

## **EVIDENCE SYNTHESIS BRIEFING NOTE**

### **TOPIC: YOUTH COMPLIANCE WITH COVID-19 PUBLIC HEALTH MEASURES**

Information finalized as of December 10, 2020.<sup>a</sup>

This Briefing Note was completed by the Evidence Synthesis Unit (Research, Analysis and Evaluation Branch, Ministry of Health) based on a literature search, as well as information provided by members of the COVID-19 Evidence Synthesis Network. Please refer to the [Methods](#) section for further information.

**Purpose:** This briefing note provides a summary of jurisdictional experiences on youth and young adults' (i.e., ages 15-29 years) compliance with COVID-19 public health measures across jurisdictions.

#### **Key Findings and Implications**

- **Strategies or Best Practices Increasing Compliance to COVID-19 Public Health Measures:** Most strategies aim at increasing physical distancing compliance.
  - **Communications and Messaging:** Initiatives can increase compliance through considering the use of different key messages, tone, and delivery directed to particular cohorts of youth and young adults. Communication should be clear, accessible, motivational, positive, and outline the consequences of not complying to public health measures.
  - **Behavioural Changes and Skill Development:** Empowering youth and young adults to physically distance requires developing a range skills and capabilities such as: patience, discipline, and self-awareness; empathy, compassion, and sense of community; becoming more informed; spatial awareness; and relaxation and positive mental health.
  - **Social Influences:** When it comes to physical distancing, family and friends are most influential, especially among younger cohorts, along with various spokespersons such as politicians, experts in the field, entertainers/celebrities, and social media influencers.
- **Compliance and Non-Compliance with Public Health Measures:** Mixed findings on youth and young adult compliance/non-compliance were identified regarding physical distancing, mask wearing, and other public health measures (i.e., washing hands, sleeve sneeze, cough into elbow).
  - **Non-Compliance:** The male gender, young age, being single, employed, and decreased income are largely associated with non-compliance. With regard to the following measures, youth and young adults:
    - **Physical Distancing:** Are report being non-compliant with physical distancing in unavoidable (e.g., an elevator; public washrooms; a small grocery store aisle; public transit), and avoidable situations (e.g., engaging in social activities to manage unease from “cabin fever”)
    - **Mask Wearing:** Report not wearing a mask when socializing with friends due to those interactions eliciting a sense of security and acceptance, and the assumption that they will be unaffected if they contract COVID-19.

**Analysis of Ontario:** Consultation with youth and young adults in Ontario generally suggest they are non-compliant with physical distancing in unavoidable (e.g., an elevator; public washrooms; a small grocery store aisle; public transit) and avoidable situations (e.g., couples in separate households not physically distancing). Strategies for increasing compliance include focusing on communication and messaging (i.e., using key messages, tone, and delivery of information that is clear and positive directed to particular cohorts of youth) and behavioural changes and skills development (e.g., patience, discipline, and self-awareness, empathy, compassion, and sense of community).

<sup>a</sup> This briefing note includes current available evidence as of the noted date. It is not intended to be an exhaustive analysis, and other relevant findings may have been reported since completion.

## **Context and Terminology**

An Angus Reid Institute analysis (August 17, 2020) on COVID-19 compliance in Canada suggests that age is a leading factor in the COVID-19 Compliance Index.<sup>b</sup> The younger Canadians are, the less likely they are to follow recommended COVID-19 public health measures (e.g., avoiding travel, minimizing their social bubble) and this non-compliance has been identified as a contributor to Canada's increasing COVID-19 cases.<sup>1</sup> Similarly, a Swiss study (Sept 13, 2020) on young adults' non-compliance with COVID-19 public health measures generally identified adolescents and young adults as a group with low compliance, especially with respect to physical distancing measures. In mid-March 2020, the World Health Organization (WHO) recognized that young people have a high potential for spreading the virus and issued a special appeal for their increased compliance, largely because they display mild or no symptoms of COVID-19, while still being infectious.<sup>2</sup>

According to an Ottawa Public Health report (June 2020) on promoting adherence to social distancing, young people's non-compliance with public health measures may be attributed to their difficulty coping with the changes in their lifestyles and routines imposed by the pandemic (e.g., in-person school, sports, and socializing with friends/peers decreasing), and challenges with managing the resulting feelings of desperation, boredom, and uncertainty.<sup>3</sup> A review (August 2020) on peer influence on adolescence during COVID-19 suggests that the period of life between the ages of 10 and 24 years is associated with increased risk taking, increased need for social connection and peer acceptance, and heightened sensitivity to peer influence. These factors may result in difficulty adhering to physical distancing rules among young people.<sup>4</sup>

The Ottawa Public Health report (June 2020) suggests that young adults may be receptive to COVID-19 information pertaining to public health measures if the messaging, tone, and style are adapted to optimize reach across age groups. In particular, findings to consider when developing initiatives/interventions include:

- Young people respond to a tone and style that is more hopeful, emphasizing how one's actions can have an impact or make a difference.
- Young people are more receptive to succinct, highly visual formats (i.e., videos, graphics).
- Family and friends play a key role in influencing behaviour and compliance, along with entertainers, sports figures, online personalities, and public health officials.
- Positive reinforcement provides encouragement, particularly for the younger group, ages 16-24 years.<sup>3</sup>

