

# RESEARCH REPORT



## Non-Housing Outcomes of Affordable Housing



## CMHC helps Canadians meet their housing needs.

Canada Mortgage and Housing Corporation (CMHC) has been helping Canadians meet their housing needs for more than 70 years. As Canada's authority on housing, we contribute to the stability of the housing market and financial system, provide support for Canadians in housing need, and offer unbiased housing research and advice to Canadian governments, consumers and the housing industry. Prudent risk management, strong corporate governance and transparency are cornerstones of our operations.

For more information, visit our website at [www.cmhc.ca](http://www.cmhc.ca) or follow us on **Twitter**, **LinkedIn**, **Facebook** and **YouTube**.

You can also reach us by phone at 1-800-668-2642 or by fax at 1-800-245-9274. Outside Canada call 613-748-2003 or fax to 613-748-2016.

Canada Mortgage and Housing Corporation supports the Government of Canada policy on access to information for people with disabilities. If you wish to obtain this publication in alternative formats, call 1-800-668-2642.

# Non-Housing Outcomes of Affordable Housing

---

Update review of empirical research evidence linking affordable adequate and stable housing to a range of outcomes

March 2016

Steve Pomeroy and Maude Marquis-Bissonnette

Focus Consulting Inc. and Carleton University Centre for Urban Research and Education (CURE)

## Executive Summary

CMHC commissioned this study to update earlier literature reviews on the linkages between housing and a broad range of non-housing outcomes. Focusing primarily on research completed since 2009, the objective of this update was to identify empirical evidence (qualitative and quantitative) on the linkages between affordable, stable housing and outcomes in six theme areas health, family stability, education, labour market and employment, crime and safety, and child development. Because child development covers multiple theme areas, findings are integrated, as appropriate, in the health, family stability and education sections. Findings from studies examining the linkages between housing and child well-being are summarized in Section 8. This literature review was limited to empirical research, primarily peer reviewed academic and journal articles.

The research focused on outcomes for individuals and families receiving some form of government housing assistance to increase affordability or improve access to better quality housing. Assisted/affordable housing plays an important stabilizing role for previously disadvantaged households, providing a supportive environment that prevented their situation from deteriorating further. Some research suggests that improved affordability and housing condition may be an important mediating factor in the transmission of intergenerational and neighbourhood disadvantage that might otherwise exert negative influences on outcomes such as health or opportunities to secure earnings. Summary of findings by theme area are presented below.

A limitation of this research project was that the focus on empirical research studies led to a bias in favor of U.S. literature. Few studies were found that examine smaller scale community based housing, such as that more characteristics of the non-profit and co-operative housing developments in Canada since the mid 1970's. Accordingly, some of the findings from the international literature may have limited relevance to Canada.

### **Health:**

Housing condition is a firmly established determinant of health. Many authors find a direct link between neighbourhood condition, housing condition and health. The effects of housing affordability are less direct and hard to isolate from the impacts of other significant factors. There are complex contextual and compositional factors mediate the relationship between health and housing affordability for example some households may take on a higher shelter cost burden in order to access better quality housing and/or better neighbourhoods. Health outcomes for different types of housing interventions are mixed and inconsistent. For example, the Moving to Opportunity experiment as well as HOPE VI public housing redevelopment in the U.S. show outcomes varying across different socio-economic groups and gender; notably, adolescent girls benefitted more than boys.

### **Family Stability:**

Looking at family stability as the absence of disruptive influences that can undermine health, cognitive well-being and positive family relationships, the research suggests a positive association between affordable, stable housing and family stability. High shelter cost burdens can impose difficulties on the family including rent arrears and eviction, which then force involuntary moves, and in some instances, homelessness. Where high shelter cost leads to frequent moves, such

instability can result in higher likelihood of poorer childhood development, lower educational achievement (grades completed, report card scores), lower income, and less remunerative occupation.

Factors separate from characteristics of the housing, such as a mother's mental health, frequent school change, and lack of a strong social network have been shown to have a larger influence on family stability than the characteristics of the house in itself. Cumulative stress on parents due to lack of affordable and suitable housing over three or more years can also affect children and adolescents, so interventions to improve affordability do have a positive impact on children as well as adults.

### **Education:**

Although much research has been conducted to try to establish a link between housing and education, there is still no consensus among researchers about the nature of this relationship. Because housing vouchers are a predominant U.S. program, designed in part to mitigate adverse neighbourhood effects, much of the empirical research tests whether the mobility created by housing vouchers results in improved educational outcomes for children, and compares public housing with voucher households as well as unassisted low-income renters. Specific studies do identify positive results but other studies contradict or qualify the strength of the findings. Education attainment (measured by standardized testing, report card scores, grades completed, and enrolment in post-secondary education) is strongly influenced by location and the quality of local schools, diversity of peers and neighbourhood characteristics. The research in this area has a strong U.S. bias, which makes the findings potentially less applicable to the Canadian context.

### **Employment and Incomes:**

The findings reveal either a neutral or slightly negative association between housing assistance (affordable housing) and labour market participation and employment income. While the research finds little empirical evidence of positive employment and labour market outcomes, it also reveals that it is necessary to design and deliver specific assistance such as skills and employment training and job placement support to achieve positive employment outcomes. Providing cheap housing, or housing allowances to reduce shelter cost burdens is alone insufficient.

### **Crime and Safety:**

Many researchers have tried to demonstrate that social housing does not cause higher crime rates, even though high rates are frequently reported in and around larger scale public housing developments. Finding mixed-results or no significant relationship, researchers focused on other variables to try and explain the incidence of crime rates. Typically neighbourhood characteristics, density, and in the U.S. context, racially linked poverty are important factors in crime rates. One explanation for the linkage between high crime rates and social housing is that socially assisted households (including voucher recipients) are often located in the more distressed and poor neighbourhoods where crime rate tends to be higher. Temporal analysis that has compared perceptions of safety and various types of crime rates prior to and after redevelopment into mixed-income and mixed-tenure development have generated statistically significant improvements in the outcomes for residents.

**Conclusion:**

The literature clearly demonstrates that high shelter cost burdens (unaffordability), poor dwelling conditions and overcrowding are associated with poor outcomes across many of the theme areas. The literature confirms that there is often a statistical association between certain attributes of housing assistance (affordability) and better outcomes for children and families. However, the literature also demonstrates that the location of housing and the neighbourhood context, the education level of the parents and the condition of the housing have strong mediating effects that may override any benefits of improved housing affordability.

Overall, the research suggests that affordable housing itself is not enough to improve well-being and life opportunities. Housing condition and neighbourhood characteristics mediate the effects improved affordability. Many authors underline that affordable housing measures would be more beneficial if provided along with varied kinds of support.

This study also highlights is the need to carefully examine the form of housing intervention when interpreting outcomes. Affordable housing occurs in a variety of contexts and is part of a bundle of factors that lead to positive or negative outcomes. For this reason, the literature often shows contradictory or inconclusive results. In particular, much of the existing stock of assisted housing that is the subject of extensive research is in the form of large-scale public housing developed between the early 1960's and 1990. This stock is older, in deteriorating condition, located in high poverty areas and occupied by a population with multiple disadvantages. In particular, there is a distinct lack of research in Canada examining the outcomes of the smaller scale mixed-income approach to social housing that was adopted as a key plank of Canadian housing policy in the 1970's.

## Résumé

La SCHL a commandé cette étude pour fournir une analyse documentaire plus récente des liens entre le logement et un vaste éventail de constatations du domaine du logement. La mise à jour, qui est essentiellement fondée sur des recherches menées depuis 2009, avait pour objectif de montrer grâce à des données empiriques (qualitatives et quantitatives) les liens qui existent entre un logement abordable et stable et des constatations dans six différents domaines, soit la santé, la stabilité familiale, l'éducation, le marché du travail et l'emploi, la criminalité et la sécurité, ainsi que le développement des enfants. Puisque le développement des enfants est aussi lié à plusieurs de ces domaines, les constatations pour cette catégorie ont été intégrées, selon leur nature, à celles de la santé, de la stabilité familiale et de l'éducation. Les constatations des études traitant des liens entre le logement et le bien-être des enfants sont résumées dans la section 8. Cette analyse documentaire est basée sur des recherches empiriques, principalement sur des articles de journaux et des articles universitaires examinés par des pairs.

Les constatations sur lesquelles s'est penchée l'étude sont celles qui concernent des personnes et des familles bénéficiant d'une aide au logement du gouvernement, destinée à accroître l'abordabilité du logement ou à faciliter l'accès à un logement de meilleure qualité. L'aide au logement et le logement abordable jouent un important rôle de stabilisation pour des ménages autrefois en difficulté en leur offrant un milieu de soutien qui empêche leur situation de se détériorer. Des études suggèrent d'ailleurs que l'amélioration de l'abordabilité et des conditions de logement pourrait constituer un facteur médiateur important pour prévenir la transmission intergénérationnelle des handicaps socioculturels ainsi que leur récurrence au sein des quartiers défavorisés. Ces situations peuvent exercer une influence néfaste sur la santé, de même que sur les occasions de bénéficier d'un revenu stable, notamment. Une description sommaire des constatations pour chacun des domaines étudiés est présentée plus bas.

Vu l'exigence d'axer la recherche documentaire sur des études empiriques, cette analyse a dû privilégier de la documentation en provenance des États-Unis. En effet, il existait peu d'études traitant d'ensembles de logements communautaires de petite taille et touchant les caractéristiques des ensembles résidentiels sans but lucratif ou coopératifs aménagés au Canada depuis le milieu des années 1970. Par conséquent, certaines constatations tirées de recherches menées à l'étranger ne sont que partiellement pertinentes au cas canadien.

### **Santé :**

Les conditions de logement sont universellement reconnues comme étant un déterminant de la santé. Bien des auteurs établissent un lien direct entre les conditions du quartier, les conditions de logement et la santé. Les effets liés à l'abordabilité du logement sont cependant moins directs et il peut être difficile de les isoler des impacts découlant d'autres facteurs importants. Effectivement, il existe des facteurs médiateurs complexes, relatifs au contexte et à la composition, qui influent sur le lien entre la santé et l'abordabilité du logement. Par exemple, certains ménages choisissent d'assumer des frais de logement plus élevés afin de pouvoir accéder à de meilleures conditions de logement ou à des quartiers plus favorisés. Les constatations en matière de santé pour les différentes interventions relatives au logement sont variables et divergentes. Ainsi, dans le cadre de l'expérience Moving to Opportunity et de l'initiative HOPE VI pour le réaménagement de logements sociaux aux États-Unis, des constatations variables ont été observées selon les différents

groupes socioéconomiques et le genre, notamment un écart marqué entre les constatations concernant les adolescents et les adolescentes, en faveur de ces dernières.

### **Stabilité familiale :**

Si la stabilité familiale est définie comme l'absence de facteurs nuisant à la santé, au bien-être cognitif et aux relations positives dans la famille, l'étude suggère une corrélation positive entre un logement abordable et stable et la stabilité familiale. Le fardeau que représentent des frais de logement élevés peut affecter négativement une famille et entraîner notamment des arriérés de loyer ou une expulsion. La famille peut alors être forcée de déménager, et peut même parfois se retrouver sans domicile. Les familles qui sont contraintes de déménager fréquemment en raison des coûts élevés du logement vivent dans une instabilité qui tend à accroître les probabilités d'un mauvais développement des enfants, d'un moins bon rendement scolaire (notes et diplômes obtenus), d'un faible revenu et d'une occupation moins bien rémunérée.

Il a été démontré que les facteurs indépendants du logement, comme la santé mentale de la mère, les changements d'école à répétition et un réseau social fragile, exercent une plus grande influence sur la stabilité familiale que les caractéristiques propres au logement. Le stress cumulatif que vivent des parents en raison de la difficulté d'accéder à un logement abordable et adéquat, et ce sur une période de trois ans ou plus, peut également affecter les enfants et les adolescents. Dans un tel cas, les interventions visant à améliorer l'abordabilité du logement ont une incidence positive sur les enfants, et aussi sur les adultes.

### **Éducation :**

Quoique de nombreuses études aient été menées pour établir un lien entre le logement et l'éducation, les chercheurs ne s'entendent toujours pas sur la nature exacte de ce lien. Puisque les bons de logement, qui servent à atténuer les effets négatifs des quartiers, constituent un programme prédominant aux États-Unis, la majeure partie des recherches empiriques effectuées cherchent à évaluer si la mobilité découlant de ces bons génère un meilleur rendement scolaire chez les enfants, et comparent les ménages utilisant les bons à ceux qui vivent dans un logement social et aux locataires à faible revenu sans aide financière. Certaines études ont indiqué des constatations positives alors que d'autres contredisent leurs conclusions ou y apportent des nuances. Le niveau d'instruction (évalué en fonction de tests standardisés, des notes au bulletin, des diplômes obtenus et de l'inscription aux études postsecondaires) est fortement touché par le lieu de résidence et la qualité des écoles locales, la diversité parmi les pairs et les caractéristiques du quartier. Les recherches sur l'éducation portent davantage sur les États-Unis, et la validité des constatations par rapport au contexte canadien est, de ce fait, diminuée.

### **Emploi et revenu :**

Les constatations révèlent un lien neutre, voire légèrement négatif, entre l'aide au logement (logement abordable) et la participation au marché du travail et le revenu d'emploi. Si l'étude ne fournit que peu de données empiriques appuyant des résultats favorables concernant l'emploi et le marché du travail, elle a tout de même révélé que, pour obtenir des résultats positifs en matière d'emploi, il est nécessaire de mettre en place et d'offrir une aide spécifique, comme une formation axée sur les compétences, une formation professionnelle, ou une assistance au placement. Ainsi,

réduire le fardeau des coûts du logement au moyen de logements à bas prix et d'allocations de logement ne suffit pas.

### **Criminalité et sécurité :**

Même si on constate souvent des taux de criminalité élevés dans les ensembles de logements sociaux de grande envergure et leurs alentours, de nombreux chercheurs ont tenté de démontrer que le logement social n'est pas la cause de cette criminalité accrue. Face à des constatations mitigées ou à un lien négligeable, les chercheurs se sont penchés sur d'autres facteurs pour tenter de fournir une explication aux taux de criminalité. De façon générale, les caractéristiques d'un quartier, la densité de population et, dans le cas des États-Unis, la pauvreté émanant du groupe racial, sont tous d'importants facteurs qui influent sur le taux de criminalité. Une des explications au lien entre un taux de criminalité élevé et le logement social est que les ménages bénéficiant d'aide sociale (bons de logement) vivent souvent dans des quartiers plus défavorisés et plus pauvres, où le taux de criminalité est généralement plus élevé. Dans une analyse temporelle où ont été comparées les perceptions relatives à la sécurité et le taux de criminalité avant et après le réaménagement d'ensembles à revenus et à modes d'occupation mixtes, des améliorations significatives pour les résidents ont été mesurées.

### **Conclusion :**

L'analyse démontre clairement que le fardeau lié à des frais de logements élevés (inabordabilité), de piètres conditions de logement et le surpeuplement sont associés à de mauvais résultats dans un bon nombre des domaines étudiés. L'étude confirme l'existence d'une corrélation statistique récurrente entre certaines caractéristiques de l'aide au logement (abordabilité) et l'obtention de meilleurs résultats chez les enfants et les familles. Cependant, l'analyse démontre également que le lieu de résidence, les caractéristiques du quartier, le niveau d'instruction des parents et les conditions de logement exercent un puissant effet médiateur qui peut invalider tout bénéfice que procure une plus grande abordabilité du logement.

Globalement, l'étude suggère que le logement abordable ne suffit pas en soi à améliorer le bien-être et les perspectives d'avenir. Les conditions de logement et les caractéristiques du quartier exercent un effet médiateur sur les résultats découlant d'une abordabilité accrue. Bien des auteurs soulignent que les mesures en matière de logement abordable seraient plus profitables si elles étaient offertes concurremment à d'autres types de soutien.

L'étude met en lumière la nécessité, dans l'interprétation des constatations, de prêter attention au type d'aide au logement qui est fourni. Le logement abordable peut découler de divers contextes et s'inscrit dans un ensemble de facteurs menant à des résultats positifs ou négatifs. Cela explique les constatations souvent contradictoires et peu probantes présentes dans l'analyse. De plus, la majorité du parc de logements subventionnés ayant fait l'objet d'une étude approfondie a vu le jour dans le cadre de l'aménagement à grande échelle de logements publics qui s'est étalé du début des années 1900 à 1990. Ce parc de logements est vieux et se détériore, et il est réparti dans des zones où sévit une pauvreté élevée et où habite une population confrontée à de multiples difficultés. Plus particulièrement, on constate le manque évident de recherches menées au Canada sur les résultats de l'approche qui avait été adoptée dans les années 1970, en tant que volet clé de la

politique de logement du Canada, pour la création d'ensembles de logements sociaux de plus petite taille favorisant une mixité des revenus.



National Office

Bureau national

700 Montreal Road  
Ottawa ON K1A 0P7  
Telephone: (613) 748-2000

700 chemin de Montréal  
Ottawa ON K1A 0P7  
Téléphone : (613) 748-2000

Puisqu'on prévoit une demande restreinte pour ce document de recherche, seul le résumé a été traduit.

La SCHL fera traduire le document si la demande le justifie.

Pour nous aider à déterminer si la demande justifie que ce rapport soit traduit en français, veuillez remplir la partie ci-dessous et la retourner à l'adresse suivante :

Centre canadien de documentation sur l'habitation  
Société canadienne d'hypothèques et de logement  
700, chemin Montréal, bureau CI-200  
Ottawa (Ontario)  
K1A 0P7

Titre du rapport: \_\_\_\_\_  
\_\_\_\_\_

Je préférerais que ce rapport soit disponible en français.

NOM \_\_\_\_\_

ADRESSE \_\_\_\_\_

rue

App.

ville

province

Code postal

No de téléphone ( ) \_\_\_\_\_

## Table of Contents

<b>1. Introduction.....</b>	<b>1</b>
Methodology and approach.....	2
Limitations and caveats on the findings.....	3
Developing a conceptual framework.....	5
<b>2. Health effects and outcomes related to affordable housing .....</b>	<b>9</b>
Expected impacts of housing: health in the causality chain.....	9
Bridging literature review from before 2009 .....	10
Updated findings stress importance of intermediate and intervening factors .....	10
How adequacy (housing condition) affects health outcomes .....	12
Homelessness and health.....	13
Does improved affordability lead to more suitable and adequate housing and does this enhance health outcomes?.....	14
Neighbourhood characteristics appear to be a stronger determinant than the dwelling characteristics.....	15
Some concluding observations on housing and health.....	16
<b>3. Family Stability .....</b>	<b>17</b>
Expected impacts of housing: family stability in the causality chain .....	17
Bridging literature review from before 2009 .....	18
Updated findings .....	18
Impact of affordable housing on family stability .....	19
Impacts of moving on children’s development .....	20
Impacts of Housing Characteristics on Children.....	23
Managing Homelessness .....	23
Some concluding observations on housing and family stability .....	24
<b>4. Education and Child Development effects and outcomes related to affordable housing .....</b>	<b>25</b>
Expected impacts of housing: education in the causality chain .....	25
Bridging literature review from before 2009 .....	26
Updated findings stress importance of intermediate and intervening factors .....	27
Does affordable and suitable housing improve educational outcomes: what is the relationship to location and neighbourhood effects?.....	27
What are the effects of moving on educational outcomes/quality of school attended .....	30
Some concluding observations on housing and education .....	33
<b>5. Labour market and employment.....</b>	<b>34</b>
Expected impacts of housing: employment and labour markets in the causality chain .....	34
Bridging literature review from before 2009 .....	35
Updated findings: Does affordable and stable housing enhance labour participation?.....	35
Does the form of housing assistance influence propensity to seek work? .....	38
Do pro-active approaches related to assisted housing help to secure employment outcomes?.....	40
Some concluding observations on housing and employment.....	41
<b>6. Crime and safety .....</b>	<b>43</b>
Expected impacts of housing: crime and safety in the causality chain .....	43
Bridging literature review from before 2009 .....	44

Updated findings: Does affordable and stable housing contribute to greater security and less crime?.....	45
Countering perceptions about public housing and crime .....	46
High incidence of crime in and near assisted housing reflects influence of poverty and disadvantage .....	48
Does demolishing and/or redeveloping older public housing improve crime outcomes?.....	48
Importance of neighbourhood characteristics .....	50
Some concluding observations on housing and crime .....	51
<b>7. Overview of literature reporting on multiple outcomes.....</b>	<b>52</b>
Moving to Opportunity (MTO) in the U.S. ....	52
Deconcentration of Social Housing in Australia.....	55
<b>8. Overview of literature reporting on multiple outcomes regarding child development. 56</b>	
<b>9. Conclusions and lessons.....</b>	<b>59</b>
Implications for policy and research .....	61
<b>10. References .....</b>	<b>63</b>

# 1. Introduction

This report was commissioned by CMHC to update earlier research (SHS, 2009; and PRA, 2011) that had reviewed literature prior to 2010 on the linkages between stable, suitable, affordable housing and a broad range of non-housing outcomes. The objective of this update is to identify empirical evidence (qualitative and quantitative), focusing primarily on research completed since 2009.

This update examines post 2009 literature and specifically explores five subthemes of non-housing outcomes: health, family stability, crime, education, and labour market participation.<sup>1</sup>

This overview first sets out a conceptual framework as a way to locate the influence and strength of linkages between different types of housing intervention and measured outcomes.

It then presents thematic summaries of the empirical literature and results under each of the five subthemes:

- a. Individual health generally, and child health specifically (includes mental and physical health conditions, e.g. asthma, respiratory ailments, depression, anxiety, distress. etc.);
- b. Family stability (includes length of stay in one location, number of moves), change in family structure, separation etc. and early childhood development;
- c. Education (includes school attendance, behavior, performance, graduation rates, rates of seeking higher education, etc.);
- d. Labour market participation (includes absenteeism, full versus part time employment, income level, advancement, as well as any evidence of program related work disincentives.);
- e. Crime and safety (includes how crime rates and perceptions of safety vary with mixed income neighbourhoods, well maintained housing or poorly maintained housing, neighbourhood income levels, etc.).

The report then concludes with an overall summary based on the individual sub-theme chapters augmented by some research literature that examines multi-dimensional outcomes linked to housing.

---

<sup>1</sup> The original terms of reference proposed examining outcomes under six sub-themes – these plus early childhood development. In reviewing the literature we found substantial overlap between childhood development and education and health. As a result, that literature is integrated into the discussion on health and education mostly.

## ***Methodology and approach***

Building on the earlier research prepared for CMHC by SHS (2009) and PRA (2011), this report presents the findings of a methodical literature review of research literature published since 2009. The review searched primarily for peer reviewed academic literature that included empirical assessment of non-shelter outcomes.

While additional grey literature (not journal based or peer reviewed) was also found, this is often written for the purpose of advocacy and generally did not reflect the degree of methodological rigour that is more typical in peer reviewed academic literature, so was generally discarded. Grey literature such as program evaluation reports were examined.

Linked keywords were used to cover housing plus each of the theme areas. The search drew on a number of academic search engines and identified 235 pieces of research published since 2009, which were then examined for relevance and findings.

Some research does not involve primary research but does draw on secondary sources, which have generated some statistical results. A number of comprehensive reviews were identified that themselves are summaries of research, rather than specific empirical explorations of specific issues. In reviewing these some were discarded as they did not include empirical analysis (primary research by authors or secondary compilation of empirical work in which some quantification and statistical analysis of outcomes was included).

The annotated summary identified the research approach; whether housing was a dependent or independent variable, the aspect of housing being examined (e.g. tenure, social housing, housing assistance vouchers or shelter allowances); whether it was empirically based, peer reviewed and robust. Some studies did use some form of quantitative assessment, but was not formally peer reviewed and may lack methodological rigour.

The resulting articles (170) were retained and summarized in a brief annotated bibliography. These were allocated across the five theme areas, although almost 30 of the articles cover multiple outcomes and the findings of these are used in the concluding chapter consolidation to augment thematic findings.

While ultimately the objective is to better understand how housing relates and contributes to a range of non-housing outcomes, this can be approached from two directions: research in which housing is the primary focus (i.e. explores impacts of some housing attribute, such as low rent or improved affordability); and research that focuses on certain non-housing outcomes (e.g. social determinants of health) and in exploring contributing factors, may include housing or housing related factors (e.g. shelter cost burdens, house condition) as one of many independent variables tested. In some studies housing may be identified as a minor factor, and in others may be presented as being more significant and having a more significant impact. The review sought to gauge the relative emphasis placed on the housing variable.

Accordingly, the search tried to capture both housing focused and non-housing focused research where some aspect of housing is identified as a contributing factor. Where housing is identified and used as potential factor the review sought to identify what characteristics of housing was

involved (e.g. condition, affordability) and whether it is possible to determine specific types of housing intervention, including proactive or passive elements (i.e. is the research examining an intentional housing activity or program). Where a specific type of housing intervention is examined, what is its nature (e.g. does research examine the impact of providing affordable housing with an RGI form of assistance; or is it about initiatives to improve housing conditions?).

As presented in the conceptual framework, discussed below, does the research trace the causality chain and detail in what ways specific housing circumstances are associated with outcomes (i.e. to what extent are intermediate and mediating effects explicitly identified and discussed)?

### ***Limitations and caveats on the findings***

In identifying and assessing the literature efforts were made to identify literature that includes some form of statistical quantitative or qualitative analysis. This included both research that utilized secondary data files, such as administrative data or undertook surveys to generate data, including some ethnography research that drew on interviews and self assessment of improvements/outcomes following a housing intervention (e.g. secured a housing unit or rental assistance).

Our focus on empirical work led to a bias in favour of U.S. literature, in part due to the practice in the U.S. of funding research demonstrations or linking outcomes research to funded programs as well as the practice in the U.S. to make program administrative data available to university based researchers, which then enabled extensive academic research. This has generated a larger body of research evidence from U.S. scholars. Heavily featured is the Moving to Opportunity for Fair Housing (MTO) Demonstration Program initiated in 1994 as a randomized social experiment designed to determine the benefits of offering mobility opportunities, with the goal of informing future voucher program policies. Similarly, as part of the HOPE VI (rebranded housing choice neighbourhoods) program funding included components to provide community development activities and to evaluate outcomes and impacts of redevelopment over time. The use of MTO and related mobility programs to undertake outcomes research is especially prolific in the U.S. and results in an excessive coverage of mobility and associated neighbourhood effects.

