of rough sleeping and need. Repeat offending was also very common, and there was a high level of police involvement after offences had been committed. Contact between police and rough sleepers was high, with contact usually initiated by police during patrols or following an incident. Only 26% of rough sleepers had actually initiated contact with police to request help.

Strengths:

The usefulness of this particular study is boosted by the use of group discussions in conjunction with quantitative data. This type of methodology enhances the explanations attributed to the quantitative outcomes, and thus allows for more rigorous policy implications to be derived.

Gaps and Limitations:

Method:

The predominant issue with respect to the methodology is that outcome measures are determined by self reporting.

Findings:

As above

Australian applicability:

This approach is decidedly resource intensive.

B.10 Bines, W. (1994). The Health of Single Homeless People, Discussion Paper No. 9, Centre for Housing Policy, York University, York.

Research Question:

What is the difference between the mental and physical health of the homeless compared to the domiciled population in England?

Methodology:

The findings of this study were based on secondary analysis of two data sources of self-reported health:

- a national large-scale survey of a representative sample (1346 people living in hostels and B& B's, and 2 samples totaling 507 people in 1991 who were sleeping rough and

using day centres and soup runs) of single homeless people carried out in 1991 on behalf of the Department of the Environment (DoE);

- the 1991 wave of the British Household Panel Study, an annual survey of a nationally representative sample of at least 5,000 households and 10,000 individuals (to be used as a control group)

Quantitative results were supplemented by qualitative data from group discussions with single homeless people from the DoE study.

Area of Economic/Social Cost/Benefits:

Health/Justice

Outcome measures used:

The prevalence of various medical conditions in the homeless population compared to the domiciled population

The prevalence of various mental conditions in the homeless population compared to the domiciled population

Proportion of homeless people who had been in a psychiatric hospital who had also been in prison or remand centres.

Findings:

The report confirms that there is a strong relationship between homelessness and ill-health, although cause and effect are difficult to disentangle. Both physical and mental health are found to be considerably worse among the single homeless than among the general population, with rough sleepers suffering the worst health of all. Problems such as chest, skin and musculoskeletal problems are particularly prevalent among people sleeping rough. These health problems are all negatively affected by rough sleeping. Mental health problems (defined as depression, anxiety and nerves) are also more prevalent among the single homeless (particularly among rough sleepers) than among the general population. A high proportion of single homeless people who have been in a psychiatric hospital had also spent time in other institutions, particularly prison or remand centres. The report suggests that a number of homeless people could be trapped in a 'revolving door' of crime, mental illness and homelessness. The study suggests that a considerable number of vulnerable single people fall through gaps in the homelessness legislation and community care provision. The need for adequate provision of long-term care and support in the community is emphasised. Greater liaison and collaboration between health, housing and community care sectors is argued to be essential to meet multiple needs.

Strengths:

The research covers a decidedly larger population than most studies in this area, and provides a substantial control group within the same time frame, thus controlling for time variations (as opposed to studies such as Efron, D., J. Sewell, et al. (1996)).

Gaps and Limitations:

Method:

The use of self reported health assessments unverified by administrative data. A further consideration is that the control group was not specified to isolate the impact of poverty on mental and physical health.

Findings:

Given the above the findings are also largely unverifiable.

Australian applicability:

Given the study is based on national data, the application would be quite straight forward, however the requirements for the surveys themselves would be costly and determining a "representative sample" may be difficult.

B.11 Forst, M. L. (1994). "A Substance Abuse Profile of Delinquent and Homeless Youth." Journal of Drug Education 24(3): 219-231.

Research Question:

What is the difference between homeless and delinquent youth in the nature and types of drug abuse?

Methodology:

Samples were selected from three agencies providing services to young people in San Francisco - one of which was a juvenile detention centre; the other two agencies worked with homeless and runaway youths. Public health services were routinely provided at all three agencies, and medical history record forms and physical examination forms were standardised and differentiated between males and females. The sample in the study consisted of all youths from whom complete medical histories and physical examination forms were obtained during the six-month study period (June 1990 to November 1990). A total of 405 young people participated in the research, 245 of whom were from the juvenile detention centre and 160 from the two homeless agencies. The data collected for this study was compared, when relevant, to surveys of the general adolescent population.

Area of Economic/Social Cost/Benefits:

Crime/Health

Outcome measures used:

1. Prevalence of health problems in homeless and delinquent youths compared to the general populace.
2. Most commonly used substance by homeless and delinquent youths respectively.
3. Nature of drug use in the two samples.
4. Prevalence of intravenous drug use and trading sex for money, drugs, food or lodgings in the two samples.

Findings:

Both groups suffered higher levels of health problems than the general adolescent population. The most commonly used substance among both the delinquent and the homeless samples was cigarettes, used at much higher levels than among the general adolescent population. The sample groups generally showed similar patterns of substance use, except that the delinquent sample had considerably higher levels of cannabis and crack cocaine use than the homeless sample, while the homeless young people had a much higher usage of LSD/mescaline and amphetamines than the delinquent group. Intravenous drug use and trading sex for money, drugs, food or lodgings (both more prevalent among the homeless than among the delinquent sample) were identified as high risk factors making young people vulnerable to sexually transmitted diseases including HIV/AIDS. Participants in the study had much higher levels of past or present sexually transmitted diseases than the general adolescent population.

Strengths:

This paper examines the costs of homelessness particularly with respect to sexually transmitted diseases, which is often not included in general health survey type questionnaires (due to the requirement for physical examinations). Further to this the use of the delinquent sample provides a particularly appropriate control group in discerning the impact of homelessness, allowing a control for poverty as well as lifestyle.

Gaps and Limitations:

Method:

Comparisons with the general population were not always possible in the study, though the research may have benefited from developing its own control group, that is, a sample of non-homeless, non-delinquent young people in San Francisco. The use of self reported data with

respect to trading sex for money, food and lodgings, may have resulted in an understatement of the prevalence of this type of activity.

Findings:

It is a relatively short article and clearly does not contain all of the findings from the research study.

Australian applicability:

This may be replicable as long as the administrative data was available.

B12. Grenier, P. (1996). Still Dying for a Home, Crisis, London.

Research Questions:

What are the contributing factors to the much shorter than average life expectancy faced by people who sleep rough?

What is the rate of suicide in the population of rough sleepers?

Does the cold weather contribute significantly to deaths?

What was the prevalence of drug use amongst the rough sleepers population?

Methodology:

The study undertook an analysis of Coroner's Courts records to provide statistical data on the number and causes of death among rough sleepers. Records for a full year were analysed from five inner-London Courts, two Courts in Manchester and one in Bristol. It was emphasised that not all rough sleepers may have been identified due to recording practices. 25 interviews were held with professionals working with homeless people in the three cities, including primary healthcare teams, doctors, nurses, psychiatrists, police and homeless outreach workers. 20 interviews with homeless people who were asked about the deaths of rough sleepers they knew.

Area of Economic/Social Cost/Benefits:

Health

Outcome measures used:

1. Life expectancy of rough sleepers compared to the national average in England.
2. Likelihood of rough sleepers committing suicide compared to the general populace.
3. Prevalence of drug use in the rough sleepers community.

