August 16, 2016

Tom Szpyrka  
IPLAN Administrator  
Illinois Department of Public Health  
525 W. Jefferson  
Springfield, IL  62701  

Dear Mr. Szpyrka,

I am pleased to present the Kendall County Health Department 2021 IPLAN and the outcomes of the 2016 IPLAN. The Kendall County Health Department employed the MAPP process and found it to be very effective in promoting community engagement. The Health Department has four advisory boards that meet throughout the year. These advisory boards are comprised of diverse community partners and community members receiving person-based as well as population-based services from the Health Department. Such community partnerships will continue to provide informed input into our IPLAN implementation processes.

The three health priorities reflected in this community health plan reflect the following health and well-being topics:

- Increasing community population opportunities for access to oral health care.
- Decreasing community population potential exposure to Lyme Disease.
- Connecting seniors to assets that reduce socio-economic duress and support mental health.

The 2021 IPLAN; like those before it, is a living community health plan and reflects thoughtful commitment to our community. We are pleased to submit this document for your review and approval. The Kendall County Board of Health approved this IPLAN on August 16, 2016.

Sincerely,  

Amaal V.E. Tokars  
Executive Director/Public Health Administrator
Letter from KCHD BOH President to IDPH endorsing the KCHD IPLAN
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EXECUTIVE SUMMARY & VISION STATEMENT

EXPLANATION OF IPLAN

The Kendall County Health Department’s 2016-2021 community health improvement plan, also referred to as the IPLAN is intended to positively impact the health and well-being of our community as well as to learn about ways to develop greater efficacy in our implementation endeavors along the way. The acronym IPLAN stands for Illinois Project for the Local Assessment of Needs. This is an assessment and planning process that all Illinois certified health departments undergo every five years. The purpose of IPLAN is to facilitate a strategic health system planning process that rises out of a community health needs assessment. By carefully assessing and planning for community health needs, we are able to develop a compilation of data-driven information that describes the community health status, and we will be able to discourage redundancies in the public health system, as well as identify gaps in the fulfillment of health and well-being needs. Through a carefully planned action cycle, we will be able to improve performance, enhance public health partnerships, and provide increased assurance with regard to the health and well-being needs of the community. The Kendall County Health Department used an assessment and planning model referred to as MAPP. The acronym MAPP stands for Mobilizing for Action through Planning and Partnership.

As a part of our planning and assessment process, we put forth great efforts to engage our community in a participatory planning process. Diverse community members who are stakeholders of the public health system were inspired to participate in and influence this critical process. Together, we looked at many kinds of data-driven health information relevant to our community. In order to achieve success, the planning required strategic thinking, participatory community engagement, and a focus on the community public health system.

We also had the opportunity to engage with our community partners in an examination of the extent to which the ten essential services are alive and well in the local public health system. While these services are not the health and well-being services that community members most readily think of as public health services, these particular services do represent a unique set of public health activities that are seen as essential to thoroughly serving the community with the quality of public health services they should expect. The ten essential services are as follows; diagnose/investigate inform/educate/empower, mobilize community partnerships, develop policies, enforce laws, link to/provide care, assure a competent workforce, evaluate, and monitor health.

Vision and values statements were also developed during the community engagement process. In our planning process, the vision and values statements were specifically developed to drive reflection around the identification of strategic health issues as well as health and well-being priorities. The visioning process was designed to elicit values constructs or phrases from the community and culminated in the collaborative development of a vision statement that drove the issues identification and prioritization process.

COMMUNITY HEALTH PLANNING VISION & VALUES STATEMENTS

<table>
<thead>
<tr>
<th>Brainstormed Values</th>
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<tbody>
<tr>
<td>Access to health care/service</td>
<td>Educate and motivate</td>
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<td>Aspire to develop meaningful goals</td>
<td>Empower citizens to make healthy choices</td>
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<td>Common good</td>
<td>Inspire thoughtful strategies</td>
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<td>Community spirit</td>
<td>Offer optimal opportunities</td>
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<td>Demonstrate healthy lifestyles</td>
<td>Social well-being</td>
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VISION STATEMENT

Complete health includes social well being, mental health, environmental health, and physical health. To this end; we aspire to educate, motivate, inspire, and empower citizens of Kendall County to make healthy choices. (Kendall County MAPP Community Partners, 11/15)

In February of 2015, the Kendall County Health Department began to engage its community public health system partners in a community needs health assessment process. The Kendall County Health Department began an Organizational Capacity Assessment during a January 2016 Strategic Planning retreat, which is to be approved by the Board of Health in the fall 2016. Along with many committed community public health system partners, the health department completed a community health plan in July of 2016 that was approved by the Board of Directors on 8/16/16.

CONTEXTUAL BACKGROUND

Serving as a foundation for our planning was the World Health Organization’s timeless 1948 definition of health, which states “Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”. Noteworthy is the inclusion of social well-being as being essential to complete health, which further expands the role and responsibility of public health practitioners. The 2010-2015 Illinois State Health Improvement Plan also offers public health practitioners increased challenge through its vision statement, “Optimal physical, mental, and social well-being for all people in Illinois through a high-functioning public health system comprised of active public, private, and voluntary partners”. This State Health Improvement Plan sets forth thoughtfully prepared health priorities. Although the health priorities produced by our community planning process are different, they are certainly supported and affirmed by the State Health Improvement Plan priorities. The health priorities of that plan which most closely relate to our own include; Address Natural and Built Environment, Oral Health, Social Determinants of Health and Health Disparities, and Mental Health.

The 2016 County Health Rankings & Roadmaps look at factors that affect people’s health within four categories; Social and Economic Factors, Physical Environment, Health Behaviors, and Clinical Care. These four categories affirm and support the health priorities selected by the community in our planning process. These respective rankings categories reveal the following: the Poor Mental Health Days for Kendall County is at 3.1%, yet only 2.8% nationally; the Physical Environment category for Kendall County is ranked 98; the number of Social Associations per 10,000 population for Kendall County is at 5.4%, yet 22% nationally and 9.9% for Illinois; the number of preventable hospital stays per 1,000 Medicare enrollees for Kendall County is 53 compared to 38 nationally; and the Clinical Care category for Kendall County is ranked 15. Our past health plan priorities fell into the IPLAN Data System categories of Environmental Health, Access to Care, and Chronic Disease. The four past IPLAN health priorities were; Reduction of Obesity through Participatory Health Education, Reduction of Indoor Radon Exposure through Health Education and Mitigation, Increase of Socio-Economic Well-Being through Participatory Health Education, and Prevention of Youth High Risk Behaviors through Early Intervention. Progress towards each of these health priorities is as follows:
COMMUNITY HEALTH SERVICES
Promoting the Reduction of Obesity thorough Participatory Health Education

Under the 2011-2016 IPLAN, Community Health Services (CHS), in collaboration with local community partners the Oswego Senior Center, University of Illinois Extension, Rush Copley Medical Center, Oswego Park District, the Agency on Aging and Meijer Food Stores created and implemented a no-cost person-centered physical health and well-being program titled Healthy Habits for Successful Living (HHSL). The primary goal of CHS was to actively promote the reduction of obesity thorough participatory health education.

Specifically, CHS, by the end of 2015 sought to increase the numbers of Kendall County residents in a target group who have a healthy BMI, by 5%. The program continuously evolved while remaining rooted in the promotion and fostering of healthy behaviors and lifestyle choices conducive to healthy weight management through good nutritional education, physical activity, and a connection between sound emotional health and eating.

The HHSL team offered classes in sessions of 16 weeks to begin within 2013, but found it difficult to retain participants for the entirety of the program and were unable to collect BMI data. In an effort to address the concern of retention the program was reduced to 14 week sessions in 2014 and BMI was calculated per KCHD. Still experiencing issues of retention, with an average class completion rate of 54%, the program was further modified to twice a week gatherings for 8 weeks. Each week of the 8 week-16 class programs, was comprised of one day of education/presentation on healthy eating habits, and the second day of the week concentrated on demonstrating different forms of exercise. The curriculum was formulated with the strategic hands on dialogic workshops such as Quick Healthy Meals and Snacks; Eating Healthy on a Budget; Daily Caloric Intake to Losing Weight and Keeping It Off; Healthy Eating as Part of a Total Lifestyle; Learning Label Nutritional Facts and Physical Activity: the Key to Living Well.

The condensed class schedule did increase retention and momentum, leading to a 71% completion rate in 2014. The program results were measured by utilizing pre and post program participant surveys which contained narrative data and qualitative data, such as Blood Pressures, Blood Glucose, Height and Weight, and BMI. Although there was a modest decrease in weight and the BMI in participants, the qualitative (narrative) results taken from comments in the participants’ surveys revealed that they had gained knowledge in how foods and lifestyles could make a difference in their well being, how to shop for and prepare healthier meals, how to choose healthier foods when eating out, and understanding how important it is to get up and move/exercise.

During the summer and fall class 2014 and the beginning of 2015, 94% of the participants who completed the evaluation indicated increasing their confidence or skills in managing their health, establishing healthy habits in two to six areas as follows: 94% who completed the survey indicated they made healthier food choices by using the USDA label; 81% reported improving their ability to more easily prepare healthy foods; 75% ate five food servings of fruits and vegetables daily, more often; 69% took action to walk or perform some other form of exercise 30 minutes a day.

Another area of improvement was the increased knowledge of Healthy Food Consumption: 65% now recognize 1500mg of sodium was the upper limit for daily intake; 65% also correctly identified fruit as a healthy carbohydrate; 53% could correctly identify canola oil as the healthiest dietary fat; and 41% recognized chicken as the healthier protein.

Most importantly, all of the participants felt they had improved their self confidence in developing healthier behaviors, reading food labels, knowing which foods have low or high carbohydrates, identifying foods that are heart healthy, using less salt to flavor with, and completing 30 minutes of exercise daily.
In conclusion, the program conducted two sessions per year and has had approximately 75 people participate. Although we were unable to collect BMI data for the first few years, the last two years showed improvements in the participants’ BMI and weight reduction, and/or maintaining desired weight. In fact, a 12 month future trajectory of this target group of participants, should they stay the course, reveals the potential for 50% achieving a healthy BMI. Information, hands-on demonstration, and individual encouragement were the key elements to the success of the program. Through reassessment and recognition of the participant’s advancements towards a healthier lifestyle, the HHSL Program served to inspire and promote healthier eating and increased physical activity, behaviors resulting in positive changes in many of the participant’s physical health and self-perception, and/or emotional well-being.

The lessons learned by CHS in working with the HHSL team can and will be applied to other CHS programs and services. CHS, in learning that everyone approaches health and is inspired to take on healthy lifestyle choices in different ways, plans to pull resources of its local community health partners to engage the Kendall County population. CHS plans to offer a community health and wellness calendar. Collecting contributions from its community health partners, CHS will display announcements of local, low and no cost community events and offerings aimed at promoting individual and family health and wellness. This calendar will be located in the Health Department’s lobby, and will be promoted on the Department’s website for the community to access and enjoy. A local news article and Facebook posts will further promote this unique calendar as an accessible resource to our community for identifying a variety of opportunities to further one’s physical and emotional health and well-being.

**ENVIRONMENTAL HEALTH SERVICES**

*Promoting Reduction of Indoor Radon Exposure through Health Education and Mitigation*

Under the 2011-2016 IPLAN, Environmental Health Services (EHS) worked to reduce indoor radon exposure for Kendall County residents through education and mitigation. This multi-dimensional project focused on community education, community partner collaborations, policy monitoring and surveillance. EHS endeavored to realize an annual increase in both the testing for and mitigation of harmful indoor radon levels by at least 3%. EHS also aimed to promote and secure radon resistant new home construction practices throughout all of Kendall County.

As part of our education initiative, EHS participated in a diverse educational campaign, focusing on getting information to the diverse demographics present in our county. Staff visited and presented at numerous community events, health fairs and even boy-scout leader meetings. Each time, staff provided basic information on what radon gas is, where it comes from, why it is a cancer threat, what can be done about this problem and where to go to get help. Several posts were provided on the Kendall County Health Department Facebook page, usually coordinated with Radon Action Month (January) of each year. Staff also created a series of informative news articles that were published in the local newspapers, participated in local television and radio interviews and even produced a movie theater trailer that was run in a local theater. These events were strategically coordinated during the last few years of the project to maximize community awareness and resulting impact during months of high indoor radon concentration and exposure risk. Staff also engaged county residents through the provision of low cost, short term radon test kits. As part of each sale, a confidential form was filled out by the purchaser allowing EHS staff to discretely track test results and ultimately provide targeted education to residents whose test results showed dangerous levels of radon gas.

Staff coordinated with local radon professionals to learn more about the local problem and the business climate in this particular industry in order to better tailor our message to our local clients. Staff also worked with a local radon mitigation professional to host a presentation as part of the health department’s professional seminar series in the fall of 2014. Staff also worked to educate local realtors, community organizations, builders, and also dropped off information at physician’s offices. Staff provided updates to all health department advisory boards each year of the project, sharing valuable information while learning from each audience new ways to reach and provide valuable information to the community.
EHS honed its messaging and outreach techniques over the years to learn what methods were most effective, that a concentrated media blitz over a one to two month period yielded better results, demonstrated by more clients purchasing test kits and ultimately testing and mitigating their homes. Additionally, data from Illinois Emergency Management Agency demonstrated that 47% of radon tests run in Kendall County showed results over 4 pCi/L, the EPA action level. Staff learned that in emphasizing this fact in their advertising message, a harder hitting approach seemed to have an effect on the amount of knowledge that clients had when staff talked with them on high test result follow up calls.

During the IPLAN cycle, EHS staff monitored and advocated for 2 pieces of proposed Illinois legislation that would become signed into law: One requiring radon resistant new construction in single family homes, statewide; the other requiring child daycare centers to test their business for radon and post scores for parents to see. EHS provided information to daycares as this latter law was signed into effect, ensuring they had the best information available in order to meet the requirements of new law.

Additionally, EHS conducted surveillance on the problem, reviewing state test and mitigation data, recording and reviewing local radon test results, and through discretely contacting residents who had tested for and discovered high indoor radon levels. In this last instance, staff asked the client key questions to learn if our education and the test result was enough to affect a meaningful change, in this case, a mitigation of the radon risk.

In meeting outcome objectives, staff realized a 5 year aggregate 160% increase in the number of radon test kits sold, although observed an aggregate 25% decrease in radon test kits run. EHS staff were also able to verify that members of the public were, in fact, mitigating their homes after receiving our message and receiving high test results through phone calls made to these clients after high tests had been detected. Of those individuals reached who had tests revealing harmful levels of indoor radon gas, 28% had mitigated their homes to safe levels. And of course all of Kendall County now conforms to the practice of providing radon resistant new home construction. Overall, EHS is confident that its multifaceted approach succeeded in producing an effective increase in testing for and mitigating harmful levels of indoor radon gas. EHS will continue to raise public awareness on the dangers of indoor radon exposure, and ways in which to mitigate this preventable health risk.

**Mental Health Services**

*Prevention of Youth High Risk Behaviors through Early Intervention*

Mental Health Services (MHS) clinicians provided early intervention services to address the health problem of high risk behavior in youth that could lead to poor behavioral health outcomes. MHS aimed to achieve the following outcome objective: From 2011 to 2016, the target population will improve in behavioral health well-being indicators by 60% in four out of five domains: academic responsibility, domestic responsibility, healthy social connectedness, refraining from delinquent behavior, and mental health resilience. Mental Health and substance abuse treatment clinicians began providing early intervention education to students at Plano High School in fall 2011.

Through the years, students were made up of male and female freshman, sophomore, juniors, and seniors. The class make-up was diverse in terms of culture/ethnicity, academic performance, connectedness to the school and level of delinquency contacts with the school office. The early intervention education was designed to address the risk factors of low academic responsibility, limited domestic responsibility, unhealthy or limited social connectedness, engagement in delinquent behavior and low mental health resilience. MHS staff engaged students weekly, in meaningful discussion on a variety of high-risk behavior-based topics; the setting being a weekly study hall.
Through early intervention education, the following protective factors were promoted:

- Academic responsibility: Academic goal setting, study tips, post high school study engagement and vocabulary
- Healthy social connectedness: Values identification, communication skills, problem solving
- Mental health resilience: Leadership skills, pro-social engagement, identifying healthy peer and other relationships, team building exercises
- Domestic responsibility: Continuum of use and risk factors of alcohol and other drug use, tobacco information, factors in and resistance to bullying, refrain from high risk behaviors
- Refraining from delinquent behavior: Understanding anger, anger management, stress management, solution focused problem solving, healthy coping

The promotion of these protective factors resulted in real progress made towards the outcome objective.

- For school year 2011/2012, 24% of students assessed showed improvement in four out of five protective factor domains; 29% of students assessed showed improvement in three out of five domains.
- For school year 2012/2013, 17% of students assessed showed improvement in four out of five protective factor domains; 22% of students assessed showed improvement in three out of five domains.
- For school year 2013/2014, 12% of students assessed showed improvement in four out of five protective factor domains; 29% of students assessed showed improvement in three out of five domains.
- In school year 2014/2015, due to unexpected changes in the format of the study lab, only six students started and finished the early intervention program. Of the six students, none showed improvement in four out of five of the identified protective factors. However, 50% of students showed improvement in domestic responsibility. 25% showed improvement in mental health resilience.

As we review the entire IPLAN cycle and experience, we discover that much progress has been shown in protective factors through early intervention efforts. Over the IPLAN period of the Early Intervention program, an aggregate of 53% of students showed improvement in four out of five domains. Although the 60% goal target was not met, it appears that early intervention education can help to reduce youth high risk behavior in some of the measured domains. MHS will continue to employ usage of early intervention strategies in population-based work through promotion and development of protective factors in prevention efforts related to mental health and substance abuse, in both clinical and public outreach work.

In addition to applying lessons learned in the clinical setting, MHS will work to sustain and further develop early intervention education efforts in a population focused manner to parents and educators of Kendall County youth. A comprehensive education presentation entitled “Early Intervention in the Promotion of Youth Well-being and Success” will be offered at diverse school and community based events. This presentation will also be posted on the KCHD website in the Mental Health Services area. Additionally, population-based early intervention psycho-education will be conducted through local news, radio, and television mediums.

**COMMUNITY ACTION SERVICES**

*Promoting Increased Socioeconomic Well-Being through Participatory Health Education*

Community Action Services (CAS) is committed to promoting socioeconomic well-being among a target population through educative opportunities and accessible systems of support. Under the 2011-2016 IPLAN, CAS endeavored to increase socio-economic well-being through participatory health education; the objective, to ensure that, by 2016, 70% of a target population moves towards improvement in its socioeconomic well-being.
To achieve the above objective a measurable comprehensive *Financial Fitness* curriculum aimed at fostering socioeconomic well-being was implemented. This six week curriculum was designed to educate young adults and seniors alike, on the importance of achieving and maintaining financial self-sufficiency by offering a variety of user friendly educative tools to accomplish this goal. CAS initially partnered with Centre Bank and the Illinois Internal Revenue Service to deliver this potentially impactful financial literacy program. However, this attempt did not yield any participants. Despite careful and thorough planning and preparation, CAS surmised that the length of a six week commitment posed a possible barrier to participant engagement. Another barrier considered was the possibility that discussing one’s financial matters in a group setting might be intimidating, especially to those individuals struggling with finances and/or other personal challenges affecting family self-sufficiency.

Moving through 2013, the Health Department staff consulted with the Kendall County Health Department’s four advisory boards in an effort to gain input and further insight into how best to attract and increase participation in Financial Fitness education. It was brought to staffs’ attention through these consultations that another local organization conducted similar programs for their employees, this being Castle Bank.

CAS staff met with Castle Bank to discuss their established *First at Work* financial wellness seminars. Realizing some success, Castle Bank’s Business Development Specialist suggested that we begin by offering these educational seminars in-house, targeting KCHD as well as other County department employees. Collectively, this multi-session program aims in large part to promote a positive impact on participants’ debt-to-income ratio.

In 2014, CAS staff actively promoted an easily accessible financial wellness experience to this target group. Individual sessions of *First at Work* were presented in 60 min time slots, over the course of a lunch hour, and the sessions covered a variety of financial self-sufficiency-related topics, such as: Saving and Budgeting, Identity Theft Protection, Credit Scores, and Home Buying. Attendees were offered a healthy and nutritious lunch, and chose to attend the sessions of greatest personal interest and need. The session that had the greatest amount of participants was the Credit Scores session, with over half of KCHD’s staff in attendance. Special attention was given to deliver each session in a manner in which attendees felt comfortable and confident engaging. Castle Bank and CAS staff also offered one-on-one meet-and-greet sessions to staff should they wish to further discuss their personal financial challenges with the Castle Bank educators, in a more private setting.

The results of this established approach were carefully evaluated for its strengths, as well as any weaknesses that were revealed. CAS staff provided all participants a pre-test before attending any of the sessions to develop a foundation concerning their financial well-being. A post-test offered at the end of the six sessions helped indicate a positive or negative change in a participant’s journey towards financial wellness. Participants were also given the opportunity to provide important personal insights and feedback on the content and delivery of the program; did they find it to be an asset to them, and how might CAS staff modify strategy to better reach a larger population and best serve as a community based program. This valuable information would serve to inform on how best to promote and attract increased community participation, most likely beginning with our schools and churches, in an effort to increase the socio-economic well-being of those in need.

Half way through the sessions, CAS asked participants to address how they felt they were doing “thus far” by completing a mid program survey. Some noted themes came out from the results of this survey. Many participants felt the need to address the barriers that may be keeping them from increasing their financial wellness. Barriers such as: needed increases in income, having to deal with increases in interest rates when trying to pay off credit card debt, cost of living keeps rising which makes saving for retirement more daunting or retirement becoming delayed as a result, or they just do not have the extra funds to save. Another theme observed in the mid program survey was the research that participants said they had done since attending the sessions. More specifically, many reported that they had researched and become better informed on their county-provided pension benefit (IMRF), as well as Roth IRA’s.
After the completion of all six sessions, the target group revealed a 90% positive improvement in the ability to achieve a healthy debt-to-income ratio.

Below are the survey questions that were given to the participants before and after participating in the six sessions. The percentages indicated below for “pre” and “post” reveal the amount of questions that received “yes” as an answer instead of “no”.

- Do you have at least $3000 or three months of living expenses saved up to cover your emergencies? (Pre = 54%, Post = 80%)
- Are you participating in at least one pension program? (Pre = 13%, Post = 70%)
- Do you save or invest beyond your retirement plan or emergency funds? (Pre = 33%, Post = 90%)
- Are you aware of how much you need to save each month to retire at the age you would like? (Pre = 25%, Post = 60%)
- Are you investing or saving money with each paycheck in a savings account, money market, or mutual fund? (Pre = 54%, Post = 80%)
- Are you paying your credit cards in full every month? (Pre = 50%, Post = 80%)
- Are you paying your bills in full each month? (Pre = 71%, Post = 90%)
- Have you reviewed your credit report lately? (Pre = 58%, Post = 80%)
- Do you balance your checkbook each month? (Pre = 50%, Post = 90%)
- Do you track your monthly expenses? (Pre = 71%, Post = 60%)
- Are you saving at least 10% of your gross income each month? (Pre = 38%, Post = 50%)

The answers to ten out of the eleven questions revealed movement towards one’s understanding of if not taking action on creating a healthier debt-to-income ratio. There was a 32% average increase in these encouraging responses between the pre test questions and post test questions.

Overall, CAS feels confident that the First at Work program and experience, and more broadly, the offering of financial wellness education to our community, offers much potential in successfully promoting and fostering a healthier debt-to-income ratio, especially among those families in our community challenged to achieve and/or maintain financial self sufficiency. Additionally, CAS considers financial wellness education, potentially, especially beneficial to our community’s youth who are approaching life’s intersections of decisions impacting the future of their socio-economic wellness. CAS has learned that financial wellness education is best provided in a manner that preserves the participant’s dignity and at times privacy, while offering flexibility to its access.

That said, CAS plans to create and offer, community-wide, financial wellness education and related supports through the use of technology and by leveraging community partnerships. CAS plans to coordinate with the University of Illinois Extension, a trusted partner and strong supporter of financial wellness education, to create a webpage devoted to financial wellness tools and related web-based links accessible to the community, 24/7. This easily accessible offering will be promoted through the use of a local news article and Facebook posts. Users will have the opportunity to contact CAS for further information, and to access other KHCA programs and services designed to promote financial self sufficiency. Leveraging community partnerships, CAS plans to coordinate with the University of Illinois Extension, another strong supporter of financial wellness education. The Extension provides practical information you can trust to help the community. Resources provided, CAS also hopes to make a special effort to reach out to local schools and churches to promote these helpful resources and there potential, to our community’s youth.
While the community-chosen health priorities for our 2011-2016 IPLAN remain of great importance to our current and ongoing work, three new health priorities have been selected to serve as the focus of our 2016-2021 IPLAN. Chosen through community partner consensus, these three health priorities represent health and well-being initiatives unduplicated by efforts already established in the local public health system, and can be distinguished by innovation from efforts yet established in the public health system. The community engagement processes by which these priorities were selected are elaborated upon later in this document. The three health priorities proudly represent the World Health Organization definition of health in their diversity as well as their reflection of community driven health priorities. The World Health Organization asserts that public health refers to all organized measures (whether public or private) to prevent disease, promote health, and prolong life among the population as a whole. Its activities aim to provide conditions in which people can be healthy and focus on entire populations, not on individual patients or diseases. Thus, public health is concerned with the total system and not only the eradication of a particular disease (World Health Organization, 2016).

The three health priorities are on the health and well-being topics of:

- Increasing community population opportunities for access to oral health care.
- Decreasing community population potential exposure to Lyme Disease.
- Connecting seniors to assets that reduce socio-economic duress and support mental health.

The data analysis, risk factors and outcome detail is elaborated upon later in this document.
The Kendall County Health Department’s Board of Health commenced with creating the 2016-2021 Kendall County Health Department Strategic Plan in January 2016, completing their organizational capacity assessment by May 2016, and will be approving the full Plan in the fall of 2016.

**2016-2021 STRATEGIC PLANNING PROCESS PHASES**

• Why we Plan Dialogue*
• What People Might Be Surprised To Know*
• How We Communicate All We Do For The Community*
• Key Stakeholder Relatedness*
• Mission and Vision Review*
• Branding and Logo Review*
• Internal Assets and Opportunities*
• External Assets and Opportunities*
• Distinctive Organizational Competencies*
• Identification of Strategic Issues

* = Phases of the organizational capacity assessment
COMMUNITY HEALTH NEEDS ASSESSMENT

PURPOSE STATEMENT

The intent of this phase of the IPLAN process was to plan and perform a public health system assessment inclusive of a broad and diverse cross section of our community health system stakeholders and partners. The Kendall County Health Department took great care to ensure a high degree of inclusivity in order to engage the many diverse aspects of our multi-sectoral community public health and human services system. Equally important was our engagement of consumers of this very system. All those involved in the creation of our community’s IPLAN appeared to gain a true sense of ownership in this plan and a genuine interest in seeing it succeed. It was a privilege to collaborate with such a broad and diverse cross section of organizations and individuals with an interest in and commitment to the health improvement of our community.

COMMUNITY PARTICIPATION & PARTNERSHIP DEVELOPMENT

While Kendall County Health Department is responsible for protecting and promoting the health and well-being of its community, it cannot be effective acting unilaterally. We partnered with community members, and other sectors and organizations of our local public health system to plan and share the responsibility for community health improvement. These partners have access to additional data and bring their own experiences and perspectives to the planning table. Such a collaborative planning process creates a shared ownership and responsibility for the plan’s implementation. It is very likely that this collaborative planning process will extend into the implementation phase, serving as the basis for taking collective action and fostering further collaboration.

In September of 2014, we assembled a small group of key health department staff along with leadership staff from our partners at Rush Copley Medical Center to begin developing the framework of our planning process. Special acknowledgment must be given to the indispensable contributions in both time and information of Rush Copley Medical Center. Rush Copley was a part of our partnership process from the start and also gathered important pieces of local data which contributed to our understanding of our community health status. The Rush Copley team also participated in a MAPP training conducted by Kendall County Health Department. Presented was a detailed description of the MAPP process, including the four essential MAPP assessments. Health department staff provided an unexhausted list of data/informatics sources to be considered in developing a data-driven community needs assessment. Our Rush Copley partners described plans to share hospital data/informatics with the health department in order to support an integrated health systems description of community health and well-being. A detailed review of the IPLAN Crosswalk was conducted and was discussed further prior to putting forth a tentative timeline for the larger IPLAN process. The process of convening the larger IPLAN Steering Committee, while time consuming, proved to be very rewarding. Administrative and program staff invited persons from the community who served in the local public health system. Community members served by our local public health system were also invited. The resulting community participation was inspiring both in numbers and quality of input. This was manifested in one meeting in which close to fifty participants attended. The Kendall County Health Department is only a 50 person department so we felt very satisfied about this kind of high quality engagement from our community. Additionally, the Board of Health and each advisory board/committee to the board had participated in the planning process and will continue to participate through the action cycle. The following community sectors and partners participated in the IPLAN process:

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<thead>
<tr>
<th>PARTICIPANT</th>
<th>SECTOR/PARTNERSHIP</th>
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<tbody>
<tr>
<td>Rebecca Aimone</td>
<td>Kane County Office of Community Reinvestment Workforce Development Div.</td>
</tr>
<tr>
<td>Diane Alford</td>
<td>Kendall County Health Department, Community Action Services Div.</td>
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<tr>
<td>Jason Andrade</td>
<td>Kendall County Health Department, Mental Health Services Div.</td>
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<tr>
<td>Jayne Ballun</td>
<td>Kendall County Health Department, Emergency Response</td>
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<tr>
<td>Penny Booher</td>
<td>Kendall County Health Department, Mental Health Services Div.</td>
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<tr>
<td>Kathy Braden</td>
<td>Caring Hands Thrift Shop-Cross Lutheran Church</td>
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<tr>
<td>Valerie Burd</td>
<td>Kendall County Resident</td>
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<tr>
<td>Glenn Campos</td>
<td>Kendall County Administrative Services, Human Resources</td>
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<tr>
<td>John Church</td>
<td>The Conservation Foundation</td>
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<tr>
<td>Melissa Creamer</td>
<td>Kendall County Health Department, Community Action Services Div.</td>
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<tr>
<td>Christina Cooper</td>
<td>Kendall County Board of Health</td>
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<td>Steve Curatti</td>
<td>Kendall County Health Department, Administration</td>
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<tr>
<td>Anne Englehardt</td>
<td>Kendall County PADS (Public Action to Deliver Shelter)</td>
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<tr>
<td>Jackie Forbes</td>
<td>Kendall County Health Department</td>
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<tr>
<td>Kimberly Fornero</td>
<td>Illinois Department of Human Services, Positive Youth Development</td>
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<tr>
<td>Beckie Frieders</td>
<td>Kish Health System, Valley West Community Hospital</td>
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<tr>
<td>Omayra Giachello</td>
<td>Illinois Department of Public Health</td>
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<tr>
<td>Janet Goehst</td>
<td>City of Plano, Treasurer</td>
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<tr>
<td>Ken Hebert</td>
<td>Rush-Copley Medical Center</td>
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<tr>
<td>Michelle Hess</td>
<td>Intern, Kendall County Health Department</td>
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<tr>
<td>April Hix</td>
<td>Fox Valley YMCA</td>
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<tr>
<td>Brian Holdiman</td>
<td>Kendall County Planning, Building &amp; Zoning</td>
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<tr>
<td>Barb Johnson</td>
<td>Kendall County PADS (Public Action to Deliver Shelter)</td>
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<tr>
<td>Clair Johnson</td>
<td>Rush-Copley Medical Center</td>
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<tr>
<td>Gail Johnson</td>
<td>Village of Oswego President</td>
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<tr>
<td>Kelly Jordan-Licht</td>
<td>Kendall County Health Department, Community Health Services Div.</td>
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<tr>
<td>Fran Klaas</td>
<td>Kendall County Highway Department</td>
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<tr>
<td>Anne Knight</td>
<td>Kendall County State’s Attorney Office</td>
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<td>Scott Koster</td>
<td>Kendall County Sheriff’s Office</td>
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<td>Steven Krentz</td>
<td>23rd District Judicial Court</td>
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<td>Harold Martin</td>
<td>Kendall County Sheriff’s Office</td>
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<td>Gloria Mathewson</td>
<td>Kendall County 708 Mental Health Board</td>
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<td>Micki Miller</td>
<td>Senior Services</td>
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<td>Rebecca Mueller</td>
<td>Kendall County Health Department, Community Health Services Div.</td>
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<tr>
<td>Barbara Nadeau</td>
<td>Senior Services/RSVP</td>
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<td>Terri Olson</td>
<td>Kendall County Health Department, Community Health Services Div.</td>
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<tr>
<td>Victor Ortiz, Ph.D.</td>
<td>Northeastern Illinois University Latino/Latin American Studies</td>
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<tr>
<td>Pam Parr</td>
<td>Village of Oswego Trustee</td>
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<td>Luis Perez</td>
<td>Village of Oswego Trustee</td>
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<tr>
<td>LuAnne Peters</td>
<td>Yorkville School District 115</td>
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<tr>
<td>Tawny Pinter</td>
<td>Kendall County Food Pantry</td>
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<tr>
<td>Terese Raabe</td>
<td>Rush-Copley Medical Center</td>
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<td>PARTICIPANT</td>
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<td>Melanie Reasor</td>
<td>Kendall County Resident</td>
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<tr>
<td>Leticia Reyes-Nash</td>
<td>Illinois Department of Public Health, Public Policy</td>
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<tr>
<td>Zaida Rodriguez</td>
<td>Rush-Copley Medical Center &amp; Compañeros en Salud</td>
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<tr>
<td>Becki Rudolph</td>
<td>Kendall County Health Department, Administration</td>
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<tr>
<td>Aaron Rybski</td>
<td>Kendall County Health Department, Environmental Health Div.</td>
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<tr>
<td>Karen Sapsford</td>
<td>Newark School Districts 18 &amp; 66</td>
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<tr>
<td>Amy Serby</td>
<td>Kendall County Health Department, Environmental Health Div.</td>
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<tr>
<td>Maria Spaeth</td>
<td>Kendall County Food Pantry</td>
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<tr>
<td>Amaal Tokars</td>
<td>Kendall County Health Department, Administration</td>
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<tr>
<td>Brenda Ulrich</td>
<td>Kendall County Resident</td>
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<tr>
<td>RaeAnn VanGundy</td>
<td>Kendall County Health Department, Administration</td>
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<td>Greg Wehrs</td>
<td>Kendall County Resident</td>
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<tr>
<td>Jordan Wehrs</td>
<td>Kendall County Resident</td>
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<tr>
<td>Mary Wehrs</td>
<td>Kendall County Resident</td>
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The strength of our broad and diverse community participation resides in its potential to create health impact through collective efforts in ways that could not so readily be done individually; collective efforts representative of a dedicated and inspired local public health system.

Never doubt that a small group of thoughtful committed citizens can change the world; indeed, it’s the only thing that ever has. **Margaret Mead**

**ASSESSMENT METHODS / COMMUNITY HEALTH PLAN PROCESS**

The Kendall County Health Department implemented the community-driven MAPP process for its ability to promote strong community connections that would foster and produce the collective wisdom of our community partners - essential to identifying, and eventually addressing, community health concerns by consensus. We took our community and community partners, collectively referred to as our Community IPLAN Committee, on a journey through community health improvement planning using concepts that included visioning, an environmental scan, the identification of strategic issues, and the formulation of strategies. This was accomplished through the vehicle of MAPP’s four unique and progressive assessments. The community members, partners and sectors making up our IPLAN Committee remained relatively consistent throughout the duration of our journey. The public at large, through the use of mainstream and social media, was kept informed of our progress, their input and in-person participation encouraged, with each assessment performed. Some new Committee members were gladly welcomed along the way.

In our first assessment, the *Local Public Health System Assessment*, our Committee collaborated to measure the capacity of our local public health system to conduct essential public health services. This led to our *Community Themes and Strengths Assessment*, during which our Committee received a great deal of information shared by members of our community unable to join us at the table, identifying public health themes that interest and engage our community, their perceptions about quality of life, and that which they believed to be community assets. Our Committee then enjoyed the results of a comprehensive, data-driven *Community Health Status Assessment*, during which they were made privy to analyzed data about our community’s health status, quality of life, a broad and diverse cross section of public health risk factors, and associated health assets. In our fourth and final assessment, the *Forces of Change Assessment*, our Committee worked closely to identify forces that are occurring or will occur that will affect our community or our local public health system. Pulling it all together, our Committee applied their cumulative experiential and data-driven knowledge gained through all four assessments to create by consensus, meaningful public health priorities intended to positively impact the health and well-being of our community.
LOCAL PUBLIC HEALTH SYSTEM ASSESSMENT
FEBRUARY 20, 2015 MEETING

Our Local Public Health System Assessment, the first of four assessments, was designed and conducted using the guidelines set forth by the National Public Health Performance Standards Program (NPHSP), and served to assess the collective capacity of the larger public health system. A consultative relationship was established with the Illinois Public Health Institute which included recommendations around valuable materials to be used, the training/guidance of group facilitation/recording for this event, and an educational presentation to the entire group on the assessment process. Preparing for this event was very time intensive as it included the organization of assessment related materials for each of our participants. These materials again placed emphasis on the ten essential health services as well as the relationship between the Local Public Health System Performance Assessment Instrument and health improvement planning. The location was selected so as to ensure easy access to community partners, and accommodations that would provide for a smooth flow between sessions. The Oswego Presbyterian Church once again was generous in donating the use of nine separate rooms which were strategically used for different phases of this all-day event.