MTO involves relocating residents out of highly disadvantaged public housing, and typically works with individuals and families experiencing multiple disadvantage. HOPE VI similarly targets distressed usually older and larger deteriorating public housing developments, and a similarly disadvantaged population. As many research authors have noted this in itself adds some degree of bias to the analysis and assessment of outcomes because these were often populations with large concentrations of poverty and disadvantage. The U.S. public and assisted housing system also tends to serve a disproportionately large population of minority households and issues related to racial segregation and discrimination are a central part of the research discourse, something less applicable to Canada. So examining outcomes for individuals, families and their children often results in negative outcomes related to the degree of disadvantage that is associated with the housing chosen as the focus of the research.

Small and Feldman (2010) offer a critique of the U.S. body of research that predominantly focuses on large scale disadvantaged communities serving mainly minorities (Afro-American in North and Midwest and Latino in Southern states). They recommend that rather than studying, or only

studying, predominantly black housing projects in areas losing low-skilled manufacturing jobs, the research should also study comparatively under-explored sites such as Chinese-American neighbourhoods with high proportions of poor immigrants, predominantly white poor neighbourhoods with high levels of drug abuse, or aging multi-ethnic neighbourhoods with high proportions of residents on fixed retirement incomes.

By comparison to the majority of U.S. research, there is a more limited literature examining smaller scale, community based housing, such as that more characteristics of the non-profit and co-operative housing developments in Canada.

The other limitation is that again related in part to predominance of MTO and housing voucher samples, there is a heavy emphasis on locational and neighbourhood variables which exert a strong impact and may have stronger causality than dwelling characteristics. As such it is very difficult to extract specific quantifiable outcomes that can be directly linked to housing circumstances and affordability.

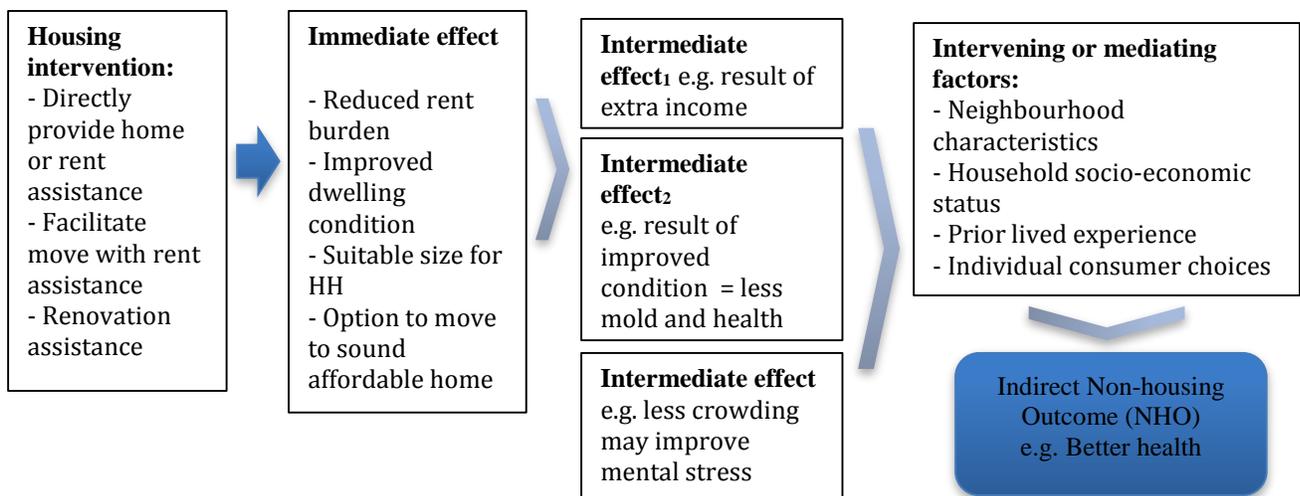
In evaluating each of the research articles reviewed, we have attempted to assess strengths and weakness and robustness of the literature. For many studies it is noted that the context in which the research was conducted (often limited to specific locations and sometimes with atypical circumstances) had an important bearing on the findings and as a consequence these may not be representative and the findings not fully transferable to the Canadian context.

## Developing a conceptual framework

The linkage and relationship between various dimensions of affordable and stable housing are both complex and often indirect (SHS, 2009; Small and Feldman, 2012). These are identified in the causality chain (Fig 1 below).

Housing assistance can generate a set of immediate direct effects, primarily housing outcomes, related to the form of intervention (SHS, 2009; Newton and Condon, 2010). When rents are set at low levels, or at a maximum 30% of income, housing is more affordable; depending on the age and quality of social housing provided, they may obtain better quality housing than they can otherwise afford; and an appropriate size of dwelling to fit their family. In some cases, assistance provides a mechanism and ongoing rental assistance that enables a household to move to housing in a different neighbourhood with the expectation that this facilitates a move away from negative influences such as high crime, lower quality schools, lack of accessible employment, while also receiving funding to lower net shelter cost burden.

**Figure 1: Causality Chain**



In addition to these direct impacts, it is also widely asserted that affordable adequate and stable housing helps to create additional ancillary benefits and outcomes, labeled intermediate effects in Fig 1 (Carter and Polevychok, 2004; SHS, 2009; Friedman, 2010; Wellesley, 2012).

So for example, as an immediate or direct effect, providing housing assistance in the form of a rent subsidy (project based subsidy or portable shelter allowance) reduces out of pocket housing cost (improves affordability). Programs to undertake repairs and bring dwellings up to minimum standards have the direct effect of improved condition. Based on existing literature it is expected that such improved affordability or improved condition in turn will have several ongoing intermediate effects and consequent non-housing outcomes. Examples of intermediate effect of housing interventions:

- Increased residual income to spend on non-housing needs, such as food;
- A larger food budget enables the family to purchase more nutritious food;

- Safer homes with lower risk of accident or health impacts

These effects then lead to various non-housing outcome (NHO), for example:

- Better fed, children are able to concentrate and focus better in school and achieve better educational outcomes, contributing to a short-term indirect outcome;
- Improved education may subsequently improve chance of accessing higher education and improving employment prospects (longer term indirect) outcome;
- Safer homes may reduce accidents and related costs in emergency health care system.

Additional mediating or intervening factors can reinforce or negate outcomes. This includes neighbourhood effects where the housing is located in a highly disadvantaged area (negative effect), with poor quality schools; or parents with strong parenting skills and a desire to help their kids escape poverty (positive effect).

More often than not, it is the influences of these intermediate steps that ultimately contributes to improved non housing outcomes, although causality can be traced back to the initial direct effect.

SHS (2009) noted that while the earlier literature suggests *some* linkages and association between housing and a range of NHOs, the literature does not convincingly confirm or establish causality. Housing itself is not necessarily or always the root cause of advantage or disadvantage; it is only one element in a set of interrelated factors (SHS, 2009). That is, housing exists as the nexus of family life and is positioned within a broader context that also contributes additional influences.

Other factors also have an impact, both positive and negative and act to reinforce or mediate the intermediate effect. In particular, neighbourhood has been found to have an important influence that mediates the effects of the housing situation (Small and Feldman, 2012). Indeed, this update reveals that neighbourhood effects may have a stronger influence in creating dynamics around safety and security, availability and access to employment, quality and opportunity for education and skills development and the nature and intensity of social networks (Turner & Berube, 2009; WHO, 201; Lens, 2013). Similarly, socio-economic characteristics, particularly income, which influences effective demand and choice of neighbourhood, as well as prior life experience of residents have been found to contribute to outcomes as much as the dwelling or program characteristics (Sanbonmatsu, 2010; Henwood et al., 2010; Nicol et al., 2012; Manley & Ham, 2012; Rothstein, 2014).

It is equally important to clearly define the form of housing intervention that is being linked to non-housing outcomes. The current review places the assessment into more programmatic terms: to what extent do certain types of housing intervention contribute to better outcomes for program participants? As described later, the empirical evidence reveals not only positive outcomes but also some negative outcomes linked to housing assistance (mainly a function of poor quality and poor location of older public housing forms of housing (Fortson and Sanbonmatsu, 2010; Pollack et al., 2010; Schwatz et al., 2010)).

The structure of assistance that creates affordability is also an influence on outcomes. In Canada most social housing is provided with rent-geared-to income (RGI) assistance. RGI rents adjust when income adjusts such that the form of assistance may also influence outcomes. In the employment and welfare literature there is extensive research on the effects of means tested income

assistance and the associated marginal effective tax rates (METR) in which assistance declines if earning exceed some minimum exemption (SRDC, 2002; Stapleton, 2010; CD Howe, 2011). These are often associated with disincentives to work.

Fallis (1993) drawing on the literature from labour markets and welfare analysis further connected these effects to housing, suggesting distorting effects of different housing assistance types and reduced propensity to move out of social housing when incomes improve. Drawing on this research would suggest that RGI based housing assistance, intended to enhance affordability, might have a counteracting effect on labour participation due to high METR effects.

Much of the focus of housing programs in Canada has historically been on supply programs – building housing in specific locations and offering housing at sub-market affordable rent.

Because it is a physical form of assistance it has attributes of place and location, which can directly influence outcomes. As such physical stock ages it may no longer be in sound condition. As such it no longer delivers the potential benefits of sound housing that in might initially have provided. In many cases, particularly earlier (pre 1980) versions, “project based supply assistance” was delivered in large scale developments, and over time was increasingly targeted to those most in need, which resulted in high concentrations of poverty, often reinforcing negative outcomes (such as lack of role models in work, intergenerational dependence on welfare income assistance, and often poor access to employment or good schools).

In the U.S. there was a shift in the early 1980’s away from place based supply programs (or as referred to in the European Union literature, object subsidies) to various forms of shelter and housing allowances (certificates and voucher programs), referred in E.U. as subject subsidies. These provide financial assistance mainly to address affordability and leave it to recipients to then select eligible dwellings (albeit with some price constraint and thus condition tradeoffs). Because they are not tied to specific projects, but instead offer options for recipients to select a dwelling anywhere these subject subsidies provide choice and mobility. Much of the U.S. literature examining outcomes uses these mobility features to examine whether the potential to move to locations that may offer greater employment opportunity, better schools for kids or improved safety do in fact result in better outcomes. This has contributed a large volume of research on outcome effects, often comparing outcomes in random trial control groups (assisted via mobility assistance, versus remained in public housing).

So, while “affordable housing” broadly defined, may be associated with some better outcomes (as it is in prior literature reviews) it may not be appropriate to generalize across different forms of “affordable housing”. Rather, the basis of that affordability, especially program and placed based versus subject based with mobility features, is equally important and accordingly should be distinguished, as it is in these reviews.

This also suggests some caution in using findings from international research where the context and program mechanisms may differ. It is critical to explicitly highlight the definition of the housing variable being discussed, and in some cases attributed.

This suggests a refined conceptual framework that identifies some direct or immediate impacts as well as a range of intermediate influences, some intervening factors and eventually some

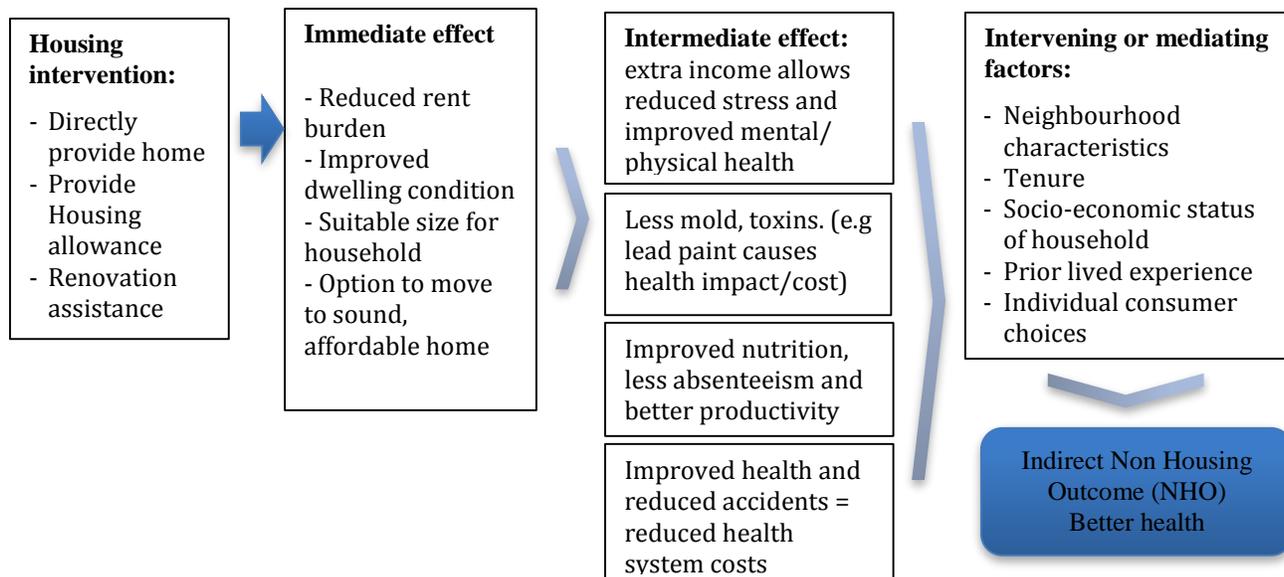
association with specific identifiable non-housing outcomes, as portrayed in Figure 1 above. In the thematic review chapters, these intermediate and intervening factors are highlighted.

The next set of chapters present summaries of research evidence under the following five sub-themes:

- a. Health
- b. Family stability
- c. Education
- d. Labour market and employment
- e. Crime and safety
- f. Multiple Outcomes

## 2. Health effects and outcomes related to affordable housing

**Figure 2: Causality Chain (theory of change and impact) – Health Effects**



### ***Expected impacts of housing: health in the causality chain***

#### *Direct and immediate effects:*

- Under the conceptual framework adapted in this research, the physical condition of the dwelling has direct positive or negative impacts. Newer or renovated housing in sound condition can positively affect health. Housing that is older and in poorer condition can pose health risks due to poor heating or ventilation and presence of molds. Structural deficiencies can cause accidents, while grab bars, handrails and good lighting reduce risk of accident and injury.
- Cost and affordability issues have been found to impose stress and can affect mental and in some cases physical health.
- Crowding is also associated with stress.

#### *Intervening or mediating factors:*

- Home ownership is often associated with better health but may reflect the fact that owners have higher income, which relates positively to other determinants of health.
- Age of the neighbourhood and home also tends to influence housing condition, especially in lower income areas, with higher levels of tenants and absentee landlords.
- Poor neighbourhood conditions may correlate with poor individual dwellings, but effects are seen mainly under the direct effects of the home condition.
- Better quality neighbourhoods usually include better condition dwellings due to higher investment/rehabilitation.

*Intermediate effects*

- Health problems can contribute to absenteeism - children missing days at school, adults missing work. Conversely, a healthier population is more productive.
- Children having more space at home (less crowding) have more chance to do their homework and therefore may increase educational attainment (such as graduating and enrolling in post-secondary education).
- Poor health contributes to increased health costs (e.g. hospitalization for poor health, especially respiratory issues) and emergency visits related to accidents in the home.

***Bridging literature review from before 2009***

Both studies previously undertaken for CMHC (SHS, 2009; and PRA, 2011) highlight a relationship between housing and health outcomes. Health is perhaps the area with greatest volume of research and one that has generated stronger evidence of causality (see for example MacLennan, 2008). SHS 2009 focused more on education and employment effects, but did highlight where health effects act as an intervening variable to enhance education and employment outcomes. Health effects are more often associated with home conditions (structural defects, indoor air quality, molds, toxins etc. contributing to respiratory disease and to the development of cancers, cardiovascular disease, and other illnesses).

For example, households living in better quality housing have fewer health risks and thus experience less work absenteeism (Dunn, 2000; 2002; Wilkinson and Marmott, 2003; Shaw, 2004; Health Canada, 2007). Meanwhile when housing is less affordable it can have an indirect effect because the quality and economic conditions of housing tend to be related to economic status and lack of income contributes to other negative outcomes such as poor diet and related health issues (Shaw, 2004). Dunn (2002) adds a more complex perspective to include the psychosocial influences of housing and how affordable sound housing enhances (or in absence detracts from) a sense of well-being.

***Updated findings stress importance of intermediate and intervening factors***

This update reviewed over 30 research studies with an emphasis on those that undertook empirical statistical analysis on the health outcomes related to affordable and stable housing. In this research, housing is typically located as one of a number of determinants of health outcomes, and is rarely examined as the sole independent variable. Reflecting on the conceptual framework above, housing context is more often an indirect contributor to measured health outcomes rather than the primary determinant. Few of the more recent studies provide any hard evidence to establish a strong and direct link between affordable housing and improved health. There is however a sound basis for the relationship between dwelling condition and health outcomes.

In framing an international conference on the determinants of health, the World Health Organization (WHO, 2011) ascribes outcomes to a set of pre-conditions that create inequality. The conditions into which children are born, grow, live, work and age have been found to be associated with health outcomes, so are typically framed as the social determinants of health. Related structural determinants such as distribution of income shape individual health status and outcomes

through their impact on intermediary determinants such as living conditions, psychosocial circumstances, behavioral and/or biological factors, and the health system itself. Housing (and tenure) condition and status is typically seen as one these structural elements.

In a comprehensive review of recent research, the Centre for Housing Policy (2015) examined research on the various ways in which the production, rehabilitation, or other provision of affordable housing may affect health outcomes for children, adults, and older adults. They identified 10 themes or hypotheses linking positive health outcomes to stable decent affordable housing. These generally reflect some form of intermediate effect related to (a) dwelling condition: when housing in better condition it may reduce exposure to health hazards (molds, toxins and structural problems leading to accidents and injury) and (b) affordability: lower rent frees up money to buy better food or prescription drugs, improves residential stability, reduces stress and mental health. Other effects include reduced crowding relieves stressors; and for some populations housing creates a platform to deliver support and health care services.

Discussing a WHO funded research project across Europe (Large Analysis and Review of European housing and health Status, LARES), Ruming (2011) reviews a research volume edited by Ormandy (2009) on housing and health. The housing and health relationships are similarly sorted into two broad categories, the first discussing how the home and its physical attributes contribute to either positive or negative health outcomes and second discussing the influence of neighbourhood on health outcomes. Ruming highlights the strength of Ormandy's book as the exploration of the complex contextual and compositional factors that mediate the relationship between health and housing.

Focusing exclusively on maternal mental health Suglia and Duarte (2011) identify other important intervening variables, in particular economic hardship and intimate partner violence. They linked issues of housing disarray and instability with a higher likelihood of screening positively for depression; however, no association was found for housing deterioration and maternal mental health.

In research more specifically on children, and controlling for a wide set of individual and family characteristics, the estimated effects of housing on health are greatly diminished (Fortson and Sanbonmatsu, 2010). These authors suggest is the individual factors (personal and family) that are more significant than neighbourhood and housing conditions, although the latter are contributing factors.

Citing a range of earlier literature, many authors link neighbourhood condition, housing condition and health (Pettigrew et al., 2009; Jacobs et al., 2009; Fortson and Sanbonmatsu, 2010; Nicol et al., 2012).

### ***How adequacy (housing condition) affects health outcomes***

Much of the earlier research, cited in PRA 2011, highlights the impacts of crowding and housing disrepair on a range of health conditions and this is reaffirmed in the more recent research identified in the current study. Numerous studies assert that there is extensive evidence that housing conditions affect health in a variety of ways (HUD, 2009; Weitzman et al., 2012; Keall et al., 2010; WHO, 2011).

HUD (2009) observes, “Although housing hazards place a particularly significant burden on certain socioeconomic, racial/ethnic, and age groups, it is important to remember that anyone of any group can be harmed by housing-related illness or injury. Advances in addressing these health concerns will benefit all categories of individuals and families”.

Across a range of countries, many studies link poor housing standards (lack of insulation) to cold and damp homes and negative health outcomes. Howden and Chapman (2011) found cold damp homes in NZ associate with higher incidence of winter hospitalization as well as high mortality rates in winter. They highlight poor construction and insufficient insulation issues and how this affects fuel expenditures, which impact affordability and lead to other issues. In 2008, 25% of total households in New Zealand or around 400,000 households experienced fuel poverty, in part due to rising electricity prices but exacerbated by poor dwelling conditions.

Jacobs et al (2009) find some relationship between improved heating and the prevalence of asthma in the U.S. In addition, these relationships between health and housing are similarly highlighted in a range of comprehensive and systematic literature reviews in Canada (Fitzpatrick-Lewis, 2011; Maqbool, 2015; Wellesley 2012). In the U.K., Davidson et al. (2010) and Nicol et al. (2012) have estimated the increase in health treatment costs (emergency visits and hospitalization) related to poor and substandard housing conditions. Treatment costs for people living in the 3.5 million poorest quality homes in the country were associated with one-year health and hospitalization costs in excess of 1.4 billion pounds (Nicol et al., 2012). Friedman (2010) also explored the cost of treating medical conditions related to poor housing conditions in the U.K. Including general practitioner (GP) costs and treatments, as well as in day and out day hospital visits, the total annual costs for treatments where ailments were specifically identified as housing related exceeded 2.5 billion pounds.

Focusing more specifically on children, Weitzman et al. (2012) highlight how lead poisoning prevention policies have significantly reduced childhood lead exposure in the United States. Becker et al. (2011) reports on a study about the links between housing insecurity (measured using crowding and multiple moves), and health of young children (less than 3 years). They rely on data from the U.S. Urban Medical Centers using a sample of over 20,000 low-income parents. They find that housing insecurity leads to poor health and developmental risks for young children. Crowded housing is leading to food insecurity, while housing instability leads to fair or poor health, lower weight and developmental risks.

Also in the U.S., Johnson, Cole and Merrill (2009) highlight issues of poor housing conditions, focusing on student housing. They identified a number of negative health conditions related to poor quality (lower rent) housing that targets students in a Western US university town.

Often in poor condition, largely due to their age (many built prior to 1950), public housing (with affordable rents) has frequently been found to contradict the expectation that affordable housing can contribute to improved health outcomes. The HOPE VI panel study found that public housing residents are more than twice as likely to be diagnosed with an array of chronic conditions compared with a nationally representative sample of African-American women (Ruel et al., 2010).

In an effort to determine whether public housing caused or merely reinforced poor health, Ruel et al. (2010) examined whether prior health conditions were responsible for poor health conditions. This research team concluded that substandard housing conditions, long tenure in public housing, and having had a worse living situation prior to public housing were not statistically associated with an increased risk of a health condition diagnosed after entry into public housing. These findings suggest that in the U.S., public housing may have provided a safety net for the very unhealthy poor, helping to prevent further decline in health, although not necessarily improving health. She also highlights the finding from the Moving to Opportunity (MTO) and HOPE VI mobility studies that little or no health improvements in adults were observed 4 to 5 years post-relocation, despite improvements in the level of neighbourhood poverty (Ruel et al., 2010).

With respect to the separate issue of overcrowding, Nelson (2010), reports that overcrowding causes stress to women during pregnancy and has adverse consequences on children when they are born. According to the authors, the literature shows that overcrowding causes women anxiety, sometimes resulting in physical problems during pregnancy such as premature birth, lower IQ for the baby and birth defects. As for children, overcrowding can cause hyperactivity, aggression and bed-wetting in addition to poor educational achievements, social integration difficulties and mental health problems.

### ***Homelessness and health***

Part of the research in the housing-health nexus focuses more narrowly on how providing housing (housing first models), and more particularly permanent supportive housing, contribute to improved health outcomes for formerly homeless persons. Henwood et al. (2013) posit that if homelessness is a determinant of poor health, then having housing should improve one's health through reduced exposure to the elements, infections, and violence. They accordingly undertook a review of the literature to identify research evidence to support this view. They cite research showing poor housing quality is associated with morbidity related to infectious and chronic diseases, injuries, poor nutrition, asthma, neurologic damage, and mental disorders. However, with respect to homeless persons, they question whether health improvements will be realized in the absence of some additional pro-active efforts to reinforce healthier lifestyle choices with appropriate supports and interventions. That is, simply providing housing without ancillary supports does not lead to improved stability nor improved health outcomes.

Burgard et al. (2011) found people who had experienced an episode of homelessness more likely to report fair/poor self-rated health and to meet criteria for major or minor depression. However, frequent moves among both homeless and insecurely housed individuals were not associated with poorer health. They suggest a need to distinguish between sub-populations and types of instability.

In a similar comprehensive review of research in Canada, Fitzpatrick-Lewis et al. (2011) found 84 studies among 1,500 reviewed that offered evidence of some association between provision of

housing (to homeless persons) and improved health, but they noted that few of these provided sound empirical evidence.

***Does improved affordability lead to more suitable and adequate housing and does this enhance health outcomes?***

Research on affordability effects on health tend to be less prevalent than that of material effects (i.e. condition of both neighbourhood and dwelling), but some researchers have sought to examine this effect. (Pollack et al., 2010; Phibbs et al., 2011; Bentley, 2011, Maqboul, 2015). Bentley et al. (2011) explored mental health in relation to housing affordability and found some evidence that mental health issues are exacerbated by higher shelter cost burdens (paying over 30%).

Pollack et al. (2010) identified some negative health outcomes among households with high shelter burdens; however, these authors argue this is as much a consequence of the low-income status of the occupant as it is of housing affordability. Pollack et al (2010) examine whether housing affordability and tenure are linked to a number of important health outcomes, controlling for perceptions of neighbourhood quality. The association between housing affordability and health outcomes was assessed using propensity score methods to compare individuals who reported living in unaffordable housing situations to similar individuals living in affordable ones. Almost half of the sample reported difficulty paying housing costs. Those reporting affordability issues also reported a much higher incidence of some self-assessed health conditions. Renting rather than owning a home (a proxy for income differences) heightened the association between unaffordable housing and self-rated health. There were no significant associations between housing affordability and heart disease, diabetes, asthma, psychiatric conditions, being uninsured, emergency department visits in the past year, obesity, or being a current smoker.

Rowley and Ong (2014) examine how affordability or housing stress (defined in Australia as households with incomes in the lowest two quintiles and paying over 30% for housing) affects well-being. Their research suggests that housing stress is only weakly linked to health outcomes, yet, they add, for households in chronic stress (experiencing stress for three plus years) there is stronger association with poor health outcomes.

Becker et al. (2011) reports on a study about the links between housing insecurity, defined as unaffordable housing, low quality, unfavorable neighbourhood, overcrowded and homelessness, and health of young children (less than 3 years). They rely on data from the U.S. Urban Medical Centers using a sample of over 20,000 low-income parents. They find that housing insecurity leads to poor health and developmental risks for young children. Crowded housing is leading to food insecurity, while housing instability leads to fair or poor health, lower weight and developmental risks.

