The health impacts of place-based interventions in areas of concentrated disadvantaged

A review of the literature

Karen Larsen

SYDNEY SOUTH WEST
AREA HEALTH SERVICE
NSW HEALTH

UNSW
THE UNIVERSITY OF NEW SOUTH WALES
Research Centre for
Primary Health Care and Equity
Research that makes a difference

Acknowledgements

The author would like to acknowledge Michelle Maxwell from Population Health at Sydney South West Area Health Service and Elizabeth Harris from the UNSW Centre for Health Equity Training, Research & Evaluation (CHETRE) for their assistance in compiling literature and writing the review. The author would also like to thank Maggy Yeum from the Greater Western Sydney Division of the NSW Department of Housing for supplying literature.

Population Health
Population Health, Planning & Performance

Sydney South West Area Health Service
Head Office
Liverpool Hospital (Eastern Campus)
Elizabeth Street, Liverpool NSW 2170

Tel: 02 9828 6938
Fax: 02 9828 6940
www.sswahs.nsw.gov.au

Table of Contents

Executive Summary

This review of literature was commissioned by Population Health Sydney South West Area Health Service (SSWAHS) to inform decision-making on interventions to improve the health and wellbeing of disadvantaged communities in South West Sydney. In the near future there will be opportunities to influence local and regional planning and urban renewal strategies. It is hoped that this review, together with local contextual information, can assist in focusing resources and commitment by the Area Health Service and other partners.

People living in socially disadvantaged locations (which are usually characterised by socio-economic disadvantage, social exclusion, higher crime rates and poorer physical environments) have consistently poorer health and wellbeing outcomes. In Australia, as with many other developed nations, urban renewal and place-based interventions have been implemented as a means of addressing the problems of concentrated social disadvantage. Place-based interventions offer a number of potential ways to tackle concentrated social disadvantage including addressing behavioural, psychological and material pathways and by impacting on the social determinants of health in a neighbourhood setting.

This review examines current evidence and opinion on urban renewal and other place-based interventions that impact on health and health determinants in disadvantaged communities. The research questions for the review were:
1. What interventions are being implemented at the neighbourhood level to address health and the social determinants of health in disadvantaged communities?
2. What is known about the effectiveness of these interventions?
3. What are the implications for future urban renewal initiatives?

The review found many policies and interventions that have been implemented to address health related issues in areas of concentrated disadvantage. However, very few of these interventions have been the subject of well designed and rigorous evaluation. This lack of evidence merely points to a knowledge gap, rather than contrary evidence of the effectiveness of these interventions. Of the evaluations that were conducted, a range of different outcomes have been reported and many of them suggest a direct link between the interventions and desired health outcomes.

Interventions can be directed at different levels within the community: the people living in the community, relationships between people living in the community and service providers, or improving the physical infrastructure of an area. The recent literature suggests a shift away from purely physical interventions to more integrated approaches. In particular, there has been greater emphasis on interventions that increase the capacity of local communities through community development, employment and education initiatives.

The key findings of this review highlight several factors associated with positive improvements in health and the social determinants of health. These include:
- Integrated and holistic approaches
- Interventions that are fully implemented i.e. no premature discontinuation
- Use of community engagement, participation, and ownership.
- Focus on long term and sustainable benefits.

- The assumed benefits are based on empirical evidence
- A good understanding of the community (the types and causes of disadvantage, the needs, the resources available)
- Investment in early intervention and prevention

A key consideration for policy and practice in the field of urban renewal is the importance of evidence. This review shows many interventions can have a positive impact on health and it's determinants. However many interventions fail to achieve any substantial improvements and can sometimes have unintended negative outcomes. It is important, therefore, that future urban renewal interventions give due consideration to the evidence base and the specific context in which this activity will take place.

Scope and Purpose

Why is this important?

SSWAHS Population Health has commissioned this review in order to inform future planning for disadvantaged communities in South West Sydney. Evidence about the effectiveness of interventions together with local contextual information will be used to plan for future resources and commitment to improve the health of disadvantaged communities in the area.

Sydney South West covers a land area of 6380 square kilometres and has a current population of approximately 1.33 million, representing 20% of the NSW population. SSWAHS is one of the fastest growing parts of NSW and its population is projected to increase by up to 300,000 people by 2030, with areas of substantial new land release and medium density urban infill (Sydney South West Area Health Service 2005).

SSWAHS is characterised by its multicultural character, with 39% speaking a language other than English at home. A high proportion of new migrants to Australia choose to settle in Sydney South West, including refugees.

Sydney South West has some of the poorest communities in NSW, characterised by a large number of recent migrants, significantly higher unemployment and a high proportion of families dependent on welfare. While much attention has been given to the problems of disadvantage within the large public housing estates, of equal significance are several areas within Sydney South West with low public housing but high levels of concentrated social disadvantage (Randolph 2000).

This review comes in the context of recent public housing estate renewal activity in all Australian states attempting to address problems of concentrated disadvantage through a range of physical and social interventions. There are also opportunities to influence local planning decisions for South West Sydney through the release of the Sydney Metropolitan Strategy and Sub-regional Planning for Sydney South West, currently in progress (Department of Planning 2005). Many of the strategies within these plans refer to issues such as affordable housing, improvements to housing, transport, employment and access to healthy foods.

Determinants of health

The dominant view accepts that health is ‘multicausal’ and the result of the interaction of human biology, lifestyle and environmental (including social) factors (AIHW 2006). Inequalities in health can also be thought of in this way. There are a wide range of economic, social and environmental factors that impact on health in positive and negative ways. These determinants of health can be categorised into layers of influence as depicted in Figure 1 (Dahlgren and Whitehead 1991). They include the following:

1. Age, sex and hereditary factors;
2. Individual lifestyle factors;

3. Social and community influences;
4. Living and working conditions; and
5. General socio-economic, cultural and environmental conditions.

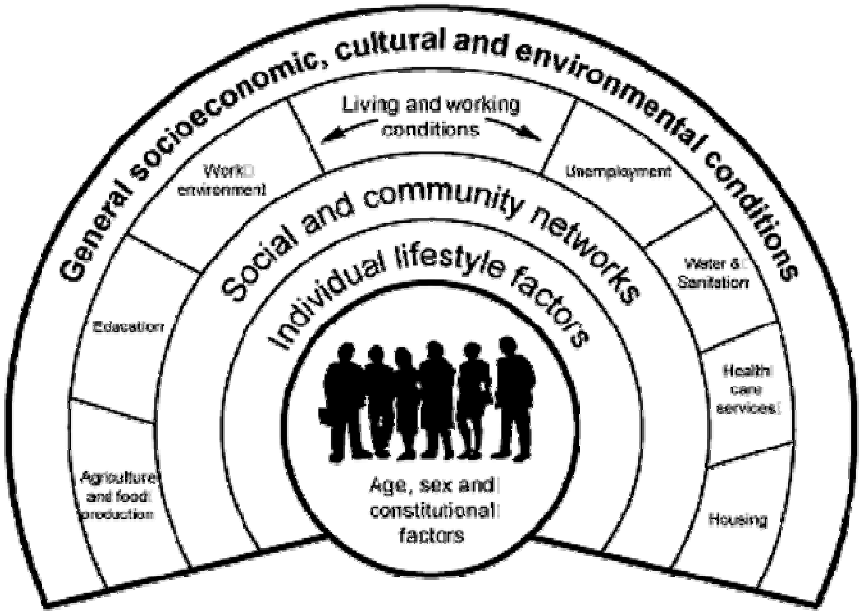

Figure 1: The wider determinants of health. Source: Dahlgren and Whitehead 1991.

The second and third layers, which refer to the social and community influences, and the effects on health of living and working conditions, are of particular relevance to discussions about urban renewal and place-based interventions for health. Many urban renewal and place-based interventions do not have an explicit focus on health and wellbeing, yet may through their impact on these determinants of health have a substantial indirect impact.

Place and health

Understanding the reason why certain areas and neighbourhoods have poorer health is a major concern for policy makers, planners, and health and human services providers in Australian cities. Socially disadvantaged locations, usually characterised by socio-economic disadvantage, social exclusion, higher crime rates and poorer physical environment, have consistently poorer outcomes in terms of health and wellbeing. These spatial inequalities in health have been the subject of much research and academic discussion (Kawachi and Berkman 2003). The negative effects of residing in neighbourhoods of concentrated social disadvantage are thought to impact on health in a number of direct and indirect ways including:

- Lack of access to social networks, which link residents to job opportunities.
- Limited role models to integrate residents into the 'appropriate' behaviours of wider society. This factor is linked to problems of crime, low education retention rates, poor health and high unemployment.
- Postcode prejudice and stigma associated with residing in areas that are perceived as negative and undesirable places.

- Decreased access to a range of health, education and community services due to service 'overload' within particular areas (Arthurson 2004).

