



HI-C

HEALTH IMPACT CHECKLIST

STATE-LEVEL EXAMPLE

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Health Impact Checklist – State Level Example
Expansion of Broadband Access Across Kansas
Summary Page

Proposal Name
Expansion of Broadband Access Across Kansas

Key Points of Proposal
Key Points of Proposal: Senate Sub. for HB 2701 (2018) established the statewide broadband expansion planning task force. While the primary direct effect of HB 2701 would be related to the creation of the task force, there could be secondary effects, including the expansion of broadband access across Kansas if the task force recommendations are implemented.

Impacted Social, Economic and Environmental Conditions
<ul style="list-style-type: none"> • Employment: Increase in the employment rate, especially in rural areas, faster re-employment and access to a larger set of job opportunities. • Higher Education: Provide access to lower-cost online education. • Health Literacy: Potentially could improve health literacy. However, in order to improve health literacy via the internet, it will be essential to enhance general literacy. • Civic Participation: Impact rates of voting in local elections, contacting local public officials, joining a neighborhood group and discussing politics with friends or family. • Social Isolation: Increase social contact among older adults. • Access to Health Care/Behavioral Health Services: Increase opportunities to deliver services via telemedicine.

Potential Health Impacts
<ul style="list-style-type: none"> • Longer life expectancy • Healthier BMI • Decreased risk for heart condition, stroke, diabetes, asthma • Improved quality of life • Decreased risk of depression and cognitive decline • Improved psychological well-being and more positive emotional health

Impacted Population(s)
<ul style="list-style-type: none"> • Rural residents: Broadband access could lead to more new businesses, increased median household income and lower unemployment levels for rural residents. • Persons with low income: Access to broadband could remove barriers associated with applying for and obtaining jobs, filling out college applications and completing homework. • Older adults: Access to broadband can improve health of seniors by addressing personal fulfillment, health preservation, social connectedness, functional capability and activity, and caregiver support.

Recommendations
<ul style="list-style-type: none"> • Strategies to increase access to broadband could include a focus on enhancing the ability of individuals to use computers and the ability to judge whether information sources are credible. • Identify strategies for making access to broadband affordable.

Entity Completing the HI-C	Entity Receiving the HI-C	Completion Date
Kansas Health Institute	(n/a – example only)	1/17/2020

Health Impact Checklist - State Level Example
Expansion of Broadband Access Across Kansas
Section I. General Information

1. Name of proposal:

Expansion of Broadband Access Across Kansas

2. Provide a short summary of the key points of the proposal, including expected outcomes if specified in the proposal. (Type in.)

Senate Sub. for HB 2701 (2018) established the statewide broadband expansion planning task force and directed the task force to: 1) develop criteria for the creation of a statewide map for defining and evaluating the broadband needs of Kansas citizens, businesses, industries, institutions and organizations; 2) develop criteria for prioritizing the expansion of broadband services across Kansas; 3) identify and document risks, issues and constraints associated with a statewide broadband expansion project and develop any corresponding risk mitigation strategies where appropriate, among other tasks.

While the primary direct effect of the HB 2701 would be related to the creation of the task force, there could be secondary effects, including the expansion of broadband access across Kansas if task force recommendations are implemented. More than 20 individuals and organizations testified before the House Committee on Energy, Utilities and Telecommunications and the Senate Commerce Committee. The conferees listed several potential impacts associated with expansion of broadband access across Kansas such as improved quality of life for all populations, including adults 65 and older, and access to online education opportunities, employment and health care services. To access materials (minutes and testimony), please click here: http://kslegislature.org/li_2018/b2017_18/measures/HB2701/testimony

3. Which of the following social, economic and environmental conditions (determinants of health) does the proposal have the greatest potential to impact? (Check at least three.)