Findings:

The average life expectancy of rough sleepers is 42 years, compared to the national average of 74 for men and 79 for women. Rough sleepers are 35 times more likely to kill themselves than the general population, and four times more likely to die from unnatural causes, such as accidents, assaults, murder, drug or alcohol poisoning. Health is often not prioritised by homeless people, whose primary concerns are keeping warm and finding something to eat. Mental health problems, suicidal thoughts and tendencies to self-harm can also result in self-neglect and health problems. Alcohol and drugs were used by rough sleepers as a form of self-medication to deal with physical and mental pain. It is stressed that the majority of homeless people were not affected by alcohol and drugs misuse. Homeless people face difficulties accessing healthcare, and were found to only seek medical help once they had acute or severe conditions. Cold weather was not found to cause a significant increase in deaths - this is attributed to the life-saving role of cold weather shelters.

Strengths:

The strength of this article is that it uses administrative data for quantitative outcomes while also using qualitative data to interpret results. It must be stated that the qualitative data suffers from the inevitable third party observations.

Gaps and Limitations:*Method:*

There is little information on the nature of the sample, and there are limitations in reporting systems (the nature of the record keeping processes) and hence the degree to which this may affect the representativeness of the results is largely unknown.

Findings:

As above

Australian applicability:

This would be easily applied in Australia through the coroner's records in both rural and urban settings. However, the impact of lack of identification may be problematic.

B13. National Centre for Homeless Education (2000) Data on Homeless Children and Youth. US Department of Education.

<http://www.serve.org/nche/Datahome.htm> [Accessed 8/8/02]

Research Question:

What are the levels of homelessness of children in schools over the period of 1988 to 1998?
What are enrolment ratios over this period?

Methodology:

The methodologies are unknown however the data is taken from the U.S. Department of Education reports from data submitted by State Education Agencies.

Area of Economic/Social Cost/Benefits:

Education

Outcome measures used:

School enrolments.

Findings:

The proportion of homeless children and youth *not attending* school during their homelessness had increased over the ten years.

Strengths:

The strength of such a system is the annual national data that is collected. The establishment of such a system allows both time series and cross sectional data for studies regarding not only costs but causation, correlation, consequences of homelessness for youth and trends over time. This type of data provides trend information on which sound policy decisions can be made.

Gaps and Limitations:*Method:*

Method uncertain.

Findings:

no further comment

Australian applicability:

Requires a similar State reporting system in Australia, which in turn, requires the appropriate education of school staff with respect to monitoring the situation.

B.14 Babidge, N., N. Buhrich, et al. (2001). "Mortality among homeless people with schizophrenia in Sydney, Australia: a 10 year follow." Acta Psychiatrica Scandinavica 103: 105-110.

Research Question:

What was the mortality rate among a group of 708 homeless people with schizophrenia over the course of a 10 year period? What was the rate of suicide among the population?

Methodology:

Mortality was assessed for a sample of 708 homeless persons who were referred to psychiatric outreach clinics attached to four large refuges in Sydney between the period 1988 to 1991. A list of these names were submitted to the New South Wales Registry of Births, Deaths and Marriages to determine how many were recorded as deceased in the period 1988-1998. Cause of death was determined by Coroners records and was categorized as "natural" or "unnatural" (accidents, unintentional injuries or poisoning, suicide, homicide or undetermined).

The sample was divided into gender based ten year age bands and Standardised Mortality Ratios (SMR) were calculated. SMRs were obtained by dividing observed deaths in the sample and dividing these by the expected deaths for cohorts in the general NSW population.

Area of Economic/Social Cost/Benefits:

Health

Outcome measures used:

4. SMR per age group per gender
5. SMR for suicide in age groups among homeless patients diagnosed with schizophrenia compared to those with other diagnoses.

Findings:

83 people had died, 19 from suicide. The SMR was 3.76 for homeless men and 3.14 for homeless women. There was no significantly higher trend for suicide amongst those that had schizophrenia.

Strengths:

Clear research question.

Data sources are specified clearly

Outputs are internationally comparable.

Gaps and Limitations:

Method:

It was possible that the total number of suicides was underestimated if there were subjects who died outside of NSW. It must further be noted that the methodology used is not referenced to other studies of this nature, nor is it justified.

With respect to determining the SMR for schizophrenic patients, general population expected mortality rates were used as opposed to expected mortality rates amongst schizophrenics in the larger population. The authors qualify this by adding that the rates calculated in the study are in line with the SMRs in other countries for this subpopulation.

Findings:

As above

Australian applicability:

This may be replicated on a national scale using data given by various homeless shelters across Australia, and following this data up with the various State Coroners' offices. Determining mortality rates among schizophrenic homeless persons, however, may be made more difficult by virtue of the requirement for diagnosis.

B.15 Sibthorpe, B., J. Drinkwater, et al. (1995). "Drug Use, Binge Drinking and Attempted Suicide Among Homeless and Potentially Homeless Youth." Australian and New Zealand Journal of Psychiatry 29: 248-256

Research Question/s:

What is the prevalence of drug and illicit use among a group of homeless or at risk young people aged between 12-17 years, compared with the general populace in the ACT. What was the proportion being hospitalised as a result of alcohol or other drug use? What was the proportion attempting suicide?

Methodology:

155 homeless or potentially homeless youth between the age of 12 and 17 were interviewed. Information was gathered using a structured protocol consisting of a small number of open ended questions. The potentially homeless were defined as those respondents who had a period away from home in the past 12 months. Whether homeless or potentially homeless respondents were only included in the survey if they had left home due to severe family discord. The sample was recruited largely from schools, from youth centres, corrections centres and other forms of accommodation in the ACT. The interviews were conducted by a trained interviewer and occasionally by school counsellors. For those recruited outside the schools both housing status and reasons for leaving home were established using a series of open ended questions.

Chi-squared tests were used in the analysis to determine the significance of observed differences. Predictors of binge drinking, drug use and attempted suicide were determined using logistic regression.

Area of Economic/Social Cost/Benefits:

Health

Outcome measures used:

Lifetime frequency of use of other drugs by homeless and potentially homeless youth.

Findings:

Of the sample 24% had been to hospital as a result of alcohol or other drug history. Forty five percent had attempted suicide and within this group females were much more likely to have attempted suicide than males (66% vs. 27%; $p < 0.00001$). The majority of the respondents had used alcohol, tobacco, pain relievers, and marijuana. Inhalants, hallucinogens, sleeping tablets, amphetamines and "Avil" were used by approximately half to one third of respondents.

Strengths:

The methodology is articulated clearly.

The research question is coherent and lends itself to a relatively unambiguous methodology.

The rationale and policy implications are clear.

Gaps and Limitations:

Method:

The problem is, once again, the use of self reporting, which directly affects the verifiability of the data. The sample additionally contains the bias of a convenience sample, i.e. those who were easily accessible, this is most particularly true in the potentially homeless population. It is difficult, however, to determine the representativeness of the study sample.

Findings:

As above.

Australian applicability:

A similar study has already been conducted at the national level (see Human Rights and Equal Opportunity Commission (1989)).