Observed differences in health between places have traditionally been attributed to one of two possible explanations: compositional and contextual. The first explanation is that differences in health between places are a result of the differences in the characteristics of people who live in these places (a compositional explanation). Often tied to this explanation is the fact that lower individual socio-economic status is associated with poorer health outcomes (Evans et al 1994). The other explanation is that differences in health between places are due to differences in the characteristics of these places (a contextual explanation). This explanation is given when differences cannot be explained by individual factors. Kawachi and Berkman (2003) argue that this distinction is somewhat artificial due to evidence of the interrelationship between people and places. People create places and places create people. It is generally recognised within the literature that concentrations of disadvantage in certain areas within cities is the result of a complex mix of social, spatial, economic and political forces, and that the local neighbourhood is important in shaping these processes (Kintrea 2007, Randolph 2000, Skifter Andersen 2003). This spatial segregation is not a simple result of social inequality, but of the interaction between social and spatial processes that simultaneously create both social and spatial inequality (Skifter Andersen 2003). Place is therefore important. Hence the focus on places and place-based interventions in current urban renewal projects.

In Australia, as with many other developed nations, urban renewal and place-based interventions have been implemented in many locations as a means of addressing the problems of concentrated social disadvantage. Urban renewal and place-based interventions are distinguished from mainstream social welfare and economic policies (not a focus of this review) as they focus on specific areas. These interventions cannot influence global trends or key national economic policy settings that ultimately determine relative levels of poverty and wealth in Australia. However, they do offer a number of potential ways to help tackle concentrated social disadvantage including:

- addressing key aspects of the behavioural, psychosocial and material pathways through which social disadvantage generates poor health outcomes.
- impacting on key social determinants of health in a neighbourhood setting through potential changes to training and employment levels; improved safety; improved amenity; and changes to social functioning (Klein 2004).

Traditionally, a choice was made to adopt a "place-based" theory of redevelopment strategy versus a "people-focussed" theory. However, there is growing recognition that this is no longer appropriate or feasible (Lamore et al 2006). In a number of Australian states, including New South Wales, the early bias toward physical regeneration has shifted due to a growing recognition of the importance of social and community development initiatives, community consultation and the need for a whole-of-government approach involving partnerships with other service agencies (including the police) (Judd et al 2002).

Objectives

Two key concerns regarding current policy and practice in urban renewal are raised in the international research literature:

- A weak evidence base for informing decisions and backing assumptions; and
- A poor understanding of disadvantage (Skifter Andersen 2002)

The following review examines current evidence and opinion on urban renewal and other place-based interventions in disadvantaged communities that impact on health and its determinants. Our key research questions are:

1. What interventions have been implemented at the neighbourhood level to address health and the social determinants of health in disadvantaged communities?
2. What is known about the effectiveness of these interventions?
3. What are the implications for future urban renewal/ regeneration initiatives and population health interventions in the Sydney South West Area Health Service?

The following review examines the findings of recent literature reviews, systematic reviews and meta-analyses of the evidence, supplemented by some key recent studies and evaluations. There are a number of key outcomes that are relevant to urban renewal and place-based interventions and health. These are discussed in the review under two sections. The first is concerned with reported health outcomes and the second looks at outcomes relating to the determinants of health including social, crime and safety, housing/neighbourhood condition and amenity, and opportunity outcomes.

Search Method

Search strategy

Due to the short time frame for this review a pragmatic search strategy was adopted. This involved a broad search of key electronic databases including Medline, CINAHL, EMBASE, Social Sciences Index, Sociological Abstracts, Australasian Medical Index, and APAIS. The key search terms included ‘urban renewal’, ‘urban regeneration’, ‘public housing’, ‘social housing’, ‘deprived areas’, ‘area based’, ‘disadvantage’, and ‘neighbourhood’. Searches were limited to articles published after 1990 in English.

Internet searches, snowballing from the key articles and consultation with staff from SSWAHS Population Health, Greater Western Sydney Division of the NSW Department of Housing and CHETRE were also key sources of relevant research literature.

Inclusion and exclusion criteria

A set of selection criteria were developed to identify the primary studies for this review. Articles were included if they met the following criteria:

1. Published after 1990
2. Based on empirical research
3. A developed country
4. Discussed urban renewal or place-based interventions
5. Addressed health or the determinants of health
6. Concerned with areas of social disadvantage
7. Focussed at the neighbourhood, small local area or community of place level

We focussed on literature reviews, systematic reviews, reviews of reviews, and meta-analyses rather than trying to conduct a comprehensive review of studies ourselves. Key recent studies and evaluations were included to supplement the information retrieved from the review of reviews.

Results

Scope and quality of evidence

While policies to address the health and health related problems in areas of concentrated disadvantage are abundant, the evidence base informing decision making and practice is less well developed. In reviewing the range of evidence available for establishing the impact of urban renewal and place-based interventions on health we find that a large number of strategies are being employed but few have been the subject of well designed, rigorous studies and evaluations. This can largely be attributed to the difficulties of studying urban renewal and health (Thomson et al 2001), however, it may also suggest inadequacies in establishing a functional link between research and policy/practice. For this reason it must be remembered that a lack of evidence points to a knowledge gap and must not be interpreted as contrary evidence. That is, it does not mean that a particular intervention has no effect on health, nor that it is not worth being implemented.

Evaluations and studies involving area-based or place-focussed interventions report a range of different outcomes. The types of outcomes reported and judgements about the 'success' of each approach in many cases appears to depend upon the framework used. While the reporting of direct health outcomes is uncommon, many of the outcomes reported have important implications for health. These are reported in the results section below.

1. Health outcomes

What are the links between place-based interventions and health?

Changes to people's social, physical, and economic environments are increasingly seen as important for improving population health (AIHW 2006). Although there is evidence linking certain features of the local environment and health, such as physical indicators of walkability and the associated physical activity (Humpel et al 2002), there is comparatively little evidence about the actual effects of intervening to change environments (Hillsdon et al 2005). The difficulties of conducting true experimental studies in this field are well known (Ogilvie et al 2006). However, numerous urban renewal and place-based interventions continue to be implemented and their findings are useful for guiding further activity in this area.

What impact do place-based interventions have on health?

A variety of place-based interventions that report health outcomes have been implemented in disadvantaged neighbourhoods and local areas. While many interventions are implemented as a single, focussed intervention, usually with clear objectives and expected outcomes, many are implemented under broader urban regeneration initiatives which may report health outcomes along with other social, physical and economic outcomes.

Housing improvement interventions
Housing improvement interventions including rehousing and physical changes to housing, such as installation of heating or insulation and general refurbishment, have been shown to impact positively on health and wellbeing (Mullins et al 2001; Saegert et al 2003; Thomson et al 2001). Improvements to housing not only effect physical health but have also been shown to have a positive effect on mental health. In fact, there is some evidence demonstrating a cause-effect relationship between housing improvement and improvements in mental health (Thomson and Petticrew 2005).

While the evidence base is limited, in that many of the studies are not very methodologically robust, the trend towards improved health following housing improvement is strong. An interesting finding by Mullins and colleagues (2001) was that housing improvement including measures to counteract the effects of cold, damp, and mould are successful if full refurbishment is completed, while partial improvements had no effect. This may help explain Saegert and colleagues' (2003) review of US housing improvement interventions which found that most studies reported statistically significant improvements, but few (14%) were judged extremely successful.

While it could easily be assumed that any improvements to housing conditions, especially in the poorest quality housing, are likely to benefit health, some cautions are raised in the literature (Thomson and Petticrew 2005). For instance one UK study found increased psychological stress (measured on the GHQ12 scale (Goldberg 1972)) among residents who had just participated in a housing improvement initiative compared with those in a neighbourhood public housing estate who had not (Thomas

et al 2005). Therefore it is important to take into consideration the specific context in which the improvements are going to take place and identify vulnerable groups who may be adversely affected.

Case study: The health impacts of housing-led regeneration: a prospective controlled study (Thomson et al 2007)

Conducted in the West of Scotland this intervention involved the relocation of 50 households living in poorer quality social housing who were relocated to new, better quality housing. Interviews with residents showed small increases in levels of ‘‘excellent’’ or ‘‘good’’ self-reported health status and a reduction of problems related to warmth, however, these increases were also found from interviews with 50 residents who did not move. The authors conclude that the absence of marked improvement in health after moving to new housing might be due to the small sample size or to the limited potential to improve health through this intervention alone.

Community based alcohol prevention

Community-based environmental programs for alcohol related problems were reviewed by Treno and Lee (2002). Of the small number of program evaluations that reported health outcomes some had inconclusive results and others reported some reductions in alcohol related problems such as injuries, fatalities, and problematic alcohol use. However, little is known about the relative effectiveness of specific interventions within these programs, the cost-effectiveness of these interventions, the appropriate geographic focus and the efficacy of such interventions in racial/ethnic minority neighbourhoods.