Social, Economic and Environmental Conditions ^{1, 2}		
Economic Stability	Neighborhood & Physical Environment	Education
<input checked="" type="checkbox"/> Employment	<input type="checkbox"/> Housing Quality	<input type="checkbox"/> Early Childhood Education and Development
<input type="checkbox"/> Income	<input type="checkbox"/> Transportation	<input type="checkbox"/> High School Graduation
<input checked="" type="checkbox"/> Housing Instability/ Homelessness	<input checked="" type="checkbox"/> Environmental Conditions (e.g., water, air and soil quality)	<input checked="" type="checkbox"/> Higher Education
<input type="checkbox"/> Food Insecurity	<input type="checkbox"/> Access to Healthy Food	<input type="checkbox"/> Language
<input type="checkbox"/> Poverty	<input type="checkbox"/> Safety	<input checked="" type="checkbox"/> Literacy

Social, Economic and Environmental Conditions ^{1, 2}		
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:
Community and Social Context	Health and Health Care	<i>Note: The number of social, economic or environmental conditions examined could depend on available resources, stakeholder interest and timeline. After examining three, additional conditions may be examined further.</i>
<input checked="" type="checkbox"/> Civic Participation	<input type="checkbox"/> Health Coverage	
<input type="checkbox"/> Discrimination	<input type="checkbox"/> Provider Availability	
<input type="checkbox"/> Toxic Stress	<input checked="" type="checkbox"/> Access to Health Care	
<input checked="" type="checkbox"/> Social Isolation	<input checked="" type="checkbox"/> Access to Behavioral Health Services	
<input type="checkbox"/> Incarceration	<input type="checkbox"/> Quality of Care	
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	

Section II. Description of Impacts

Instructions: Having described the proposal and identified its potential impacts on various social, economic and environmental conditions, collaborate with organizations that might have research capacity to complete items included in Section II.

4. What partners can help you find research regarding potential impacts of the proposal on the social, economic and/or environmental conditions identified in Question 3? (Type in.)

Specific Partner(s)	Partnership Contribution(s)
Kansas Department of Health and Environment, Kansas State Department of Education, Kansas Department of Commerce	These agencies can serve as resources for data.
The Docking Institute at Fort Hays State University, Kansas Legislative Research Department	These entities can assist with conducting literature review to understand the impact of broadband on each of the social, economic or environmental conditions.

Potential partner types include community foundations, nonprofit organizations, governmental agencies, universities or colleges, health care organizations, community coalitions, stakeholder groups, community organizations (including those representing populations facing significant barriers to health and well-being) and others.

5. Describe how the proposal could impact the social, economic and/or environmental conditions identified in Question 3 and how it could result in associated health impacts for the community overall. (Type in.)

Social, Economic or Environmental Condition	Impact of the Proposal on Condition	Impact of the Condition on Health	Overall Impact on Health
Employment	Access to broadband could have several positive impacts related to employment, including an increase in employment, especially in rural areas ^{3, 4} , faster re-employment and access to a larger set of job opportunities. Specifically, individuals can search for jobs on websites, and use online systems to submit applications and resumes. Broadband also can help people gain new career skills ⁵ . Access to high-speed broadband could also help to attract employers to rural areas.	Tangible (e.g., health insurance, income) and intangible (e.g., sense of meaning) benefits of employment may have positive effects on health. Having health insurance increases access to services, which in turn affects a person’s health and well-being. Additionally, an increase in employment could improve economic conditions (personal income, job security). People with higher incomes are more likely to have longer life expectancies and healthier BMIs. ⁶	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear
Higher Education	Students living in areas without broadband may not be able to utilize online learning opportunities. Broadband may also enable access to lower-cost online education. ⁷ Adults with more education tend to experience less economic hardships and enjoy greater access to resources. Higher education has an even greater effect on lifetime earnings, a pattern that is true for men and women, for blacks and whites, and for Hispanics and non-Hispanics.	There is strong correlation between an individual’s level of education and health outcomes. For example, research has found that greater educational attainment has been associated with eating healthy, getting exercise and avoiding risk factors such as drinking excessively and smoking. In addition, more-educated people are less likely to suffer from common acute and chronic diseases (heart conditions, stroke, diabetes, asthma).	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear

Social, Economic or Environmental Condition	Impact of the Proposal on Condition	Impact of the Condition on Health	Overall Impact on Health
Literacy (Health)	The Internet requires basic skills, such as literacy. On average, Internet health information requires a 10th grade reading level (= age 15). Access to the internet seems to have the potential for improving health literacy. However, in order to improve health literacy via the internet, it will be essential to enhance general literacy (the ability to read and write). ^{8, 9}	Limited health literacy increases the disparity in health care access among populations who face significant barriers to health and well-being. Low health literacy is often linked to chronic health problems because patients know less about their conditions and how to handle symptoms. ¹⁰ However, research suggests that in order to increase health literacy via the internet, it is critical to enhance general literacy, the ability to use computers and the ability to judge whether information sources are credible. ¹¹	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear
Civic Participation	Several studies found a correlation between broadband and civic engagement. Broadband access could impact rates of voting in local elections, contacting local public officials, joining a neighborhood group and discussing politics with friends or family. ¹²	Civic participation improves health through multiple pathways. For example, a study found that members of civic groups were more likely to be physically active. Belonging to civic groups expanded participants' social networks, which made them more aware of opportunities to be physically active in their community. Another study found positive impact of volunteerism on health. Volunteers enjoy better psychological well-being and more positive emotional health. ^{13, 14}	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear

Social, Economic or Environmental Condition	Impact of the Proposal on Condition	Impact of the Condition on Health	Overall Impact on Health
Social Isolation	Access to broadband may be beneficial for decreasing loneliness and increasing social contact among older adults and individuals who live in rural communities. ¹⁵	Research has linked social isolation and loneliness to higher risks for a variety of physical and mental conditions, including high blood pressure, heart disease, obesity, anxiety, depression, cognitive decline and Alzheimer’s disease. ¹⁶	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear
Access to Health Care/Behavioral Health Services	Telehealth/telemedicine (the remote delivery of health care services) has the potential to improve the quality, cost and availability of health care in rural areas by providing improved access to specialists, speedier treatment, the ability for patients to remain close to home, and the ability for rural health care providers to sharpen and maintain their skills. However, the success of telemedicine is dependent upon access to strong, reliable broadband service. ¹⁷	According to research, telehealth interventions produce positive outcomes when used for remote patient monitoring for several chronic conditions, including cardiovascular and respiratory disease, with improvements in outcomes such as mortality, quality of life, and reductions in hospital admissions. Telehealth also was reported effective for patient monitoring for psychotherapy as part of behavioral health. ¹⁸	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear

6. Based on the potential impact of the proposal on the social, economic or environmental conditions identified in Question 3, identify populations who could be impacted and how the proposal might affect their health. (Describe at least three populations.)

Note: Focus on populations that are at a higher risk for poor health as a result of the barriers they experience to social, economic, political and environmental resources, as well as limitations due to illness or disability. For a full list of potential populations of focus, see Section IV. Glossary of Terms.

Social, Economic or Environmental Condition	Impacted Population	Impact on Health	Overall Impact on Health
Employment	Rural residents	Americans living in rural areas have less access to broadband. Broadband access could lead to more new businesses, ¹⁹ increased median household incomes and lower unemployment levels for rural residents. ²⁰ There are many positive tangible and intangible benefits of employment and higher income on health.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear
Employment Higher Education	Persons with low income	Low-income households have lower rates of in-home Internet connectivity compared with higher-income groups. Connectivity rates are particularly low among HUD-assisted renter households, who also are more likely to depend exclusively on smartphones to access the Internet in the home. ²¹ As a result, persons with low income experience additional barriers associated with applying for and obtaining jobs, filling out college applications and completing homework.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear
Social Isolation	Older adults	Access to health care and support services (including transportation and mobility support), nutrition, housing, and social isolation impact the health of seniors. Access to broadband can improve health of seniors by addressing personal fulfillment, health preservation, social connectedness, functional capability and activity, and caregiver support. ²²	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear

Section III. Recommendations

Instructions: Having described the potential impacts of the proposal and populations who may face significant barriers to health and well-being, use Section III to identify collaborative approaches to addressing these findings.

7. What partners can help you to develop recommendations to address or mitigate the potential health impacts identified in Questions 5 and 6? (Type in.)

Specific Partner(s)	Partnership Contribution(s)
Kansas State Department of Education	In collaboration with stakeholders around the state identify strategies for effective use of internet to improve health literacy.
The University of Kansas or Kansas State University	In collaboration with stakeholders around the state identify strategies for effective use of internet to improve health literacy.
AARP	Identify strategies for building older adults' capacity in using internet.