B.16 Fischer, P. (1988). "Criminal Activity Among the Homeless." American Psychologist 39(1): 46-51

Research Question:

Are there any differences in the nature of offences committed by homeless persons compared to the general populace.

Methodology:

Data was gathered from the Baltimore Police Department's computerised crime reporting system, the Criminal History Applied System Effort (CHASE). Nineteen eighty-three was chosen because it was the latest year in which addresses of suspects were included in the database. A subset of 634 arrests of adults aged 18 or older, and identified as homeless at the time of arrests, were compared with all adult arrests reported for Baltimore City for the year (50,524). Data was collected on arrests of homeless adults in which the offender gave a pre-arrest address known to be a mission, shelter, or soup kitchen. The search identified 275 homeless individuals accounting for 634 arrests. The data available on arrests for Baltimore as a whole were aggregated. Thus arrests could not be linked to individuals as was possible for the homeless population. Information from the aggregate report included offence by age, sex of offender and time and place of occurrence by police district. Arrests were categorised according to FBI Part I and II standard offences. The former being the crimes against the person and crimes against property and the latter being all other crimes (predominantly petty crimes). In addition, a random sample of 50 reports of arrests of homeless persons for part I offences was obtained. The reports included a narrative by the arresting officer of the charge and the disposition of the arrestee. These were used to determine whether the seriousness of the charge was deserved or if the actions could be interpreted as adaptive behaviour by homeless individuals. The characteristics of the homeless were compared with data drawn from the United States Decennial Census of Baltimore City and from a previous study of 51 homeless persons in Baltimore. Given that the sociodemographics of the homeless Baltimore population has not been well established, this study of 51 persons from Missions in Baltimore was selected as the best indicator of the Baltimore Homeless population. P tests were then used to determine the differences between the two populations.

Area of Economic/Social Cost/Benefits:

Justice

Outcome measures used:

6. Age of suspects arrested, homeless, domiciled and significance of differences.
7. Age and race of homeless persons arrested, homeless persons from missions, and Baltimore City adults, and significance of differences.
8. Type of offence by age of suspects among the homeless and in the general population in percentages and significance of differences.

Findings:

Among the homeless, those arrested were more likely to be white, over 45 years old and to have committed victimless crimes. There was a significant difference ($p < 0.05$) between arrests of homeless persons and arrests in the general population in the distribution of Part I and Part II offences. There was a significant difference between arrests of homeless persons and arrests in the general population in distribution of crimes against persons and against property ($p < 0.05$). Finally, there was a significant difference between arrests of homeless persons and arrest in the general population in the distribution of Part I and Part II offences within age groups ($p < 0.05$).

Strengths:

The methodology suffers from lack of administrative data, however the methodology is simple and straightforward. The research question is well articulated and easily lends itself to simple outcome measures.

Gaps and Limitations:*Method:*

As mentioned above, there was a lack of comparable individual data for the domiciled arrested cohort and hence the study lacked a rigorous control group.

Findings:

The lack of a quality control group renders comparisons tenuous and subject to alternative explanations for recorded differences.

Australian applicability:

The applicability to an Australian environment is highly contingent on the presence of this type of administrative data in the criminal justice system.

B.17 Zima, B., W. Kenneth, et al. (1994). "Emotional and Behavioral Problems and Academic Delays Among Sheltered Homeless Children in Los Angeles County." American Journal of Public Health 84(2): 260-263.

Research Question:

What is the prevalence of behavioural problems, depression, or severe academic delay amongst a sample of school age children? What was their usage of mental health care services or special education services?

Methodology:

During a four month period in 1991, 169 school age children and their parents living in 18 emergency homeless family shelters were interviewed. The interviewees had all stayed at one of the shelters for at least one night and had at least one child between the ages 6-12. Sociodemographic characteristics of both children and parents were obtained from the parent. Additionally, a homeless history was taken, as well as an assessment by parents of emotional or learning problems of children, using questions from the National Health Interview Survey, 1988 Child Health Supplement (National Centre for Health Statistics). Depression was evaluated using the Children's Depression Inventory (Kovacs, 1985), behavioural problems were assessed using the Child Behaviour Checklist (Achenbach and Edelbrock, 1983), receptive vocabulary was measured with the Peabody Picture Vocabulary Test (Dunn, 1981) and finally, three reading skills – letter-word identification, word attack and passage comprehension were assessed using the reading subtest of the Woodcock- Johnson Language Proficiency Battery (Woodcock, 1981). Bivariate analysis of discrete variables was performed using a chi-square test of proportions, and analysis of continuous variables was performed using analysis of variance. Linear and logistic regression were used to examine whether the child's homeless history variables and demographics factors were uniquely associated with each child mental health problem, and to determine whether specific child mental health problems were uniquely associated with service use, controlling for other factors. The significance statistics and standard errors were adjusted for correlations in responses for children from the same family by using the intra-class correlation model.

Area of Economic/Social Cost/Benefits:

Education/Health

Outcome measures used:

1. Presence of depression
2. Presence of behavioural problems
3. Presence of receptive vocabulary delay

4. Presence of reading delay
5. Schooling missed over 3 month period.

Findings:

Seventy eight percent of the homeless children in the study suffered from either depression, a behavioural problem, or severe academic delay. Among children having a problem only a third of the parents were aware of any problem, and only 15 percent had ever received mental health care or special education.

Strengths:

The research question is well articulated and the methodology well established by the literature. The rationale is well established.

Gaps and Limitations:

Method:

The methodology lacks an adequate control group of low income, housed and predominantly minority children to adequately isolate the impact of the homeless factor.

Findings:

The other limitation is that the study did not include homeless children living with families not in shelters. The absence of this sample would likely underestimate the prevalence of the problems identified in the study, as the conditions faced by the non-sheltered are most likely to exacerbate these problems.

Australian applicability:

This may be replicated in an Australian context, however the resources for a national study are likely to be high. Additionally, the problem remains in finding representative samples in a fluid population.

B.18 Parkinson, S. and M. Horn (2002). Homelessness and Employment Assistance, Hanover Welfare Services, Melbourne.

Research Question:

How complete and accurate is information on housing homelessness circumstances and related personal factors relevant to assessment for employment assistance and service delivery by Centrelink?

The research focus of this study is not directly linked to assessment of service use and unemployment in homeless populations, however preliminary data for the study does include this information.

Methodology:

Centrelink customer file data was compared with interview responses for a sample of 135 Newstart recipients experiencing homelessness. The study sample was recruited from five Supported Accommodation Assistance Program (SAAP) and Transitional Housing Management Programs across Victoria. The study compared the participant interviews with their personal Centrelink records retrieved through the Freedom of Information process to identify the completeness of current assessment processes. This was followed by broader stakeholder consultation and focus groups. Comparing the study sample to the National Data Collection Agency SAAP data revealed that the sample was broadly representative.

Area of Economic/Social Cost/Benefits:

Unemployment.

Outcome measures used:

There are a number of outcome measures not specifically related to costing homelessness in terms of service use and unemployment history that have not been included.

1. Unemployment history

2. Service type utilised by participants at the time of interview.
3. Period of Newstart commencement
4. Current claims on Centrelink.
5. Comparison of past and present Centrelink activity.