Participants in this assessment represented board of health, advisory boards/committees, hospitals, social service providers, agricultural/environmental organizations, community-based organizations, business sector, the faith community, county officials, law enforcement, school system, and some health department staff. We very carefully identified community partners and stakeholders that contribute to the delivery of the Ten Essential Public Health Services. It is our firm belief that consumers of the local public health system contribute to the delivery of the ten essential services by providing formal and informal input via their perceptions and experiences with the health system.

Therefore, we were so very privileged to have as participants, consumers of the local public health system. These consumers were not identified as such and instead, simply identified themselves as affiliated with their place of employment, a church, or as a community member. We were successful in having forty nine participants with us on that day, a number close to the entire employee count of our health department.

The day of the Local Public Health System Assessment was embedded into an all day retreat format which included a Welcome and Orientation to materials provided as well as to the assessment process. The actual assessment process took place via the work of five separate work groups, A through E, each with their own facilitator and recorders. Each work group room had on display helpful visual materials to help guide the process. These groups were charged with employing the Local Public Health System Assessment Instrument in ascertaining the health system’s capacity to carry out the Ten Essential Services through the model standards. Group A was assigned Essential Services 1 and 2; Group B, 3 and 4; Group C, 5 and 6; Group D, 7 and 9; and Group E, 8 and 10. A key responsibility of these work groups was to cite challenges and opportunities by identifying strengths and weaknesses of our current local public health system. At the end of the day, pulling it all together, the larger participant group reconvened to report on these areas in their own words.

Highlights were delivered in the forms of strengths and opportunities. As strengths, the Kendall County public health system has strong community partnerships, coalitions and organizations that all work together toward common goals and share strategies for planning, decision making and responses; Community health education occurs throughout Kendall County through meaningful partnerships; and Waubonsee Community College, internships availability, and seminar series offer effective workforce development occurring throughout the county. Concurrently, there exists many opportunities, such as: The Kendall County public health system needs to engage young adults (18-30) in health and well-being activities; The system needs to share health informatics (data) amongst providers, make assessments more known, and have the ability to provide layer data from county, state and national levels; Community education is occurring, but is it effective and meeting the needs of the county residents? Are we targeting the right audience?; and the Kendall County Health Department would like to employ leadership on research methods that produce effective health outcomes in county residents. This valuable information, drawn from the assessment in this forum, served to inform the overall health assessment process.
COMMUNITY THEMES & STRENGTHS ASSESSMENT
MAY 28, 2015 MEETING

Our Community Themes and Strengths Assessment can be considered a cornerstone of our IPLAN development process. The purpose of this assessment is to gather data on the needs and themes, and strengths and assets, of our community through first hand experiences and perceptions of community residents. Our Community Themes and Strengths Assessment was designed to engage a broad and diverse cross section of community members that had not been proportionately represented at our engagement forums thus far.

We strategically chose to implement ethnographic interviewing techniques in an effort to obtain valuable narrative data directly from community members describing the health and well-being themes and strengths of their community. Ethnographic interviewing techniques involve culturally sensitive use of non-scripted questions and discourse in order to understand the lived experiences of others. Our use of ethnographic interviewing techniques proved effective in securing our community citizens’ valued voice on strengths and needs related to community health and well-being, through the lens of their lived experiences.

A dedicated cross-disciplinary group of health department staff was trained in select elements of the ethnographic interviewing technique. Staff were trained on the following relevant principles; ethnography, artifact, deductive, inductive, neutrality, qualitative, quantitative, recording, reflexivity, and superstructure. Staff were also trained on interviewing question types and the importance of interviewer reliability. Interested community members were asked in non-verbatim, open-ended fashion to provide their reflections on community themes and strengths around socio-economic well-being, environmental health, mental health, physical health, and community resilience. These semi-private interviews were completed in public places in a number of diverse settings including local business, KCHD, laundry mats, retail establishments, senior centers, school cafeterias, and Kendall County Jail. All interviewees were adults and some interviews were conducted in Spanish. It should be noted that in the ethnographic method, a subject’s reported experience/perspective is not merely understood as opinion. Instead, it is put through the process of data analysis to ascertain the potential of its contribution to emergent themes and potential key findings. In total, fifty full interviews were completed. The narrative data (reflections and responses) and numeric data (demographic information) were recorded, transcribed, coded, analyzed, and prepared in a format for community discussion of findings.

At our 5/28/15 Community Themes and Strengths Assessment meeting, we began by providing to and discussing with our community partners, a Community Health Assessment update, and an overview of our Local Public Health System Assessment findings. The results of our Community Themes and Strengths assessment were then presented. Committee members engaged in active dialogue about these findings. They took the time to provide their own insight into the health and well-being, strengths, and needs of the community in relation to these findings. Finally, a discussion was facilitated in which the IPLAN Committee was asked to build upon the dialogue by considering potential health priorities and community health assets. This discussion was built upon the Local Public Health System Assessment findings, and the Community Themes and Strengths Assessment. An asset map was created through this process and recorded on a large white board for all to see.

Those community partners participating in our Community Themes and Strengths Assessment presentation engaged in meaningful discussion and offered valued insights and input. Our partners expressed a genuine interest in our ethnographic interview process; both the strategy behind it and how it was received by the community. A key discussion centered on the likelihood that while many public health services exist, there may be many in our community who are unaware of their existence. Additionally, our partners stressed the importance of speaking the languages of those with whom we connect. For example, the younger members of our community have come to rely greatly on social media outlets for most of their information needs – receiving and sending.
Conversely, our aging community may still rely on, and in some cases only have access to, the more traditional forms of mainstream media, such as the newspaper or the supermarket bulletin board. Another astute discussion centered on the fact that the Kendall County community recently experienced unprecedented growth, and continues to welcome new members to its community. This dynamic highlighted a need for the dissemination of information that gives consideration to and reaches new community members experiencing Kendall County and its many offerings for the very first time.

Of the most prominent themes that arose from our Community Themes and Strengths Assessment, products of our community partners, were the two themes, access to care and the availability of resources. These themes are rooted in our community’s perceptions and experiences. They represent that which is important to our community, and how our community perceives as essential to their quality of life. Our Community Themes and Strengths Assessment presentation was made available to our entire community via the health department’s website; complete with a request for further community input. While further input was not received, the presentation, at minimum, served to inform our community of our findings and progress made towards our Community Health Improvement Plan.

COMMUNITY HEALTH STATUS ASSESSMENT 
AUGUST 27, 2015 MEETING

Our Community Health Status Assessment was the third of four assessments conducted in our IPLAN process. The purpose of this assessment is to describe the health and well-being conditions of our community through relevant data-driven information. This assessment was grounded in a number of prominent constructs including the World Health Organization’s definition of health, participatory engagement and data-driven diversity. These constructs were considered essential to a successful IPLAN process and inasmuch were included in our IPLAN discussions from the very beginning.

The World Health Organization’s definition of health and wellness, reiterated as a part of our presentation, states that “Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.” This definition makes clear that each of the aforementioned aspects of health is essential to complete health and does not place them in a ranking order. Participatory engagement continues to be an area of emphasis for us in that we seek more than questions and feedback rendered from traditional processes of participation. Participatory engagement has the potential to reveal new understandings (knowledge production) about trends inherent to a particular community and social responsibility with regard to action (praxis) or acting with efficacy upon health issues. Data-driven diversity remained a critical construct for us as we sought to develop a presentation based upon diverse aspects of health as well as one that would engage persons from diverse personal/professional backgrounds in the community. Although all slides within the body of the presentation are data-driven, we also deliberately utilized data embedded in narrative and/or cited data-driven sources as a means to be sure to engage a broad range of participants in sophisticated dialogue about these health matters. We also took care to include kinds of data that came out of health concerns raised in previous discussions. Data placed in charts and graphs served to help our participants grasp visually the messages to be conveyed.

In creating the Community Health Status Assessment and presentation, data-driven information, relevant to our community, was collected to help to describe demographic characteristics, socio-economic characteristics, health resource availability, behavioral risk factors, environmental health-related risks, social and mental health indicators, and infectious disease.
More specifically, demographic characteristics describe our community’s make-up in terms of age, race, sex, economic status, level of education, income level and employment, and also include very informative hospital utilization data; socio-economic characteristics include data taking a more in depth look at poverty, housing, employment and education; health resource availability focuses on access to care; behavioral risk factors include data on community violence, substance abuse, obesity and prostate cancer; environmental health-related risks include food-borne illness, vector-borne diseases (primarily mosquitoes and ticks), radon and groundwater contamination; social and mental health includes data on mental health prevalence, elder well-being (including injuries) and suicide and violent deaths; and infectious disease includes sexually transmitted infections. Following these health indicators were thoughtful listings of community assets potentially capable of minimizing if not preventing the associated health risks.

Individually, health indicators represented by this data were studied for a number a characteristics that included, in addition to a clear description of the issue: key demographics, the existence of any disparities, contributing causes, and noteworthy community assets. Collectively, this data served to create a profile with regard to the context of our community, the strengths and risks of the community related to health and well-being, and the health status of the community. The data consisted of local data, as well as national data, and data-driven information relevant to understanding the local health status. The Kendall County Health Department partnered with Rush Copley Medical Center in the data collection process. The Health Department is deeply appreciative of these contributions.

On the evening of the Community Health Status Assessment presentation, our community partners were warmly welcomed, their interest and participation appreciated. We explained that the purpose of the data-driven presentation was to instigate thoughtfulness in the area of demographic trends, key risks, and key strengths as related to health and well-being in our community. We let participants know that their comments, insights, and questions were welcome throughout the presentation, and that if time permitted we hoped to engage in quality dialogue following the presentation. Our partners were provided with a Community Health Improvement Plan process update that included a recap on the first two assessments; noting that the Community Health Status Assessment is third in the series of four; and providing a brief description of the forthcoming and final assessment, Forces of Change. They were then provided with a brief yet thorough review of the progress of KCHD's 2011-2016 IPLAN, and a summation of findings from the 2015 Local Public Health System and Community Themes and Strengths assessments, before introducing the 2015 Community Health Status Assessment presentation.

Community partners were asked to share their thoughts and any questions they may have had. They expressed their appreciation for the scope and diversity of health issues presented. Several partners were particularly surprised by the data presented on sexually transmitted infections. One partner, a school social worker, planned to bring our data back to school to share with fellow colleagues. Community members expressed surprise and appreciation for the variety of public health services available to community members. Community partners expressed understanding of the Community Health Status Assessment as being collaborative and one facet of the larger IPLAN development process. In an effort to close out this meeting on time as promised, community partners were informed that the entire Community Health Status Assessment presentation would be made accessible on the KCHD website for further review, and that valued input would continue to be solicited over the months ahead, either through the KCHD website or a phone call to the health department administrator.
It is important to note that the Community Health Status Assessment has not been a static process. The assessment of our community’s health status did not end with our meeting in August. After the initial data was collected, much time and effort was put into describing the data in ways that would support a diverse and participatory community engagement process. Even after a very successful meeting, much more data has continued to be collected and analyzed in order to inform subsequent meetings and more fully understand our community health status. In fact, shortly after the August meeting the health department presented the community with a new and improved website, complete with Kendall County community health profiles generated with primary and secondary data. These health profiles, made possible in partnership with Rush Copley Medical Center, provide both the community and our community partners with a one-stop source of non-biased data and information about community health in Kendall County, and healthy communities in general. It is intended to help planners, policy makers, and the community. Health indicators have been continuously revisited to refresh and fine tune our understanding of community health status.

**Forces of Change/Strategic Issues/Formulating Health Priorities**  
**November 20, 2015 Meeting**

This multistep meeting, deeply rooted in community partner participation, was designed to have the Forces of Change Assessment seamlessly flow into the identification of strategic issues, to be followed by the development of IPLAN health priorities. To provide a foundation for this meeting’s discussions, the IPLAN Committee took an active role in creating a vision statement that would reflect values they believed to represent the health and well-being of their community. To seed our partner’s thinking and to promote collaborative discussion, each member was provided with a copy of the 2011-2016 IPLAN Vision Statement. Partners were asked to consider the statement merely as an example, a point of reference; but to feel free to capture any part or parts of this statement, or none at all, in the creation of their very own. The discussion proved to be both considerate and productive as our partners, through consensus, developed the following brief yet powerful vision statement:

*We aspire to educate, motivate, inspire, and empower citizens of Kendall County to make healthy choices.*

To which language was added to describe our holistic approach to public health; the elements of social, mental, physical and environmental health and well-being. The end result is the following deeply meaningful and community driven 2016-20121 IPLAN Vision Statement.

*Complete health includes social well being, mental health, environmental health, and physical health. To this end; we aspire to educate, motivate, inspire, and empower citizens of Kendall County to make healthy choices.*

Community partners were asked to share brainstormed forces they believed to be impacting the health and well-being of our community. Partners were then given the opportunity to discuss key forces identified with the larger group. A Threats and Opportunities Worksheet was created on a large whiteboard for all to follow and consider. Key forces were converted to threats posed. A discussion on threats posed lead to the creation of possible opportunities. Trends/forces of change presented included: increased population, large companies shutting down/loss of local jobs, upward trend in obesity. Threats presented included: large companies shutting down, existence of poverty/limited access to care, fear of the economy, lack of a state budget and related resources to provide community services, vector-borne diseases (mosquitoes and ticks), and water shortages/contamination. Assets/opportunities presented included: higher education, economy starting to grow/economic development, workforce development located in the health department, proximity to large metropolitan area, local services that provide for family planning, Local PADS and food pantry, health department’s affordable mental health services, school-based supports, Kendall Area Transit, Rush Copley and Kish Health System services, and many area physicians. These opportunities, including the data presented in the Community Health Status Assessment served as a foundation for the identification of strategic issues.
Prepared with this information, group discussion ensued, leading to the identification of and open group discussion on strategic issues. Two issues were presented. While affordable effective mental health services are made available and accessible to our community through the Kendall County Health Department, it's possible that portions of our community remain unaware that they exist. As a second issue, it is possible that many local physicians do not accept Medicaid and/or other forms of insurance available to our community. These issues speak to opportunities for improvement in the areas of raising community awareness of and access to local health and well-being supports.

It was at this time that the larger group was separated into three facilitated breakout groups, each representing a different strategic area. The three strategic areas reflected were environmental health, mental and social well-being, and physical health. In addition to Forces of Change Brainstorming Worksheets, the following three important supplemental documents were furnished at each table where community partners and meeting facilitators gathered to brainstorm: Illinois’ State Health Improvement Plan; Rush Copley Medical Center’s FY16 health assessment priorities; and Kendall County Health Department’s Community Health Needs Assessment. Also provided was a computer with internet access in the event our participants desired to access additional supporting information.

A consensus process was used by each breakout group to move from the strategic issues to the selection of health priorities. Possible strategies to address the priorities selected were discussed by KCHD staff and their respective table facilitators as a means of ensuring that the strategies captured the true meaning and essence of each table’s discussion. Health priorities were then selected to address and provide for positive impact on both individual and population health.

**RESULTS OF HEALTH STATUS/COMMUNITY HEALTH PROFILE**

The following paragraphs describe data-driven health information relevant to the Kendall County community and served as an integral part of our community health assessment process. More detailed data-driven information and analysis related to the three health priorities chosen by our community partners is addressed later in this document. The health information collected reflects demographic characteristics, socio-economic characteristics, health resource availability, behavioral risk factors, environmental health-related risks, social and mental health indicators, and infectious disease. More specific, demographic characteristics describe our community’s make-up in terms of age, race, gender, economic status, level of education, income level and employment, and very informative local hospital utilization data. Socio-economic characteristics include data on poverty, housing, employment and education. Health resource availability focuses on access to care. Behavioral risk factors contain data on community violence, substance abuse, obesity and prostate cancer. Environmental health-related data includes risks posed by food-borne illness, vector-borne diseases (primarily mosquitoes and ticks), indoor radon exposure, and groundwater contamination. Social and mental health includes data on mental health prevalence, elder well-being (including injuries such as falls), and suicide and violent deaths. And infectious disease includes data on sexually transmitted infections. Following each of the aforementioned health indicators is a listing of known local community assets capable or potentially capable of minimizing if not preventing the health risks associated with their respective health indicator. It is important to note that this data represents information available through August 2015 as it was presented to community partners in our Community Health status Assessment on August 27, 2015. Demographic and healthcare utilization data was generously supplied by our valued partners, Rush-Copley Medical Center; their source of demographic information, Nielson based on the 2000 and 2010 Census.
Demographic and socioeconomic characteristics were vital to our health status analysis. It is worth considering that Kendall County’s population increased a staggering 110% from 2000 to 2010. Compare this level of growth, over the same time period, with that of our state at 4%, and the United States at 10%. Kendall County’s population has since risen an additional 5.7% from 2010 to 2015. Most cities located in Kendall County experienced positive growth between 2010 and 2015 with the exception of Newark (-1.9%, -61 residents) (Rush-Copley, 2015). Regarding population by age, growth for the 25-34 age group has declined by 13% between 2010 and 2015; conversely, growth for the combined 45+ age groups increased by 19% between 2010 and 2015 (+6,264).

2015 Kendall County age distribution is illustrated in the chart at the right. Ages 25-44 account for the highest percent of the population in Kendall County (30%) and in the U.S. (26.0%) in 2015. Kendall County has a significantly younger population as compared to state and national median age. The median age for Kendall County increased from 2010 to 2015 (+1.8 years) and also increased at the state and national level. Kendall County splits the population of males and females 50/50.

The racial diversity of Kendall County (the county) is reflected in a 74% Caucasian population, a 6% Black population, a 3% Asian population, and a 0.5% American Indian and Alaska Native population. The population of Hispanics or Latinos in Kendall County is 16%. When including persons who identify as multi-race and the ethnicity population of Hispanics, the Caucasian population varies to over 80%. Kendall County's Hispanic population has remained fairly consistent between 2010 and 2015 (with 15.6% in 2010 to 16.6% in 2015) (US Census American Communities Survey, 2014). 80% of Kendall County households are family households, and Kendall County has a greater average household size (3.05) than the state (2.57) and national average (2.57). 83% of Kendall County households are married couple families. Female householders account for 11.6% of households in Kendall County.

In regards to education and unemployment, just under 7% of adults in the county have no high school diploma; over 5% are unemployed. Conversely, 22.5% of Kendall County residents attained at least a bachelor’s degree compared to our state’s 18% and our national average of 20% (Kendall County Health Department, 2015 Community Action Plan). Kendall County continues to have a higher median household income ($81,045) than the state ($57,978) and national ($53,706) medians. At $87,331, the Village of Oswego has the highest median household income of zip codes in Kendall County.

Interestingly and of some concern, the foreclosure rate in Kendall County is relatively high with a countywide average of one in every 387 homes in foreclosure; the statewide average being one in every 799 homes (RealtyTrac, 2015). Kendall County children make up the largest percentage of individuals living below the poverty level, at 8%; and 72% of adults work outside the county (United States Census Bureau, 2010).

Rush-Copley’s data on local health care utilization, the source of which is Rush Copley’s IHA COMPdata Informatics, 2015 provides important insights into our community’s use of our healthcare system. For instance, with respect to Rush-Copley Hospital, total inpatient discharges originating from cities located in Kendall County have remained fairly flat from 2010 to 2014. In the most recent year, the top diagnoses for these admissions were related to childbirth, psychoses, major joint replacement, esophagitis, rehab, sepsis, and pneumonia. Total emergency department visits originating from cities located within Kendall County grew 15% (4,739 visits) from 2010 to 2014. And in the most recent year, 2014, the top diagnoses for emergency department visits were related to chest pain, urinary tract infections, ear infections, headaches, abdominal pain, pharyngitis, pneumonia, bronchitis, gastroenteritis, dizziness, fever, flu, and head injuries.
Kendall County Health Department’s Community Action Services contributed meaningful data in the area of socio-economic health and wellness; specifically, in the areas of poverty, housing, employment and education. In 2013, the poverty rate in Kendall County was 5.8%, of which 49.45% were female-headed households, 12.49% were male-headed households, and 38.06% represented the households of married couples. This county poverty rate represents a 2.4% increase over the year 2000 (3.4%). And while the state’s 2013 poverty rate was 14.7%, growth in the state’s poverty rate since 2009 has seen an increase of 1.3% (Community Commons, 2015).

The term ‘housing cost burden’ represents the percentage of housing costs that exceed one’s income. As of 2013, Kendall County’s household burden was 37.37%. This percentage was 4% higher than Grundy County; 1.43% higher than Illinois; and 1.9% higher than that of the United States. Kendall County is the 2nd most expensive county in the state in which to reside. For perspective, a minimum wage of $22.52/hr is needed to afford a 2 bedroom home (National Low Income Housing Coalition, n.d.). Kendall County possesses a home foreclosure rate of 1 in every 387 houses. Compare this rate to that of neighboring Grundy County, whose foreclosure rate was 1 in every 1038 (RealtyTrac, 2015). In 2008, Kendall County reported 97 homeless children in the schools. As of 2015 that number has since risen sharply to 233 (Kendall County Health Department’s 2015 Community Action Plan).

According to the 2010 US Census, the average commute time for Kendall County residents was 31.93 minutes. This average may indicate a degree of disparity when compared with the state average of 26.88 minutes and the national average of 24.42 minutes. The percentage of county residents traveling between 30 to 60 minutes was 35.5%; compared to the state average of 31.89% and the national average (27.64) (US Census Bureau, 2010). Kendall County residents appear to be driving farther to access employment.

From 2014 to 2015 there has been a 14.4% increase in the numbers of Kendall County residents using the county’s sole mode of local public transportation, Kendall Areas Transit (KAT). There appears to be a notable demand and a growing need for this service. However, due to budget constraints and an aging motor fleet, accommodating such needs may be challenging at best (LaLonde, P., 2015).

Kendall County’s 2015 unemployment rate of 5.2% represents a slight decrease over the last several years. A potentially misleading statistic when one ponders the real circumstances of those no longer considered unemployed. Given that the poverty rate in Kendall County has increased since 2000, perhaps these individuals, while employed, are underemployed. Or perhaps the no longer qualify for unemployment and have since been removed from the unemployment count. According to our national labor department, 7 million Americans are working part-time jobs even though they want (or more importantly need) full time work. This is 3 million more than in 2007 when the last recession began (US Department of Labor, Bureau of Statistics, 2015).

In 2015 Kendall County ranked 6th in the state in the number of people possessing a higher education. Over 22% of the county’s population held a bachelors degree; and 11.6% had at least a master’s degree (Kendall County Health Department, Community Action Plan, 2015).

The Kendall County community is fortunate to have a number of assets that can or do positively impact the aforementioned health indicators. These assets, listed in no particular order, include but are not limited to: a local health department (KCHD) that serves as the primary provider and/or referral source for both personal and mental health promotion; a Low Income Home Energy Assistance Program (LIHEAP); a Illinois Home Weatherization Assistance Program (IHWAP); a Percentage of Income Payment Plan (PIPP) program; scholarship programs for economically disadvantaged students; a Women, Infants, and Children (WIC) program; Kendall County Health Department’s Outreach Case Management; Kendall Senior Services; Veterans Assistance Commission of Kendall County; the Kendall County Housing Authority. Additional community assets include: a Meals on Wheels program; school summer lunch programs; a diverse and engaged local public health system; nearby community colleges and vocational centers; local Public Aid Offices; two local food pantries; the County Department of Employment and Education, the Salvation Army; the Red Cross, and a local and professional run Public Action to Deliver Shelter (PADS) program.
Kendall County Health Department’s Mental Health Services researched and contributed meaningful data in the areas of mental health and wellness; specifically, in the areas of mental health prevalence, elder well-being, community violence, substance abuse, and suicide and violent death. With respect to mental health prevalence, one in five adults experience a mental health condition every year (National Alliance on Mental Health Illness, n.d.). Mental disorders are illnesses that, when left untreated, can be just as serious and disabling as physical diseases, such as cancer and heart disease. For every $1 spent on mental health services, $5 is saved in overall healthcare costs (University of Chicago, n.d.). In Kendall County, in 2014, an average of one in four adults aged 25 and older say there have been days within the last 30 days that their mental health was not good (Illinois Department of Public Health, 2014). Pertaining to mental health treatment, less than one-third of adults and one-half of children with diagnosed mental health disorders receive treatment every year. A social stigma continues to surround mental health disorders, and mental health care is frequently difficult to access. In 2013, 10% of adolescents lacked insurance. Even when they are covered, the amount of mental health services they can receive is often limited. Researchers have documented a number of disparities in access. Among adolescents, those that are homeless; served by state child welfare and juvenile justice systems; and are lesbian, gay, bisexual, and/or transgender are often the least likely to receive services (U.S. Department of Health and Human Services, 2015). Between fall of 2014 and spring of 2015 (which covers two shelter seasons), the Kendal County Health Department dedicated one mental health clinician for two hours per night at a PADS site. Approximately 54 PADS guests benefitted mental health case management services, of which 41% (22 individuals) also engaged in outpatient mental health treatment at the health department.

Depression affects more than 19 million Americans yearly. Fewer than half suffering from this illness seek treatment (Mental Health America, n.d.). In Kendall County, in 2012, 26% of 8th graders claimed to have felt sad or hopeless for two weeks or more in a row; 33% of 10th graders felt sad or hopeless for two weeks or more in a row; and 25% of 10th graders felt they had no adults to talk to about important issues in their lives (Illinois Youth Survey, 2012). Also in Kendall County, from 2010-2014, a 6.3% increase was seen in the number of people treated for a depressive disorder (Kendall County Health Department, Electronic Health Records, 2015). In 2014, 12.8% of adults ages 65 and older were told they had a depressive disorder sometime during their lives. In the 45-64 age group 15.2% of adults were told they had a depressive disorder some time during their lives (Illinois Department of Public Health, 2014).

Post traumatic stress disorder (PTSD) affects 3.5% of the U.S. adult population. Women are more likely to develop the condition than men. While PTSD can occur at any age, the average age of onset is in a person’s early 20s (National Alliance on Mental Illness, n.d.). It bears mentioning that an estimated 24.4 million people have PTSD at any given time – a number equal to the total population of Texas (PTSD United, 2015).

Attention deficit hyperactivity disorder (ADHD) is one of the most common reasons children are referred for mental health services. It affects as many as 1 in 20 children; boys are three to four times more likely to experience ADHD than girls (Mental Health America, n.d.). ADHD affects about 4.1% of American adults age 18 years and older in a given year. The disorder affects 9.0% of American children age 13 to 18 years (National Institute of Mental Health, n.d.).

Autism, a developmental disorder that affects a person’s ability to socialize and communicate with others, affects 1 in 68 children. Boys are 4 times as likely as girls to develop autism. Despite many claims that have been highlighted in the media, there exists strong evidence that vaccines do not cause autism (National Alliance on Mental Illness, n.d.).

Between 2000 and 2050, the proportion of the world’s population over 60 years will double from about 11% to 22%. The absolute number of people aged 60 years and over is expected to increase from 605 million to 2 billion over the same period (World Health organization, 2014). As of 2013, the population of persons 65 and older within Kendall County was 8.7%. Consider that older Americans are more likely to commit suicide than any other group. Over 20% of adults aged 60 and older suffer from a mental or neurological disorder (University of Chicago, n.d.).
In 2013, 2.5 million nonfatal falls among older adults were treated in emergency departments; the direct medical costs of falls amounted to $34 billion. 1 out of every 3 older adults fall each year, with less than half talking to their healthcare providers about it. Falls are the leading cause of both fatal and nonfatal injuries among older adults. Illustrated in the chart to the right, fall-related deaths have sharply risen over the past decade. An estimated 25,000 older adults died from unintentional fall injuries in 2013. Men are 40% more likely to die from a fall than women. Older whites are 2.7 times more likely to die from falls as their black counterparts. Older non-Hispanics have higher fatal fall rates than Hispanics (Centers for Disease Control and Prevention, 2015).

More than two million of the 34 million Americans age 65 and older suffer from some form of depression. One-third of widows/widowers meet criteria for depression in the first month after the death of their spouse; half of these individuals remain clinically depressed after one year. Depression is a significant predictor of suicide in elderly Americans. Suicide rate among white males aged 85 and older is nearly six times the suicide rate in the U.S. 65.3 deaths per 100,000 persons (white males 85 and older) compared to 10.8 deaths per 100,000 persons in the U.S. (Mental Health America, n.d.)

Community violence can occur anywhere; urban, suburban and rural areas alike. Kendall County offers a mix of rural and increasingly urbanized areas. Over 1/3 of girls and boys ages 10 to 16 years old across the country are victims of direct violence. Community risk factors for violence include: diminished economic opportunities; high concentrations of poor residents; high levels of transiency or family disruption; low levels of community participation; and socially disorganized neighborhoods (U.S. Department of Veterans Affairs, n.d.). And violence comes in many forms, not the least of which is through misuse of technology-based social media. In looking at cyber-bullying, more than 1 in 3 young people have experienced cyber-threats online. An estimated 50% of young people have experienced some form of cyber-bullying, with 10 to 20% having experienced it regularly (Bullying Statistics, 2010). According to the 2012 Illinois Youth Survey, in Kendall County, an average of 41% of all 6th through 12th grade students reported ever being bullied; of which 16% of both 6th and 12th graders were cyber-bullied, 21% of 8th graders were cyber-bullied; and 22% of 10th graders were cyber-bullied.

In a look at domestic violence, every 15 seconds in the U.S. a woman is beaten. Two in five women who are murdered are killed by their husbands. And an estimated 95% of all cases of partner abuse involve a man beating a woman (Illinois Department of Public Health, 2010). In Kendall County, in 2012, 6% of 12th graders admitted that during the past 12 months, someone they were dating had slapped, kicked, punched, hit or threatened them (Illinois Youth Survey, 2012).

With respect to prescription medications, the Centers for Disease Control and Prevention has classified prescription drug abuse as an epidemic; nearly one-third of people aged 12 and over who used drugs for the first time in 2009 began by using a prescription drug non-medically. Emergency Department visits involving nonmedical use of pharmaceuticals increased 98.4% from 2004-2009. And 1.9 million Americans were either dependent on or abused prescription pain relievers in 2013 (National Institute of Drug Abuse, 2011).
An increase in painkiller prescribing is a key driver of the increase in prescription overdoses. The severity of the epidemic varies widely across U.S. states and regions. Illinois’ overdose death rate for 2010 (10.0 per 100,000 population) is below the national rate (12.4 per 100,000 population) (Centers for Disease Control and Prevention, n.d.). Nonetheless, nationally, between 1999 and 2007, drug-induced deaths were second only to motor vehicle fatalities (Centers for Disease Control and Prevention, 2014). Persons in the United States consume opioid pain relievers (OPR) at a greater rate than any other nation. They consume twice as much per capita as the second ranking nation, Canada (Centers for Disease Control and Prevention, 2014). It appears opioid use - and misuse - can lead to the use of heroin. Nearly half of young people who inject heroin surveyed in three recent studies reported abusing prescription opioids before starting to use heroin. People abusing pain relievers are switching to heroin because of decreased access to pain relievers, and the relatively lower cost of heroin (National Institute of Drug Abuse, 2014).

In 2012 an estimated 669,000 Americans reported using heroin in the past year – a trend on the rise since 2007. 156,000 people started heroin use in 2012, nearly double the number of people in 2006. This equates to an estimated 427 people starting heroin in 2012...each day (Lipari, R.N. & Hughes, A., 2015). In Kendall County, in May of 2015, a string of three deaths were reported from heroin overdose in a single week (Schury, M., 2015). While heroin use appears to be on the rise, it is believed to be seriously underreported (National Institute of Drug Abuse, 2014).

Perhaps no less dangerous and more easily obtained is alcohol. Nearly 88,000 people die from alcohol-related causes annually, making it the third leading preventable cause of death in the United States. In 2012, more than 10% of U.S. children lived with a parent with alcohol problems. In 2013, 24.6% of people age 18 and older reported that they engaged in binge drinking in the past month (National Institute on Alcohol Abuse and Alcoholism, 2015). And from 2010-2014, there has been a 21.2% increase in the number of persons from Kendall County who were seen at an emergency department for alcohol abuse (Rush-Copley Medical Center, 2015). A review of the 2012 Illinois Youth Survey, for Kendall County, reveals that 11% of 6th graders abused alcohol; 28% of 8th graders abused alcohol; 49% of 10th graders abused alcohol; 59% of 12th graders abused alcohol.

Data on suicide and violent deaths is compelling. In 2013, in the U.S., there were 1,028,725 suicide attempts. This number translates to one attempt every 31 seconds. Nationwide, in 2013, there were 41,149 suicides, or a rate of 12.6 per 100,000 population; this equates to 112.7 suicides per day. Put another way, an average of 1 person every 12.8 minutes killed themselves (Drapeau, C. W., & McIntosh, J. L., 2015). Not far behind was Illinois’ 2013 suicide rate of 10.3% (Centers for Disease Control and Prevention, 2015). While somewhat dated it is interesting to note that in 2010, suicides by gun accounted for nearly six of every 10 firearm deaths, just over half of all suicides. Furthermore, at 87%, males made up the majority of gun suicides. And it was people 65 and older with the highest firearm suicide rate at 10.6 per 100,000 people (Cohn, D., Taylor, P., Lopez, M.H., Gallagher, C.A., Parker, K., & Maass, K.T., 2013).
In Illinois, from 1999 to 2013, 52.0% of all violence-related injury deaths were due to some form of suicide, of which 21.6% involved the use of a firearm. In 2013, suicide was the leading cause of all violence-related injury deaths in those aged 35 and older; and was the second leading cause of death among the age group of 15 to 34 (Centers for Disease Control and Prevention, WISQARS, 2015). Locally, from 2010-2014, there has been a 75.7% increase in the number of persons from Kendall County who presented to a local emergency department with suicidal ideation (Rush-Copley Medical Center, 2015).

Nationally, homicide and suicide accounted for nearly 15% of all deaths in the 10 to 14 year old age range, from 1999 to 2013. In Illinois, the highest percentage of violent-related injury deaths was due to homicide by firearm (31.2%). Homicide was the third leading cause of death among the age group of 15-34 in 2013 (Centers for Disease Control and Prevention, WISQARS, 2015).

Kendall County’s 2015 self-violent death statistics revealed the following: Ages ranged from 21 to 54 years old; broken down by age range: 20s (2), 30s (2), 40s (3), 50s (2); by gender: 78% (7) male, 22% (2) female; by race: 89% (8) white, 11% (1) Hispanic; by circumstance: 67% (6) accidental, 33% (3) intentional. 67%; by substance: illicit drug; 22%, alcohol; 11% prescription medication. Accidental by cause: 66%, heroin intoxication; 17%, motor vehicle; 17%, prescription medication. Intentional by method: 67% by firearm; 33% by asphyxiation. Lastly, the presenting problem(s) by theme in order of prevalence included addiction struggles; relational problems/loss; chronic medical issue(s); chronic depression; socio-economic duress (Kendall County Coroner, 2015).

Fortunately, the Kendall County community possesses a number of community assets capable of having a positive impact on the mental health and well-being of community members. To provide an unexhausted list, the Mental Health Services (MHS) division of the Kendall County Health Department offers our community a variety of affordable, accessible services that include: suicide and crisis intervention; family and individual therapy; psychiatric services; suicide assessment and intervention; substance abuse services, Transitions Program (care coordination for our elders); outreach services; Tobacco Cessation Program; individual, family and group services; and consultative and education supports in community settings. Additionally, MHS maintains strong working relationships with our local school system social workers, PADS administrators and volunteers, the State’s Attorney, and Senior Services.; Mental Health First Aid Certification courses are offered through Waubonsee Community College. This multi-sector group of partners represents but a portion of our local public health system, and share a common commitment to the prevention, intervention, and treatment of those with mental health and substance abuse issues and illness.

Kendall County Health Department’s Environmental Health Services contributed meaningful data in the areas of food-borne illness; radon, tick and mosquito-borne diseases; and groundwater contamination. In the case of food-borne illness, annually, an estimated 1 in 6 Americans will get sick; an estimated 128,000 will be hospitalized, and an estimated 3,000 will die. Add to these numbers the belief that two thirds of all food-borne illnesses go unreported (Centers for Disease Control and Prevention, 2014). Locally, Kendall County, in 2014, experienced its first scientifically proven food-borne illness outbreak originating from a commercial food establishment. More than a dozen people became ill, seven of which presented in area emergency departments. Two of which were hospitalized (Kendall County Health Department, 2014).

According to the U.S. Environmental Protection Agency (2015), radon is the leading cause of lung cancer in non-smokers, and is responsible for more than 21,000 lung cancer deaths each year. The risk of death to the average person from chronic exposure to indoor radon gas is 1,000X higher than the risk from any other carcinogen or toxin regulated by the Food and Drug Administration or the USEPA (University of Minnesota, n.d.). Radon test results from tests taken in Kendall County homes reveal an average indoor concentration of 5.5 pCi/L (picocuries per liter) of radon per home (the action limit is 4 pCi/L). This average is slightly higher than neighboring counties such as DeKalb (5.1), Kane (5.2), Du Page (5.0) , Will (5.3), and Grundy (4.5) (Illinois Emergency Management Agency, n.d.). Additionally, Kendall County’s per home average concentration exceeds the state average (4.9).
It is important to note that the indoor concentration of radon gas at which action is recommended, also referred to as the action level, is 4.0 pCi/L (Environmental Protection Agency, 2013). Kendall County Health Department, since 2001, has made low cost radon test kits available to its community. Of the hundreds of test kits run, an average of 47% of these tests revealed indoor radon concentrations at or above the USEPA action level; a significant finding (Kendall County Health Department, 2015). Indoor concentrations of radon gas can be reduced if not mitigated with the use of a number of radon gas exclusion techniques. Some techniques come at a relatively low cost, as in the case of sealing cracks in a home’s unfinished basement floor. Other techniques are more costly. A mechanical mitigation system, proven to be very effective, can cost as much as $1600. In 1985, Kendall County began requiring radon resistant new home construction. The county’s local municipalities have since phased in similar requirements. Radon resistant construction greatly reduces the cost of installing a mechanical mitigation system. It stands to reason that some level of disparity may exist, as it pertains to cost, between homes built with and without radon resistant construction (Kendall County Health Department, 2015).