While not related directly to health, a striking finding of the study was that there were no statistically significant associations between movement out of housing stress and an improvement in financial wellbeing. Their work highlights a conscious trade-off, wherein some households may take on a higher shelter cost burden in order to access better quality housing and/or better neighbourhoods. This will result in an inverse relationship between health and well-being and affordability (Rowley and Ong, 2014).

### ***Neighbourhood characteristics appear to be a stronger determinant than the dwelling characteristics***

Much of the U.S. research draws on natural experiments as well as research demonstrations involving the use of vouchers to facilitate movement out of highly disadvantaged neighbourhoods (Ludwig et al., 2012; Kessler et al., 2012). Notable among these is the 15-year Moving to Opportunity (MTO) panel study, which included periodic follow up on various outcomes including health status of children. While this involves a housing program (voucher) to manage shelter affordability, its primary impact is on enabling mobility and thus the outcomes are strongly influenced by neighbourhood characteristics, consumer choices on such locations and local effects.

Lindberg et al. (2009) undertook a systematic review of literature to examine how different housing interventions impact both neighbourhood and health outcomes. They frame their analysis at the neighbourhood level based on the evidence of linkages between extreme poverty neighbourhoods (more than 40% below poverty line) and a myriad poor health outcomes, including mortality, poor child and adult physical and mental health, and negative health behaviours. They sought to find sound empirical evidence on specific housing programs and policies. Using an expert panel to review literature they determined that of 10 possible housing interventions sufficient evidence to justify implementation exists for only one program in the U.S. – the housing choice (Section 8) voucher.

Citing other research Lindberg et al. (2009) found consensus that this voucher program enabled disadvantaged, often minority and poor households to move away from segregated and deprived areas; participants experienced less crowding and faced lower rent burdens than low-income individuals living in unregulated housing. They also found that vouchers relieve budgetary pressures and allow families to improve eating and nutrition. Citing Myers 2005, they report that among food-insecure households, children whose families were not receiving a housing subsidy were 2.11 times likelier to have a weight (standardized for age) more than 2 standard deviations below the median weight.

Lindberg et al. (2009) also examined the more specific form of vouchers used in the Moving to Opportunity program. They note the results in terms of health outcomes for other programs, including the MTO experiment and HOPE VI public housing redevelopment, are mixed and inconsistent varying across different socio-economic groups and gender of adolescents (a finding corroborated by Fortson, 2010; Ludwig, 2012; and Kessler et al., 2014, among others)

Kessler et al. (2014) in their analysis of MTO mental health outcomes did identify various positive outcomes, but results were inconsistent across different populations and gender – notably adolescent girls benefitted more than boys. Compared with the control group, boys in the low-poverty voucher group had significantly increased rates of major depression and conduct disorder. Boys in the traditional voucher group had increased rates of PTSD compared with the control group. However, compared with the control group, girls in the traditional voucher group had decreased rates of major depression and conduct disorder.

Outside of the U.S., Bond et al. (2012) examined the relationship between the mental well-being of residents living in deprived areas (in U.K.) and their perceptions of their housing and neighbourhoods. They determined that for people living in deprived areas, the quality and aesthetics of housing and neighbourhoods are associated with mental wellbeing, but so too are

feelings of respect, status and progress that may be derived from how places are created, serviced and talked about by those who live there. They conclude that the quality of resident services is also a factor as well as physical features of the housing.

### ***Some concluding observations on housing and health***

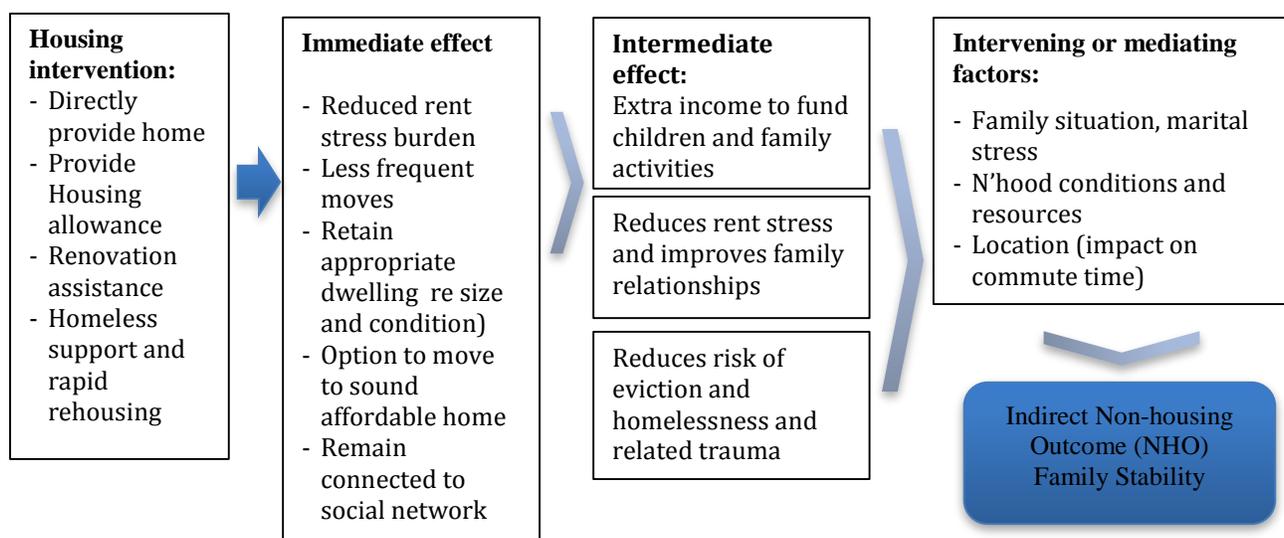
In the earlier literature, there is a larger body of fairly conclusive evidence identifying a causal relationship between poor housing conditions and crowding and negative health outcomes. Housing condition is a firmly established determinant of health. Across a range of countries, many studies link poor housing standards (lack of insulation) to cold and damp homes and negative health outcomes and unnecessarily large health care expenditures. Citing a range of earlier literature, many authors link neighbourhood condition, housing condition and health (Pettigrew et al., 2009; Jacobs et al., 2009; Fortson and Sanbonmatsu, 2010; Nicol et al., 2012). Crowded housing conditions are linked to negative health outcomes for pregnant mothers and children (Nelson, 2010; Becker et al, 2011). There are also a number of studies that quantify the health costs of poor dwelling conditions.

Using the narrower lens of the current review – the effects of affordable and stable housing-- the relationship between affordability characteristics of housing and health are less conclusive. Authors report that complex contextual and compositional factors mediate the relationship between health and housing (Phibbs et al., 2011; Dockery, 2013). While Rowley and Ong (2014) report that households in chronic stress (experiencing stress for three plus years) there is stronger association with poor health outcomes, they also highlight a conscious trade-off, wherein some households may take on a higher shelter cost burden in order to access better quality housing and/or better neighbourhoods. This will result in an inverse relationship between health and well-being and affordability.

Health outcomes for different types of housing interventions in the US, including the MTO experiment as well as HOPE VI public housing redevelopment, are mixed and inconsistent – varying across different socio-economic groups and gender of adolescents (a finding corroborated by Fortson, 2010; Ludwig, 2012; and Kessler, 2014, among others). Kessler et al. (2012) in their analysis of MTO did identify various positive outcomes, but again results were inconsistent – notably adolescent girls benefitted more than boys.

### 3. Family Stability

**Figure 3: Causality Chain (theory of change and impact) – Family Stability Effects**



#### ***Expected impacts of housing: family stability in the causality chain***

##### *Direct and immediate effects:*

- Lower more affordable rents reduce financial stress.
- Affordability of home influences family stability, when housing costs are high relative to income, families tend to move more often, sometimes leading to homelessness, or being “at risk” of homelessness.  
Housing assistance can help family to secure appropriate sized home in sound condition, which may reduce need to move.
- Quality of housing, the neighbourhood and access to resources also influence family stability.
- Affordable housing allows families to stay housed, and access resources they need.

##### *Intervening or mediating factors*

- Family situation – including marital stress, parenting competence and health.
- Neighbourhood quality and location relative to support services, schools and employment.
- Family stability also brings school stability to children, therefore helping them achieve better educational outcomes, future occupation and income, also reducing risks of delinquency.
- Commute time for parents caused by selecting more distant place of residence reduces time at home nurturing children.

### *Intermediate effects*

- Affordable housing allows parents to benefit from more money to meet their children's needs.
- Children could achieve better cognitive, behavioural and emotional developments. Stability reinforces educational performance.
- Affordable housing imposes less stress on parents, and therefore on children, leading to better health.
- Potentially avoiding homelessness, including all negative outcomes it brings to members of the family.

### ***Bridging literature review from before 2009***

In SHS (2009), stability was found to be related to education, skills development and employment. For education, the report underlines that family stability, as well as school stability, help children achieve better educational attainment. The authors also stress that available parent time would be more important than factors related to housing. Concerning skills development and education, residential stability leads to a better self-esteem and economic stability, which, in return helps unemployed people to join the workforce. In fact, stability would procure a sense of security, which would also help build a support network.

PRA (2011) also reports few effects of family stability, namely better behavioural and cognitive development of children, and better education results. The report also underlines that payments on rent or mortgage that are too high can cause stress, leading to poorer mental health.

### ***Updated findings***

#### **Definition of 'family stability'**

Authors use the term 'family stability' to refer to many situations. In some cases, family stability refers to frequency of moving from a house to another, the capacity of staying sheltered and even the structure of the family. Also, some other expressions, such as housing stability and residential stability could be understood as synonyms. School stability, or school mobility, referring to how often children change school during their academic career, is a related concept. From the literature, we also learn that mobility is not necessarily negative, and could refer to a positive change, when a family moves to a better neighbourhood, or if they move from an apartment to buy a house.

For instance, Clark (2010) defines housing instability as including 'frequent moves, difficulty paying rent or mortgage, overcrowding, and denied housing resulting from discriminatory practices, family size, criminal background, bad credit, or past evictions.' (p.2)

Tyler et al. (2014) defines housing stability in the case of young homeless people as 'the extent to which individual's customary access to housing of reasonable quality is secure', therefore propose to measure it as the risk of instability. Concretely, factors such as housing type, housing history, financial situation and consumption patterns could be taken into account.

Sandstrom and Huerta (2013), underline that instability refers to change and discontinuity, which can be either positive or negative, depending on the context. They define instability ‘‘as the experience of change in individual or family circumstances where the change is abrupt, involuntary, and/or in a negative direction, and thus is more likely to have adverse implications for child development.’’ (p.5) They also mention five domains in the literature in which instability related to the family exists: income, employment, family structure, housing as well as education and childcare services.

### ***Impact of affordable housing on family stability***

Few authors in the past years have studied the reasons leading families or individuals to a situation of housing instability. It seems clear from the literature that unaffordable housing (or lack of affordable) is the primary reason for families to become unstable. A major shortcoming of the research though relies on the difficulty to demonstrate a clear relationship between policies promoting affordable housing, such as public housing, housing vouchers and others, and the positive impacts on families, namely being stable and staying housed.

For instance, in a three city ethnographic study, Clark (2010) examines trajectories of housing instability among poor families in U.S. The author examines push (reason to leave a house) and pull factors (reason to move to a certain house or neighbourhood), as well as challenges and benefits for families, especially children. In the affordability category, the majority of reasons for residential mobility were due to forced moves (Chicago = 54; San Antonio = 55; and Boston = 29). In fact, forced move was the number one reason given across all categories. Forced moves (pushes) consisted of eviction, fire, foreclosure, and HOPE VI demolition. Clark finds that families move mostly for negative ‘push factors’, firstly housing affordability (eviction, inability to pay rent or mortgage), then quality of housing, neighbourhood, social relationship and access to resources. Data suggests that assisted affordable housing options tend to increase family stability.

Clark (2010) concludes that housing instability does not occur in a vacuum and, rarely, is housing insecurity the only challenge that individuals and families have at any one time. She explains that housing instability leads to ‘behavioural problems and education delays’ among children, but a causal link cannot be established since housing instability is also often related to other influences such as parental domestic abuse, parental substance abuse, child abuse and neglect, and physical and mental health problems. Also, she underlines that children can benefit from mobility when it is related to an adequate home and better neighbourhood.

In addition, Gultekin (2014) concludes that lack of affordability in housing leads families to residential instability or homelessness. The author looks at personal events leading families to homelessness, focusing on women. She finds that the primary reason for homelessness among mothers is related to financial problems due to underemployment, job loss, no maternity leave, and ‘no margin of error’. Past mistakes (for instance, legal trouble), failing health (disabilities and health problems), absence of social network and help were also factors leading them to homelessness and residential instability. Gultekin mentions that the literature relates homelessness to subsequent financial insecurity, health problems, lower educational attainment, and loss of social network.

From a different perspective, Clampet-Lundquist et al. (2011) look at the effect of Moving to Opportunity (MTO) housing vouchers on children, and focus on differences between boys and girls. Overall, they find that girls fare better than boys across a number of dimensions. Related specifically to family stability, they find that boys lack involvement with positive male figure after moving (the subjects in this experimental design included a number of Afro-American single or separated parents), they cite the literature according to which a good relationship with a male family member has positive effects on young boys. The authors find that MTO often creates a geographical and social distance between father, who are important same-sex model, and their son. On the other hand, they also report that the presence of negative father figures is related to delinquency patterns among boys.

Accordingly, Smith et al. (2014) are interested in assessing the effects of the MTO program on girls and women and how safe they feel in their new neighbourhood. They use data from the experimental American MTO voucher program compiled with mixed methodologies (quantitative and qualitative). In-depth interviews report that girls and women claim being frequently sexually harassed. The authors attribute this in part to the high level of poverty in the neighbourhoods in which they live - the MTO sample included only girls and women living in moderate and high poverty neighbourhoods.

### ***Impacts of moving on children's development***

Many authors have assessed the impact of moving frequently on children. Authors measure cognitive, emotional and behavioural development of children, as well as later outcomes such as occupation, criminal records, etc. Authors also identify patterns leading to negative outcomes on children. Authors generally find that frequent moving can lead to negative outcomes, especially for children. However, they do not agree on these effects, nor on the age at which consequences could be more important.

In a report for the Center for Housing Studies, Phinney (2009) gives a portrait of moving in low-income families, assuming that they move more often than more affluent families. He finds that almost 50 percent of households move three times or more during the six years period covered by the study, and 19% moved six times or more (hypermobility). While some respondents experienced a positive move (for instance, they moved because they bought a house), 38% experienced involuntary move during that period, some because they received eviction (20%), and 12% became homeless. Respondents moving often are on average younger, are more likely to have mental health issues, be victims of domestic violence, and more likely to experienced job instability.

The literature is not clear whether residential stability has an effect on children's development, or, in particular, in which context it does affect their development. Sandstrom and Huerta's (2013) literature review describes effects of instability on children in five domains: family income, employment, family structure, housing and "out-of-home contexts", mostly school and child care. The author finds that residential instability leads to worse educational and social outcomes (lower vocabulary skills, behavioural troubles, lower educational attainment). Elementary school children seem to be more sensitive to residential instability than younger children (pre-school) and adolescents. However, children from all ages achieve poor social development. Finally, the authors

stress that home and neighbourhood quality ‘mediate’ the effects of residential instability on children.

Suglia, Duarte and Sandel (2011) find association between housing quality, housing instability and depression among mothers of young children. In addition, they find an association between housing instability and anxiety disorders. Using evidence that wellbeing is related to housing quality and their mother’s health, the authors suggest that providing affordable housing to young mothers could support and benefit them as well as their children.

On the other hand, Schoon et al. (2012) focus on the relationship between income poverty, family instability and cognitive development. They found no significant association between children’s cognitive development and family stability. Nevertheless, they find that poverty does affect young children’s cognitive capacities.

Particularly, some authors have focused on the negative effects of residential instability on very young children. Rumbold et al. (2012) highlight that moving two times or more during the first two years of childhood is significantly associated with internalizing behavioural problems at the age of nine, even after controlling for socio-demographic and households’ variables. According to the authors, this suggests that during their first two years of life, children are more vulnerable to residential instability than at any other period. No significant relationship was found for any other period of time and externalizing behaviour. Also, they find that households who were renting for a long period are more likely to have children externalizing behavioural problems.

Taylor and Edwards (2012) looked at the relationship between housing tenure, residential mobility and housing stress on children’s cognitive and socio-emotional development. They find that children’s vocabulary is widely different depending on the tenure type. The difference between children from homeowner with no mortgage families and children from families living in public housing is significant. The difference is also significant between children from public housing and private rental. As for residential stability, the authors find only one significant relationship: multiple moves (five times or more) would affect children’s development at the age of 4 and 5 years old. The authors suggest it would be explained by a certain period where children are more vulnerable to the effects of moving. Housing stress is also found to have no effect on socio-emotional and cognitive development.

Ziol-Guest and McKenna (2009) find residential instability is significantly associated with children’s readiness for school at the age of five only if they have moved three times or more since their birth. As well, residential instability affects children only in poor families. Few authors focus on reasons explaining why residential instability would have a negative impact. Findings suggest that financial constraints due to moving or paying a high price for a dwelling may affect children if they receive less attention, and are not provided all material (books for instance) and experiences (extra-curricular activities) that they required. Also, families who move have fewer (or loose) social ties, which could affect children’s development.

Anderson et al. (2014) counter that not all moving leads to ‘adverse developmental outcomes’ (p.11) In fact, they explain: ‘theory and research generally converge to suggest that residential mobility among children co-occurs with changes in relevant proximal contexts, and that these associations may shift, or vary in relevance, for children across developmental periods.’ (p.15)

Herbers, Reynolds and Chen (2013) investigate the risk of school mobility on education. In other words, rather than focusing on frequent housing moves, they measure the impact of school mobility on children (although these could be caused by moving homes). They compare future occupation, mental health, and criminal activities among children who have changed school two times or more between kindergarten and twelfth grade, and other who did not. Their results show students who change school frequently are less likely to complete their high school education in prescribed time, have lower level of occupational prestige, are more like to suffer from symptoms of depression and more likely to be arrested when adults. No significant relationship was established between school instability and felony arrest. Residential instability was not found to be predictive of adult arrest. In this research, moving is found to be more harmful when students are older, especially between fourth and eighth grade.

### **Impact of Familial Structure on Children**

Family stability is also understood as the stability of the structure of the family. For some authors, it also relates to different types of families, mostly children from biological or non-biological parents, married parents, parents living together or single parents. In the past years, research has focuses on the effects of family structure and changes among them on children's outcomes, noticing that traditional families are less frequent than it once was.

Coley, Brooks-Gunn and Waldfogel (2012) explored the effects of family structure (biological parents that are married, biological parents living together without being married, and the biological mother is single) and stability (if the child has live in the same family structure since he was born) on five years old children. They measured effects based on cognitive and behavioral developments, and measures of health (asthma and obesity). They found that children from unmarried parents are more likely to suffer behavioral and health problems: depressive and anxiety symptoms, aggressive behaviors, asthma and obesity at the age of five years old. Children from non-traditional families are also more likely to suffer from those problems, as well as lower cognitive attainment. They also find family instability is associated to health problems by the age of five.

Sun and Li (2011) examined the relationship between types of families, change in family structure and children's academic performance. They compare two categories of families: disrupted (i.e. change in family structure such as divorce and separation) and non-disrupted. They find that children from non-disrupted families achieve better educational outcomes than children from disrupted families.

Children's trajectories were also more positive from single-parent families than from households with multiple transitions (coupling and uncoupling). Family stability seems to positively influence children's outcomes. It is not so much being in a lone parent family as the change and disruption associated with divorce and separation that are most influential on children's well-being (Sun and Li 2011).

### ***Impacts of Housing Characteristics on Children***

If residential instability could influence children's outcomes, researchers are also interested in understanding the effects of housing characteristics on children. In Coley et al. (2013), the quality (condition) of housing was found to be the most determining variable on the emotional, behavioural and cognitive developments of children and adolescents. Children and adolescents of low-income families were found to have lower emotional and behavioural outcomes and adolescents showed lower skills in math and reading than their peers from wealthier families. The housing type (owned, rental, or subsidized) and price were not found to be significantly related to children's outcomes. Residential instability presents mixed-results. Results suggest that mother's mental health, parents' stress and family routine would be more determining than the characteristics of the house in itself. Cumulative stress on parents due to lack of affordable and suitable housing could affect children and adolescents.

Suglia, Duarte and Sandel (2011) also found an association between housing quality (noisy and crowded home), housing instability and depression among mothers of young children. In addition, they find an association between housing instability and anxiety disorders. This leads the authors to believe that providing young mothers affordable housing could support them, as well as supporting their children, since evidence was given that their wellbeing is related to housing and their mother's health.

### ***Managing Homelessness***

The literature highlights that frequent moving or housing instability can lead to homelessness. Therefore, many authors are interested in understanding what factors lead to such situations and how it can be avoided.

Shinn (2009) presents a literature review in order to help Community Development Corporations (CDCs) in the U.S. to help homeless families. She comes to few conclusions. First, homeless families share common characteristics and needs with other poor families, rather than with homeless adults. Evidence shows that homeless families don't tend to stay homeless for a long time. Shinn highlights that in most cases, subsidies for housing are sufficient for families to prevent homelessness and to stay housed (e.g. using housing assistance or vouchers in a rapid re-housing response). Some families would need additional services to stay housed, like mental health support, but they represent a small percentage of homeless families – most face economic challenges (rather than mental health or addictions, more prevalent in the singles chronic homeless population).

Mayberry et al. (2014) report on how parents in situations of homelessness (living in a shelter) can maintain and adapt families' routine and rituals with their kids. They conducted 80 interviews with parents in current or recent situations of homelessness. They found that rules in shelters prevent parents from maintaining routines, rituals and some habits with their kids. Some rules are related to schedule (waking up time, mealtime, etc.), while other are related to how parents can educate and maintain discipline with their children. To this end, many parents mention that they are often threatened and scared that child protective services may remove the children from their custody.

Parents are found to adapt their routines but also establish strategies in order to maintain them. For instance, some parents would overstep the rules, some would stay in their room for most of the day, and others would find a way to tell their children they would be disciplined whenever it would be possible.

Jakubec et al. (2012) intend to draw a portrait on 'how housing stability is experienced and managed' in Calgary, Canada, hoping to help researchers and service providers (shelters) to understand constraints to housing stability experienced by beneficiaries. Findings show that housing possibilities have to be adapted to different clientele. Different sectors have to work together, particularly when it comes to housing people with addictions or mental health issues. There is also a need to better inform people of available services. Availability of services and ongoing follow-ups are important due to possibilities of relapses. The authors recommend the information regarding housing possibilities and related services to be streamlined.

### ***Some concluding observations on housing and family stability***

To the extent that family stability is understood to mean the absence of disruptive influences that can undermine healthy development and relationships, the research literature suggests that there is a positive association between affordable stable housing and family stability.

While this research examines how changing family structure impacts children's trajectories and outcomes, the research does not explicitly identify if and how housing status and affordability are associated, although it is implied that stressors such as affordability burdens may contribute to changing structure.

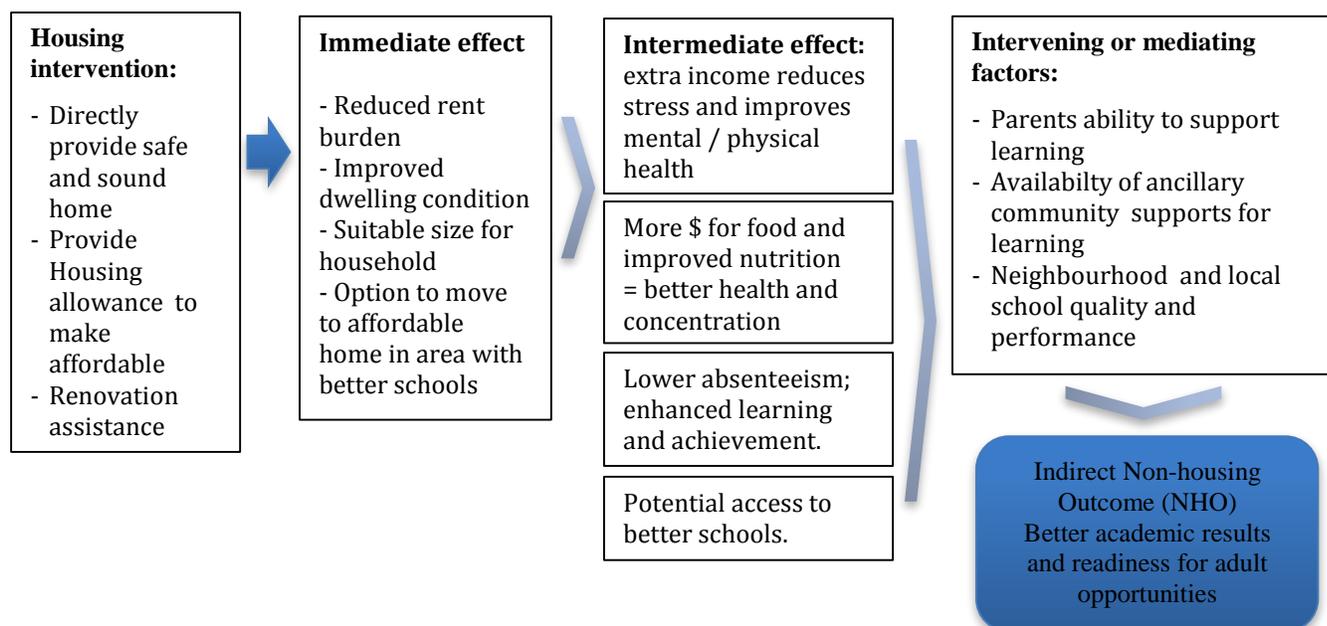
Clark (2010) notes that housing instability does not occur in a vacuum and, rarely, is housing insecurity the only challenge that individuals and families have at any one time, thus it is difficult to conclusively point to causality. The primary impact is on reducing high shelter cost burdens that can impose difficulties on the family including rent arrears and eviction, which then force involuntary moves, and in some instances, homelessness.

Where this does lead to frequent moves, such instability can result in higher likelihood of poorer child development, lower educational achievement, lower income, and less remunerative occupation (Clark, 2010; Gultekin, 2014; Sandstrom and Huerta, 2013 and others).

## 4. Education and Child Development effects and outcomes related to affordable housing

### Conceptual framework

**Figure 4: Causality Chain (theory of change and impact) – Educational outcomes**



### *Expected impacts of housing: education in the causality chain*

#### *Direct and immediate effects:*

- The primary effects are in reducing the cost of housing, enabling families to obtain housing of a suitable size for their family (reduce crowding) and potentially (depending on the housing provided or accessed) improve housing conditions;
- Affordable housing also reduces housing cost and leaves more money to buy other necessities such as food: better-fed children are expected to perform better in school.
- Sound housing reduces risk of accident and injury that may cause absenteeism and missed schooling.
- Where assistance is provided under a rental assistance program that permits the family to select location of housing, the housing intervention may also trigger neighbourhood effects.