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<sup>b</sup> The Angus Reid Institute created an index based on variables related to day-to-day life during COVID-19. Respondents were scored on measures such as washing their hands, wearing a mask, avoiding public spaces, socializing with people in a larger bubble. This index yielded three groups: The infection fighters, the inconsistent and the cynical spreaders. Infection fighters are regimented about their COVID-19 safety precautions and are likely to be older than 54 years and inclined to see the status quo held or tightened when it comes to public health restrictions. The inconsistent are defined by their reliability on some infection-control behaviours such as handwashing and physical distancing but less so on staying home and keeping their social circles small. Cynical spreaders have been and continue to be the primary concern of public health officials. This group ignore guidelines, socialize with larger groups, and do not adhere to mask use.<sup>1</sup>

**Supporting Evidence**

[Table 1](#) below summarizes jurisdictional experiences on the factors that contribute to compliance or non-compliance with COVID-19 public health measures, and strategies or best practices used to increase compliance with COVID-19 public health measures. In terms of jurisdictional experience, information is presented on Ireland, Israel, Switzerland (Zurich), United Kingdom, United States (Wisconsin). No scientific evidence or information from other Canadian jurisdictions was identified.

Additional details are provided in [Table 2](#) (factors contributing to compliance or non-compliance with COVID-19 public health measures) and [Table 3](#) (strategies or best practices increasing compliance with COVID-19 public health measures) in the Appendix.

**Table 1: Summary of Jurisdictional Experiences of Compliance and Non-Compliance with Public Health Measures and Strategies or Best Practices Increasing Compliance to COVID-19 Public Health Measures**

<b>International Scan</b>	<ul style="list-style-type: none"> <li>● <b>Compliance and Non-Compliance with Public Health Measures:</b> Reports of youth and young adult compliance/non-compliance were identified regarding physical distancing, mask wearing, and other public health measures (i.e., washing hands, sleeve sneeze, cough into elbow).             <ul style="list-style-type: none"> <li>○ <b>Compliance:</b> Some research suggests that a minority of youth and young adults have been found to adhere to mask wearing (Wisconsin, United States [US]), and other public health measures (e.g., hygiene practices) (Ireland; Zurich, Switzerland). With regard to the following measures, youth and young adults:                 <ul style="list-style-type: none"> <li>▪ <i>Mask Wearing:</i> Adhere to mask wearing due to employment in public spaces and their sense of responsibility to others (e.g., parents, grandparents, immunocompromised individuals).</li> <li>▪ <i>Other Public Health Measures:</i> Comply with other protective measures, such as avoiding groups, coughing or sneezing into one’s elbow, and washing one’s hands regularly.</li> </ul> </li> <li>○ <b>Non-Compliance:</b> Other research suggests that youth and young adults are generally non-compliant with physical distancing (Ireland; US), along with mask wearing (Wisconsin, US), and other public health measures (e.g., hygiene practices) (Israel; Zurich, Switzerland). The male gender, young age, being single, employed, and decreased income are largely associated with non-compliance. With regard to the following measures, youth and young adults:                 <ul style="list-style-type: none"> <li>▪ <i>Physical Distancing:</i> Are non-compliant to physical distancing in unavoidable and avoidable situations:                     <ul style="list-style-type: none"> <li>● <i>Unavoidable Situations:</i> Work requirements for non-essential industries.</li> <li>● <i>Avoidable Situations:</i> Engaging in social activities to manage unease from “cabin fever”; meeting with friends; engaging in sports with friends (e.g., playing football, cycling); spending time with friends at different places (e.g., meeting at a shopping centres); travelling to other towns, counties, and cities for socializing; and the belief that other precautions, such as handwashing are sufficient in protecting themselves from COVID-19.</li> </ul> </li> <li>▪ <i>Mask Wearing:</i> Report not wearing a mask when socializing with friends due to those interactions eliciting a sense of security and acceptance when interacting</li> </ul> </li> </ul> </li> </ul>
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	<p>with friends, and the assumption that they will be unaffected if they contract COVID-19.</p> <ul style="list-style-type: none"> <li>● <b>Strategies or Best Practices Increasing Compliance to COVID-19 Public Health Measures:</b> Communications and messaging (Wisconsin, US; Zurich, Switzerland) and social influences (United Kingdom) are used to increase compliance among youth and young adults. Most strategies aim at increasing physical distancing compliance. <ul style="list-style-type: none"> <li>○ <u>Communications and Messaging:</u> Provide clear and consistent messages about the effectiveness public health measures and how they can increase young adults' responsibility to protect others. Smartphones can be used to disseminate awareness about the virus and its methods of transmission.</li> <li>○ <u>Social Influences:</u> When it comes to physical distancing, family and friends are most influential, especially among younger cohorts, along with various spokespeople such as politicians, experts in the field, entertainers/celebrities, and social media influencers.</li> </ul> </li> </ul>
<p><b>Ontario Scan</b></p>	<ul style="list-style-type: none"> <li>● <b>Compliance and Non-Compliance with Public Health Measures:</b> Reports of youth and young adult compliance/non-compliance in Ontario were identified regarding physical distancing. <ul style="list-style-type: none"> <li>○ <u>Compliance:</u> Some research suggests that a minority of youth and young adults have been found to adhere to physical distancing (Ottawa, Canada). With regard to the following measures, youth and young adults: <ul style="list-style-type: none"> <li>▪ <i>Physical Distancing:</i> Are slightly more likely to comply with physical distancing restrictions compared to other hygiene measures (e.g., hand washing). Parents are an important factor instilling physical distance compliance through encouraging youth and young adults to stay at home.</li> </ul> </li> <li>○ <u>Non-Compliance:</u> Other research also suggest that youth and young adults are generally non-compliant with physical distancing (Ottawa, Canada). With regard to the following measures, youth and young adults: <ul style="list-style-type: none"> <li>▪ <i>Physical Distancing:</i> Are non-compliant to physical distancing in unavoidable and avoidable situations: <ul style="list-style-type: none"> <li>● <u>Unavoidable Situations:</u> Building corridors; an elevator; public washrooms; a small grocery store aisle; when taking public transit; workplaces; dense urban settings; circumstances with children; and when living between two homes.</li> <li>● <u>Avoidable Situations:</u> The belief that other precautions, such as handwashing are sufficient in protecting themselves from COVID-19; couples in separate households not physically distancing.</li> </ul> </li> </ul> </li> </ul> </li> <li>● <b>Strategies or Best Practices Increasing Compliance to COVID-19 Public Health Measures:</b> Communications and messaging (Ottawa, Canada) is used to increase compliance among youth and young adults. <ul style="list-style-type: none"> <li>○ <u>Communications and Messaging:</u> Those designing initiatives aimed at increasing compliance should consider the use of different key messages, tone, and delivery directed to particular cohorts of youth and young adults. Communication should be clear, accessible, motivational, positive, and outline the consequences of not complying to public health measures.</li> <li>○ <u>Behavioural Changes and Skill Development:</u> Empowering youth and young adults to physically distance requires developing a range skills and capabilities such as: patience, discipline, and self-awareness; empathy, compassion, and sense of</li> </ul> </li> </ul>

