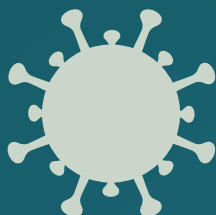


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Housing and Social Inequalities in Health in Times of COVID-19: Strategies for Promoting Affordable Quality Housing

RAPID KNOWLEDGE SYNTHESIS

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Notification

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Highlights

The COVID-19 pandemic and the preventive and control measures put in place to protect against the associated health risk have highlighted existing social inequalities in health. The population was asked to spend more time at home to minimize the risk of coming into contact with the virus, which prompted the scientific community to examine the impact of housing conditions during the health crisis. Thus, it was observed that:

- ▶ Housing, including its surrounding environment, is an important determinant of health, wellbeing and quality of life;
- ▶ Living in unhealthy, unsafe or overcrowded housing can have negative effects on physical and mental health, especially during periods of confinement;
- ▶ Safe and healthy housing can act as a protective factor against the transmission of COVID-19;
- ▶ Disadvantaged populations that are less well housed are less well protected from COVID-19 during periods of confinement;
- ▶ During the COVID-19 pandemic, social inequalities in housing have intensified: disadvantaged populations are more likely to be poorly housed and it has become more difficult for them to access quality housing;
- ▶ The economic impact of the pandemic is reducing access to quality housing, particularly for large families and disadvantaged households;
- ▶ In the short term and during a pandemic, providing emergency assistance to households in precarious housing situations can reduce housing instability. This can be done in particular by alleviating or allowing the deferral of financial obligations related to housing and by minimizing the number of eviction orders attributable to overdue rents;
- ▶ In the medium term, it is necessary to increase access to quality housing so as to better protect the population from COVID-19 and other contagious infections. Several strategies can be employed, including increasing the supply of safe and healthy housing, developing complete living environments and implementing mechanisms that result in a sustainable supply of affordable housing;
- ▶ It is important to better document the characteristics of the housing stock to improve understanding of its impacts on the health of the Québec population, both when COVID-19 is prevalent and over the longer term;
- ▶ Investing in social and community housing is a strategy that allows many housing issues to be addressed in a sustainable manner.

Background

The COVID-19 pandemic has led Québec, like many jurisdictions around the world, to recommend the application of strict health measures to curb its spread (1). These measures are aimed, in particular, at limiting the number of contacts between people and physically distancing people from one another. These are considered effective approaches to reducing transmission and the number of cases of COVID-19 (2, 3). During periods of high virus transmission, these measures called for the suspension of all workplace activities that could not be directly or indirectly associated with the provision of essential services, resulting in the temporary closure of many sports and recreational, work, educational and daycare settings.

Usually reserved for private life, the home suddenly became a place for work, education and childcare. The health measures made it the ideal place to take shelter from the spread of COVID-19 and, therefore, an essential element of the strategy for controlling the spread of the virus (4). Housing has long been recognized as an important determinant of health and health equity (5). Thus, the characteristics of their dwelling influence how people adapt to the various constraints and impacts of the pandemic (6-8).

Already in 1986, the Ottawa Charter for Health Promotion described housing as quite simply a “prerequisite for health” (9). Social inequalities between socio-economic groups are evidenced, in particular, by unequal housing conditions. As a result, populations disadvantaged by these inequalities are often forced to live in housing characterized by factors that are harmful to their health and wellbeing (10). Neighbourhood features, type of tenure (ownership status), the social conditions of the occupants, the quality of the housing itself and its financial aspects are among the dimensions of housing that can influence people's health status. Housing is thus an expression of social inequalities, but it is also itself a factor that increases wealth inequalities between groups distinguished by whether or not they have access to property (5, 10).

During the pandemic, the consequences of living in poor quality housing have been exacerbated in more ways than one (4, 12-15). Firstly, poor housing conditions can increase the risk of transmission of the virus between occupants, particularly through overcrowding or inadequate ventilation. Secondly, health measures such as confinement have resulted in prolonged exposure to poor housing conditions, which may have had a negative effect on the physical and mental health of individuals. For example, people living in unhealthy housing were more likely to develop respiratory problems such as asthma or emphysema (6, 11, 16). In addition to this, occupants of dwellings that were too small experienced more episodes of psychological distress and domestic violence (17-19). The characteristics of neighbourhoods also had a significant impact on people's health by either providing or failing to provide access to services and infrastructure that support a healthy lifestyle, such as parks and green spaces or access to local shops. Finally, the economic impact of the pandemic appears to be reducing access to quality housing, particularly for disadvantaged households (10, 14, 20).

This document begins with a review of how housing can influence the health and quality of life of its occupants. It then presents the findings on the impact of housing on the health of the Québec population during the COVID-19 period. As a response to this impact, this report proposes strategies for improving housing conditions and reducing social inequalities in health, starting with specific actions that can support households whose housing conditions have become increasingly unstable during the pandemic. It concludes by outlining medium-term strategies for improving the supply of healthy, safe and affordable housing.