#### *Intervening or mediating factors*

- Parent's backgrounds and ability to support/assist children in schoolwork.

- Ancillary programs connected to housing, such as afterschool homework clubs, life skills, ESL and labour market readiness can help connect adults to high school completion and vocational qualifications, which in turn improve employment potential
- Better quality neighbourhoods usually include access to schools with stronger performance levels thus enhancing potential improved educational opportunity and outcomes.

*Intermediate effects*

- The main impacts on education come via reduced expenditures on housing, which leaves more money to buy nutritious food. This then helps children concentrate in school and improve performance;
- Improved nutrition and better health - health problems can contribute to absenteeism - children missing days at school.
- Children having more space at home have more chance to do their homework and therefore increase educational attainment.

***Bridging literature review from before 2009***

The literature published after 2009 shows similar inconclusive results to those reported in SHS (2009). Although much research has been conducted to try to establish a link between housing and education, there is still no consensus among researchers about the nature of this relationship. The more recent research has improved from the perspective of methodological soundness. The 2009 research divides the literature related to educational outcomes in four categories: neighbourhood, transience and stability, tenure and (less frequently) dwelling condition.

In sum, the more recent literature confirms previous conclusion from 2009: the ‘neighbourhood effect’ exists even if it is hard to isolate its effects. Phibbs and Young (2005) state that stability was a determining factor for children’s learning process, especially for children with learning difficulties. Lack of school attendance and change of school are both elements that negatively impact educational attainment. SHS (2009) highlights that research has shown a positive association between homeownership and educational attainment (Braconi, 2001; Bridge et al., 2007; Crawford and Londerville, 2004; Curtis and Phibbs, 2006; Mullins and Western, 2001; Rossi and Weber, 1996 and Steele and Sarker, 2005).

Finally, with respect to housing conditions, the SHS 2009 study draws on research that linked poor housing conditions to poor educational outcomes. Those conditions include overcrowded home, noise and poor housing conditions (Cooper, 2001; Phibbs and Young, 2005; Curtis and Phibbs, 2000; Braconi, 2001). Lanus (2009) was able to relate overcrowding in the home (more than two people per bedroom) and poor educational attainment. While such research does suggest an association, studies are required to prove the causal link between housing conditions and students’ attainment.

### ***Updated findings stress importance of intermediate and intervening factors***

Turner and Berube (2009) state that “[k]ids do better in school when they are healthy, well-nourished, and arrive at school ready to learn”. Those pre-conditions are related to the readiness of children to learn and to school. Affordable, suitable and adequate housing contribute to meet those pre-conditions. For instance, by providing affordable housing to poor households, the families have more money to meet the basic needs like eating and sleeping well.

On the other hand, affordable, suitable and adequate housing can also have an indirect effect on children’s educational attainment. The neighbourhood in which the family live provides an environment which influences children’s educational outcomes. The local school, which is often the school that children will attend, offers conditions that help children to achieve educational goals. As well, the neighbourhood provides daycare, afterschool programs, day camps, different level of safety and crime rate, and other children who influence children’s opportunities and outcomes. In the recent literature, it is mostly this impact of the neighbourhood on children’s educational achievement that was studied. Concerning programs aiming to move a family to a better neighbourhood, such as housing vouchers, the recent literature highlights that while the majority of the research underlines some positive impacts on families, they find that it is more moderate than is often presumed. In general, families that obtain vouchers move to a better neighbourhood less frequently than what was expected. In addition, even if they move, they don’t necessarily remove their children from their previous school, which has the effect of inhibiting the positive educational impact of the housing vouchers (DeLuca and Rosenblatt, 2010).

Based on an analysis in the U.K., Friedman (2010) asserts that there is strong evidence that poor housing conditions result in educational underachievement, with children in better quality homes achieving higher achievement on national and degrees, and therefore having greater earning power. Purely based on differences in exam results, he calculates the bill amounts to £14.8 billion pounds in lost earnings forecast for this generation in poor housing.

### ***Does affordable and suitable housing improve educational outcomes: what is the relationship to location and neighbourhood effects?***

Schwartz et al. (2010) examine whether, and to what extent, public housing students perform worse on standardized math and reading exams by comparing them to other students living elsewhere in New York City. The authors conduct a large sample study, with quantitative analysis. They find that compared to students elsewhere in NYC, public housing students perform less well in standardized exams, but similar to their (non-public housing) peers in their same schools. This may well reflect concentrations of poverty and disadvantage, rather than simply effects of public housing. Schwartz et al. (2010) report that half of the public housing students in NYC attend only 10% of elementary and middle schools (83 schools), and two-third of public housing students attend 15% of the elementary and middle schools (127 schools) in NYC.

Ellen and Horn (2012), researched whether federally assisted households have access to better performing schools than other poor households. That to that end, they compared households receiving four types of housing support (public housing, LIHTC, Housing Choice Voucher and Project-based section 8 developments) to other poor households in 100 metropolitan areas in 50 states, who were not receiving housing assistance. The authors created a measure of school

performance using the percentile rank for each school within every state based on student proficiency rates in math and English language arts. They found that all types of assisted households are more likely to live near low-performing schools than other households. In addition, except for LIHTC, all assisted households are more likely to live near low-performing schools than poor households. Even though housing vouchers were utilized, in part, to help families send their children to higher-performing schools, it was found that households receiving vouchers don't actually live near better performing schools than people receiving LIHTC or Project-based Section 8. However, they do live near better schools than people living in public housing.

Galvez (2010) corroborates the conclusions related to educational outcomes. She highlights that the large majority of the studies show that voucher holders have access to better neighbourhood and outcomes than people living in public housing (Goering, Stebbins and Siewart, 1995; Cunningham and Drosch, 2005; Hartung and Henig, 1997; Kingsley et al., 2003; Pendall, 2000; Devine et al., 2003). In her comprehensive review, Galvez (2010) identifies only one research report presenting a different conclusion: a study conducted by Reece et al. (2000) suggests, in contrast to most other reported findings, that public housing tenants have access to better neighbourhoods than vouchers holders. Nevertheless, according to Galvez (2010), the study presents some limitations, mostly that it did not include counts of units or vouchers and did not discuss how opportunities could influence the outcomes. As well, Galvez's literature review shows that LIHTC tenants and voucher holders live in comparable conditions (McClure, 2006; Ellen, O'Regan and Voicu, 2009; Galvez, forthcoming).

DeLuca and Rosenblatt (in Tegeler, ed., 2011) report the effects of the Baltimore Mobility Program, an assisted housing voucher program available for African-American low-income households. The program was aimed at households currently or formerly living in public housing or on the waiting list for housing assistance and provided assistance to find a new home. The authors showed an improvement in the households' immediate environment based on an analysis of the neighbourhood and the school. They also found better elementary school characteristics based on results obtained on standardized exams, qualifications of teachers and level of rate of poverty among students. They conclude that the Baltimore Mobility Program successfully provided radical change in the environment of the poorest households, even if it did not measure actual educational outcomes of movers.

Cunningham and MacDonald (2012) aims to highlight the links between housing and education, covering the current state of housing in the U.S., in a literature review on this topic, identifying common challenges for researchers related to methodology and suggesting avenues for future research. The authors underline that children from poor families lag behind children from wealthier ones. Many variables have an effect on school outcomes, namely involvement of parents, quality of school and the ability of parents to meet children's basic needs. Overcrowded homes, homelessness and residential instability negatively affect children. All these factors affect children's readiness for school and therefore their success. The literature suggests that affordable housing can reduce or simply avoid some of these negatives outcomes (for example reducing stress and overcrowding).

As many policies aim to move households from disadvantaged neighbourhoods to ones with better schools, less crime, safe and healthy dwellings, researchers are interested in understanding the effects of mixing children from households with different levels of income at school. According

to Turner and Berube (2009), a consensus seems to have emerged that students from low-income households benefit from attending schools with children from mixed-income households. The school environment provided to children of middle or higher-income families also serves children from low-income families. However, the authors also recognize it is increasingly hard to teach and to learn when students in the class come from poor families in which parents are poorly educated and struggle to get and keep a job (Rothstein, 2004).

Schwartz (in Tegeler, ed., 2011), overviews a case study of Montgomery County where, for the past decades, an inclusionary zoning (IZ) policy has been implemented (mainly affecting low-density suburban subdivisions). Under this IZ policy, to increase the supply of affordable housing and limit the concentration of poverty, the public authorities have required to developers to build 12.5% to 15% of units to be sold at below-market prices. This case study article assesses the educational performance of children from very low-income households integrated in low-poverty neighbourhood through those inclusionary policies. Schwartz (in Tegeler, ed., 2011) finds the results of this integration very positive: "highly disadvantaged children with access to the district's lowest-poverty neighbourhoods and schools begin to catch up to their non-poor, high-performing peers throughout elementary school, while similarly disadvantaged children without such access do not." This case study corroborates previous conclusions that children of low-income households benefit from being mixed with children from higher-income households in school (Turner and Berube, 2009).

Rothstein et al. (2008, in Turner and Berube, 2009) stress that the neighbourhood in which children live often contributes to their low-performance despite the efforts of the school. The neighbourhood is a determining variable in the quality of education children get because it often determines the school they attend. In sum, the studies interested in the educational outcomes related to different housing programs in the U.S. generally agree on the importance of the neighbourhood as a determining variable in the educational outcomes of children. These programs are good case studies to assess the inevitable impact of the neighbourhood on educational outcomes.

In one of the few non-US studies, a case study of Buenos Aires in Argentina, Lanus (2009) looks at the impact of poor quality housing on educational attainment. He uses two variables: a poor location (either in a slum, close to a dump or in a flood area) as well as overcrowded homes (more than two people per bedroom) and related them to students' educational outcomes. This is one of the few studies that specifically examined the educational impacts of unsuitable (crowded) housing. Despite some weaknesses in the methodology, Lanus highlights an association between poor location and overcrowded housing and educational attainment. Using a regression he finds that, on average, the chances of remaining in school decrease by 11% and 13% when living in an overcrowded home (i.e. compared to not overcrowded). For adults between 18 and 26 years old, living in an overcrowded house decreases the chance of completing a secondary education by 33.2%. When the home is also poorly located, this further decreases chances to complete secondary education (17.6%).

In England, researchers have focused on the effects of poor neighbourhoods, characterized by a high concentration of social housing, on educational attainment of children and have reached different conclusions than the U.S. studies. Weinhardt (2010; 2013) looked at the effect of living in a deprived neighbourhood, which he characterizes by a high concentration of public housing.

To that end, he compares students who move at a young age into deprived neighbourhood ('early movers') to students who move later in their educational process into deprived neighbourhoods ('later movers'). The timing of a move can be taken as exogenous because of long waiting lists for social housing in high-demand areas. He found there is no significant difference in educational attainment between the two types of students, based on a national standardized test of 14-year-old pupils. This raises interesting questions on the efficacy of current policies aimed at moving families from deprived neighbourhood to better ones.

Similarly, Gibbons, Silva and Weinhardt (2013) look at four cohorts of children in England, over 1.3 million students in their first three years of secondary education. The authors find that 'neighbour-peer effects are not strong and pervasive determinants of students' outcomes on either the cognitive [or] the non-cognitive dimension.' (p.867) If there is evidence of correlation between students' educational results and the neighbourhood in which they live, no causal effect could be found. Therefore, moving from one neighbourhood to another should not affect the educational outcomes of children during their compulsory education. This evidence belies the assumption on which US policies are based, that moving to a better neighbourhood helps children improve their educational outcomes. According to this study, it is unlikely to happen in the UK (perhaps reflecting other exogenous differences in the respective education systems of the two countries).

Notably, studies conducted in the U.S. and in the U.K. show opposite results. While studies in the U.S. tend to show an association between neighbourhood and educational outcomes, the very few studies in the U.K. conducted recently tend to argue for the opposite. The use of methodologies that are not comparable could explain this variation. The country context as well as other factors could also have influenced the conclusions. However, no conclusion can be reached regarding the explanation of the differences in the results at this point.

### ***What are the effects of moving on educational outcomes/quality of school attended***

Researchers have also studied the impact of moving on educational outcomes. This is particularly relevant in the United States as policies such as housing vouchers promote mobility of households. Housing vouchers, introduced in the early 1970's to replace public housing, were adapted in the 1990's as part of initiatives designed to encourage and enable mobility and de-concentrate poverty, especially in public housing sites. Researchers proposed that helping households move to better neighbourhoods and concurrently providing financial assistance to address affordability could increase opportunities for family members including children.

The preceding section has outlined and discussed how neighbourhood characteristics influence health outcomes: the quality of schools in the neighbourhood and the characteristics related to the families' members are intervening variables that influence children's educational outcomes. This section now explores how specific housing interventions, such as vouchers and housing related supplements enable (or constrain) mobility and ability to move to "better neighbourhoods".

Ellen and Horn (2011) and Galvez (2010) both report positive educational outcomes for children moving to better neighbourhoods and schools via housing voucher assistance. In producing a literature review on recent research with a view to understanding the educational outcomes related to housing assistance, Galvez (2010) highlights broad conclusions emerging from recent findings.

According to her, researchers find that voucher holders have access to better neighbourhoods (and therefore better outcomes) than people living in public housing (who also have low assisted rents). She refers to recent studies published by Goering, Stebbins and Siewart (1995), Cunningham and Droesch (2005), Hartung and Henig (1997), Kingsley et al. (2003), Pendall (2000), and Devine et al. (2003). In addition, among children from households receiving housing assistance, she finds that voucher holders have access to schools of comparable quality as households living in LIHTC “affordable developments (McClure, 2006; Ellen, O’Regan and Voicu, 2009; Galvez, forthcoming).

Burdick-Will et al. (2009) ask whether neighbourhoods have an impact on children’s educational outcomes. Because the research draws on housing vouchers directed to affordability issues, this includes the impact of improved affordability. Comparing different studies available, including ones from the evaluation of the Moving to Opportunity (MTO) housing vouchers programs, the authors conclude that neighbourhood effects do exist, and are particularly evident in very distressed neighbourhoods and disadvantaged communities (and often associated with less safe areas).

Based on the belief that neighbourhoods affect children’s educational outcomes, policies supporting inter-district school transfer were implemented in the United States. DeBray and Frankenberg (in Tegeler, ed., 2011) draw on outcome data related to two kinds of policies: the earlier Gautreaux program aiming to relocate households and reduce poverty concentration, as well as eight current inter-district school transfer programs. Both types of programs aim to enhance chances of educational success for children in low-income households. The authors conclude that policies aiming to relocate households in better neighbourhoods are more effective than inter-district school transfer.

According to Turner and Berube (2009), “kids perform better in school if they don’t change schools frequently, and schools perform better when they have lower turnover.” A high level of turnover is damaging for students and the schools they attend (Hanushek, Kain, and Rivkin, 2004, cited in Turner and Berube, 2009). For children, changing schools means adapting to changes in the teaching curriculum as well as teaching methods, making new friends, and coping with a new social environment. As a consequence, children perform less well in school, particularly when they move within the same school district (Xu, Hannaway, and D’Souza, 2009, cited in Turner and Berube, 2009).

According to Sanbonmatsu et al. (2006, cited in DeLuca and Rosenblatt, 2010), students from households receiving housing vouchers were, on average achieving the 15<sup>th</sup> percentile in statewide school tests before moving and improved to the 24<sup>th</sup> percentile after moving. The authors find it is still a relatively low performance level because children from families receiving housing vouchers still attend low-performance schools, but this still documents a positive improvement in educational performance related to a housing intervention.

In contrast with the reported findings from Sanbonmatsu et al. (2006), Horn et al (2014) conclude that children from households receiving a housing voucher tend to attend lower proficiency rated schools than other poor renter households who don’t receive any housing support. The authors qualified their results as ‘troubling’ and counterintuitive: it is expected that families given

assistance to find housing in areas with better schools would move to areas with higher performing schools and would be better able to do so than other poor households.

In addition, children from households receiving housing vouchers live near schools that have proficiency rates that are only 3 percentage points higher, on average, than schools near public housing residents, and 1 percentage point lower than schools near households who live in Low Income Housing Tax Credit (LIHTC) developments. The authors consider these two variations to be smaller than might have been expected since housing voucher recipients can choose their location, which is not the case for public housing and LIHTC residents. However, the study doesn't permit assessment of the effects of vouchers on a large period of time. For instance, it is impossible to know if a family receiving a housing voucher has moved to a different neighbourhood, increasing at the same time the quality of the school attended by the children.

DeLuca and Dayton (2009) evaluated how policies aiming to improve access to better schools and communities, mainly assisted housing programs and school vouchers, impact the youth educational outcomes. As far as the data is available, they find those programs improve children's outcomes. Assisted housing programs achieve their mission by helping poor parents access better neighbourhoods, while school vouchers allow them to send their kids to private schools. However, changing the educational outcomes was not found to be that easy, even if children evolve in a better environment or context. Results are mixed regarding to what extent and how programs lead to better educational outcomes, but do not point toward strong improvements.

DeLuca and Rosenblatt (2010) show that despite moving to a better neighbourhood, a majority of children attend schools that are geographically near their previous residence and some children continue to attend schools in the inner city. Therefore, parents' choice in where to enroll children is an important mitigating influence on the expected benefits of mobility. In an attempt to explain these choices, they find that there is a lack of information available for housing voucher receivers related to educational opportunities, employment, etc. Many parents were limited by transportation available, wanted to stay near their relatives and were hesitant to transfer their children to different schools because of the potential stress on them. The authors suggest that there is a need to integrate housing voucher services with others such as housing, mental health services, employment assistance, and schooling advices.

Horn, Ellen and Schwartz (2014) ask whether low-income households use the housing voucher to relocate to a neighbourhood with better performing schools. Relying on data on the location of assisted households, they identified the nearest schools and evaluated school performance based on proficiency rates at standardized exams of math and english. They also used information on poverty levels and the racial composition of schools from the 'Common Core of Data,' the Department of Education's primary database on public elementary and secondary education in the U.S. The methodology has an important limitation: the school to which a household sends their children is not necessarily the school designated for their area. Some parents leave kids in their original school to avoid disruption, or simply send them to another school.

Taken together the findings of these different studies are inconclusive. Some report movement to locations with better performing schools and better educational outcomes, while other research finds that families may relocate but not change their children's schools. Parent's decisions about

moving children to a new school when they relocate appears to have a greater bearing on outcomes than the housing relocation.

### ***Some concluding observations on housing and education***

The empirical literature published after 2009 shows similar inconclusive results to those reported in SHS (2009). Although much research has been conducted to try to establish a link between housing and education, there is still no consensus among researchers about the nature of this relationship.

This update tends to have a strong U.S. bias. Because housing vouchers are a predominant U.S. program, designed in part to respond to adverse neighbourhood effects, much of the empirical research tests whether the mobility created by vouchers resulted in improved educational outcomes for children. Specific studies do identify positive results, but others contradict or qualify the strength of these findings.

Location strongly influences education attainment. In addition, educational outcomes vary across different types of housing interventions in the U.S. Households living in Low-Income Housing Tax Credit (LIHTC) projects have access to higher quality schools than public housing tenants, but lower quality schools than households receiving vouchers. But, vouchers holders do not always relocate their children to new schools, nor always move to places with better schools, so expected improvements in education outcomes did not always materialize.

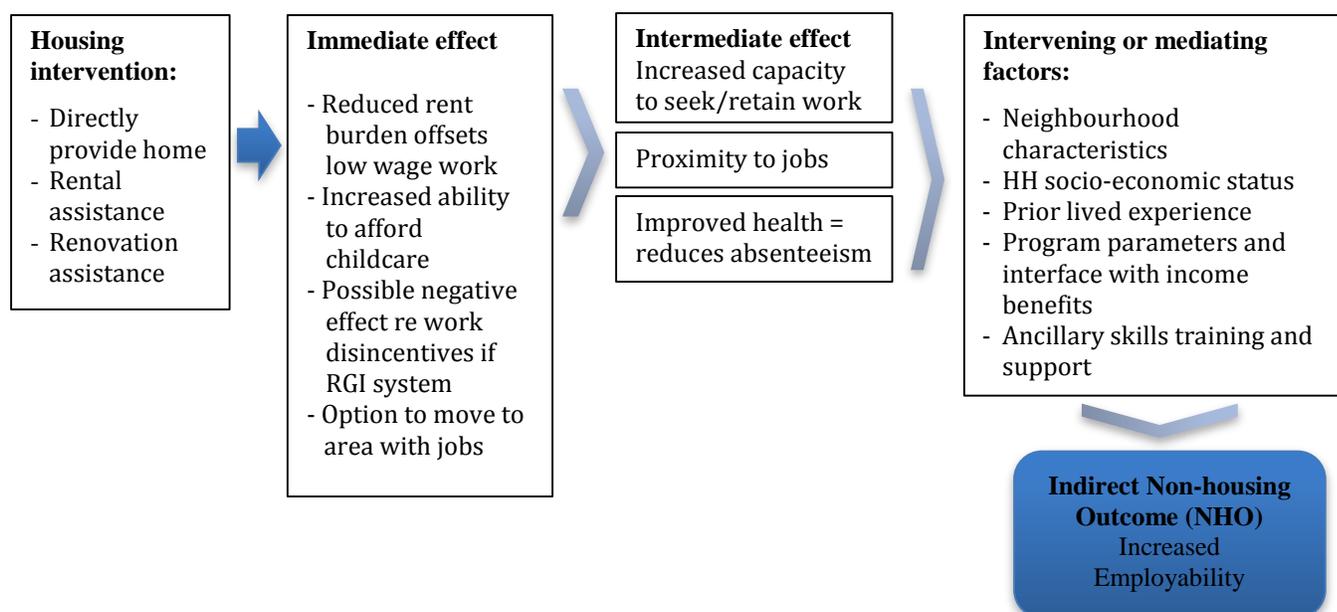
There is a general perception, and some U.S. evidence (based on student performance tests), that schools serving higher socio-economic populations achieve higher performance scores. Conversely, schools serving lower socio-economic populations report lower student performance in school (Turner and Berube 2009). To the extent that low income is strongly associated with housing affordability, it might be argued that housing affordability (lack of) is associated with lower school performance and student educational achievement. Research shows that, *cereris paribus*, low-income children do better when they attend schools where the majority of students are middle and upper income (Schwartz, 2009, cited in Turner and Berube 2009). To improve educational outcomes, reducing shelter costs, either via project or mobility assistance alone appears insufficient. Educational outcomes can be enhanced either by enabling relocation, or by investing in the neighbourhood schools themselves.

Notably, studies conducted in the U.S. and in the U.K. show opposite results. While studies in the U.S. tend to show an association between neighbourhood and educational outcomes, the very few studies in the U.K. conducted recently tend to argue for the opposite – they found no statistically significant relationship. Both methodology and context influence the different results.

## 5. Labour market and employment

### Conceptual framework

**Figure 5: Causality Chain (theory of change and impact) – Labour market outcomes**



### ***Expected impacts of housing: employment and labour markets in the causality chain***

#### *Direct and immediate effects:*

- Reduced shelter costs helps to stabilize household and reduced minimal required earnings to cover other expenses such as child care costs (potentially a work incentive effect)
- Augments and complements income assistance but may also create work disincentive is rents are Rent Geared to Income (RGI) with an effective claw-back on earnings)

#### *Intervening or mediating factors:*

- The form of housing assistance (e.g. as discussed below, income based rents and related claw-back on any earnings may create a barrier and disincentive to work, and offset any benefit of low rent).
- Neighbourhood effects may be positive – if housing well located in area of active employment, or negative – when there is a concentration of disadvantaged households, and high welfare dependence, there may be few incentives to encourage employment. Or, the housing may be poorly located in relation to appropriate lower skilled jobs
- Skills and educational background of household may constrain employability, separate from housing situation

*Intermediate effects*

- Depending on location of the affordable housing (or if it is in form of a mobile rental allowance) may enable household to live closer to employment areas.
- Housing condition (adequacy) and crowding (suitability) may contribute to some health effects, which in turn could reduce absenteeism.
- Lower housing costs may help support household in vocational training toward improved employment potential.

***Bridging literature review from before 2009***

The previous research conducted for CMHC (SHS, 2009) reported that there were some linkages between housing and employment but that proving causality is problematic. PRA (2011) reported on specific employment outcomes of assisted housing and highlighted a number of empirical research studies that rejected the hypothesis that housing assistance enhances employment and labour market outcomes. The current review corroborates and reinforces this earlier finding.

Overall, the empirical evidence that housing assistance (reduced rental cost) enables increased employment is inconclusive, or possibly slightly negative. These findings may be more a function of the form of housing assistance (income based rents) as well as some selection bias (re who is eligible for housing assistance), as described further below.

Empirical results vary by methodology as well as by sub-population. For example, Susin (2005) finds that housing subsidy programs reduce individual earnings by roughly 15 percent; Jacob and Ludwig (2012) determined a small negative relationship with both employment and earnings. Meanwhile, Harkness and Newman (2006) suggest that employment outcomes for single mothers receiving housing assistance did not statistically differ from other single mothers not eligible for housing subsidy. A later panel study reported no evidence that moving into project based assisted housing is associated with sustained reductions in employment rates, work hours, or earnings (Newman et al., 2009).

Exploring these inconsistencies further, the effects of affordable and stable housing on labour markets and employment can be examined through three core questions:

- Does affordable and stable housing enhance labour participation?
- Does the form of housing assistance influences propensity to seek work
- Do pro-active approaches related to assisted housing help to securing employment outcomes

Each of these questions is reviewed below.

***Updated findings: Does affordable and stable housing enhance labour participation?***

Much of the literature in this area is U.S. based in part due to a long-standing approach of providing assistance through a form of shelter allowance (program label and form has varied slightly but such programs have existed since the early 1970's). Also there is a practice of research demonstration approaches in the U.S., which have fuelled and supported extensive academic inquiry.

The U.S. research examines how portable shelter allowances (housing vouchers) impact mobility and whether this in turn improves access to employment and increased earnings.

Drawing from the literature in labour economics, Shroder (2010) notes that employment varies with participation in different social programs as well as the form of program. In this regard, he enumerates a number of biases that can be found in the empirical literature, including “general omitted variable bias,” which relates to potential influences, which were not considered in the research analysis. He referenced his own earlier research (Shroder, 2002) that reviewed over two-dozen studies to conclude, “the distribution of results from these empirical studies is consistent with a true housing assistance/short-term employment effect of zero”. He then refuted his own earlier conclusion based on three recent major studies (Mills, 2006; Jacob and Ludwig 2008; and Carleson, 2008), which confirm that housing assistance has a negative impact on hours worked and earnings, although this finding can vary by sub-group as well as over time.