	community; becoming more informed; and spatial awareness; and relaxation and positive mental health.
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### **Methods**

Individual peer-reviewed articles and review articles were identified through PubMed, the Cochrane Library, and Google Scholar. Grey literature was identified through Google and relevant government websites. The search was limited to English sources and therefore may not capture the full extent of initiatives in non-English speaking countries. Full-text results extracted were limited to those available through Open Access or studies made available to the Ministry by our partners.

The COVID-19 Evidence Synthesis Network is comprised of groups specializing in evidence synthesis and knowledge translation. The group has committed to provide their expertise to provide high-quality, relevant, and timely synthesized research evidence about COVID-19 to inform decision makers as the pandemic continues. The following members of the Network provided evidence synthesis products that were used to develop this Evidence Synthesis Briefing Note:

- Evidence Synthesis Unit, Research, Analysis and Evaluation Branch, Ministry of Health.  
889. Youth Compliance with COVID-19 Public Health Measures 10-DEC-2020 (SurajbaliK-RAE).

For more information, please contact the [Research, Analysis and Evaluation Branch \(Ministry of Health\)](#).

**Table 2: Factors Contributing to Compliance or Non-Compliance with COVID-19 Public Health Measures**

Jurisdiction/ Target Age	Factors Contributing to Compliance or Non-Compliance with Public Health Measures
<b>Physical Distancing</b>	
<p><b>Ottawa, Canada</b></p> <p><b>Youth and Young Adults</b></p>	<ul style="list-style-type: none"> <li>• <b>Compliance:</b> The Ottawa Public Health report (June 2020) on consultations with youth and young adults notes factors contributing to public health measure compliance with respect to physical distancing:               <ul style="list-style-type: none"> <li>○ <b>Knowing when to physically distance:</b> The report stated that most youth and young adults:                   <ul style="list-style-type: none"> <li>▪ Are aware of the recommended safe distance (i.e., six feet apart), and recognize that physical distancing is required to stop the spread or transmission of COVID-19.</li> </ul> </li> <li>○ <b>Social role and identity:</b> The report suggests that most youth and young adults:                   <ul style="list-style-type: none"> <li>▪ Practice physical distancing because they feel they have a role to play as part of their larger community.</li> <li>▪ Engage in physical distancing to protect family members, especially participants living with older parents, grandparents, or family members with underlying health conditions.</li> </ul> </li> <li>○ <b>Memory and decision making:</b> According to the report, many of the youth and young adults:                   <ul style="list-style-type: none"> <li>▪ Indicated there are almost no situations where they would not decide to maintain physical distancing, with exception to emergency situations.<sup>3</sup></li> </ul> </li> </ul> </li> <li>• <b>Non-Compliance:</b> The Ottawa Public Health report (June 2020), based on consultations with youth and young adults, notes factors that contribute to public health measure non-compliance with respect to physical distancing:<sup>c</sup> <ul style="list-style-type: none"> <li>○ <b>Challenges of physically distancing:</b> The report noted that most youth and young adults:                   <ul style="list-style-type: none"> <li>▪ Find it relatively easy to practice physical distancing, although the report suggests it is difficult for those in certain circumstances, such as in: building corridors; an elevator; public washrooms; a small grocery store aisle; when taking public transit; some workplaces; more urban settings (e.g., city centers); circumstances with children; and, when living between two homes.</li> <li>▪ Understand the consequences of not physical distancing, however continuing to physical distance is reported to be more mentally rather than physically challenging, specifically for youth and younger groups.</li> </ul> </li> <li>○ <b>Social influence of non-compliance to physical distancing:</b> The report stated that there is a sub-set of youth and young adults who are not practicing physical distancing, and participants noted examples of others they knew who were not adhering to COVID-19 public health measures (e.g., couples not</li> </ul> </li> </ul>