Objectives and methodology

This document is intended for the public health network and its partners, including municipalities, regional county municipalities (RCMs) and community organizations. It aims to:

- ▶ review evidence of the influence of housing on health and quality of life;
- ▶ illustrate how the COVID-19 pandemic has exacerbated social inequalities in health related to housing;
- ▶ describe the impacts of health measures, particularly confinement, on the health and quality of life of disadvantaged populations;
- ▶ describe promising strategies for increasing the supply of safe, healthy, affordable housing and healthy living environments.

To achieve this, a documentary search was carried out using key words on two platforms comprising several databases. A rapid consultation of the grey literature was also carried out.

The list of the keywords used, the databases consulted, the description of the methodological process and the grid used to assess the level of support for the strategies presented in this document are available in *Annexe 1 (all appendices are available only in the French version of this document)*.

Housing, an important determinant of health

Affordability, access, residential stability, location and conditions (quality and safety) are factors that make housing an important determinant of health and of social inequalities in health (5, 21-25).

Conditions: quality and safety

It has been repeatedly demonstrated that poor housing conditions have adverse effects on health. For example, poor housing conditions may be related to inadequate ventilation, lack of protection from temperature extremes, infestations of pests or other pathogens, exposure to materials causing adverse health effects, overcrowding¹ and increased risk of injury (26-28). These conditions can result in deterioration of cardiac, respiratory and mental health conditions as well as an increase in unintentional injuries (11).

Affordability²

Living in unaffordable housing can affect one's health. On the one hand, it is now recognized that the inability to pay for housing is a source of anxiety and depression, which undermine mental health (6, 12, 26-28). On the other hand, when housing costs represent a significant portion of household income, less money is available for other basic needs such as food, clothing and transportation. Thus, unaffordable housing has indirect impacts on food security and on the mental and physical health of adults and children. These impacts may also force households to live in housing that is of low-quality or too small for the number of occupants. Finally, unaffordability can also lead to residential instability and sometimes even homelessness (32, 33).

¹ According to the Canada Mortgage and Housing Corporation (CMHC), which established the National Occupancy Standard (NOS), a dwelling is of adequate size if it has enough bedrooms for the size and composition of the household. The NOS establishes the number of bedrooms a household needs as follows: "A maximum of two people per bedroom; household members, of any age, living as part of a married or common-law couple share a bedroom with their spouse or common-law partner; Parents in a one-parent family, of any age, have a separate bedroom. Household members aged 18 or over have a separate bedroom - except those living as part of a married or common-law couple. Household members under 18 years old of the same sex share a bedroom - except parents in a one-parent family and those living as part of a married or common-law couple. Household members under 5 years old of the opposite sex share a bedroom if doing so would reduce the number of required bedrooms" (26).

² Affordable housing: housing for which a household spends less than 30% of its pre-tax income (12).

Residential stability

Residential stability fosters health prevention and protection (5, 34). Residential instability is associated with having difficulty paying rent, spending more than 50% of household income on housing, moving frequently, living in overcrowded conditions or experiencing hidden homelessness³ (36). It results in a higher risk of mortality (from any cause), increased risk of heart disease, high blood pressure, poor self-reported health and a greater propensity to smoke. The mere threat of eviction is associated with anxiety, depression and increased exposure to violent behaviour (11). For children, residential instability can also be detrimental to their physical, emotional and intellectual development, and can lead to mental health disorders in adulthood (5).

Access

Restrictions on access to housing can have health implications. Apart from the economic aspect discussed above, restrictions on access may be due to discrimination, based on gender, ethnic origin, family situation or disability status (5). Discrimination that restricts access to certain dwellings drives households to live in poor quality housing or in areas with reduced access to certain services (grocery stores, schools, active and public transportation networks, green spaces, etc.). Such discrimination may subsequently indirectly impact physical and mental health (37).

Location

Several factors related to the location of housing can have an impact on the health of individuals. The underlying mechanism is linked to the presence of certain services or infrastructure or to the layout of the surrounding urban environment. For example, having cycling and pedestrian facilities near one's home is associated with increased physical activity and a reduced risk of road injury (38). On the other hand, living near roads with high traffic volumes may be associated with negative physical and mental health effects (e.g., dementia, asthma, respiratory diseases, some cancers) (39-41).

Housing and social inequalities in health

These associations which detail the relationship between housing and health give rise to social inequalities in health, because economically and socially disadvantaged populations are most affected by lack of access, residential instability, unfavourable locations and poor housing conditions (7, 31, 42).