Much is made of the potentially greater impact of portable assistance, (vouchers in the U.S.), because it allows recipients to relocate away from negative influences to places with better employment opportunities. However, Mills’ literature review (2006) cites research (Orr, 2003) in which 4,600 residents of public housing were divided into three groups: regular vouchers, vouchers only usable in low-poverty neighbourhoods, or to non-voucher control status. There was no significant difference in earnings between those three subgroups, which suggested a zero effect on labour participation from different forms of assistance and related locational effects.

Research in Australia (Feeny et al., 2011) similarly did not find any statistically significant difference between people living in public housing versus those in private housing receiving a housing allowance (Commonwealth Rental Assistance, CRA).

Looking more specifically at portable assistance via housing choice vouchers, used in the U.S. Moving to Opportunity (MTO) and Moving to Work programs, in which it is expected the ability to move to places with more employment will improve employment, Basolo (2013) examined two cities in California and found no statistically significant improvement in employment between movers and non-movers. Basolo did find that there were some geographic variations: voucher holders that moved to central locations were more likely to be employed than those that moved outside the central city.

In seeking to interpret these counter-intuitive results, Basolo (2013) suggests that assumptions about the reasons for mobility are inaccurate or incomplete – a greater understanding is required about the motivations and selected locations of movers – these may not be based only or primarily on finding work. She also observes that mobility programs may be beneficial, but these must be supported by programmatic and structural changes in order for mobility to change outcomes (i.e. pro-active programming to support transition into work, as discussed further below).

Useful for the current review, Shroder (2010) reported that empirical literature outside of the U.S. is sparse, with significant literature found only in Scandinavia and Australia [and U.K.] Focusing on housing allowances, in this international literature review Shroder found no analyses of impact on short-term labor supply, but several studies on the related question of longer-term dependence on subsidy. He reports that attrition from the housing allowance program is high and they find no

sign of duration dependence on housing assistance. This finding suggests that short-term housing assistance is transitional and possibly helps in securing employment and income.

Stephens et al. (2010) analyze the link between housing and employment in the U.K., including the extent to which housing policies and conditions impact on labour market outcomes and how employment status and changes to it affect access to housing. Their focus is firstly on different welfare regimes and they locate housing assistance (place-based and allowances) as a part of the welfare system in order to explore how welfare policies impact housing outcomes. This is the opposite focus to the current review, which is exploring the impact of housing on other non-housing outcomes. They report that it is not possible to establish the effectiveness of certain housing policies (social housing, housing allowances and low debt owner housing) in terms of housing outcomes, nor their distributional consequences.

Secondly, underpinning concerns about attributing causality (as raised in earlier review by SHS, 2009), Stephens et al. (2010) report lower employment and a much higher level of worklessness among tenants of below market rent (BMR, i.e. assisted) housing. Over one-third of those in BMR housing are workless, compared to 9% in the general population. Stephens refers to Hills Government-commissioned Independent Inquiry in 2007, which argued that:

*Even controlling for a very wide range of personal characteristics, the likelihood of someone in social housing being employed appears significantly lower than those in other tenures. There is no sign of a positive impact on employment of the kind that the better incentives that sub-market rents might be expected to give. (Hills, 2007, p.12)*

Hills (2007) is also reported to have identified a close spatial association between high poverty and social housing (in the U.K.) such that tenure and neighbourhood effects are inextricably intertwined, and confound attribution.

In a more narrowly focused exploration, also in the U.K., Gregoire and Maury (2013) undertook an empirical analysis of disabled persons. They determined through a panel survey that up to one-quarter of the lower employment probability of disabled people can be attributed to the effect of qualifying for social housing.

This lower likelihood of seeking and retaining work to a degree reflects the impact of selection bias, outlined by Shroder (2010) and highlighted by others (Battu, 2008; van Ham, 2010; Jacob and Ludwig, 2012; Cho and Whitehead, 2013). Due to means testing and eligibility conditions, those accessing social housing have greater poverty and fewer are in work, so this low employment is a precedent condition, rather than a consequence of housing assistance.

It is also observed that in countries with small social sectors (like Canada, Australia, and U.S.) and higher tendencies to target assistance to the most vulnerable, it is more difficult to link employment incentives to housing as the eligible target population is often the least employable due to multiple disadvantage (Cho and Whitehead, 2013).

Wood et al. (2009) found that causality of declining employment among public housing tenants (particularly males) in Australia is strongly influenced by adverse selection – eligibility requirements for public housing tend to select those with lower skills, education and thus lower

employability. Stephens et al. (2010) similarly conclude lack of employment relates to a combination of factors and cannot be solely attributed to social (assisted) housing.

While focused more on neighbourhood characteristics and effects, a longitudinal study in Scotland (van Ham and Manley (2010)) found that individual level characteristics are more important in explaining labour outcomes than are neighbourhood characteristics. At same time, larger areas of deprivation are associated with lower employment while mixed income rental neighbourhoods fared somewhat better (small positive correlation with a transition to and remaining in work).

In a subsequent study, van Ham et al. (2012) refine this assessment highlighting their finding that individual outcomes do not appear to be exacerbated by living in concentrations of unemployment. They go on to suggest that, while neighbourhood and community regeneration is a positive thing to do, there are limitations to how effectively poverty de-concentration will lead to improved employment and other outcomes. Other factors, such as an individual educational attainment and labour market skills, are more likely to have a greater influence on employability (Manley and van Ham, 2012).

### ***Does the form of housing assistance influence propensity to seek work?***

There is extensive literature internationally on how income related subsidy systems effect work incentive, especially in countries with income related rents such as Canada's RGI rent systems (Canada, US, Australia) and in the U.K. where housing assistance is integrated into broader social security and income benefits.

The U.S. literature examines how portable shelter allowances (housing vouchers) impact mobility and whether increased choice results in poor households relocating to areas with better schools, less crime and for the theme at hand, better proximity or access to employment opportunities. A number of programs and demonstrations have sought to increase mobility via portable vouchers allocated both to those already in public housing and to those on wait lists. The theory of change associated with these programs (e.g. Moving to Work, Moving to Opportunity) is that the increased choice would allow recipients to move to locations that will, among other things, offer greater employment opportunities and thus improve employment and income. Covington (2011) found that while this has resulted in a suburbanization of voucher recipients, these suburban locations are characterized by lower income and limited employment opportunities (possibly due to spending constraint on value of the voucher).

The housing voucher program is a key feature of affordable housing responses in the U.S. and has been directly linked to demonstration and program initiatives to de-concentrate poverty and improve recipient outcomes. There is consequently extensive U.S. literature on the topic, including many empirical analyses (Jacob and Ludwick 2012; Olsen, 2003; Mills et al., 2006; Schroder, 2008). These studies seek to evaluate the effectiveness of portable forms of assistance and whether the outcomes for recipients exceed those found in earlier placed based strategies that conflated low assisted rents with neighbourhood effects of concentrated deprivation.

Jacob and Ludwick (2012) note that existing estimates of the effect of means-tested housing assistance on labour supply are limited and mixed and they refer to Shroder (2002) as a widely

cited review that argues, “housing assistance is not persuasively associated with any effect on employment.”

Much of the research examines what happens when public housing tenants are given vouchers and a choice to relocate to “better neighbourhoods”. Jacob and Ludwisk (2012) undertook an exploration of housing voucher recipients that were selected from the Chicago waiting list (i.e. not already assisted) rather than from existing public housing tenants. They specifically examined effects on labour supply in the late 1990’s among low-income households living in private rental housing and seeking housing assistance. This is different from relocation studies, which are focused on the impacts of locational change among tenants already assisted public housing. Their analysis found that allocation of vouchers to these households living in private housing resulted in small reductions in employment rates (down 6%) and quarterly earnings (down 10%) from pre voucher comparisons.

Lens (2014) sought to determine the spatial mismatch between housing assistance outcomes and employment. His analysis (similar to that of Basola, 2013) challenges the expectation that households receiving vouchers will fare better because they can select locations with better employment prospects. Lens in fact determined that, by a large margin, public housing locations had better proximity to low-skilled employment opportunities, yet employment rates remain low.

Saugeres and Hulse (2010) conducted in-depth interviews with women living in assisted housing in Australia that indicate that their decision-making around re-entering work is complex, often calculating whether they would be financially better off by being in paid work. Drawing on their earlier research (Hulse & Saugeres, 2007) they suggest that Public Housing tenants may develop personal strategies to get by (without employment) rather than face the uncertainties and rent increases associated with reporting paid work.

Also writing from an Australian perspective Wood et al. (2009) reference similar disincentive effects of housing subsidies in the U.S. and U.K. They cite earlier work (much of which is cited in SHS, 2009), which suggested that empirical evidence on the effect of housing subsidies in Australia is inconclusive, but there is a growing literature on this issue (Barrett, 2002; Whelan, 2004; House and Randolph 2005; Phibbs and Young, 2005).

The more recent research (Wood et al. 2009) seeks to explain why employment rates among public housing tenants in Australia have been declining, while those in the general population have increased. They found a substantial reduction (by half) in male tenant employment from 1982 to 2002 (Wood et al., 2009). Using a logit model and data from national census, the authors found the decline in employment was associated with adverse selection bias: eligible male tenants tended to have characteristics that make them less employable than males in general. The analysis was unable to identify explanatory factors for female tenants.

Notably these findings are refuted by Groenhart in 2014 who used more discrete city data (four state capitals) including sub-metropolitan data versus national aggregate data more typically used (Flateau, 2002; Hulse and Randolph, 2004; Wood et al., 2009).

Groenhart’s analysis uses a data set that extends further (to 2011), and picks up a general improvement in employment (more notably part-time employment), in which public tenants

shared. When public housing is located in proximity to employment opportunities, especially in the service sector, these projects and cities fared better in terms of percentage of tenants in employment. This suggests location and the local labour market factors and characteristics are important. As Berry (2013) observes, real incomes increasingly depend on where people live and work.

### ***Do pro-active approaches related to assisted housing help to secure employment outcomes?***

SHS (2009) highlighted some positive labour market outcomes associated with pro-active strategies that seek to (re)connect assisted housing tenants to labour markets via training and job placement initiatives. The literature suggests that simply providing affordable rent, even in stable communities with less concentrated poverty may not be sufficient to generate positive labour market outcomes. Initiatives in the U.S. have identified the challenge of concentrated poverty in low income and public housing communities and have sought to implement various initiatives to improve employment outcomes. These include HUD's self-sufficiency initiative as well as demonstration programs (Brennan and Lubell, 2012).

HUDs' self-sufficiency initiative provides U.S. Housing Authorities (which own and manage public housing) to adopt special procedures for eligible families enrolled in this program (Lubell and Cramer, 2011). This initiative temporarily suspends the rent adjustment which would normally be triggered by a tenant moving into work or increasing earnings under rent-geared to income rules. Instead, the amount of the notional rent increase is allocated to an escrow savings account for the tenant. In some programs, foundation partners match this amount. The intent is to replace the existing work disincentives with an incentive to work and increase earnings.

Program policies permit eligible participants to access these savings for specific purposes, such as purchase of a car to get to work, pay for training and education or as home purchase down payment. Lubell and Cramer (2011) argue that while authorized by HUD, few housing authorities are using this opportunity. They proposed that if brought to scale the positive experience of a few pioneering agencies could be significantly expanded.

Riccio (2010) reports on Jobs-Plus, a demonstration program implemented in public housing communities in six U.S. cities. Identifying the claw back effect of RGI rent systems as a disincentive to work, this demonstration suspended earnings related to rent increases and examined whether this resulted in higher labour force participation and increased earnings. An evaluation, which tracked participants over seven years, found that this model caused a 16 percent increase in average annual earnings over the full seven years (an average gain of \$1,300 per year) for nondisabled, working age public housing residents. It was less successful in two of six locations, leading researchers to conclude, "when properly implemented, such initiatives offer a feasible and effective way [for traditional housing providers] to move beyond their core function of providing housing subsidies to take on another important role — serving as a platform for work."

Gao et al. (2009) similarly document the model adopted by a supportive housing agency, with employment specialists providing skills training and workplace orientation as well as ongoing support. This programming and support increased employment among clients from 13% to 54% over a two-year period.

A recent assessment in the U.K. (Gardiner and Simmons, 2012) highlights the disproportionately high level of unemployment among social housing residents (as identified in Hills 2007) and accordingly sets out to identify proactive strategies and practices implemented by providers that help improve employment outcomes. Generally, these include things like advice and support as well as offering internships or employment within the provider organization. The review found that while beneficial on a stand-alone basis, these efforts are not always well coordinated with broader employment initiatives and don't necessarily combine the right incentives (or remove disincentives) to optimize impact.

An Australian study (Feeny et al., 2011) explored this issue from the perspective of labour market programs (LMP), in which those receiving social insurance and unemployment benefits are required to work in order to sustain benefit eligibility (a Mutual Obligation Activity, or MOA, more often imposed on younger employable sub-groups). Their interest was whether being a social housing tenant or being in receipt of housing assistance influences participants' success in LMPs and resulted in better employment outcomes. They found, contrary to US studies, employment outcomes for participants in Australian LMPs did not vary with the housing assistance status of participants -- the disincentive effect of income related housing assistance was not found to dissuade labour participation for LMP participants.

Wood et al. (2009) and Stephens et al. (2010) suggest that the captive audience nature of place-based social housing offers the potential for pro-active initiatives to provide internship work and reconnect tenants with the labour market. They also suggest that social landlords can assist tenants in making decisions about whether the tenant is better off working by providing help in calculating the effect of claw-backs and rent increases.

### ***Some concluding observations on housing and employment***

This updated review confirms earlier conclusions (SHS 2009) that there is weak empirical support for the belief that living in affordable housing on its own, whether place based or via portable allowances, generate discernable positive outcomes in the area of employment and earnings.

There are no conclusive findings in the empirical research to support the notion that providing housing assistance, either via placed base supply programs, like public or non-profit housing, or via shelter allowances (U.S. vouchers) has any positive effect on labour force participation, income or earnings. Focusing mainly on robust empirical studies, the research findings reveal either neutral or slightly negative association between housing assistance (affordable housing) and labour participation and income. This is consistent with the literature on labour market economic theory (Fallis, 1993; Sara et al., 2010), which postulates that any form of income assistance (and housing assistance is a form thereof) will create a negative incentive of propensity to work).

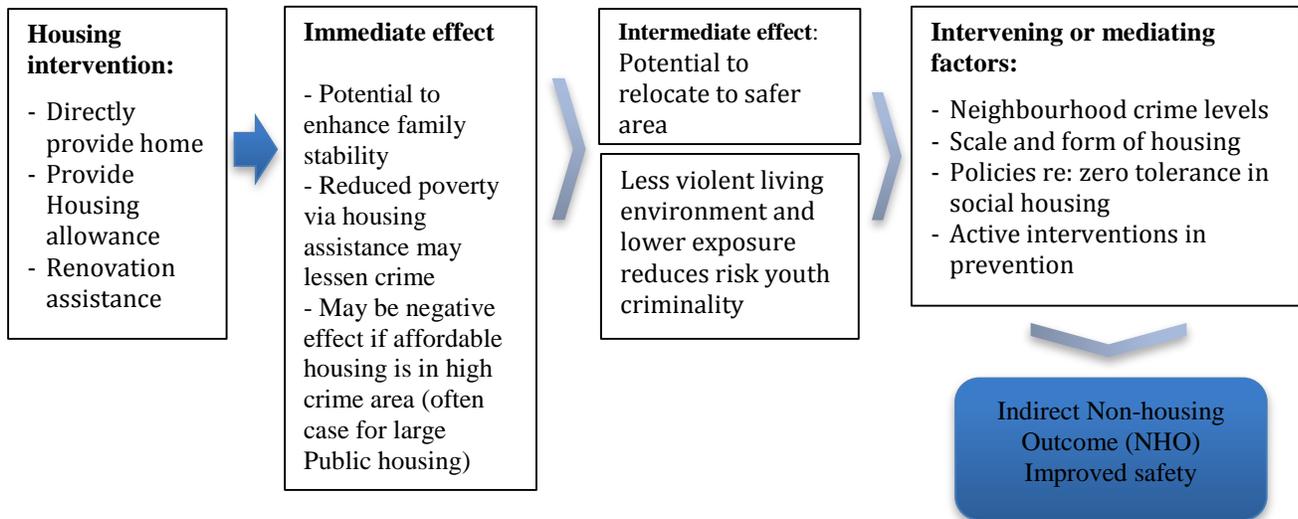
This review also highlights the critical impact of program selection bias, wherein with increased targeting of housing assistance to those most in need, the subjects of research (recipients of housing assistance) are, through the eligibility screen, already more disadvantaged than the general population and low-income people generally. Therefore, it is not surprising that most empirical research confirms assisted tenants have lower employment and greater poverty. It is not because they are in assisted housing that people are poor; people are in assisted housing because they are poor and disadvantaged.

While the research finds little empirical evidence of positive employment and labour market outcomes it also reveals that it is necessary to design and deliver specific assistance such as skills and employment training and job placement support to achieve positive employment outcomes. Providing cheap housing or housing allowances to reduce shelter cost burdens alone is insufficient.

## 6. Crime and safety

### Conceptual framework

**Figure 6: Causality Chain (theory of change and impact) – Crime and safety effects**



### ***Expected impacts of housing: crime and safety in the causality chain***

#### *Direct and immediate effects:*

- Affordable and suitable housing brings stability to families. In particular, they move less, which enhances social and informal support networks, which can help attenuate impacts of crime. Improved housing affordability reduces poverty, which is in some literature associated with risk of crime.
- When affordability is delivered in a form that allows or encourages beneficiary to relocate and choose where to live, there is the potential to select a safer neighbourhood
- In some cases, more notably large developments with high concentrations of poverty and victimization, moving into such housing may expose families and children to negative influences.
- Place base public housing, especially older, larger buildings, is stereotyped and often targeted by criminal elements, undermining safety and security (e.g. number of shootings, drug dealing and gang violence in some public housing)

#### *Intervening or mediating factors:*

- Scale and form of social/public housing
- Housing programs involving mobile rental assistance (e.g. vouchers in U.S.) can help to relocate to suitable and affordable housing in neighbourhoods with lower incidence of crime.
- Lower crime neighbourhood provides a safer environment (less crime) and potential positive role models.
- Policies with respect to zero-tolerance for criminal activity among residents (eviction).

*Intermediate effects*

- Safer neighbourhood provides better environment to all household's members: they feel safer and more secure, which can lead to a better health.
- Less exposure to crime and delinquent behaviors and reduced risk to be victims of crime.
- Greater feeling of safety, leading to better health.
- Because safer neighbourhood provides better role models, lower risk that youth will get involved in criminal activities.
- A less violent environment provides better chances for young girls and woman to succeed in life.
- Children growing up in a low violence community are more likely to have better educational outcomes.

***Bridging literature review from before 2009***

In SHS (2009), crime is not a focus; however, some cited authors refer to crime as a non-housing outcome of affordable housing. For instance, the authors cite Jackson (2004) for whom high rate of crime can affect child outcomes, just like other characteristics or deprived neighbourhood. Ellen and Turner (1997) report that there is a lack of literature concerning high crime neighbourhoods and its effects on moral and emotional development of children, and risk of involvement in criminal activities. In short, crime is seen as a determinant of the neighbourhood that can influence peoples' outcomes. PRA (2011) also does not directly address the theme of crime; however, it is included among 'social outcomes' of housing.

Previous authors established some link between housing variables and crime. The research cites Glaser and Sacerdote (2000) who found that crime is more common around multi-unit developments because there is less social connection between neighbours. They also refer to the article of Ludwig et al. (2001) in which the authors write that moving households from a high- to a low-poverty neighbourhood decreases arrests among young people for violent offences. Finally, the report cites Immergluck and Smith (2006) linking the foreclosure rate and high crime rate (possibly due to abandoned properties attracting criminal activity).

In sum, previous research mentions crime as a variable of the neighbourhood, which then affects people's outcomes and is associated with housing. The recent literature highlights a greater influence of this variable on life opportunities.

***Updated findings: Does affordable and stable housing contribute to greater security and less crime?***

The review sought to identify research that links housing and crime in a positive way, that is, reductions in criminality and improved safety. The volume of research that supports positive outcomes is much more limited than that which highlights and tries to understand higher crime rates in or near assisted housing. As Friedman (2010) notes “link between housing conditions and crime, offending, and criminal-like behaviour is less well-established than that between housing and health and housing and education. And the debate about causation (that is, poor housing conditions as a cause of crime) versus association (poor housing and crime both as symptoms of wider social ills) is also very open.”

Lens (2011) examines the role of social housing in the decline of crime rates across US cities over the past two decades (1990-2010). While some factors were identified to explain the overall decline of crime rates such as “booming economy, the waning of the crack epidemic, policing strategies, mass incarceration, the aging population, and even the legalization of abortion” (p.107), Lens’ assumption is that some change in how social housing was developed could also contribute to the decline.

He examined the policy shift from large concentrated public housing to dispersed vouchers (in the mid 1970’s) and less concentrated tax credit developments (LIHTC and HOPE IV redevelopment since the late 1980’s). Lens (2011) finds strong evidence that vouchers have contributed to decreased crime rates, especially when recipients choose lower crime neighbourhoods.

Lens (2013b) subsequently reports that there is strong evidence that investment in social housing, used as a revitalization tool, had a positive effect on property values in New York City (Schill et al., 2002; Schwartz, 2006). His results however do not suggest strong significant relationships between investment in social housing and crime.

In his New York Study, Lens (2013b) finds that programs to assist access to affordable ownership and to rehabilitate distressed multi-unit properties reduced property crime; meanwhile programs that provide rental assistance and moderate rehabilitation programs both act to reduce public order crimes (consistent with the broken window theory). The various housing program investments were more effective to reduce crime in poor neighbourhoods than in affluent ones. As well, Freedman and Owens (2010) examine the effect of the Low-Income Housing Tax Credit (LIHTC) program on crime rates. They find that the LIHTC projects are associated with areas with decreasing incidences of crimes like robberies or aggravated assault; however, these authors find it has little effect on property crime.

Similarly, Albright, Derickson and Massey (2013) measured variations in crime rates, property values and taxes in a neighbourhood following the development of social housing in Mount Laurel, New Jersey. They found no association between construction of affordable housing projects and crime rates, property values or taxes. As for crime, the crime rate declined progressively from 1990 to 2009 in all townships. In Mount Laurel, the crime rate was low in 1990 and so the change is flatter than nearby townships (which started with higher rates). In addition, there is also no discontinuity in the downward trend in crime rates after the construction of social housing projects.

Clampet-Lundquist (2010) explores how people living in distressed public housing buildings act to improve their safety and what happens when people are relocated to non-public housing accommodation. She finds that strong social networks helped residents living in distressed public housing buildings keep safe if there was drug dealing, fighting, or gun shooting close or directly in the housing projects. Many people were not working so they would spend a lot of time there, making good connections with other residents and were often familiar with those involved with criminal activities. These social networks helped residents avoid danger by spreading the word about activities or events that could place residents in danger. After moving, people lost those social ties almost completely. Clampet-Lundquist's found that relocated residents felt less safe even if they move to a better neighbourhood. These findings highlight the complexity of the relationship between the environment and feeling safe and the role of strong social networks in overcoming what would typically be seen as a dangerous living environment.

While focusing more narrowly on a sub-population of ex-offenders, Fontaine (2013) discusses the impacts of assuring affordable and supportive housing to ex-prisoners with mental health disabilities. Many released prisoners don't have a place to stay and have difficulties finding one for many reasons: "(1) incomes and work histories insufficient to rent and maintain independent housing, (2) formal policies inhibiting their ability to secure public housing, (3) long waiting lists for public housing, and (4) resistance by landlords to rent to them" (p.53) (Fontaine and Biess, 2012; Roman and Travis, 2004). Fontaine (2013) assesses the impact of a housing initiative for released offenders as a measure to prevent crime (recidivism). Mostly, he finds that the Returning Home – Ohio program led to less recidivism within the first years of release. Among the group of people who were re-arrested within a year, young males, non-Whites, and those with many previous incarcerations and no mental illness diagnosis were overrepresented.

Finally, Lens (2013c) reviews the scientific literature linking social housing and crime and finds consensus that the relationship between those two variables remains unclear:

- First, traditional social housing (large public housing developments) record higher crime rates. However, he notes that it is not likely to spread into nearby neighbourhoods.
- Second, other types of social housing – scattered, smaller scale affordable housing – appear to have little or no effect on crime rates.
- Third, while many studies seek to understand the link between housing vouchers and crime, the relationship remains unclear. Studies often show opposite results. He notes "furthermore, any potential effects on neighbourhood crime by voucher households need to be weighed against the fact that these subsidies have been effective at reducing exposure to neighbourhood crime among subsidized households." (p.353)

In conclusion, he highlights that the high-density of disadvantaged people as well as social disorganization in one place seem to be the cause of crime rather than any attribute of social housing (built environment).

### ***Countering perceptions about public housing and crime***

The vast majority of literature on housing and crime seeks to counter the stereotype that public and assisted housing is a haven for criminal activity. Such efforts are especially prevalent in the more recent literature, in part due to a critical analysis by Rosin (2008). Rosin published an article

in *The Atlantic* and thus received broader public exposure than academic research articles. She cites evidence that large and isolated public housing developments built in the 1950s and 1960s have high crime rates. This article spurred many researchers to investigate and contest her allegations, notably: are crime rates in public housing caused by the residents thereof, or are residents exposed to higher incidence of crime due to historical design, location, and issues of victimization?

Rosin's findings are corroborated by other research in the scientific literature. Haberman, Gross and Taylor (2013) find a positive association between robberies and public housing (i.e. higher crime rates are statistically linked to public housing). However, they also find significant disparities among public housing communities. The size of the public housing community influences the robbery rate in nearby neighbourhoods. Hayes et al (2013) reported an association between former tenants of public housing who were relocated with housing vouchers and crime. Such former residents were more likely than the population to be both victims and perpetrators of violent crime and property crime. Mast and Wilson (2013) similarly report a positive association between crime and housing vouchers holders. The association is particularly strong for burglaries, violent crime, and street crime. It also varies depending on the concentration of housing vouchers holders in a neighbourhood, the type of families and the initial crime rate of the neighbourhood. Anthony and Robbins (2013) find that adolescents living in public housing meeting unfavourable conditions ('daily hassles', low neighbourhood cohesion and low aversion toward substance use) are more likely to use illicit substance and have delinquent behaviours. In Canada, Jemma (2014) studies how elements of the built environment are related to the crime rate and found that crimes committed with guns happen more often near public housing.