<sup>c</sup> Online consultations with youth and young adults (aged 16-29) were used to gather information on: Behaviour changes as a result of COVID-19; knowledge and understanding of physical distancing and other stay-at-home measures; opinions about methods and approaches used to encourage the maintenance of physical distancing; and strategies for engaging and connecting with youth and young adults on the topic of COVID-19. A total of 11 mini groups (comprised of 4-5 participants each) were undertaken online with youth and young adults in the City of Ottawa. In total, 48 young people participated. Participants were primarily segmented by age into three groups (i.e., ages 16-17, 18-24, and 25-29) and by gender.<sup>3</sup>

Jurisdiction/ Target Age	Factors Contributing to Compliance or Non-Compliance with Public Health Measures
	<p>physically distancing).</p> <ul style="list-style-type: none"> <li>○ <b>Memory and decision making:</b> According to the report, many of the youth and young adults:               <ul style="list-style-type: none"> <li>▪ May ‘forget’ to practice physical distancing such as when doing something habitual in nature (i.e., dropping something off to a family member).</li> <li>▪ Are misinformed that there are risks associated with visiting people who follow preventative measures and do not have COVID-19 symptoms.<sup>1</sup></li> </ul> </li> </ul>
<p><b>Ireland</b></p> <p><b>Youth and Young Adults</b></p>	<ul style="list-style-type: none"> <li>● A Research Evidence into Policy, Programmes, and Practice (REPPP) report (May 25, 2020) on the way young people participating in Garda Youth Diversion Projects (GYDPs) are responding to COVID-19 public health measures suggests that most participants in the project are COVID-19 compliant.<sup>d</sup></li> <li>● <b>Compliance:</b> <ul style="list-style-type: none"> <li>○ The report suggests young people in GYDPs have largely been COVID-19 compliant; however, a minority of young people are engaging in non-compliant behaviours.</li> <li>○ Young people are more likely to comply with restrictions associated with maintaining the two-meter distance restriction but are less likely to practice physical distancing privately and still are meeting in groups in public areas.</li> <li>○ There is some evidence to indicate that when COVID-19 restrictions first came into place, young people appeared to socialize as they had prior to the new COVID-19 public health measures; however, a majority made moderate changes to their behaviour in the period afterwards.</li> <li>○ Parents are an important and perhaps the only factor keeping young people at home.</li> </ul> </li> <li>● <b>Non-Compliance:</b> <ul style="list-style-type: none"> <li>○ Non-compliant behaviour ranged from meeting with friends, engaging in sports with friends (e.g., playing football, cycling), and spending time with friends at different places (e.g., meeting at a shopping centres), to more serious breaches of the restrictions, such as travelling to other towns, counties, and cities for socializing, sourcing illegal drugs, or meeting family.</li> <li>○ Young people living in stressful home environments use strategies to cope with the challenges and to avoid conflict in the home, such as: staying in contact with friends both online or in person, staying up at night, and sleeping during the daytime to avoid contact with others, going out in the evenings and at night to socialize with peers locally in small groups.</li> <li>○ Some parents experience difficulties with ensuring their children abide by the COVID-19 regulations. Parents report being unable and/or frightened to challenge their children about their non-complying behaviours. Parents who report encouraging compliance among children also report potentially creating conflict within the family home.</li> </ul> </li> </ul>

<sup>d</sup> This report presents findings from surveys (n=113) completed by Youth Justice Workers (YJWs) about the Government's COVID-19 public health measures introduced on March 12, 2020 and young people participating in Garda Youth Diversion Projects (GYDPs). This report describes young people's compliance with the measures and how COVID-19 and the restrictions have impacted their lives. The survey's questions asked YJWs about (1) young people in their GYDP and compliance with the COVID-19 public health measures; (2) the observed impacts for young people's, particularly in terms of their behaviours since the measures were introduced; (3) how COVID-19 and the restrictions have affected GYDP work practices; and, (4) the requirements for frontline work with young people in GYDPs arising from COVID-19.<sup>5</sup>