Key findings concerning the impact of housing quality during a pandemic

Quality housing appears to offer some protection against COVID-19 contagion

Housing conditions, such as the type of dwelling inhabited, and the size of its living area relative to the size of the household residing there, have been associated with the risk of contracting, and of ultimately dying, from COVID-19 (19, 42-44). The size of a dwelling has an impact on the ability to isolate oneself and to maintain a certain distance from other household members (44). Indeed, living in a small space with several people can increase the risk of contagion because of the difficulty of maintaining physical distance if a household member has COVID-19 or has been in contact with a reported case. The more people in a household, the greater the number of potential opportunities for transmission of the virus within the household (44). This is particularly true of intergenerational households,⁴ which have been associated with a greater potential for exposure to the virus due to the risk of contagion attached to living with younger people (45-47). In this sense, a dwelling that is sufficiently large for the number of people occupying it confers a protective effect with respect to exposure to the virus. In fact, in Québec, during the first wave of the pandemic (March-July 2020), the mortality rate among people living in households of five or more people (regardless of the size of the dwelling) was 1.4 times higher than those living in single-person households (44). Moreover, certain population groups are at greater risk of living in overcrowded conditions, including, in

³ People who are experiencing hidden homelessness lack a stable place of residence and frequently go from one type of housing to another (including dwelling units, shelters or other living quarters) (35).

⁴ An intergenerational household consists of an elderly person living with at least one of their adult children or grandchildren (45).

particular, more disadvantaged populations such as newcomers or those with lower incomes (19, 44).

As for multi-unit buildings, special attention must be paid to common areas (entrances, elevators, laundry rooms, etc.) in the context of a pandemic because the frequency of close contact with other people is increased, which can augment the risk of contagion (44, 48). In Québec, during the first wave of COVID-19, people living in high-rise buildings had higher mortality rates from COVID-19 than those living in single-family homes⁵ (44). However, living in a multi-unit building is not an issue in itself if proper protective measures are applied. Entrances, stairways and common areas must be of sufficient size for the number of dwellings and be usable in a way that allows for physical distancing. In addition, dwellings should be well maintained, allow for good ventilation and provide easy access to outdoor spaces (balconies, terraces, etc.) (49-51).

Poor housing conditions during confinement are associated with negative impacts on physical and mental health

In periods when the population is urged to spend more time at home, living in housing that is in poor condition, too small, lacking private access to the outdoors, or in a neighbourhood with poor urban planning exacerbates social inequalities in health (15). The quality of the environment in which a dwelling is located is of even greater significance to disadvantaged populations who are more likely to live in poor quality housing. Given the lack of affordable housing for low-income households, many are forced to live in unhealthy housing because they cannot find anything better within their budget (5). Renters are more likely to live in unhealthy housing⁶ than homeowners. Among other things, temperatures that are too cold (6.5% of owners' dwellings versus 19.2% of renters' dwellings) or too hot (9.1% of owners' dwellings versus 28.3% of renters' dwellings) are three times more prevalent in renters' households (5).

Dwellings in poor condition, with inadequate heating, insulation, ventilation or lighting have been observed to adversely affect physical and mental health (15, 16, 27, 52-55). For example, children living in unhealthy housing are more likely to experience respiratory problems such as asthma and allergies (27, 56). During extreme cold and heat events, difficulty regulating the temperature in the home can also engender negative health effects, especially for those who are more sensitive to temperature changes (e.g., seniors, children, chronically ill persons) (57).

In addition, people who are confined to small or overcrowded homes may have more difficulty maintaining privacy, a greater risk of developing mental health problems (e.g., episodes of psychological distress or depression), and more health risks associated with sedentary living (17, 19, 58, 59). Lack of space at home is also thought to increase social inequalities for children for whom it is more difficult to set up a space dedicated to school work, and to ensure good learning conditions (18). The size of a dwelling could also be a factor affecting relationships, with arguments and separations occurring more frequently in households where space is lacking. This is suspected to have an impact on domestic violence, particularly for women, children and seniors (18, 19, 60, 61). According to the latest available data, nearly one in ten renter households in Canada consider their dwelling to be of insufficient size, and one in eight Québec families with young children live in a dwelling that is too small (62, 63). That said, living alone during a period of confinement can engender feelings of loneliness and diminish quality of life and feelings of wellbeing (58, 64).

Households with private outdoor space (e.g., garden, balcony) were able to enjoy the health and wellbeing benefits associated with outdoor activities, while those who were more materially disadvantaged had their access to outdoors restricted (6, 19, 53, 58, 65). Notably, having an outdoor space is considered to be a calming factor in situations of conflict (18). In addition, living in a neighbourhood where nearby goods and services (e.g., parks and green spaces, active and public transportation infrastructure, businesses, etc.) are accessible and safe fosters the health of residents, in particular, by encouraging the adoption of healthy

⁵ The mortality rate attributable to COVID-19 was age-standardized. Also, residents of long-term care homes were excluded.