The potentially fatal yet preventable mosquito-borne disease, West Nile virus has had a presence in Illinois and in Kendall County since 2002. Kendall County has detected the virus in one or a combination of disease hosts that include mosquitoes, birds, horses and humans - each year since. In 2014, Kendall County was one of only 13 counties in Illinois that recorded human cases of this potentially fatal disease (Illinois Department of Public Health, 2015). Kendall County Health Department, since 2010 alone, has responded to over 90 community-placed complaints of stagnant water on residential property, stagnant water being a prime mosquito breeding habitat (Kendall County Health Department, 2015). Some disparity may exist as it applies to age. People over 60 years of age are at the greatest risk of contracting a severe form of West Nile virus infection. Also, people with certain medical conditions such as cancer, diabetes, hypertension, kidney disease, and people who have received organ transplants, are also at greater risk for serious illness (Illinois Department of Public Health, 2015).

Chikungunya (Chik-V) is an emerging mosquito-borne disease worth taking note. A total of 207 Chik-V disease cases have been reported to ArboNET across 32 U.S. states as of July 7, 2015. Most people infected with Chik-V will develop symptoms (ranging from headache to joint pain and can be severe to disabling). Mutated strains of Chik-V can now be carried by the aggressive Asian tiger mosquitoes (present in all states east of the Mississippi River) (Centers for Disease Control and Prevention, 2014).

A sentinel issue to monitor is the emergence of the mosquito-borne Zika virus disease. According to the Illinois Department of Public Health, in May 2015, the Pan American Health Organization (PAHO) issued an alert regarding the first confirmed Zika virus infection in Brazil. A subsequent outbreak in Brazil led to reports of Guillain-Barre syndrome and pregnant women giving birth to babies with birth defects and poor pregnancy outcomes. Zika virus has since been detected in U.S citizens. In June 2016 the Illinois Department of Public Health reported 18 cases of Zika virus disease statewide. While none of the Illinois cases were transmitted within the state, the risk of transmission certainly exists.
Another vector, the black-legged deer tick, is capable of transmitting Lyme Disease, the most commonly reported vector borne illness in the United States. In 2014, it was the fifth most common Nationally Notifiable disease. However this disease does not occur nationwide and is concentrated heavily in the northeast and upper Midwest. In 2013, Illinois had an incidence (number of confirmed cases per 100,000 people) of 2.6. This incidence was greater than 33 other states in the country (Centers for Disease Control and Prevention, 2015). In 2013, Kendall County had an incidence 9.2 (Illinois Department of Public Health, 2013). This may point to disparity compared with state incidence as the numbers appear to show Kendall County may be more at risk!

To provide additional perspective on the level of health risk of this disease, there are seven predominant types of ticks in the US, but only two carry Lyme Disease. Of these two types, one (blacklegged/deer tick) is very prominent in Illinois, specifically northern IL (Centers for Disease Control and Prevention, 2014). Kendall County has experienced an overall increase in trend over past 14 years with diagnosed Disease cases (Illinois Department of Public Health, INEDSS, 2014).

In considering local groundwater contamination, particularly as it applies to private water well, the most common contaminants are nitrates and coliform bacteria. Private water wells are sampled for these contaminants upon installation, before they are put into service. After this initial test, routine testing, recommended annually, appears to drop off dramatically with an average of 25 private water wells in Kendall County being tested every year despite routine Health Department recommendation of sampling annually (Kendall County Health Department, 2015).

Nitrate is a naturally occurring chemical that is especially dangerous to infants. Illinois has high nitrogen output, especially in comparison to the East and West coast (Environmental Protection Agency, 2014). From 2008-2015 in Kendall County, ~15.5% of all water samples from privately owned wells detected nitrate at or above 0.1 mg/L (Kendall County Health Department, 2015).

Coliform bacteria is commonly found in soil, on vegetation, and in surface waters. Some strains (i.e., E. coli) found in the feces of warm-blooded humans and animals can cause serious illness. Contamination levels are dependent on conditions such as the proximity to other contamination sources, the potential for flooding, the age of well, and construction of well (West, J., n.d.). From 2008-2015, in Kendall County, an estimated 16.8% of all water samples from privately owned wells tested at or above a 1.0 mg/L for coliform (Kendall County Health Department, 2015). One might draw the conclusion that there exists a level of disparity among private well owners in that private wells not regulated or monitored like public wells. Private water well owners/consumers may not have money or knowledge to properly monitor, repair or treat a water source.

There are many community assets to consider with respect to the above environmental health-related health indicators, including: Routine and ongoing health department inspections of all food service establishments, mobile food vending units, and most temporary event food establishments; Routine training for health department staff charged with assuring safe food sources and food handling practices; the provision of commercial and consumer food safety education made available on the health department’s website; Long history of documented food-borne illness statistics and related preventative regulatory guidelines.
Regarding vector-borne diseases: KCHD (online) provides information on mosquitoes (WNV) and ticks; offers the community, tick identification; comprehensive mosquito-borne disease surveillance program, finding routinely communicated to the public and key state and local stakeholders; annual vector-borne disease-related educative presentations made to the public at well attended local community events including Dickson-Murst Farm Days and the Kendall County Natural Resources Tour; and mosquito abatement (larvaciding and adulticiding) performed by local municipalities. Regarding radon, radon test kits made accessible by the health department to the community for a nominal fee; Radon awareness and prevention-related information made available on the health department’s website; Regular radon related Facebook posts through the radon season; Staff available to answer questions from the public; Extensive public outreach experience as it applies to radon public education and awareness campaigns; Health department calls made and guidance offered to those whose tests came back with readings at or exceeding harmful levels of indoor radon gas; Radon resistant new home construction requirements enforced by local building authorities; Long standing source of Federal funding supporting local radon education and awareness campaigns; Public access to the Illinois Emergency Management Agency’s website complete with lists of Illinois-licensed radon mitigation and measurement professionals. The main community assets addressing groundwater contaminants include: Staff who permit and inspect the construction and repairs of private, semi private and non-community water wells to ensure as safe a water supply as possible and protection of the groundwater aquifer; Information provided on KCHD website; Health department-cultivated productive working relationships with local water well drillers; Health department staff keep abreast of new and proven construction techniques and equipment to ensure staff possess the best knowledge for problem solving and decision making; Staff available to answer questions from the public about water wells and keeping them contaminant free; and two local labs for water testing within the community.

Kendall County Health Department’s Community Health Services contributed meaningful data in the areas of access to care, sexually transmitted infections, prostate cancer, and obesity. Surveillance on local access to health care began with a look at health insurance coverage. The following percentages represent an estimate of Illinois’ 2013 uninsured population for those under 65 years of age: Non-Hispanic White, 15%; Non-Hispanic Black, 15 to 25.0%; Asian, 15.3%; Hispanic, 25 to 35.0% (United States Census Bureau, 2013). It appeared that in 2013, in Illinois, the Hispanic population represented the highest percentage of uninsured. Since official data on health insurance coverage in 2013 at the county level was unavailable, the above percentages of Illinois’ uninsured Hispanic population were used to estimate the average number of Kendall County’s Hispanic population, in 2013, without health care insurance. Of the estimated 20,144 Hispanics living within Kendall County in 2013, between 5,056 and 7,050, or an estimated average of 6,053 (30%) were uninsured (Kendall County Health Department, 2014). Nationally, from 2009 to 2013, 41.5% of Hispanics lacked health insurance, compared to 15.1% of whites (Dominguez, K., Penman-Aguilar, A., Chang, M.H., Moonesinghe, R., Castellanos, T., Rodriguez-Lainz, A., & Schieber, R., 2015). In 2014, 13% of all individuals in the U.S. were uninsured; 11% of all individuals in Illinois were uninsured; and 11% (an estimated 13,000) of Kendall County residents were uninsured (United States Census Bureau, n.d.). While access to health insurance coverage is so very important to all of Kendall County’s residents, it appears that our Hispanic population may be lacking in coverage the most. As a matter of health inequity, the uninsured, as a collective whole, may be subject to greater health risks and poor outcomes as the result of health issues gone undiagnosed or untreated, or misdiagnosed and mismanaged.

Given the comparatively high rate of uninsured, it made sense to take a closer look at Kendall County’s Hispanic population and the health issues identified by local hospital and partner, Rush-Copley Medical Center. According to data collected by Rush-Copley Medical Center, the following health issues treated in inpatient revealed a notable increase among uninsured Hispanics from 2010 to 2014: Neonatal with other Significant Problems; and Alcohol/Drug Abuse or Dependence. The following health issues treated in the Emergency Department revealed a notable increase among uninsured Hispanics from 2010 to 2014: Complication of Pregnancy, Childbirth, and the Puerperium; Diseases of the Nervous System and Sense Organs; and Diseases of the Respiratory System (Rush-Copley Medical Center, 2015).
With consideration to cost, or affordability, as a barrier to access to health care, according to Center for Disease Control and Prevention’s 2014 Behavioral Risk Factor Surveillance System (BRFSS) data, **24.6%** of Kendall County adults ages 45 to 64 needed to see a doctor but could not, due to cost. **15.5%** of Hispanics reported a delay in or non-receipt of needed medical care because of cost concerns (Dominguez, K., Penman-Aguilar, A., Chang, M.H., Moonesinghe, R., Castellanos, T., Rodriguez-Lainz, A., & Schieber, R., 2015). In 2012, Hispanic unemployment rate in Illinois was **higher** than the overall state rate at 17.6% (Algernon, A., 2013). Without employment, there is no access to employee insurance or group insurance. In 2012, nationwide poverty for those of Hispanic origin was **25.6%**, a rate **higher than all other races** except for Black (University of Wisconsin-Madison, n.d.). Poverty leads to inability to access or pay for health insurance; the cost of premiums and/or co-pays cannot be afforded. Patients are responsible for an increasing portion of their health care costs. From 2013 through 2014, patients' share of their health care costs grew **9.5%** for established patients and **7.9%** for new patients (O’Donnell, J. & Ungar, L., 2015).

Not to be overlooked is the cost of medicine. Even for those who can afford to see a doctor, there may be those who cannot afford to fill a prescription. In 2013 the average annual price of a generic drug prescribed for a chronic condition was $280 per year. **27%** of all generic drugs have increased in price since 2013, and some have increased exponentially (Jaret, P., 2015). According to the BRFSS 2014, **11.7%** of adults (ages 45-64) needed to fill a prescription for medication within the last 12 months could not, because of **cost**.

In addition to the uninsured, it is possible that Medicaid participants are less likely to have access to recommended care for disease prevention and screening; dental care; counseling on healthy lifestyle; vaccinations; chronic disease management. It appears that many health care providers, including specialists and dentists, may not accept Medicaid or are in need of placing a limit or cap on the number of Medicaid holding clients they are able to serve (Kendall County Health Department, 2014).

Fortunately, the Kendall County community can claim a number of assets working to promote access to care. They include eight primary care groups within Kendall County; Kendall County Health Department’s annual participation in two local and well established annual Latino health fairs; actively enrolling Kendall County residents into Affordable Care Act-required insurance; ongoing client linkage and referral among our local public health system; the existence and promotion of a free medical clinic; access to discount cards for prescription medication; procurement of Kendall Area Transit gift cards for clients in need of transportation to and from medical appointments; and active participation in Salvation Army

Another community health issue worthy of close and ongoing surveillance are sexually transmitted infections (STIs). Although our rates are lower than the state and national rates, STIs are still heavily prevalent in Kendall County – as evidenced in the following chart prepared by Kendall County Health Department, depicting Illinois Department of Public Health 2013 data:
The following chart representing Kendall County, the data provided by the Illinois Department of Public Health, illustrates that STIs have been on the rise throughout the last 14 years. Perhaps of greatest concern is the notable rise in Chlamydia infections.

Of the 262 cases of Chlamydia in Kendall County, reported in 2014, 72 cases (27.5%) were male and 190 (72.5%) were female. Of all these cases, 46% were persons 20 to 24 years of age, and 27% were persons 15 to 19 years of age. 27% of these cases were both tested and treated at a clinic; while 73% were tested, and 70% treated at a private doctor’s office – unaccounted for is 3% tested but not treated (Illinois Department of Public Health, n.d.).

There are a number of possible contributing factors to the rise in STIs worth considering. With respect to age, individuals in their late teens to early twenties are more likely to exhibit feelings of invincibility (it won’t happen to me). Additionally, today’s social media appears to glorify sex. There may also exist, disparities in prevention and treatment due to cultural beliefs and norms. Poverty can be associated with an inability to afford and in essence access healthcare. STIs might disproportionately affect individuals engaging in social networks where high-risk sexual behavior is common. Stigma may play a role in that individuals may feel somewhat uncomfortable discussing matters of physical intimacy. Yet another consideration are ‘sexual networks’, which refers to groups of people who can be considered “linked” by sequential or concurrent sexual partners. There may also be false perceptions that because you only have had one partner that you are ‘safe’. There may be a risk involved in using technology promoting the finding of partners by simply supplying one’s first name or remaining completely anonymously (Healthy People.gov, n.d.). And not to be underestimated is the potential for one’s general lack of education and awareness on the risk and protective factors of STIs.

Kendall County assets committed to reducing the prevalence of STIs include an established, well connected and dedicated local public health system comprised in part of the Kendall County Health Department, local health care providers, and school social workers; and what appears to be a growing interest on the part of our local schools to promote and provide STI education in our schools.

Cancer is the second leading cause of death among Americans. Every day, in Illinois, 179 people are diagnosed with cancer. Broken down, 26 women are diagnosed with breast cancer; 17 people are diagnosed with colorectal cancer; 25 people are diagnosed with lung cancer; and 23 men are diagnosed with prostate cancer. In fact the highest rate of cancer in men is prostate cancer at 25.8%, with lung and bronchus being the second highest at 14.7% (Illinois Department of Public Health, 2014). A men’s health issue with a comparatively high prevalence rate makes prostate cancer worthy of additional surveillance. In the U.S., in 2015, there were 220,000 new cases of prostate cancer contributing to 27,540 deaths. 1 in 7 men will be diagnosed with prostate cancer during his lifetime. While prostate cancer can appear in a man’s 40s, and the risk rises sharply in his 50s, 6 cases in 10 are diagnosed in men 65 years and older, with the average age at time of diagnosis, 66. Although 1 in every 38 men diagnosed with prostate cancer will die of prostate cancer, the balance survive in large part due to early detection (American Cancer Society, 2015).
The following data set, from the National Cancer Institute, compares the local, state and national incident rates of males with prostate cancer over the years 2008-2012. One can see that the incident rate in Kendall County, while slightly lower than the State’s, is notably higher than that of the Nation’s:

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Sample Population (Male)</th>
<th>New Cases (Annual Average)</th>
<th>Cancer Incidence Rate (Per 100,000 Pop.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall County</td>
<td>3,851</td>
<td>53</td>
<td>137.6</td>
</tr>
<tr>
<td>Illinois</td>
<td>631,965</td>
<td>8,778</td>
<td>138.9</td>
</tr>
<tr>
<td>United States</td>
<td>15,967,881</td>
<td>210,297</td>
<td>131.7</td>
</tr>
</tbody>
</table>

Contributing factors considered with respect to prostate cancer, in addition to age, include race, genetics, diet, and occupation. African American men stand a greater chance of being diagnosed with prostate cancer than any other ethnic group. One’s genetics may play a contributing role, a father and/or grandfather having been diagnosed with prostate cancer serving as a possible forewarning and a clear invitation to get tested. Men who consume large quantities of red meat and dairy products high in fat appear to be at higher risk; as are men who work in environments that present risk of exposure to toxic chemicals, such as fire fighters and farmers (American Cancer Society, 2015).

Surveillance performed by the Centers for Disease Control and Prevention on obesity reveals that, in 2012, 35.1% of Kendall County adults aged 20 and older self-reported that they have a Body Mass Index (BMI) greater than 30.0 (obese). Excess weight may indicate an unhealthy lifestyle and puts individuals at risk for further health issues. As reflected below, the percent of Kendall County adults reporting as obese surpasses both the State and National averages of 27% and 27.14% respectively (Centers for Disease Control and Prevention, 2012):
Furthermore, as evidenced in the chart below, this appears to be trending upward since 2010 (Centers for Disease Control and Prevention, 2012).

Broken down by gender, in 2012, the percentage of Kendall County males reporting a BMI considered obese, at 36.6%, slightly exceeds that of Kendall County females, reporting at 34.6; with both genders exceeding the Illinois and Nation averages (Centers for Disease Control and Prevention, 2012).

Other issues associated with obesity were looked at, such as high blood pressure and cholesterol. Looking at data collected from 2006 to 2012, 35.2% of Kendall County adults aged 18 and older had been told by a doctor that they have high blood pressure or hypertension. This percentage exceeds both Illinois (28.2) and National averages (28.16) (Community Commons, n.d). These results appear to align with data on high cholesterol. In 2012, the percentage of the Medicare fee-for-service population in Kendall County with high cholesterol was 49.69%. Once again, the County’s percentage exceeds both Illinois (46.44) and National averages (46.75) (Community Commons, n.d).
Community assets with the potential to positively impact obesity and related chronic diseases included: Local work out facilities; YMCA after school programs; Physical education within schools; Informational resources through Kendall County Health Department and online sites regarding BMI, weight, healthy eating, and healthy living; Blood pressure cuffs for purchase; Local health markets and grocery stores; weight-loss and nutritional programs such as Seattle Sutton and Weight Watchers; and Park District and Forest Preserve amenities.

A sentinel issue to monitor is the emergence of the mosquito-borne Zika virus disease. According to the Illinois Department of Public Health, in May 2015, the Pan American Health Organization (PAHO) issued an alert regarding the first confirmed Zika virus infection in Brazil. A subsequent outbreak in Brazil led to reports of Guillain-Barre syndrome and pregnant women giving birth to babies with birth defects and poor pregnancy outcomes. Zika virus has since been detected in U.S citizens. In June 2016 the Illinois Department of Public Health reported 18 cases of Zika virus disease statewide. While none of the Illinois cases were transmitted within the state, the risk of transmission certainly exists.

Other notable sentinel events or issues include the evolution of the Affordable Care Act, upward trending in tuberculosis cases, and the Illinois’ fiscal year 2016 budget impasse. According to the U.S. Department of Health and Human Services, Nationwide, since the Affordable Care Act’s coverage expansion began, about 16.4 million uninsured people have gained health insurance coverage - the largest reduction in the uninsured in four decades. The uninsured rate in Illinois in 2014 was 11%, down from 15.5% in 2013. And as a result of Illinois having expanded Medicaid under the ACA, as of January 2015, 475,003 Illinoisians have gained Medicaid or Comprehensive Health Insurance Plan coverage since the beginning of the Health Insurance Marketplace first open enrollment period. In addition to reducing the numbers of the uninsured and expanding Medicaid, the ACA has served to end discrimination for pre-existing conditions, expand mental health and substance use disorder benefits, and strengthen Medicare. Time will tell is the ACA continues to evolve to provide the nation, Illinois, and Kendall County citizens with increased access to health care, and affordable care at that.

The preliminary tuberculosis (TB) statistics for 2015 show a total of 9,563 TB cases reported, compared with a total of 9,421 for 2014. Among the 9,563 TB cases reported, 3,201 (33.5%) occurred among U.S. born persons, corresponding to an annual TB incidence of 1.2 per 100,000 persons. The 6,335 TB cases among foreign born persons in the United States (66.2% of the total U.S. cases) corresponded to an annual incidence of 15.1 per 100,000 persons. Overall national TB incidence remained approximately 3.0 cases per 100,000 persons during 2013 – 2015 (Kanabus, Annabel, 2016). After 2 decades of declining incidence, progress towards TB elimination in the United States appears to have stalled. Illinois’ 2015 state-wide tuberculosis case rate per 100,000 population was 2.67, a slight but notable increase over 2014 (2.49) (Illinois Department of Public Health, 2015). At the local level, Kendall County Health Department has recently observed an increase in the number of TB cases presenting in Kendall County residents. In 2016, as of the end of July, KCHD had addressed three active cases of TB, and five latent cases of TB; this compared to two cases of TB in 2015. It is possible that this recent increase in cases is a reflection of a possible increase in awareness among local health care providers in response to increases at the state and national levels. In other words, local health care professionals are becoming more vigilant for signs and the possible manifestation of TB in their patients, which could be leading to increased testing.

Since July 2016 the state of Illinois' budget impasse has and may very well continue to greatly challenge the capacity of local health departments (LHD) such as KCHD to protect the health of its citizens. KCHD, like many other LHDs, has been forced to take appropriate yet extreme actions in response to this ongoing crisis that have included measures such as laying off staff, reducing the work week and reducing the hours open for business. While resources have been diminishing, the need for our services has never been greater. We resolve to address and meet these needs with efficacy.
COMMUNITY HEALTH ASSETS & STRATEGIC ISSUES

The use of Mobilizing for Action through Planning and Partnerships (MAPP), our choice of a community-driven strategic planning process for improving community health, proved efficient and effective in successfully guiding our community partners through the identification of community health assets and strategic issues. Specifically, our implementation of three MAPP health planning assessments, the Local Public Health System Assessment, the Community Themes and Strengths Assessment, and the Forces of Change Assessment. The Local Public Health System Assessment resulted in our community IPLAN Committee citing strengths and weaknesses of the local public health system. The Community Themes and Strengths Assessment resulted in the Committee citing assets and priorities related to health and well-being in our community. And the Forces of Change Assessment resulted in the Committee naming forces, threats, and opportunities related to the health of the community. To simplify the following discussion; strengths, assets, and opportunities will be referenced as health assets in the community. Likewise; weaknesses, priorities, and threats will be referenced as strategic issues in the community.

Significant health assets identified in the culmination of these assessment results included: a public health system that has strong community partnerships, coalitions, and organizations that work together toward common goals and share plans for planning, decision making and responses; community health education that occurs throughout Kendall County through meaningful partnerships; workforce development opportunities through a local community college and the health department’s professional seminars; and partners with the ability to create and share public health informatics. These are some of the key findings from our Local Public Health System Assessment. Bringing to light these local public health system assets appeared to reinforce our local public health system partner’s commitment to provide and to further strengthen these valued assets. Some of the key findings of assets in our Community Themes and Strengths assessment were described as: community resources viewed and serving as assets to social well-being; organizational resources identified as assets for mental health; parks and preserves considered assets to the health of our environment; fitness options available as assets to physical health; community cooperative context considered an asset to community resilience; small towns and public centers promoting community connectedness. It is apparent that both our local public health system and the community we serve think very broadly about health and well-being issues as they pertain to our community.

Assets that were cited in our Forces of Change Assessment in the form of health opportunities include: a highly educated population; observed resurgence in our local economy and economic development; workforce development opportunities located in/provided by the health department; a community in proximity to large metropolitan area; local services that provide for family planning; a local PADS program and food pantry; affordable mental health services at the health department; school based supports; Kendall Area Transit; Rush-Copley Medical Center and Kish Health Systems services; and many area physicians.

Some of the strategic health issues described as weaknesses in our Local Public Health System Assessment were described as: the public health system could increase its engagement of young adults aged 18 -30 in health and well-being activities; the system could share health informatics (data) amongst providers, make assessments more known, and have the ability to provide layered data from count, state and national levels; and the health department would like to employ leadership on research methods that produce effective health outcomes in county residents.
Our Community Themes and Strengths Assessment revealed the following thoughtful key strategic health issues cited as possible priorities: the need for more substance abuse counseling (or the need for more individuals to engage in this counseling), more mental health support groups, more community center(s) and social gathering spots, and affordable medication; the availability of full-time and/or well paying jobs; additional after school supports and activities for our community’s youth; the need to increase community awareness of accessible mental health services, access to affordable and easy-to-work-with insurance plans; more activities for seniors, additional public transit options, increase awareness of the dangers of misusing prescription pain pills; need for increased awareness of mental health illnesses as real and treatable; the need to explore the presence and possible risks of radium in local deep groundwater aquifers; lack of opportunities to recycle Styrofoam, new and emerging diseases; possible increase in severe weather events that result in river flooding; difficulty in accessing specialty medical and oral health care, a need for more and more affordable fresh produce; a possible disinterest or inability of long-time residents to adapt to changes inherent in a small town community subject to rapid growth; and the need anticipate, plan and drill for natural and manmade disasters. Our Forces of Change Assessment cited the following strategic health issues referred to as threats; a perceived lack of awareness of existing affordable, accessible mental health service; a need for local physicians to accept or increase capacity to accept Medicaid; and the need to ensure that our public health messaging is reaching its intended target(s). The culmination of strategic health issues from these three community health assessments served to inform the health priorities selected through consensus by our community IPLAN committee.

A brainstorming session with our community IPLAN Committee was facilitated using a Forces of Change Brainstorming Worksheet. Each community partner was asked to list brainstormed forces impacting the health and well-being of our community, their community. Our partners then took the opportunity to discuss key forces identified with the larger group. A Threats and Opportunities Worksheet was prepared on a large white board for all to see. Key forces, listed by Committee members were channeled into threats posed. Group discussion ensued about threats. Threats were then channeled into opportunities created prompting group discussion about opportunities and further identification of strategic issues. A consensus process was used to move from strategic issues to the selection of health priorities.

**Prioritization of Results**

Three health priorities have been selected. Chosen through community partner consensus, these three health priorities represent health and well-being initiatives unduplicated by efforts already established in the local public health system, and can be distinguished by innovation from efforts yet established in the public health system. The community engagement processes by which these priorities were selected are elaborated upon later in this document. The three health priorities proudly represent the World Health Organization definition of health in their diversity as well as their reflection of community driven health priorities. The World Health Organization asserts that public health refers to all organized measures (whether public or private) to prevent disease, promote health, and prolong life among the population as a whole. Its activities aim to provide conditions in which people can be healthy and focus on entire populations, not on individual patients or diseases. Thus, public health is concerned with the total system and not only the eradication of a particular disease (World Health Organization, 2016).

The three health priorities are on the health and well-being topics of:

- Increasing community population opportunities for access to oral health care.
- Decreasing community population potential exposure to Disease.
- Connecting seniors to assets that reduce socio-economic duress and support mental health.

The data analysis, risk factors and outcome detail is elaborated upon later in this document.
COMMUNITY HEALTH PLAN

DOCUMENTATION OF BOARD OF HEALTH ADOPTION

The Kendall County Board of Health adopted the 2016 -2021 IPLAN and priority objectives at its August 16, 2016 Board of Health meeting.

PURPOSE STATEMENT

The purpose of this community health plan is to reflect the strategic issues and priority objectives identified by the community, to devise sound strategies around the priority objectives, and to design an action cycle capable of meaningful impact around the implementation of those objectives.

COMMUNITY PARTICIPATION

While Kendall County Health Department is responsible for protecting and promoting the health and well-being of its community, it cannot be effective acting unilaterally. We partnered with community members, and other sectors and organizations of our local public health system to plan and share the responsibility for community health improvement. These partners have access to additional data and bring their own experiences and perspectives to the planning table. Such a collaborative planning process creates a shared ownership and responsibility for the plan’s implementation. And it is very likely that this collaborative planning process will extend into the implementation phase, serving as the basis for taking collective action and fostering further collaboration.

Equally important to the numbers and diverse make-up of partners engaged in our collaborative planning process was the process itself. Anchored by five essential elements, this process fully infused with community participation included: Data-Driven Information, Diversity of Community, Locally Relevant, Participatory Engagement, and Stakeholder Voice. Not only did these elements form the IPLAN process, but they served to inform the health priorities chosen as well.

Data-driven information means the critical use of data to understand not only our community’s health status, but also deepen our analysis of that health status. Therefore, the data behind data-driven information includes data sets reflecting local county level information, state level information, and national level information; research-based journal articles useful to understanding our local health status, and numeric and narrative data derived from our individual community health assessments. The analysis of this data-driven information assisted partners representing our IPLAN committee in identifying and determining health and well-being issues prevalent or emerging in our community.

Diversity of community reflects an IPLAN Committee made up of many individuals, organizations and sectors of our community. Some of these community partners included: local clinics/hospital, faith-based organizations, law enforcement, members of local governance, State partners, and school system. In addition to the numbers and diversity of organizations and sectors represented, the diversity of individual participants was also greatly valued. The age, race, and socio-economic diversity of participants required served to infuse diversity in values, perceptions and experiences into our IPLAN dialogue. The addition of the ethnographic method as a part of the data collection process, provided even more diversity to the IPLAN process, as many of the individuals interviewed did not possess the economic means (due to performing hourly waged work, working two jobs, or not being able to be a part of the planning process on work time) nor sociological tendency (due to not having been invited to participate in the past, due to the perceived domination of professional experience over lived experience in most organizational planning processes, or due to general lack of confidence in one’s ability to influence the community health system) to join our planning meetings. In addition to the use of the ethnographic method, great care was taken to provide the entire community with routine planning updates and the opportunity to share personal input and feedback with the health department 24/7 and from the comfort of their personal phone or computer.
Locally relevant describes a process providing for parallels with the lived and professional experiences of both our local public health system and community partners. It inspires a community to consider and strategize around key health and well-being needs of their own community, and fosters an increased sense of ownership and responsibility.

Participatory engagement means an IPLAN process that strongly promotes and places a high value on the responses of the community to data-driven information presented. More importantly, participatory engagement ensures that the community’s input actually influences the larger understanding of the data-driven information. In actively sharing personal knowledge, perceptions and experiences the community serves as co-expert in the examination of data as it relates to health and well-being matters in their community.

Stakeholder voice reflects the importance placed on input received from our diverse multi-sector local public health system. Our local public health system not only included those professionals involved in the delivery of public health services, but those in need of or who had received them, the latter possess valuable firsthand experience with the delivery of these services. This 360 degree input, or voice, was present at each of our four community-driven IPLAN Committee meetings, and was also evident in the ethnographic interviewing from which meaningful data was received for the Community Needs and Strengths Assessment.

These five essential elements of community participation were embedded in our IPLAN process with intentionality and in an integrated manner. There is an overlapping relationship between these essentialities. They were and will continue to be present through the action cycle.

THE ACTION CYCLE

FROM STRATEGIC HEALTH ISSUE TO HEALTH INTERVENTION STRATEGY

Strategic health issues were closely examined by our community partners in their selection of priority health objectives chosen. Once priorities were selected, our partners put forth a great deal of thought and engaged in group discussions to identify promising health intervention strategies. Health department staff served to ensure that the implementation of proposed strategies would be feasible, and that they would represent both population-based and personal health care interventions.

COMMUNITY PARTICIPATION

Community participation will remain a cornerstone of the 2016-2021 IPLAN, and will continue through our action cycle in a number of ways. The health department’s Board of Health serves and is served by advisory boards/committees made up of community members and professionals in our local public health system. Members of these advisory boards/committees served as active participants in our IPLAN process and will continue to be provided with many opportunities to share their valued input into priority objectives throughout the action cycle. The entire community IPLAN Committee will also be convened during the action cycle to receive an update on the IPLAN process and progress made, and will certainly be encouraged to provide their input. The community at large will also be invited to this important event. Since health strategies represent both population-based and personal health care interventions, we anticipate that there will be great opportunities to gather valuable data as well as insight from community members targeted by these strategic interventions.
Efficacy Review

Key to the successful implementation of our community-chosen priorities will be routine evaluations of health strategies for their efficacy in fulfilling if not exceeding our priority objectives. Such evaluations will include regular updates and related discussions among program staff, tracking and monitoring data-driven results of our strategic efforts, as well as appealing to our community partners and members for their valued feedback. While our priority health objectives will remain the same, our priority health strategies cannot be considered static. Initial strategies may evolve and new strategies may be tested based on data-driven information and related lesson learned. We cannot understate the importance of community and community partner participation in the successful implementation of our IPLAN, their IPLAN. It is our sincere intention and our hope to actively engage the participation of our community, individually and collectively, in pursuance of optimal health and well-being.
DESCRIPTION, ANALYSIS & PRIORITY OBJECTIVES

PRIORITY: INCREASE COMMUNITY POPULATION OPPORTUNITIES FOR ACCESS TO ORAL HEALTH CARE.

The Kendall County Health Department’s (KCHD) Community Health Services division is committed to protecting the community’s health and well-being through, among other efforts, inspiring healthy lifestyle choices and preventing disease. This includes certain healthy behaviors, and access to affordable oral health care, capable of promoting and maintaining one’s good oral health, while at the same time minimizing if not preventing a number of chronic diseases known to be associated with poor oral health. KCHD intends to implement both direct client services and population based interventions in an effort to increase community population opportunities for access to oral health care for the residents of Kendall County.

To increase our community’s opportunities for access to oral health care, KCHD intends to collaborate with Kendall County dental offices, health centers and other local public health system partners to promote engagement in increasing access to oral health care for Kendall County’s uninsured adult population and/or co-create participatory access to good oral health for the county’s population. To accomplish this, KCHD aims to establish and make accessible to its community, a free dental clinic to Kendall County adults lacking insurance.

Additionally, KCHD will strive to advance the Kendall County community’s knowledge on ways in which to achieve and maintain good oral health through educational presentations on good dental health habits (annually) to school-age children, and by providing the Kendall County community with web-accessible information linking them to oral health care and oral hygiene education which includes tools and support aimed at promoting enrollment in dental insurance.

Combined, the above initiatives provide a thoughtful and well rounded combination of population based work and direct client assistance. Our intended population based work, involving raising our public’s awareness of the real and extended health impacts of poor oral health, and ways in which they can improve their own oral health, is considered a form of knowledge production; knowledge that is intended to encourage, inspire and equip one to pursue and maintain good oral health-producing behaviors and in essence achieve good oral health. This education, or knowledge production, is in itself a form of access to good oral health.

IMPORTANCE OF PRIORITY HEALTH NEED

The World Health Organization sets forth a concise and deeply profound statement on the importance of good oral health: Oral health is a critical component of general health and well-being. It is essential to the quality of life (World Health Organization, 2012). KCHD and its community partners agree with this statement and are committed to increase community population opportunities for access to oral health care.

Oral health might be considered unique in that it offers clues about one’s overall health. It may also be surprising to some that problems in one’s mouth can affect the rest of one’s body. It is important to understand this connection between oral health and overall health.

According to the Mayo Clinic, like many areas of the body, the mouth is teeming with bacteria, most of which is harmless. Under normal circumstances, our body's natural defenses combined with good oral health care, including daily brushing and flossing, serve to keep these bacteria under control. Unfortunately, without proper oral hygiene or lack of access to oral health care, these bacteria become capable of reaching levels that might lead to oral infections, such as tooth decay and gum disease. Interestingly, there are certain medications, such as decongestants, antihistamines, painkillers, diuretics and antidepressants, capable of reducing saliva flow. Saliva helps wash away food and neutralizes acids created by bacteria in the mouth, affording a level of protection from bacteria that could lead to disease. It is also possible that oral bacteria and the inflammation brought about by periodontitis (a severe form of gum disease) may possibly play a role in some diseases.
The Mayo Clinic goes on to explain that endocarditis, an infection of the inner lining of the heart (endocardium), can occur when bacteria or other germs from another part of the body, such as the mouth, spread through the bloodstream and attach to damaged areas in the heart. Also, there is research suggesting that heart disease, clogged arteries and stroke might be linked to the inflammation and infections that oral bacteria can cause. And periodontitis has been linked to premature birth and low birth weight (Mayo Clinic, 2016).

In addition to the above-discussed diseases, one cannot underestimate the important role good oral health plays in some basic yet critically important everyday human functions. Functions such as chewing, swallowing, speaking, smiling, kissing, laughing, and singing. These functions are critical to our ability to eat and nourish ourselves; effectively communicate, develop and maintain self-confidence, and perhaps feel accepted in a social setting.

A 2008 study explored the way in which endentulous individuals, those lacking teeth, were perceived in a social context, along with the potential social repercussions. This study, titled Social Perceptions of Individuals Missing Upper Front Teeth, involved 200 volunteer college students, 19 to 50 years of age, asked to rate five photographs depicting individual with tooth presence or absence, from a person with a full set of teeth (referred to as full dentition) to a person missing as many as four upper front teeth. Social traits to be rated included perceived attractiveness, health status, education attainment, satisfaction with life, active social life, aggressiveness, intelligence, trustworthiness, amount of caring, friendship, dating, and likelihood to live as a neighbor. Results of this study suggested a person missing visible teeth was more negatively perceived on all social traits than a person with a full set of teeth. These results suggested to the researchers the presence of strong Western cultural values, in that those missing teeth may experience barriers to personal and social success (Willis, Willis-Esqueda, and Schacht, 2008).

The value of our good oral health cannot be underestimated. It bears restating that oral health is more about teeth; oral health is essential to our general health and well-being.

**ANALYSIS TO IDENTIFY POPULATION GROUPS AT RISK**

For most Americans, oral health status has improved. Dental caries has declined significantly among school aged children since the early 1970s, although dental caries still remains the most prevalent chronic disease of childhood. Over the same time period, fewer adults have experienced tooth loss because dental decay or periodontal disease and the prevalence of complete tooth loss among adults has been consistently declining. Even with all these improvements in oral health over the decades, oral health disparities remain across some population groups (Dye, Tan, Smith, & Lewis, 2007).