Case study: The Sacramento Neighbourhood Alcohol Prevention Project: Outcomes From a Community Prevention Trial (Treno et al 2007)

A recent community-based alcohol prevention program, the Sacramento Neighborhood Alcohol Prevention Project, aimed to reduce alcohol access, drinking, and related problems in two low-income, predominantly ethnic minority neighbourhoods, focusing on individuals between the ages 15 and 29. Five project interventions included a mobilization component to support the overall project, a community awareness component, a responsible beverage-service component, an underage-access law enforcement component, and an intoxicated-patron law enforcement component. Overall, significant reductions in assaults as reported by police, aggregate emergency medical services (EMS) outcomes, EMS assaults, and EMS and motor vehicle accidents were found. Results from the Sacramento Neighbourhood Alcohol Prevention project demonstrate the effectiveness of neighbourhood-based interventions in the reduction of alcohol-related problems such as assaults, motor vehicle crashes, and sale of alcohol to minors.

Place based transport interventions

Transport poverty is a characteristic of many disadvantaged locations especially the disadvantaged areas of Western Sydney (Urban Frontiers Program 1999). Transport systems play a role in mediating socio-spatial disadvantage through providing access to economic opportunities and social and community services (Dodson et al 2004). Improving transport links, road safety, and public transport are integral to many urban renewal initiatives. We identified 2 reviews of place-based transport interventions.

While there was no indication of the social characteristics of targeted areas, and in particular the level of disadvantage, the issues addressed may be similar to those experienced in some disadvantaged areas. The first review (Elvik 2001), a meta-analysis of 33 studies, found that area wide traffic calming interventions reduce the number of accidents by a mean of 15%. The effects are relatively constant in different countries and different years. The second review by Elvik (1995) looked at public lighting interventions and found that night time accidents were reduced by 15-35%. The results varied by year and country.

Access to health services

Primary care services such as general practice, which operate as the first contact point to the health care system in Australia, have an opportunity to address health inequities by improving access to quality care. However, primary health care is not accessed equally among all Australians and there is evidence to suggest that people who are socioeconomically disadvantaged are more likely to need, but are less likely to access health care, especially preventive health services (Harris and Knowlden 1999).

Targeting disadvantaged groups with specific health programs and services and distribution of services according to need are two possible approaches to the problem of inequality in access. The former approach has the potential for substantial gains in the short term, and the latter approach is likely to provide fairer access in the long term (Harris and Knowlden 1999). Strategies that have been shown to be effective in reducing health inequalities include outreach services, reducing cost and other barriers to access, developing culturally appropriate services, and increasing access to skills and resources that will enable people to adopt more health promoting lifestyles (Gepkens and Gunning-Schepers 1996; Turrell et al 1999).

Strategies to co-locate providers and services within primary health care in disadvantaged locations have important implications for access to health care (McDonald and Hare 2004). Examples include GPs co-located in community health centres, school-based health centres and generalist community health centres. Co-location of GPs and primary health care nurses can improve referrals from GPs to nurses (Rose et al 2003). In the UK, co-location of health and social services has also improved referrals between these teams and reduced the time-period between referral and assessment (Glendinning et al 1998; Brown et al 2003).

Key points:

- There is limited empirical research on health outcomes due to the difficulties of conducting research in this context
- Improvements to housing can have positive effects on physical and mental health
- The most successful housing improvement interventions are fully implemented, ie. not prematurely discontinued, and tackled in tandem with other social problems.
- Improving access to health services is likely to have substantial health benefits

2. Determinants of health

2.1. Social outcomes

What are the links between social/community functioning and health?

Findings from a recent review of the international literature indicated that a positive association exists between social capital, at the individual and area level, and better health (Kamrul Islam et al 2006). In an analysis comparing the potential of six progressively less individualised and more community-focused interventions to prevent deaths from heart disease, social support and measures to increase social cohesion fared well against more individual medical care approaches (Lomas 1998). Also, a Swedish study found that social capital is positively related to the level of health capital (Bolin et al 2003). Russell and Killoran (2000) suggest a number of ways by which building social capital can promote health. These include promoting better and more accessible health education; designing better healthcare delivery systems; collective action to build and improve infrastructure; prevention efforts; and addressing cultural norms that may be detrimental to health.

What impact do place-based interventions have on social outcomes and health?

Some key approaches to improve social cohesion in disadvantaged neighbourhoods are changing the social mix of neighbourhoods, and empowerment of local communities through community development (Kahrik 2006). Physical upgrades to housing have also been used as a means for improving social cohesion and functioning.

Tenure diversification
A trend seen in both Australian and international contemporary urban regeneration is a focus on balancing social mix through tenure diversification to improve social outcomes (Arthurson 2004). Tenure diversification of existing neighbourhoods can take place in a number of ways including demolition, upgrading or sale of publicly rented housing and the construction of new, more costly owner-occupied or private rented housing. By increasing the number of owner occupiers or balancing the mix between owner occupiers and public tenants, it is assumed that the negative aspects of concentrated social disadvantage can be addressed. Objectives may include enhancing access to employment and other services; lowering area based stigma; building social capital; and creating more inclusive communities (Arthurson 2002; Wood 2003).

The research literature points out the insufficient link between the empirical evidence base and these assumptions about social benefits (Arthurson 2002; Kleinhans 2004; Wood 2003). One of the key benefits expected from tenure diversification is greater social interaction between people of different socioeconomic status. Many of the British and Dutch studies have found that social interaction on mixed tenure estates is low and lifestyle and socio-economic characteristics are a far more important determinant of social interaction than tenure (Kleinhans 2004). Atkinson and Kintrea (2000) have found that owners have largely different social worlds compared to social renters, spending more time away from the estate and using local facilities far less

than renters. This is problematic for the development of social cohesion both within these mixed neighbourhoods and at the wider community level as cohesion, at least in part, is dependent on social interactions. An interesting finding from a number of studies is the apparent presence of relatively strong social cohesion within these communities prior to any sort of intervention to improve social outcomes (Bryson and Winter 1999; Mullins and Western 2001). Rather, what does appear to be missing are the facilities, such as community halls, that could consolidate local cohesion (Forrest and Kearns 1999).

There is some evidence to suggest that greater cross tenure social interactions may be present where tenures are mixed at the street level (Kleinhans 2004). Jupp (1999) found that on estates with higher amounts of street level tenure mixing, residents were more likely to know someone with a different tenure; residents were significantly more positive about the estates overall; and the chance that streets of exclusively public housing will develop a bad image was reduced.

Almost all the assumed benefits of tenure diversification and social mix are expected to arise from social interactions, however it is recognised that greater social interaction between people of different social status can engender tension and conflict (Kleinhans 2004). Also linked to the objective of greater social interaction is the idea that tenure diversification leads to the introduction of mainstream norms and values. While there is a range of literature that discusses this notion there is a lack of empirical evidence testing the idea.

Research conducted by Jupp (1999) shows the importance of ensuring that overall maintenance and the affairs of the estate are well managed in order to encourage tolerance, mixing and reduce tensions. There is a need for a greater understanding of how tenure diversification strategies might foster positive social interactions and minimise the likelihood of conflict and tension. Arthurson (2002) questions whether policy-makers are over-emphasising the extent to which social mix assists community regeneration.

Case study: Social interaction in three mixed tenure estates (Atkinson and Kintrea 2000)

This study was conducted in three social housing estates in Scotland where owner-occupation had been introduced in the 1990s. The study sought to measure the potential of owner-occupiers to influence social networks among housing estate residents and hence to influence positively the patterns of social inclusion. On the three estates renters and owners were living on the same streets and were not physically separated by main roads, open spaces or other barriers. Social interaction was measured by diaries which described the movements of individuals outside their homes for a period of seven consecutive days, supplemented by in-depth interviews. Stark differences were found in the daily activities of renters and owners. The estate rather than the world beyond was a much more important realm for renters than owners, and vice versa. Owners occupy largely different social worlds and play only a small part in the social interaction that goes on in the estates.

Housing improvements

Although housing improvements are often integrated with a tenure diversification strategy they can also be implemented as a separate intervention with different objectives. Thomson and colleagues (2001) identified 4 studies reporting broader social impacts of housing improvement. The positive social outcomes reported with improvements to housing included a reduced sense of isolation, increased sense of belonging, involvement in community affairs, greater recognition of neighbours, and improved view of the area as a place to live. However, as reported in a subsequent paper (Thomson and Petticrew 2005), the author identified two studies which showed the potential for regeneration to increase exclusion and divisions within an area.

Community development and capacity building
Community development and capacity building is widely recognised as an important means for improving social capital (Chapman and Kirk 2001). There is also increasing recognition of the need for focus to shift to community regeneration and away from an approach that focuses solely on physical renewal. This trend has been seen in current urban renewal practice in Australia, including New South Wales (Randolph 2000).

Community development and capacity building can play an important role in urban renewal projects by facilitating improved local service delivery, civic engagement and volunteering, community planning and support for the development of social capital at the neighbourhood level (Chapman and Kirk 2001). Therefore, it can be argued that urban renewal and place-based interventions to improve social outcomes and health should include efforts to enhance the capacity of individuals to acquire the level of skills, knowledge and expertise to make an effective contribution to decision-making and community regeneration.

In reviewing the effectiveness of capacity building efforts in urban renewal and place-based interventions a number of issues were identified. Training is vital to community capacity building but according to Henderson and Mayo (1998), priority given to training and education in area regeneration initiatives is often too little, too late. They highlight the time lag between the decision to launch a regeneration scheme and the realisation that training and community education need to be an integral part of the scheme.