⁶ Indicators of unhealthy conditions include the presence of: bedbugs, cockroaches, rodents, visible mould, traces of water infiltration, vermin, excessive humidity, or temperatures that are too hot or too cold (5).

living habits (15, 66-68). During confinement, living in a neighbourhood well supplied with parks and green spaces has positive effects, particularly for residents of densely populated neighbourhoods (15, 69). This is true provided that these spaces are well laid out and sufficiently numerous to prevent overcrowding (19, 65).

The unaffordability of certain rental markets increased during the pandemic, which affected low-income households in particular

In terms of housing, the impacts of the pandemic were unevenly distributed among populations in different income groups. High-income households were able to take advantage of favourable conditions to adjust quickly to the challenges imposed by the health measures. Generally, it is easier for owner households than renters to obtain deferred payment plans for their housing in case of difficulty (70). Moreover, it appears to have been easier for owner households than for renter households to work at home and maintain their income (71).

The adjustment of renter households to the effects of the pandemic has been more difficult. It should be noted that before COVID-19, the Québec rental market was already showing signs of tightening. On the one hand, the average vacancy rate for the total supply of rental housing was below the equilibrium threshold of 3% in certain Québec agglomerations. This rate was notably lower for dwellings with three or more bedrooms. On the other hand, the average proportion of real pre-tax income spent on rent in renter households has tended to increase in recent years (72). This has had the effect of creating financial insecurity among renter households, particularly disadvantaged households and large families (5). There are several reasons for this. These include the lack of social housing, the erosion of existing stock caused by the demolition of rental buildings or their conversion to condominiums, the lack of incentives for developers to diversify the housing stock, the growth of temporary commercial rentals (e.g., Airbnb), the increase in

demand due to population growth, and the subsequent entry into the rental market of new investors who see an opportunity to profit from meeting this demand (5, 27, 72-74). While many of these problems appear to have become chronic over the past few decades, several have intensified during the pandemic, including the lack of affordable housing for low-income households:

- ▶ According to a survey by the Canada Mortgage and Housing Corporation (CMHC)⁷ (74), in the fall of 2020, compared to 2019, the average rent for a private rental unit had increased by 4.2% in Greater Montréal, its highest increase since 2003;
- ▶ Few units that were affordable to low-income households⁸ were available; the vacancy rate for units considered affordable to the lowest income quintile was 1.6%, whereas for higher income households the rate was 7.4% (4th quintile) (74);
- ▶ The scarcity was even more pronounced for family dwellings (three bedrooms or more) with a rent of less than \$925 per month (vacancy rate of less than 1%) (75);
- ▶ Rents for newly available rental units were considerably more expensive than those already occupied (36% difference on the Island of Montréal), which discouraged many households from moving even for better conditions (73, 74);
- ▶ The Administrative Housing Tribunal (AHT) has recorded a growing number of owner applications for repossessions and evictions in recent years, with the highest number being registered in 2020 (76);
- ▶ The supply of social or community housing failed to meet the need in Greater Montréal. Whereas such housing represented only 10% of all rental units, 29% of renter households had need of such housing (75).

⁷ The Rental Market Survey (RMS) is conducted by the CMHC each October and is based on a sample of rental units taken from all urban centres with a population of 10,000 or more. Only privately owned rental properties that have at least three rental units and have been on the market for at least three months are included. The RMS provides data on market rents, tenant turnover and vacancy rates for all properties in the sample (74).

⁸ The CMHC's RMS presents vacancy rates for rental units that would be affordable to renters (where renters would spend no more than 30% of their monthly income on housing) according to income quintile. For example, for a renter household with an income of less than \$25,000, the monthly rent had to be less than \$625 to be considered affordable. Within this rent range, the vacancy rate was only 1.6%.

However, the situation was not the same everywhere in Québec, with the increase in the average rent being smaller in the Greater Québec City and Gatineau regions (2.7% in Québec City and 2.4% in Gatineau between 2020 and 2019). Nevertheless, in the Greater Québec City region, the demand for rental units did increase. The housing supply, however, only increased in the higher rent brackets (73).

While it is complex to pinpoint precisely how the pandemic compounded the growing lack of affordability in Québec's housing market, it is nevertheless clear that low-income households had more difficulty finding adequate housing in 2020 than in previous years. Extended work interruptions and job losses due to pandemic control measures undoubtedly contributed to this situation. These circumstances had the most severe effect on young people and workers in certain low-paid service sectors such as accommodation and food services (77). Such households generally reside in rental units (20). Before the pandemic, 46% of employed renters in Québec had less than one month's savings. Given the massive job losses and the delay in receiving benefits from financial support programs during the pandemic, many households may have experienced food insecurity or residential instability (78). Indeed, job losses and rising rents may have affected the ability of low-income households to meet other basic needs, since housing costs account for the largest share of their expenditures (5, 30, 79). Surveys conducted by the INSPQ indicate that this group experienced more food insecurity during the pandemic (79). Financial support programs implemented during the pandemic certainly alleviated some of the hardship experienced by these households (80). However, these programs are temporary, while employment levels in some sectors of the economy remain lower than before the pandemic (20).