Oral health disparities exist for many racial and ethnic groups, by socioeconomic status, gender, age, and geographic location. Non-Hispanic blacks, Hispanics, and American Indians and Alaska Natives generally have the poorest oral health of any racial and ethnic groups in the United States. The greatest racial and ethnic disparity among children aged 2-4 years and aged 6-8 years is seen in Mexican American and black, non-Hispanic children. Blacks, non-Hispanics, and Mexican Americans aged 35-44 years experience untreated tooth decay nearly twice as much as white, non-Hispanics. Adults aged 35-44 years with less than a high school education experience untreated tooth decay nearly three times that of adults with at least some college education. Adults aged 35-44 years with less than a high school education experience destructive periodontal (gum) disease nearly three times that of adults with at least some college education. The five year survival rate is lower for oral pharyngeal (throat) cancers among black men than whites (36% versus 61%). 47.2% of U.S. adults have some form of periodontal disease. In adults aged 65 and older, 70.1% have periodontal disease. Periodontal disease is higher in men than women and greatest among Mexican American and Non-Hispanic black, and those with less than a high school education (Centers for Disease Control and Prevention, 2016).
The table to the left shows the prevalence of dental caries in permanent teeth by age and race in the United States. Alarmingly, 42.0% of black American adults have untreated dental caries. That is almost half of the black population, while 22% of white Americans have untreated dental caries. Also troubling is that 35.7% of Hispanic American adults have untreated dental caries (Feinberg, 2015).

Table below highlights the prevalence of complete tooth retention among adults by age, race and ethnicity, and poverty level in the United States. Table B shows that 53% of adults aged 25–44 and 29% of adults aged 45–64 had a full set of permanent teeth (excluding third molars). Among adults aged 25–44, tooth retention was lower for Hispanic (46%) and non-Hispanic black (43%) adults, compared with non-Hispanic white adults (58%). For adults living at 100% of the federal poverty level or lower, 42% had not lost a permanent tooth, whereas for adults living above the poverty level, approximately 55% had retained all of their permanent teeth. Complete tooth retention was more prevalent among non-Hispanic white adults (35%) aged 45–64 compared with non-Hispanic black (11%) and Hispanic adults (19%). Complete tooth retention was also higher for adults aged 45–64 living above the poverty level (32%) compared with those living at or below the poverty level (15%) (Dye, Li, & Thorton-Evans, 2012).

http://www.cdc.gov/nchs/products/databriefs/db104.htm

http://www.ada.org/~/media/ADA/Advocacy/Files/060523_Kelly%20Report%20Dental%20Chapter.pdf?la=en
The table to the right highlights the prevalence of edentulous, a lacking of teeth, among older adults, by age, race and ethnicity, and poverty level for the United States. Complete tooth loss was significantly higher among adults aged 65–74 living at or below the poverty level compared with those with higher incomes. 15% of adults aged 65–74 and 22% of adults aged 75 and over were edentulous in 2009–2010. The prevalence of complete tooth loss was more than twice as high for adults aged 65–74 living at or below 100% of the federal poverty level (34%), compared with those living above the poverty level (13%). For adults aged 75 and over, there was no significant difference in the prevalence of edentulism by poverty status (24% for those living at or below 100% of the poverty level, and 21% for those living above the poverty level). Differences observed by race and ethnicity status among adults aged 65–74 and among those aged 75 and over also were not statistically significant (Dye et al., 2012).

The differences in oral health between these subgroups should not detract from the overarching problem that across age groups and gender, as well as race, there exists an alarming statistic that more than 100 million Americans simply do not go to the dentist because they can’t afford it. Part of the problem is that many people don’t have dental insurance and can’t afford steep out-of-pocket costs for care (Childress, 2012).

The Table below illustrates poor dental health for Kendall County as well as Illinois and the United States. Poor dental health is defined as an adult aged 18 and older who self-reports that six or more of their permanent teeth have been removed due to tooth decay, gum disease or infection. For Kendall County, 10.1% of the adult population reported poor dental health. For Illinois, 14.7% of the adult population reported poor dental health and the United States is at 15.7%. Kendall County’s percentage is low compared to the state of Illinois and the rest of the United States(Centers for Disease Control and Prevention, 2014). Regardless, when talking about poor oral health, 10.1% can be considered a significant number.

The table below illustrates the number of dentists per 100,000 population in the U.S., Illinois and Kendall County, in 2013. Dentists include those practitioners qualified as having a doctorates degree in dental surgery (D.D.S.) or dental medicine (D.M.D.), and licensed by the state to practice dentistry. At a rate of 35.2 dentists per 100,000 population, Kendall County residents may have less to a dentist than Illinois as a whole (68.8) and our nation as a whole (63.2). It might stand to reason that the number of dentists in Kendall County has not kept pace with a recent explosive growth in the Kendall County population.

According to the 2016 County Health Rankings, using 2014 data, Kendall County has a ratio of population to dentists of 2,820 to 1; this compared to Illinois as a whole with a ratio of 1410 to 1. Nationally, top county performers demonstrated a ratio of 1340 to 1. These percentages may suggest that Kendall County residents might benefit from a possible increase in access to dentists with the addition of more dentists serving the county (County Health Rankings, 2016).

The table below takes a look at dental care utilization. More specific, this data collected between 2006 and 2010, describes the percentage of adults aged 18 and older who self-reported that they had not visited a dentist, dental hygienist or dental clinic within the past year. Close to 12% of the 72,527 Kendall County respondents reported not having visited a dentist, dental hygienist or dental clinic within the past year. Although notably lower than the aggregate percentages for Illinois and the Nation, this percentage nonetheless can be considered significant.
Perhaps more compelling than the data presented in Table F above are the 2014 Behavioral Risk Factor Surveillance System findings in which 378,247 Kendall County residents participated. Over 7% reported had their last dental visit between one and two years prior to being surveyed. Close to 15% reported their last dental visit had been greater than two years prior to the survey or never. Additionally, over 25% of the respondents reported having one to five permanent teeth removed; 6% reported having six or more, but not all, teeth removed and 2% reported having all of their permanent teeth removed.

With consideration to stigma, it might be fair to state that few people look forward to a trip to the dentist. For one, serious anxiety prevents millions of Americans from seeking proper preventative care. According to Peter Milgrom, DDS, director of the Dental Fears Research Clinic at the University of Washington in Seattle, between 5% and 8% of Americans avoid dentists out of fear, and a greater percentage, as much as 20%, experiences anxiety to the extent that they will go to the dentist only when absolutely necessary (WebMD, 2016). As told to WebMD, in doctor Milgrom’s experience as a practitioner, nearly two-thirds of these individuals relate their fear to a bad experience in the dentist’s office. The other third reveal other issues such as various mood or anxiety disorders, substance abuse, or posttraumatic stress (such as that which is experienced by war veterans, victims of domestic violence, and victims of childhood sexual abuse). An awareness of and the ability to address such underlying issues may have a profound impact on increasing community access to oral health care.

The table below reveals the poverty rate change for Kendall County from 2000 to 2014. Kendall County’s poverty rate had gone up by 2% from 3.4% in 2000 to 5.4% in 2014. As indicated earlier, there appears to be a correlation between poverty and poor oral health, perhaps rooted in lack of access to opportunities for oral health care.

![Poverty Rate Change Table]

The table on the next page describes, over 2010 to 2014, the percentages of the U.S., Illinois and Kendall County populations reportedly without health insurance coverage, a critical component of one’s access to medical and dental care, and one’s health status. At 6.37%, Kendall County’s uninsured population appears smaller than those of our nation, and Illinois, as a whole (U.S. Census Bureau, 2014). While this may appear promising, it is important to consider that those with insurance coverage may not be able to afford to use it. According to a report released by the Commonwealth Fund, a private foundation that conducts independent research on health and social issues, in an examination of health insurance trends between 2003 and 2014, even though more Americans now have health insurance, many still avoid seeing doctors due to high out-of-pocket expenses. The report described people with deductibles that are equivalent to 5% or more of their household income as underinsured (Newsweek, 2015).
The lack of health insurance is considered a key driver of health status.

This indicator reports the percentage of the total civilian non-institutionalized population without health insurance coverage. This indicator is relevant because lack of insurance is a primary barrier to healthcare access including regular primary care, specialty care, and other health services that contribute to poor health status.

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population (For Whom Insurance Status is Determined)</th>
<th>Total Uninsured Population</th>
<th>Percent Uninsured Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall County, IL</td>
<td>117,888</td>
<td>7,510</td>
<td>6.37%</td>
</tr>
<tr>
<td>Illinois</td>
<td>12,690,056</td>
<td>1,563,887</td>
<td>12.32%</td>
</tr>
<tr>
<td>United States</td>
<td>309,082,272</td>
<td>43,878,140</td>
<td>14.2%</td>
</tr>
</tbody>
</table>

Note: This indicator is compared with the state average.

Data Source: US Census Bureau, American Community Survey, 2010-14. Source geography: Tract

The table below describes the percentage of the U.S., Illinois and Kendall County populations, between 2010 and 2014, enrolled in Medicaid, and serves as an indicator of vulnerable populations which are more likely to be experiencing a number of health access, health status, and social supports needs. At 11.21%, Kendall County’s Medicaid insured population appears smaller than those of our nation, and Illinois, as a whole. Once again, while this may look promising, it represents a notable percentage of Kendall County residents who may be in great need of health and wellbeing supports up to and including oral health care.

KCHD approached local public health system partner, Rush-Copley Medical Center for information regarding the use of their emergency departments by Kendall County residents presenting oral health issue(s). The following data may speak to the need for increased opportunities for access to oral health care that extend beyond the hospital emergency department. It may also signify the need by many for dental insurance, and/or affordable dental insurance.


As illustrated in the table to the right, in 2014 the number of Rush Copley emergency department visits by Kendall County residents for dental disorders increased by 22% over the 2010 figure.

Additionally, as depicted in the table below, between 2010 and 2014 the average annual number of visits made by Kendall County residents to the emergency department for dental caries was 38, they range of 33 to 47.

It is important to state and consider that Kendall County is limited in its offerings of affordable local public transportation; the main and perhaps sole provider of public transportation for those in need of such a service is Kendall Area Transit (KAT). KAT is a general public transportation service with a priority for serving the community’s disabled and seniors, while welcoming all county residents in need of local transportation. A review of the last three years of KAT’s ridership data reveals the importance of and need for affordable local public transit as a means for which our community has access medical and dental health care. KAT’s annual activity reports indicate a substantial need for transportation to and from medical appointments. In fact, medical appointments, which include dental appointments, made up 32% of the 25,434 rides given in state fiscal year (SFY) 2016 (July 1, 2015 through June 30, 2016). This demand for rides to medical appointments has been consistent over the last three years when compared to 34% (of 27,288 rides) over SFY15, and 33% (of 23,852 rides) over SFY14 (Kendall Area Transit, 2016).
Kendall County Health Department’s priority to increase community population opportunities for access to oral health care closely aligns with Healthy People 2020’s goal of preventing and controlling oral and craniofacial diseases, conditions, and injuries, and improving access to preventive services and dental care. Healthy People 2020 (HP2020) has pledged to move the needle on this goal through a number of objectives, several of which are shared in part by KCHD’s own objectives. For instance, HP2020’s object, Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth, may be served well by KCHD’s intentions to educate Kendall County school children on the importance of and ways in which to practice good oral hygiene. Regarding the two HP2020 objectives, Reduce the proportion of adults with untreated dental decay and Reduce the proportion of adults who have ever had a permanent tooth extracted because of dental caries or periodontal disease, KCHD aims to contribute to good adult oral health by making accessible a free dental clinic, conveniently located in the Kendall County Health Department, with services provided by volunteer dentists, for Kendall County’s uninsured adults. KCHD also intends to contribute to HP2020’s overarching mission of improving community oral health by making accessible, 24/7, web-based information and social media messaging that raises community awareness on good oral health practices and related local resources.

KCHD’s commitment to increasing community population opportunities for access to oral health care also aligns with Illinois’ 2010 State Health Improvement Plan (SHIP) priority health concern of addressing oral health. KCHD and the state recognize the need and public health importance of oral health and clearly identify good oral health as being important to overall health. That poor oral health can become a risk factor for chronic diseases such as heart disease and diabetes. KCHD and the state, as set forth in the 2010 SHIP, see the value in promoting dental preventative and treatment services to the community, particularly among those experiencing socio-economic duress. KCHD will be sure to follow and study the state’s experience(s) in addressing community oral health as there is and will be much to learn. At the same time, KCHD looks forward to sharing with the state its experiences, including the efficacy of its priority strategies.

**RISK FACTORS, DIRECT CONTRIBUTING FACTORS, INDIRECT CONTRIBUTING FACTORS:**

Utilizing a Health Problem Analysis Worksheet, shown later in this document, KCHD engaged in a brainstorming exercise to analyze the risk, direct contributing and indirect contributing factors to the health problem of periodontal and associated chronic disease. Two chief risk factors associated with this health problem were established as a lack of access to oral health care; and behavioral choices that may limit access to good oral health.

With consideration to the first risk factor, a lack of access to oral health care, two direct contributing factors quickly rose to the top; social determinants and unaffordable oral health care. Indirect contributing factors leading to social determinants included unemployment/underemployment, and a lack of education. Considerations to the factor of unaffordable oral health care include indirect contributing factors such as one’s lack of insurance or of being underinsured, a lack of local providers willing and able to accept Medicaid, and the lack of a free local dental health clinic for those in greatest need and without the means to afford dental care.

A number of direct contributing factors were discussed as having an impact on the second of the two risk factors, behavioral choices that may limit access to good oral health. They include poor oral hygiene practices, unhealthy diets, tobacco use, and stigma - or fear of the dentist. Leading to poor oral hygiene practices are the following non-exhausted indirect contributing factors: the practicing of good oral hygiene not considered a daily or life’s priority, a lack of oral hygiene supplies, and an overall lack of awareness of the important role good oral health plays in one’s overall health and well-being.
With consideration to unhealthy diets, indirect contributing factors include one’s lack of access to healthful foods, poor eating habits brought on by stress, and a lack of understanding regarding the connection between unhealthy foods and poor oral hygiene (i.e., consumption of sugar-laden beverages). Indirect contributing factors that fall under tobacco use include addiction to tobacco, tobacco used as a means of coping with stress, and a lack of awareness as to the effects tobacco use can have on one’s oral health – smoking and chewing tobacco.

Finally, the indirect contributing factors, fear of the dentist chair and post traumatic stress brought on by a past negative experience in the dental chair, lead to the direct contributing factor of stigma.

Creating the Health Problem Analysis Worksheet proved to be an important and useful exercise in guiding the establishment of priority objectives. These objectives, discussed under the following two sections, are intended to help address the community risk factors of lack of access to oral health care, and the making of behavioral choices that limit one’s access to or attainment of good oral health.

**Measurable Outcome Objectives**

- By 2021 approach 100% of Kendall County dental offices and health centers to promote engagement in increasing access to oral health care for Kendall County’s uninsured adult population and/or co-create participatory access to good oral health for the county’s population.

**Measurable Impact Objectives**

- By 2021, create and offer a free dental clinic to Kendall County adults lacking insurance.
- By 2021, advance the Kendall County community’s knowledge of ways in which to achieve and maintain good oral health by providing at least two educational presentations on good dental health habits (annually) to school-age children.
- By 2021, provide the Kendall County community with web-accessible information linking them to oral health care and oral hygiene education which includes tools and support aimed at promoting enrollment in dental insurance.

**Proven Intervention Strategy**

Dentist with a Heart, a non-for-profit program that provides desperately needed free dental services to the underprivileged and uninsured of a section of the Fox Valley area (predominantly covering Kane and Du Page county communities, has been a good model for KCHD to study. This time-tested and much evolved community-based program runs one day to one week in February each year, and is offered by local volunteer dentists who, out of their own offices, provide exams, necessary X-rays, cleaning and routine extractions at no cost to adults and children ages three and older. No appointments are taken; it runs on a first come first serve bases during the duration of the event. More than $1 million in free dental care has been donated by such caring and committed dentists and hygienists, since the program started ten years ago (Aurora Children’s Dental Service, 2016).

According to the U.S. Department of Health and Human Services, Nationwide, since the Affordable Care Act’s (ACA) coverage expansion began, about 16.4 million uninsured people have gained health insurance coverage - the largest reduction in the uninsured in four decades. The uninsured rate in Illinois in 2014 was 11%, down from 15.5% in 2013. And as a result of Illinois having expanded Medicaid under the ACA, as of January 2015, 475,003 Illinoisans have gained Medicaid or Comprehensive Health Insurance Plan coverage since the Health Insurance Marketplace’s first open enrollment period. In addition to reducing the numbers of the uninsured and expanding Medicaid, the ACA has served to end discrimination for pre-existing conditions, expand mental health and substance use disorder benefits, and strengthen Medicare (Secretary, H. O. (n.d.)). Time will tell if the ACA continues to evolve to provide the nation, Illinois, and Kendall County citizens with increased access to health care, and affordable care at that.
The information gleaned from Dentists with a Heart provided KCHD with some insight into the provision of direct client oral health care at no cost to the patient and through the use of volunteer dentists. KCHD previously made accessible to the Kendall County community, twice, a low cost dental clinic; the cost of services determined by using a sliding scale fee system based on the patient’s ability to pay. These clinics were grounded in the dentist providing a valuable service while collecting on the costs of his or her work. These clinics were extremely well attended, the need for low-cost affordable oral health care more than evident. The majority of patients were adults. These clinics, while successful in that those in greatest need received accessible, affordable oral health care, did not meet the needs of the dentists in covering their costs. KCHD is now pursuing the creation of a free dental clinic to serve uninsured adults. Free dental services will be provided by local dentists interested in and willing to volunteer their valuable skills and time to offer services that they feel comfortable providing, up to and including root canals and, as a last resort, tooth extraction. The dentists will also have the opportunity to serve their own patients in need, those experiencing financial duress and a lack of dental insurance, through this volunteer clinic model. KCHD is confident that there are local dentists with a genuine interest in if not a passion for giving back to their community in such way. KCHD would provide a dental clinic room, secure a dental chair and other necessary non-portable equipment, provide staff to greet and direct patients to the dentist, and provide for the secure storage of confidential client records. The clinic schedule would commence with a modest one day per month. Concurrently, KCHD staff will offer to assist these patients in exploring and enrolling in affordable health and dental care. As referenced above, the Affordable Care Act has provided us with a vehicle in which to connect the uninsured with health and dental coverage.

The American Dental Hygienists’ Association emphasizes the importance of early education on a proper oral health regimen by making the point that educating children on the importance of their home care, and teaching proper brushing and flossing, can create a routine of healthy behavior that kids can continue - into adulthood. Additionally, children who are taught and practice good oral hygiene could serve as positive role models to their older siblings and parents. That said, KCHD realized great potential to promote and advance good oral health and overall health in Kendall County by educating the children of its community. KCHD performed an extensive web search for proven and promising oral health-related educative programs designed for children. Many were discovered.

As a sampling, the Children’s Healthy Smile Project, promoted through grants and generous donations, supplies “Smile Kits” containing oral health-related education and simple oral hygiene supplies, for children and their families. The Massachusetts Health Department implements a program titled “Growing Healthy Smiles in Child Care Settings”, in which child day care and learning centers are offered tooth brushes and education on the importance of brushing teeth and good oral health care. The commercial oral hygiene products industry (companies such as Crest, Colgate, Oral-B, and Listerine) offers a myriad of tools designed to assist in the education of children (i.e., videos, coloring books and easy to read pamphlets). KCHD intends to capitalize on this treasure trove of child-relatable oral health care information in its efforts to educate the children of Kendall County. By partnering with local schools, KCHD intends to provide at least two educational presentations on good dental health habits (annually) to school-age children. KCHD recognizes the valuable potential investment in promoting and establishing good oral hygiene routines among children; and the younger the better.

In performing a search of web-accessible offerings to a community, providing helpful information and resources on the importance of and ways in which to achieve and maintain good oral health, KCHD discovered the website, Your Dental Health (TM). This is a public education program of the British Columbia Dental Association designed to provide general dental health information. Your Dental Health (TM) also provides information through the use of a Facebook page. The information provided is not intended to replace the advice of one’s dentist, dental specialist or other health professionals. It represents a means of reaching entire communities by providing this helpful information through 24/7 access, and from the privacy of one’s environment of choice. This site also offers a means of sharing local resources that promote access to opportunities for good oral health (British Columbia Dental Association, 2016).
Your Dental Health (TM) is recognized by KCHD as a promising strategy and possible model to fulfilling its priority object, to provide the Kendall County community with web-accessible information linking them to oral health care and oral hygiene education which includes tools and support aimed at promoting enrollment in dental insurance. KCHD intends to study this model to create a like version but on a smaller scale, and with resources geared more towards the Kendall County community. And it will also include helpful information and guidance aimed at promoting enrollment in Illinois in medical and dental care insurance. To do so, KCHD will leverage the 24/7 accessibility of the internet to prepare, provide and promote a consumer-friendly community-wide resource for oral health care information and related resources. KCHD’s local public health system partners will be encouraged to inform and/or contribute to this community-wide offering of information.
**Health Problem Analysis Worksheet**

**Health Problem:** Periodontal & Associated Chronic Disease

**Risk Factors**
- Lack of access to oral health care
- Unaffordable oral health care
- Poor oral hygiene practices
- Unhealthy diet
- Tobacco use
- Stigma (Fear of the Drill)

**Direct Contributing Factors**
- Social Determinants
- Un/Underemployed
- Lack of Education
- Un/Underinsurance
- Lack of Providers Taking Medicaid
- Lack of a Free Clinic
- Not Considered a Priority
- Lack of Education
- Lack of Oral Hygiene Supplies
- Lacking Access to Healthy Foods
- Stress
- Lack of Education
- Addiction
- Stress
- Lack of Education
- Fear of the Unknown
- Past Negative Experience
### Community Health Plan Worksheet

<table>
<thead>
<tr>
<th>Health Problem:</th>
<th>Outcome Objective(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periodontal and Associated Chronic Diseases</td>
<td>By 2021 approach 100% of Kendall County dental offices and health centers to promote engagement in increasing access to oral health care for Kendall County’s uninsured adult population and/or co-create participatory access to the county’s population, to good oral health.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk Factor(s) (May Be Many)</th>
<th>Impact Objective(s):</th>
</tr>
</thead>
</table>
| • Lack of Access to Oral Health Care  
  • Behavioral Choices Limiting Access to Good Oral Care | • By 2021, create and offer a free dental clinic to Kendall County adults lacking insurance.  
• By 2021, advance the Kendall County community’s knowledge of ways in which to achieve and maintain good oral health providing at least two educational presentations on good dental health habits, annually, to school-age children.  
• By 2021, provide the Kendall County community with web accessible information linking them to oral health care and oral hygiene education and supports. (To include tools and support aimed at promoting enrollment in dental insurance) |

<table>
<thead>
<tr>
<th>Contributing Factors (Direct/Indirect; May Be Many)</th>
<th>Proven Intervention Strategy(ies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Social Determinants:</td>
<td>KCHD will promote engagement in increasing access to oral health care by developing and offering to uninsured adults, a free oral health clinic based on the use of volunteer dentists.</td>
</tr>
<tr>
<td>• Un/Underemployed</td>
<td>KCDH will also assist the uninsured in enrolling in Affordable Care Act-supported insurance, in partnership with local certified health insurance navigators.</td>
</tr>
<tr>
<td>• Lack of education</td>
<td>KCHD will work to instill good hygienic practices in its community’s children through the delivery of presentations in local schools. Children will not only be better equipped to protect and preserve their own oral health, but to serve as role models to their older siblings and parents.</td>
</tr>
<tr>
<td>• Unaffordable Oral Health Care:</td>
<td>KCHD will leverage the 24/7 accessibility of the internet to prepare, provide and promote a consumer-friendly community-wide resource for oral health care information and related resources.</td>
</tr>
<tr>
<td>• Un/Underinsured</td>
<td></td>
</tr>
<tr>
<td>• Lack of Medicaid providers</td>
<td></td>
</tr>
<tr>
<td>• Lack of free clinics</td>
<td></td>
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<tr>
<td>• Poor Oral Hygiene practice:</td>
<td></td>
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<tr>
<td>• Not considered a personal priority;</td>
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<tr>
<td>• Lack of education</td>
<td></td>
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<tr>
<td>• Lack of oral hygiene supplies</td>
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<tr>
<td>• Unhealthy Diet:</td>
<td></td>
</tr>
<tr>
<td>• Lack of access to healthy food</td>
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<tr>
<td>• Stress-induced poor eating habits</td>
<td></td>
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<tr>
<td>• Lack of education</td>
<td></td>
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<tr>
<td>• Tobacco Use:</td>
<td></td>
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<tr>
<td>• Addiction</td>
<td></td>
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<tr>
<td>• Stress</td>
<td></td>
</tr>
<tr>
<td>• Lack of education/awareness on impacts on oral health</td>
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</tr>
<tr>
<td>• Stigma (Fear of the drill):</td>
<td></td>
</tr>
<tr>
<td>• Fear of the unknown/the misunderstood</td>
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<tr>
<td>• Past negative experience</td>
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<td><strong>RESOURCES AVAILABLE</strong> (GOVERNMENT &amp; NON-GOVERNMENTAL)</td>
<td><strong>BARRIERS</strong></td>
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<tr>
<td>• Local oral and medical health care providers</td>
<td>• Lack of insurance/insufficient insurance</td>
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<td>• Local dental offices and health clinics</td>
<td>• Unaffordable insurance</td>
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<td>• Daycares and Preschools</td>
<td>• Cost of oral health care services</td>
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<td>• YMCA</td>
<td>• Lack of oral hygiene supplies and related education</td>
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<td>• Community Schools</td>
<td>• Lack of education/awareness</td>
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<tr>
<td>• Board of Health</td>
<td>• Unemployment/underemployment</td>
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<td>• KCHD Advisory Boards</td>
<td>• Lack of local transportation options</td>
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<td>• Churches</td>
<td>• Language barriers</td>
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<td>• Senior Services</td>
<td>• Stigma</td>
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<td>• Area Hospitals</td>
<td>• Fear of the unknown</td>
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<td>• Public Media</td>
<td>• Lack of Nutrition/Knowledge</td>
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<td>• Pharmacies</td>
<td>• Addiction to tobacco</td>
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<td>• Illinois Department of Public Health</td>
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<td>• Behavioral Risk Factor Surveillance System</td>
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<td>• Center for Prevention and Disease Control and</td>
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<td>Prevention</td>
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<td>• American Dental Association</td>
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<td>• Grant opportunities</td>
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DESCRIPTION OF HEALTH PROBLEMS, RISK FACTORS AND CONTRIBUTING FACTORS (INCLUDING HIGH RISK POPULATIONS, AND CURRENT AND PROJECTED STATISTICAL TRENDS):

Access to oral health care is problematic and has been shown to impact overall health and well-being, extending to all ages. Approximately 2/3 of Americans seek care from a dentist regularly, while the remaining 1/3 of individuals and families face an assortment of challenges to accessing dental care. Access challenges include difficulty getting to a dental office, prioritizing dental care among the other health care and basic needs of living, overcoming financial barriers (unaffordable oral health care), social determinants, and navigating government assistance programs. Risk factors such as unhealthy diets, stigma, and smoking also occur. One in seven adults age 35 to 45 has periodontal (gum) disease and increases to one in every four adults aged 65 years and older. In addition, nearly a quarter of all adults have experienced some facial pain within the past 6 months. Associated chronic disease such as oral cancers is the most common in older adults, particularly those over 55 years old who smoked and chewed tobacco. Among adults aged 22- 64, 91% had dental caries and 27% had untreated tooth decay. Untreated tooth decay was higher in Hispanics (36%) and non-Hispanic Blacks (42%) adults compared to Non-Hispanic Whites (22%) and non-Hispanic Asians (17%) adults aged 20 - 64 years. Adults ages 20 – 39 where twice as likely to have their own teeth (67%) compared with those ages 40 – 64 (34%). About one in five adults aged 65 and over had untreated tooth decay. Tooth decay is the most prevalent chronic infectious disease affecting children in the U.S. Given the serious consequences, it is important to maintain good oral health. It is recommended that adults and children see a dentist on a regular basis; at least once a year.

CORRECTIVE ACTIONS TO REDUCE THE LEVEL OF THE INDIRECT CONTRIBUTING FACTORS:

Promote good oral hygiene and oral health care through school and population based public outreach efforts. Study and utilize elements of proven and/or promising public oral health education campaigns to inform presentations to school children, and to inform a web-based resource page and links. Promote smoking and chewing tobacco cessation, good dietary habits, good oral hygiene practices, and raise awareness of the chronic health conditions that can be caused by poor oral health. Assist the uninsured in enrolling in insurance. Create and offer to the uninsured adult community, a free dental clinic run out of the Health Department and by volunteer dentists.

CONTRIBUTING FACTORS (DIRECT/INDIRECT; MAY BE MANY)

<table>
<thead>
<tr>
<th>Direct</th>
<th>Indirect</th>
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<tr>
<td>Social Determinants</td>
<td>Un/Underemployed</td>
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<tr>
<td>Unaffordable Health Care</td>
<td>Lack of Education</td>
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<td>Poor Oral Hygiene Practice</td>
<td>Un/Underinsured</td>
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<td>Unhealthy Diet</td>
<td>Lack of Providers Taking Medicare</td>
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<td>Tobacco Use</td>
<td>Lack of Free Clinic</td>
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<td>Stigma</td>
<td>Not Considered Priority</td>
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PROPOSED COMMUNITY ORGANIZATION(S) TO PROVIDE AND COORDINATE THE ACTIVITIES:

KCHD will endeavor to partner with local oral health care providers, the YMCA, local child daycares and community schools, KCHD’s community partner-supported Advisory Boards, the Women, Infant, KCHD’s Child /Family Case Management Program at KCHD, area hospitals, local churches, senior services/nursing homes, public media, pharmacies, the Illinois Department of Public Health, the Centers for Disease Prevention and control, and the American Dental Association. It is with anticipation that additional community organizations will be discovered, and new partnerships cultivated, over the action cycle.

EVALUATION PLAN TO MEASURE PROGRESS TOWARD REACHING OBJECTIVES:

Documentation of oral health clinic evolution at KCHD, stats for hospital (Valley West Community Hospital in Sandwich, IL and Rush Copley Medical Center in Aurora, IL) ER visits pertaining to oral health care, monitor number of educational devices provided to community (flyers, brochures, educator presentations), number of newly enrolled clients for dental insurance, questionnaires/surveys may be developed to measure behavioral change, knowledge and needs of the community.
**PRIORITY: DECREASE COMMUNITY POTENTIAL EXPOSURE TO LYME DISEASE**

**IMPORTANCE OF PRIORITY HEALTH NEED**

**National Scope:** Lyme Disease is one of the most commonly reported vector-borne diseases in the United States (National Institute of Health, 2015). According to the Centers for Disease Control and Prevention (CDC), there were 25,359 reported cases of Lyme Disease in 2014 in the United States. As represented in the chart to the right, there has been an overall increasing trend in the reported cases by year from 1995-2014 in the U.S. (CDC, 2015). The CDC acknowledges that the number of reported cases does not represent all individuals infected with Lyme Disease on a yearly basis (CDC, 2015). In 2008, laboratory researchers estimated 288,000 Lyme Disease infections from patients that submitted lab specimens (Hinckley et al., 2014). Further, Nelson et al. (2015) performed a retrospective analysis of health insurance claims nationwide and found that annually around 329,000 cases of Lyme Disease actually occur. This indicates that there are a significantly larger number of Lyme Disease cases than those that are reported.

The age distribution of Lyme Disease is represented in the chart below. Reported cases of Lyme Disease are most common among boys aged five to nine years (CDC, 2010). There are also differences in Lyme Disease incidence based on ethnicity. According to Fix et al. (2000), the reported incidence of Lyme Disease is disproportionately high among Caucasians when compared to African Americans, which can be attributed to differences in risk of exposure/area of residence. Further, a failure to recognize Lyme Disease early on in African Americans contributes to lower incidence and poorer outcomes (Fix et al., 2000). Nationally, the reported cases of Lyme Disease distribution have significant variation depending on the month of diagnosis as displayed in the chart on the next page. According to the CDC (2015), patients were more likely to have onset of Lyme Disease during the months of June, July, and August. Geographically, Lyme Disease cases are mostly present in the upper Midwest and northeast (Bacon et al., 2008). In 2014, Illinois had 233 reported cases of Lyme Disease (CDC, 2015). The actual number of cases is expected to be significantly higher (Nelson et al., 2015).
There are also economic consequences associated with Lyme Disease. The national healthcare expenditure for Lyme Disease is estimated to be around $712 million to $1.3 billion per year with $3000 being spent on average per patient (Johns Hopkins, 2015). One of the main factors contributing to this high expenditure is delayed diagnosis and treatment. Along with lower awareness of Lyme Disease in patients, there is a discrepancy on awareness and proper diagnosis among family physicians (Borgermans et al., 2014). According to Meltzer et al. (1999), when Lyme Disease is diagnosed early, there is a $174 cost for direct medical treatment. When diagnosis and treatment are delayed, the cost per patient increases to around $2228 to $6,724 for just the first year (Meltzer et al., 1999). This indicates that more effort should be placed in increasing early diagnosis and treatment through improved awareness of Lyme Disease in order to prevent the economic costs of delayed treatment.

Vector, Transmission, Symptoms: The primary risk factor for Lyme Disease is the exposure to deer-ticks. Deer ticks are small arachnid parasites with flattened bodies, possessing 8 legs as adults and nymphs, and measuring 3-5 millimeters and reddish brown to dark brown in color. Adult males are smaller than females and are a more uniform dark brown in color (Orkin, 2016). According to the CDC (2015), the lifecycle of Ixodes Scapularis, the deer-tick, consists of two years with four stages. It starts out as an egg, and after hatching, the ticks have a blood meal for survival at each stage: six-legged larva, eight-legged nymph, and adult (CDC, 2015). The deer-tick utilizes a host for each stage. Borrelia burgdorferi, a spirochete bacteria, is the parasite that uses deer-ticks for the transmission of Lyme Disease to humans (Tilly et al., 2009). The deer-ticks, Ixodes scapularis, get infected by B. burgdorferi from infected rodents during larval feeding (Tilly et al., 2009). Once the tick reaches the nymphal stage, it can now infect other animals, including rodents (Tilly et al., 2009). This perpetuates the cyclic nature of the infection.

Once the tick matures to an adult, it only feeds on larger animals (Tilly et al., 2009). The deer-tick waits for its host through questing position, where it rests on tips of grass/shrubs with lower legs and upper legs outstretched (CDC, 2015). It climbs up onto a host that brushes past it. The deer-tick produces a cement-like material to fasten itself in place on human skin (Barbour, 2015). The tick’s feeding tube also contains barb-like structure that enables it to latch on firmly (CDC, 2015). As it feeds on the blood, the tick injects its anesthetic saliva to inhibit blood clotting and immune response (Barbour, 2015). Also, the human host is less likely to feel any pain or itching during feeding (Barbour, 2015).
The bacterial spirochete is then injected from the gut of the tick into its mouth and transmitted into the human, which can take up to two days (Barbour, 2015). Although the blood meal provides a direct channel for bacterial transfer, the odds of transmission into the human are lower than 5% (Barbour, 2015). As the time of tick attachment increases, the likelihood of spirochete transmission also increases (CDC, 2015). The classic sign of tick-bite is a bull’s-eye red rash on the skin (CDC, 2015).

There are both early and late symptoms of the infection. Early symptoms, which manifest three to thirty days after tick bite, include fever, headaches, joint pain, and swollen lymph nodes (CDC, 2015). Late symptoms, which manifest months after the bite, include neck stiffness, severe headaches, arthritis, neural inflammation/meningitis and memory issues (CDC, 2015). Infection of the Borrelia burgdorferi utilizes specific mechanisms to penetrate the complexity of human immune defenses. The spirochetes evade the immune system by preventing white cell recognition and protein binding through their extensive mobility through the body (Barbour, 2015). The presence of the bacteria stimulates the production of cytokine hormones that can activate different systems (Barbour, 2015). This activation results in fever, headaches, fatigue, and muscle pain experienced in patients (Barbour, 2015). Over time, these symptoms progressively worsen as the infection spreads to different organ systems. According to the study by Johnson et al. (2014), patients with acute Disease had a significantly lower quality of life status than patients with other chronic disorders. Further, the individuals suffering from Lyme Disease experienced significant activity limitation, lower productivity, less healthy days, and more disease burden (Johnson et al., 2014). This displays the tremendous toll that Disease can take on the daily functioning and quality of life of afflicted individuals.

**Seasonal Life Cycle of Vector:** Climate change has been linked to an increased emergence of vector-borne diseases due to high vector sensitivity to climatic factors (Campbell-Lendrum et al., 2015). According to the World Health Organization (2015), there have been many climate change vulnerability assessments, which have shown that a rise in global temperatures will lead to a rise in vector-borne disease incidence. As temperatures rise, tick hibernation time is reduced, increasing the chance of human exposure to the tick. Several studies have modeled and projected the impact of climate change on the reproduction and distribution of deer-ticks. [Mechanistic models have shown that climate change induce temperature increase leads to wide range expansions of deer-ticks (Ostfeld & Brunner, 2015)].
Climate models of the Midwest have shown an increase in temperature since the 1970’s (National Climate Assessment, 2014). This expansion increases the likelihood of human exposure to the vector, which enhances transmission of the bacterial spirochete.