Case study: Community-Initiated Urban Development: An Ecological Intervention (Semenza et al 2006)

In Portland, USA, an intervention was implemented and evaluated in three neighborhoods with the objective of promoting community participation in urban renewal and engaging residents in the construction of attractive urban places. Community-designed street murals, public benches, planter boxes, information kiosks with bulletin boards, trellises for hanging gardens, all positioned in the public right-of- way formed the focal point of the intervention. 265 residents within a two-block radius of the three sites were interviewed before and after the intervention. Results showed improvements in mental health, increased sense of community, and an overall expansion of social capital. The authors conclude that through community empowerment, participation, and collective action, the strategy successfully engaged residents in restoring neighborhoods, with direct benefits to community wellbeing.

Key points

- Improved social cohesion through tenure diversification is hindered by poor social interaction between groups of different socioeconomic status
- Street level tenure mixing and good management of maintenance and the affairs of the estate may improve social outcomes through tenure diversification
- Physical upgrades to housing are likely to improve issues of stigma and poor satisfaction with the area
- There is increasing recognition of the importance of community engagement and capacity building to the success and sustainability of urban renewal projects

2.2. Crime and safety

What are the links between crime/safety and health?

It is difficult to establish simple cause-and-effect connections between crime and health, given the absence of firm evidence and the wide range of other variables which influence them both (Russell and Killoran 2000). However, it is well recognised that direct experiences or perceptions of safety can greatly affect a person's physical and mental health and wellbeing (AIHW 2006). McCabe and Raine (1997) have described the ill effects of crime on health as:

- the health implications for those who had been victims of crime;
- the health implications of fear of crime; and
- the adjustments to behaviour, lifestyle and quality of life made as a result of fear or experience of crime.

Two recent reviews report that living in public housing is strongly correlated with poorer outcomes in crime (Blunden and Johnston 2005; Mullins et al 2001), thus improving crime and safety is a key concern of many urban renewal and place-based interventions.

What impact do place-based interventions have on crime, safety and health?

Various interventions have been implemented within the context of urban renewal, policing and other crime reduction initiatives to tackle the problems of crime and safety in some areas of concentrated social disadvantage. The two main types include those that seek to reduce crime through modification of the physical environment, and those that address crime and safety through social/community interventions. At question is the extent to which these interventions are effective.

Environmental interventions
In the context of urban renewal housing improvements can impact on crime and fear of crime in a number of ways. Improvements in perceptions of safety following housing improvements were found in two studies reviewed by Thomson and colleagues (2001). Actual reductions in crime following housing improvements are less evident. Judd and colleagues (2002) present anecdotal evidence to suggest that place-based initiatives are associated with perceived reductions in crime, but also note that there is very limited empirical evidence to support this association.

Environmental interventions such as housing improvement are also discussed as part of a wider range of interventions being deployed to address high crime rates in particular areas. These are termed crime prevention through environmental design (CPTED) and focus on territoriality, surveillance, maintenance, access control, activity support, and target-hardening. Cozens and colleagues (2005) in a detailed compilation and overview of the most significant research on CPTED found a growing body of research that supports the assertion that crime prevention through environmental design (CPTED) is effective in reducing both crime and fear of crime in the community. A typical CPTED intervention is improved street lighting. A

systematic review of 8 US studies and 5 UK studies evaluating the effects of improved street lighting on crime found significant reductions in crime (20% reduction across al studies) following this type of place-based intervention (Farrington and Welsh 2002).

Another environmental crime reduction intervention employed in places of disadvantage focuses on the prevention of alcohol related problems, including crime. The main focus of this approach is to change the environment in which a person consumes alcohol, rather than the behaviour of the individual drinker. In a review of US community based environmental programs for alcohol, Treno and Lee (2002) found reductions in alcohol-related problems such as drunk driving, alcohol-related car crashes and their consequences, the sale of alcohol to underage drinkers, and assault injuries.

Social/community interventions

The CPTED movement, which initially emphasised the importance of the design of the physical environment, also now accepts the need for a more integrated approach involving social and community based initiatives along with physical interventions (Saville and Cleveland, 1998; Korthals Altes and van Soomeren, 1998). While design factors may influence crime, experts point to socioeconomic factors and poor parenting as the major causes of crime (Weathurburn and Lind 1998). A social crime prevention perspective shifts the emphasis from defending communities to strengthening them.

Social interventions can include early intervention projects, which target very young children and at-risk youth. They can also approach prevention of crime at a community wide level often overlapping with strategies to address social exclusion and community functioning. Examples include family support and preschool programs, employment programs, education based programs, recreation programs, and community capacity building.

There is growing evidence demonstrating that social interventions are more effective than physical interventions in the reduction of crime on disadvantaged neighbourhoods (Blunden and Johnston 2005). Strategies seen as particularly effective in reducing crime and creating social stability on public housing estates are those that increase resident participation or satisfaction, resulting in a slow down in tenancy-turn-over rates and a demographic maturation of the area; and a more proactive approach by housing managers to both initial allocations and dealing with ‘problem tenants’ (Judd et al 2002).

In order to compare the effectiveness of physical/spatial and social interventions to reduce crime within disadvantaged areas with high crime rates, Samuels and colleagues (2004) conducted an analysis of 9 areas with high public housing concentrations in New South Wales, Queensland and South Australia. Within each state, three areas of public housing concentration were chosen for study: one involving significant physical/spatial intervention; one involving primarily social interventions; and a ‘control’ estate with minimal intervention strategies over the study period. Findings of the analysis show a number of associations between interventions and crime patterns identified from the analysis of the crime data:

1. Social rather than physical/spatial interventions are associated with reductions in crime.
2. Whole-of-government strategies and intensive inter-agency collaborations create a context within which social interventions flourish.
3. Empathetic housing management and 'non-traditional' community policing interventions occurring at neighbourhood and individual level seem effective in reducing crime.
4. Neither de-concentration (tenure mix via asset sales) nor Radburn-reversal are associated with reductions in crime. Possibly, benefits were not yet apparent given the time-scale of this research.
5. A 'diffusion' distribution pattern can be detected in the mapped crime data of all nine study areas; possibly crime is 'flowing' from hotspots into 'cooler' zones.

Case study: The Pathways to Prevention project (Homel et al 2006)

The Pathways to Prevention project is a demonstration project developed jointly by Griffith University and Mission Australia to tackle high crime rates among young people in a disadvantages suburb of Brisbane. The program is based on the strong evidence demonstrating that problem behaviour by young children is one of the strongest predictors of both adolescent delinquency and later adult offending. The project targeted four to six year old children who were in transition to school focussing on enhancing their communication and social skills and empowering their families, schools and ethnic communities to provide supportive environments for positive development. Early results show positive results especially in building family connectedness and outcomes for children, especially for boys' behaviour.

Key points

- High crime rates in areas of concentrated social disadvantage are attributed to the social composition rather than physical context
- Physical improvements have some effect, particularly on perceptions and fear of crime
- Place-based interventions with a social focus are most effective at reducing crime and fear of crime

2.3. Housing quality and living conditions

What are the links between housing quality and living conditions and health?

Housing and neighbourhood conditions have a major impact on the health and wellbeing of individuals. These impacts are a result of conditions within and outside the home and can be positive or negative. Features such as bicycle and walking paths, green spaces, and good quality housing are recognised for their positive impact on health (AIHW 2006). Poorly designed built environments may have a negative impact through health hazards such as air pollution, spread of infectious diseases, traffic noise and traffic accidents.

The research literature has demonstrated a clear relationship between poor housing and poor health (Mullins et al 2001). However, attempts to prove that poor housing actually causes poor health have often failed (Waters 2001). Ambrose and Barlow (1996) has identified two types of relationships between housing and health:

- the effect of housing design, quality, management, location and degree of overcrowding on residents' physical and mental health; and
- the consequences of personal health status for housing opportunities.

One of the major problems being faced on public housing estates is the simultaneous obsolescence of large numbers of dwellings (Spiller Gibbins Swan 2000). Therefore improved housing and neighbourhood conditions are a key objective for many urban renewal and place-based projects.

What impact do place-based interventions have on housing and neighbourhood conditions and health?

Housing improvement
Renovation and refurbishment of housing and neighbourhoods is a feature of many urban renewal and place-based interventions. At the neighbourhood level, common activities include dwelling sales; demolition and replacement or sale of land; neighbourhood amenity upgrades; infrastructure provision and enhancement (Spiller Gibbins Swan 2000). The improvement of housing conditions, at least in the short term, is an expected outcome of interventions that involve some sort of renovation or refurbishment. Also anticipated, as has been demonstrated in a number of urban renewal projects carried out in New South Wales, is the removal of stigma associated with public housing estates by ensuring that they look and operate in a way comparable with other residential areas (Hughes 2004).