Jurisdiction/ Target Age	Factors Contributing to Compliance or Non-Compliance with Public Health Measures
	<ul style="list-style-type: none"> <li>○ Adult non-compliance with public health measures (i.e., socializing with neighbours, visiting relatives, and family events) impacts young people’s capacity to adhere to the restrictions.<sup>5</sup></li> </ul>
<p><b>United States</b></p> <p><b>Ages 18–31</b></p>	<ul style="list-style-type: none"> <li>● <b>Non-Compliance:</b> A Stanford University news article (April 14, 2020) reported on the reasons young adults did not comply with physical distancing recommendations in the middle of March 2020.<sup>e</sup> The most common reasons for failing to physical distance were: work requirements for non-essential industries; the need to engage in social, physical, or routine activities to help protect one’s mental and physical well-being and manage the unease associated ‘sheltering in place’ (e.g., “cabin fever”); the belief that other precautions, such as only hand-washing, were sufficient to protect themselves from COVID-19; and having to take children outdoors or to social events for the welfare of both their children and themselves.<sup>6</sup></li> </ul>
<b>Mask Wearing</b>	
<p><b>Wisconsin, United States</b></p> <p><b>Ages 18–23</b></p>	<ul style="list-style-type: none"> <li>● A Centers for Disease Control and Prevention (CDC) report (August 16, 2020) on the factors influencing risk for COVID-19 exposure among young adults (ages 18–23 years) suggests that 32% of all Winnebago County citizens diagnosed with SARS-CoV-2 were young adults. In 30 key informant interviews, most participants reported that the factors influencing their use of masks included: exposure to misinformation, conflicting messages, or opposing views about the need for and effectiveness of masks.</li> <li>● <b>Compliance:</b> <ul style="list-style-type: none"> <li>○ Many young adults who have jobs that entail interacting with the public identify concerns about workplace exposure, emphasizing the importance of businesses implementing control measures (e.g., requiring masks, implementation of countrywide mask ordinance) consistent with published guidance, especially when physical distancing is difficult.</li> <li>○ Young adults who report having a sense of responsibility also report wearing masks when shopping and might explain why they hold positive views of masks.</li> </ul> </li> <li>● <b>Non-Compliance:</b> <ul style="list-style-type: none"> <li>○ Young adults note not wearing a mask when socializing with friends, which might indicate that they feel a sense of security when interacting with friends. The expectation that young adults would likely be unaffected if they contracted COVID-19, coupled with social or peer pressure, may explain transmission patterns among young adults.</li> <li>○ Although young adults perceive a low severity of disease outcome for themselves, many express concerns about transmitting SARS-CoV-2 to close family or friends at risk and to the broader community.</li> <li>○ Among the few young adults who express negative attitudes about masks and physical distancing or who had questions about the effectiveness of masks,</li> </ul> </li> </ul>

<sup>e</sup> The researchers collected a total of 20,734 responses to a survey that was posted on social media networks Twitter and Facebook, as well as the neighborhood social networking service NextDoor.<sup>6</sup>



Jurisdiction/ Target Age	Factors Contributing to Compliance or Non-Compliance with Public Health Measures
	those views appear to be based on the expressed need to make their own choices (i.e., personal agency). <sup>7</sup>
<b>Multiple Public Health Measures</b>	
<p><b>Israel</b></p> <p><b>Ages 18–29</b></p>	<ul style="list-style-type: none"> <li>• <b>Non-Compliance:</b> A study (October 13, 2020) on non-adherence behaviour during the COVID-19 pandemic suggested the following factors as predictive of increased non-compliance to COVID-19 public health measures:               <ul style="list-style-type: none"> <li>○ <b>Sociodemographic factors:</b> Male gender, young age, bachelorhood, being employed, and decreased income. Male gender and young age have been associated with non-adherence to public health measures in the United States (US), Somalia, Saudi Arabia, and Hong Kong during the COVID-19 outbreak.<sup>8</sup></li> <li>○ <b>Health-related factors:</b> Physical activity, psychological distress, and attention deficit hyperactivity disorder (ADHD) symptoms.</li> <li>○ <b>Behavioural and personality factors:</b> History of risk-taking, anti-social behaviour, and low pro-sociality.</li> <li>○ <b>COVID-19 Perception factors:</b> Low perceived risk of COVID-19, lower perceived efficacy of the preventive measures, and higher perceived costs of adherence to the preventive measures.</li> <li>○ <b>Economic factors:</b> Negative correlation between adherence and the perceived costs of adherence (i.e., quarantine). This correlation is similar to previous study findings reporting that perceived economic costs of the quarantine in Canada during the 2004 SARS outbreak were related to non-adherence.</li> <li>○ <b>Social factors:</b> The negative correlation between adherence and past risk-taking behaviour/unhealthy lifestyle are supported by a study reporting suboptimal adherence to public policies among young adults with hazardous drinking.<sup>8</sup></li> </ul> </li> </ul>
<p><b>Zurich, Switzerland</b></p> <p><b>Ages 15–20</b></p>	<ul style="list-style-type: none"> <li>• <b>Compliance:</b> <ul style="list-style-type: none"> <li>○ According to a Swiss study (September 13, 2020) on non-compliance with COVID-19-related public health measures among young adults, rates of compliance with COVID-19 measures among young adults was relatively high, and slightly better for physical distancing compared to hygiene measures.<sup>f</sup></li> <li>○ Non-compliance with certain protective measures, such as avoiding groups, coughing or sneezing into one’s elbow, and washing one’s hands regularly, was generally low, implying that public health messaging was effectively disseminated and young people were generally receptive to these measures.</li> </ul> </li> <li>• <b>Non-Compliance:</b> <ul style="list-style-type: none"> <li>○ Non-compliance is associated with a cluster of characteristics termed “antisocial potential” which is described as low acceptance of moral rules, legal cynicism, low shame or guilt, low self-control, high engagement in delinquent behaviours, and association with peers who exhibit social deviance.</li> </ul> </li> </ul>