Deer-ticks are highly influenced by soil types, land use, elevation, timing, duration, and rate of temperature and moisture changes (Githeko et al., 2000). The study by Ogden et al. (2014) examined the impact of climate change on the reproductive rate of deer-ticks. They utilized both observed and projected temperature data to model the reproduction number of the deer-tick and its change based on climate change (Ogden et al., 2014). Results showed that increased temperature due to projected climate change increased the reproductive number of deer ticks by a factor of 1.5-2 in the United States (Ogden et al., 2014). This indicates that climate change can have a significant impact on the potential reproductive favorability of this vector. This increased prevalence can potentially contribute to a greater distribution of the bacterial spirochete and higher likelihood of human exposure and infection to Lyme Disease. Researchers also found that there was significant correlation between warmer winters and increased Disease incidence one and one half years later (Subak, 2003).

As presented in the chart below, climate change can impact the life cycle of deer-ticks. The study by Levi & Ostfeld (2015) found that warming of climate pushes the timing of tick nymphs/larvae forward. This results in drastic changes in tick interaction with hosts. Adult ticks lay their eggs during the spring, and larvae emerge during the summer. The larvae can get infected with the spirochete bacterium from feeding on rodents. Once they transform into nymphs, this can be transmitted to humans and other animals. Climate change modifies the timing of this cycle since nymphs begin appearing months before larvae. These nymphs infect the host community, which the larvae later come in contact with, serving as a transmission reservoir for the emerging larvae (Levi & Ostfeld, 2015). A gap is created between nymph feeding and larval feeding, which provides more time for host infection and transfer to new larvae (Levi & Ostfeld, 2015). This effectively increases the potential transmission of Lyme Disease among this vector, which increases the potential for disease infection and transmission in humans. Overall, these studies illustrate the association between climate change and variation in deer-ticks distribution and movement.

**ANALYSIS TO IDENTIFY POPULATION GROUPS AT RISK**

**Relevance to Kendall County:** Data on Lyme Disease prevalence in Illinois and Kendall County is maintained by CDC and Illinois Department of Public Health respectively. As shown in the chart to the left, Illinois has had an overall increasing trend of confirmed Lyme Disease cases from 2004-2013 (CDC, 2015). This growing trend demonstrates a need to examine the distribution of Lyme Disease in Illinois. Exposure to deer-ticks is the primary risk factor for Lyme Disease development in humans.
The map below shows the geographic distribution of the deer-tick by county in Illinois. The counties that are shaded green depict a high prevalence of the deer-tick (IDPH, 2014), though consistent tick surveillance is not performed statewide which would influence this data. Although Kendall County is not shaded as having a high prevalence of deer-ticks, it is surrounded by several shaded counties including LaSalle, Grundy, Will, and DuPage (IDPH, 2014).

**Known Geographic Distribution of *Ixodes scapularis* by county in Illinois 2013**

*Ixodes scapularis* is also known as the “deer tick” and the “black-legged tick”. *Amblyomma americanum*, the lone star tick, and *Dermacentor variabilis*, the American dog tick, should be presumed present throughout the state.

Shaded counties denote where the “deer tick” has been found repeatedly in the environment and is believed established. CDC criteria for “established” ticks are at least 5 ticks or 2 life stages (larvae, nymphs, adults) identified.

Cross-hatched counties denote where additional reports suggest the “deer tick” is present and may be established.

**Counties added during 2013:**

- Established Counties: DeWitt, Coles, Henry, Mason and McDonough
- Suspected Counties: Crawford and Douglas

Additional tick and host surveillance activities not depicted on this map may have been conducted by other agencies/organizations in Illinois. Findings reflected on this map are those reported to the Illinois Department of Public Health (IDPH). IDPH does not perform testing for disease pathogens in ticks, but identification for genus and species is performed at IDPH when the tick is intact and sent in a crush-proof container.

Illinois Department of Public Health
Entomologist, Division of Environmental Health
525 W. Jefferson St - 3rd Floor
Springfield, IL 62701
217-782-6630

*May 9, 2014*

Known Geographic distribution of Ixodes Scapularis by county in Illinois; Illinois Department of Public Health (2014)
For confirmed Lyme Disease cases in Kendall County, there has been an overall increasing linear trend as presented in the chart to the right (IDPH, 2014). Results from IQuery, a web-based community health data query system maintained by the Illinois Department of Public Health, demonstrate a positive trend as well, though this data is far from complete and was not used in generating this report.

While the number of confirmed cases in Kendall may be few, this could be attributed to the same nationwide large disconnect between reported and unreported disease cases. Lack of awareness and potential misdiagnosis due to sporadic symptoms could explain these low numbers in the county. The increasing trend of confirmed cases justifies the need to address Lyme Disease in Kendall County.

Similar to humans, dogs also can become infected with Lyme Disease from the bite of an infected deer tick. Data acquired from the Companion Animal Parasite Council shows that over the last 5 years, between approximately 1,600 and 5,000 new cases of Lyme Disease are reported in the State of Illinois (2016).

THE RELATIONSHIP OF PRIORITY TO HEALTHY PEOPLE 2020

One of the overarching goals of Healthy People 2020 is to attain high-quality, longer lives of preventable disease, disability, injury, and premature death (Office of Disease Prevention and Health Promotion). While Healthy People 2020 does not specifically mention Lyme Disease or set any objectives for the reduction of exposure to deer-ticks (Office of Disease Prevention and Health Promotion), this disease certainly warrants public health’s consideration for surveillance and intervention. Lyme Disease is a preventable disease that can hinder the quality of life and even pose threat of premature death. To that end, reducing if not preventing exposure to Lyme Disease appears to contribute to the overall goal of Healthy people 2020.

CONNECTION TO THE ILLINOIS STATE HEALTH IMPROVEMENT PLAN

The 2021 Illinois State Health Improvement Plan sets forth plans to address health priorities identified in the Illinois State Health Assessment. That assessment identified behavioral health, chronic disease and maternal and child health as current priorities to be addressed (Illinois Department of Public Health, 2016). While Lyme Disease is not referenced directly, it was likely considered in early planning stages while environmental health reports and initiatives were considered by focus groups working on this plan. Regardless, Lyme Disease is certainly a concerning, preventable disease that would benefit from attention and mitigating measures. Our hope is that our work on this priority will be recognized and used to inform state data and future priority evaluation processes.

RISK FACTORS, DIRECT CONTRIBUTING FACTORS, INDIRECT CONTRIBUTING FACTORS

The main risk factor for Lyme Disease is exposure to deer-ticks. The direct contributing factors to this risk factor include occupational risk, behavioral choices, recreational activities, and residential environment. Each direct contributing factor can be broken into several indirect contributing factors. Research studies have shown association between these factors and risk of potential exposure to deer-ticks, which leads to increased likelihood of Lyme Disease transmission.
When considering occupational risks, the identified indirect contributing factors include forestry or park work, outdoor construction or field work, farming, landscaping occupations, and veterinary work. These occupations require a great deal of time spent outdoors or in close contact with animals, which increases the likelihood of exposure to infected deer-ticks. The study by Schwartz & Goldstein (1995) showed that, in New Jersey, outdoor workers are 5.1 times more likely to be subjected to tick exposure and Lyme Disease than indoor workers; and those individuals routinely in close contact with animals, 4.9 times more likely. Urban park workers in the United Kingdom had an increased risk of exposure when compared to workers in a more controlled environment as demonstrated by the case control study by Rees et al. (1994). According to the primary care-based prospective study by Letrilliart et al. (2005), Lyme Disease incidence was significantly higher for farmers and rural residents. The study by Kuiper et al. (1991) showed that forestry workers were more likely to test positive for Lyme causing bacteria than controls not working in forests. Landscapers and land surveyors frequently work outdoors and are exposed to ticks, which increases their risk of acquiring Lyme Disease through bacterial transmission from deer-tick bites (Randolph, 2016). Veterinarians come in contact with various animals/pets that might carry deer-ticks, which increases likelihood of transmission (Piacentino & Schwartz, 2002).

Behavioral choices are also a direct contributing risk factor. Indirect contributing factors related to behavioral choices include use of a licensed insect repellant, wearing protective clothing, self-checking/tick awareness, and pet care. Several studies have shown the association between these behavioral choices and Lyme Disease. The case-control study by Connally et al. (2009) highlighted the effectiveness of preventive measures in Lyme Disease. Results showed that checking for ticks within 36 hours of yard exposure decreased the odds of contracting Lyme Disease by 45% (odds ratio of 0.55). Bathing within two hours of yard exposure proved significantly protective against Disease, decreasing odds of contracting the disease by 58% (odds ratio of 0.42). Further, fencing in a yard was significantly protective against Lyme Disease decreasing odds of contracting the disease by 46% on its own (odds ratio of .54). Overall, this indicates that behavioral preventative choices can highly contribute to lowering the risk of Lyme Disease transmission.

Although pets can carry infected deer-ticks into homes and pose an increased exposure risk, research studies have been inconclusive on this association (CDC, 2015). The longitudinal study by Finch et al. (2014) utilized self-reported surveys in individuals residing in Rhode Island. The results showed that wearing protective clothing was significantly protective against Lyme Disease (Finch et al., 2014). Another study also showed that clothing protection was 40% effective and repellants on skin/clothing was 20% effective against Lyme Disease (Vasquez et al., 2008).

As for the direct contributing factor, recreational activities, the indirect contributing factors include outdoor sports, hiking/walking/biking, hunting, and camping. The cross-sectional study by Smith et al. (1988) linked outdoor leisure activities, more than 30 hours per week, with positive Lyme antibody in subjects. The case control study by Ley et al. (1995) revealed that camping was associated with Lyme Disease with an odds ratio of 3.00. When it comes to hiking on trails, tick surveillance techniques, specifically tick drags in Germany, showed a significantly lower relative risk of exposure to ticks in pastures (frequented by ruminants) than meadows (Richter et al., 2011), which are more representative of some of Kendall County hiking trails. Individuals that hunt recreationally also experience increased exposure to deer-ticks, depending on the time of year, which increases the likelihood of disease transmission.
In the residential environment, the indirect contributing factors include proximity to open prairie/woodlands/rivers, the presence of deer on/near property, and the condition of one’s yard as it applies to the presence of leaf litter and overgrown vegetation. According to Duffy, et al, deer-ticks are most abundant in woodlands (Duffy et al, 1994). The density of infected ticks is associated with the prevalence and incidence of Lyme Disease (Ginsberg, 1994). The case control study by Glass et al. (1995) showed that Lyme Disease infected cases were more likely than controls to live in suburban and rural areas near woodlands. Orloski et al. also showed that Lyme Disease cases are fifteen times more likely than controls to live in rural area versus a suburban or urban setting (Orloski et al. 1998). Further, those with Lyme Disease were 2.5 times more likely to observe deer, the deer ticks’ primary host, on their property (Orloski et al., 1998). According to the National Park Service (2015), the presence of leaf litter and poorly maintained yards also contributed to increased deer-tick prevalence. The number of aforementioned cited studies clearly illustrates the association between one’s residential environment and relative risk of exposure to infected deer-ticks, and in essence to Lyme Disease.

**Measurable Outcome Objective**

- Decrease Kendall County residents’ exposure to Lyme Disease by utilizing an awareness program to increase preventive behavior by 50% through five years utilizing a binary survey. Responses will be used to assess preventative behavior potential in county residents after presentation delivery. 50% of county participants will display potential preventive behavior after program presentation delivery.
- Provide and promote tick and Lyme Disease information to the community.

**Measurable Impact Objective:**

- Up to 4 physician/veterinary clinics will be visited annually. During these visits, staff will distribute Lyme Disease awareness brochures and a have a brief discussion with the health provider on the material.
- A minimum of two community presentations will be delivered to county residents annually.
- Surveillance program will be developed with tick drags performed at three sites per year
- Population-based awareness information and surveillance data will be updated at least annually, and made easily accessible to our community via a newly created tick webpage created especially for this priority.

**Proven Intervention Strategy:**

**Literature Review:** There have been several successful intervention strategies used to target Lyme Disease over the years. The evaluation study by Garnett et al. (2011) focused on a deer-targeted intervention for Lyme Disease in Connecticut. This intervention attempted to reduce the number of deer-ticks by targeting their primary hosts, the white-tailed deer. This controls the movement of the ticks, which results in reduction in Lyme Disease transmission to humans. The researchers performed topical treatment of acaricide on white-tailed deer, which kills the deer-tailed tick and prevents tick movement to other locations (Garnett et al., 2011). To attract the deer, a central bin was installed which holds and dispenses bait (Garnett et al., 2011). Topical acaricide is applied to the deer as they feed, and is later transferred throughout the body due to self-grooming by the deer (Garnett et al., 2011). The results showed a significant decrease in the abundance of the deer tick.

The evaluation study by Malouin et al. (2002) focused on an educational intervention to improve knowledge and preventive behaviors in Lyme Disease. They utilized a randomized controlled experimental design with participants being placed into a control group and experimental group (Malouin et al., 2002). The control group received regular educational materials through the mail, while the experimental group received tick-related educational material (Malouin et al., 2002). They measured awareness knowledge and behaviors through a self-reported questionnaire that was mailed to the participants before and after the program (Malouin et al., 2002). Results indicated that there was a significant increase in the Lyme Disease knowledge, attitudes, and behavior for the intervention group compared to the control group (Malouin et al., 2002). This indicates the successful impact of a population-based educational program designed to increase awareness and encourage behavioral change.
The primary program goal is to reduce the community population’s potential exposure to Lyme Disease. As the Kendall County Health Department does not have the resources to install a great number of white tail deer feeding stations outfitted with acaricide at many different properties throughout the county, this project will focus instead on population-based educational interventions to influence protective behavioral change. An education program along with information dissemination through brochures/flyers will be utilized to increase awareness in Lyme Disease in county residents. This awareness serves to induce preventive behavioral change in the individual, which will lead to a reduced potential exposure to Lyme Disease. The county-wide awareness program will consist of multiple components. There will be verbal presentations, brochures distribution, and discussions with county healthcare providers and local veterinarians. Awareness brochures will be created and distributed to local healthcare clinics and veterinarian offices. Staff presentation will be delivered to county residents through several prominent local outreach and community events, such as the annual three-day community Natural Resources Tour, Dickson-Murst Farm Days, the Kellogg Farm Camp, local science clubs, veterinary/physician clinics. Information presented will be age appropriate. There will be approximately 625 fourth grade and fifth grade students as well as 90 adult chaperones at Natural Resources Tour. The Kellogg Farm Camp hosts as many as 40 children between the ages of seven and eleven, and their parents. Dickson-Murst Farm’s two ‘Farm Days’ provide the opportunity to directly reach and educate approximately 25 to 30 individuals of all age groups at each event.

The evaluation will solely focus on preventive behavioral change potential in individuals. The preventive behavioral change potential represents the likelihood that an individual will change his or her behavior to adopt more preventive techniques after gaining awareness from the presentation. There will be no separate control/comparison groups or randomization. All county residents that receive the awareness education and complete the verbal questionnaire will be grouped into a single group. Rather than self-reported questionnaires, a researcher-assisted questionnaire will be verbally administered to participants. The questions will contain binary responses of yes or no, which will be counted and recorded. This technique prevents loss of response in participants since it is collected in real-time. The number of “yes” responses to the preventive behavioral change questionnaire will be compared to the total number of responses to the questionnaire. The percentage of individuals that display preventive behavioral change potential will be tracked on an annual basis. Information collected will not contain any personal identifies and will be reported in aggregate.
HEALTH PROBLEM ANALYSIS WORKSHEET

HEALTH PROBLEM

LYME DISEASE

RISK FACTOR

EXPOSURE TO TICKS

DIRECT CONTRIBUTING FACTORS

OCCUPATIONAL RISK

FORESTRY/PARKS

OUTDOOR CONSTRUCTION/FIELDWORK

FARMING

LANDSCAPERS

REPELLENT USE

PROTECTIVE CLOTHING

SELF CHECKING/TICK AWARENESS

PET CARE

OUTDOOR SPORTS

HIKING/WALKING/BIKING

HUNTING

CAMPING

PROXIMITY TO OPEN PRAIRIE/WOODLAND/RIVER

PRESENCE OF DEER ON/NEAR PROPERTY

CONDITION OF YARD/LEAF LITTER

INDIRECT CONTRIBUTING FACTORS

RECREATIONAL ACTIVITIES

RESIDENTIAL ENVIRONMENT

BEHAVIORAL CHOICES

HANDLING/TICK AWARENESS

PROTECTIVE CLOTHING

SELF CHECKING/TICK AWARENESS

PET CARE

OUTDOOR SPORTS

HIKING/WALKING/BIKING

HUNTING

CAMPING

PROXIMITY TO OPEN PRAIRIE/WOODLAND/RIVER

PRESENCE OF DEER ON/NEAR PROPERTY

CONDITION OF YARD/LEAF LITTER

DIRECT CONTRIBUTING FACTORS

OCCUPATIONAL RISK

FORESTRY/PARKS

OUTDOOR CONSTRUCTION/FIELDWORK

FARMING

LANDSCAPERS

REPELLENT USE

PROTECTIVE CLOTHING

SELF CHECKING/TICK AWARENESS

PET CARE

OUTDOOR SPORTS

HIKING/WALKING/BIKING

HUNTING

CAMPING

PROXIMITY TO OPEN PRAIRIE/WOODLAND/RIVER

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PROXIMITY TO OPEN PRAIRIE/WOODLAND/RIVER

PRESENCE OF DEER ON/NEAR PROPERTY

CONDITION OF YARD/LEAF LITTER

DIRECT CONTRIBUTING FACTORS

OCCUPATIONAL RISK

FORESTRY/PARKS

OUTDOOR CONSTRUCTION/FIELDWORK

FARMING

LANDSCAPERS

REPELLENT USE

PROTECTIVE CLOTHING

SELF CHECKING/TICK AWARENESS

PET CARE

OUTDOOR SPORTS

HIKING/WALKING/BIKING

HUNTING

CAMPING

PROXIMITY TO OPEN PRAIRIE/WOODLAND/RIVER

PRESENCE OF DEER ON/NEAR PROPERTY

CONDITION OF YARD/LEAF LITTER

INDIRECT CONTRIBUTING FACTORS

RECREATIONAL ACTIVITIES

HANDLING/TICK AWARENESS

PROTECTIVE CLOTHING

SELF CHECKING/TICK AWARENESS

PET CARE

OUTDOOR SPORTS

HIKING/WALKING/BIKING

HUNTING

CAMPING

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PROXIMITY TO OPEN PRAIRIE/WOODLAND/RIVER

PRESENCE OF DEER ON/NEAR PROPERTY

CONDITION OF YARD/LEAF LITTER
<table>
<thead>
<tr>
<th>HEALTH PROBLEM</th>
<th>OUTCOME OBJECTIVE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Lyme Disease</td>
<td>• Decrease Kendall County residents' exposure to Lyme Disease by utilizing an awareness program to increase behavioral change in participants by demonstrating 50% of survey respondents to acknowledge potential behavioral change in response to the survey over five years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RISK FACTOR(S) (MAY BE MANY)</th>
<th>IMPACT OBJECTIVE(S)</th>
</tr>
</thead>
</table>
| • Exposure to Borrelia burgdorferi-Infected Deer Ticks | • Four veterinary/physician clinics will be visited annually, and this will include distribution of Lyme Disease awareness brochures and a brief discussion with the health provider on the material  
• At least two community presentations will be delivered to county residents annually  
• Surveillance program will be developed with tick drags performed at three sites per year  
• Awareness and surveillance information will be updated and shared on the webpage annually |

<table>
<thead>
<tr>
<th>CONTRIBUTING FACTORS (DIRECT/INDIRECT; MAY BE MANY)</th>
<th>PROVEN INTERVENTION STRATEGY(IES)</th>
</tr>
</thead>
</table>
| 1) Occupation: Forestry/Park work, Outdoor Construction/Fieldwork, Farming, Veterinary, Public Health Surveillance | 1) Garnett et al. (2011): deer-targeted intervention  
• reduce the number of deer-ticks by targeting their primary hosts, the white-tailed deer  
• controls the movement of the ticks |
| 2) Behavioral Choices: Lack of repellent use, Lack of Protective clothing, Failure to check self/Lack of awareness, Pet ownership | 2) Malouin et al. (2002): educational intervention  
• improve knowledge and preventive behaviors in Lyme Disease  
• significant increase in the Lyme Disease knowledge, attitudes, and behavior for the intervention group |
| 3) Recreational Activities: Outdoor sports, hiking/walking/biking, hunting, camping |                                                                                                     |
| 4) Residential Environment: Proximity to open prairie/woodland/river, presence of deer on/near property, condition of yard/leaf litter |                                                                                                     |

<table>
<thead>
<tr>
<th>RESOURCES AVAILABLE (GOVERNMENT &amp; NON-GOVERNMENTAL)</th>
<th>BARRIERS</th>
</tr>
</thead>
</table>
| IDPH, CDC, local physicians, municipal stakeholders, forest preserve district contacts, Soil & Water conservation district, Kendall County Farm Bureau, community schools, NIU Entomology, technology, local veterinarians | • Scope and effectiveness of public awareness campaign limited available resources(funding, staff)  
• Lack of participant cooperation/Non-response  
• Lack of community event opportunities |
**DESCRIPTION OF HEALTH PROBLEMS, RISK FACTORS AND CONTRIBUTING FACTORS (INCLUDING HIGH RISK POPULATIONS, AND CURRENT AND PROJECTED STATISTICAL TRENDS):**

Lyme Disease is a vector-borne disease that is transmitted to humans through the deer-tick. There are both early and late symptoms. Early symptoms, which manifest three to thirty days after tick bite, include fever, headaches, joint pain, and swollen lymph nodes. Late symptoms, which manifest months after the bite, include neck stiffness, severe headaches, arthritis with significant joint swelling, bell’s palsy, heart palpitations, dizziness, neural inflammation, shooting nerve pain, and short-term memory issues. The main risk factor for Lyme Disease is exposure to deer-ticks. The direct contributing factors to this risk factor are occupational risk, behavioral choices, recreational activities, and residential environment. For populations at risk, reported cases of Lyme Disease are most common among boys aged 5-9 years. In terms of ethnicity, the reported incidence of Lyme Disease is disproportionately high among Caucasians when compared to African Americans. Statistics from the CDC show that 25,359 reported cases of Lyme Disease in 2014 in the United States. The actual number of Lyme Disease cases is projected to be 329,000 cases annually due to the low amount of reporting, misdiagnosis, and lack of awareness. The national healthcare expenditure for Lyme Disease is estimated to be around $712 million to $1.3 billion per year with $3000 being spent on average per patient.

**CORRECTIVE ACTIONS TO REDUCE THE LEVEL OF THE INDIRECT CONTRIBUTING FACTORS:**

Increasing public awareness; encouraging behavioral change; engaging in community outreach; disseminating information (through educational presentations, brochures, flyers) to public and community health providers (enlisting assistance from physicians/vets); promoting active protective behaviors among county residents; performing Lyme Disease surveillance through tick drags, reporting surveillance information to public through webpage; leveraging technology (Facebook, Websites such as KCHD) to spread the awareness message.

**CONTRIBUTING FACTORS (DIRECT/INDIRECT; MAY BE MANY):**

The main risk factor for Lyme Disease is exposure to deer-ticks. The direct contributing factors to this risk factor are occupational risk, behavioral choices, recreational activities, and residential environment. For occupational risk, the indirect contributing factors are forestry/parks, outdoor construction/fieldwork, farming, and landscapers. For behavioral choices, the indirect contributing factors are repellent use, protective clothing, self-checking/tick awareness, and pet care. For recreational activities, the indirect contributing factors are outdoor sports, hiking/walking/biking, hunting, and camping. For residential environment, the indirect contributing factors are proximity to open prairie/woodlands/river, presence of deer on/near property, and condition of yard/leaf litter.

**PROPOSED COMMUNITY ORGANIZATION(S) TO PROVIDE AND COORDINATE THE ACTIVITIES:**

Community organizations such as Soil & Water conservation district, forest preserve district contacts, community schools, NIU Entomology identification, local physicians/vets, municipal stakeholders, KCHD advisory committees.

**EVALUATION PLAN TO MEASURE PROGRESS TOWARD REACHING OBJECTIVES:**

Document number of clinics visited, number of tick surveillance sites, number of community presentations delivered, number of brochures distributed at clinics. Utilize verbal questionnaire to measure behavioral change potential. Compare the number of individuals that displayed potential preventive behavioral change with all individuals that received awareness education and completed the verbal questionnaire. Analyze trends on an annual basis.
PRIORITY: CONNECT SENIORS TO ASSETS THAT REDUCE SOCIO-ECONOMIC DURESS & SUPPORT MENTAL HEALTH

The Kendall County Health Department’s (KCHD) Mental Health Services and Community Action Services will endeavor to promote and preserve the socio-economic well-being and mental health needs of, in addition to others, our community’s senior population. Kendall County seniors, defined as persons over the age of 60, represent a demographic within our community, thoughtfully chosen by our community partners, who may benefit greatly from efforts intended to address such needs. KCHD will do so using a combination of extensive community engagement, intentional care coordination, and the delivery of person-based services in an effort to raise individual and community awareness of and promote access to services which address mental health and substance abuse, social isolation and connectedness, and financial instability.

IMPORTANCE OF PRIORITY HEALTH NEED

The world’s population is aging rapidly. Between 2015 and 2050, the proportion of the world's seniors is estimated to almost double from about 12% to 22%. In absolute terms, this is an expected increase from 900 million to 2 billion people over the age of 60. Seniors face special physical and mental health challenges which need to be recognized ("Mental Health Older Adults," 2016, para. 2). This fact highlights the importance of mental health and well-being services that are both effective and meaningful for this specific population.

According to the National Social Life, Health, and Aging Project (NSHAP), a constant effort to maintain social roles and activity in the face of later life transitions is crucial in maintaining older adults’ mental, physical and social well-being. Social gerontologists view social integration as a key component of “successful aging” (Cornwell, Laumann, & Schumm, 2008). Mental and socio-economic supports are designed to explore and address risk factors that appear to be related to possible barriers to an increase in social cohesion and to assist individuals in recognizing the harmful consequences of lack of access and/or engagement to these crucial services. KCHD Mental Health Services and Community Action Services seek to proactively identify and address the barriers that contribute to lack of social cohesion or connectedness in the senior population. The American Association of Retired Persons (AARP) has gathered information about risk factors, experiences, and processes that are related to the development of isolation in later life including having psychological vulnerabilities, and limiting socio-economic resources. The AARP research points to the importance of having access to supports and opportunities for social engagement as a protective factor for decreasing social isolation for older adults. It has been identified that there is a relationship between social isolation and poorer health for seniors. The AARP also suggests that there is a relationship between lower income and poorer health. The AARP research signifies that current interventions that incorporate technology linking seniors to information about socio-economic and mental health well-being supports have been used and proven effective in increasing social connectedness (Elder & Retrum, 2012).

The percentage of seniors in Kendall County who receive Medicare that have been diagnosed with a mental illness is on the rise from 10.6% in 2007 to 15.1% in 2014 (Centers for Medicare and Medicaid Services, 2016). The data from the Kendall County Health Department’s electronic health record system shows that participation in Mental Health Services have been on the decline for participants over the age of 60 however, alcohol abuse and depression are the top two diagnosis. The percentage of seniors in Kendall County who are in poverty is on the rise from 0.9% in 2000 to 5.4% in 2014 (US Census Bureau, 2010-2014). The data from the Kendall County Health Department’s electronic health record system shows that participation in Community Action Services has increased for persons over the age of 60 by 21% in just the past three years. The Community Action Services intake data that is tracked every quarter shows that in the last year an overwhelming percentage of persons over the age of 60 who live in Kendall County and participate in services have lived in the county less than 10 years (65%) and have moved to Kendall County from Kane County (28%).
With the incoming population of seniors already seeking socio-economic well-being supports within the Community Action Services division, this will be key in educating those seniors and the community on other resources that are available to them in the community. The Kendall County Health Department is committed to working with other community resources and partners that will work to create opportunities for education and environments that will support senior social connectedness and access to health and well-being supports.

It is well understood that healthy social connectedness, to both family and community, is an important protective factor for overall health and well-being. According to the American Association of Retired Persons, a person’s lack of social connectedness is measured by the quality, type, frequency, and emotional satisfaction of social ties. Social isolation can impact health and quality of life, measured by an individual’s physical, social, and psychological health; ability and motivation to access adequate support for themselves; and the quality of the environment and community in which they live. The primary risk factors associated with isolation are: living alone, mobility or sensory impairment, major life transitions, socioeconomic status (low income, limited resources), being a caregiver for someone with severe impairment, psychological or cognitive vulnerabilities, location: rural, unsafe or inaccessible neighborhood/community, small social network and/or inadequate social support, language (non-English speaking); and membership in a vulnerable group (American Association of Retired Persons [AARP], 2012, p. 2).

Social capital is defined as the resources available to individuals and groups through social connections and social relations with others. Access to social capital enables older citizens to maintain productive, independent, and fulfilling lives (Cannuscio et al., 2003, p. 1). Researchers at Brigham Young University and the University of North Carolina at Chapel Hill pooled data from 148 studies on health outcomes and social relationships — every research paper on the topic they could find, involving more than 300,000 men and women across the developed world — and found that those with poor social connections had on average 50% higher odds of death in the study’s follow-up period (an average of 7.5 years) than people with more robust social ties (Blue, 2010). Healthy social connectedness is comprised of access to friends, family, and meaningful health and well-being resources.

Inherent to the identified health need of connecting seniors to assets that reduce socio-economic duress and support mental health is the concept of health socialization and connectedness. As a result, KCHD is committed to promoting senior citizen access to these vital services that are also inclusive of family. KCHD staff will work to identify and engage family members of those senior citizens who are receiving socio-economic support and mental health services and/or education to promote their involvement in the process. This will help to promote and support meaningful connection to family members and allow those family members to have increased perspective on the unique needs and/or stressors of their loved one.

KCHD will also work to provide intervention to support on-going and regular connection between the senior citizen and family member(s). Additionally, KCHD will work to engage and mobilize local community and senior groups to promote engagement, support, and social cohesion for Kendall County seniors. It is believed that this will result in meaningful change and improved health and well-being.
Financial duress is a significant risk factor that negatively impacts the health and well-being of senior citizens. While the Census Bureau’s official poverty measure shows 9% of seniors nationally live in poverty, the share climbs to about one in seven seniors (15%) under the Bureau's alternative Supplemental Poverty Measure, which takes into account out-of-pocket health expenses and geographic differences in the cost of living ("Old and poor: America’s forgotten," 2014, p. 1). The Supplemental Poverty Measure differs from the official poverty measure in a number of ways to reflect available financial resources, including liabilities (such as taxes), the value of in-kind benefits (such as food stamps), out-of-pocket medical spending (which is generally higher among older seniors), geographic variations in housing expenses, and other factors. Senior citizens often times face increased financial stressors due to having fixed incomes and disproportionate exposure to financial or medical needs. Close to half (45%) of adults ages 65 and older had incomes below twice the poverty thresholds under the SPM in 2013, compared to 33% of seniors under the official measure. Below is the 2007 Elder Economic Security Standard Index for Kendall County (Russell & Bruce, 2008, p. 32).

The table below shows the monthly expenses for selected household types who are seniors in Kendall County. It shows that a senior would need to at least have an annual income of $20,785 to be an owner of a home without a mortgage in 2007 to live in Kendall County and be financially stable while the federal poverty guideline for one person was $10,210. The table also shows how adding any long term care costs can add up to over $7,000 extra a year to almost $40,000 more a year depending on the circumstances.

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As illustrated below, according to the Health Communities Institute (January 2016), the overall poverty rate for all persons living in Kendall County was 5.4% and 11.2% of these individuals were over the age of 65. This is of critical importance, as seniors who live in poverty are an especially vulnerable group due to increased physical limitations, medical needs, and social isolation. Senior patients with symptoms of depression have roughly 50% higher healthcare costs than non-depressed seniors ("Depression in older adults," n.d., p. 1). Seniors often live on a fixed income from pensions or other retirement plans and social security. If this income is insufficient in the face of increasing prescription costs and other costs of living, most seniors have no way to supplement their income. Retirement plans may be vulnerable to fluctuations in the stock market as well; the increasing reliance of retirees on stock market based retirement plans may explain why more seniors nationwide are now slipping into poverty.

Unlike traditional measures of poverty (e.g. the Federal Poverty Guideline), the Senior Financial Stability Index (SFSI) recognizes that economic well-being is multifaceted and cannot be adequately measured by a single aspect of a household’s resources. The SFSI incorporates five key factors that impact economic security: retirement assets, household budget, healthcare expenses, home equity, and housing costs. The number of seniors at risk of outliving their financial resources remains unacceptably high. Utilizing the Senior Financial Stability Index (SFSI), just over one in four senior Americans was found to be insecure in 2004, and that number increased to more than one in three by 2008. As of 2010, just over one third of all senior Americans remained economically insecure, indicating no significant improvement over the previous two years (Meschede, Bercaw, Sullivan, & Cronin, 2015, p. 1).
According to Mental Health America, more than two million of the 34 million Americans age 65 and older suffer from some form of depression. Symptoms of clinical depression can be triggered by other chronic illnesses common in later life, such as Alzheimer’s disease, Parkinson’s Disease, heart disease, cancer and arthritis. One-third of widows/widowers meet criteria for depression in the first month after the death of their spouse, and half of these individuals remain clinically depressed after one year. Depression is a significant predictor of suicide in senior Americans. Comprising only 13% of the U.S. population, individuals aged 65 and older account for 20% of all suicide deaths, with white males being particularly vulnerable. Suicide among white males aged 85 and older (65.3 deaths per 100,000 persons) is nearly six times the suicide rate (10.8 per 100,000) in the U.S ("Depression in Older Adults," n.d., p. 1).

The need for meaningful and accessible mental health for senior citizens is critical. Mental health problems are under-identified by health-care professionals and seniors themselves, and the stigma surrounding mental illness makes people reluctant to seek help ("Mental Health Older Adults," 2016, para. 4). It is important that active engagement and education on available mental health resources and services are directly presented to seniors. The number of seniors with substance abuse problems is expected to double to five million by 2020 and untreated substance abuse and mental health problems among seniors are associated with poor health outcomes, higher health care utilization, increased complexity of the course and prognosis of many illnesses, increased disability and impairment, compromised quality of life, increased caregiver stress, increased mortality, and higher risk of suicide ("Healthy Aging Facts," n.d., p. 1). Additionally, services should address the multiple risk factors inherent to the senior population, including social isolation or disconnect.

KCHD will work to connect seniors to assets that reduce socio-economic duress and support mental health. As indicated, there are significant health and well-being risks associated with socio-economic duress and untreated mental health for the senior citizen population. By 2021, KCHD will strive to increase the number of mental health and socioeconomic supports facilitated for seniors, age 60 and above, by a minimum of 10%. These services will serve to increase social cohesion in the senior population and will also be inclusive of family.

**ANALYSIS TO IDENTIFY POPULATION GROUPS AT RISK**

KCHD utilized a multi-modal process to determine population groups at risk. Through the use of MAPP (Mobilizing Action for through Planning and Partnerships), the KCHD completed the Community Health Status Assessment, Local Public Health System Assessment, Community Themes and Strengths Assessment, and Forces of Change Assessment. Healthy People 2020, State Health Improvement Plan, Kendall/Grundy Community Action Plan, and IPLAN Data Systems were also included during the analysis. KCHD partnered with Rush Copley Medical Center to create Community Health Data that is now available on the KCHD website (Community Health Data, 2016). This data is a one-stop source of non-biased data and information about the community health and well-being in Kendall County and healthy communities in general. These assessments, in addition to other relevant data, helped to identify population groups at risk for the IPLAN priority of connecting seniors to assets that reduce socio-economic duress and support mental health.

The Community Health Status Assessment provided a comprehensive overview of demographic trends, key risks, and key strengths of Kendall County. Kendall County population has grown 116.69% from 2000 to 2014, while IL and the U.S. experienced less than 15% growth (US Census Bureau, 2010-2014). Unprecedented growth presented unique challenges and opportunities for Kendall County residents.
The table below is provided by: US Census Bureau (2010-2014). American Community Survey [Decennial Census]. Retrieved from http://www.census.gov/programs-surveys/acs/. The table highlights Kendall County’s population change from 2000-2014 which has grown upwards of over 116%. The table also shows the population change from 2000-2014 for Illinois and the United States. Illinois has experienced a population growth of 3.62% while the United States has experienced a population growth of 11.61%.


<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall County, IL</td>
<td>118,194</td>
<td>54,544</td>
<td>63,650</td>
<td>116.69%</td>
</tr>
<tr>
<td>Illinois</td>
<td>12,868,747</td>
<td>12,419,293</td>
<td>448,454</td>
<td>3.62%</td>
</tr>
<tr>
<td>United States</td>
<td>314,107,083</td>
<td>281,421,908</td>
<td>32,685,177</td>
<td>11.61%</td>
</tr>
</tbody>
</table>

Notes: This indicator is compared with the state average. Data Source: US Census Bureau, American Community Survey, US Census Bureau, Decennial Census, 2010-14, Source geography: County

**Population Change**

Population change within the report area from 2000-2014 is shown below. During the fourteen-year period, total population estimates for the report area grew by 116.69 percent, increasing from 54,544 persons in 2000 to 118,154 persons in 2014.