Overall, the pandemic caused more financial difficulties for renters than for homeowners (6, 11, 16, 78). The most socioeconomically disadvantaged renters were the most affected, putting them at greater risk of experiencing a deterioration of their mental health (6, 15, 16, 29, 81). The chronic lack of affordable housing and the economic insecurity that characterize the post-pandemic recovery period place low-income renter households in a vulnerable position that can lead to increased residential instability and homelessness (6, 11, 30, 82). These can result not only in a deterioration of living conditions and of physical and mental health status, but also in an increase in the potential to transmit COVID-19 (11).

Strategies for increasing access to quality housing

Measures to be implemented in the short term to promote residential stability during a pandemic

The various observations made above underpin the relevance of implementing certain strategies aimed at improving access to affordable, quality housing. Considering the effects of the pandemic, it is important to introduce short-term measures to ensure residential stability for people who have been placed in a vulnerable position.

PROVIDE EMERGENCY ASSISTANCE TO HOUSEHOLDS IN PRECARIOUS SITUATIONS

Strategies	Proposed means
<p>Alleviate and defer economic obligations (4, 6, 14, 73, 83-86)</p> <p>Level of support: Moderate</p>	<ul style="list-style-type: none"> ▶ Set up mechanisms that allow for the deferral of rent and bills (6, 11, 83). ▶ Increase support for renters experiencing temporary difficulties in paying their rent by implementing an interim rental assistance program that provides access to a low-interest loan (83, 85). ▶ Increase support for low-income renters with high housing costs by implementing an emergency benefit program to cover a portion of current rental costs (63, 83). ▶ Increase support for homeowners with mortgages by allowing deferrals of mortgage and municipal tax payments (4, 6, 14, 84, 87).
<p>Minimize eviction orders due to delinquent rents to prevent an increase in residential instability and homelessness (4, 6, 11, 14, 73, 78, 83, 84, 86)</p> <p>Level of support: Moderate</p>	<ul style="list-style-type: none"> ▶ Strengthen renter advocacy mechanisms, for example, by increasing access to legal support and promoting mediation to encourage the adoption of landlord-tenant rent deferral agreements (6, 11, 14, 73, 83).
<p>Help ensure safety in the home during a health crisis (19, 83, 88, 89)</p> <p>Level of support: Moderate</p>	<ul style="list-style-type: none"> ▶ Improve the visibility of the range of shelter and support services available to victims of gender-based violence and ensure adequately funded programs (19,89). ▶ Provide the resources needed to respond to gender-based violence in all population groups and educate front-line workers to enable them to identify signs of violence, abuse or neglect (19,57).

Ensuring the flexibility of these immediate actions will allow them to meet a variety of needs. They should also be applied for long enough to encourage the emergence of sustainable housing solutions (83).

Measures to be implemented in the medium term to increase the supply of safe and healthy housing

COVID-19 and the number of hours spent at home exposed flaws in housing conditions. By demonstrating the impact of housing on health and wellbeing, the pandemic has highlighted the importance of adopting initiatives that address housing from a broader perspective and in a context where other health and social needs are being addressed (90). The following are strategies that can be put in place to improve the supply of safe and healthy housing and reduce social inequalities in health.