A review of recent policies to improve the quality of council built neighbourhoods in the UK found that with regard to physical improvements to the housing stock, many programmes have been evaluated as successful at the basic level (Kintrea 2007). Typically, houses have been improved, living conditions have been made better and residential satisfaction has increased (i.e. spending money led to better houses and more satisfied tenants). This is similar to the findings of a US study which found that renovations on public housing estates improved housing conditions which in turn are likely to improve health (Brugge et al 2003). What is not demonstrated well in the

literature is the link between renovation and refurbishment and long-term improvements to housing and neighbourhood conditions (Kintrea 2007).

Case study: Housing condition, renovations and possible building related symptoms (Brugge et al 2003)

This study compared housing conditions (pest infestation, water leaks, etc.), chronic health conditions and symptoms in two public housing estates in the USA, one of which had substantial renovations to walls, roofs, piping, heating and water systems. Surveys of residents showed that residents reported worse environmental conditions at the unrenovated development. Some measures of health outcomes including skin rashes, ear infection, sneezing, nosebleeds and burning/itching eyes were also improved in the renovated estate. The authors conclude that their research supports the claim that renovations improve housing conditions and that such improvements may be associated with health improvements, but that further research is needed to firmly document any health benefits.

Neighbourhood design

The importance of neighbourhood design for health is well documented in the research literature. Aspects of neighbourhood design have been found to impact on obesity (Booth et al 2005); mental health (Weich et al 2002); and cardiovascular disease (Diez Roux 2003). Some features of neighbourhood design known to impact on health are proportions of green space in the neighbourhood (Maas et al 2006), land use mix, residential density and street connectivity (Frank et al 2005). There is a large amount of research that has looked at design features and levels of physical activity, however only a small number have focussed on disadvantaged neighbourhoods. A recent UK study found that residents living in an area undergoing renewal, which included the introduction of cycle paths, were more concerned with crime and safety, antisocial behaviour and loss of parking spaces than the potential physical health benefits of the cycleway (Trayers et al 2006). While walking is promoted as a good form of exercise, a study conducted by Bostock (2001) found that reliance on walking as a mode of transport by mothers in a disadvantaged area can have negative effects on the welfare of families. Not only is it more difficult to access health and social care resources, walking as a mode of transport in disadvantaged neighbourhoods can have a negative impact on the well being of mothers and their day-to-day relationships with children. The study found higher levels of stress and physical fatigue among mothers due to the pressure of walking while caring for young children, limited access to resources including health and social support and the consequences of substituting their time and labour to ease the workload of life on a low income. Therefore consideration must be made for the unique conditions experienced by residents living in disadvantaged locations. There is a need for further research to explore how changes to neighbourhood design through urban renewal can promote the health and wellbeing of disadvantaged residents.

Tenure diversification

While most urban renewal projects have employed some direct modification of neighbourhood and/or housing conditions, tenure diversification projects often rely on an indirect flow-on effect to bring about the desired improvements.

In a review of research into the consequences of tenure diversification in the UK and the Netherlands, Kleinhans (2004) found overwhelming evidence to support the claim that tenure diversification improves the physical characteristics of homes and neighbourhoods. This is largely attributed to the influx of owner occupiers who generally exhibit higher standards of maintenance. The author also found some evidence in the literature for tenure diversification as a strategy to improve the area's reputation and decrease stigmatisation, but notes that diversification alone is an insufficient condition. One of the more convincing arguments for supporting the development of socio-economically diverse communities in regeneration is that middle-income home owners are more likely to demand and successfully attract additional services to the community, like better-resourced schools (Arthurson 2002). However, there is little research available, especially in Australia, to support this argument.

Whilst improved housing, amenity and image of the areas are legitimate objectives for any urban renewal or place-based intervention, questions have been raised about the ability of the tenure diversification approach to benefit existing socio-economically disadvantaged residents. Arthurson (2001) notes that through the process of attracting more affluent residents to the area the inequality of current residents can be added to rather than ameliorated. Also, there has been little empirical investigation exploring the idea that tenure diversification attracts additional or improved services to a neighbourhood (Wood 2003). Wood (2003) points out that specialist services are often targeted directly at those localities with the greatest need and if tenure diversification changes the social mix, additional resources might be lost.

Key points:

- Renovation and refurbishment is successful at improving housing and living conditions in the short term
- Tenure diversification is likely to bring overall improvements to housing conditions and the physical appearance of the neighbourhood
- Questions are raised about this approach's ability to improve living conditions for existing residents and attract additional or improved services

2.4. Opportunity outcomes

What are the links between opportunities and health?

Social disadvantage is often characterised by low levels of education and employment which prevent people from participating in the mainstream activities of society and accessing the standards of living enjoyed by the rest of society. This has been termed 'social exclusion' and can occur at an individual or community level.

Fewer opportunities and life choices among people in disadvantaged neighbourhoods can have detrimental effects on health. In Australia, 19% of the mortality burden for males and 12% for females has been associated with socioeconomic disadvantage (AIHW: Mathers et al. 1999), and there is large amount of evidence demonstrating the clear association between unemployment, money problems, and poor education with various measures of physical and mental health (AIHW 2006, OHE 1993, Brown et al 2005). For this reason some suggest that tackling poverty is the most direct route to combating health inequalities (Russell and Killoran 2000).

Social exclusion and poor life opportunities are used to describe the negative effects of concentrated social disadvantage, and also to justify many of the current approaches to urban renewal and place-base interventions.

What impact do place-based interventions have on opportunities and health?

Attempts to improve opportunities in areas of concentrated social disadvantage have taken a number of forms, including efforts to attract investment in the local economy, education and job training initiatives. While the number of initiatives that have been implemented is vast, only a small number have been formally evaluated.

Revitalising the local economy
Revitalisation of the local economy is a key objective of many urban renewal and place-based interventions. A common finding from skills training and job seeker projects is that those who can leave the area, do leave (Taylor 1998, Hall 1997), which suggests that incentives to stay, such as locally available jobs, may have more sustainable benefits for the community as a whole.

Community economic development efforts in Australia are largely operated through economic development agencies. Growth in employment through attracting businesses to their region, assisting in the growth and development of local businesses, building partnerships between public sector agencies and the private sector and assisting local people establish enterprises are their key priorities (Beer and Maude 2002).

In Western Sydney, the Greater Western Sydney Economic Development Board is the group responsible for advice to government agencies on issues relating to employment growth and economic development within Greater Western Sydney, and to project manage activities capable of delivering Board objectives through regional partnerships. Supported by the NSW Department of State and Regional Development, the Board works in partnership with government agencies, councils, and other regional organisations to facilitate employment growth and economic and community development in Greater Western Sydney (*www.gws.org.au*). Current and planned projects targeting disadvantaged locations in Greater Western Sydney include the Liverpool Youth Jobs project, the Auburn Catering Social Enterprise project, and the Airds Slingshot Program.

The role of local governments is also extremely important to community economic development (Beer and Maude 2002). Some potential roles include:

- Provider of services
- Land use and policy planning
- Engage Federal and State agencies in delivery of services to the LGA
- Facilitator and networker for sustainable change
- Facilitator and provider for infrastructure
- Measuring and monitoring change and an advisory role

A key issue for the community economic development approach is not only ensuring a viable local economy, but ensuring that local residents benefit through gaining employment. Of particular interest is the relative importance of matching the occupational mix of jobs with resident skills. This was the subject of research by Immergluck (1998) which found that both occupational match and the ratio of nearby jobs to the nearby labour force had an important effect on local employment rates. However, the availability of local jobs had a very modest effect on employment rates when occupational match was not taken into account. This suggests that interventions that seek solely to increase the aggregate number of jobs near high-unemployment neighbourhoods are not likely to improve employment rates in these areas substantially.

Changing the social mix through tenure diversification is another popular approach which some argue will result in substantial improvements to the local economy. While there is some empirical evidence to show that there are reductions in joblessness associated with the introduction of owner-occupation, this is normally linked with the 'dilution' effect of importing employed people on to estates rather than through an increase in opportunities for unemployed tenants to access the job market (Scottish Homes 1999; Tarlin et al., 1999). Personal networks have been shown to be especially important to the poor in finding employment (Johnson et al. 1999; Rankin 2003). However there is little research that examines how mixed tenure neighbourhoods might encourage this.

Education

Various education strategies are currently being employed to improve opportunities and life chances for socially disadvantaged people. Education strategies are not just limited to school age children but have the potential to improve educational opportunities for people at all stages of life. Strategies targeting children and

adolescents are often focussed on early intervention within schools or the home and include:

- Disadvantaged schools programs, including funding for improved infrastructure, additional staffing, and consultancy (NSW Priority Schools Program www.psp.nsw.edu.au)
- Special access programs for entry to higher education;
- Language, literacy and numeracy programs, including "Books in homes" www.biha.com.au ; and
- Youth allowance, Austudy and ABStudy and other financial support to students.

Education programs for adults also involve higher education access programs, language, literacy and numeracy programs and financial support for study.