<table>
<thead>
<tr>
<th></th>
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</tbody>
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BRISTOL, MONTGOMERY, NEWARK, OSWEGO, PLANO AND YORKVILLE

TOTAL POPULATION: 2000-2015

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bristol</td>
<td>489</td>
<td>2,734</td>
<td>3,075</td>
<td>2,586</td>
<td>529%</td>
</tr>
<tr>
<td>Montgomery</td>
<td>16,051</td>
<td>25,329</td>
<td>25,909</td>
<td>9,858</td>
<td>61%</td>
</tr>
<tr>
<td>Newark</td>
<td>2,818</td>
<td>3,195</td>
<td>3,134</td>
<td>316</td>
<td>11%</td>
</tr>
<tr>
<td>Oswego</td>
<td>17,085</td>
<td>36,308</td>
<td>38,352</td>
<td>21,267</td>
<td>124%</td>
</tr>
<tr>
<td>Plano</td>
<td>7,503</td>
<td>13,058</td>
<td>13,439</td>
<td>5,936</td>
<td>79%</td>
</tr>
<tr>
<td>Yorkville</td>
<td>11,477</td>
<td>22,743</td>
<td>24,225</td>
<td>12,748</td>
<td>111%</td>
</tr>
<tr>
<td>Subtotal</td>
<td>55,423</td>
<td>103,367</td>
<td>108,134</td>
<td>52,711</td>
<td>95%</td>
</tr>
<tr>
<td>Total Kendall County</td>
<td>54,555</td>
<td>114,736</td>
<td>121,320</td>
<td>66,765</td>
<td>122%</td>
</tr>
</tbody>
</table>

2. Includes cities that are at least 60% located within Kendall County. Does not include PO Boxes.

Most cities located in Kendall County experienced positive growth between 2010 and 2015 with the exception of Newark (-1.9%, -61 residents) (US Census Bureau, 2010-2014).

Kendall County’s population that is aged over 65 in 2014 is 7.53% of the entire population. In 2005, Kendall County’s population that is aged over 65 in 2005 was 7.4% while in 2000 it was 8.5% (US Census Bureau, 2010-2014).
The table below is provided by: US Census Bureau (2010-2014). *American Community Survey* [Decennial Census]. Retrieved from http://www.census.gov/programs-surveys/acs/. The table below illustrates the age and gender demographics for Kendall County.

<table>
<thead>
<tr>
<th>Report Area</th>
<th>0 to 4 Male</th>
<th>0 to 4 Female</th>
<th>5 to 17 Male</th>
<th>5 to 17 Female</th>
<th>18 to 64 Male</th>
<th>18 to 64 Female</th>
<th>Over 64 Male</th>
<th>Over 64 Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall County, IL</td>
<td>4,765</td>
<td>4,562</td>
<td>13,957</td>
<td>12,874</td>
<td>35,901</td>
<td>37,036</td>
<td>3,865</td>
<td>5,018</td>
</tr>
<tr>
<td>Illinois</td>
<td>413,359</td>
<td>397,412</td>
<td>1,145,752</td>
<td>1,068,543</td>
<td>4,031,684</td>
<td>4,065,814</td>
<td>645,147</td>
<td>973,654</td>
</tr>
<tr>
<td>United States</td>
<td>10,205,681</td>
<td>9,767,630</td>
<td>27,510,156</td>
<td>26,293,790</td>
<td>97,973,928</td>
<td>99,177,526</td>
<td>16,886,374</td>
<td>24,352,764</td>
</tr>
</tbody>
</table>

The table below is provided by: US Census Bureau (2010-2014). *American Community Survey* [Decennial Census]. Retrieved from http://www.census.gov/programs-surveys/acs. The table highlights the population over 60 for Kendall and surrounding counties.

<table>
<thead>
<tr>
<th>County</th>
<th>Population aged 60+</th>
<th>Increase</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
<td>2014</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>DuPage</td>
<td>119,273</td>
<td>182,330</td>
<td>63,057</td>
<td>52.87%</td>
</tr>
<tr>
<td>Grundy</td>
<td>6,044</td>
<td>9,222</td>
<td>3,178</td>
<td>52.58%</td>
</tr>
<tr>
<td>Kane</td>
<td>46,132</td>
<td>89,825</td>
<td>43,693</td>
<td>94.71%</td>
</tr>
<tr>
<td>Kankakee</td>
<td>17,608</td>
<td>23,368</td>
<td>5,760</td>
<td>32.71%</td>
</tr>
<tr>
<td>Kendall</td>
<td>6,505</td>
<td>15,924</td>
<td>9,419</td>
<td>144.80%</td>
</tr>
<tr>
<td>Lake</td>
<td>75,380</td>
<td>125,883</td>
<td>50,503</td>
<td>67.00%</td>
</tr>
<tr>
<td>McHenry</td>
<td>28,640</td>
<td>54,966</td>
<td>26,326</td>
<td>91.92%</td>
</tr>
<tr>
<td>Will</td>
<td>57,010</td>
<td>111,180</td>
<td>54,170</td>
<td>95.02%</td>
</tr>
<tr>
<td>Region</td>
<td>356,592</td>
<td>612,698</td>
<td>256,106</td>
<td>71.82%</td>
</tr>
</tbody>
</table>

Sources: 2000 Decennial census. 2014 estimates, both from the U.S. Census Bureau

Kendall County, with its population growth, has also seen its senior population grow to over 144% since 2000 (US Census Bureau, 2010-2014).
Kendall County has led all counties in growth of foreign born immigrants since the 2010 Census. See the table below.


According to the Illinois Coalition for Immigrant and Refugee Rights, Kendall County’s Hispanic population grew by 259% since 2010 and the Asian population has grown by 385%. The Family Focus of Aurora has outreached their programs to include immigrants from Kendall County due to the growth (Tsao, n.d.). 6.86% of seniors in Kendall County are Hispanic according to the Census Bureau estimates for 2014 which has grown from 2.2% in 2000 (US Census Bureau, 2010-2014).

The table below is provided by US Census Bureau (2010-2014). American Community Survey [Decennial Census]. Retrieved from http://www.census.gov/programs-surveys/acs/. The table below highlights the minority population aged over 60 in Kendall and surrounding counties for 2014.

The Local Public Health System assessment highlighted perceived strengths and opportunities/needs of the local public health system. Strengths of the local public health system identified KCHD as having strong community partnerships, coalitions, and organizations that all work together toward common goals and share plans for planning, decision making and responses. Opportunities of the local public health system included: whether or not community education was effective and meeting the needs of the county residents and if KCHD is targeting the right audience.
The results of the Local Public Health System Assessment clearly highlight the fact that KCHD is seen by the community as being highly effective in creating strong partnerships in the community to work together towards a common goal and the opportunity identified in community education and whether it is effective and targeting the right audience speaks directly to the need for the proposed IPLAN priority of connecting seniors to assets that reduce socio-economic duress and support mental health. KCHD will work to provide community education with our community partners. With the growing population in Kendall County, including that of the senior population (+145%) and the minority senior population (+4.6%), Kendall County can be seen as a community with community health and well-being education needs for our area’s seniors.

Below is a listing of Illinois counties that have the highest household median income. Kendall County ranks as number one (Oberman, 2014). According to the U.S. Census, the village of Oswego has the highest median income of the zip codes in Kendall County while the village of Bristol and Plano have the lowest.


The table below is provided by: US Census Bureau (2010-2014). American Community Survey [Decennial Census]. Retrieved from http://www.census.gov/programs-surveys/acs/. This chart shows the median household estimates for 2015 for the municipalities in Kendall County. The village of Oswego has the highest median income followed by the village of Yorkville. The village of Bristol has the lowest median income in Kendall County.
As seen in the table below, even while Kendall County has the highest median income, the poverty rate has increased since the 2000 Census.

The table below is provided by: US Census Bureau (2010-2014). *American Community Survey* [Decennial Census]. Retrieved from http://www.census.gov/programs-surveys/acs/. This table shows the poverty rate change for Kendall County from 2000 to 2014. Kendall County’s poverty rate has gone up by 2% from 3.4% in 2000 to 5.4% in 2014.

The poverty rate for seniors in Kendall County is shown below in Table N for 2014 at 5.4% according to the U.S. Census. It is important to note that the poverty rate for seniors in Kendall County was at 1.8% in the 2005 estimates and in the 2000 U.S. Census the rate for seniors in Kendall County in poverty was at 4.5% (U.S. Census Bureau, 2010-2014). Community Action Services reports that in their client tracking records, Single Tracking and Reporting System (STARS), in 2015, 32.5% of their clients were seniors seeking socio-economic assistance. This is an increase over previous years with Community Action Services assisting on average about 25% of their clients being seniors (*Kendall Grundy Community Action (Kendall Office)*, n.d).

The table below is provided by: US Census Bureau (2010-2014). *American Community Survey* [Decennial Census]. Retrieved from http://www.census.gov/programs-surveys/acs/. This table shows how many and the percentage of seniors that are living in poverty in Kendall County. These are estimates for 2014 based on the 2010 Census. There is an estimated 5.4% of seniors living in poverty in Kendall County.
The Community Themes and Strengths Assessment utilized an ethnographic method which rendered ethnographic emergent themes as prominent findings. Twenty-two percent of the voices rendered from the assessment were over the age of sixty. Important social and mental health well-being needs and strengths identified included: community connectedness as a need, socioeconomic stability as essential to well-being, access to care as a need for mental health, and community education as a need. There is a clear consensus for the need of community education to connect community members to assets that reduce socio-economic duress and support mental health in Kendall County. Mental Health issues are a serious concern among the senior population. Senior Americans are more likely to commit suicide than any other group. Most at risk for completion of suicide are 80+ year old men (American Foundation for Suicide Prevention, 2016). Over 20% of adults aged 60 and older suffer from a mental or neurological disorder, depression being the most common (World Health Organization, 2016). The older adult population in Kendall County shows significant exposure to risk factors. According to the Centers for Medicare and Medicaid Services, depression rates in Kendall County’s seniors have been on the rise since 2007. In 2007, the percentage of persons over the age of 65 who received Medicare that had been diagnosed with depression was at 9.3%. In 2014, that number rose to 13.0%. That reveals a 3.7% increase in seven years. Also, in 2007, the percentage of persons over the age of 65 who received Medicare that had been diagnosed with Schizophrenia or other Psychotic Disorders was at 1.3% but in 2014 it rose up to 2.1%. That is a 0.8% increase in seven years (Centers for Medicare and Medicaid Services, 2016, table 1). It doesn’t occur frequently but schizophrenia can be diagnosed later in life. Women over the age of 65 are among those who are more likely to become diagnosed later in life and this diagnosis may be associated with dementia in some patients (Wetherell & Jeste, n.d.).

The Forces of Change Assessment identified community threats and opportunities. One of the forces seen was the stigma related to mental health which leads people to not always seek help. This leads to the well-being of people who need mental health care to become diminished if they do not step forth when they need care. A threat associated with this assessment is the risk seniors may have in becoming socially isolated. This leads to opportunities for increasing community connectivity by focusing on Kendall County seniors through mobilizing meaningful partnerships throughout the community. Another potential threat highlighted through the assessment was the increase in the poverty rate in Kendall County, especially in the senior population. A related threat was a lack of awareness of services. An opportunity identified was to increase awareness of mental health and social well-being supports that are available to the senior population. The Forces of Change Assessment clearly identified the senior population as being at risk. This is precisely the group that the KCHD will target through the proposed IPLAN priority of connecting seniors to assets that reduce socio-economic duress and support mental health.

The senior population in Kendall County is seen as having a disproportionate exposure to risk factors over other groups in Kendall County. The KCHD has a strong working relationship with senior centers located within county lines. The KCHD regularly provides leadership in the areas of mental health/substance abuse treatment, crisis/suicide intervention, social well-being supports, and community based prevention and diversion efforts. The Beecher Senior Center and the Oswego Senior Center as well as the Fox Valley Older Adults Center have all demonstrated a commitment to senior and community wellness. These partnerships between the KCHD and the three local senior centers will be key to increasing community connectivity and social and mental wellness supports for the Kendall County senior population.

Data from the 2014 National Survey on Drug Use and Health highlights that the prevalence of heavy alcohol use in 2014 was lower among adults ages 65 and up (2.2%) (Substance Abuse and Mental Health Services Administration, 2014). However, a study published in the Journal of General Internal Medicine found that more than a third of drinkers 60 years old and older consume amounts of alcohol that are excessive or that are potentially harmful in combination with certain diseases they have or medications they are taking (Barnes et al., 2010). County Health Rankings 2016 reported that Kendall County had a 22% rate of excessive drinking compared with the national benchmark of 12% and the Illinois rate of 21%.
Kendall County also showed that 43% of motor vehicle crash deaths are alcohol related compared with the national benchmark rate of 14% and the Illinois rate of 36%. Kendall County showed an inadequate social support rate of 5.4 per 10,000 in the population compared with the national benchmark of 22.1 and the Illinois rate of 9.9 (University of Wisconsin Population Health Institute, 2016). In looking up demographic data in the KCHD’s electronic health record system, 12% of the persons diagnosed with alcohol abuse are over the age of 60. This is the most prevalent diagnosis for seniors in our Mental Health Services Division. Alcohol abuse, drunk driving, and inadequate social supports are significant risk factors that face the senior population in Kendall County.

According to a 2010 report by the Substance Abuse and Mental Health Services Administration, the need for substance abuse treatment among Americans over age 50 is projected to double by 2020. Although marijuana use was more common than nonmedical use of prescription drugs for adults age 50-59, among those aged 65 and older, nonmedical use of prescription drugs was more common than marijuana (Substance Abuse and Mental Health Services Administration, 2014). The precise rate of seniors with drug problems is difficult to assess. One reason is that many of the signs and symptoms of misuse and abuse mirror common signs of aging in general. Recently released statistics present clear hints at a growing epidemic of drug abuse. According to the Prevention Tactics report, prescription drug abuse is present in 12% to 15% of senior individuals who seek medical attention (Basca, 2008). What’s more, a document from the John Hopkins Medical School notes that the number of Americans over age 50 abusing prescription drugs is projected to rise to 2.7 million in 2020 – a 190% increase from the 2001 figure of 910,000 (Anderson, 2014). The KCHD will work to reduce the senior population’s alcohol and drug abuse through increasing social connectedness and access to important health and well-being supports.

**The Relationship of Priority to Healthy People 2020**

KCHD’s priority health need of connecting seniors to assets that reduce socio-economic duress and support mental health is in line with Healthy People 2020 which, in part, seeks to improve the health, function, and quality of life of seniors (Office of Disease Prevention and Health Promotion, 2014). KCHD will work to increase the number of mental health and socioeconomic supports facilitated for seniors, age 60 and above, by a minimum of 10%. The American Hospital Association reports that seniors are the fastest growing age group, and the first “baby boomers” (adults born between 1946 and 1964) will turn 65 in 2011. Also, more than 37 million people in this group (60%) will manage more than one chronic condition by 2030 (American Hospital Association; First Consulting Group, 2007, p. 23). One of these chronic conditions that has seen an increase for seniors is depression.

Healthy People 2020 also seeks to reduce the proportion of adults aged eighteen years and older who experience major depressive episodes. KCHD will utilize strategies to promote mental health awareness for Kendall County seniors. Antidepressant use among seniors has nearly doubled from 1995-2003 (Kramarow, Lubitz, Lentzner, & Gorina, 2007, p. 1417). Approximately 68% of adults aged over 65 know little or almost nothing about depression and 38% in this age group believe that depression is not a “health problem” (National Mental Health Association, 1996). Effective education and awareness strategies in mental health and socioeconomic supports in the community are needed to promote engagement and support of Kendall County seniors. KCHD staff will work to reduce stigma and increase understanding of symptoms and treatment associated with depression.

Healthy People 2020 reported another objective to increase the proportion of adults who self report good or better mental health. 79.1% of adults self-reported good or better mental health in 2010 and the goal is to increase this figure to 80.1%. The Centers for Disease Control has advocated the promotion of well-being, emphasizing a person’s physical, mental, and social resources and enhancing protective factors and conditions that foster health (Centers for Disease Control, 2016). The health priority of connecting seniors to assets that reduce socio-economic duress and support mental health is of critical importance with respect to increasing quality of life and well-being. KCHD mental and socioeconomic services will raise awareness of mental health and socioeconomic supports availability to the community and the senior population.
KCHD’s priority health need, connecting seniors to assets that reduce socio-economic duress and support mental health, is also in alignment with two of Illinois’ 2010 State Health Improvement Plan’s (SHIP) Public Health System Priorities, improving access to health services, and addressing social determinants of health and health disparities. Our priority also captures the SHIP’s priority health concern addressing mental health, with both KCHD and the State considering sound mental health as fundamentally important to one’s overall health.

**RISK FACTORS, DIRECT CONTRIBUTING FACTORS, INDIRECT CONTRIBUTING FACTORS**

Drawing on the Health Problem Analysis Worksheet below, KCHD concentrated on what may be the risk, direct contributing and indirect contributing factors to the health problem of mental health and socio-duress in the senior population. Three significant risk factors associated with this health problem were established, they being selected as poor mental health and substance abuse, social isolation, and financial instability.

When contemplating the first risk factor of poor mental health and substance abuse, three direct contributing factors emerged; untreated mental health problems, personal loss, and chronic health problems. Indirect contributing factors leading to untreated mental health problems included problems accessing mental health treatment, lack of awareness of mental health resources, and the stigma that may be associated with mental health. Considerations to the direct contributing factor of personal loss include indirect contributing factors such as experiencing loss of a spouse and a decrease in a feeling of a sense of purpose. The third direct contributing factor, chronic health problems, brought attention to two indirect factors; an over reliance to prescription medications and pain and/or mobility issues.

Direct contributing factors were discussed as having an impact on the second of the three risk factors, social isolation. They include lack of community involvement, family disconnect, and generational divide. Indirect contributing factors that may advance a lack of community involvement are the disappearance of the “front porch” (i.e., neighbors outdoors socializing), a lack of community engagement opportunities, and a lack of public transportation. Indirect factors pertinent to family disconnect are the spreading out of family members further away from each other, and once again, the lack of public transportation. When focusing on generational divide, the proliferation of technology with notable trends of a senior vs. youth attitude or ideology were revealed.

Reflecting on the third risk factor of financial instability, direct contributing factors include the high cost of living, having a fixed income and employment barriers. Indirect contributing factors that fall under high cost of living include property taxes, utility bills, and lack of affordable housing. The indirect contributing factors associated with having a fixed income are having insufficient savings, the amount of jobs available that do not pay a living wage, and the reliance on social security and pensions. Employment barriers became the final direct contributing factor associated with the risk factor of financial instability. Assigned as indirect factors were age discrimination and lack of transportation.

**MEASURABLE OUTCOME OBJECTIVE**

•By 2021, assess 100% of the seniors utilizing KCHD for their needs as related to mental health and substance abuse, social isolation, and financial instability.

**MEASURABLE IMPACT OBJECTIVE**

•By 2021, conduct a minimum of four presentations annually to seniors, at local senior living facilities, senior centers, senior clubs and social gatherings, to raise awareness of and promote access to services which address mental health and substance abuse, social isolation, and financial instability.

•By 2021, engage a minimum of four local public health system partners annually, including health care providers, staff of senior living facilities and senior centers, to raise awareness of and promote access to services which address mental health and substance abuse, social isolation, and financial instability.
By 2021, leverage the 24/7 accessibility of the internet (to include a webpage and corresponding social messaging, and KCHD's electronic newsletter) to prepare, promote and provide a senior-friendly community-wide resource for mental health and financial stability-related information and resources that may be informed in part by local public health system partners.

**Proven Intervention Strategy**

KCHD will endeavor to connect seniors to assets that reduce financial instability and support mental health through a combination of extensive community engagement, seamless care coordination, and the delivery of person-based services.

KCHD possesses a great deal of experience in each of the aforementioned processes, including the delivery of person-based services using a people-centered approach to care (World Health Organization, 2016).

Community engagement will be performed through traditional public outreach and through the use of technology. Under public outreach, KCHD will provide a number of in-person presentations annually to seniors, at local senior living facilities, senior centers, senior clubs and social gatherings, to raise awareness of and promote access to services which address mental health and substance abuse, social isolation, and financial instability. KCHD will also be engaging a minimum number of local public health system partners annually, including health care providers, staff of senior living facilities and senior centers, to raise awareness of and promote access to services which address mental health and substance abuse, social isolation, and financial instability. With consideration to the use of technology, KCHD will leverage the 24/7 accessibility of the internet to prepare, provide and promote a senior-friendly community-wide resource for mental health and financial stability-related information and related community resources. KCHD’s local public health system partners will be encouraged to inform and/or contribute to this community-wide offering of information. The availability of and access to this information will be actively promoted; the information routinely updated, and also communicated through social media messages (KCHD’s Face book and Twitter), and KCHD’s quarterly electronic newsletter – made available to KCHD’s local public health system partners, including those partner organization who serve our senior population, and the Kendall County population as a whole.

KCHD’s efforts to engage and educate the senior community and senior care providers, is intended to lead seniors to community supports and services capable of addressing their needs as they relate to mental health and substance abuse, social isolation, and financial instability. KCHD is one of Kendall County’s leading providers of these services.

Mental health problems are under-identified by health-care professionals and older people themselves, and the stigma surrounding mental illness makes people reluctant to seek help (World Health Organization, 2016). KCHD will endeavor to raise awareness of mental health problems among both Kendall County’s senior population, and our local public health systems partners – in particular, our local health care and senior-provider professionals.

In an effort to educate and wrap around needed services around our seniors, KCHD will create and provide to all seniors seeking through KCHD socioeconomic supports, information describing what mental health is; how to recognize mental health issues and illness; and where to receive help. This information will serve more than the possible needs of the direct recipients of this information. There may very well be a family member, friend or acquaintance of the recipients of this information, in need of mental health supports. Our information will be designed to be easily shared.

 Concurrently, KCHD will strive to identify possible socio-economic duress among those seeking mental health treatment and supports, for all, but with an emphasis on our seniors.
In a holistic effort to educate and wrap needed services around seniors, KCHD will create and provide to all seniors seeking through KCHD mental health treatment and supports, information describing the risk factors leading to socio-economic duress (also described as financial instability and economic insecurity), and more importantly, protective factors intended to secure and maintain one's financial stability and economic security. This information will serve more than the possible needs of the direct recipients of this information. Again, there may be a family member, friend or acquaintance of the recipients of this information, in need of socio-economic supports. This information also will be designed to be easily shared by the recipient with others. KCHD will track and measure the number of seniors around which the aforementioned services have been wrapped. Additionally, KCHD will measure the impact that these services have had or our having on our seniors’ mental health (documented in KCHD’s psychosocial assessments), and financial stability and economic security (documented in KCHD’s Single Tracking and Reporting System).

In following the World Health Organization’s vision of person-centered care, in part, KCHD will serve seniors - and their families - in a manner that builds trust and addresses their needs in culturally competent, dignified and holistic ways. Seniors and their families will be encouraged and enabled to collaborate with KCHD in identifying and addressing the best approaches to meeting their individual mental health and socioeconomic needs. Seniors will be informed and involved in decision-making, and will have choices. They will be invested and active participants in achieving their individual needs.

Combined, these strategies will serve to minimize if not prevent poor mental health, social isolation and financial instability among those in need representing the community’s senior population.
HEALTH PROBLEM ANALYSIS WORKSHEET

**Health Problem**: Mental Health & Socio-economic Duress in the Senior Population

**Risk Factors**
- Poor Mental Health & Substance Abuse
- Social Isolation
- Financial Instability

**Direct Contributing Factors**
- Problems Accessing Mental Health Treatment
- Lack of Awareness of Mental Health Resources
- Widowhood
- Decrease Sense of Purpose
- Over-reliance on Prescription Medications
- Pain & Mobility Issues
- Disappearance of the Front Porch
- Lack of Community Engagement Opportunities
- Lack of Transportation
- Family Spread Out
- Lack of Public Transportation
- Proliferation of Technology
- Senior vs Youth Attitudes/Ideologies
- High Property Taxes
- Utility Bills
- Lack of Affordable Housing
- Cost of Health Care
- Insufficient Savings
- Lack of Living Wage Jobs
- Reliance on SSN & Pensions
- Lack of Public Transportation
- Age Discrimination

**Untreated Mental Health Problems**
- Personal Loss

**Chronic Health Problems**
- Lack of Community Involvement

**Family Disconnect**
- Generational Divide

**High Cost of Living**
- High Cost of Living

**Fixed Income**
- Employment Barriers

**Fixed Income**
- Financial Instability

**Social Isolation**
- Mental Health & Socio-economic Duress in the Senior Population
# Community Health Plan Worksheet

## Health Problem:
Mental Health and Socio-Economic Duress in the Senior Population.

## Outcome Objective(s):
- By 2021, assess 100% of the seniors utilizing KCHD for their needs as related to mental health and substance abuse, social isolation, and financial instability.

## Risk Factor(s) (May be Many):
- Poor mental health and substance abuse
- Social Isolation
- Financial instability

## Impact Objective(s):
- By 2021, conduct a minimum of four presentations annually to seniors, at local senior living facilities, senior centers, senior clubs and social gatherings, to raise awareness of and promote access to services which address mental health and substance abuse, social isolation, and financial instability.
- By 2021, engage a minimum of four local public health system partners annually, including health care providers, staff of senior living facilities and senior centers, to raise awareness of and promote access to services which address mental health and substance abuse, social isolation, and financial instability.
- By 2021, leverage the 24/7 accessibility of the internet (to include a webpage and corresponding social media messaging, and KCHD’s electronic newsletter) to prepare, promote and provide a senior-friendly community-wide resource for mental health and financial stability-related information and resources that may be informed in part by local public health system partners.

## Contributing Factors (Direct/Indirect; May be Many):
- Untreated Behavioral Health Problems
  - Problems accessing Behavioral Health treatment
  - Lack of awareness of Behavioral Health resources
  - Stigma
- Personal Loss
  - Widowhood
  - Decrease sense of purpose
- Chronic Health Problems
  - Over-reliance on prescription medication
  - Pain and mobility issues
- Lack of Community Involvement
  - Disappearance of the front porch
  - Lack of community engagement opportunities
  - Lack of public transport
- Family Isolation
  - Family spread out
  - Lack of public transit
- Generational Divide
  - Proliferation of technology
  - Senior vs. youth/ideologies
  - High cost of living

## Proven Intervention Strategy(ies):
- KCHD will implement a combination of extensive community engagement, seamless care coordination, and the delivery of person-based services using the person-centered care approach.
- Presentations annually to seniors, at local senior living facilities, senior centers, senior clubs and social gatherings, to raise awareness of and promote access to services which address mental health and substance abuse, social isolation, and financial instability.
- Engaging a minimum number of local public health system partners annually, including health care providers, staff of senior living facilities and senior centers, to raise awareness of and promote access to services which address mental health and substance abuse, social isolation, and financial instability.
- Leverage the 24/7 accessibility of the internet to prepare, provide and promote a senior-friendly community-wide resource for mental health and financial stability-related information and related community resources. KCHD's local public health system partners will be encouraged to inform and/or contribute to this community-wide offering of information. The availability of and access to this
<table>
<thead>
<tr>
<th>Resources Available (Government &amp; Non-Governmental)</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall County Health Department Mental Health and Community Action Divisions</td>
<td>• Funding</td>
</tr>
<tr>
<td>Senior Services Associates</td>
<td>• Lack of adequate staff</td>
</tr>
<tr>
<td>Oswego Senior Center</td>
<td>• Lack of public awareness</td>
</tr>
<tr>
<td>Kendall Area Transit</td>
<td>• Transportation</td>
</tr>
<tr>
<td>Local Park Districts</td>
<td>• Language/ESL</td>
</tr>
<tr>
<td>Local High Schools</td>
<td>• Reluctance to access services/Stigma</td>
</tr>
<tr>
<td>Kendall County Senior Providers</td>
<td>• Perceptions/attitudes towards services</td>
</tr>
<tr>
<td>Rush Copley</td>
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<tr>
<td>Workforce Development</td>
<td></td>
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<tr>
<td>Churches</td>
<td></td>
</tr>
<tr>
<td>YMCA</td>
<td></td>
</tr>
<tr>
<td>Kendall County VAC</td>
<td></td>
</tr>
<tr>
<td>Kendall County youth organizations</td>
<td></td>
</tr>
</tbody>
</table>
**DESCRIPTION OF HEALTH PROBLEMS, RISK FACTORS AND CONTRIBUTING FACTORS (INCLUDING HIGH RISK POPULATIONS, AND CURRENT AND PROJECTED STATISTICAL TRENDS):**

KCHD and its community partners have identified the health problem of mental health and socio-economic duress in the senior population. Risk factors include mental health and substance abuse, social isolation, and socio-economic duress. While there are many identified direct contributing factors, significant areas include untreated behavioral health problems, personal loss, chronic health problems, lack of community involvement, family disconnect, generational divide, high cost of living, fixed income, cost of health care, and employment barriers. The senior population is certainly seen as being at risk, however, those seniors experiencing high exposure to poverty, transportation/language barriers, residential isolation, and mental/physical disabilities are seen as being particularly vulnerable.

**CORRECTIVE ACTIONS TO REDUCE THE LEVEL OF THE INDIRECT CONTRIBUTING FACTORS:**

- The creation and dissemination of information describing what mental health is; how to recognize mental health issues and illness; and where to receive help.
- The creation and dissemination of information describing the risk factors leading to socio-economic duress (also described as financial instability and economic insecurity), and more importantly, protective factors intended to secure and maintain one’s financial stability and economic security.
- Provision of mental health and socio-economic supports facilitated for seniors that are inclusive of family.

<table>
<thead>
<tr>
<th>Direct</th>
<th>Indirect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated behavioral health problems</td>
<td>Lack of awareness of mental health and socio-economic resources.</td>
</tr>
<tr>
<td>Personal loss</td>
<td>Widowhood</td>
</tr>
<tr>
<td>Chronic health problems</td>
<td>Pain and mobility issues</td>
</tr>
<tr>
<td>Lack of community involvement</td>
<td>Lack of community engagement opportunities</td>
</tr>
<tr>
<td>Family disconnect</td>
<td>Lack of transportation barriers</td>
</tr>
<tr>
<td>Generational divide</td>
<td>High cost of living/fixed incomes</td>
</tr>
<tr>
<td>High cost of living</td>
<td>Medical costs</td>
</tr>
<tr>
<td>Fixed income</td>
<td>Age discrimination</td>
</tr>
<tr>
<td>Cost of health care</td>
<td>Family disconnect</td>
</tr>
<tr>
<td>Employment barriers</td>
<td></td>
</tr>
</tbody>
</table>

**PROPOSED COMMUNITY ORGANIZATION(S) TO PROVIDE AND COORDINATE THE ACTIVITIES:**

- KCHD Mental Health & Community Action Divisions
- Senior Services Associates
- Oswego Senior Center
- Kendall Area Transit
- Local Health Care Providers
- Local Senior Living Facilities
- Local Park Districts
- Local High Schools • Kendall County Senior Providers
- Rush Copley
- Workforce Development
- Churches
- YMCA
- Kendall County VAC
- Kendall County youth organizations

**EVALUATION PLAN TO MEASURE PROGRESS TOWARD REACHING OBJECTIVES:**

- Number of presentations made to senior groups
- Number of senior-serving local public health system partners engaged
- Increased number of mental health and socio-economic supports facilitated for seniors, age 60 and above, by a minimum of 10%. This will be measured and tracked using KCHD’s Footholds relational database, and Single Tracking and Reporting System (STARS) data base.


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APPENDIX/APPENDICES
Purpose and Practices of Public Health

Ten Essential Services

What Public Health Does (The Purpose of Public Health)

The fundamental obligation of agencies responsible for population-based health is to:

• Prevent epidemics and the spread of disease
• Protect against environmental hazards
• Prevent injuries
• Promote and encourage healthy behaviors and mental health
• Respond to disasters and assist communities in recovery
• Assure the quality and accessibility of health services

These responsibilities describe and define the function of public health in assuring the availability of quality health services. Both distinct from and encompassing clinical services, public health’s role is to assure the conditions necessary for people to live healthy lives, through community-wide prevention and protection programs.

Core Public Health Functions

Assessment
Policy Development
Assurance

How Public Health Serves (The Practice of Public Health)

Public health serves communities and individuals within them by providing an array of essential services. Many of these services are invisible to the public. Typically, the public only becomes aware of the need for public health services when a problem develops (e.g., an epidemic occurs). The practice of public health becomes the following ten “essential services”:

<table>
<thead>
<tr>
<th>The 10 Essential Public Health Services</th>
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<tbody>
<tr>
<td>1. Monitor health status to identify community health problems</td>
</tr>
<tr>
<td>2. Diagnose and investigate health problems and health hazards in the community</td>
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<tr>
<td>3. Inform, educate, and empower people about health issues</td>
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<td>4. Mobilize community partnerships to identify and solve health problems</td>
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<tr>
<td>5. Develop policies and plans that support individual and community health efforts</td>
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<td>6. Enforce laws and regulations that protect health and ensure safety</td>
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<tr>
<td>7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable</td>
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<tr>
<td>8. Assure a competent public health and personal health care workforce</td>
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<tr>
<td>9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services</td>
</tr>
<tr>
<td>10. Research for new insights and innovative solutions to health problems</td>
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</tbody>
</table>
1. **Monitor health status to identify and solve community health problems:**
   *What’s going on in our community? Do we know how healthy we are?*
   This service includes accurate and periodic assessment of the community’s health status including identification of health risks, attention to vital statistics and disparities and identification of assets and resources. Also included is the utilization of methods and technology, such as GIS, to interpret and communicate data and population health registries.

2. **Diagnose and investigate health problems and health hazards in the community:**
   *Are we ready to respond to health problems or threats? How quickly do we find out about problems? How effective is our response?*
   This service includes timely identification and investigation of health threats, availability of diagnostic services, including laboratory capacity, and response plans to address major health threats.

3. **Inform, educate, and empower people about health issues:**
   *How well do we keep all people and segments of our community informed about health issues?*
   This service includes initiatives using health education and communication sciences to build knowledge and shape attitudes, inform decision-making choice and develop skills and behaviors for health living. Also included are health education and health promotion partnerships within the community to support health living as well as media advocacy and social marketing.

4. **Mobilize community partnerships and action to identify and solve health problems:**
   *How well do we really get people and organizations engaged in health issues?*
   This service includes constituency development and identification of system partners and stakeholders, coalition development as well as formal and informal partnerships to promote health improvement.

5. **Develop policies and plans that support individual and community health efforts:**
   *What policies promote health in our community? How effective are we in planning and setting health policies?*
   This service includes policy development to protect health and guide public health practice, community and state planning and alignment of resources to assure successful planning.

6. **Enforce laws and regulations that protect health insurance and safety:**
   *When we enforce health regulations, are we up-to-date, technically competent, fair and effective?*
   This service includes review, evaluation and revision of legal authority, laws and regulation. Also included are education about laws and regulations, advocating of regulations needed to protect and promote health and support of compliance efforts and enforcement as needed.

7. **Link people to needed personal health services and assure the provision of health care when otherwise unavailable:**
   *Are people receiving the medical care they need?*
   This service includes identifying populations with barriers to care, effective entry into a coordinated system of clinical care, on-going care management, culturally appropriate and targeted information for at risk population groups as well as transportation and other enabling services.

8. **Assure a competent public and personal health care workforce:**
   *Do we have a competent public health staff? How can we be sure that our staff stays current?*
   This service includes assessment of the public health and personal health workforce, maintaining public health workforce standards including efficient processes for licensing/credentialing requirements and use of public health competencies. Also included is Quality Improvement and life-long learning, including leadership development and cultural competence.

9. **Evaluate effectiveness, accessibility, and quality of personal and population-based health services:**
   *Are we doing any good? Are we doing things right? Are we doing the right things?*
   This service includes ongoing evaluation of health programs based on analysis of health status and service utilization data to assess program effectiveness and to provide information necessary for allocation resources and re-shaping programs.

10. **Research for new insights and innovative solutions to health problems:**
    *Are we discovering and using new ways to get the job done?*
    This service includes identification and monitoring or innovative solutions and cutting-edge research to advance public health. Also included are linkages between public health practice and academic/research settings and epidemiological studies, health policy analyses and health systems research.
Employ methods of community communication that considers presence and responsiveness.
(Objectives to be formulated with Advisory Boards)
- Access to Services
- Emigration Challenges
- Individual/Family Needs
- Serving Community
- Wellbeing Issues

Continue to streamline fund diversification for the sustainability of community work.
(Objectives to be formulated by Finance Committee)
- Affordable Services
- Financial Sustainability
- Fiscal Communication
- Insurance Landscape
- Reserve Preservation

Act with leadership on all matters of stakeholder interrelatedness.
(Objectives to be formulated with Advisory Boards)
- Community Health Planning
- Partner Participation
- Private Schools
- Program Impact
- Resource Sharing

Workforce Development will be informed by performance management, a readiness for change, and an appreciative perspective on learning organization.
(Objectives to be formulated by Personnel Committee)
- Accreditation Acquisition
- Data Trends
- Electronic Health Records
- Staff Sustainability
- Surveillance

6/16 – AVET
2021 Strategic Planning Process Phases

- Why we Plan Dialogue
- What People Might be Surprised to know
- How we Communicate all we do for the Community
- Key Stakeholder Relatedness
- Mission and Vision Review
- Branding and Logo Review
- Internal Assets and Opportunities
- External Assets and Opportunities
- Distinctive Organizational Competencies
- Identification of Strategic Issues
Ethnographic Interviewing Guidance

Explicit Purpose.

“When an ethnographer and informant meet together for an interview, both realize that the talking is supposed to go somewhere. The informant only has a hazy idea about this purpose; the ethnographer must make it clear. Each time they meet it is necessary to remind the informant where the interview is to go. Because ethnographic interviews involve purpose and direction, they will tend to be more formal than friendly conversations. Without being authoritarian, the ethnographer gradually takes more control of the talking, directing it in those channels that lead to discovering the cultural knowledge of the informant (Ethnographic Interviews and Notes, Spradley 1979).”