PROVIDE SAFE AND HEALTHY HOUSING

Strategies	Proposed means
<p>Ensure universal access to safe and healthy housing while preventing overcrowding (19, 27, 29, 68, 91, 92)</p> <p>Level of support: Strong</p>	<ul style="list-style-type: none"> ▶ Ensure that housing is designed to meet the needs of different types of occupants, including families, seniors and persons with functional limitations (19, 27, 68, 91, 92). ▶ Ensure access to housing for groups that may be discriminated against (e.g., families with children, minorities, people with disabilities and women) (29, 68). ▶ Provide protection to those who experience difficulty finding housing, such as people experiencing homelessness or those with new needs that make their housing unsuitable, such as seniors or people with functional limitations (29). ▶ Establish safe and reliable complaint processes to ensure that discriminatory practices are reported without fear of repercussions (29).
<p>Promote the development of housing resistant to environmental risks (26, 40, 93-95)</p> <p>Level of support: Strong</p>	<ul style="list-style-type: none"> ▶ Plan and design buildings and living environments such that exposure to environmental risks is mitigated (68, 93-95). ▶ Ensure that buildings are located at an appropriate distance from elements that pose an environmental risk (e.g., highways, industrial areas, waterways, etc.). ▶ Adopt a greening policy to reduce heat island effects in heavily concretized areas and improve ambient air quality. ▶ Choose materials and cladding that minimize the emission of pollutants and reflectivity, and minimize greenhouse effects. ▶ Promote the maintenance and upgrading of existing buildings through funding programs and by prioritizing disadvantaged areas (27, 29, 93). ▶ Adopt best practices in terms of energy efficiency and indoor air exchange for the construction and renovation of housing (95).
<p>Inform the public of best practices for maintaining safe and healthy housing (27,93-96)</p> <p>Level of support: Strong</p>	<ul style="list-style-type: none"> ▶ Encourage good maintenance practices and changes in certain contaminant-generating behaviours (27, 94). ▶ Educate owners and renters about the proper ways to maintain good indoor air quality and to regulate temperature (27, 93, 95, 96).
<p>Establish a safe and healthy housing policy and legal framework (5, 27, 95)</p> <p>Level of support: Strong</p>	<ul style="list-style-type: none"> ▶ Design intersectoral municipal action plans to intervene in relation to different aspects of housing (accessibility, healthiness, ventilation) and land use factors, to optimize the quality of housing (27, 95). ▶ Adopt a municipal by-law on healthy housing and housing maintenance and provide resources for enforcement of standards (5, 27).

MEASURES TO BE IMPLEMENTED IN THE MEDIUM TERM TO INCREASE THE SUPPLY OF AFFORDABLE HOUSING

Not only must housing be healthy and safe, it must be so for all households, regardless of their needs and means. Taking action to ensure healthy and safe housing necessarily involves addressing affordability, since lower income households may be forced to live in poor housing conditions that can undermine their health, because they cannot afford adequate housing that meets their needs (5). In the longer term, the unaffordability of housing can have a negative impact on the health status of disadvantaged populations and

on their ability to re-enter the labour market, which can affect productivity at the national level (5). Furthermore, the ability of communities to retain households from all socio-economic levels contributes to their vitality and gives them access to a diverse workforce necessary for economic prosperity (30). In addition, high rents result in high turnover of occupants in dwellings, which can lead to an erosion of social and support networks in a community (8). Finally, several strategies exist to improve the supply of affordable housing and reduce social inequalities in health. Their implementation will support post-pandemic recovery.

PROVIDE SUSTAINABLE SUPPORT FOR AFFORDABLE HOUSING

Strategies	Proposed means
<p>Diversify the housing supply by developing a varied housing stock comprising different types of housing and tenure (68)</p> <p>Level of support: Strong</p>	<ul style="list-style-type: none"> ▶ Promote housing developments that target households with different income levels with the goal of improving local access to affordable housing, which facilitates the long-term retention of households in their communities (68). ▶ Finance the construction of new social housing (5, 6, 8, 10, 14, 68, 71, 87, 97). This measure both provides disadvantaged households with access to healthy and affordable housing and reduces demand in the private market, thus counteracting a surge in rental prices (71). ▶ Impose a regulatory framework requiring social housing quotas to be met by any new residential development (8, 71, 98). ▶ Make social and community housing accessible to groups with various income levels (13, 15, 31) so that it becomes an affordable option for a larger segment of the population. ▶ Encourage the creation of housing cooperatives⁹ (71).
<p>Preserve the private rental housing stock and foster its affordability (4, 5, 29, 71, 72, 99)</p> <p>Level of support: Moderate</p>	<ul style="list-style-type: none"> ▶ Regulate the rental market: <ul style="list-style-type: none"> ▶ Introduce mechanisms to regulate the cost of rents and utilities, such as a register of leases that would prevent the imposition of unjustified increases when tenants change (4, 5, 29, 72). ▶ Strengthen the legal framework for landlord-tenant relations (security of tenure, grounds for eviction, duration of leases, etc.) to improve rent control and reduce the number of evictions. ▶ Better regulate the activities of platforms such as Airbnb to counter the problems of accessibility and the rent increases that they occasion (100). ▶ Limit the conversion of rental units to condominiums. ▶ Offer a tax credit for the construction of affordable housing to encourage developers to include affordable units for low-income households in residential projects. These will have to remain affordable for several years or decades. ▶ Refinance the Réno-QC programs for rental housing and offer grants and/or preferential loans for the rehabilitation of rental units in exchange for limiting rent increases.
<p>Use land-use planning tools to promote housing affordability (5, 14, 29, 71-73, 98)</p> <p>Level of support: Moderate</p>	<ul style="list-style-type: none"> ▶ Orient planning and development projects toward designs that support affordable housing (5, 29). ▶ Use inclusionary zoning to require developers to set aside a percentage of new construction projects of a certain size for affordable housing (5, 72). Alternatively, developers could contribute to a fund dedicated to the construction of social housing. ▶ Develop urban plans that require the construction of more rental housing that is diversified and extends to the entire urban perimeter (71, 98). ▶ Support municipalities in establishing property reserves that could be used to acquire buildings and land for social and community housing (71, 73). This would offer protection from the speculative dynamics of the real estate market.