<sup>f</sup> This prospective-longitudinal cohort study uses data before and during the pandemic to describe patterns of non-compliance with COVID-19 related public health measures in young adults and to identify which characteristics increase the risk of non-compliance. Data came from an ongoing cohort study in Zurich, Switzerland (n=737). Non-compliance with public health measures and concurrent correlates were measured at age 22. Antecedent sociodemographic, social, and psychological factors were measured at ages 15-20. Young adults generally complied with COVID-19 public health measures, although non-compliance with some measures (e.g., cleaning/disinfecting mobile phones, standing 1.5-two meters apart) was relatively higher.<sup>2</sup>

Jurisdiction/ Target Age	Factors Contributing to Compliance or Non-Compliance with Public Health Measures
	<ul style="list-style-type: none"> <li>○ Non-compliance particularly with hygiene related measures, was higher among males, those with a higher level of education, higher socioeconomic status (SES), and non-migrant background.</li> <li>○ Non-migrant background and high-SES young people are less likely to comply with hygiene measures, but not physical distancing measures. This may reflect what is known as the “immigrant health paradox,” whereby first- and second-generation migrants tend to report fewer risky health behaviours and better health outcomes compared to the country-born population.</li> <li>○ Non-compliance with certain hygiene and physical distancing measures were relatively higher, including cleaning and disinfecting mobile phones or standing 1.5–two meters apart.             <ul style="list-style-type: none"> <li>▪ Hygiene and physical distancing behaviours are driven by different mechanisms. For example, negative attitudes towards authorities (i.e., low police legitimacy, low trust in government) are associated with physical distancing non-compliance but not with hygiene non-compliance.</li> <li>▪ Hygiene practices may also depend on situational, household, or occupational characteristics that may influence the risk of infection:                 <ul style="list-style-type: none"> <li>• Migrant background or low SES individuals may be more likely to work in service sector positions that are considered “essential”, increasing exposure to environmental risks.</li> <li>• Low SES or education groups face higher barriers to compliance with physical distancing rules, such as staying home or avoiding public transport, due to economic hardship and the fear of losing income. Physical distancing non-compliance among these groups may be even higher in contexts that lack a strong social safety net or compensation for lost wages.<sup>2</sup></li> </ul> </li> </ul> </li> </ul>

**Table 3: Strategies or Best Practices Increasing Compliance with COVID-19 Public Health Measures**

Jurisdiction / Target Age / Public Health Measure	Description of Strategy or Best Practice
<b>Communications and Messaging</b>	
<p><b>Ottawa, Canada</b></p> <p><b>Ages 16–17</b></p> <p><b>Various Public Health Measures</b></p>	<ul style="list-style-type: none"> <li>• The Ottawa Public Health report (June 2020) on COVID-19 communications suggests that youth (i.e., ages 16-17) are more likely to respond to positive, hopeful information that provides a sense of closure. Younger women seek guidance and structure to counter what they perceive as irresponsible behaviour, while younger men are more responsive to rules but need safe alternatives to meet with friends. Components to increasing compliance among youth ages 16-17 years include:               <ul style="list-style-type: none"> <li>○ <b>Key information/messaging:</b> Outlining benefits and consequences; impact and difference; how the virus spreads, the impact of asymptomatic people; risks and susceptibility of young people; severity of the illness; how to physically distance; how to socialize ‘safely’; alternative activities to avoid a situation that may not allow for physical distancing; real-time information on the services and vendors that are open or closed; and how to access public facilities.</li> <li>○ <b>Tone/Style:</b> Motivational; hopeful; emphasis on societal/collective benefit; impact of actions on others; personal and connected to the community; accessible, clear, and easy to understand.</li> <li>○ <b>Delivery:</b> Grounded in fact.<sup>3</sup></li> </ul> </li> </ul>
<p><b>Ottawa, Canada</b></p> <p><b>Ages 18–24</b></p> <p><b>Various Public Health Measures</b></p>	<ul style="list-style-type: none"> <li>• The Ottawa Public Health report (June 2020) suggested that young adults (i.e., 18-24 years) are more open to messaging that is factual, practical, and blunt, emphasizing the consequences and direct impact of personal behaviours on others, especially those who are more vulnerable. Components to increasing compliance among young adults aged 18-24 years includes:               <ul style="list-style-type: none"> <li>○ <b>Key information/messaging:</b> Impact of behaviour on those who are more vulnerable such as:                   <ul style="list-style-type: none"> <li>▪ <u>Practical information:</u> How to behave on a day-to-day basis, identifying ‘high risk’ areas; identifying what measures are taken to adapt and make physical distancing easier; outlining current restrictions and how they are changing.</li> <li>▪ <u>Facts and figures:</u> Recovery/reproduction numbers; and number of cases reported.</li> </ul> </li> <li>○ <b>Delivery:</b> Animated short videos on how the virus spreads; videos and pictures of COVID-19 tests (i.e., nasal and throat swabs being taken).</li> <li>○ <b>Tone/Style:</b> Using elements of fear as a driver of behaviour change; motivational by using facts to show progress; physical distancing ‘PLUS’ (i.e., connecting a range of actions to fully depict what responsible behaviours look like as a whole).<sup>3</sup></li> </ul> </li> </ul>
<p><b>Ottawa, Canada</b></p> <p><b>Ages 22–29</b></p>	<ul style="list-style-type: none"> <li>• The Ottawa Public Health report (June 2020) noted that the older demographic is more likely to have work experience and consider physical distancing through the lens of various COVID-19 regulations and protocols implemented in the workplace. They are also more likely to take a global perspective on COVID-19. Components to increasing compliance among young adults ages 22-29 years include:               <ul style="list-style-type: none"> <li>○ <b>Key information/messaging:</b> Focus on precautionary messages, including infection prevention and control noting that masks and gloves do not replace</li> </ul> </li> </ul>