While some authors identify a positive statistical association between assisted housing and crime, it is nevertheless impossible to establish a causal (and directional) link between the two variables. Researchers have tried to demonstrate that social housing does not lead to higher crime rates, even though reported rates of crime tend to be higher in assisted housing than in other low-income areas. Lenesskie (2013) finds no significant association between homicide rate and public housing. He explains that social housing does not drive the homicide rate, but rather, the physical conditions of public housing foster lethal violence. In a 2012 article aiming to respond to Rosin's controversial view, Ellen, Lens and O'Regan (2012) find a positive association between crime rates and the presence of housing voucher receivers. However, once they control for neighbourhood fixed effects (such as vacancy rate and presence of poor households), the association becomes statistically insignificant. They conclude that housing voucher assistance doesn't cause crime. Lens (2013c) also confirms this conclusion.

Griffiths and Tita (2009), acknowledge that social housing (project and place-based) has the effect of isolating its residents (socially) from resources and supportive institutions, limiting at the same time social interaction with people living outside public social housing. These neighbourhoods experience 'cumulative disadvantage' (p.322): high-density, low-resources, many families below the poverty line, many families receiving public aid, unemployed and lone parents.

Rather than the neighbourhood characteristics causing crime (including high incidence of low-income housing) Hipp (2010) argues that crime levels act to define and characterize neighbourhoods. His research reveals that crimes caused residential instability, a higher concentration of disadvantaged households, a declining retail environment, and as associated with

a high proportion of Africans Americans after a decade. He, like other researchers conclude that one effect of the voucher program was that constrains on acceptable rents or capacity to pay results in voucher holders finding housing in areas with low rents, which inherently are also those with higher levels of crime and disadvantage.

### ***High incidence of crime in and near assisted housing reflects influence of poverty and disadvantage***

One explanation for high crime rates is that social housing is often located in distressed and poorer neighbourhoods where crime rates tends to be higher (Dickson-Gomez et al. (2009), Griffiths and Tita, 2009; Freedman and Owens, 2010; Sharkey and Sampson, 2010; Lens, Ellen and O'Regan, 2011; Lens, 2011; Northern Illinois University Center for Governmental Studies, 2011; Lens, 2013d; Van Zandt and Mhatre, 2013).

In the case of mobile voucher assistance, Ellen, Lens and O'Regan (2012) propose that because the crime rate is higher, the vacancy rate also increases, therefore suppressing rents and making landlords accepting of more tenants with housing vouchers. Likewise, Lens (2013a) finds that as the gap between rental prices from low and high crime tracts tends to deepen, vouchers holders tend to concentrate in higher crime rate tracts simply in order to find units that are affordable with the voucher value and landlords that will accept voucher holders.

Lens, Ellen and O'Regan (2011), find that voucher holders live in safer neighbourhoods than unassisted households; however, they do not necessarily live in less poor neighbourhoods. The authors also found that neighbourhoods, which, over time, accommodated more voucher holders, improve more quickly in safety than any other neighbourhood. Van Zandt and Mhatre (2013) conclude there is a relationship between crime within ¼ miles radius and the proportion of apartment complex where vouchers holders are concentrated. However, they find no relationship between crime rate and the presence of vouchers holders in apartment complex. Thus, they suggest that for cost reasons vouchers holders move to neighbourhood or complex that already has a high crime rate. The authors underline that in many developments, vouchers holders were declining while the crime rate was increasing in the neighbourhood.

### ***Does demolishing and/or redeveloping older public housing improve crime outcomes?***

Another research approach has used redevelopment as a case study to examine crime and security issues before and after areas are redeveloped – usually under the HOPE VI redevelopment program, which typically seeks to deconcentrate poverty and add elements of income and tenure mix, as well as non-housing community development and educational support services.

Among the most important research on this question, Sandler (2012) compares the crime rate in a neighbourhood before and after demolishing public housing between 1995 and 2010 in Chicago. Sandler found that crime decreased 10% (statistically significant) after public housing was demolished. All types of crimes declined after the demolition, but particularly violent crimes (murder, assaults and robberies). This decline in the crime rate started when public housing tenants start to move and it persisted for at least 5 years after the housing was demolished. She found as well that the majority of the public housing residents moved within two miles of their previous

home, however, the crime rate in those areas remained low. In other words, the crime seems to stop, not to move or spread to other neighbourhoods.

Like many researchers, Cahill (2011) found mixed-results in a study of the effect of HOPE VI on the displacement of crime. In Milwaukee, an examination of crime displacement (using the Weighted Displacement Quotient) shows mixed results during the first year but revealed that crime tended to diminish with time. In Washington, the results seem to show that HOPE VI meets the expectations of redevelopment because the crime rate diminished year after year around housing redevelopments. However, the author underlines a major constraint: it was not possible to isolate the effect of other variables on the results, such as the impact from other housing projects or initiatives. One such example is that in addition to redeveloping housing, new community development activities were also introduced to help residents improve employment and to provide activities and educational support for children.

Popkin et al. (2012) assess the effects on crime when former public housing residents were relocated in other neighbourhoods using housing vouchers. They rely on two case studies, Chicago and Atlanta, which have been through similar situations during the 1990s and the 2000s. The authors find comparable patterns in both cities: first, the overall crime rate declined significantly during those two decades, but not as fast as it should have in certain neighbourhoods with a high density of relocated public housing tenants. In the neighbourhoods where public housing developments were, the crime rate declined quickly. In Chicago, violent crime decreased significantly, while property crime increased slightly. In Atlanta, violent crime and property crime decreased. The authors note that a certain threshold of relocated public housing tenants led to certain problems. Above this threshold, crime rates diminished less quickly than if there were no relocated households. They note that this threshold is lower than the threshold for vouchers holders who were not relocated after public housing was torn down.

Similarly, Sciandra et al. (2013) researched the long-term impact of the Moving to Opportunity (MTO) experiment on crime and delinquency. MTO families were randomized into three groups: an experimental group offered a housing voucher that could only be used to move to a low-poverty neighbourhood, a Section 8 housing group offered a standard housing voucher, and a control group. This paper focuses on MTO youth ages 15–25 in 2001 ( $n = 4,643$ ) and analyzed neighbourhood characteristics and criminal behavior (number of violent and property crime arrests) over 10 years after randomization. The broad research question is whether using voucher assistance to move people out of distressed and high poverty neighbourhood would reduce their criminal activity. The authors find that all the effects of MTO tend to attenuate with time. While preliminary analysis in Kling et al. (2005) showed consistent change in criminal activity for young people, it held some inconsistency based on gender. Over time the impacts soften, whether a positive or a negative change. For males, the study finds a decline in violent crime arrests but an increase in property crime arrests over a period of ten years. For females, they find no significant difference in the number of arrests, but the numbers are overall quite low. The authors also underline that among the sample, voucher holders lived in a better neighbourhood in the long run. The characteristics of the neighbourhood are “large and persistent” (p.470) even if they attenuate over time. The authors conclude that crime rate is related to neighbourhood conditions and that changes in these conditions affect people’s criminal behavior.

Suresh and Gennaro (2009) found a spillover or displacement effect when revitalizing traditional public housing in Louisville, Kentucky. They looked at the data over a 19-year period and found that after revitalizing public housing developments, crime increased in other nearby neighbourhoods. Like in other places in the U.S., Louisville saw these large public housing developments torn down and replaced by mixed-income and mixed-tenure social housing. After demolitions, the authors found a greater risk of homicides in poor neighbourhoods, other public housing and Section 8 projects. Therefore, it appears that homicides were simply displaced with former tenants of public housing. Social disorganization, which, they argue, leads to a higher level of crime, moved to other neighbourhoods.

### ***Importance of neighbourhood characteristics***

Much of the aforementioned research reflects the strong influence of neighbourhood characteristics, both the locational attributes of “place fixed” public housing and alternate areas facilitated via housing vouchers. Sharkey and Sampson (2010) suggest that families moving to lower density and low crime suburbs are less likely to see their children engaged in criminal activities. They underline two programs aimed at moving poor households into better neighbourhoods in Chicago. The Gautreaux program, one of the first desegregation, mobility initiatives, designed (by court order) to de-segregate neighbourhoods by moving African American families to neighbourhoods where they would represent no more than 30% of the population, generated interesting results by improving life opportunities of children. The later Moving to Opportunity (MTO) housing vouchers (a controlled trial demonstration) led to mixed results. The authors found that when children stay in the city (and in higher poverty, higher crime areas), they are more likely to find themselves in a violent environment, become a victim or use violent behaviour themselves. When their family moved to the suburbs, children are less exposed to violence by half, and are less likely by over a third to be engaged in violent behaviour themselves. The explanation relies on differences between “racial and economic composition of the destination neighbourhoods” (p.639), quality of schools, the control young people perceive to have over their environment and different degree of fear.

Popkin, Leventhal and Weismann (2010) report on the consequences for young girls moving out of public housing. Their assumption is that girls fear specific threats - something Gordon and Riger (1989) have called ‘female fear’. The authors rely on interviews with parents and young people who have benefited from the MTO program (using housing vouchers) in Boston, Los Angeles and New York. The authors found that women and young girls are vividly aware of the violence they avoided by having left public housing. The girls feel safer in low-poverty neighbourhoods in general, and also experience less victimized and have a sense of freedom from pressure for sexual activity.” (p.729). Girls were also under the impression that they had escaped many risks by leaving public housing. Girls from public housing reported they were often pressured to have sex or have unprotected sex, were physically abused, contracted infections, were involved in ‘risky sexual activity’ (p.733), and were using drugs. The authors found overall, the girls who had left public housing thanks to housing vouchers were in a better physical and mental situation (i.e. anxiety, traumatism, etc.) than their peers in public housing or high-poverty neighbourhoods.

Similarly, Owens (2013) looked at how some changes in social housing affect people’s perception of disorder, violence and safety. The author examined the impact on perceptions in two different cities: Chicago, where large scale distressed public housing was prolific but has been through many

major changes, and Boston, where housing redevelopments were generally smaller in scope. The results showed that demolition of public housing largely influenced how people perceived their neighbourhood. In Chicago, where the demolitions occurred, she found mixed results. While the crime rate declined, perceptions of disorder and violence attenuated in some cases, while perceptions of disorder increased in others. In Boston, she found no significant differences between neighbourhoods with public housing, HOPE IV projects or without public housing, probably because of the data limitations. The author also found mixed results regarding the presence of voucher holders and perceptions of disorder, violence and safety. In Chicago, concentration of voucher holders did not lead to increased perception of disorder, while in Boston, it did. Although the author underlined this perception could also reflect the increasing crime rate in those neighbourhood. Therefore, she concluded “voucher users may not be a tangible element of neighbourhood context that influences perceptions.”(p.96)

### ***Some concluding observations on housing and crime***

In sum, while some authors identify a positive association between social housing and crime, it is nevertheless very difficult to establish a causal (and directional) link between the two variables. Some studies have pointed to positive improvements in the crime rate and feelings of safety and security related to housing assistance. Many researchers have tried to demonstrate that social housing does not lead to a higher crime rate, even though high crime rates are frequently reported in and around larger scale public housing developments. Finding mixed results or no significant relationship, researchers focus on other variables in their analysis to try to explain the incidence of crime rates. Typically, this invokes influences of neighbourhood, density, and in the U.S. context, racially linked poverty. Our review of literature points in the same direction:

- There is often a positive statistical association between crime and social housing (i.e. higher crime rates are positively associated with large-scale concentrations of low-income housing) particularly in large and isolated traditional public housing developments. However, the direction of causality remains inconclusive.
- Programs aiming to relocate families to better neighbourhoods, mostly via housing vouchers and the MTO program, are often found to offer safer neighbourhoods to households. Other programs such as HOPE VI projects and LIHTC show results that are more mixed. In all cases, a causal relationship between crime and social housing are hard to establish, particularly when authors control for variables that could otherwise influence their results.
- Elements of the built environment (especially concentrations of density and poverty) seem to be a critical determinant of the crime rate, as well as neighbourhood characteristics such as the existing crime rate before addition of social housing. Ethnicity seems also to lead to many disparities among results.
- Temporal analysis that has compared perceptions of safety and various types of crime rates prior to and after redevelopment into mixed-income and mixed-tenure development (as is typical under the US HOPE VI program) have generated statistically significant improvements in the outcomes for residents.

## **7. Overview of literature reporting on multiple outcomes**

### ***Moving to Opportunity (MTO) in the U.S.***

The preceding chapters summarize the findings based on empirical research evidence under five thematic areas. In addition, the review identifies an additional set of over 20 articles in which the impact of housing, and in particular affordable and stable housing, were examined across multiple types of non-housing outcome. There was considerable overlap across these articles with many presenting findings related to the U.S. MTO demonstration program.

One of the most important findings across this set of literature, and consistent with the earlier thematic assessments, is that there is a sound body of empirical research literature directly linking dwelling (and neighbourhood) condition to outcomes in the area of health. However, by contrast, the evidence about how affordable housing impacts on employment, educational attainment, family stability and criminality remains both mixed and inconclusive to different extent.

A second key finding is how housing programs designed to enable mobility are associated with improved outcomes, or not. While directly linked to improved affordability, it is the mobility aspect of these programs (i.e. variants of the housing choice voucher program in the U.S.), rather than the fact that these mechanisms reduce net shelter costs and lower the shelter cost burden, that have the greater impact. This invokes a wide range of neighbourhood influences on outcomes complementing or offsetting the outcomes related to housing assistance. The mobility impacts vary across studies.

The primary source of insight on mobility programs is provided in the formal evaluations of the U.S. MTO demonstration program. This was, as the name suggests, set up as both a housing assistance initiative and a research initiative. Initiated in 1994 and run over a fifteen-year period, MTO has been rigorously reviewed and evaluated by a large number of academics and researchers. It incorporated a randomized trial with participants assigned to one of three subgroups: (1) The “Section 8 group” that received rental housing vouchers without any restrictions; (2) The “experimental group” that received vouchers and mobility counseling but could only use those vouchers in neighbourhoods with poverty rates below ten percent; and (3) the “control group” that enrolled in the demonstration but did not receive vouchers.

The final evaluation report (HUD/Sanbonmatsu et al., 2011; and cited by Ludwig et al., 2012; 2013; 2014; Kessler et al., 2014) highlights three findings across three impact domains:

- The ability (and indeed requirement) to move resulted in moves to lower poverty and safer neighbourhoods. Adults and female youths in both the Section 8 group and the experimental group felt safer in their neighbourhoods than those in the control group.
- Living in lower poverty neighbourhoods was positively associated with improved health outcomes. This included less extreme obesity and diabetes as well as reduced psychological distress and lower incidence of depression.
- There were no statistically significant improvements in educational outcomes of children (based on key measures such as standardized tests, graduation rates and enrollment in post-

secondary education), nor any improvement in employment and incomes compared to families in the control group.

Gennetian et al. (2012) look at the effects of growing up in a neighbourhood of concentrated poverty on children in a long-term perspective. Regarding educational and employment outcomes, they identify better but modest, and even sometimes mixed results. They confirm improved physical health. Also, they underscore that girls have better outcomes than boys, in particular mental health outcomes. However, children from the MTO experiment are more likely to have risky behaviour; women are more likely to have drinking habits and men more likely to use drugs. Lastly, all MTO children report feeling safer in the new neighbourhood and have seen less drug transactions than in their previous place of residence (public housing).

Chetty, Hendren and Katz (2015) looked at the effects of the MTO program on long-term outcomes for children whose families received housing vouchers. They use the data from the MTO experimental program and tax returns. They find that the MTO lead to positive long-term outcomes for children. They find those children show a higher attendance rate at college, and higher earnings for children who were very young at the time they moved. Those children also live in better neighbourhoods as adults and were less likely to become single parents. The report underlines that younger children were at the time they originally moved, the stronger the (cumulative) neighbourhood effects were.

Kouropoulos (2012) suggests that the positive outcomes regarding crime and perception of safety were strongly influenced by the fact that the public housing projects in which MTO families initially resided were often characterized by poorly maintained facilities, high levels of crime, extreme ethnic and racial segregation, and isolation from other neighbourhoods. The improved sense of safety in new neighbourhoods is therefore hardly surprising. He goes on to compare results of an earlier analysis undertaken on public housing in Toronto in which he used administrative data to track outcomes for children growing up in public housing. The types of properties varied in type and scale, and locational characteristics, and as such presented a natural experiment of random selection for comparison of outcomes.

Kouropoulos finds no differences in eventual earnings, likelihood of unemployment, and welfare reliance between residents of the largest and smallest projects in this Toronto sample. He suggests that caution is required in setting expectations for relocation programs regarding expected educational effects for children. “Parents from poor neighbourhoods seem to focus on a desire to reduce exposure to crime and drug activity, but many also seem reluctant to move far from their current residence.” At the same time he notes much better educational outcomes when children of voucher assisted households attend newer charter schools: “winning a lottery to attend a charter school in Boston increased student achievement by about 0.2 standard deviations per year in english language arts and by about 0.4 standard deviations per year in math compared with achievement in traditional public schools.” Lottery studies in New York City and Washington, D.C., showed similar gains. Oreopoulos (2012) concludes that if the objective is in fact improved educational outcomes, direct investment in schools through education reform may be a better and more direct route (and will help all children in that school) than the blunt practice of simply enabling some children to relocate (which can introduce negative outcomes if they remain in or near deep poverty areas.)

Returning to the Toronto example, Oreopoulos (2012) also notes that long-term outcomes measured by earnings at age 30 found some children from public housing ended up with strong earnings while others remained unemployed – suggesting that family differences matter as much or more than just location.

The Gautreaux program, the precursor to MTO, the Supreme Court ordered relocation of poor Afro-American families (mainly lone parents) from segregated black public housing to white suburbs provides additional insight. This program differed significantly from MTO. It too has been extensively studied, but was not formally set up as a research initiative; it has no control group and involved different protocols and rules on relocation. The main difference in protocol was the formal assistance of a counselor in relocation, which resulted in placements further away and in generally better areas. MTO recipients were permitted to exercise greater consumer choice.

The long-term follow up on Gautreaux as reported by Deluca et al. (2010) confirms the success of permanent relocation in better areas, the improved income attainment of the relocated families and generally improved crime outcomes (less criminality, particularly among male children). However, as in MTO, the main contribution was relocation, not reduced rent (due to receipt of rental assistance).

Much of the U.S. research examines and explores various aspects of mobility programs and alongside the contentious issue of neighbourhood effects and the extent to which these effects influence and mediate outcomes. Small and Feldman (2010) note that a key factor in assessing neighbourhood effects is that researchers should expect heterogeneity, not homogeneity in the effect of neighbourhood poverty. Whether and how neighbourhoods matter depend substantially on individual, neighbourhood, and city level conditions. Much of the research has focused on Chicago (in part due to Gautreaux) and they proposed that basing research evidence on just one such city may generate misleading results. Rather than studying, or only studying, predominantly black housing projects in areas losing low-skilled manufacturing jobs, the researcher should study, or also study, comparatively under-explored sites such as Chinese-American neighbourhoods with high proportions of poor immigrants, predominantly white poor neighbourhoods with high levels of drug abuse, or aging multi-ethnic neighbourhoods with high proportions of residents on fixed retirement incomes.

Other researchers report no significant impacts as a result of relocating disadvantaged households. Jacobs et al. (2015) employ a randomized voucher lottery to compare outcomes against baseline conditions for voucher recipients in Chicago between 1997 and 2011. Different from the MTO housing voucher program, which relocates existing public housing residents, this research selected households that at the outset were living in unsubsidized private housing. The form of the natural experiment included a large subset of families chosen at random. They then used a variety of administrative databases to track outcomes over 14 years for both those initially allocated a voucher compared to those that applied, but did not get a voucher in the original random allocation process (control group). Examining a wide range of possible outcomes, they found that the receipt of housing assistance has little, if any, impact on neighbourhood or school quality or on a wide range of important child outcomes, including standardized test scores, high school graduation, arrests, earnings, and social welfare receipt as adults, as well as health outcomes. After accounting for multiple hypothesis testing, researchers find no statistically significant effects for our measured outcomes overall or in any of the pre-specified subgroups.

### ***Deconcentration of Social Housing in Australia***

There has been a recent research interest in examining the effect of social mix and whether recent trends in the deconcentration of social housing is generating improvements in well-being and feelings of safety (Parkinson et al., 2014). This context in Australia is somewhat different than that in the U.S., as the process is not so much one of relocating existing residents out of high density, racially segregated disadvantaged areas as it is a process of gentrification of the predominantly lower density social housing estates that are more the norm in Australia. Mix is achieved both by selling homes in low-density social housing estates to investors or owners while concurrently purchasing homes for social housing in other market estates.

Using a longitudinal dataset as well as data on neighbourhood characteristics from the 2001 and 2011 census, researchers examined whether the social quality of life (well-being) of social and lower-income private renters is better in areas with high tenure diversity and concentrations of social housing compared to those living in less diverse neighbourhoods with lower concentrations of social housing. With the exception of inner city areas, 'tenure diverse' areas have relatively high concentrations of low-income renters (both social and private renters) compared to the average, meaning they tend to be poorer.

After statistically controlling for individual, household, and area disadvantage characteristics the research found evidence of area-level effects related to the diversity of tenure and concentration of social housing on wellbeing outcomes. These included:

- Tenure per se is not associated with lowered wellbeing but living in high-density dwellings is, particularly for social renters.
- Living in areas with lower concentrations of social housing is associated with higher mental wellbeing and satisfaction with safety and the neighbourhood across tenure groups.
- Moving from areas with high concentration of social rental results in improved wellbeing outcomes. Outcomes are better in areas with moderate tenure diversity.

## **8. Overview of literature reporting on multiple outcomes regarding child development**

In addition to the literature that looks specifically at housing and school performance or housing and child health (presented earlier), there are a number of studies that look at the relationship between housing and child development and wellbeing. Leventhal and Newman (2010) undertake a critical review of recent research on the role of housing in children's development, including physical health; social, emotional, and behavioral outcomes; and schooling, achievement, and economic attainment. They examine six features of housing that are central to housing policy and have generally received the most research attention: (1) physical housing quality; (2) crowding; (3) residential mobility; (4) homeownership; (5) subsidized housing; and (6) unaffordability. The strongest evidence is provided for the deleterious associations between environmental toxins/hazards and crowding with children's health, and for residential mobility (which can be influenced by voucher type programs) with children's short-term academic, social and emotional problems. The findings on assisted housing are mixed, and homeownership and affordability are not linked to children's outcomes.

Newman and Holupka (2014) want to understand how housing affordability affect parents' expenditures related to their children's well-being. They use data from the 2004-2009 Consumer Expenditure Surveys in the U.S. In sum, they find that affordability of housing does not affect significantly how much parents spend for their children. The authors graph an inverted U-shaped relationship between those two variables. They conclude that children expenditures follow housing costs when they are particularly low and particularly high. This U-shaped curve is similar to the curve showing the relationship between housing cost and children's cognitive development. Newman and Holupka (2014) recognize that housing affordability could partly explain children's cognitive development but also mention that other factors are more successful in predicting it: level of education of mothers is the strongest predictor, race of the mother, and if the family receive food stamps are other strong predictors of children's cognitive development.

Newman and Holupka (2015) subsequently focus on effects of housing costs on cognitive and behavioural development of children as well as their health. They use data from the Panel Study of Income Dynamics using a sample of initially 5,000 families living in American metropolitan areas. First, they find that even if families are low-income, they spend on average 31% of their income on housing, which is very close to the 30% 'rule-of-thumb' for housing affordability. Second, unaffordable housing affected children's cognitive development, but not their behavioural development, nor their health. The authors note that the disparate results for cognitive achievement versus behavioural is interpreted as the ability of higher income families to invest resources in their children's development, while behavioural problems are more closely linked to family events and family processes.

Coley et al. (2014) are interested in understanding how certain elements of housing or neighbourhoods could impact children's outcomes. To that end, they create four profiles of low-income families with varied housing and neighbourhood conditions. They use data from the Three-City Study, a longitudinal mixed-methods survey beginning in 1999 in the U.S. Their results highlight the endogeneity of low-income families' situations and serve as a warning for those that would like to conclude that there are causal links between certain factors related to housing or

neighbourhood and children's outcomes. The authors write: "housing cost was not associated with housing problems and neighbourhood disorder in a simple linear fashion" (p.52) Nevertheless, the authors conclude housing that is in good condition and safe neighbourhoods are associated with better children's functioning, especially when housing is owned or private-rental even if this is not affordable. Notably, affordable housing does not necessarily lead to better children's outcomes particularly when in the form of assisted (public) housing and high residential mobility.

Theodos, Coulton and Budde (2014) examine the links between residential and school mobility, as well as educational attainment. They use data from the Making Connections initiative between 2002 and 2010 with a sample of more than 2,000 children in 10 U.S. cities. They find that school mobility is not always due to residential mobility. Also, on average, switching home location does not necessarily lead the children to attend a better school. Better educated parents were more likely to see their children sent to a better school than parents with less education. Housing tenure was not found to be associated to any particular outcome. However, food insecurity was associated with poorer schools, based on children's test scores, and the inability to afford good food may be related to high housing costs crowding out ability to buy food.

Providing additional insight from outside of the U.S., Dockery et al. (2010) offer a very exhaustive portrait of links between housing and childhood development in Australia. They identify the direct outcomes such as reduced rental expense and better dwelling condition to draw out the intermediate effects. Because housing is often a significant expense in a family's budget, and because the cost of housing often determines how much the family will be able to spend on other goods (food, clothing, school, etc.), housing impacts the quality of life of all family members. In addition, housing provides conditions of living, directly affecting children's health for instance. Finally, housing is inextricably related to the neighbourhood which also impacts on children's outcomes.

Dockery et al. (2013) offer empirical evidence on the links between housing and childhood health and development. This research focuses on three aspects: physical health, cognitive development and school achievement, as well as emotional and behavioural development. The authors rely on data from the *Growing Up Australia: The Longitudinal Study of Australian Children* and *Footprints in Time: The Longitudinal Study of Indigenous Children*. Overall, the authors come to understand that housing has little effect on children's outcomes. They find that a multiplicity of factors influences children's outcomes, some that they even may have forgotten to measure (omitted variables). Socio-economics factors are closely related to housing, and neighbourhood effects, namely providing a safe environment and play spaces, are important determining factors related to socio-economic status. The authors also conclude that parenting style has a large effect on very young children, while factors related to socio-economic status largely influence children when they become older. Housing characteristics had limited impact of children's health.