Evaluation of the Priority Schools Program has shown that the program is successful in supporting low socio-economic status communities (Groundwater-Smith and Kemmis 2004). In particular the program has been shown to improve literacy and numeracy, with the greatest gains in cases where schools tried aspects of productive pedagogies, explicit and systematic teaching or interventions related directly to the content area tested. Slight improvements were also found for student's social skills and behaviour, handling of student welfare issues and attendance. The sustainability of improvements was also explored in the evaluation and the authors concluded that while many achievements could be sustained, some strategies, particularly those that require additional staff, cannot be sustained without the additional resources made available by the Program.

Improving the education of children and adults in disadvantaged areas is one of the key strategies for improving life opportunities and breaking the cycle of poverty. In a survey of the research in OECD countries on intergenerational mobility (the extent to which key characteristics and life experiences of individuals differ from those of their parents) an overall finding was that a strategy based on a greater investment in children holds the promise of breaking the cycle of intergenerational disadvantages because of its effects in reducing child poverty and contributing to child development (d'Addio 2007).

Skills training and job assistance programs

Various skills training and job assistance programs have been implemented in disadvantaged areas to improve job readiness, access to employment, and job retention. Projects are targeted to people at various stages of life with varying types and degrees of disadvantage. For instance vocational training in schools, apprenticeship access and support programs and career advice are largely targeted to young people prior to or at an early stage in their careers. Services targeted to adults often include skills training, job search assistance, counselling, placement services, income support and ancillary assistance and incentives for employers.

At the individual level there are a number of ways job training and other employment programs can lead to improved job prospects. These have been summarised as:

- improving access to networks and employers;
- improving work-related skills, motivation and confidence;
- limiting the deterioration of work skills; and

- providing employers with more knowledge of jobseekers (Queensland Department of Education and Training 2002).

There is a large amount of research available from the Australian and international literature on the effects of employment programs on disadvantaged communities, however the quality and its generalisability varies (URCOT 2005). Martin (2003) identifies a number of caveats in the international literature including the fact that outcomes are generally narrowly defined; there is little evidence on the long-term effects of programs; and there are few rigorous studies of local employment/economic development programs.

The findings from Martin's (2003) review of OECD research into active labour market policies has important implications for Australian urban renewal and place-based interventions. The review found that:

- Public training programs have a mixed track record and show the most consistently positive results for adult women, mixed results for adult men and poor results for disadvantaged young people.
- Job search assistance and counselling was found to be a particularly cost-effective measure.
- Subsidies to private sector employment typically give rise to significant 'dead weight' and 'substitution' effects, resulting in relatively low net employment gains.
- Subsidies to unemployed people to start up a small business have had some success (for a minority of unemployed people usually those with relatively high education levels).
- Direct public sector job creation does not help unemployed people get permanent jobs in the open labour market but may provide some social benefits and should be targeted to the most disadvantaged unemployed.

The implementation of various labour market programs has been a focus of urban renewal on many NSW public housing estates. While few have been the subject of rigorous research, the available evidence to date indicates that substantial numbers of public estate tenants have moved into employment (Hughes 2004).

Some groups living in disadvantaged areas suffer from special types of disadvantage that also need to be addressed in order to facilitate appropriate labour market participation. Such groups include those with mental or physical disability, recent immigrants, older disadvantaged workers and many more. The needs of these groups are complex and diverse, and often cannot be adequately addressed through interventions delivered by a single service (Perkins and Nelms 2004). They require a holistic view of the elements contributing to an individual's work readiness and interventions which target these in a balanced and progressive manner.

Key Points

- A mixture of people focussed and place focussed interventions are more likely to achieve sustainable outcomes
- Investment in education of children is a key strategy for improving life opportunities and breaking the cycle of intergenerational disadvantage
- Skills training and employment initiatives have shown some success

Discussion

What interventions have been implemented?

Due to time constraints it was not possible to review the full range of interventions that have been undertaken to address health and social problems in disadvantaged areas, however this review has highlighted the broad areas in which activity is taking place and key trends in the types of interventions being used.

Urban renewal and place-based interventions have tended to focus on positive change at the level of people, place or space (see Table 1). Space refers to the physical environment, in this case the physical environment of disadvantaged neighbourhoods. Place refers to the meaning and use of space such as social networks and the economy.

Table 1: Examples of crime reduction interventions that focus on levels within the community

Outcome	People	Place	Space
Safety and security	Safety audits of people's houses Changing locks at low cost Teaching self defence skills	Establishing neighbourhood watch and local safety committees More visible policing Community arts programs to reduce vandalism	Improved lighting Reduce number of thoroughfares with little visibility Rapid removal or rubbish and graffiti

While interventions vary according to the problems to be addressed and the context, the literature identifies some overall trends in the types of interventions being carried out. A key strategy for tackling the complex social problems, particularly in public housing estates, has been to change the social mix by encouraging more owner-occupiers to live in the area. This is an example of a range of interventions that have been implemented at the "space" level which anticipate positive impacts at the social level.

One major change in the types of interventions being used has been the shift away from purely physical (space) interventions to a more integrated and holistic approach. In particular there has been greater emphasis placed on social interventions such as community development, education and employment. This may partly be due to a greater understanding of the social determinants of health.

What is known about their effectiveness?

The review found very few interventions have been the subject of well designed and rigorous evaluation. There are difficulties in conducting evaluations of these often complex interventions in complex communities, and it is especially difficult to

establish a cause and effect relationship. The lack of evidence should not be interpreted as contrary evidence of their effectiveness. Rather, it emphasises the importance of developing reliable and standardised methods of evaluation and incorporating research into the application of urban renewal and place-based interventions.

The key findings of this review highlight several factors associated with positive improvements in health and the social determinants of health. These include:

- Integrated and holistic approaches
- Interventions are fully implemented i.e. no premature discontinuation
- Community engagement, participation, ownership.
- Focus on long term and sustainable benefits.
- Assumed benefits are based on empirical evidence
- A good understanding of the community (the types and causes of disadvantage, the needs, the resources available)
- Investment in early intervention and prevention

Factors likely to contribute to a project having limited, unsustainable and even negative impacts on the community include:

- Short term projects
- Premature discontinuation of an intervention
- Single factor interventions e.g. only physical improvements to the neighbourhood.
- Poor understanding of the community and its needs

What are the implications for policy and practice?

Place is important. It not only has the potential to impact negatively on certain forms of disadvantage and health inequality, but as our review has shown, place-based interventions have the potential to impact positively on the health and wellbeing of disadvantaged communities. However, as discussed above, there are some key factors that are likely to determine whether a place-based intervention will achieve the desired outcomes.

Disadvantaged urban areas are not static; they are influenced by broad societal trends, and local dynamics. Developing a thorough knowledge of the community, its needs, and resources, and the broader social, political and economic factors that are likely to impact on the community is an important step in addressing the problem of disadvantage and health inequality. Public housing estates in particular are greatly influenced by changes to social housing policy. In the future the eligibility criteria for public housing in NSW will change to concentrate on those people in the greatest housing need (NSW Department of Housing 2005). These changes, as well as wider demographic trends, such as smaller households and an ageing population, are likely to have a substantial impact on the composition and character of areas with high concentrations of public housing.

One of the key considerations for urban renewal is long term and sustainable outcomes. This does not refer solely to the longevity of particular projects (primarily a funding issue), but also refers to highly mobile nature of public housing tenants. For instance, employment initiatives may be highly successful in finding jobs for clients,

however, without other simultaneous initiatives to improve the living conditions, opportunities in these estates those who are able to leave probably will (Taylor 1998). For this, and many other reasons, the value of a more integrated and holistic approach to urban renewal strategies is increasingly being acknowledged in Australian and international approaches to urban regeneration (Clarke 2006; Mullins et al 2001; Taylor 1998; Skifter Andersen 2003; Wood 2003). Tackling problems at multiple levels and across multiple disciplines acknowledges the complex and interrelated nature of the issues to be addressed, and is more likely to achieve positive outcomes for health and the determinants of health.

An overarching theme present in much of the literature on urban renewal is the issue of community participation. However, the difficulties associated with community participation are also well recognised (Health Development Agency 2000). The time frame in which these urban renewal activities takes place and are evaluated is also important. Sufficient time is need to identifying the health benefits or otherwise of interventions. Short life-spans of projects (even those spanning 10 years), highly mobile populations, and difficulties attributing health effects to the intervention, make it difficult to assess health impacts of urban renewal. For this reason many evaluations have sought to look at basic outputs and project activities rather than more sophisticated measures of health impacts (Atkinson et al 2006). A better understanding of the research evidence and development of good quality evaluation techniques in this field are likely to improve understanding of optimal time frames, and help to establish best practice models for urban renewal overall.

Conclusion

Urban renewal and place-based interventions have the potential to impact on health and wellbeing at the local level. This can occur through direct impacts on physical or mental health or indirect impacts via the determinants of health. In addition, the way in which renewal activities are managed may also impact on health through, for example, the extent to which community participation takes place. This review shows many interventions can have a positive impact on health and it's determinants. However, contrary to the assumptions behind many urban renewal and place-based initiatives, many interventions fail to achieve any substantial improvements and can sometimes have unintended negative outcomes. It is important, therefore, that future urban renewal interventions give due consideration to the evidence base and the specific context in which this activity will take place.