Strategies for creating complete living environments

The design of complete living environments is a land-use strategy similar to the development of 15-minute cities, where people can access businesses and services in 15 minutes or less via active transportation.

Inspired by the urban planning trends of new urbanism and smart growth, one aim of which is to limit urban sprawl, complete living environments emphasize access to local businesses and services through the use of active and public transportation (101-103). Complete living environments are environments where services are easily accessed and activities of daily

⁹ Housing co-operatives are collective residential properties, whose members can be owners or renters, and that operate under self-management with a social mission and without a profit motive (Hurteau).

living are easily accomplished primarily by means of walking, cycling or using public transit, regardless of age, ability or background. By adopting certain planning principles such as mixed use development or human-scale density, municipalities can create complete living environments. These can have a concrete impact on health, particularly by promoting physical activity, a diversified food supply, community

involvement, and the reduction of noise and air pollution (15, 104). It would therefore be beneficial to advance strategies that foster the development of healthy and safe environments through the development of more complete environments. The creation of such environments is all the more important because they can compensate for the impacts of living in poorer quality housing that may be experienced by disadvantaged people (5).

Develop complete living environments

Strategies	Proposed means
<p>Promote the development of complete living environments in urban areas (68, 103, 105-107).</p> <p>Level of support: Strong</p>	<p>Adopt land-use planning principles that promote the development of complete and accessible living environments (28, 68, 103):</p> <ul style="list-style-type: none"> ▶ Provide for diverse uses by grouping together various urban functions (economic, institutional, recreational, transportation, etc.); ▶ Take advantage of a more compact, human-scale physical environment to increase proximity to everyday destinations (work, school, local shops and services) and improve the viability of public transportation systems; ▶ Provide dense residential areas that are diverse in terms of types of dwellings and tenure; ▶ Create neighbourhood units that are conducive to active transportation (with a connected street network and active and public transportation infrastructure); ▶ Develop neighbourhood distinctiveness and a sense of community; ▶ Preserve agricultural land, green spaces, landscapes of interest and sensitive natural areas; ▶ Make equitable economic development choices (e.g., preserve the affordability of commercial space to support local businesses); ▶ Encourage citizen participation in decision-making processes; ▶ Develop neighbourhoods with a high walkability score, accessible to all types of users (seniors, children, people with reduced mobility, etc.); ▶ Promote access to green spaces and encourage greening initiatives (68 108): <ul style="list-style-type: none"> ▶ Ensure that children have easy access to parks and green spaces; ▶ Ensure that parks and green spaces are designed to accommodate people of all ages, backgrounds and physical abilities.
<p>Promote the development of complete living environments in rural areas (68, 104, 108, 109)</p> <p>Level of support: Strong</p>	<p>Adopt land-use planning principles that promote the development of complete living environments (68, 104, 108) :</p> <ul style="list-style-type: none"> ▶ Encourage the development of denser cores by locating new subdivisions and new construction as close as possible to existing village cores while respecting the heritage and architectural character of the cores; ▶ Develop neighbourhood distinctiveness and a sense of community; ▶ Support the retention of local services; ▶ Ensure that residents have access to recreation and leisure facilities, as opportunities for physical activity may be more limited in less dense areas (68); ▶ Promote access to green spaces and encourage greening initiatives (68, 108) : <ul style="list-style-type: none"> ▶ Ensure that children have easy access to parks and green spaces; ▶ Ensure that parks and green spaces are designed to accommodate people of all ages, backgrounds and physical abilities; ▶ Redesign village through roads to be safe for users of active modes of transportation (38); ▶ Promote the development of public transportation.

Strengthening actions aimed at better documenting and studying the characteristics of the housing stock and its impact on the health of the Québec population

The success of any housing strategy relies on a broad cross-sectoral partnership (29). The effectiveness of the strategy will be enhanced by researching and making use of recent data on the characteristics of the housing stock as they relate to the health status of occupants. These data can help target the most disadvantaged rural and urban areas for priority intervention (4, 29). Similarly, groups likely to experience housing insecurity should be involved in citizen participation processes upstream of interventions, to ensure consistency (11, 104).

DOCUMENT THE CHARACTERISTICS OF THE HOUSING STOCK AS THEY RELATE TO HEALTH

Strategies	Proposed means
<p>Document the characteristics of the housing stock and its impact on the health of the Québec population to identify the most effective and promising preventive actions (110)</p> <p>Level of support: Moderate</p>	<ul style="list-style-type: none"> ▶ Carry out surveys and develop databases that catalogue the characteristics of the housing stock and allow for analysis of the gap between the population’s needs and the housing supply. ▶ Priority should be given to supporting participatory research activities (carried out in conjunction with field actors) examining the short, medium and long-term effects of the pandemic. ▶ Adopt housing quality assessment practices using public health criteria that include citizen participation (e.g., <i>Mon habitat : plus qu’un simple toit</i> [My Home: More than just a roof] (5, 111).