Housing assistance could greatly affect children and parents, impacting physical health and cognitive, emotional and behavioural development in the short and long run. But reflecting the importance of different types of housing assistance, they caution that housing assistance is also associated with overcrowded homes and less liveable neighbourhoods. The poor achievement of children from housing assisted families could be related more to socio-economic status and parenting style than housing characteristics.

Taylor and Edwards (2012) examine the association between housing mobility, housing stress, and children's development. Their data also come from the *Growing Up in Australia: The Longitudinal Study of Australian Children*. They find that housing tenure and frequent house moves alter children's outcomes. Children at age 4 or 5 are also more sensitive to negative outcomes than children of 8 or 9 years old. Housing tenure is associated with diminished vocabulary in addition to emotional and behavioural problems. Housing stress (paying high percentage for rent) is not found to be associated with negative outcomes.

In the United Kingdom, Tunstall et al. (2011) look at the impacts of housing conditions, housing tenure and neighbourhood conditions on five-year-old children. Their analysis relies on the British Millenium Cohort Study. They confirmed that children living in social housing were living in the worst housing conditions, and more deprived neighbourhoods. Their parents were among the lowest income families, often being lone parent, young mothers or parents of large families. The authors underscore that housing conditions, tenure and neighbourhood only explain a small variation in children's early development and educational attainment.

In one of a few Canadian studies, Martens et al. (2014) explore the effects on health and education on children living in public housing. They focus on the data from the Manitoba Centre for Health Policy on children aged from birth to 19 years old. They find that children in social housing have poorer health and educational outcomes than children not living in public housing even when they were located in comparable neighbourhood. They also found that children living in social housing located in better neighbourhood fared better than others when they become adolescents.

## **9. Conclusions and lessons**

Consistent with earlier research consolidated for CMHC (SHS, 2009; and PRA, 2011) there is extensive research that identifies and in some cases empirically verifies relationships between housing and an array of domains, including health, family stability, education, employment and crime and safety.

The literature clearly demonstrates that high shelter cost burdens (unaffordability), poor dwelling conditions and overcrowding are negatively associated with this array of outcomes. Based on this research the logical conclusion is that if these circumstances can be inverted, the outcomes can similarly be inverted:

- By addressing unaffordable situations by providing housing with lower affordable rent or via a housing allowance that reduces net out of pocket housing expenditure the negative impacts of unaffordable housing will be removed;
- By providing housing in sound condition, or funding rehabilitation programs to address substandard conditions and attributes (e.g. remove lead paint) the negative impacts of poor dwelling condition can be removed; and
- By ensuring that housing is appropriately sized (enough bedrooms for the family size and composition) issues of overcrowding and their effects can be canceled.

The inherent logic of these arguments has led to extensive amount of grey literature and advocacy materials that adopt and assert these logical outcomes. The rhetoric is extensive and well employed as an argument for governments to invest in affordable and social housing. For example “if governments invest in affordable housing children will perform better in school, parents will be able to stabilize their lives and secure employment, health among poor tenants will improve, etc.”

Drawing from this tendency, the current review of empirical literature has tried to focus on an examination of how intentional responses in the form of public and community based affordable housing and housing assistance programs can and have responded to and contributed to offsetting the negative outcomes created by the absence of affordable and sound housing.

What this study highlights is the need to carefully examine the form of housing intervention. In particular, much of the existing stock of assisted housing is in the form of large-scale public housing developed between the early 1960’s and 1990. This stock, which is the subject of extensive research, is older, in deteriorating condition, located in high poverty areas and occupied by a population with multiple disadvantages.

More often than not, empirical research has identified negative impacts and outcomes among residents of public housing. Research reports high crime rates in public housing, children that live in public housing are often found to score less well in educational testing and achievement; there are higher rates of unemployment among public housing residents, residents score poorly in health assessments and residents do not feel safe.

Finding such negative outcomes, researchers have then sought to understand and explain their findings. Many researchers have identified important caveats and limitations on their findings expressing the view that family history, socio-economic and neighbourhood characteristics have a more statistically significant relationship with outcomes (such as health, education, family stability) than housing affordability.

It is also noted that multiple housing and non-housing influences operate in concert, making it very difficult to disentangle the linkages and to attribute causality as distinct from association (Dockery et al., 2013). In the area of crime, where research has identified high crime rates in social housing researchers such as Ellen, Lens and O'Regan (2012), Lens (2013) and Leneskie, (2013) have tried to demonstrate that social housing does not cause higher crime rates, even though reported rates of crime tend to be higher in assisted housing than in other low income areas. Authors propose that social housing does not drive the crime rate, but rather, the physical conditions of public housing fosters violence. Some conclude that assisted households often can only find a dwelling in distressed neighbourhood with an existing higher crime rate. Lens (2011, 2013c) even suggests that assisted households such as voucher holders would contribute to decreasing crime rates.

The more recent literature confirms previous conclusion from 2009: 'neighbourhood effects' exists and play a significant role in mediating or enhancing outcomes, both positively and negatively. The recent literature highlights that while the majority of the findings underline some positive impacts on families, they find that it is a more moderate impact than is often presumed. The extent and type of impacts are influenced by decisions made by recipients, such as the decision to keep children in the same school to stay with friends and to social networks, rather than using voucher to access new "better" neighbourhoods and schools.

Neighbourhood effects were found to be a significant part of the discourse in the U.S. literature where a large body of research has examined the impact and effectiveness of voucher-based assistance that enables families originally living in public housing (or in some initiatives on a waiting list for assistance) to relocate. Armed with assistance to improve their ability to pay market rent, it was expected that these programs would enable recipients to move to better neighbourhoods with improved access to employment and higher performing schools.

Research findings, both for MTO and other quasi-experimental programs with randomized trials, generated mixed results. Where recipients did select and remain in less disadvantages areas, there was discernable improvement in a number of outcomes (family stability, health, children's education, employment and income). But results were mixed, in part due to locational choices made by recipients (e.g. moving nearby and leaving children in the same school in order to maintain kinship and social network links) (Fortson, 2010; DeLuca and Rosenblatt, 2010; Ludwig, 2012; and Kessler 2014). Notably, studies conducted in the U.S. and in the U.K. show differing results. While studies in the U.S. tend to show an association between neighbourhood and educational outcomes, the very few studies conducted recently in the U.K. found no evidence of statistical association (Gibbons, Silva and Weinhardt, 2013).

In the area of employment outcomes, the empirical research does not report any conclusive findings to support the notion that providing housing assistance, either via placed base supply programs, like public or non-profit housing, or via shelter allowances (U.S. vouchers) has any positive effect on labour force participation, income or earnings. Focusing mainly on robust

empirical studies, the research findings reveal either neutral or slightly negative association between housing assistance (affordable housing) and labour participation and income

Looking outside the U.S., there has been a recent research interest in Australia in examining the effect of social mix and whether deconcentrating social housing is generating improvements in well-being and feelings of safety. Parkinson et al. (2014) find that higher concentrations of social housing were associated with lower levels of neighbourhood satisfaction reduced well-being and reduced safety. Meanwhile in areas of lower concentration of social housing, outcomes were more positive - social renters were happier, more satisfied with their safety and neighbourhoods as well as their chances of being employed when they resided in the more moderately tenure mixed areas.

In short, the research suggests that affordable housing is not enough in itself to improve well-being in life opportunities. It must be in sound condition, and it is the right combination and density of affordable housing and location linked, where appropriate to employment and labour market training for parents to secure work, investments in local schools to enhance student opportunity and augment this with housing based supports like afterschool programming and homework clubs. It is a broader array of area level effects and the granularity of mix that matters.

Also, many authors underline that affordable housing measures would be more beneficial if provided along with varied kinds of support. For instance, many authors underline that U.S. MTO housing vouchers should be granted with some support to advise families in their choice of new neighbourhood depending on their own needs (like the earlier Gautreaux program) in order to maximize the benefits of the policy. For instance, they could be provided information on the effect of changing schools for their children and on better schools in other neighbourhoods. Others explain that affordable housing can be a platform to support people with mental health issues, problems of drug or alcohol consumption and former prisoners.

Parkinson et al. (2014) also observe that more careful and purposeful strategies on urban renewal including improved access to employment and affordable housing are needed to improve safety and neighbourhood satisfaction levels in disadvantaged areas. Wood et al. (2009) and Stephens et al. (2010) suggest that the captive audience nature of place-based social housing offers the potential for pro-active initiatives to provide internship work and reconnect tenants with the labour market. They also suggest that social landlords can assist tenants in making decisions by providing help in calculating if the tenant is better off in work after taking into account the effect of claw-backs and rent increases resulting from higher income.

### ***Implications for policy and research***

The empirical evidence to date has been strongly influenced by a large volume of work emanating from the U.S. focused on forms of public housing that reflect long abandoned approaches (large scale concentrations of poverty) and more recent experiments related to poverty deconcentration and the use of vouchers – which are more about addressing neighbourhood influences than affordability per se.

There is a noticeable absence of research that examines newer initiatives that have sought to redevelop traditional public housing projects and to revitalize neighbourhoods that experience multiple disadvantage. Some earlier research has examined and evaluated the impact of the HOPE VI public housing redevelopment initiative, but that predates the current review.

In particular, there is a distinct lack of research in Canada examining the outcomes of the smaller scale mixed-income approach to social housing that was adopted as a key plank of Canadian housing policy in the 1970's. The underpinning theory was that small-scale community-based and community operated (non-profit and co-operatives) would invert the negative outcomes associated with the previous era of large-scale public housing (as reported by the Hellyer task Force; Dennis and Fish, 1973; and Rose, 1980).

A research agenda to promote and support robust examination of outcomes in the Canadian context of smaller community-based developments with some income mix would both address the current lack of sound research and help focus future initiatives and investments aimed to address persisting affordability and homelessness in Canada.

Finally, where positive impacts have been identified in relation to stable and affordable housing, the context is usually one where additional supports and services have been provided to residents. Simply providing bricks and mortar at low rent appears to be insufficient. The array of additional services and formal and informal support determine outcomes including better educational performance, improved stability and enhanced employment outcomes. Additional research should seek to identify the array of ancillary services that have been implemented or facilitated by providers of affordable housing, similar to recent research focused on formerly homeless persons.

## 10. References

Alam, Bhuiyan Monwar. 2009. "Transit Accessibility to Jobs and Employment Prospects of Welfare Recipients Without Cars: A Study of Broward County, Florida, Using Geographic Information Systems and an Econometric Model", *Journal of Transportation Board of the National Academies*, 2110, p.78-86.

Albright, Len, Elizabeth S. Derickson and Douglas S. Massey. 2013. "Do Affordable Housing Projects Harm Suburban Communities? Crime, Property Values, and Taxes in Mount Laurel, NJ", *City & Community*, vol.12, no.2, June, p.89-112.

Alexandrer, Jemma. 2014. *A Place-Based Approach Characteristics of Sites where Youth-Related Gun Violence Occurred in the Halifax Regional Municipality*, Thesis, submitted in partial fulfillment for the requirements of the degree of Masters of Arts in Criminology, Halifax, Nova Scotia, April.

Anderson, Sarah et al. 2014. "Residential Mobility Among Children: A Framework for Child and Family Policy", *Cityscape*, vol.16, no.1, p.5-36.

Anil, Bulent, Jeffrey L. Jordan, Velma Zahirovic-Herbert. 2011. "Housing Uncertainty and Childhood Impatience", *Urban Education*, vol. 46, no.5, p.1169-1187.

Anthony, Elizabeth K. and Danielle E. Robbins. 2013. "A Latent Class Analysis of Resilient Development Among Early Adolescents Living in Public Housing", *Children and Youth Services Review*, vol. 35, p.82-90.

Anucha, Uzo, Helen Leung and Alexander Lovell. 2011. *Housing Affordability and the Well-Being of Children: Towards a Longitudinal Research Strategy*, Research Report, Canada Mortgage and Housing Corporation (CMHC).

Australian Housing and Research Institute (AHURI). [Audio briefing].

Australian Housing and Urban Research Institute (AHURI). 2005. *The Health, Employment and Education Benefits of Public Housing*, AHURI Research and Policy Bulletin, no.54, March.

Australian Housing and Urban Research Institute (AHURI). 2009. *What Can Be Done to Improve Employment Outcomes Among People Receiving Housing Assistance*, AHU Research and Policy Bulletin, no.114, May.

Australian Housing and Urban Research Institute (AHURI). 2011. *How Does Living in Public Housing Affect Women's Employment?*, AHURI Research and Policy Bulletin, no.143, September.

Australian Housing and Urban Research Institute (AHURI). 2014. "Do Current Measures of Housing Affordability Reflect Wellbeing?", Policy Brief, issue 166, March.

Australian Housing and Urban Research Institute (AHURI). 2015. *Is De-concentrating Social Housing a Useful Policy to Promote Wellbeing?*, AHURI Research and Policy Bulletin, no.197, September.

Bambra, Clare. et al. 2010. ‘Tackling the Wider Social Determinants of Health and Health Inequalities: Evidence from Systematic Reviews’, *Journal of Epidemiology and Community Health*, vol.64, p.284-291.

Basolo, Victoria. 2013. ‘Examining Mobility Outcomes in the Housing Voucher Program’, *Cityscape: A Journal of Policy Development and Research*, vol.15, no.2, p. 135-153.

Battu, H, Ada Ma and Euan Phimister. ‘*Housing Tenure, Job Mobility and Unemployment in the UK*,’ *The Economic Journal*. [Volume 118, Issue 527](#), pages 311–328, March 2008

Baturina, Daniel, Gojko Bezovan and Jelena Matancevic. 2013. *Local Welfare Systems as Part of the Croatian Welfare State: Housing, Employment and Child Care*, Welfare Innovations at the Local Level in Favour of Cohesion (WILCO), Publication no.05, 38 pages.

Becker, Diana et al. 2011. ‘U.S. Housing Insecurity and the Health of Very Young Children’, *American Journal of Public Health*, vol.101, p.1508-1514.

Bentley, Rebecca, Emma Baker, Kate Mason, S.V. Subramanian and Anne M. Kavanagh. 2011. ‘Association Between Housing Affordability and Mental Health: A Longitudinal Analysis of a Nationally Representative Household Survey in Australia’, *American Journal of Epidemiology*, vol.174, no.7, August, p.753-760.

Berry, Mike. 2006. *Housing Affordability and the Economy: A Review of Labour Market Impacts and Policy Issues*. *National Research Venture 3: Housing Affordability for Lower Income Australians*, Research Paper 5, Australian Housing and Urban Research Institute (AHURI), August.

Bond, Lyndal, Ade Kearns, Phil Mason, Carol Tannahill, Matt Egan and Elise Whitely. 2012. ‘Exploring the Relationships Between Housing, Neighbourhoods and Mental Wellbeing for Residents of Deprived Areas’, *BMC Public Health*, vol.12, no.48, 14 pages.

Brookes, Nadia, Jeremy Kendall and Lavinia Mitton. 2013. *Local Welfare in the United Kingdom: Housing, Employment and Child Care*, Welfare Innovations at the Local Level in Favour of Cohesion (WILCO), Publication no.01, 63 pages.

Bryant, Toba. 2009. ‘Housing and Income as Social Determinants of Women’s Health in Canadian Cities’, *Women’s Health and Urban Life*, vol.8, no.2, December, p.1-20.

Burdick-Will, Julia. 2009. *Converging Evidence for Neighborhood Effects on Children’s Test Score: An Experimental, Quasi-Experimental, and Observational Comparison*, Project on Social Inequality and Educational Disadvantage: New Evidence on How Families, Neighborhoods and Labor Markets Affect Educational Opportunities for American Children, Brookings Institution.

- Burgard, Sarah A, Kristin S. Seefeldt and Sarah W. Johnson. 2011. *Housing Instability and Health: Findings from the Michigan Recession and Recovery Study*, National Poverty Center Working Paper Series, no.11-23, July.
- Cahill, Meagan. 2011. "Using the Weighted Displacement Quotient to Explore Crime Displacement from Public Housing Redevelopment Sites", *Cityscape*, vol.13, no.3, p.103-135.
- Canada Mortgage and Housing Corporation (CMHC). 2010. *Affordable Housing For Families: Assessing the Outcomes*, Research Highlight, Socio-economic Series 10-007, July.
- Carlson, Deven et al. 2009. *Long-Term Effects of Public Low-Income Housing Vouchers on Labor Market Outcomes*, Institute for Research on Poverty, Discussion Paper no.1363-09.
- Carlson, Deven, et al. 2012. Long-Term Effects of Public Low-Income Housing Vouchers on Neighborhood Quality and Household Composition, *La Follette School Working Paper Series no.2012-002*, University of Wisconsin-Madison.
- Carlson, Deven et al. 2012. "Long-Term Earnings and Employment Effects of Housing Voucher Receipt", *Journal of Urban Economics*, vol. 71, p.128-150.
- Chellman, Colin C. et al. 2011. 'Does City-Subsidized Owner-Occupied Housing Improve School Quality?', *Journal of the American Planning Association*, vol.77, no.2, p.127-141.
- Chetty, Raj, Nathaniel Hendren and Lawrence F. Katz. 2015. *Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment*, Harvard University and NBER, May.
- Cho, Youngha and Christine Whitehead. 2013. "The Immobility of Social Tenants: Is it True? Does it Matter?", *Journal of Housing and the Built Environment*, vol.28, p.705-726.
- Clampet-Lundquist, Susan. 2010. "'Everyone Had Your Back': Social Ties, Perceived Safety, and Public Housing Relocation", *City & Community*, vol.9, no.1, March, p.87-109.
- Clampet-Lundquist, Susan et al. 2011. "Moving Teenagers Out of High-Risk Neighborhoods: How Girls Fare Better than Boys", *American Journal of Sociology*, vol.116, no.4, January, p.1154-1189.
- Clark, Sherri Lawson. 2010. *Housing Instability: Toward A Better Understanding of Frequent Residential Mobility Among America's Urban Poor*, Final Report, submitted to the Center for Housing Policy, February.
- Coley, Rebekah Levine, Kull, M, Leventhal, T, Lynch, A.D. 2013. "Relations between Housing Characteristics and the Well-Being of Low-Income Children and Adolescents", *Developmental Psychology*, vol.49, no.9, p.1775-1789.
- Coley, Rebekah Levine, et al. 2014. "Profiles of Housing and Neighborhood Contexts Among Low-Income Families: Links with Children's Well-Being", *Cityscape*, vol.16, no.1, p.37-60.

Conference Board of Canada. 2010. *Building From the Ground: Enhancing Affordable Housing in Canada*, Report, March.

Covington, Kenya, Lance Freeman and Michael A. Stoll. 2011. *The Suburbanization of Housing Choice Voucher Recipients*, Metropolitan Opportunity Series, Metropolitan Policy Program at Brookings, October.

Craigie, Terry-Ann L., Jeanne Brooks-Gunn and Jane Waldfogel. 2012. ‘Family Structure, Family Stability, and Outcomes of Five-Year-Old Children’, *Families, Relationships and Societies*, vol.1, no.1, p.43-61.

Cunningham, Mary and Graham MacDonald. 2012. *Housing as a Platform for Improving Education Outcomes among Low-Income Children*, What Works Collaborative, Urban Institute, May.

Currie, Janet. 2009. ‘Healthy, Wealthy, and Wise: Socioeconomic Status, Poor Health in Childhood, and Human Capital Development’, *Journal of Economic Literature*, vol.47, no.1, March, p.87-122.

Curtis, Marah A., Sarah Garlington and Lisa S. Schottenfeld. 2013. ‘Alcohol, Substance Use and Criminal History Provisions in Public Housing’, *Cityscape*, vol. 15, no.3, p. 37-52.

Davidson, Maggie. *The Real Cost of Poor Housing*, Building Research Establishment (BRE), United Kingdom.

DeLuca, Stefanie, Greg J. Duncan, Micere Keels, Ruby M. Mendenhall. 2010. ‘Gautreaux Mothers and their Children: An Update’, *Housing Policy Debate*, vol.20, no.1, p.7-25.

DeLuca, Stefanie, et al. 2012. ‘Chapter 9 – The Notable and the Null: Using Mixed Methods to Understand the Diverse Impacts of Residential Mobility Programs’, in M. van Ham et al. (ed.), *Neighborhood Effects Research: New Perspectives*, p.195-223.

DeLuca, Stefanie and Elizabeth Dayton. 2009. ‘Switching Social Contexts: The Effects of Housing Mobility and School Choice Programs on Youth Outcomes’, *Annual Review of Sociology*, vol.35, p.457-491.

DeLuca, Stefanie, Peter Rosenblatt. 2010. ‘Does Moving to Better Neighborhoods Lead to Better Schooling Opportunities? Parental School Choice in an Experimental Housing Voucher Program’, *Teachers College Record*, Columbia University, vol. 112, no.5, May, p.1443-1491.

Dickson-Gomez, Julia, B. Ellen Cromley, Mark Convey and Helena Hilario, 2009. ‘How Much Choice is There in Housing Choice Vouchers? Neighborhood Risk and Free Market Rental Housing Accessibility for Active Drug Users in Hartford, Connecticut’, *Substance Abuse Treatment, Prevention and Policy*, vol.4, no.5.

Dockery, Alfred Michael et al. 2008. *Housing Assistance and Economic Participation. National Research Venture 1: Housing Assistance and Economic Participation*, Final Research Paper, Australian Housing and Urban Research Institute (AHURI), July.

- Dockery, Alfred Michael et al. 2010. *Housing and Children's Development and Wellbeing: A Scoping Study*, AHURI Final Report no.149, Australian Housing and Urban Research Institute, Western Australia Research Centre, July.
- Dockery, Alfred Michael et al. 2013. *Housing and Children's Development and Wellbeing: Evidence from Australian Data*, AHURI Final Report, no.201, Australian Housing and Urban Research Institute, Western Australia Research Centre, March.
- Ellen, Ingrid Gould and Keren Mertens Horn. 2012. *Do Federally Assisted Households Have Access to High Performing Public Schools?*, Poverty and Race Research Action Council, November.
- Ellen, Ingrid Gould, Michael C. Lens and Katherine O'Regan. 2012. "American Murder Mystery Revisited: Do Housing Voucher Households Cause Crime?", *Housing Policy Debate*, vol.22, no.4, September, p.551-572.
- Erickson, Michael D. and Stuart S. Rosenthal. 2010. "Crowd Out Effects of Place-Based Subsidized Rental Housing: New Evidence from the LIHTC Program", *Journal of Public Economics*, vol.94, p.953-966.
- Evers, Adalbert et al. 2013. *Local Welfare Systems as Part of the German Welfare State: Housing, Employment and Child Care*, Welfare Innovations at the Local Level in Favour of Cohesion (WILCO), Publication no.08, 33 pages.
- Fallis, George. 1993. "On Choosing Social Policy Instruments: The Case of Non-Profit Housing, Housing Allowances or Income Assistance", *Progress in Planning*, vol. 4, no.1 .
- Feeny, Simon and Ong, Rachel and Spong, Heath and Wood, Gavin. 2011. "The Impact of Housing Assistance on the Employment Outcomes of Labour Market Programme Participants in Australia", *Urban Studies*. Vo. 49, no.4, p. 821-844.
- Fischer, Will. 2014. *Research Shows Housing Vouchers Reduce Hardship and Provide Platform for Long-Term Gains Among Children*, Center on Budget and Policy Priorities, Washington.
- Fitzpatrick-Lewis, Donna, Rebecca Ganann, Shari Krishnaratne, Donna Ciliska, Fiona Kouyoumdjian and Stepehn W. Hwang. 2011. "Effectiveness of Interventions to Improve the Health and Housing Status of Homeless People: A Rapid Systematic Review", *BMC Public Health*, vol.11, no.638, 14 pages.
- Fontaine, Jocelyn. 2013. "The Role of Supportive Housing in Successful Reentry Outcomes for Disabled Prisoners", *Cityscape*, Rental Assistance and Crime, vol. 15, no.3, p.53-75.
- Fortson, Jane G. and Lisa Sanbonmatsu. 2010. "Child Health and Neighborhood Conditions: Results from a Randomized Housing Voucher Experiment", *Journal of Human Resources*, vol.45, no.4, Fall, p.840-864.
- Freidman, Matthew and Emily G. Owens. 2010. "Low-Income Housing Development and Crime", *Journal of Urban Economics*, vol.70, no.203, September-November, p.115-131.

- Friedman, Danny. 2010. *Social Impact of Poor Housing*, ECOTEC.
- Galvez, Martha M. 2010. *What Do We Know about Housing Choice Voucher Program Location Outcomes? : A Review of Recent Literature*, What Works Collaborative, August.
- Gao, Ni, William R. Waynor and Shannon O'Donnell. 2009. 'Creating Organizational Commitment to Change: Key to Consumer Employment Success in a Supportive Housing Agency', *Journal of Vocational Rehabilitation*, vol.31, p.45-50.
- Gardiner, Laura and Dave Simmonds. 2012. *Housing Providers' Approaches to Tackling Worklessness: Assessing Value and Impact*, Report for the Centre for Economic and Social Inclusion for HACT, London, May.
- Gebler, Nancy et al. 2012. "Achieving MTO's High Effective Response Rates: Strategies and Tradeoffs", *Cityscape*, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, vol.14, no.2, p.57-86.
- Gennetian, Lisa A. 2012. "The Long-Term Effects of Moving to Opportunity on Youth Outcomes", *Cityscape*, vol.14, no.2, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, p.137-159.
- Gibbons, Stephen, Olmo Silva and Felix Weinhardt. 2013. "Everybody Needs Good Neighbourhoods? Evidence from Students' Outcomes in England", *The Economic Journal*, vol. 123, September, p.831-874.
- Gibson, Marcia, Mark Petticrew, Clare Bambra, Amanda J. Sowden, Kath E. Wright, Margaret Whitehead. 2011. 'Housing and Health Inequalities: A Synthesis of Systematic Reviews of Interventions Aimed at Different Pathways Linking Housing and Health', *Health and Place*, vol.17, p.175-184.
- Gielen, Andrea C. et al. 2012. "Home Safety and Low-Income Urban Housing Quality", *Pediatrics*, vol.130, no.6, December, p.1053-1059.
- Gill, Andrea M.K. 2012. "Moving to Integration? The Origins of Chicago's Gautreaux Program and the Limits of Voucher-Based Housing Mobility", *Journal of Urban History*, vol.38, no.4, p.662-686.
- Gregoir, Stéphane and Tristan-Pierre Maury. 2013. 'The Impact of Social Housing on the Labour Market Status of the Disabled', *Health Economics*, vol.22, p.1124-1138.
- Griffiths, Elizabeth and George Tita. 2009. "Homicide In and Around Public Housing: Is Public Housing a Hotbed, a Magnet, or a Generator of Violence for the Surrounding Community?", *Social Problems*, vol.56, no.6, August, p.474-493.
- Groenhart, Lusy. 2014. 'Employment of Public Housing Residents in Australian Cities', *Urban Policy and Research*, 17 pages.
- Gubits, Daniel, Jill Khadduri and Jennifer Turnham. 2009. *Housing Patterns of Low Income*

*Families with Children: Further Analysis of Data from the Study of the Effects of Housing Vouchers on Welfare Families*, Joint Center for Housing Studies, Harvard University, September.