Relevant Constructs
- Ethnographic
- Artifact
- Deductive
- Inductive
- Neutrality
- Qualitative
- Quantitative
- Recording
- Reflexivity
- Superstructure

Question Types
- Direct
- Example
- Experience
- Hypothetical
- Guided Tour

Interviewer Reliability
Substantive Contribution: Does this interview contribute to our understanding of health and well-being?
Aesthetic Merit: Is this purpose understood by the cultural other?
Reflexivity: Is the interviewer able to develop new questions that are relevant to the initial responses of the subject?
Impact: Does the response move me?
Expresses a Reality: Does the interview represent a credible account of a cultural, social, or individual perspective?
Kendall County Health Department
Health and Wellbeing Community Themes and Strengths
Field Interviews

- Explain the purpose of the interview and obtain consent.
- Let interviewee know that you will be taking notes.
- Demographic only and no identifiable information will be collected.
- Explain that input will be used to inform the Community Health Plan.
- Invite interviewees to May planning meeting and provide copy of the flyer.

- Interviewer Name __ ____________________
- Interviewee Gender ______ _____________
- Interviewee Race ______ ______________
- Approximate Age (20's) (30's) (40's) (50's) (60+)
- Field Note (complete later)

1. How would you define full health and wellbeing?

2. What does social wellbeing; in terms of socioeconomic and community well being mean to you?

3. What are some social wellbeing related community assets or strengths?

4. What are some social wellbeing related community concerns or needs?

5. What does mental health mean to you?

6. What are some mental health related community assets or strengths?

7. What are some mental health related community concerns or needs?

8. What does environmental health mean to you?

9. What are some environmental health related community assets or strengths?

10. What are some environmental health related community concerns or needs?

11. What does physical health mean to you?

12. What are some physical health related community assets or strengths?

13. What are some physical health related community concerns or needs?

14. What does community resilience; in terms of the ability to adapt and change in the face of challenge, mean to you?

15. What are some related community resilience assets or strengths?

16. What are some related community resilience concerns or needs?

AVET – 3/15
<table>
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<tr>
<th>Interviewer</th>
<th>Type of Location</th>
<th>Name of Location</th>
<th>Town</th>
<th>Interview Date</th>
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Professional Seminar Series presents

THE ETHNOGRAPHIC METHOD:
The role of ethnographic data in community health assessment

Dr. Amaal Tokars
Kendall County Health Department

Friday February 27, 2015  9:00 am—12:00 pm
Kendall County Health Department
811 W. John St.  Yorkville, IL  60560

Training Objectives
Participants will gain understanding in the relevance of:

• Anthropological research;
• the ethnographic method;
• as well as related data implications for conducting community health assessment

There is no charge for this educational event.

Please RSVP by calling Kerri at (630) 553-8031
COMMUNITY THEMES & STRENGTHS ASSESSMENT ETHNOGRAPHIC INFORMED INTERVIEW FINDINGS

Presented to Community Partners by the Kendall County Health Department on 5/28/15

Mobilizing Action Through Planning and Partnerships (MAPP) Assessment Lenses

- Local Public Health System Assessment
- Community Themes and Strengths Assessment
- Community Health Status Assessment
- Forces of Change Assessment
Community Themes and Strengths Assessment Focus

- Provides a deep understanding of the issues residents experience as important
- Community thoughts, concerns, and experiences are gathered
- Community provides insight into issues of importance

Anthropological Research

- The problem with studying peoples not at center of mainstream culture is that social schema is informed by a juxtaposition with the social world and the subsequent experience with social structures
- Anthropological research deals with the creation and transmission of meaning
Ethnographic Method

- Fieldwork is a form of inquiry that requires a researcher to be immersed in the social setting
- Researcher becomes familiar with socio-cultural dynamics
- Ontology (The study of the essentialities within the nature of being i.e. *who is expert*)
- Epistemology (The theoretical analysis of knowledge as it relates to justification i.e. *inductive inquiry*)
- Triangulation between primary data (new data), emergent theme, and secondary data (existing data)

Demographic Diversity

- Interviewee Gender: Male-42% Female-58%
- Interviewee Race: Caucasian-80% Latino-10%
  Black-6% Asian-4%
- Approximate Age: 20's-22% 30's-18% 40's-26% 50's-12% 60+-22%
Health and Wellbeing Themes

Mind and body as essential
- Physically fit/mentally fit/mental health/feeling safe/free from illness/positive outlook
- Health including mind and body both preventative and ongoing
- My mind and body working 100% without flaws
- Cross between physical & mental wellbeing, standard of living & quality of life
- Physical health as essential
- Daily activities without discomfort/free from sickness/up to date on shots/physically fit
- Not being ill, being well-fed and having essential needs met
- Being proactive with how you treat your body
- Having beliefs, disease-free, having the physical means to care for self & others
- Social wellbeing as essential
- Willing to help/being happy with what you want to do/being able to work
- A community that supports its fellow citizens, financially, physically, and ethically
- Community centers, activities for youth and seniors, community partnerships
- Comfortable living, happiness with yourself

Health and Wellbeing Themes

Access to care concerns
- Able to see doc/free of insurance concerns/able to get needed shots/afford insurance
- Having enough money to live on, not worrying constantly, & having insurance
- Access to regular physical check-ups, dental, & mental health services
- Having affordable insurance and the ability to see a doctor
- Exercise and nutrition concerns
- Diet and exercise, eating well and exercising, fitness and good appetite
- Exercise and eating right
- Exercising daily, eating well, going to the doctor regularly
- Good diet, exercise, going to the doctor to get checked up
- Safety from violence concerns
- Safeguard against domestic violence/neighborhood violence/delinquent behavior
- No fighting in the house, no angry talk with the kids or the spouse
- We have the library and community police meetings
- We have neighborhood watch
Social Wellbeing Themes

Socioeconomic stability as essential
Socioeconomic disparities/need rental assistance/funding & fundraising
People that have a low socioeconomic status will not have as good of health
Enough money to care for your family & resources to make life comfortable
Community resources as essential
Fitness clubs/senior services/food pantries/Health Department/good healthcare/human services
I have health insurance, I do not seek help as my kids are grown
We have many resources available, organizations, churches, & clubs that help
Community support as essential
Community development/do things beneficial to community/working together to support
Everyone taking care of everyone else
Being able to do things that are beneficial to the community
Community safety as essential
Public services/police officers/safe environment/safe things for kids to do/address bullying
Cleanliness and safety
Not a scary environment, like Chicago
Community connectivity as essential
Community centers/social activities/interacting with people/Friendly neighborhoods/belonging
Making sure that you have friends and are able to socialize
Ability to interact with others, important to socialize with others

Local Economy as context
Economy plays a role/improving economy/quality of food/family-owned businesses/privately owned
There are a lot of locally owned businesses
Small business are important
Availability of community resources as needed
Substance abuse counseling/more support groups/need community centers/gathering spots/affordable medication
The county will need more resources due to the growth in the county
If resources are needed from the community that they should be available
Employment opportunity as needed
Having a being able financially support family/full time jobs/well paid jobs
Many local job opportunities and opportunities to volunteer are needed
There are many without a computer & the computer is key to finding & applying for jobs
Youth development as need
Support for kids after school/youth centers/social activities for kids/structure for youth beyon sports
Expanding parks and making them more accessible for kids
We do not have anything for teenage youth
Named resources as asset
Area churches/food pantries/Health Department/park districts/schools districts/ Senior Services/YMCA
PADS is a great asset in the community
Private sports leagues for children
Mental Health Themes

Emotional stability as essential
- How one thinks about self/mentally stable/how you feel/interpret own thoughts & others
- The cognitive ability to understand what is going on in your head
- Making sure that you are doing everything you can to stay sane

Lifestyle stability as essential
- Good conscience/take care of self/completes functions of daily life/move forward positively/stay active
- Being able to make good decisions for yourself

Healthy behaviors
- Having healthy behaviors

Stress moderation as essential
- Reasonable stress-not worrying constantly/manage stress level/positive outlook/anxiety issues
- Being stable enough to be stress and worry free

Positive thoughts
- Positive thoughts

Relationship boundaries as essential
- Happy relationships/ability to function socially/take care of family/healthy relationships/not letting others influence

Being able to balance work, family, & social commitments
- Having a close family connection with healthy, open communication
- Access to care as need

Need affordable MH treatment; insurance companies are difficult; need MH outreach
- People cannot afford it

As the county continues to grow we will probably need more supportive services

Mental Health Themes

Community resources as need
- More activities for seniors & youth/transit options/prescription pain pills
- More places for group functions like parks & shopping centers
- There is a general lack of gathering places to relieve stress

Awareness as need
- People need to be aware of services/where to go for help/no mental health services in community
- I do not see a lot of things in our community related to mental health
- People need a place to go when they need help or information

Education as need
- Education about MH for the public/raise awareness of MH issues/MH and drug addiction
- Need for more education, stigma to MH causes those in need not to come forward
- Connection with social health, awareness of activities that promote mental health

Nonprofit resources as asset
- Area YMCA/Health Department/public parks/Senior Services
- Senior Services brings doctors to present on health issues
- Health Department has mental health staff to work with people with low income or no money

Community resources as assets
- Center for Alzheimer's/Physicians that can treat MH/school programs/counseling services
- Community is calm, quiet, & peaceful, leads to a non-stressful environment

There are many resources, clinics, and physicians
Environmental Health Themes

Clean surroundings as essential
Surroundings affect health/quality of environment/clean community/take care of land
Good recycling programs and public transportation programs
How the environment effects residents
Programs and services as essential
We have good services/PADs an asset/river good for boaters/need sidewalks/need curbs
Public transport allows for cutting down on pollution from personal vehicles
Insect control, trash pickup, recycling, & skin product testing
Air/water as essential
Air quality is good/clean water/not much air pollution/clean air & water/truck traffic could effect air
The quality of the air and the overall state of the surrounding environment
Clean air and water
Community surroundings as context
Have access to outdoor activities/good outdoors/open green space/slum lords/poor sidewalks
Clean community, I do not feel endangered at all.
I have noticed upkeep in neighborhoods and park districts are clean
Cleanliness/pollution as context
Clean community/construction is dirty/keep the land clean/discard things properly
It is a rural area, there may be a lot of pesticides we do not know about
I see more electric cars around the community lately

Environmental Health Themes

Air/water concerns as need
Radium in water/risk of river flooding/clean up river banks/do not allow burning/public water not safe
Increased pollution in Fox River
Water seems clean, although it worries me that it seems highly chlorinated
Recycling interests as need
Recycling/electronic recycling/plenty of people recycle/appliance pick-up
Everywhere I go I see opportunities for recycling cans, bottles, & paper
Recycling options, Illinois does not recycle Styrofoam, we need a program for that
Parks and preserves as asset
Clean parks/more parks/plenty of green spaces/lots of parks/forest preserves
There are nature preserves and no pollution in the area
Lots of parks, trails, forest preserve areas, & the kayak chute at the Fox River
Clean air/water as asset
No smog/clean water and air/rural with less air pollution/water seems fine/well-kempt streams
I think our water department does a great job keeping our water safe
Water here seems very clear
Physical Health Themes

Body function as essential
- Body is functioning/gets me to work & home/body is operating/move comfortably
- Feeling good every day
- A healthy body, well maintained

Exercise and fitness as essential
- Being fit/exercising/best shape possible/appropriate weight/be active/care for body
- You are up and active and not staying idle
- Maintaining your body at whatever age you are

Fitness concerns as need
- Increase awareness in kids/out-of-school activities for kids/affordable park activities
- Fitness classes should be provided to those who cannot afford membership

Would be nice if we could walk more places, we do not have enough sidewalks

Access to care as need
- Difficult to access specialty care/cost of dental/must have insurance to access/no nursing home
- Not sure about access in more rural areas
- I have Medicaid and this makes it hard to get medical services
- Nutrition concerns as need
- School lunches are processed/schools portions/produce is expensive
- While I see vegetable stands, more health food stores
- Farmers market would be great, there is a lack of access to fresh produce

Physical Health Themes

- Fitness options as asset
- Opportunities for exercising/ physical activities programs/health clubs
  - There are more fitness centers opening, there is an increased interest in fitness
  - Bike paths, running paths, open spaces, gyms, and parks are abundant

- Community resources as asset
- Biking paths/fitness centers/park districts/sports programs/walking paths

- Access to grocery stores
- The outdoors are important

- Access to care as asset
- Both Rush Copley/community immediate care centers/good doctors
  - Access to hospitals and doctors in the event that health problems arise
  - Right now, hospitals are close enough
Community Resilience Themes

- Cooperation and helpfulness as essential
- Work together/many interested in helping/some not interested in helping/glued to electronic devices
- We should face challenges together in ways that deals with the problems
- The community may still be small enough to be tight-knit & able to work together
- Adaptability and change as essential
- Some towns do not want change/long time residents do not welcome change/some not adaptable
- Need to continually change and adapt, trainings and drills need to be ongoing
- If a community wants to evolve and survive, it has to focus
- Community communication as essential
- Texting rather than personal/listen to others/everyone knows one another/stay connected
- There needs to be more communication
- Not sure there is enough communication about change or adaptation
- Disaster preparedness as need
- Need tornado plans/responders trained/zombie apocalypse/preparedness activities
- We have good law enforcement, fire control, & ambulance, but they are limited
- We have not been tested in a real disaster

Community Resilience Themes

- Social concerns as need
- Schools must support kids/dropouts are less resilient/need social services/Latino outreach
- One of the fastest growing counties around
- Increased drug use
- Socioeconomic concerns as need
- Socioeconomic disparity/affordable rent/foreclosure rate/lack of high paying jobs/lack of funding
- Insurance will not pay for rehabilitation
- Awareness of hunger and education problems needs to be present
- Community context as asset
- Neighbors are supportive/good community awareness/health conscious/many providers
- Town meetings
- Neighborhood watch groups
- Named resources as assets
- Emergency services/food pantries/Health Department/law enforcement/local schools
- In small towns everyone still knows each other
- Everyone took fairly good precautions during the Ebola scare, so we seem ready on an outbreak level
Emergent Themes (Findings)

Meaning Making
- Both mind and body is essential to health and wellbeing
- Socioeconomic stability is essential to social wellbeing
- Emotional stability is essential to mental health
- Environmental health is identified with environmentalism & recycling
- Fully functioning body is essential to physical health
- Spirit of cooperation and helpfulness is essential to community resilience

Community Themes
- Access to care is identified as a need for health and wellbeing
- Availability of resources is identified as a need for social wellbeing
- Access to care is identified as a need for mental health
- Air & water concerns are identified need in environmental health
- Fitness concerns are identified as a need for physical health
- Access to care is identified as a need for physical health

Disaster preparedness planning is identified as a continued need for community resilience

Community connectedness including sidewalks and social gathering places is a need

Community Strengths
- Community resources are assets to social wellbeing
- Organizational resources are identified as an asset for mental health
- Parks and preserves are assets to environmental health
- Fitness options available are identified as an asset for physical health
- Our community cooperative context is identified as an asset for community resilience
- Community connectedness including small town and public centers of activity is a strength

The Kendall County Health Department is grateful for the many community partners which have been thoughtful participants in our community health assessment process thus far; especially community interviewees, Aurora University Interns, and Rush-Copley Medical Center. Please feel free to contact Amaal at the Kendall County Health Department with further input or insights at (630) 553-8097.
COMMUNITY THEMES & STRENGTHS ASSESSMENT ASSETS MAP

Forces and Assets For Change

Access to Higher Education, Growing Economy, KCDEE Onsite, Proximity to Chicago

Job Loss

Poverty/Socio-economic Duress

PADS, Mental Health Services, Food Pantry, School-based Supports, Community Action Services, KAT Transportation.

Community Emphasis, Faith-Based, Community Cohesion, Inter-Generational, Building Community

Missed opportunities for Greatness

Access to Care

Balancing Growth

Availability of Health Services, Reduced Stigma

Access to Care

Financial Disparities

Low Cost Services at KCHD, KCDEE.

Fear (economic)

Immigration Safety, Economic (sound science), Immunizations

Lack of State Budget

Diversified Funding Streams, Active Grant Research

Water Contamination

Surveillance Systems in Place, Sound Science about Trends (e.g.: Lyme’s Disease, West Nile Virus and Chikungunya)

Vector-borne Disease

Kendall County Health Department
Forces of Change Assessment
November 19, 2015
2016-2021 Community Health Improvement Plan

Community Health Status Assessment

Presented to Community Partners by the Kendall County Health Department
August 27, 2015

Executive Director Comments

We aspire to educate, motivate, inspire, and empower citizens of Kendall County to make healthy choices by offering optimal opportunities for access to health care/health services, while encouraging citizens to demonstrate healthy lifestyles and social well-being that positively contributes to a common good and growing community spirit.
2011-2016 Community Health Plan Priorities

- **Reduction of Indoor Radon Exposure through Health Education & Mitigation**

- **Increase Socio-Economic Well-Being through Participatory Health Education**

- **Prevention of Youth High Risk Behaviors through Early Intervention**

- **Reduction of Obesity through Participatory Health Education**
REDUCTION OF **INDOOR RADON EXPOSURE**
THROUGH **HEALTH EDUCATION & MITIGATION**

- Decrease Kendall County residents’ exposure to indoor radon by means of increasing the number of Kendall County homes receiving radon mitigation services by 3% annually. *(Outcome Objective)*

  - A 2011 target of 133 homes to be mitigated of dangerous levels of indoor radon gas....
    
    .....was met and exceeded as 155 homes received mitigation services (20%).

  - A 2012 target of 137 homes to be mitigated of dangerous levels of indoor radon gas....
    
    .....was met and exceeded as 140 homes received mitigation services (5%).

Source: IEMA, 2015
Moving the needle...

- 2013, KCHD began reaching out to residents whose KCHD AirChek tests revealed indoor radon above the EPA action limit.
  - Ensuring test results understood, answering questions, and inquiring on mitigation efforts.
  - Conversations expanded in line with evolving messaging.
    - In 2013, many seemed unaware of what radon is. These calls took slightly more time because they had excellent questions able to clarified.
    - In 2014, people appeared increasingly familiar with radon and associated hazards; interested in what they could do to remove it from their homes.
    - 2015, calls in process

Reduction of Indoor Radon Exposure through Health Education & Mitigation

- Increase the numbers of indoor radon measurements performed in Kendall County by 3%, annually. (Impact Objective)

Radon Test Kits Sold vs. Radon Tests Run

- Kendall County municipalities now require radon resistant (new) home construction. (Impact Objective)
Radon

**Risk Factors**
- Prevalent throughout Kendall County
- Lack of awareness
- Cost of mitigation
- Radon-related policy
- Smoking (synergistic)

**Protective Factors**
- Generate and increase awareness
- Testing made accessible
- Mitigation made affordable
- Radon resistant construction
- Smoking cessation

Learnings and Future Applications

- The **high prevalence** of indoor radon concentrations
  - Population-based awareness education a staple
- **Revelations from our community and community partners:**
  - **Common misconceptions** about radon (using fans, short term exposure risks)
  - The **cost of mitigation**. We learned to adjust our message to ensure we informed them about simple, cost effective steps to lower radon levels
  - **Messaging pitfalls** to avoid (perceived government regulation)
Learnings and Future Applications

- Learning outreach and communication
  - Media blitz vs. sporadic year round messaging
- The message itself...
  - Competition with other information in print/on the internet, we needed to “break through the noise”
  - Must use “hard hitting” information to get attention
    - “47% of tests in Kendall show levels over the action limit”
    - “4 pCi/L of radon is the equivalent amount of radiation as smoking a half a pack of cigarettes a day.”

Lessons learned are key as they can be applied to most aspects of our program work
INCREASE *Socio-Economic Well-Being*

THROUGH PARTICIPATORY HEALTH EDUCATION

- By 2016 70% of target population will improve socioeconomic well-being. *(Outcome Objective)*

*4 separate courses offered to the public over 2012-13*

  - Tested a new approach via pilot program

---

INCREASE *Socio-Economic Well-Being*

THROUGH PARTICIPATORY HEALTH EDUCATION

- By 2016, educate single parent families and the elderly, targeted populations, on the importance of understanding debt to income ratio through a *Financial Fitness Educational Series and Family Self-Sufficiency Case Management*. *(Impact Objective)*
  - *A Financial Fitness curriculum is in place and has been taught to a target group of KCHD staff, as a pilot program.*

- By 2016, promote increased financial self sufficiency among target population as evidenced by post-test scores. *(Impact Objective)*
  - The pilot program group provided a baseline score (aggregate data via pre-test) from which to evaluate curriculum and strategy effectiveness pertaining to debt/income ration (post-test).
Pilot Program

- Partnership with Castle Bank
- Six unique sessions presented in 60 min time slots over the lunch hour.
- Sessions delivered in a manner in which attendees felt **comfortable and confident engaging**.
- The sessions covered a variety of financial self-sufficiency-related topics, such as:
  - Saving and Budgeting
  - Understanding Your Credit Score
  - Refinancing Your Home
  - Home Buying Made Simple
  - Fraud and Identity Theft

- **One-on-one meet-and-greet sessions offered.**

---

Pilot Program Results

- Pilot group revealed a **91% increase in ability to achieve a healthy debt-to-income ratio**

![Diagram showing Financial Fitness Survey: Debt to Income Ratio Outcome Evaluation](image)
Pilot Program Survey Results

1. Do you have at least $3000 or three months of living expenses saved up to cover your emergencies? (Pre = 54%, Post = 80%)
2. Are you participating in at least one pension program? (Pre = 13%, Post = 70%)
3. Do you save or invest beyond your retirement plan or emergency funds? (Pre = 33%, Post = 90%)
4. Are you aware of how much you need to save each month to retire at the age you would like? (Pre = 25%, Post = 60%)
5. Are you investing or saving money with each paycheck in a savings account, money market, or mutual fund? (Pre = 54%, Post = 80%)
6. Are you paying your credit cards in full every month? (Pre = 50%, Post = 80%)
7. Are you paying your bills in full each month? (Pre = 71%, Post = 90%)
8. Have you reviewed your credit report lately? (Pre = 58%, Post = 80%)
9. Do you balance your checkbook each month? (Pre = 50%, Post = 90%)
10. Do you track your monthly expenses? (Pre = 71%, Post = 60%)
11. Are you saving at least 10% of your gross income each month? (Pre = 38%, Post = 50%)

Socioeconomic Self-Sufficiency

Risk Factors
- Lack of education/job skills
- Unemployment, underemployment
- Lack of financial management knowledge/skills/tools
- Fear of losing safety net assistance (short-term thinking)
- Stigma/misunderstood

Protective Factors
- Financial management knowledge/skills/tools
  - Made easily accessible
- Parents leading by example
- Measure of resiliency/creativity (survival skills)
- Being understood
Future Applications

- Capitalize on technology to **increase community access** to (and participation in) Financial Fitness courses
  - Web-based offerings
  - In-house computer station
- Engage Community Action Services **clients**, and **local schools and churches**
- Focus on **teenagers, young adults**
Mental Health Services

Priority: Prevention of Youth High Risk Behaviors Through Early Intervention

Health Problem: High Risk Behavior in Youth that Could Lead to Poor Behavioral Health Outcomes

Risk Factors

- Low Academic Responsibility
- Limited Domestic Responsibility
- Unhealthy or Limited Social Connectedness
- Engagement in Delinquent Behavior
- Low Mental Health Resilience

Prevention of Youth High Risk Behaviors Through Early Intervention

By December 1, 2016, the target population will improve in behavioral health well-being indicators by 60% in four out of the five following domains (Outcome Objective):

Protective Factors.....
- Academic responsibility
- Domestic responsibility
- Healthy social connectedness
- Refraining from delinquent behavior
- Mental health resilience
The Strategy

- MHS is proactively working to minimize if not avert select youth high risk behaviors in a target population comprised of Plano HS students representing a diverse cross section of students in terms of gender, class, culture/ethnicity, academic performance, connectedness to the school, and level of delinquency contacts with the school office. MHS staff engage students weekly, in meaningful discussion on a variety of high-risk behavior-based topics; the setting being a weekly study hall.

Mental Health Services

Priority: Prevention of Youth High Risk Behaviors Through Early Intervention

EARLY INTERVENTION TOPICS

- **LOW ACADEMIC RESPONSIBILITY**: Academic goal setting, study tips, post high school study engagement and vocabulary

- **LIMITED DOMESTIC RESPONSIBILITY**: Values identification, communication skills, problem solving

- **UNHEALTHY OR LIMITED SOCIAL CONNECTEDNESS**: Leadership skills, pro-social engagement, identifying healthy peer and other relationships, team building exercises

- **ENGAGEMENT IN DELINQUENT BEHAVIOR**: Continuum of use and risk factors of alcohol and other drug use, tobacco information, factors in and resistance to bullying, refrain from high risk behaviors

- **LOW MENTAL HEALTH RESILIENCE**: Understanding anger, anger management, stress management, solution focused problem solving, healthy coping
Prevention of Youth High Risk Behaviors through Early Intervention

- For school year 2011/2012, 24% of students assessed showed improvement in four out of five protective factor domains.
  - 29% of students assessed showed improvement in three out of five domains.

- For school year 2012/2013, 17% of students assessed showed improvement in four out of five protective factor domains.
  - 22% of students assessed showed improvement in three out of five domains.

- For school year 2013/2014, 12% of students assessed showed improvement in four out of five protective factor domains.
  - 29% of students assessed showed improvement in three out of five domains.

- For school year 2014/2015........
  - Awaiting complete set of data
  - 50% of students showed improvement in domestic responsibility.
  - 25% showed improvement in mental health resilience.

Prevention of Youth High Risk Behaviors through Early Intervention

- Over the first three school years of the Early Intervention program, 53% of students showed improvement in four out of five domains.

- During IPLAN process, progress has been shown in protective factors through early intervention efforts.

- It appears that early intervention education can help to reduce youth high risk behavior in some of the measured domains.
Usage of Early Intervention Strategies in Treatment

- Holistic approach to mental health and wellbeing topics for all treatment and educative endeavors.
- Continued focus on mental wellbeing in diverse life contexts, as well as development of protective factors.
- Continued family systems emphasis and strengths based client focused approach.

Usage of Early Intervention Strategies in Population Based Work

- Promotion and development of protective factors in prevention efforts related to mental health and substance abuse, in both clinical and public outreach work.
- Strive to identify high risk populations.
- Early intervention efforts inclusive of high risk populations in both English and Spanish language.
- Ensure intervention efforts are accessible to diverse populations.
REDUCTION OF OBESITY THROUGH PARTICIPATORY HEALTH EDUCATION

• By 2016 increase the number of Kendall County residents in target group who have a healthy BMI (not overweight or obese) by 5%. (Baseline = 38.5% BRFSS data) (Outcome Objective)

2011 – 2012: Adopt Health Weight Habits; A Class to Take Back Control
Reduction of Obesity through Participatory Health Education

Community Health Services actively promoted the reduction of obesity through participatory health education through partnership with Oswego Senior Center, University of Illinois Extension, Rush Copley Medical Center, Oswego Park District, Northeastern Agency on Aging and Meijer Food Stores.

Healthy Habits is a person-centered health and wellness program that included general elements of good nutrition, physical activity and a connection between sound emotional health and eating.

Two eight week sessions per year, bi-weekly classes; 75 participants served.

Pre and Post Health Behavior and Self Efficacy Survey, including biometrics, served as evaluation tool.

Reduction of Obesity through Participatory Health Education

- Information, demonstration, and encouragement were key elements to the success of the program.
- Participant feedback a key factor in evolving/shaping the program.
- While unable to report on BMI data for the first two years, participant surveys revealed increases in:
  - Knowledge of how healthy foods and lifestyle can make a difference in their wellbeing.
  - How to shop for and cook healthier meals.
  - Understanding the importance of movement.
  - Understanding how to read nutrition labels.
  - Ability to eat healthier at home and dining out.
  - Knowing how to adjust recipes to make them healthier.
  - Ability to identify a variety of ways in which to incorporate exercise into their lives.
Reduction of Obesity through Participatory Health Education

Summer and Fall sessions, 2014....

- Seventeen survey results submitted to and analyzed by statisticians at U of I, Champaign-Urbana
- Overall, 94% (16) indicated increasing their confidence or skills in managing their health and wellness.
- A summation of survey results follows........

2014 Survey Results
Improvement in Actions that Lead to Better Health
(N=16)

- 94% (15) indicated that they made healthier food choices by using the USDA label.
- 81% (13) reported improving their ability to more easily prepare healthy foods.
- 75% (12) reported eating five servings of fruits and vegetables daily more often.
- 69% (11) took action to walk or exercise 30 minutes daily.
2014 Survey Results
Increased Knowledge of Healthy Food Consumption and Exercise
(N=17)

- 65% (11) now recognize 1500 mg as the upper limit for daily sodium intake.
- 65% (11) can now correctly identify fruit as a healthy carbohydrate.
- 53% (9) can now correctly identify canola oil as the healthiest dietary fat.
- 41% (7) now recognize chicken as the healthiest protein.
- 29% (5) now know that 30 minutes of exercise five times a week is the recommended level.

2014 Survey Results
Improved Confidence in Developing Healthy Habits
(N=17)

- Reading food labels, 88% (15)
- Knowing which foods have carbohydrates, 82% (14)
- Using the food label to compare foods, 82% (14)
- Preparing healthy meals, 76% (13)
- Identifying foods that are heart healthy, 76% (13)
- Using less salt to flavor foods, 76% (13)
- Eating at least three regularly spaced meals a day, 71% (12)
- Consuming appropriate amounts of fat, 59% (10)
- Being physically active 30 minutes daily, 59% (10)
2014 Survey Results
Changes in Self Perception
(N=17)

- 18% (3) indicated an increase in general daily happiness level.
  - 76% (13) reported remaining “content” or “generally happy” both before and after the program; while one participant reported remaining “stressed”.
- 71% (12) reported increased satisfaction with body image/how they felt about their body after the program.
- 76% (13) indicated a post-program increase in energy level, feeling like doing things, and accomplishing tasks after the program.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Initial BMI</th>
<th>% Change in Weight (Loss)</th>
<th>% Change in BMI (Improved)</th>
<th>% Change in Weight (6 mo.)</th>
<th>% Change in BMI (6 mo.)</th>
<th>BMI</th>
<th>% Change in BMI (12 mo.)</th>
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<td>9</td>
<td>8</td>
<td>Obese</td>
<td>17</td>
<td>Overweight</td>
</tr>
<tr>
<td>#2</td>
<td>Obese</td>
<td>3</td>
<td>4</td>
<td>9</td>
<td>10</td>
<td>Obese</td>
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<tr>
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<td>5</td>
<td>19.9</td>
<td>19</td>
<td>Overweight</td>
<td>30</td>
<td>Healthy</td>
</tr>
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</table>

* At 6 month follow-up, 50% of members of target group will have achieved a 10% reduction in their body weight.
* By 2016 increase the number of Kendall County residents in target group who have a healthy BMI (not overweight or obese) by 5%. (Baseline = 38.5% BRFSS data)
* Participant #4 was began with a healthy BMI, with a goal of maintenance.
Obesity

**Risk Factors**
- Genetics
- Overeating
- Slow metabolism
- Poor diet
- Physical inactivity
- Environment
- Behavioral/Psychological
- One size fits all approach

**Protective Factors**
- Healthy diet
- Physical activity
- Environment supportive of healthy choices
- Self Confidence
- Policy
- Person-centered/offer options

Future Applications

- Use of participatory education including demonstrations, hands-on experiences appear to increase engagement
  - Exercises modified to meet the needs and abilities of participants
- Offer a holistic approach to health and wellness
- Use of a Person-centered approach including careful listening, addressing participant questions (personal interests and desire for specific information)
- Share our experiences with other community partners
2016-2021 Community Health Improvement Plan

MAPP
Mobilizing for Action through Planning and Partnerships

- ‘A community-driven strategic planning process for improving community health’

1. Local Public Health Assessment
2. Community Themes and Strengths Assessment

3. Community Health Status Assessment - identifies priority community health and quality of life issues. "How healthy are our residents?" and "What does the health status of our community look like?"

4. Forces of Change Assessment

Local Public Health System Assessment (LPHSA)
Prominent Findings
Feb. 20th, 2015

LPHSA Purpose: Measures the capacity of the local public health system to conduct essential public health services.

STRENGTHS
- The Kendall County public health system has strong community partnerships, coalitions and organizations that all work together toward common goals and share plans for planning, decision making and responses.
- Community health education occurs throughout Kendall County through meaningful partnerships.
- Waukesha Community College, internships at local colleges and universities, and seminars series offer effective workforce development occurring throughout county.

OPPORTUNITIES
- The Kendall County public health system needs to engage young adults (18-30) in health and well-being activities.
- The Kendall County public health system needs to share health information with providers, make assessments more known, and have the ability to provide layer data from county, state and national levels.
- Community education is occurring, but is it effective and meeting the needs of the county residents? Are we targeting the right audience?
- The Kendall County Health Department would like to employ leadership on research methods that produce effective health outcomes in county residents.
Community Themes and Strengths Assessment
May 28, 2015
Ethnographic Interview Emergent Themes
Source: Kendall County Health Department Ethnographic interviews, 5/15

- **Community Themes**
  - Access to care is identified as a need for both mental health and physical health
  - Availability of resources is identified as a need for social wellbeing
  - Air & water concerns are identified as needs in environmental health
  - Fitness is identified as a need for physical health
  - Disaster preparedness planning is identified as a continued need for community resilience
  - Community connectedness, including sidewalks and social gathering places is a wellbeing need

- **Community Strengths**
  - Community resources are assets to social wellbeing
  - Organizational resources are identified as assets for mental health
  - Parks and preserves are assets to environmental health
  - Fitness options available are identified as assets for physical health
  - Our community cooperative context is identified as an asset for community resilience
  - Community connectedness, including small town and public centers of activity is also an asset

Kendall County
Demographics and Utilization

Prepared for
Kendall County Health Department
Demographics

Total Population

- Kendall County population experienced over 6% growth from 2010 to 2015, while IL and U.S. experienced less than 5%

<table>
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<tbody>
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<td>Kendall</td>
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<td>38,038,049</td>
<td>10,714,453</td>
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</table>

Source: Nielsen based on the 2000 and 2010 Census, 7/2015
Total Population

- Most cities located in Kendall County experienced positive growth between 2010 and 2015 with the exception of Newark (-1.9%, -61 residents)

<table>
<thead>
<tr>
<th>BRISTOL, MONTGOMERY, NEWARK, OSWEGO, PLANO AND YORKVILLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL POPULATION: 2000-2015</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Bristol</td>
</tr>
<tr>
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</tr>
<tr>
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<tr>
<td>Plano</td>
</tr>
<tr>
<td>Yorkville</td>
</tr>
<tr>
<td>Subtotal</td>
</tr>
<tr>
<td>Total Kendall County</td>
</tr>
</tbody>
</table>

Note: 1. Data is from the 2000 and 2010 Census, 2015.
2. Includes cities that are at least 80% located within Kendall County. Does not include PC Boro.

Population by Age

- Growth for 25-34 age group has declined by 13% between 2010 and 2015
- Growth for the combined 45+ age groups increased by 19% between 2010 and 2015 (+6,264)

<table>
<thead>
<tr>
<th>KENDALL COUNTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE CHANGE: 2010 AND 2015</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Age Group (Years)</td>
</tr>
<tr>
<td>Age 0 to 4</td>
</tr>
<tr>
<td>Age 5 to 9</td>
</tr>
<tr>
<td>Age 10 to 14</td>
</tr>
<tr>
<td>Age 15 to 17</td>
</tr>
<tr>
<td>Age 18 to 20</td>
</tr>
<tr>
<td>Age 21 to 24</td>
</tr>
<tr>
<td>Age 25 to 34</td>
</tr>
<tr>
<td>Age 35 to 44</td>
</tr>
<tr>
<td>Age 45 to 54</td>
</tr>
<tr>
<td>Age 55 to 64</td>
</tr>
<tr>
<td>Age 65 to 74</td>
</tr>
<tr>
<td>Age 75 to 84</td>
</tr>
<tr>
<td>Age 85 and over</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
Age Distribution

- Ages 25-44 account for the highest percent of the population in Kendall County (29.3%) and in the U.S. (26.0%) in 2015.

<table>
<thead>
<tr>
<th>Age Group (Years)</th>
<th>Kendall 2010 (Actual)</th>
<th>Kendall 2015 (Estimate)</th>
<th>U.S. 2010 (Actual)</th>
<th>U.S. 2015 (Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages 0 to 4</td>
<td>8.3%</td>
<td>7.6%</td>
<td>6.5%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Ages 5-17</td>
<td>22.3%</td>
<td>21.0%</td>
<td>17.5%</td>
<td>18.0%</td>
</tr>
<tr>
<td>Ages 18-24</td>
<td>9.9%</td>
<td>8.7%</td>
<td>9.9%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Ages 25-44</td>
<td>32.7%</td>
<td>26.3%</td>
<td>26.9%</td>
<td>26.0%</td>
</tr>
<tr>
<td>Ages 45-64</td>
<td>13.9%</td>
<td>13.9%</td>
<td>14.9%</td>
<td>13.8%</td>
</tr>
<tr>
<td>Ages 65-74</td>
<td>8.8%</td>
<td>8.7%</td>
<td>11.3%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Ages 75+</td>
<td>2.8%</td>
<td>3.2%</td>
<td>2.0%</td>
<td>3.2%</td>
</tr>
</tbody>
</table>

Median Age

- Kendall County has a significantly younger population as compared to state and national median age.