Findings:

Close to half of those interviewed were utilising SAAP Crisis Short Term Case Management, with 22% utilising transitional housing, with a median length of stay of 106 days. Of the 135 participants, 72% of the sample had been registered as unemployed with Centrelink for longer than 12 months, while 22% had been unemployed for more than five years. Just over half the participants had been receiving Newstart (assistance of \$374.90 to \$404.50 fortnightly) for longer than 12 months. This compares to 60% of the general Newstart population for over 12 months in 1999. The current Centrelink activity type for the majority of participants was Jobsearch (basic employment service) while 14% used the Community Support Programme and 13% Intensive Assistance. This would indicate a low uptake on the Intensive Assistance (provision of services such as arranging counselling, vocational training, work experience, job search techniques, employment goal setting, or language and literacy training. in addition to income support) given that the vast majority were, in fact, eligible.

Strengths:

This study deals explicitly with the use of employment services and income support by homeless people. Any truly complete cost benefit analysis or cost effectiveness analysis would have to explore the costs associated with income benefits as well as employment support while acknowledging that any attempt to increase access to these facilities through more permanent housing is likely to incur costs in these areas. Further to this, the placement of this study in an Australian context implies that this type of administrative data is available and accessible in Australia.

Gaps and Limitations:

Method:

The main consideration with respect to the methodology of this particular study is that it does not explicitly deal with the issue of service utilisation and costs.

Findings:

Given the above, the findings with respect to utilisation of services are secondary to the comparative study and hence not elaborated in any great detail.

Australian applicability:

As was mentioned above, costing homelessness with respect to unemployment benefits and utilisation of Centrelink services is quite straight forward in line with the presence of administrative data. Accessing this data is contingent on the consent of the parties included in any sample (through the Freedom of Information Act).

B.19 Weinreb, L., R. Goldberg, et al. (1998). "Determinants of health and service use patterns in homeless and low-income housed children." Pediatrics 102(3): 554-563.

Research Question:

Is there a difference between health problems and service use in housed as opposed to homeless children?

Methodology:

The Worcester Family Research Project was a case-control study of 220 homeless and 216 low-income, housed families and their 627 dependent children aged 3 months to 17 years that were residing in Worcester, Massachusetts between August 1992 and July 1995. Homeless mothers were recruited from 9 shelters and 2 welfare hotels serving homeless families. During the course of the study, 361 families were approached for enrolment, 102 refused to participate and another 39 failed to complete all four interviews. No significant

differences were found between women who completed the study and those who refused with respect to race and number of children. Homeless women who refused to participate were slightly younger than those who completed the study (24.2 years vs 26.1 years). The homeless women who dropped out of the study before completing all interviews were similar to study participants in terms of race, age, and number of children.

Housed families who had never been homeless were recruited from the Worcester Department of the Public Welfare office. Children between the ages of 3 months and 17 years who were living with their mother were eligible for assessment. Depending on family size, 1 child was randomly selected from each of three age groups: infants and toddlers (0-2.4 years; n = 218); preschool children (2.5-5.9 years; n = 180); and school-aged children (6 years and older; n = 228). Data were collected from both mothers and children using structured interviews conducted by trained interviewers. All interviews were conducted separately for mothers and children in the respondent's choice of Spanish or English. For mothers, interviews took place during 3 to 4 sessions and covered information such as childhood and adult life events, support networks, histories of violent victimization, and mental and physical health status. In addition, mothers completed an interview about the child's background, health, life events, support network, and service use. Information about children's health conditions and acute illness symptoms was gathered from approximately equal proportions of the homeless and housed during the winter months of December through March (30% vs 33%, respectively). Demographic information, including housing history, income, education, jobs, family size and structure, and service use was gathered using a modified version of the Personal History Form. This instrument was designed for use with homeless and low-income housed persons.

Current mental health symptomatology and distress were assessed using the Symptom Checklist 90 (SCL-90). This self-report instrument provides a current profile across nine symptom dimensions: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. Dimensions of child health status were measured including health perception, accidents, acute illness morbidity, medical conditions, and disability. Mothers' perceptions of the child's health status and self-reports of accidents, medical conditions, and disability days were measured by questions adapted from the National Health Interview Survey, Child Health Supplement. Acute illness symptoms were adapted from the Rand Health Insurance Experiments' Child Health Questionnaire. Health service use questions were drawn from the National Health Interview Survey.

Differences between homeless and housed children were assessed using the t test for continuous variables and the [chi square] test for categorical variables. Two-tailed tests of significance were used for all analyses. Logistic regression analyses were used to examine the relationship between housing status and child health outcomes, while controlling for potentially confounding variables. The outcomes under study included emergency department visits in the past year (0-1 vs 2 or more); ambulatory care visits in the past year (0-2 vs 3 or more, including well-child and sick visits); mother's perception of their child's health status as fair or poor versus good to excellent; and number of acute illness symptoms reported in the past month (0-1 vs 2 or more). The multivariate models developed for each outcome included important background factors. Each model contained covariates for age, ethnicity, family size, and housing status. Other predictors were included on the basis of *a priori* postulated associations with the outcomes under study as well as on the basis of univariate associations with the principal study endpoints (P [is less than] .15). Variables included in these analyses were: history of physical or sexual abuse; foster care placement; number of moves in the past year; mother's age, education, income; size of mother's support network; history of battering and emotional distress. All nominated predictors competed for entry using a stepwise algorithm. Variables that were eliminated from the generated regression models were individually re-entered to check for negative confounding. Additionally, health service outcomes were controlled for children's health status and mother's social support, whereas symptom and health status outcomes included the medical condition count as an additional controlling variable. Adjusted odds ratios and accompanying 95% confidence intervals were calculated. All analyses were initially run in SAS (version 6.11) statistical software and then

rerun in SUDAAN (version 7.0) statistical software to account for correlated data as a result of sibling pairs within the sample. (Weinreb, et al. 1998)

Area of Economic/Social Cost/Benefits:

Health

Outcome measures used:

1. Health status (%)
 - Excellent
 - Very good or good
 - Fair or poor
2. Medical conditions/past year (%) (*)
3. Symptoms/past month (%)
4. Low birth weight (%)
5. Accidents past year requiring medical care
6. Service utilization
7. Emergency department
 - visits/past year
 - (mean, SD)
8. Two or more emergency department visits past year (%)
9. Outpatient visits/past year (mean, SD)
10. Hospitalized in past year (%)
- 11-20. P values for the differences between housed and homeless for all the above

Findings:

Health service use was higher among the homeless. More than one third of the homeless children reported two or more emergency department visits during the past year compared with only one fifth of the housed children. Homeless children also had higher outpatient visit rates for well and sick care. Homeless children were more likely to have been hospitalized in the past year compared with the housed children. Homeless mothers were more than twofold more likely to report that their children were in fair or poor health. Albeit not statistically significant, the mothers of homeless children were more likely to report the presence of multiple acute illness symptoms during the past month, than were mothers of housed children

Strengths:

The interview formats adopted were firmly established in the literature, while the presence of a control group allowed issues like poverty to be controlled for, as well as other demographic and financial characteristics. The sample size was substantial and the research question was appropriately addressed.