Gultekin, Laura E. 2014. *In Their Own Words : Exploring Family Pathways to Housing Instability*, Dissertation submitted for the degree of Doctor of Philosophy (Ph.D) in Nursing, University of Michigan.

Haberman, Cory P., Elizabeth R. Groff and Ralph B. Taylor. 2013. ‘The Variable Impacts of Public Housing Community Proximity on Nearby Street Robberies’, *Journal of Research in Crime and Delinquency*, vol. 50, no. 2, p.163-188.

Harrison, Elizabeth L., Koren L. Fisher, Joshua A. Lawson, Karen E. Chad, M. Suzanne Sheppard, Bruce A. Reeder, Nigel L. Ashworth and Brenda G. Bruner. 2010. ‘Exploring the Role of Housing Type on Physical Activity and Health Status in Community-Dwelling Older Adults’, *Activities, Adaptation and Aging*, vol. 34, p.98-114.

Hayes, Christopher et al. 2013. ‘Public Housing Transformation and Crime: Are Relocatees More Likely to be Offenders or Victims?’, *Cityscape, Rental Assistance and Crime*, vol. 15, no.3, p.9-35.

Henwood, Benjamin F., Leopoldo J. Cabassa, Catherine M. Craig and Deborah K. Padgett. 2013. ‘Permanent Supportive Housing: Addressing Homelessness and Health Disparities?’, *American Journal of Public Health*, Supplement 2, vol.103, no. S2, p.S188-S193.

Hickman, Paul. 2010. *Understanding Residential Mobility and Immobility in Challenging Neighborhoods*, Research Paper no.8, Centre for Regional Economic and Social Research, Sheffield Hallam University, September.

Hipp, John R. 2010. ‘A Dynamic View of Neighborhoods: The Reciprocal Relationship between Crime and Neighborhood Structural Characteristics’, *Social Problems*. Vol.57, no.2, p.205-230.

Health and Housing Status of Homeless People: A Rapid Systematic Review’, *BMC Public Health*, vol.11, no.638, 14 pages.

Herbers, Janette E., Arthur Reynolds and Chin-Chih Chen. 2013. ‘School Mobility and Developmental Outcomes in Young Adulthood’, *Development and Psychopathology*, vol.25, no.2, May, p.501-515.

Howden-Chapman, Philippa, Licy Frances Telfar Barnard and Bob Lloyd. 2011. ‘Tacking Cold Housing and Fuel Poverty in New Zealand: A Review of Policies, Research and Health Impacts’, *Energy Policy*, January, 10 pages.

Horn, Keren Mertens, Ingrid Gould Ellen and Amy Ellen Schwartz. 2014. *Do Housing Choice Vouchers Live Near Good Schools?*, Working Paper, NYU Furman Center, February.

- Jacob, Brian A. and Jens Ludwig. 2012. 'The Effects of Housing Assistance on Labor Supply: Evidence from a Voucher Lottery', *American Economic Review*, vol. 102, no.1, p.272-304.
- Jacob, Brian A., Max Kapustin and Jens Ludwig. 2015. 'The Impact of Housing Assistance on Child Outcomes: Evidence from A Randomized Housing Lottery', *The Quarterly Journal of Economics*, p.465-506.
- Jacobs, David E., Jonathan Wilson, Sherry L. Dixon, Janet Smith and Anne Evans. 2009. 'The Relationship of Housing and Population Health: A 30-Year Perspective Analysis', *Environmental Health Perspectives*, vol.117, no.4, April, p.597-604.
- Jakubec, Sonya et al. 2012. "'More Than the House': A Canadian Perspective on Housing Instability", *Housing, Care and Support*, vol.15, no.3, p.99-108.
- Johnson, Erin, Eugene C. Cole and Ray Merrill. 2009. 'Environmental Health Risks Associated with Off-Campus Student-Tenant Housing', *Journal of Environmental Health*, January/February, vol. 71, no.6, p.43-47.
- Keall, Michael et al. 2010. 'Assessing Housing Quality and Its Impacts on Health, Safety and Sustainability', *Journal of Epidemiology and Community Health*, vol.64, no.9, September, p.765-771.
- Kessler, Ronald C. et al. 2014. 'Associations of Housing Mobility Interventions for Children in High-Poverty Neighborhoods With Subsequent Mental Disorders During Adolescence', *The Journal of the American Medical Association*, vol.311, no.9, March.
- Lanus, Ramon Maria. 2009. *Do Poor Housing conditions Affect Educational Attainment? An Analysis of the Impact of Poor Housing on Educational Achievement. A Study Based in Buenos Aires, Argentina*, Thesis submitted in partial fulfillment for the degree of Master of Public Policy, Georgetown University, Washington, D.C.
- Laurin, Alexandre and Finn Poshman. 2011. *What's My METR? Marginal Effective Tax Rates Are Down – But Not for Everyone: The Ontario Case*, Policy Brief, C.D. Howe Institute, April 27<sup>th</sup>.
- Leech, Tamara G.J. 2012. "'Subsidized Housing, Public Housing, and Adolescent Violence and Substance Use'", *Youth and Society*, vol. 44, no.2, p.217-235.
- Lelkes, Orsolya and Eszter Zolyomi. 2009. *Quality of Housing and the Link to Income*, Research Note no.2, European Commission, November.
- Leloup, Xavier et Paul Morin. 2012. *Les modes d'allocation du logement social ont-ils un effet sur le bien-être et la santé des familles? Une comparaison des programmes d'habitation à loyer modique (HLM) et de supplément de loyer (PSL) à Montréal*, Rapport, Canada Mortgage and Housing Corporation (CMHC), Mars.

Lens, Michael C. 2011. *Estimating the Spatial Relationships between Subsidized Housing and Crime*, Dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, New York University.

Lens, Michael C. 2013. "Safe, but Could be Safer: Why Do HCVP Households Live in Higher Crime Neighborhoods?", *Cityscape*, Rental Assistance and Crime, vol. 15, no.3, p.131-152.

Lens, Michael C. 2013. "The Limits of Housing Investment as a Neighborhood Revitalization Tool: Crime in New York City", *Journal of the American Planning Association*, vol.79, no.3, Summer, p.211-222.

Lens, Micheal C. 2013. "The Impacts of Housing Vouchers on Crime in U.S. Cities and Suburbs", *Urban Studies*, vol. 51, no.6, May, p.1274-1289.

Lens, Michael C. 2013. "Subsidized Housing and Crime: Theory, Mechanisms, and Evidence", *Journal of Planning Literature*, vol.28, no.4, p.352-363.

Lens, Michael. 2014. "Employment Accessibility Among Housing Subsidy Recipients", *Housing Policy Debate*, vol. 24, no. 4, p.671-691.

Lens, Michael C., Ingrid Gould Ellen and Katherine O'Regan. 2011. *Neighborhood Crime Exposure Among Housing Voucher Households*, Assisted Housing Research Cadre Report, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, February, 31 pages.

Lesneskie, Eric G. 2013. *Public Housing and Lethal Violence: An Analysis of the Effect of the Presence of Public Housing on Homicide Rates*, Dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy (Ph.D.), State University of New Jersey, May.

Leventhal, Tama and Sandra Newman. 2010. "Housing and Child Development", *Children and Youth Services Review*, vol.32, p.1165-1174.

Lindberg, Ruth A., Susan J. Popkin, Edmond D. Shenassa and Andrés Villaveces. 2010. "Housing Interventions at the Neighborhood Level and Health: A Review of the Evidence", *Journal of Public Health Management and Practice*, August, vol.16, no.5, p.44-52.

Ludwig, Jens et al. 2011. "Neighborhoods, Obesity, and Diabetes – A Randomized Social Experiment", *The New England Journal of Medicine*, vo.365, p.1509-1519.

Ludwig, Jens et al. 2012. "Neighborhood Effects on the Long-Term Well-Being of Low-Income Adults", *ScienceMag*, vol.337, September 21<sup>st</sup>, p.1505-1510.

Ludwig, Jens et al. 2013. "Long-Term Neighborhood Effects on Low-Income Families: Evidence from Moving to Opportunity", *American Economic Review Papers and Proceedings*, vol.103, no.3, May, p.226-231.

Lupton, Ruth et al. 2009. *Growing Up in Social Housing in Britain: A Profile of Four Generations, 1946 to the Present Day*, Institute of Education, Centre for Research on the Wider Benefits of Learning, London School of Economics and Political Science.

MacLennan, Duncan. 2008. *Housing for the Toronto Economy*, Research Paper 212, University of Toronto Cities Centre.

Magpool, Habibah, Janet Viveiros and Mindy Ault. 2015. *The Impacts of Affordable Housing on Health: A Research Summary*, Insights from Housing Policy Research, Center for Housing Policy, April.

Mahamoud, Aziza et al. 2012. *Housing and Health: Examining the Links*, Wellesley Institute, March.

Manley, David and Maarten van Ham. 2012. "Chapter 7 - Neighborhood Effects, Housing Tenure and Individual Employment Outcomes", in M. van Ham et al. (ed.), *Neighborhood Effects Research: New Perspectives*, p.147-173.

Martens, Patricia J. et al. 2014. "The Effects of Neighborhood Socioeconomic Status on Education and Health Outcomes for Children Living in Social Housing", *American Journal of Public Health*, vol.104, p.2103-2113.

Mast, Brent D. and Ronald E. Wilson. 2013. "Housing Choice Vouchers and Crime in Charlotte, NC", *Housing Policy Debate*, vol. 23, no.3, p.559-596.

Mayberry, Lindsay S., et al. 2014. "Families Experiencing Housing Instability: The Effects of Housing Programs on Family Routines and Rituals", *American Journal of Orthopsychiatry*, vol.84, no.1, p.95-109.

McClure, Kirk. 2013. "Which Metropolitan Areas Work Best for Poverty Deconcentration with Housing Choice Vouchers?", *Cityscape*, Rental Assistance and Crime, vol. 15, no.3, p.209-236.

McNamara, Justine et al. 2010. "Children in Housing Disadvantage in Australia: Development of a Summary Small Area Index", *Housing Studies*, vol.25, no.5, p.625-646.

Molnar, Agnes et al. 2012. "Health Impact Assessment of Roma Housing Policies in Central and Eastern Europe: A Comparative Analysis", *Environmental Impact Assessment Review*, vol.33, p.7-14.

Murphy, Amy et al. 2012. *The Healthy Homes Program Guidance Manual*, U.S. Department of Housing and Urban Development and Office of Healthy Homes and Lead Hazard Control.

Najman, Jake M. et al. 2009. "The Impact of Episodic and Chronic Poverty on Child Cognitive Development", *Journal of Pediatrics*, no.154, p.284-289.

Nelson, Julianne. 2010. "No Room at the Inn: Pregnancy and Overcrowding: Overcrowding and Poor Housing Can Put the Health of Pregnant Women and their Babies at Risk. Midwife Julianne

- Nelson Discusses Ways of Tackling this Public Health Challenge”, *Journal of Family Healthcare*, vol.4, no.20, August, p.112.
- Newman, Sandra, C. Scott Holupka and Joseph Harkness. 2009. “The Long-Term Effects of Housing Assistance on Work and Welfare”, *Journal of Policy Analysis and Management*, vol.28, no.1, p.81-101.
- Newman, Sandra J. and C. Scott Holupka. 2014. “Housing Affordability and Investments in Children”, *Journal of Housing Economics*, vol.24, p.89-100.
- Newman, Sandra J. and C. Scott Holupka. 2015. “Housing Affordability and Child Well-Being”, *Housing Policy Debate*, vol.25. no.1, p.116-151.
- Nicols, Simon, Mike Roys and Helen Garrett. 2012. *The Cost of Poor Housing to the NHS*, Briefing Paper, Building Research Environment (BRE), united Kingdom.
- Northern Illinois University Center for Governmental Studies. 2011. *Dubuque 2010 Study on Crime & Poverty*, Summary Report, January 14<sup>th</sup>.
- Obradovic, Jelena et al. 2009. “Academic Achievement of Homeless and Highly Mobile Children in an Urban School District: Longitudinal Evidence on Risk, Growth, and Resilience”, *Development and Psychopathology*, no.21, p.493-518.
- Orfield, Myron et al. 2015. “FORUM: High Costs and Segregation in Subsidized Housing Policy”, *Housing Policy Debate*, vol. 25, no.3, p.574-607.
- Owens, Ann. 2013. “Perceptions of Disorder, Violence, and Safety Amid the Transformation of Assisted Housing”, *Cityscape*, Rental Assistance and Crime, vol. 15, no.3, p.77-103.
- Parkinson, Sharon et al. 2014. *Wellbeing Outcomes of Lower Income Renters: A Multilevel Analysis of Area Effects*, AHURI Final Report no.226, Australian Housing and Urban Research Institute (AHURI), August.
- Park, Jun Min, Angela R. Fertig and Paul D, Allison. 2011. ‘Physical and Mental Health, Cognitive Development, and Health Care Use by Housing Status of Low-Income Young
- Pendall, Rolf et al. 2014. *Driving to Opportunity: Understanding the Links among Transportation Access, Residential Outcomes, and Economic Opportunity for Housing Voucher Recipients*, Urban Institute, March.
- Petticrew, Mark, Ade Kearns, Phil Mason and Caroline Hoy. 2009. The SHARP Study: A Quantitative and Qualitative Evaluation of the Short-Term Outcomes of Housing and Neighbourhood Renewal’, *BMC Public Health*, November, vol.9, no.415, 14 pages.
- Phibbs, Peter and Susan Thompson. 2011. *The Health Impacts of Housing: Toward a Policy-Relevant Research Agenda*, AHURI Final Report no.173, Australian Housing and Urban Research Institute (AHURI), August.

- Phinney, Robin. 2009. *Residential Mobility, Housing Problems, and Child Outcomes in the Women's Employment Study*, Report prepared for the Center for Housing Studies, May.
- Pleace, Nicholas and Jon Minton. 2009. *Delivering Better Housing and Employment Outcomes for Offenders on Probation*, Research Report no 610, Department for Work and Pensions, Centre for Housing Policy, University of York.
- Pollack, Craig Evan, Beth Ann Griffin And Julia Lynch. 2010. 'Housing Affordability and Health Among Homeowners and Renters', *American Journal of Preventive Medicine*, vol. 39, no.6, p.515-521.
- Popkin, Susan J. et al. 2012. 'Public Housing Transformation and Crime: Making the Case for Responsible Relocation', *Cityscape*, vol.14, no.3, p.137-160.
- Popkin, Susan J., Diane K. Leny and Larry Buron. 2009. 'Has HOPE IV Transformed Residents' Lives? New Evidence from the HOPW IV Panel Study', *Housing Studies*, vol.24, no.4, p.447-502, July.
- Popkin, Susan J., Tama Leventhal and Gretchen Weismann. 2010. 'Girls in the 'Hood: How Safety Affects the Life Chances of Low-Income Girls', *Urban Affairs Review*, vol.45, no.6, July, p.715-744.
- Quinn, Kelly, Jay S. Kaufman, Arjumand Siddiqi and Karim B. Yeatts. 2010. 'Stress and the City: Housing Stressors are Associated with Respiratory Health among Low Socioeconomic Status Chicago Children', *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, vol.87, no.4, 15 pages.
- Ravi, Arjun. 2012. *Lakewood CMC: Social Return on Investment Evaluation*, Report, April.
- Research Alliance for Canadian Homelessness, Housing and Health (Reach<sup>3</sup>). 2010. *Housing Vulnerability and Health: Canada's Hidden Emergency*, The Homeless Hub Report Series, Report on the Reach<sup>3</sup> Health and Housing in Transition Study, Toronto, November, no.2.
- Riccio, James A. 2010. *Sustained Earnings Gains for Residents in a Public Housing Jobs Program: Seven-Year Findings from the Jobs-Plus Demonstration*, MDRC Policy Brief.
- Roman, Caterina G. et al. 2009. 'The Relation of the Perceived Environment to Fear, Physical Activity, and Health in Public Housing Developments: Evidence from Chicago', *Journal of Public Health Policy*, vol.30, p.286-308.
- Rosenbaum, James E. and Stefanie DeLuca. 'Does Changing Neighborhoods Change Lives? The Chicago Gautreaux Housing Program', in David Grusky editor, David Grusky, ed. (pp. 393-399). Westview.
- Rosenblatt, Peter and Stefanie DeLuca. 2012. ' "We Don't Live Outside, We Live in Here": Neighborhood and Residential Mobility among Low-Income Families', *City and Community*, vol.11, no.3, September, p.254-284.

- Rosin, Hanna. 2008. ‘‘American Murder Mystery’’, *The Atlantic*, July/August, [online] <http://www.theatlantic.com/magazine/archive/2008/07/american-murder-mystery/306872/> (page consulted on September 11<sup>th</sup> 2015)
- Rowler, Steven and Rachel Ong. 2012. *Housing Affordability, Housing Stress and Household Wellbeing in Australia*, AHURI Final Report no.192, Australian Housing and Urban Research Institute (AHURI), September.
- Ruel, Erin et al. 2010. ‘Is Public Housing the Cause of Poor Health or a Safe Net for the Unhealthy Poor?’, *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, vol.87, no.5, 827-839.
- Rumbold, Alice R. et al. 2012. ‘The Effects of House Moves During Early Childhood on Child Mental Health at Age 9 Years’, *BMC Public Health*, vol.12, p.583.
- Ruming, Kristian. 2011. ‘Housing and Health in Europe’, Book Reviews, *Australian Planner*, vol.48, no.2, June, p.109-110.
- Sanbonmatsu, Lisa et al. 2011. *Moving to Opportunity for Fair Housing Demonstration Program*, Final Impacts Evaluation, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, November.
- Sanbonmatsu, Lisa et al. 2012. ‘The Long-Term Effects of Moving to Opportunity on Adult Health and Economic Self-Sufficiency’, *Cityscape*, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, vol.14, no.2, p.109-136.
- Sandler, Danielle H. 2012. *Is Public Housing a Public Bad? Externalities of Chicago’s Public Housing Demolitions*, University of California, Davis, U.S.
- Sandstrom, Heather and Sandra Huerta. 2013. *Low Income Working Families*, Discussion Paper 3, September.
- Santiago, Anna Maria and George C. Galster. 2014. ‘The Effects of Childhood Exposure to Neighborhood and Community Violence: Impacts on the Safety and Well-Being of Low-Income, Minority Children’, *Journal of Community and Practice*, vol.22, p.29-46.
- Sarpca, Sinan, Charles Ka Yui Leung and Kuzey Yilmaz. 2010. *Public Housing Units vs. Housing Vouchers: Accessibility, Local Public Goods, and Welfare*, Working Paper 1032, November.
- Saugeres, Lise and Kath Hulse. 2010. *Public Housing, Women and Employment: Challenges and Strategies*, Final Report no.155, Australian Housing and Urban Research Institute (AHURI), November.
- Sautkina, Elena, Lyndal Bond and Ade Kearns. 2012. ‘Mixed Evidence on Mixed Tenure Effects: Findings from a Systematic Review of UK Studies, 1995-2009’, *Housing Studies*, vol.27, no.6, p.748-782.

- Sciandra, Matthew et al. 2013. ‘‘Long-term Effects of the Moving to Opportunity Residential Mobility Experiment on Crime and Delinquency’’, *Journal of Experimental Criminology*, vol. 9, p.451-489.
- Schoon, Ingrid, et al. 2012. ‘‘Family Hardship, Family Instability, and Cognitive Development’’, *Journal of Epidemiology and Community Health*, vol.66, p.716-722.
- Shroder, Mark. 2010. *Housing Subsidies and Work Incentives*, U.S. Department of Housing and Urban Development, Office of Policy Development and Research.
- Shroder, Mark D. and Michelle P. Matuga (ed.). 2012. ‘‘Moving to Opportunity’’, *Cityscape*, vol.14, no.2, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, July.
- Schultheis, Eric, Gregory Russ and Carolina Lucey. 2012. ‘‘Using Administrative Data for Spatial and Longitudinal Analysis of the Housing Choice Voucher Program’’, *Cityscape*, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, vol.14, no.3, p.195-206.
- Schwartz, Amy Ellen, et al. 2010. ‘Public Schools, Public Housing: The Education of Children Living in Public Housing’, *Urban Affairs Review*, vol.46, no.1, p.68-89.
- Sharkey, Patrick et al. 2013. *High Stakes in the Classroom, High Stakes in the Street: The Effects of Community Violence on Students’ Standardized Test Performance*, Working Paper no. 03-13, IESP, March.
- Sharkey, Patrick and Robert J. Sampson. 2010. ‘‘Destination Effects: Residential Mobility and Trajectories of Adolescent Violence in a Stratified Metropolis’’, *Criminology*, vol.48, no.3, p.639-681.
- Shinn, Marybeth. 2009. *Ending Homelessness for Families: The Evidence for Affordable Housing*, Homelessness Research Institute, National Alliance to End Homelessness.
- Sokolowsky, Amanda Nicole. 2014. *Health Hazards in Rental Housing: An Overview of Clark County, Nevada*, Thesis, Submitted in partial fulfillment of the requirements of the Master of Public Health, University of Nevada, Las Vegas.
- Small, Mario Louis and Jessica Feldman. Forthcoming. ‘‘Chapter 3 – Ethnographic Evidence, Heterogeneity, and Neighborhood Effects after Moving to Opportunity’’, in van Ham, M. et al. (ed.), *Neighborhood Effects Research: New Perspectives*.
- Smith, Robin et al. 2014. ‘‘Coercive Sexual Environments: What MTO Tells Us About Neighborhoods and Sexual Safety’’, *Cityscape*, vol.16, no.1, p.85-112.
- SRDC. 2002. *Self-Sufficiency Project (SSP) - Making Work Pay*, Final Report, Long-Term Welfare Recipients.

Stapleton, John. 2010. *Zero Dollar Linda: A Meditation on Malcolm Gladwell's 'Million Dollar Murray', the Linda Chamberlain Rule, and the Auditor General of Ontario*, Metcalf Foundation, Toronto, November.

Stephens, Mark, Suzanne Fitzpatrick and Alison Wallace. 2010. *Study on Housing Exclusion: Welfare Policies, Housing Provision and Labour Markets. Country Report for the United Kingdom*, European Commission, May.

Suglia, Shakira Franco, Cristiane S. Duarte and Megan T. Sandel. 2011. 'Housing Quality, Housing Instability, and Maternal Mental Health', *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, vol.88, no.6, p.1106-1116.

Sun, Yongmin, and Yuanzhang Li. 2011. 'Effects on Family Structure Type and Stability on Children's Academic Performance Trajectories', *Journal of Marriage and Family*, vol.73, June, p.541-556.

Suresh, Geetha and Gennaro F. Vito. 2009. 'Homicide Patterns and Public Housing: The Case of Louisville, KY (1989-2007)', *Homicide Studies*, vol.13, no.4 , p.411-433.

Taylor, Matthew and Ben Edwards. 2012. 'Housing and Children's Wellbeing and Development', *Family Matters*, no.91, p. 47-52.

Tegeler, Philip, ed. 2011. *Finding Common ground: Coordinating Housing and Education Policy to Promote Integration*, Poverty and Race Research Action Council and The National Coalition on School Diversity.

Theodos, Brett, Claudia Coulton and Amos Budde. 2014. 'Getting to Better Performing Schools: The Role of Residential Mobility in School Attainment in Low-Income Neighborhoods', *Cityscape*, vol.16, no.1, p.61-84.

Thomson, Hilary and Sian Thomas. 2009. 'The Health Impacts of Housing Improvement: A Systematic Review of Intervention Studies From 1887 to 2007', *American Journal of Public Health*, November, vol.99, no.S3, p.S681-S692.

Tunstall, Rebecca, et al. 2011. *Growing Up in Social Housing in the New Millenium: Housing, Neighborhoods, and Early Outcomes for Children Born in 2000*, Centre for Analysis of Social Exclusion, London School of Economics, Case/143, February.

Tunstall, Rebecca, et al. 2013. *The Links Between Housing and Poverty: An Evidence Review*, Joseph Rowntree Foundation.

Turner, Margery Austin and Alan Berube. 2009. *Vibrant Neighborhoods, Successful Schools: What the Federal Government Can Do to Foster Both*, The Urban Institute, July.

Tyler, Frederick J., et al. 2014. 'How Stable is Stable? Defining and Measuring Housing Stability', *Journal of Community Psychology*, vo.42, no.8, p.964-979.

U.S. Department of Housing and Urban Development (HUD). 2009. *Leading Our Nations to Healthier Homes: The Healthy Homes Strategic Plan*.

Van Ham, Maarten and David Manley. 2010. 'The Effect of Neighbourhood Housing Tenure Mix on Labour Market Outcomes: A Longitudinal Perspective', *Journal of Economic Geography*, vol.10, p.257-282.

Van Zandt, Shannon and Patrick Mhatre. 2013. "The Effects of Housing Choice Voucher Households on Neighborhood Crime: Longitudinal Evidence from Dallas", *Poverty & Public Policy*, vol.5, no.3, September, p.229-249.

Weinhardt, Felix. 2010. *Moving into the Projects: Social Housing Neighbourhoods and School Performance in England*, SERC Discussion Paper 44, February.

Weitzman, Michael, et al. 2013. "Housing and Child Health", *Current Problems in Pediatric and Adolescent Health Care*, vol.43, September, p.187-224.

Williamson, Anne R., Marc T. Smith and Marta Strambi-Kramer. 2009. "Housing Choice Vouchers, the Low-Income Housing Tax Credit, and the Federal Poverty Deconcentration Goal", *Urban Affairs*, vol.45, no. 1, September, p. 119-132.

Wood, Gavin, Rachel Ong and Alfred M. Dockery. 2009. *The Long Run Decline in Employment Participation for Australian Public Housing Tenants: An Investigation*, The Centre for Labour Market Research, CLMR Discussion Paper, 34 pages.

World Health Organization. 2011. *Closing the Gap: Policy Into Practice on Social Determinants of Health*, Discussion Paper, World Conference on Social Determinants of Health.

Ziol-Guest, Kathleen M. and Claire McKenna. 2009. *Early Childhood Residential Instability and School Readiness: Evidence from the Fragile Families and Child Wellbeing Study*.

Visit our website at [www.cmhc.ca](http://www.cmhc.ca)