Potential partner types include community organizations, impacted population(s), community foundations, nonprofit organizations, governmental agencies, universities or colleges, health care organizations, community coalitions, stakeholders, populations who face significant barriers to health and well-being, and others.

8. Based on the results of this Health Impact Checklist, suggest recommendations that can help to maximize potential positive health impacts and/or mitigate potential negative health impacts of the proposal. (Type in.)

Recommendation(s)
Focus on enhancing the ability of individuals to use computers and the ability to judge whether information sources are credible.
Identify strategies for making access to broadband affordable.

Section IV: Glossary of Terms

Summary definitions for determinants of health were pulled from Healthy People 2020²³ and additional sources.^{24,25} Additional information is available [here](#).

Civic Participation: Encompasses a wide range of both formal and informal activities including voting, volunteering and participating in group activities or organizations.

Determinants of Health: The “conditions in the environments in which people are born, live, learn, work, play, worship and age that affect a wide range of health, functioning and quality-of-life outcomes and risks.”

Discrimination: A socially structured action that is unfair or unjustified and harms groups or individuals. Discrimination occurs at both structural and individual levels and can be attributed to social interactions

that occur to protect more powerful and privileged groups at the detriment of other groups. Discrimination on the basis of race is one example of discrimination.

Food Insecurity: The disruption of food intake or eating patterns due to a lack of money or other resources.

Housing Instability: Despite no standard definition, housing instability encompasses a number of housing-related challenges including trouble paying rent, overcrowding, staying with relatives, moving frequently, or spending the bulk of income on housing.

Impacted Populations: Populations who were identified by completing the Health Impact Checklist as being impacted by the proposal. Those groups may include populations who face significant barriers to health and well-being (populations of focus).

Populations of Focus: Populations may include racial and ethnic minorities, including persons of Black, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander races and persons of Hispanic ethnicity; rural/urban residents; children; pregnant women; persons who are LGBTQIA+; older adults; persons with chronic illnesses; persons with housing instability or who are homeless; immigrant populations; displaced persons; persons with limited English proficiency; persons with low literacy; persons with low income; persons with disabilities; and others.

Social Isolation: A person's lack of social connectedness is measured by the quality, type, frequency and emotional satisfaction of social ties. Social isolation exists when an individual lacks opportunities to be socially connected. Social isolation can impact health and quality of life, as well ability and motivation to access adequate support. It also can impact the quality of the environment and communities in which a person lives.

Toxic Stress: A strong, frequent or prolonged activation of the body's stress management system. Stressful events that are chronic, uncontrollable and/or experienced by children without access to support from caring adults tend to provoke toxic stress responses. Studies indicate that toxic stress can have an adverse impact on brain architecture.

Section V: References & Sources

Instructions: In your preferred format, provide citation or reference information on the resources used to complete the HI-C.

¹ The list of social, economic and environmental conditions is adapted from Healthy People 2020 and the Kaiser Family Foundation. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health> and <https://www.kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/>

² U.S. Department of Health and Human Services. (2019). *Healthy People 2020*. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources>

³ Atasoy, H. (2013). The effects of broadband internet expansion on labor market outcomes. *Industrial and Labor Relations Review*, 66(2), 315-345.