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<p><b>Various Public Health Measures</b></p>	<p>distancing; include what is being done to limit spread of the virus (i.e., testing); outline the consequences of not adhering to the practice of physical distancing; demonstrate how COVID-19 affects an individual; explaining how to mitigate risk, while carrying out daily routine; emphasis on data, including comparisons on how Canada is doing in comparison to other jurisdictions; including information in regard to what is re-opening; what measures are being put in place; and why some places are being opened and not others.</p> <ul style="list-style-type: none"> <li>○ <b>Tone/Style:</b> Motivational, hopeful; focused on togetherness, emphasizing societal/collective benefit; accessible and easy to understand.</li> <li>○ <b>Delivery:</b> Employers/workplace; signage in public places; leverage credibility of spokespersons such as public health organizations, government; directing the target audience to a website for more information.<sup>3</sup></li> </ul>
<p><b>Wisconsin, United States</b></p> <p><b>Ages 18–23</b></p> <p><b>Mask Wearing</b></p>	<ul style="list-style-type: none"> <li>● According to the CDC report (October 16, 2020) on factors influencing risk of COVID-19 exposure among young adults, exposure to misinformation and unclear messages were identified as drivers of behaviour during the COVID-19 outbreak. This highlights the importance of providing clear and consistent messages about the need for and effectiveness of masks. In addition, framing communication messages that increase young adults' responsibility to protect others and target perceived social or peer pressure to not adhere to public health guidance may influence young adults to adhere to public health guidelines that prevent the spread of COVID-19.<sup>7</sup></li> </ul>
<p><b>United States</b></p> <p><b>Young Adults</b></p> <p><b>Physical Distancing</b></p>	<ul style="list-style-type: none"> <li>● A Standard new article (April 14, 2020), on physical distancing identified specific recommendations for addressing the key reasons why people do not comply with physical distancing orders. Public health messages should be aimed at young people, as “shelter-at-home” is more difficult for younger people who are accustomed to social interactions and life outside the home. The article recommends that messages aimed at younger audiences address the negative consequences arising from their non-compliance, and how individual actions affect community-wide health outcomes.<sup>6</sup></li> </ul>
<p><b>Zurich, Switzerland</b></p> <p><b>Ages 15–20</b></p> <p><b>Various Public Health Messages</b></p>	<ul style="list-style-type: none"> <li>● The Swiss study (September 13, 2020) on young adults and their non-compliance with COVID-19-related public health measures suggests that public health campaigns should address specific aspects of non-compliance, such as improving the awareness and understanding of the virus on smartphones and other methods of transmission.<sup>2</sup></li> </ul>

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<b>Behavioural Changes and Skill Development</b>	
<p><b>Ottawa, Canada</b></p> <p><b>Ages 16–29</b></p> <p><b>Physical Distancing</b></p>	<ul style="list-style-type: none"> <li>• The Ottawa Public Health report (June 2020) suggests that youth and young adults require a range of skills and capabilities to engage in physical distancing:               <ul style="list-style-type: none"> <li>○ <b>Patience, discipline, and self-awareness:</b> Fines have the potential to enforce discipline, but are viewed negatively by youth and young adults; self-control on how to say ‘no’ for the right reasons; developing patience to wait in lines and taking longer to run errands; being aware of their ‘personal bubble’; ability to achieve a sense of inner peace and happiness, relying on one’s self rather than external encouragement.</li> <li>○ <b>Empathy, compassion, and sense of community:</b> Instilling that success can only be accomplished together; thinking about other people and who could be affected; being selfless; putting others’ needs ahead of oneself; understanding the perspective of others.</li> <li>○ <b>Becoming more informed:</b> Creating a network to disseminate information via word of mouth; better informing oneself through researching and seeking out information; encourage willingness to seek out information.</li> <li>○ <b>Spatial awareness:</b> Specific markers placed on the ground to demonstrate two-meter distance; being aware of where one is are at any point in time.</li> <li>○ <b>Relaxation and positive mental health:</b> Self-awareness and self-care; positive mindset; mindfulness.<sup>3</sup></li> </ul> </li> </ul>
<p><b>Ottawa, Canada</b></p> <p><b>Ages 16–29</b></p> <p><b>Physical Distancing</b></p>	<ul style="list-style-type: none"> <li>• The Ottawa Public Health report (June 2020) suggests that there are mixed views about whether positive reinforcement helps youth and young adults physically distance; however, the report identified positive reinforcement is beneficial particularly for regulating the behaviours of those aged 16-24 years. The report stated that:               <ul style="list-style-type: none"> <li>○ Youth 16-17 years report a greater desire for explicit encouragement and positive reinforcement.</li> <li>○ Young adults 18-24 years acknowledge that praise from public officials and see a reduction in COVID-19 cases as progress.</li> <li>○ Young adults 25-29 years identify that reopening of the economy is indicative that physical distancing and other measures are effective and are not in favour of ‘too much’ positive feedback, which may put progress at risk and cause a setback as people react by discontinuing the practice of physical distancing.<sup>3</sup></li> </ul> </li> </ul>
<b>Social Influences</b>	
<p><b>Ottawa, Canada</b></p> <p><b>Ages 16–29</b></p> <p><b>Physical Distancing</b></p>	<ul style="list-style-type: none"> <li>• The Ottawa Public Health report (June 2020) notes that when it comes to physical distancing, family and friends are most influential, especially among the younger cohort. Young people listen to various spokespersons across the spectrum, from politicians and experts in the field, to musicians and online personalities. The following were noted as influential in encouraging physical distancing:               <ul style="list-style-type: none"> <li>○ <b>Family, friends, and neighbours:</b> Parents, grandparents, friends, roommates, co-workers, and neighbours are important to influencing physical distancing. Mothers and friends have a particularly strong influence, especially those working in health care. For this group, receiving inspiration and motivation from friends has an impact.</li> <li>○ <b>Entertainers, music artists, and athletes:</b> Entertainers, music artists, and athletes at home with their family using social media platforms (e.g., Twitter,</li> </ul> </li> </ul>