Gaps and Limitations:

Method:

Like many other studies the main concern is the use of self reported data without the support of administrative data, thus possibly introducing recall bias.

Findings:

The interpretation of high service rates use is limited because information was not gathered as to the appropriateness of medical service usage as well as an inability to discern between routine and sick care visits.

Australian applicability:

May be applied in an Australian environment, however accessing administrative data should be used to eliminate response bias. Additionally, the methodology should validate whether or not the use of services is appropriate.

B.20 Nicholson, P. (2000) The Health Status of Homelessness - Young Women in Melbourne: An Investigation into the Health Status of Homeless Women in Melbourne, Victoria. The Royal Women's Hospital.

<http://wellwomen.rwh.org.au/pages/Homelessness.htm> [Accessed 25/9/02]

Research Question:

What is the health status of a cohort of 40 homeless women aged between 18 and 25 years of age?

Methodology:

The research design consisted of a descriptive survey. One hundred female participants were recruited from these various crisis accommodation agencies, boarding houses, hotels, squats and the streets of Melbourne such as the St. Kilda CAC, and Hanover SB CAC. Participants were aged between 18-65 but for the purposes of this paper the findings from women aged between 18-25 years of age who represented 40% of the sample were outlined.

Area of Economic/Social Cost/Benefits:

Health

Outcome measures used:

1. % of the homeless young women experiencing illness in the past two years
2. % of the homeless population compared to national population with respiratory infections and asthma.
3. Prevalence of Hepatitis
4. % of young homeless women in the survey having ever experienced some type of difficulty with mental health
5. Rates of smoking
6. % of homeless population in the survey compared to national population, smoking
7. % of homeless young persons that had ever injected drugs
8. Times per day use of heroin by those currently injecting drugs in the sample.
9. % of sexually active homeless women
10. % of sexually active homeless women using condoms.

Findings:

71% of the homeless young women had experienced an illness in the past two years. Of that 71% the most common illnesses were the respiratory conditions bronchitis, pneumonia and asthma. Especially prevalent was asthma with 24% of respondents having had that illness in the past two years. The Australian national prevalence for this illness is actually 16% for this age group. Hepatitis was also prevalent with 17% of respondents having had some form of hepatitis related illness / symptoms in the past two years. 26% of respondents indicated that they had tested positive for a type of hepatitis. Sixty Three percent of young homeless women had experienced some type of difficulty with mental health, and 18.4% or nearly one fifth of the respondents reported they had been in hospital for the treatment of mental health. Rates of smoking in this study were exceptional with 92% of homeless women aged between 18-25 currently smoking. This is compared with the Australian national rate of 41% for females in the similar age group of 18-24 year olds. The reported level of injected drugs was high in this sample; 92.5% of young homeless women reported having ever injected some form of drug. Alternatively, this meant that only 7.5% of homeless women between 18-25 had never injected any drugs / substances. Of those who were currently using heroin, 40% were using

2-5 times a day, and 9.5% were using over five times daily. 10% of respondents reported using heroin fortnightly or less often, suggesting a recreational use of the drug.

Strengths:

The main strength of this survey is that it focuses on the specific issues of young homeless women thus isolating trends pertaining to this demographic group. It is possible that a more general survey would conceal the prevalence of these conditions in the general homeless population and more specifically would conceal the over representation of intravenous drug users.

Gaps and Limitations:

Method:

There is self reported bias in this type of survey. Additionally, the sample is small and did not attempt to ensure a balanced degree of representation for the entire population of homeless young women.

Findings:

Given the above, the findings can only pertain to the research sample and generalisations cannot not be made as to the application to the larger population.

Australian applicability:

While this study highlights the importance of isolating sub-populations in the homeless community, a more appropriate study would need to take into account demographic characteristics and provide a much larger stratified sample in order to reflect more clearly the costs in terms of health of the homeless female population

B.21. McCarthy, B. and J. Hagan (1991). "Homelessness: A Criminogenic Situation." British Journal of Criminology 31: 393-410.

Research Question:

Does participation in crime increase with homelessness?

Methodology:

The purposive survey was conducted by collecting contemporary information on street crime and retrospective data on at home crime with a self report, anonymous survey of a single sample of homeless adolescents. One hundred and thirty females and two hundred and sixty males found to be homeless agreed to be surveyed. Two measures of criminal participation were used; the proportion of the sample who participated in crime at home and the proportion who participated in the same activity after leaving home. An increase from the first score to the second indicates an increase in crime after leaving home. The relationship between crime and number of homeless experiences and the length of the current episode is further explored. The McNemar test of difference is used to determine the difference between pre and post responses, being a non-parametric test appropriate for dichotomous variables. This method allows an assessment of how many people changed their pattern of crime, and the significance of this change is calculated using a chi squared test. Twenty one individual indicators of criminal activity, divided into five conceptual categories; drug use, drug selling, property offences, assault and prostitution were used. Within each category, a set of indicators which range from more common, non-serious offences to serious law violations were used.

Area of Economic/Social Cost/Benefits:

Justice

Outcome measures used:

- Proportion of respondents partaking in illegal activities while at home.
- Proportion of respondents partaking in corresponding illegal activities while homeless.
- Significance of difference per and during homeless episode

Findings:

The results showed that although a sizeable proportion of those surveyed participated in a number of illegal activities at home, a significantly greater proportion of adolescents participated in 18 of the twenty-four criminal activities. The effect of the number of previous episodes was unclear, however the duration of homelessness determined by a sub-sample of those who had been on the street for a year or more showed a significant difference between the two periods. A significant positive increase was found in 15 of the activities in females and 19 in the male population of this sub-sample.

Strengths:

This is a good example of the costs of homelessness in terms of increased crime. With respect to the methodology the author attempts to limit the reactivity errors (errors deriving from recall and self reported data) by adopting a number of recommendations for reducing these errors in the survey process as outlined in Sudman and Bradburn (1983).

Gaps and Limitations:

Method:

As highlighted above, the self reporting suffers from recall and social desirability bias. While adoption of the Sudman and Bradburn (1983) measures may limit this the data should be viewed with a degree of caution.

Findings:

As above.

Australian applicability:

This study may be costly to implement at a national level, however the decided advantage of this type of survey is that it looks at changes in behaviour pre and during homelessness in order to assess the direct costs of homelessness with respect to crime, allowing the distinction to be made in adaptive behaviour that is directly attributable to homelessness. While this type of data does suffer from self reporting, it is largely verifiable with court records. This is one of the few studies reviewed that looks at changes in criminal behaviour in the homeless not just retrospective data of criminal activity.

B.22 McCormick, P., N. Wylie, et al. (2000). Outcomes for Households Receiving Financial Assistance to Secure or Maintain Private Rental Housing, Hanover Welfare Services, Melbourne.

Research Question:

What is the impact of the Housing Establishment Funds (funds provided to ensure access to private rental or to provide rent in arrears to prevent eviction) by the Australian Commonwealth Government in maintaining private rental accommodation?