References

AIHW: Mathers, C., Vos, T. and Stevenson, C. (1999) The burden of disease and injury in Australia. AIHW cat. no. PHE 17. Australian Institute of Health and Welfare: Canberra.

AIHW (2006) Australia's health 2006. AIHW cat. no. AUS 73. Australian Institute of Health and Welfare: Canberra.

Ambrose, P. and Barlow, J. (1996) The real cost of poor homes. The Royal Institute of Chartered Surveyors: London.

Arthurson, K (2001) Achieving Social Justice in Estate Regeneration: The Impact of Physical Image Construction. Housing Studies 16(6): 807-26.

Arthurson, K. (2002) Creating inclusive communities through balancing social mix: a critical relationship or tenuous link? Urban Policy and Research 20(3): 245-61.

Arthurson, K. (2004) Social mix and disadvantaged communities: policy, practice, and the evidence base. Urban Policy and Research 22(1): 101-6.

Atkinson, R. and Kintrea, K (2000) Owner-occupation, social mix and neighbourhood impacts. Policy & Politics 28(1): 93-108.

Atkinson, R., Thomson, H., Kearns, A. and Petticrew, M. (2006) Giving urban policy its 'medical': assessing the place of health in area-based regeneration. Policy and Politics 34(1): 5-26.

Beer, A. and Maude, A. (2002) Local and Regional Economic Development Agencies in Australia. Local Government Association of South Australia: Adelaide.

Blunden, H. and Johnston, C. (2005) Public housing and nonhousing outcomes – a background paper. Shelter NSW: Sydney.

Bolin, K., Lindgren, B., Lindstrom, M. and Nystedt, P. (2003) Investments in social capital- implications of social interactions for the production of health, Social Science & Medicine 56(12): 2379-90.

Booth, K., Pinkston, M., Carlos Poston, W. (2005) Obesity and the Built Environment. Journal of the American Dietetic Association 105(5): 110-17.

Bostock, L. (2001) Pathways of disadvantage? Walking as a mode of transport among low-income mothers. Health and Social Care in the Community 9(1): 11–18.

Brown, L., Tucker, C. and Domokos, T. (2003) Evaluating the impact of integrated health and social care teams on older people living in the community. Health and Social Care in the Community 11(2): 85-94.

Brown, S., Taylor, K. and Wheatley Price, S. (2005) Debt and distress: Evaluating the psychological cost of credit. Journal of Economic Psychology 26(5): 642-63.

Brugge, D., Melly, S., Russell, M., Perez, R., Heeren, T., Snell, J., Helms, D. and Hynes, P. (2003) A community-based participatory survey of public housing conditions and associations between renovations and possible building related symptoms. Epidemiology 15(4): S132.

Bryson, L. and Winter, I. (1999) Social Change and Suburban Lives. Allen and Unwin: Sydney.

Chapman, M. and Kirk, K. (2001). Lessons for Community Capacity Building: A Summary of Research Evidence. Research Department, Scottish Homes: Edinburgh.

Clarke, M. (2006) Urban renewal programs in Australia: modelling the key performance indicators. Australian Property Journal 39(2): 131-9.

Cozens, P. M., Saville, G. and Hillier, D. (2005) Crime prevention through environmental design (CPTED): a review and modern bibliography. Property Management 23(5): 328.

d'Addio, C. (2007) Intergenerational Transmission of Disadvantage: Mobility or Immobility across Generations? A Review of the Evidence for OECD Countries, OECD: Paris.

Dahlgren, G. and Whitehead, M. (1991) Policies and strategies to promote social equity in health. Institute of Future Studies: Stockholm.

Department of Planning (2005) City of Cities: A Plan for Sydney's Future. Department of Planning: Sydney.

Diez Roux, A. (2003) Residential environments and cardiovascular risk. Journal of Urban Health 80(4): 569-89.

Dodson, J., Gleeson, B. and Sipe, N. (2004) Transport Disadvantage and Social Status: A review of literature and methods. Urban policy Program, Research Monograph 5, Griffith University: Brisbane.

Elvik R. (1995) A meta-analysis of evaluations of public lighting as an accident countermeasure. Transportation Research Record 1485:112-24.

Elvik R. (2001) Area-wide urban traffic calming schemes: a meta-analysis of safety effects. Accident Analysis and Prevention 33:327-36.

Evans, R., Barer, M. and Marmor, T. (eds) (1994) Why some people are healthy and others are not. Aldine de Gruyter: New York.

Farrington, D. and Welsh, B. (2002) Effects of improved street lighting on crime: a systematic review. Home Office Research, Development and Statistics Directorate: London.

Forrest, R. and Kearns, A. (1999) Joined-up places? Social cohesion and neighbourhood regeneration. Joseph Rowntree Foundation: York.

Frank, L., Schmid, T., Sallis, J., Chapman, J. and Saelens, B. (2005) Linking objectively measured physical activity with objectively measured urban form. American Journal of Preventive Medicine 28(2): 117-25.

Gepkens, A. and Gunning-Schepers, L. (1996) Interventions to reduce socioeconomic health differences: a review of the international literature. European Journal of Public Health 6: 218-26.

Glendinning, C., Rummery, K. and Clarke, R. (1998) From collaboration to commissioning: developing relationships between primary health and social services. British Medical Journal 317(7151): 122-5.

Goldberg, D. (1972). The Detection of Psychiatric Illness by Questionnaire, Oxford University Press: Oxford.

Groundwater-Smith, S. and Kemmis, S. (2004) Knowing makes the difference: Learnings from the NSW Priority Action Schools Program. NSW Department of Education and Training: Sydney.

Hall, P. (1997) Regeneration policies for peripheral housing estates: inward- and outward-looking approaches. Urban Studies 34: 873-90.

Harris, M. and Knowlden, S. (1999) Clinical perspective: a general practitioner response of health differentials. In Harris E., Sainsbury P., Nutbeam D. (eds) (1999) Perspectives on Health Inequity. Australian Centre for Health Promotion: Sydney pp73–82.

Health Development Agency (2000) Participatory approaches to health promotion and health planning: a literature review. Health Development Agency: London.

Henderson, P. and Mayo, M. (1998) Training and education in urban regeneration: A framework for participants. Routledge: London.

Hillsdon, M., Foster, C., Naidoo, B. and Crombie, H. (2005) The effectiveness of public health interventions for increasing physical activity among adults: a review of reviews. Health Development Agency: London.

Homel, R., Freiberg, K., Lamb, C., Leech, M., Carr, A., Hampshire, A., Hay, I., Elias, G., Manning, M., Teague, R. and Batchelor, S. (2006) The Pathways to Prevention Project: The first five years 1999-2004. Griffith University and Mission Australia: Sydney.

Hughes, M. (2004) Community economic development and public housing estates. Shelter NSW: Sydney.

Hulse, K. and W. Stone (2006). Housing, housing assistance and social cohesion. Positioning paper. Australian Housing and Urban Research Institute: Melbourne.

Humpel, N., Owen, N. and Leslie, E. (2002) Environmental factors associated with adults' participation in physical activity: a review. American Journal of Preventive Medicine 22:188-99.

Immergluck, D. (1998) Job proximity and the urban employment problem: Do suitable nearby jobs improve neighbourhood employment rates? Urban Studies 35(1): 7-23.

Johnson, J., Bienenstock E. and Farrell, W. (1999) Bridging social networks and female labor-force participation in a multiethnic metropolis. Urban Geography 20: 2–30.

Judd, B., Samuels, R. and O'Brien, B. (2002) Linkages between housing, policing and other interventions for crime and harassment reduction on Public Housing estates. Australian Housing and Urban Research Institute: Melbourne.

Jupp, B. (1999) Living Together. Community Life on Mixed Tenure Estates. Demos: London.

Kahrik, A. (2006) Tackling social exclusion in European neighbourhoods: experiences and lessons from the NEHOM project. GeoJournal 67:9-25.

Kamrul Islam, M., Merlo, J., Kawachi, I., Linstrom, M. and Gerdtham, U. (2006) Social capital and health: Does egalitarianism matter? A literature review. International Journal of Equity and Health 5: 3.

Kawachi, I. and Berkman, L. (2003) Neighbourhoods and health. Oxford University Press: New York.

Kintrea, K. (2007) Policies and Programmes for Disadvantaged Neighbourhoods: Recent English Experience. Housing Studies 22(2): 261-82.

Klein, H. (2004) Health inequality, social exclusion and neighbourhood renewal: can place-based renewal improve the health of disadvantaged communities? Australian Journal of Primary Health 10(3): 110-9.

Kleinhans, R. (2004) Social implications of housing diversification in urban renewal: A review of recent literature. Journal of Housing and the Built Environment 19(4): 367-90.

Korthals Altes, H. and van Soomeren, P. (1998) CPTED and community building: The next phase, Paper presented to the 1998 International CPTED Association Conference, Washington DC.

Lamore, R., Link, T. and Blackmond, T. (2006) Renewing people and places: institutional investment policies that enhance social capital and improve the built environment of distressed communities. Journal of Urban Affairs 28(5): 429-42.