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	<p>Instagram, Snapchat, Spotify) who share messages reinforcing the need to physical distance/stay safe are influential among young people.</p> <ul style="list-style-type: none"> <li>○ <b>Leadership:</b> Ontario Premier, Prime Minister, Governor General, World Health Organization (WHO), Health Ministers, Public Health officials (e.g., Theresa Tam), Government officials set the rules and act as role models to some degree.<sup>3</sup></li> </ul>
<p><b>United Kingdom</b></p> <p><b>Adolescents</b></p> <p><b>Physical Distancing</b></p>	<ul style="list-style-type: none"> <li>● A Cell Press Review analysis (August 2020) on peer influence in adolescence during COVID-19 suggests that, given the current restrictions on face-to-face interactions, social media is likely to be the most effective way to promote physical distancing behaviours among adolescents. Young people can post content online about how they are following the rules, for example by sharing a photo or video of themselves at home. Platforms such as Instagram can add physical distancing tags (phrases and images) to these posts. These will then be seen by their peers, who may add endorsements, such as comments and likes, which increase the visibility of the post. As more adolescents see this content, physical distancing can be established as a group norm among friends. This behaviour will then be modelled by those looking on, who may go on to post similar content themselves. One advantage of this approach is that it is adolescent led and autonomous: the way in which young people manage physical distancing, and their motivation for doing so, will stem naturally from the young people themselves.</li> <li>● The report recommends that public health bodies consider targeting, and even incentivizing, influential individuals online (i.e., those who have the capacity to diffuse information among a large online social network). For example, it may be particularly useful to target social media ‘influencers’, individuals with a strong online presence and many adolescent followers. If these social media influencers model positive physical distancing behaviour and communicate the risk of COVID-19 through their platform, adolescents may listen. An advantage of targeting social media influencers is that they exist across domains of interest (e.g., different hobbies) and are likely to target large groups of young people.<sup>4</sup></li> </ul>
<p><b>United Kingdom</b></p> <p><b>Adolescents</b></p> <p><b>Physical Distancing</b></p>	<ul style="list-style-type: none"> <li>● The Cell Press Review analysis (August 2020) on peer influence in adolescence during COVID-19 reports that campaigns that impose physical distancing have been led by the government and are likely to be enforced by other adults (e.g., parents, teachers, police). One possible approach to enhance their effectiveness among young people would be to provide adolescents with the autonomy to develop and deliver their own campaigns, with a focus on changing peer attitudes on the importance of physical distancing. The analysis reported on a study that successfully demonstrated that a peer-led approach can reduce rates of peer victimization in schools.<sup>4</sup></li> </ul>

## References

1. Angus Reid Institute. (2020). [COVID-19 Compliance: One-in-five Canadians making little to no effort to stop coronavirus spread.](#)
2. Nivette, A., Ribeaud, D., Murray, A., Steinhoff, A., Bechtiger, L., Hepp, U., et al. (2020). [Non-compliance with COVID-19-related public health measures among young adults in Switzerland: Insights from a longitudinal cohort study.](#) *Social Science & Medicine*, 268, 113370.
3. Ottawa Public health. (2020). [Consultations With Youth and Young Adults on Covid-19 Communications.](#)
4. Andrews, J. L., Foulkes, L., & Blakemore, S.-J. (2020). [Peer influence in adolescence: Public-health implications for COVID-19.](#) *Trends in Cognitive Sciences*.
5. Guiney, C. (2020). [GYDP young people: response to Covid-19 public health measures.](#) *Drugnet Ireland*, 16–17.
6. Stanford News. (2020, April 14). [Work and a desire to exercise, socialize are why people didn't social distance,](#) Stanford researchers nd.
7. Wilson, R. F., Sharma, A. J., Schluechtermann, S., Currie, D. W., Mangan, J., Kaplan, B., et al. (2020). [Factors Influencing Risk for COVID-19 Exposure Among Young Adults Aged 18–23 Years—Winnebago County, Wisconsin, March–July 2020.](#) *Morbidity and Mortality Weekly Report*, 69(41), 1497.
8. Pollak, Y., Shoham, R., Dayan, H., Seri, O. G., & Berger, I. (2020). [Background and concurrent factors predicting non-adherence to public health preventive measures during the chronic phase of the COVID-19 pandemic.](#)