Methodology:

Eligibility for inclusion in the study sampling frame was based on whether Hanover Housing Services (HHS) client households had been provided with HEF assistance in the period between February and June 1999. A random sample of 161 households was selected for inclusion in the study. A researcher examined and identified client files and contact information and then attempted to contact clients to ascertain whether they were in the same tenancy. Where a client could not be contacted the researcher contacted the landlord to establish whether or not the tenant was still in the same tenancy or had left. Information was also gathered from the landlord on the outcome of the tenancy. Where a client was still in the same tenancy, the researcher attempted to contact them by telephone and ask permission to survey. Where clients were in the same tenancy and non contactable, the survey was mailed to the client. An information letter was provided to inform the client of the confidential nature of the survey and would have no impact on future requests for services from HHS. The survey was non-identifying. Following completion of the survey, several households were able to ask permission to use their experiences as case studies. These households were chosen because their experiences and circumstances were considered to be representative of the

group. A pilot survey was undertaken and small changes in the terminology were made to the survey. The total clients assisted with HEF funds was 299. This represented 26% of households assisted by HHS with HEF over a 12 month period. Comparison of the demographic profile of the 161 households with the broader client group receiving HIF enabled an assessment that they were, in effect, representative of the total clients who had received a HEF payment.

Area of Economic/Social Cost/Benefits:

Housing

Outcome measures used:

1. Previous accommodation of clients assisted with rent in advance.
2. Length of tenancy at contact for those assisted with rent in arrears.
3. Proportion of income spent on rent for those assisted for rent in arrears by household type.
4. Tenancy outcomes by household type.

Findings:

The vast majority of individuals (80%) in the study group had previously lived in or were currently in private rental. Thirty seven percent of the group were assisted with rent in advance for new accommodation. Of the 63% in the group that were provided with assistance for rent in arrears, 39% had been in their tenancy for less than six months, 24% for 6-12 months and 37% for over one year. Amongst those who received the supplement over 89% were paying 30 % of their income on rent (which is a benchmark for housing stress), while one third were paying over 50% of their income on rent. In total, 70% had received a HEF assistance payment only once. In the final analysis, 63% of households were still in the same tenancy. Seventy One percent of those assisted with rent in advance were still in the same tenancy at least 5 months after assistance. Fifty eight percent of those assisted with rent arrears were still in the same tenancy. This low outcome for those who received monies for rent arrears may reflect the expiry of leases and non renewal by landlords. Half of those households who had moved from their tenancy subsequent to assistance were reported to have done so voluntarily to alternative housing. The other half experienced difficulty with their tenancy and were either evicted or left of their own accord. Thus the study showed that only nineteen per cent of the study group of 161 households can be said to have experienced subsequent difficulties that led to the loss of their tenancy.

Strengths:

This study provides a good example of the utilisation of Non Government Organisations to access data and information on clients assisted under various outsourced government housing programs.

Gaps and Limitations:

Method:

The methodology to ascertain the representativeness of the sample is not explained in great detail, leaving the representativeness of the sample slightly ambiguous. Additionally, it was noted in the study that the data collection process was contingent on records being accurate and detailed which though largely true, for a proportion of cases, information was not available from files.

Findings:

As highlighted by the authors, this study group was meant to be representative of households assisted with HEF at a single metropolitan THM service. Service delivery practices vary including the geographical boundaries and locations of the service implying that clients may vary with respect to circumstances and needs of households presenting in crisis. Thus drawing conclusions about the entire HEF population is difficult

Australian applicability:

As highlighted by the authors the data collection process was time consuming and resource intensive, however with respect to costing homelessness or programs the utilisation of Housing NGOs does provide a useful source for accessing information on clients and contact details if surveying past clients. This type of program may also be applied to other forms of government assistance in housing sourced out to NGOs.

B.23 Bailis, L., M. Blasinsky, et al. (1991). Job training for the homeless: Report on Demonstration's first year, Research and Evaluation Report Series 91-F, Office of Strategic Planning and Policy Development, Washington.

Research Question:

Did the national Demonstration Project (32 local employment and training services outreach programs designed for the homeless that included case management services, housing assistance and other services) achieve planned levels of clients served, trained and placed?

What other outcomes did the project achieve?

Methodology:

In April 1988 the department of labour completed a competitive tender and awarded \$7.7 million in one year grants to 33 public and private groups to implement employment and training projects for the homeless. 32 projects were implemented. Study findings were based on review of the materials submitted by the projects. The information requested from the programs included outcomes measures, client characteristics, program services, program implementation, program linkages and program effectiveness. The first five aspects were examined in this report. The data is derived from reports of the first 12 months of the project, by the 32 projects and include; the final evaluation report data and participant data from quarterly reports. All the quantitative (and qualitative) data were self reported by the projects.

Area of Economic/Social Cost/Benefits:

Training/Education.

Outcome measures used:

1. Number of homeless participants served.
2. Number of homeless participants placed in jobs
3. Average length of training time under the project
4. Average training cost under the project
5. Number of project participants trained
6. Average Hourly wage rate at placement
7. Number of project participants placed by job
8. Number of project participants with upgraded housing.

Findings:

Roughly 7,400 homeless people were served under the program, 2,300 more than planned. Twenty of the 32 projects served more people than planned. The total number of people trained also exceeded the plan, with the total trained within the one year period exceeding expectations (by 1,500) to train 4,600 individuals. With respect to those placed in unsubsidised employment, 33 percent of those trained had gainful, unsubsidised employment within the year. In total, 2,400 were employed in unsubsidised employment, 300 more than expected. The average hourly wage of those in employment was \$5.04 per hour, well over the minimum wage. Though the costs varied considerably by project, the average training cost per person was \$1,708.11. With respect to housing upgrades just less than 2,000 participants were placed in upgraded housing as a result of the project. Only 10 organisations reported housing outcomes of which 7 of the 10 reported exceeding targeted outcomes.

Strengths:

The strength of this particular study is that it examines a national project with very definitive outcomes. As highlighted in the McCormick et al. (2000) summary, the use of Non Government Organisations and smaller public organisations to access data and information on clients assisted under various outsourced programs facilitates the process of national data collection, by dividing the responsibility between organisations.

Gaps and Limitations:

Method:

The inherent problem with this type of study is the use of self reported data, however it must be acknowledged that the alternative is just too resource intensive. Further to this, the findings are based on a short time frame of implementation and would require a follow up to determine the true costs and benefits of the projects, including turnover of participants in work placements.

Findings:

As above.

Australian applicability:

This type of study could be replicated for any number of government outsourced projects for the homeless. Not only would this provide a costing of services but also quantified benefits as established under the outcome measures established under funding agreements.

B.24 King, A. and T. Payne (1993). Living conditions and costs of the young unemployed, Report and Proceedings No.110, The University of New South Wales, Social Policy Research Centre, Sydney.

Research Question: Is the current system of income support adequate? What are the incomes, costs and circumstances of the young unemployed?