Conclusion

Housing plays a crucial role in determining health and wellbeing throughout the life course. Its characteristics and those of its environment not only influence living conditions, they also contribute to disease and injury prevention. Clearly, housing contributes to the wellbeing and resilience of individuals and communities. The COVID-19 pandemic has highlighted the existence of social inequalities in several sectors, and that of housing has been no exception. Inequalities associated with housing have in turn exacerbated health inequalities. This rapid synthesis has examined how the latter may have been intensified by the pandemic and the health measures imposed. It proposes short-term actions to address the social

inequalities in health caused by the deterioration of living conditions associated with housing during the pandemic. It also outlines broad medium-term strategies aimed at facilitating access to safe, healthy and affordable housing. These will not only contribute to ensuring a better post-pandemic recovery, they will also lay the groundwork for coping with future health challenges. The last few decades have shown that real estate market forces alone cannot meet the diversity of housing needs in Québec (71, 98). Thus, the impact of the pandemic on social inequalities in health related to housing calls for action by the various levels of government. Supporting access to quality housing can be considered a major public health intervention. Given the importance of housing within the hierarchy of the population's needs, it should be a priority.

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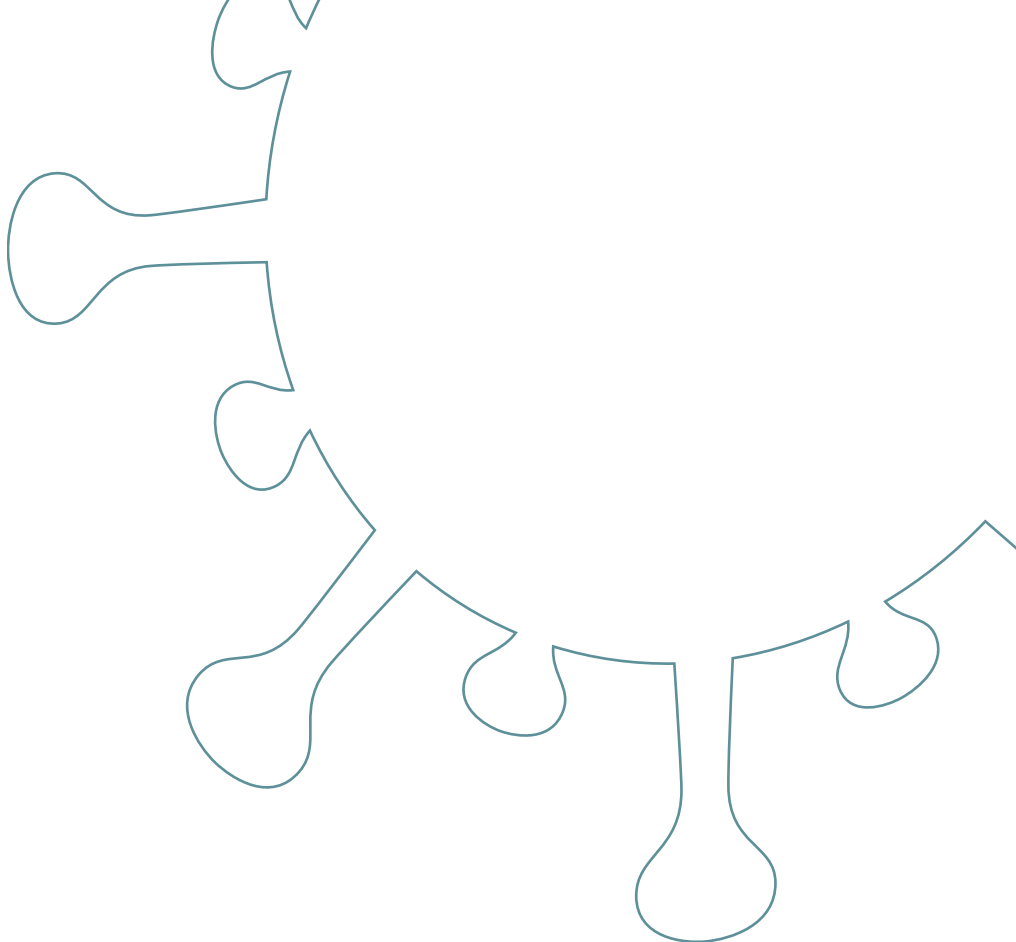
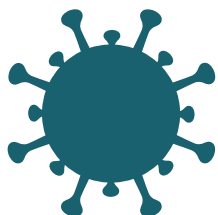
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