Lomas, J. (1998) Social capital and health: implications for public health and epidemiology. Social Science & Medicine 47(9): 1181-8.

Maas, J., Verheij, R., Groenewegen, P., de Vries, S. and Spreeuwenberg, P. (2006) Green space, urbanity, and health: how strong is the relation? Journal of Epidemiology and Community Health 60: 587-92.

Martin, J. (2003) 'What Works and For Whom: OECD Countries' Experiences With Active Labour Market Policies', Presentation to Knowledge Wave Leadership forum 19-21 February: Auckland.

McCabe, A. and Raine, J. (1997) Framing the debate: crime and public health. Public Health Alliance: Birmingham.

McDonald J, and Hare L. (2004) The Contribution of primary and community health services. A literature review. Centre for Health Equity, Training, Research and Evaluation, UNSW: Sydney.

Mullins, P. and Western, J. (2001) Examining the links between housing and nine key socio cultural factors. Australian Housing and Urban Research Institute: Melbourne.

Mullins, P., Western, J. and Broadbent, B. (2001) The Links between Housing and Nine Key Socio Cultural Factors: A Review of the Evidence. AHURI Queensland Research Centre: Brisbane.

NSW Department of Housing (2005) NSW Government Plan for Reshaping Public Housing. [Available at: http://www.housing.nsw.gov.au/Changes+to+Public+Housing/Reshaping+Public+Housing/ Accessed: 01/08/07.]

Ogilvie, D., Mitchell, R., Mutrie, N., Petticrew, M. and Platt, S. (2006). Evaluating health effects of transport interventions methodologic case study. American Journal of Preventive Medicine 31(2):118-26.

OHE (1993) The impact of unemployment on health, Briefing no. 29. Office of Health Economics: London.

Perkins, D. and Nelms, L. (2004) Assisting the most disadvantaged job seekers, in Carlson E. (ed) A future that works: economics, employment and the environment, Centre of Full Employment and Equity, University of Newcastle: Newcastle.

Queensland Department of Education and Training (2002) Breaking the Unemployment Cycle: Initiative Review, Department of Employment and Training: Brisbane.

Randolph, B. (2000) Renewing disadvantaged areas: issues and policies. Penrith South, NSW: Urban Frontiers Program, University of Western Sydney, UFP publications - conference papers: Paper presented to the Creative Approaches to Urban Renewal Conference, Shelter WA: Perth.

Rankin, B. (2003) How low-income women find jobs and its effect on earnings. Work and Occupations 30(3): 281-301.

Rose, V., Harris, E., Harris, M. and Comino, E. (2003) Integrated primary care in disadvantaged communities. A pilot study of community health nurse co-location in general practice. Centre for Health Equity, Training, Research and Evaluation: Sydney.

Russell, H. and Killoran, A. (2000) Public health and regeneration: making the links. Health Education Authority: London.

Saegert, S., Klitzman, S., Freudenberg, N., Cooperman-Mroczek, J. and Nassar, S. (2003) Healthy Housing: A Structured Review of Published Evaluations of US Interventions to Improve Health by Modifying Housing in the United States, 1990-2001, American Journal of Public Health 93(9): 1471-7.

Samuels, R., Judd, B., O'Brien, B. and Barton, J. (2004) Linkages between housing, policing and other interventions for crime and harassment reduction in areas with public housing concentrations. Volume 1: main report. Australian Housing and Urban Research Institute: Melbourne.

Saville, G. and Cleveland, G. (1998) 2nd Generation CPTED: An Antidote to the Social Y2K Virus of Urban Design, Paper presented at the 3rd Annual International CPTED Conference, Washington, DC, December 14-16, 1998.

Scottish Homes (1999) Assessing the Impact of Tenure Diversification: The Case of Niddrie. Scottish Homes: Edinburgh.

Semenza, J., March, T. and Bontempo, B. (2006) Community-Initiated Urban Development: An Ecological Intervention. Journal of Urban Health 84(1): 8-20.

Skifter Andersen, H. (2002) Can Deprived Housing Areas Be Revitalised? Efforts against Segregation and Neighbourhood Decay in Denmark and Europe. Urban Studies 39(4): 797-90.

Skifter Andersen, H. (2003) Urban sores: on the interaction between segregation, urban decay and deprived neighbourhoods. Ashgate Publishing: England.

Spiller Gibbins Swan (2000) Public housing estate renewal in Australia. Project 212. Australian Housing Research Fund: Melbourne.

Sydney South West Area Health Service (2005) A health profile of Sydney South West : a status report describing the population, their health and the services provided for Sydney South West Area Health Service, NSW Health. Sydney South West Area Health Service: Liverpool.

Tarlin, R., Hirst, A., Rowland, B., Rhodes, J. and Tyler, P. (1999) An Evaluation of the New Life for Urban Scotland Initiative. Scottish Executive: Edinburgh.

Taylor, M. (1998) Combating the Social Exclusion of Housing Estates. Housing Studies 13(6): 819-832.

Thomas, R., Evans, S., Huxley, P., Gately, C. and Rogers, A. (2005) Housing improvement and self-reported mental distress among council estate residents. Social Science & Medicine 60(12): 2773-83.

Thomson, H., Petticrew, M. and Morrison, D. (2001) Health effects of housing improvement: systematic review of intervention studies. British Medical Journal 323(7306): 187-90.

Thomson, H. and Petticrew, M. (2005) Is housing improvement a potential health improvement strategy? WHO Regional Office for Europe: Copenhagen.

Thomson, H., Morrison, D. and Petticrew, M. (2007) The health impacts of housing-led regeneration: a prospective controlled study. Journal of Epidemiology and Community Health 61(3): 211-4.

Trayers, T., Deem, R., Fox, K., Riddoch, C., Ness, A. and Lawlor, D. (2006) Improving health through neighbourhood environmental change: are we speaking the same language? A qualitative study of views of different stakeholders. Journal of Public Health 28(1): 49-55.

Treno, A. and Lee, J. (2002) Approaching alcohol problems through local environmental interventions. Alcohol Research & Health 26(1): 35-40.

Treno, A., Gruenewald, P., Lee, J. and Remer, L. (2007) The Sacramento Neighborhood Alcohol Prevention Project: Outcomes From a Community Prevention Trial. Journal of Studies on Alcohol and Drugs 68(2): 197-207.

Turrell, G., Oldenberg, B., McGuffog, I. and Dent, R. (1999) The Socioeconomic Determinants of Health: Towards a National Research Program and a policy and intervention agenda. Queensland University of Technology School of Public Health. AusInfo: Canberra.

Urban Frontiers Program (1999) Transport needs and issues in the Macarthur region, discussion paper prepared for Macarthur Regional Organisation of Councils. University of Western Sydney: Campbelltown.

URCOT (2005) Good practice in employment services for disadvantaged jobseekers. URCOT: Melbourne.

Waters, A. (2001) Do housing conditions impact on health inequalities between Australia's rich and poor? Australian Housing and Urban Research Institute: Melbourne.

Weatherburn, D. and Lind, B. (1998) poverty, parenting, peers and crime-prone neighbourhoods. Trends and Issues in Criminal Justice No. 85. Australian Institute of Criminology: Canberra.

Weich, S., Prince, M., Burton, E., Frens, B. and Sproston, K. (2002) Mental health and the built environment: cross-sectional survey of individual and contextual risk factors for depression. British Journal of Psychiatry 180: 428-33.

Wood, M. (2003) A Balancing Act? Tenure Diversification in Australia and the UK. Urban Policy and Research 21(1): 45-56.

Appendix: Definitions

Community: A group of individuals with commonality of place, commonality of interest, or commonality of race/ethnicity. Often used to describe some idyllic state.

Social Exclusion: Social exclusion prevents people from participating in the mainstream activities of society and accessing the standards of living enjoyed by the rest of society. The concept is often used to describe how different social processes interact to cause disadvantage.

Social capital: Commonly refers to the stocks of social trust, norms, and networks that people can draw upon in order to solve common problems. Often separated into three subcategories: bonding; bridging; and linking social capital.

Social cohesion: Popularly referred to as the 'social glue' or 'social fabric'.
Hulse and Stone (2006) offer a useful conceptualisation of social cohesion into three dimensions:

- Social connectedness (social capital, emphasis on social processes);
- Inequalities (social exclusion, emphasis on economic processes); and
- Cultural context (norms underlying behaviours and interactions).

Urban renewal: The process of regenerating a targeted urban area usually via physical modification of the built environment but can also include efforts to address social problems such as crime, poor social cohesion and unemployment.

Tenure diversification: Strategies that encourage a diversity of tenure types in a neighbourhood or local area. Most commonly aimed at encouraging owner occupiers to move into areas previously characterised by a majority of socially rented dwellings.

Place-based interventions: Encompasses the broad range of initiatives to improve the physical, social, and financial aspects of a specific target location.

Community development:
A range of practices dedicated to increasing the strength and effectiveness of community life, improving local conditions, especially for people in disadvantaged situations, and enabling people to participate in public decision making and to achieve greater long term control over their circumstances.