Methodology:

The sample was composed of single unemployed people aged between 16 and 24 without dependent children, living in the Sydney metropolitan area and receiving either Job Search Allowance (JSA) or Newstart Allowance (NSA). The stratified random sample drawn by the Department of Social Services (DSS) was designed to include 700 people. The sample was stratified by age, payment type, living arrangements and area. 711 people were approached for the survey, with an overall response rate of 58.5, yielding a sample of unemployed people living in metropolitan Sydney. The questionnaire was based in part on that by Hartley (1989), and consisted of 12 sections: personal details, living arrangements, living with parents: leaving home and transfers, away from parents: leaving home and transfers, income, away from parents: housing costs, non housing expenditure components, other aspects of income adequacy, financial assets and liabilities, financial vulnerability, housing location preferences, barriers to employment, assistance from Department of Social Services.

Area of Economic/Social Cost/Benefits: Training/Education/Unemployment.

Outcome measures used:

There are a number of outcome measures not relevant to homelessness that will be omitted.

1. No. of recipients of JSA homeless (by definition these are those between the ages of 16-17) rate
2. Proportion of individuals on the JSA homeless rate who left school at age 15 or younger.
3. No. of JSA homeless recipients who held a job for more than 3 months or more.
4. Median duration of receipt of unemployment benefit for JSA Homeless recipients
5. DSS Mean benefit income received for JSA Homeless recipients
6. DSS Base benefit income received for JSA Homeless recipients

7. Proportion of JSA Homeless recipients receiving private income.
8. Mean amount received per week for JSA Homeless recipients from private income
9. Proportion of JSA Homeless recipients receiving private income from parents.
10. Mean amount received per week for JSA Homeless recipients from private income from parents
11. Mean board payment per week for JSA Homeless Recipients
12. Mean food payment per week for JSA Homeless Recipients
13. Mean telephone, electricity and gas payment per week for JSA Homeless Recipients
14. Mean transport expenditure per week for JSA Homeless Recipients
15. Mean of total income less expenditure for Mean board payment per week for JSA Homeless Recipients per week.

Findings:

In the sample there were only 32 JSA Homeless recipients. Of this small sample 31 had held a job for 3 months or more, only 9 per cent had received unemployment benefits for more than 12 months with 44 per cent receiving it for between 6 and 12 months. The mean benefit per fortnight for this sub-group was \$205, which was the same as the base benefit. Nineteen per cent received private incomes of which the mean was \$82.60, with the mean amount from parents being \$7.70 per week. With respect to expenditure, mean board payment for JSA homeless recipients was \$49, mean payment for telephone, gas and electricity was \$13.30, and mean total expenditure on transport was \$15 per week. In total, the mean of total income less expenditure was \$35 dollars per week.

Strengths:

This particular study, though not directly focussed on homelessness, provides a substantial analysis of government and private expenditure of this sub-sample of the homeless.

Gaps and Limitations:

Method:

Yet again, there remains the problem of self reported data use. More importantly however, the sample size is small. This primarily is the result of the categorisation of the system by payment type. It is possible that other "homeless" youth may be captured in the data of those above the age of 17, however, it is impossible to discern, and contingent on definitions. As a result, the survey fails to capture the true cost of homelessness in youth in terms of government benefits, and the sample used cannot be construed as representative.

Findings:

As above.

Australian applicability:

This type of study would be very useful for a costing of homelessness in Australia, however it would require that a uniform definition of homelessness be determined. It is simply not representative to use the JSA homeless recipients alone. The determination of the costs of homelessness in Australia, in terms of income benefits, may be better derived by accessing the records of shelter service providers for identification, and then obtaining information from Centrelink as to income benefits received.

The particular advantage of this study is that it looks at income and expenditure for individuals, thus examining the financial costs of homelessness for JSA recipients in terms of income adequacy and poverty levels. This however, remains a resource intensive process, most particularly if applied at the national level.

B. 25 Australian Institute of Health and Welfare (2001). SAAP National Data Collection Project 2001, AIHW Cat. No. HOU 61, Australian Institute of Health and Welfare, Canberra.

Research Question:

What are the levels of support given to clients of the Supported Accommodation Assistance Program?

Methodology:

The National Data Collection began in 1996-97 when it first began providing annual information on the provision of assistance through the Supported Accommodation Assistance Program. The National Data Collection consists of distinct collections. Currently, four collections are run annually: the Client Collection, the Administrative Data Collection, the Unmet Demand Collection and the Casual Client Collection. The Client Collection is the main component. It collects information about all clients receiving support under SAAP of more than 1 hour's duration. Data are recorded by service providers during, or immediately following, contact with clients and are then forwarded to the NDCA after clients' support periods have ended or, for ongoing clients, at the end of the reporting period (31 December and 30 June). Data collected includes basic socio-demographic information and information on the services required by, and provided to, each client. Information about each client's situation before and after receiving SAAP services is also collected. The Administrative Data Collection consists of general information about the agencies providing accommodation and support services to people who are homeless or in crisis. The Unmet Demand Collection is conducted annually over 2 weeks. It measures the level of unmet demand for SAAP services by collecting information about the number of requests for support or accommodation from SAAP agencies that are not met, for whatever reason. The two-week Casual Client Collection is conducted annually to elicit information about short-term or one-off assistance provided to homeless people. The participation rate for the Client Collection is 94% of SAAP agencies providing support and/or accommodation to SAAP clients. Across Australia, consent was obtained from clients in 82% and 79% of annual support periods respectively.

The Australian Institute of Health and Welfare developed an adjustment scheme that allowed for differences between support periods with consent and those without. The scheme also adjusted estimates to allow for agency non-participation (if this occurs), for clients who gave valid consent for some support periods but not for others (referred to as 'mixed consent'), and for clients who did not give consent in any of their periods of support. The statistical assumptions underlying the adjustment scheme developed by the Institute were as follows.

The collection is divided into specified groups, or strata. Within the strata it is assumed that support periods with valid consent represent support periods without valid consent. This means that the characteristics of support periods within each stratum are assumed not to depend on whether valid consent was obtained. The strata are defined in terms of characteristics available for all support periods in participating agencies. If there are any non-participating agencies within a State or Territory it is assumed that, on average, participating and non-participating agencies provide a similar volume and profile of support. Some clients have mixed consent. Assumptions about the extent and nature of mixed consent are made to estimate the number of clients and the average number of support periods per client. Adjustments made for clients with mixed consent within subgroups are derived using simulation techniques and by-product data from the Client Collection. For support periods, two weights for adjusting estimates are derived:

_ *a non-participation weight*—a range of information is available for all support periods in participating agencies and estimates using these data are adjusted only for agency non-participation; and

_ *a full non-participation non-consent weight*—for estimates using data that require consent, weights that adjust for both agency non-participation and client non-consent are used.

It is possible for these two weighting schemes to give slightly different estimates for the same item. Since estimates derived using the non-participation weights are based on a much larger sample of support periods than those using the full non-participation non-consent weights, the former (where available) are preferred because of their greater accuracy. For clients, only one weight is derived since valid consent is required to derive these estimates. A non-participation weight is derived for each support period in participating agencies, and a full non-participation non-consent weight is derived for each support period with valid consent. A client weight is derived for each client with at least one support period with valid consent. Estimates of totals are then found by summing the relevant weights for each support period or client with the characteristics of interest. In estimates of numbers of clients, inaccuracies caused by identical linkage keys for a small number of clients and changing linkage key information for the same client are not considered in the adjustment scheme. In this report nearly all estimates of clients and support periods obtained using data from the Client Collection had been adjusted for agency non-participation and, where applicable, client non-consent using the scheme just outlined. However, estimates relating to accompanying children had not been adjusted since only data for the second half of the reporting period were available; only data not requiring consent are used in these tables. In addition, in the supplements associated with this report, unadjusted estimates are presented at the regional level because the scheme was developed for national and State-level estimates and is not appropriate for regional estimates. No other adjustments have been made for errors or omissions or for data not obtained as a result of question exclusions on the high-volume form.