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- ⁴ Lobo, B., Alam, R., & Whitacre, B. (2019). Broadband speed and unemployment rates: Data and measurement issues. *Science Direct. Telecommunications Policy*, *In Press*.
- ⁵ Smith, A. (2015). *Lack of broadband can be a key obstacle, especially for job seekers*. Washington, DC: Pew Research Center.
- ⁶ Chetty, R., Stepner, M., Abraham, S., Lin, S., Scuderi, B., Turner, N., et al. (2016). The association between income and life expectancy in the U.S., 2001-2014. *Journal of the American Medical Association*, *315*(16), 1750–1766.
- ⁷ Deming, D. J., Goldin, C., Katz, L. F., & Yuchtman, N. (2015). Can online learning bend the higher education cost curve? *American Economic Review*, *105*(5), 496-501.
- ⁸ Jiang, S., & Beaudoin C. (2016). Health literacy and internet an exploratory study on the 2013 HINTS survey. *Computers in Human Behavior*, *58*, 240-248.
- ⁹ Diviani, N., van den Putte, B, Giani, S., & van Weert, J.C. (2015). Low literacy and evaluation of online health information: A systematic review of the literature. *Journal of Medical Internet Research*, *17*(5).
- ¹⁰ Berkman, N., Dewalt, D., Pignone M., Sheridan, S., Lohr, K., Lux, L, et al. (2004). Literacy and health outcomes. *Agency for Healthcare Research and Quality (AHRQ) Evidence Report Summaries*, *87*, 1-8.
- ¹¹ U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. (2009). Improving health literacy for older adults. Expert panel report.
- ¹² Whitacre, B. E., & Manlove, J. L. (2016). Broadband and civic engagement in rural areas: What matters? *Community Development*, *47*(5), 700-717.
- ¹³ Office of Disease Prevention and Health Promotion. *Healthy People 2020*. Civic Participation.
- ¹⁴ Anderson, N. D., Damianakis, T., Kroger E., Wagner, L. M., Dawson, D. R., Binns, M. A., et al. (2014). The benefits associated with volunteering among seniors: A critical review and recommendations for future research. *Psychology Bulletin Journal*, *140*(6), 1505-1533.
- ¹⁵ Cotten, S., Anderson, W., McCullough, B. (2013). Impact of internet use on loneliness and contact with others among older adults: Cross-sectional analysis. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3636305/>
- ¹⁶ National Institute on Aging. (2019). Social Isolation, loneliness in older people pose health risks. Retrieved from <https://www.nia.nih.gov/news/social-isolation-loneliness-older-people-pose-health-risks>
- ¹⁷ Sheppard, L. (2018). *Testimony: Impact of broadband on health care access and outcomes in rural areas*. Topeka, KS: Kansas Health Institute.
- ¹⁸ Totten, A. M., Womack, D. M., Eden, K. B., McDonagh, M. S., Griffin, J. C., Grusing, S., et al. (2016). *Telehealth: Mapping the evidence for patient outcomes from systematic reviews*. Report No.: 16-EHC034-EF. AHRQ Comparative Effectiveness Technical Briefs. Rockville, MD: Agency for Healthcare Research and Quality.
- ¹⁹ Kim, Y., & Orazem, P. F. (2016). Broadband internet and new firm location decisions in rural areas. *American Journal of Agricultural Economics* *99*(1), 285-302.
- ²⁰ Whitacre, B., Gallardo, R., & Stover, S. (2014). Broadband’s contribution to economic growth in rural areas: Moving towards a causal relationship. *Science Direct: Telecommunications Policy*, 1011-1023.
- ²¹ U.S. Department of Housing and Urban Development's Office of Policy Development and Research. (Fall 2016). *Digital inequality and low-income household*.
- ²² Baker, C. (2013). A connection for all ages: Enabling the benefits of high-speed internet access for older adults. *AARP Public Policy Institute: Insight on the Issues*, 79.
- ²³ U.S. Department of Health and Human Services. (2019). *Healthy People 2020*. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources>

²⁴ National Scientific Council of the Developing Child. (2014). *Excessive Stress Disrupts the Architecture of the Developing Brain*. Retrieved from https://developingchild.harvard.edu/wp-content/uploads/2005/05/Stress_Disrupts_Architecture_Developing_Brain-1.pdf

²⁵ AARP Foundation. *Framework for Isolation in Adults Over 50*. Retrieved from https://www.aarp.org/content/dam/aarp/aarp_foundation/2012_PDFs/AARP-Foundation-Isolation-Framework-Report.pdf

The logo for HI-C online is a white speech bubble with a dotted border and a tail pointing towards the bottom right. Inside the bubble, the text "HI-C" is written in a large, bold, black sans-serif font, and "online" is written below it in a smaller, black sans-serif font. There are several small decorative icons around the bubble: a double colon (:), a small circle (o), a double equals sign (=), a small triangle (Δ), a small square (◻), and a small asterisk (*).

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