Area of Economic/Social Cost/Benefits:

Housing/Health, Welfare.

Outcome measures used:

1. 1. Number of clients supported
2. 2. Average number of support periods per client
3. 3. Types of support provided
4. 4. % of requests for support not provided
5. 5. Change in unemployment profile before and after support
6. 6. Employment post employment assistance.
7. 7. No. of accompanying child support periods.
8. 8. Total recurrent allocation of funding for SAAP.
9. 9. Total funding per target group

Many less relevant outcomes were not included in the above listing because of the sheer numbers.

Findings:

It was estimated that funding for 1,238 SAAP agencies supported 91,200 clients to whom they provided 168,200 occasions of support during 2000-2001. The average number of support periods per client was approximately 1.8. Around 5,000 of the closed support periods involved total accommodation of less than one day. A further 92,800 support periods included some accommodation of one day or longer. The three broad types of support services most often provided during 2000-2001 were housing and accommodation services (76% of all support periods), general support and advocacy (76% used general services like living skills and personal development, legal assistance, advocacy etc.) and basic support services (70% used basic support services such as meals, laundry, recreation and transport).

Eighty seven percent of requests were met. Overall, there was little difference in the profile of clients' employment status before and after receiving support. However, for those clients requesting employment assistance, the proportion of supported periods in which they were employed in some capacity doubled from around 9% before support to 18% after.

The total recurrent allocation under SAAP was \$268.5 million. Recurrent funding to agencies was \$251.4 million, a real increase of 13% from 1996-97. The greatest proportion of this funding went to young people (90,131,000) followed by Single men (24,572,000) with the least amount provided to single women only (8,480,000).

Strengths:

This data is decidedly useful in the sense of providing a national system for accounting for monies spent and services provided by programs specifically targeting the homeless. The use of alpha codes (codes used for clients) is particularly useful in tracking service use within the system.

Gaps and Limitations:

Method:

The only real concern with the data is the data entry errors and omissions and their impact on national service use totals. The use of some adjustment measures however attempts to limit the impact they have on the data.

Findings:

Due to the above problem the total service use indicators are only estimates, though given the relatively high response rates and submission rates, it may be inferred that they are largely representative.

Australian applicability:

This is a particularly useful data set for the costing of homelessness in Australia. There are however several problems with its use for a national costing of homelessness. The obvious omission from this costing are programs not specifically catering for the homeless that are utilised by the homeless. The most glaring example of this is the homeless costs that are incurred via the medical system. In addition other non program based costings are required, such as incarceration and general law enforcement costs and costs born by the nonprofit community. The SAAP data collection is useful, however the use of alpha codes cannot trace clients outside the SAAP system. It would be far more useful for clients to be tracked by an identifier that may be found in other systems, such as a tax file number or a medicare number etc.

B.26 Anderson, I. and D. Quilgers (1995) Foyers for young people: Evaluation of a pilot initiative, Center for Housing Policy, University of York. <http://www0.york.ac.uk/inst/chp/foyersum.htm>. Accessed 8/10/02.

Research Question:

Was the foyer project in the UK successful in developing an integrated approach to homelessness and unemployment?

Methodology:

This study was summarised on the above website. The full study was not accessible, hence much of the exact methodology is unknown. What is known is that the information derived in the findings was ascertained through staff interviews, monitoring of clients using YMCA foyer support services, interviews with young people, an employer telephone survey and examination of background information.

Area of Economic/Social Cost/Benefits:

Housing, Training/Education.

Outcome measures used:

1. No. of young people in the hostels utilising Job Search within 18 months from the inception of the program
2. No. of young people in the hostels utilising Employment Training within 18 months from the inception of the program

3. No. of young people in the hostels utilising Employment Action within 18 months from the inception of the program
4. No. of young people in the hostels utilising Youth Training within 18 months from the inception of the program
5. No. of young people in the hostels utilising other training within 18 months from the inception of the program
6. No. of young people in the hostels who gained work experience within 18 months from the inception of the program
7. No. of young people in the hostels gained numeracy and literacy classes within 18 months from the inception of the program.
8. No. of young people in the hostels who obtained temporary work within 18 months from the inception of the program
9. No. of young people in the hostels who obtained fulltime work within 18 months from the inception of the program
10. No. of young people in the hostels who obtained part time work within 18 months from the inception of the program

Findings:

Employment and Training Outcomes – Number of participants starting each activity.

Job Search	280
Employment Training	51
Employment Action	35
Youth Training	11
Other Training	91
Other Work experience	61
Literacy and Numeracy	15
Temporary Work	72
Full time Job	130
Part-time Job	40

664 young people were referred to the foyer support services in the first 18 months. 331 people had left the support services by the end of the 18 months. A quarter left with a job and move-on accommodation. The lower numbers in the activities such as life skills training and providing assistance with move-on may be explained by the fact that they were only initiated towards the end of the project. The costs involved were; 1. Approximately 40,000 pounds for the 5 existing YMCAs converted to foyers. 2. Approximately 6,275,000 pounds for capital and running costs for the 2 newly built foyers.

Strengths:

The value of this study is the examination of outcomes for a combined housing and training/employment service. The outcomes are easily quantifiable and the methodology at least in part, is based on the use of administrative data supported by qualitative information.

Gaps and Limitations:

Method:

The methodology was difficult to ascertain, however the simplicity of the outcomes and the description of the types of information gathered were relatively sufficient to get a broad understanding of the methodological process. It would, however, have been appropriate to find out details of the nature of the administrative data in greater detail.

Findings:

The main limitation of the findings is a lack of program goals by which outcomes could be assessed to ascertain whether the project was more or less successful than anticipated. Further to this, as stated in the research itself, the full impact of the program would require a longer term study. The reason for this longer term study is the notion of training and education as long term investments. It would have been interesting to see the income streams and the stability of job turnover and housing of those who went through the program.

Australian applicability:

This type of program and the study attached would be quite easily replicable in an Australian environment, however it would have the obvious limitation of examining costs and benefits for only one section of the homeless population. The application of this project across the board would be possible if the training/employment services were attached to the current shelters run by both public and private providers.

AHURI Research Centres

Sydney Research Centre
UNSW-UWS Research Centre
RMIT Research Centre
Swinburne-Monash Research Centre
Queensland Research Centre
Western Australia Research Centre
Southern Research Centre

Affiliates

Northern Territory University
National Centre for Social and Economic Modelling



Australian Housing and Urban Research Institute
Level 7 20 Queen Street, Melbourne Victoria 3000
Phone +61 3 9613 5400 Fax +61 3 9629 8536
Email information@ahuri.edu.au Web www.ahuri.edu.au