- The median age for Kendall County increased from 2010 to 2015 (+1.8 years) and also increased at the state and national level.

<table>
<thead>
<tr>
<th>Year</th>
<th>Kendall</th>
<th>IL</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 (Estimate)</td>
<td>34.5 Yrs.</td>
<td>37.5 Yrs.</td>
<td>37.6 Yrs.</td>
</tr>
<tr>
<td>2015 (Actual)</td>
<td>32.7 Yrs.</td>
<td>35.5 Yrs.</td>
<td>37.1 Yrs.</td>
</tr>
</tbody>
</table>

KENDALL COUNTY, IL AND U.S. MEDIAN AGE, 2010 AND 2015

Population by Gender

- Kendall County splits the population of males and females 50/50.

<table>
<thead>
<tr>
<th>Gender</th>
<th>2010 (Actual)</th>
<th>2015 (Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>49.5%</td>
<td>49.4%</td>
</tr>
<tr>
<td>Female</td>
<td>50.5%</td>
<td>50.0%</td>
</tr>
</tbody>
</table>

KENDALL COUNTY POPULATION BY GENDER: 2010 AND 2015

Source: Nielsen based on the 2010 Census, 70215
Population by Race/Ethnicity

- Kendall County’s Hispanic population has remained fairly consistent between 2010 and 2015 (with 15.6% in 2010 to 16.6% in 2015)

<table>
<thead>
<tr>
<th>Race</th>
<th>2010 (Actual)</th>
<th>2015 (Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Alone</td>
<td>63.8%</td>
<td>62.2%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>6.7%</td>
<td>6.1%</td>
</tr>
<tr>
<td>American Indian and Alaska</td>
<td>0.3%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Asian Alone</td>
<td>3.0%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Native Hawaiian and Other</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Some Other Race Alone</td>
<td>5.0%</td>
<td>5.4%</td>
</tr>
<tr>
<td>Two or More Races</td>
<td>4.3%</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>2010 (Actual)</th>
<th>2015 (Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic or Latino</td>
<td>15.0%</td>
<td>16.6%</td>
</tr>
<tr>
<td>Not Hispanic or Latino</td>
<td>04.4%</td>
<td>03.4%</td>
</tr>
</tbody>
</table>

Source: Nielsen based on the 2010 Census, 7/2015

Households

- 80% of Kendall County households are family households
- Kendall County has a greater average household size than the state and national average

<table>
<thead>
<tr>
<th>Households by Type</th>
<th>2010 (Actual)</th>
<th>2015 (Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Households</td>
<td>30,097</td>
<td>31,446</td>
</tr>
<tr>
<td>Non-Family Households</td>
<td>7,905</td>
<td>8,250</td>
</tr>
<tr>
<td>Total</td>
<td>37,992</td>
<td>39,696</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Households by Size</th>
<th>2010 (Actual)</th>
<th>2015 (Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Households</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-person household</td>
<td>6,025</td>
<td>6,664</td>
</tr>
<tr>
<td>2-person household</td>
<td>10,586</td>
<td>11,008</td>
</tr>
<tr>
<td>3-person household</td>
<td>6,763</td>
<td>7,178</td>
</tr>
<tr>
<td>4-person household</td>
<td>7,534</td>
<td>7,873</td>
</tr>
<tr>
<td>5-person household</td>
<td>3,932</td>
<td>4,319</td>
</tr>
<tr>
<td>6 or more person household</td>
<td>1,439</td>
<td>1,730</td>
</tr>
<tr>
<td>Total</td>
<td>38,022</td>
<td>40,651</td>
</tr>
</tbody>
</table>

Average Household Size:

<table>
<thead>
<tr>
<th></th>
<th>2010 (Actual)</th>
<th>2015 (Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall</td>
<td>2.54</td>
<td>3.40</td>
</tr>
<tr>
<td>IL</td>
<td>2.61</td>
<td>2.57</td>
</tr>
<tr>
<td>U.S.</td>
<td>2.59</td>
<td>2.57</td>
</tr>
</tbody>
</table>

Note: Source: Nielsen Clariets based on 2000 Census, 7/2015
1. 2010 actual data for Average Household Size is taken from census.gov
Households

- 83% of Kendall County households are married couple families

- Female householders account for 11.6% of households in Kendall County

KENDALL COUNTY
POPULATION BY HOUSEHOLD TYPE AND PRESENCE OF CHILDREN: 2015

<table>
<thead>
<tr>
<th>Households by Type</th>
<th>2015 (Estimate)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Married-Couple Family</td>
<td>26,108</td>
<td>83.3%</td>
</tr>
<tr>
<td>With own children</td>
<td>14,960</td>
<td>47.3%</td>
</tr>
<tr>
<td>No own children</td>
<td>11,329</td>
<td>36.0%</td>
</tr>
<tr>
<td>Male Householder</td>
<td>1,000</td>
<td>5.1%</td>
</tr>
<tr>
<td>With own children</td>
<td>307</td>
<td>2.0%</td>
</tr>
<tr>
<td>No own children</td>
<td>893</td>
<td>2.2%</td>
</tr>
<tr>
<td>Female Householder</td>
<td>3,848</td>
<td>11.6%</td>
</tr>
<tr>
<td>With own children</td>
<td>2,240</td>
<td>7.1%</td>
</tr>
<tr>
<td>No own children</td>
<td>1,408</td>
<td>4.5%</td>
</tr>
<tr>
<td>Total</td>
<td>31,446</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: Based on the 2010 Census, 2015

Household Income

- Kendall County continues to have a higher median household income than the state and national medians

KENDALL COUNTY, IL AND U.S.
MEDIAN HOUSEHOLD INCOME: 2010 AND 2015

<table>
<thead>
<tr>
<th></th>
<th>2010 (Actual)</th>
<th>2015 (Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall</td>
<td>$79,897</td>
<td>$81,045</td>
</tr>
<tr>
<td>IL</td>
<td>$55,735</td>
<td>$57,978</td>
</tr>
<tr>
<td>U.S.</td>
<td>$51,914</td>
<td>$53,706</td>
</tr>
</tbody>
</table>

Source: Based on the 2010 Census, 2015
Household Income

- Oswego has the highest median household income of zip codes in Kendall County

| BRISTOL, MONTGOMERY, NEWARK, OSWEGO, MEDIAN HOUSEHOLD INCOME: 2015 |
|-------------------------|------------------|
|                        | 2015             |
|                        | (Estimate)       |
| Bristol                | $50,000          |
| Montgomery             | $75,095          |
| Newark                 | $98,805          |
| Oswego                 | $87,331          |
| Plano                  | $97,601          |
| Yorkville              | $90,430          |
| Kendall County         | $81,045          |

Note:
2. Includes only those that are at least 80% located within Kendall County. Does not include PO Boxes.

Utilization
Inpatient Discharges

- Total inpatient discharges originating from cities located in Kendall County have remained fairly flat from 2010 to 2014.
- In the most recent year, the top diagnoses for these admissions were related to childbirth, psychoses, major joint replacement, esophagitis, rehab, sepsis, and pneumonia.

### Kendall County Inpatient Discharges
Includes Oswego, Montgomery, Yorkville, Plano, Newark, and Bristol

<table>
<thead>
<tr>
<th>City</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>5 Year Change Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oswego</td>
<td>2,912</td>
<td>2,707</td>
<td>2,766</td>
<td>2,906</td>
<td>2,888</td>
<td>(24)</td>
<td>-0.8%</td>
</tr>
<tr>
<td>Montgomery</td>
<td>2,500</td>
<td>2,391</td>
<td>2,425</td>
<td>2,535</td>
<td>2,516</td>
<td>16</td>
<td>0.6%</td>
</tr>
<tr>
<td>Yorkville</td>
<td>1,898</td>
<td>1,995</td>
<td>2,039</td>
<td>2,087</td>
<td>2,005</td>
<td>107</td>
<td>8.8%</td>
</tr>
<tr>
<td>Plano</td>
<td>1,100</td>
<td>1,190</td>
<td>1,242</td>
<td>1,057</td>
<td>1,071</td>
<td>(119)</td>
<td>-10.0%</td>
</tr>
<tr>
<td>Newark</td>
<td>283</td>
<td>286</td>
<td>335</td>
<td>268</td>
<td>261</td>
<td>(22)</td>
<td>-7.8%</td>
</tr>
<tr>
<td>Bristol</td>
<td>107</td>
<td>100</td>
<td>107</td>
<td>134</td>
<td>115</td>
<td>8</td>
<td>7.5%</td>
</tr>
<tr>
<td>Total</td>
<td>8,890</td>
<td>8,669</td>
<td>8,914</td>
<td>8,977</td>
<td>8,916</td>
<td>26</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

Notes:
1. Source: HPA COMPdata, 7Q2015 excludes normal deliveries.
2. Includes cities that are at least 90% located within Kendall County. Does not include PO Boxes.

Emergency Department Visits

- Total emergency department visits originating from cities located within Kendall County grew 15% (4,739 visits) from 2010 to 2014.
- In the most recent year, the top diagnoses for emergency department visits were related to chest pain, urinary tract infections, ear infections, headaches, abdominal pain, pharyngitis, pneumonia, bronchitis, gastroenteritis, dizziness, fever, flu, and head injuries.

### Kendall County Emergency Department Visits
Includes Oswego, Montgomery, Yorkville, Plano, Newark, and Bristol

<table>
<thead>
<tr>
<th>City</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>5 Year Change Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oswego</td>
<td>9,750</td>
<td>10,085</td>
<td>10,043</td>
<td>9,660</td>
<td>10,172</td>
<td>422</td>
<td>4.3%</td>
</tr>
<tr>
<td>Montgomery</td>
<td>9,736</td>
<td>9,876</td>
<td>9,820</td>
<td>9,796</td>
<td>9,997</td>
<td>261</td>
<td>2.7%</td>
</tr>
<tr>
<td>Yorkville</td>
<td>5,663</td>
<td>6,010</td>
<td>7,030</td>
<td>7,609</td>
<td>8,197</td>
<td>2,634</td>
<td>47.3%</td>
</tr>
<tr>
<td>Plano</td>
<td>4,593</td>
<td>4,655</td>
<td>5,437</td>
<td>5,523</td>
<td>5,928</td>
<td>1,335</td>
<td>29.1%</td>
</tr>
<tr>
<td>Newark</td>
<td>949</td>
<td>1,069</td>
<td>1,077</td>
<td>966</td>
<td>967</td>
<td>16</td>
<td>1.9%</td>
</tr>
<tr>
<td>Bristol</td>
<td>292</td>
<td>305</td>
<td>343</td>
<td>391</td>
<td>361</td>
<td>99</td>
<td>33.6%</td>
</tr>
<tr>
<td>Total</td>
<td>36,883</td>
<td>31,938</td>
<td>35,750</td>
<td>34,150</td>
<td>35,622</td>
<td>4,736</td>
<td>15.3%</td>
</tr>
</tbody>
</table>

Notes:
1. Source: HPA COMPdata, 7Q2015.
2. Includes cities that are at least 90% located within Kendall County. Does not include PO Boxes.
COMMUNITY ACTION
Presented by: Diane Alford

OVERVIEW

- Poverty
- Housing
  - Housing cost burden
  - Foreclosure
- Employment
  - Commuter rate
  - Kendall Area Transit (KAT)
  - Unemployment
- Education
- Assets in the Community
Poverty

- In 2013, the poverty rate in Kendall County was 5.8%.
- In Kendall County, 49.45% of persons in poverty are female-headed households compared to male-headed households at 12.49%, and married couples at 38.06%.

Poverty in Kendall County, Illinois

2013 poverty estimates show a total of 10,016 persons living below the poverty level in the report area. Poverty information is at 100% of the federal poverty income guidelines.

<table>
<thead>
<tr>
<th>Report Area</th>
<th>All Ages</th>
<th>All Ages Poverty Rate</th>
<th>Age 0-17</th>
<th>Age 0-17 Poverty Rate</th>
<th>Age 2-17</th>
<th>Age 2-17 Poverty Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Area</td>
<td>10,016</td>
<td>15.6%</td>
<td>4,183</td>
<td>4.5%</td>
<td>2,791</td>
<td>8.1%</td>
</tr>
<tr>
<td>Grundy County, IL</td>
<td>3,684</td>
<td>14.3%</td>
<td>1,381</td>
<td>10.7%</td>
<td>958</td>
<td>9.6%</td>
</tr>
<tr>
<td>Kendall County, IL</td>
<td>6,337</td>
<td>15.8%</td>
<td>2,797</td>
<td>7.4%</td>
<td>2,332</td>
<td>7.6%</td>
</tr>
<tr>
<td>Illinois</td>
<td>1,431,296</td>
<td>14.6%</td>
<td>613,204</td>
<td>20.4%</td>
<td>457,235</td>
<td>19.6%</td>
</tr>
<tr>
<td>United States</td>
<td>160,900,660</td>
<td>15.8%</td>
<td>16,086,960</td>
<td>22.2%</td>
<td>10,158,032</td>
<td>20.8%</td>
</tr>
</tbody>
</table>

Note: This indicator is compared with the state average. Data source: U.S. Census Bureau. Poverty and Income, 2017. Source: Geography County.
Housing – Housing Cost Burden

- Housing cost burden – indication of what percentage of housing costs exceed income
- As of 2013, Kendall County’s household burden was **37.37%**
- This percentage was:
  - ~4% higher than Grundy County
  - 1.43% higher than Illinois
  - 1.9% higher than United States
- Significant disparity at county, state, and national level
- Kendall County is the 2nd most expensive county in the state in which to reside
  - A minimum wage of $22.52/hr is needed to afford a 2 bedroom home

Housing – Foreclosure

- Kendall County foreclosure rate:
  - 1 in every **387** houses
- Grundy County foreclosure rate:
  - 1 in every **1038**
- In 2008, Kendall County reported 97 homeless children in the schools
- Since then (as of 2015), that number has risen to 233
**Employment – Commuter Rate**

- **Average commute time (minutes) for Kendall County**: 31.93
  - This average shows disparity when compared with the state (26.88) and national average (24.42) commute time

- **Percent of workers traveling 30-60 minutes for Kendall County**: 35.5%
  - This average shows disparity when compared with the state (31.89%) and national average (27.64)

- Why do the people who live here…not work here?

**Employment – Kendall Area Transit (KAT)**

- **From FY2014-2015:**
  - 14.4% increase in those using the KAT para-transit system
  - There is a demand and a growing need for this service

- However, due to budget costs and an aging fleet, accommodating those demands may not be feasible
EMPLOYMENT - UNEMPLOYMENT

- Kendall County unemployment rate as of May 2015: 5.2%
- Although the rate has decreased, the real question is:
  - Where are those people now?
  - Are they financially struggling? (Reminder: poverty rate in Kendall County has increased since 2000)
- According to the labor dept, 7 million Americans are working part-time jobs even though they want full time work
  - This is 3 million more than in 2007 when the last recession began

![Unemployment Rate in Kendall County](image)

EDUCATION

- Education within Kendall County
  - 22.5% of population has at least a bachelors degree
  - 11.6% of population has at least a masters degree
  - Kendall ranks 6th in the state for the amount of people with higher education degrees

![Percentage of Educational Attainment in Kendall County, Illinois from 2009-2013](image)
ASSETS WITHIN THE COMMUNITY

- KCHD is the chief provider and/or referral source for both personal and mental health promotion
  - Low Income Home Energy Assistance Program (LIHEAP)
  - Illinois Home Weatherization Assistance Program (IHAP)
  - Percentage of Income Payment Plan (PIPP)
  - Scholarship programs for economically disadvantaged students
  - Kendall County Health Department’s Women, Infants, and Children Program
  - Kendall County Health Department’s Outreach Case Management
  - Kendall Senior Services
  - Kendall County Veteran’s Assistance Commission
  - Kendall County Housing Authority

ASSETS WITHIN THE COMMUNITY

- Meals on Wheels
- School Lunch Programs
- Growing and continual working relationship with community stakeholders
- Nearby community colleges and vocational center
- Public Aid Offices
- 2 local food pantries
- Salvation Army
- Red Cross
- PADS shelter
Resources


Kendall County Health Department (n.d.). Kendall-Grundy Community Action Community Service Block Grant Community Action Plan 2016 Comprehensive Plan. Yorkville, IL & Morris, IL: Kendall County Health Department Staff & Grundy Outreach Staff.


Overview

- Mental Health Prevalence
  - Treatment
  - Depression
  - Posttraumatic stress disorder (PTSD)
  - Attention Deficit Hyperactivity Disorder (ADHD)
  - Autism
- Elder Wellbeing
  - Fall-Related Injuries
  - Fall-Related Deaths
  - Depression
- Community Violence
  - Cyber-Bullying
  - Domestic Violence
- Substance Abuse
  - Prescription Medication
  - Heroin
  - Alcohol
- Suicide and Violent Death
  - Suicide
  - Homicide
  - Kendall County Self-Violent Death Statistics (2013)
- Assets in the Community

Mental Health Prevalence

- 1 in 5 adults experiences a mental health condition every year
- Mental disorders are illnesses that, when left untreated, can be just as serious and disabling as physical diseases, such as cancer and heart disease.
- For every $1 spent on mental health services, $5 is saved in overall healthcare costs
- In Kendall County (2014):
  - Average of one in four adults (ages 25 and older) say there have been days within the last 30 days that their mental health was not good
Mental Health Prevalence - Treatment

- Fewer than one-third of adults and one-half of children with diagnosed mental health disorders receive treatment every year.
- A social stigma continues to surround mental health disorders, and mental health care is frequently difficult to access.
- In 2013, 10% of adolescents lacked insurance.
  - Even when they are covered, the amount of mental health services they can receive is often limited.

Mental Health Prevalence - Treatment

- Researchers have documented a number of disparities in access.
  - Among adolescents, those that are homeless, served by state child welfare and juvenile justice systems; and are lesbian, gay, bisexual, and/or transgender are often the least likely to receive services.
    - In Kendall County from 2009-2013, the percent population under age 18 in poverty was 5.8%.
    - The Kendall County PADS (Public Action to Deliver Shelter) program, for the 2014-2015 season, assisted 60 guests (13 of those guests were children).
    - It is estimated that PADS had about 1,700 overnight stays compared to about 1,200 in the previous years.
Mental Health Prevalence - Depression

- Depression affects more than 19 million Americans yearly
- Fewer than half suffering from this illness seek treatment
- In Kendall County (2012):
  - 26% of 8th graders felt sad or hopeless for two weeks or more in a row
  - 33% of 10th graders felt sad or hopeless for two weeks or more in a row
    - 25% of 10th graders felt they had no adults to talk to about important issues in their lives
- In Kendall County (from 2010-2014):
  - A 6.3% increase was seen in the number of people treated for a depressive disorder
- In Kendall County (2014):
  - 12.8% of adults ages 65 and older were told they had a depressive disorder sometime during their lives

Mental Health Prevalence – Posttraumatic Stress Disorder

- PTSD affects 3.5% of the U.S. adult population
- Women are more likely to develop the condition than men
- While PTSD can occur at any age, the average age of onset is in a person’s early 20s
- An estimated 24.4 million people have PTSD at any given time
  - That is equal to the total population of Texas
Mental Health Prevalence - Attention Deficit Hyperactivity Disorder

- One of the most common reasons children are referred for mental health services
- Affects as many as 1 in 20 children
- Boys are 3-4x more likely to experience ADHD than girls
- ADHD affects about 4.1% American adults age 18 years and older in a given year
- The disorder affects 9.0% of American children age 13 to 18 years

Mental Health Prevalence - Autism

- Developmental disorder that affects a person’s ability to socialize and communicate with others
- Prevalence rate for autism: 1 in 68 children
- Boys are 4x as likely as girls to develop autism
- Despite many claims that have been highlighted by the media…
  > …strong evidence has been shown that vaccines do not cause autism
Elder Wellbeing

- Between 2000-2050, the proportion of the world’s older adults will double from 11% to 22%
  - As of 2013, the population of persons 65 and older within Kendall County was 8.7%
- Older Americans are more likely to commit suicide than any other group
- Over 20% of adults aged 60 and older suffer from a mental or neurological disorder

Elder Wellbeing – Fall-Related Injuries

- In 2013:
  - 2.5 million nonfatal falls among older adults were treated in emergency departments
  - Direct medical costs of falls were $34 billion
- 1 out of every 3 older adults fall each year
  - Less than half talk to their healthcare providers about it
- Falls are the leading cause of both fatal and nonfatal injuries among older adults
Elder Wellbeing – Fall-Related Deaths

- Fall-related deaths have sharply risen over the past decade.
- ~25,000 older adults died from unintentional fall injuries in 2013.
- Men are 40% more likely to die from a fall than women.
- Older whites are 2.7x more likely to die from falls as their black counterparts.
- Older non-Hispanics have higher fatal fall rates than Hispanics.

Elder Wellbeing – Depression

- More than two million of the 34 million Americans age 65 and older suffer from some form of depression.
- One-third of widows/widowers meet criteria for depression in the first month after the death of their spouse.
  - Half of these individuals remain clinically depressed after one year.
- Depression is a significant predictor of suicide in elderly Americans.
- Suicide rate among white males aged 85 and older is nearly six times the suicide rate in the U.S.
  - 65.3 deaths per 100,000 persons (white males 85 and older).
  - 10.8 deaths per 100,000 persons (US).
Community Violence

- Community violence can occur anywhere, in both suburban and rural areas
- Over 1/3 of girls and boys ages 10-16 years old across the country are victims of direct violence
- Community risk factors for violence:
  - Diminished economic opportunities
  - High concentrations of poor residents
  - High levels of transiency or family disruption
  - Low levels of community participation
  - Socially disorganized neighborhoods

Community Violence – Cyber-Bullying

- More than 1 in 3 young people have experienced cyber-threats online
- ~50% of young people have experienced some form of cyber-bullying
  - 10-20% experience it regularly

In Kendall County in 2012:
- An average of 41% of all 6th – 12th graders reported ever being bullied
- 16% of both 6th and 12th graders were cyber-bullied
- 21% of 8th graders were cyber-bullied
- 22% of 10th graders were cyber-bullied
Community Violence – Domestic Violence

- Every 15 seconds in the U.S. a woman is beaten
- 2 in 5 women who are murdered are killed by their husbands
- ~95% of all cases of partner abuse involve a man beating a woman
- In Kendall County in 2012:
  - 6% of 12th graders admitted that during the past 12 months, someone they were dating had slapped, kicked, punched, hit or threatened them

Substance Abuse – Prescription Medication

- The Centers for Disease Control and Prevention has classified prescription drug abuse as an epidemic
  - Nearly one-third of people aged 12 and over who used drugs for the first time in 2009 began by using a prescription drug nonmedically
- ED visits involving nonmedical use of pharmaceuticals increased 98.4% from 2004–2009
- 1.9 million Americans were either dependent on or abused prescription pain relievers in 2013
Substance Abuse – Prescription Medication

- An increase in painkiller prescribing is a key driver of the increase in prescription overdoses
- The severity of the epidemic varies widely across US states and regions
  - Illinois’ overdose death rate for 2010 (10.0 per 100,000 population) is below the national rate (12.4 per 100,000 population)
- Persons in the United States consume opioid pain relievers (OPR) at a greater rate than any other nation
  - They consume twice as much per capita as the second ranking nation, Canada

Substance Abuse - Heroin

- Nearly half of young people who inject heroin surveyed in three recent studies reported abusing prescription opioids before starting to use heroin
- People abusing pain relievers are switching to heroin because of:
  - Decreased access to pain relievers
  - Relative cost of heroin
- In 2012 about 669,000 Americans reported using heroin in the past year
  - A trend on the rise since 2007
- 156,000 people started heroin use in 2012, nearly double the number of people in 2006
  - This equates to ~427 people starting heroin in 2012...each day
- In Kendall County 2015:
  - In May, a string of three deaths were reported from heroin overdose in only 1 week
  - Heroin use is on the rise and seriously underreported
Substance Abuse - Alcohol

- Nearly 88,000 people die from alcohol-related causes annually, making it the third leading preventable cause of death in the United States.
- In 2012, more than 10% of U.S. children lived with a parent with alcohol problems.
- In 2013, 24.6% of people ages 18 or older reported that they engaged in binge drinking in the past month.
- From 2010-2014, there has been a 21.8% increase in the number of persons from Kendall County who were seen at an ED for alcohol abuse.

In Kendall County in 2012:
- 11% of 6th graders abused alcohol
- 28% of 8th graders abused alcohol
- 49% of 10th graders abused alcohol
- 59% of 12th graders abused alcohol

Suicide and Violent Death – Suicide

- Nationwide in 2013:
  - There were 41,149 suicides
  - This equates to 113.7 suicides per day
  - Average of 1 person every 12.8 minutes killed themselves
  - 1,028,725 annual suicide attempts in U.S.
    - Translates to one attempt every 31 seconds
- In Illinois, the suicide rate for 2013 was 10.3
- The highest firearm suicide rate by age is among those ages 65 and older (10.6 per 100,000 people)
  - The rate for older adults has been relatively steady in recent years; the rate is rising, though, among those ages 41-64
Suicide and Violent Death – Suicide

- In Illinois, 1999-2013:
  - 52.0% of all violence-related injury deaths were due to some form of suicide
  - 21.6% of all violence-related injury deaths were due to suicide firearm
  - Suicide was the leading cause of all violence-related injury deaths in ages 35 and older
  - Suicide was second leading cause of death among the age group of 15-34 in 2013

- From 2010-2014, there has been a 75.7% increase in the number of persons from Kendall County who presented to an ED for suicidal ideation

Suicide and Violent Death – Homicide

- Overall, homicide and suicide accounted for nearly 15% of all deaths in the 10-14 year old age range from 1999-2013

- In Illinois:
  - The highest percentage of violent-related injury deaths was due to homicide firearm (31.2%)
  - Homicide was the third leading cause of death among the age group of 15-34 in 2013
Suicide and Violent Death –
Kendall County 2015 Self Violent Death Statistics

- Ages ranging from 21 to 54 years
- 20s (2), 30s (2), 40s (3), 50s (2)
- 78% (7) male, 22% (2) female
- 89% (8) white, 11% (1) Hispanic
- 67% (6) accidental, 33% (3) intentional
- 67%, involved an illicit drug; 22%, alcohol; 11% prescription medication
- Accidental by cause: 66%, heroin intoxication; 17%, motor vehicle; 17%, prescription medication
- Intentional by method: 67% by firearm; 33% by asphyxiation
- Preventing problem(s) by theme, in order of prevalence:
  - Addiction struggles; relational problems/loss; chronic medical issue(s); chronic depression; socio-economic duress

Assets in the Community

- The Mental Health Unit at the Kendall County Health Department is dedicated to offering residents a variety of services including:
  - Crisis intervention
  - Family and individual therapy
  - Psychiatric services
  - Suicide assessment and intervention
  - Substance abuse services
  - Transitions Program
  - Outreach services
  - Tobacco Program
  - Individual and group services on sight
  - Consultative and education support in community settings
- Working relationship with schools, PADS, State’s Attorney and Senior Services
- Mental Health First Aid Certification courses through Wadhtonsee Community College
- Commitment in prevention, intervention, and treatment
ENVIRONMENTAL HEALTH

Overview

- Foodborne Illness
  - The Fable
  - The Reality
- Radon
- Vector Borne Diseases
  - West Nile Virus
  - Chick-V
  - Lyme Disease
- Groundwater Contamination
  - Nitrate
  - Coliform
- Assets in the Community

Presented by: Aaron Rybski
Foodborne Illness – The Fable

*drops food on floor.*

Germs: Go get it! Quick!

King Germ: No... we must wait 5 seconds... it is the rule!
- Unknown

Unfortunately, it doesn’t work this way.

Foodborne Illness – The Reality

- It makes no difference who you are...
  - Foodborne illnesses can affect anyone and everyone
- It makes no difference what you eat...
  - Foodborne illnesses can affect beef, poultry, seafood, dairy and produce
- Each year from foodborne illnesses:
  - 1 in 6 Americans get sick
  - 128,000 are hospitalized
  - 3,000 die
- Taking these numbers into consideration:
  - 2/3s of all foodborne illnesses go unreported
Foodborne Illness

- For Kendall County in 2014:
  - First known foodborne illness outbreak was documented
    - Over a dozen people were sick
    - Seven people were seen in the ER
    - Two people were hospitalized

Radon

- The leading cause of lung cancer in non-smokers
- EPA Action Limit of radon is 4.0 pCi/L
- EPA Action limit is equivalent radiation as smoking .5 pack of cigarettes a day
- The U.S. EPA/Surgeon General’s office estimate radon is responsible for more than 20,000 lung cancer deaths each year
Radon

- Test run in Kendall County indicates an average of 5.5 pCi/L of radon in homes (action limit is 4 pCi/L)
- This average is higher and shows disparities among neighboring counties including:
  - DeKalb (5.1), Kane (5.2), DuPage (5.0), Will (5.3), Grundy (4.5)
- Kendall County has:
  - Average level of radon 0.6 pCi/L above the state average…
    - …which is already 0.9 pCi/L higher than the EPA Action Limit
- 47% of radon test results from Kendall County show radon levels over EPA action limit

Radon

- Death risk to the average person from radon gas:
  - At home?
    - 1,000x higher than the risk from any other carcinogen or toxin regulated by the FDA or EPA
- The problem?
  - A mitigation system is needed to decrease radon levels
    - Mitigation systems cost anywhere from $1200 - $1600
  - Radon induced lung cancer is caused by chronic exposure. Buying such a costly system to prevent the onset of a future chronic disease is often overlooked
  - Disparity in mitigation cost among homes built prior to radon resistant construction
Vector Borne Diseases – West Nile

- Mosquito borne disease
- In 2014, Kendall County was 1 of 13 counties in Illinois which had recorded human cases of West Nile Virus
- Although there are peaks and troughs over the past 14 years…
  - West Nile is still very entrenched in Illinois
  - Health Department has responded to almost 90 complaints of stagnant water over the last 5 years (education and enforcement are still necessary!)

Vector Borne Diseases – West Nile

- Mosquito born diseases – West Nile
  - Disparity in risk
    - People over 60 years of age are at the greatest risk for severe disease
    - People with certain medical conditions, such as cancer, diabetes, hypertension, kidney disease, and people who have received organ transplants, are also at greater risk for serious illness
  - 8.7% of Kendall County’s population are persons 65 years and older
    - There has been a 1.4% increase in this subpopulation from 2010
Vector Borne Diseases

- Mosquito borne Chikungunya (Chik-V)
  - A total of 207 Chik-V disease cases have been reported to ArboNET across 32 U.S. states as of July 7, 2015

- Big concern:
  - Most people infected with Chik-V will develop symptoms (ranging from headache to joint pain and can be severe to disabling)
  - Mutated strains of Chik-V can now be carried by the aggressive Asian tiger mosquitoes (present in all states east of the Mississippi River)

Vector Borne Diseases

- Lyme Disease (tick borne):
  - Most commonly reported vector borne illness in the United States
  - Fifth most common Nationally Notifiable Disease (as of 2013)
  - In 2013, Illinois had an incidence (number of confirmed cases per 100,000 people) of 2.6
    - This incidence was greater than 33 other states in the country
  - In 2013, Kendall County had an incidence 9.2
    - Huge disparity compared with state incidence...the numbers show we’re more at risk!
Vector Borne Diseases

- Let’s put it into perspective:
  - Seven predominant types of ticks in US, but only two carry Lyme Disease
  - Of these two types, one (blacklegged/deer tick) is very prominent in Illinois, specifically northern IL

- For Kendall County:
  - Overall increase in trend over past 14 years with diagnosed Lyme disease cases

Groundwater Contamination

- Most common contaminants are nitrates and coliform bacteria
- Private wells are sampled for these contaminants upon completion before they are put into service
- Low testing rates otherwise
  - Only ~25 private wells in Kendall County are tested every year despite Health Department recommendation of sampling annually
Groundwater Contamination: Nitrate

- Nitrate:
  - Naturally occurring chemical that is especially dangerous to infants
  - The problem: Illinois has high nitrogen output, especially in comparison to the East and West coast

- From 2008-2015 in Kendall County, ~15.5% of all water samples from privately owned wells detected nitrate at or above 0.1 mg/L.

Groundwater Contamination: Coliform

- Coliform bacteria is commonly found in soil, on vegetation, and in surface waters
  - Some strains (E. coli) found in the feces of warm-blooded humans and animals can cause serious illness

- Contamination levels are dependent on:
  - Proximity to other contamination sources
  - Potential for flooding
  - Age of well
  - Construction of well

- From 2008-2015 in Kendall County, ~16.8% of all water samples from privately owned wells tested at or above a 1.0 mg/L for coliform
  - Indicator of additional contamination that could pose a serious health risk
Groundwater Contamination

- Disparity among private well owners
  - Private wells not regulated or monitored like public wells
  - Owners may not have money or knowledge to properly monitor, repair or treat a water source

Assets in the Community

- **Foodborne Illness**
  - Routine staff inspections to all food establishments, mobile vending units, and most temporary food establishments
  - Staff training to assure safe food for consumers in Kendall County
  - Information on food safety on the KCHD website
  - Long history of documented food borne illness statistics and regulatory guidelines
  - Largest program within EHS = lots of time and attention
Assets within the Community

- **Vectorborne diseases:**
  - KCHD (online) provides information on mosquitoes (WNV) and ticks
  - Basic tick identification
  - KCHD takes dead bird calls and collects for testing
  - Traps/tests mosquitoes and shares information with key stakeholders throughout the county
  - EHS presents to the public at Dickson Murst Farm Days, Kendall County Natural Resources Tour to answer questions and provide informational support
  - Mosquito abatement within community
  - Municipal involvement and promotion
  - CDC/Illinois Department of Public Health web information
  - Periodic newspaper articles/news stories – (well documented disease)

Assets in the Community

- **Radon:**
  - Radon test kits for nominal fee at Kendall County Health Department
  - Information on KCHD website
  - Regular radon related Facebook posts through the radon season
  - Staff available to answer questions from the public
  - Extensive outreach experience
  - Calls to those whose tests came back with readings over the EPA action limit for radon
  - Radon resistant new home construction requirements
  - Federal funding provided to network of organizations allowing for statewide education
  - Public access to IEMA website with years of data, lists of licensed mitigators and testers
Assets in the Community

- **Groundwater Contaminants**
  - Staff permit and inspect private, semi private and non-community water wells to ensure a safe water supply as possible and protection of the groundwater aquifer.
  - Work with IDPH to routinely check and inspect non-community water wells.
  - Information provided on KCHD website.
  - Staff work closely with water well drillers.
    - Stay up to date with new construction methods and equipment to ensure staff has better knowledge for problem solving and decision making.
  - Staff routinely answer questions from the public about water wells and keeping them contaminant free.
  - Lists of licensed well contractors and pump installers.
  - 2 local labs for water testing within community.

References:


Community Health Services

Overview of Health Care Indicators:

- Access to Care
- Sexually Transmitted Infections/Disease
- Prostate Cancer
- Obesity

Presented by: Terri Olson
Access to Care

The Affordable Care Act holds two pieces of legislation:
1. The Patient Protection with Affordable Care
2. Health Care and Education Reconciliation Act

Together, these expand Medicare coverage to millions of low income Americans, improving both Medicaid and the Children’s Health Insurance Program (CHIP). The plan was to reform comprehensive health insurance that would expand coverage, hold insurance companies accountable, lower health care cost, and guarantee more choices to enhance the quality of care of all Americans. There are rising concerns with this program.

Key Demographics

- Kendall County had a population size of 121,350 in 2014.

- Based on percentage increase from 2010-2013, the Hispanic population within Kendall County rises each year.
  - 16.4% (2013)
  - 16.6% (2014)
- There were ~20,144 Hispanics within Kendall County in 2014

Description of Health Issue

- Health Insurance Coverage – Illinois 2013:
  - Uninsured population under age 65:
    - Non-Hispanic White: 15% or below
    - Non-Hispanic Black: 15.1-25.0%
    - Asian: ~15.3% (all ages)
    - Hispanic: **25.1%-35.0%**
      - Hispanics have the highest percentage of being uninsured
  - Applying this percentage:
    - Of the ~20,144 Hispanics living within Kendall County in 2014, between 5,056 and 7,050 went uninsured (average of 6,053)
Description of Health Issue

- **Health Insurance Coverage – 2014**
  - 13% of all individuals within U.S. are uninsured
  - 11% of all individuals within Illinois are uninsured
  - 11% of all individuals within Kendall County are uninsured
    - This translates to ~ 13,000 uninsured individuals
    - 41.5% are Hispanic
- **Health Inequity:**
  - The uninsured, as a collective whole, is the group who has the highest health-risk due to:
    - Health problems are left untreated
    - Chronic health issues are not properly being diagnosed or managed
    - Future health statuses are below the rest of the community because health issues are not being addressed

Health Issues among Uninsured Hispanics within Kendall County

- The following health issues treated in inpatient revealed a notable increase among uninsured Hispanics from 2010 – 2014:
  - Neonatal with other Significant Problems
  - Alcohol/Drug Abuse or Dependence without Rehabilitation Therapy; without MCC

- The following health issues treated in the Emergency Department revealed a notable increase among uninsured Hispanics from 2010 – 2014:
  - Complication of Pregnancy, Childbirth, and the Puerperium
  - Diseases of the Nervous System and Sense Organs
  - Diseases of the Respiratory System
Contributing Causes - Cost of Access to Care

- According to 2014 BRFSS:
  - 24.6% of Kendall County adults (ages 45-64) needed to see a doctor but could not due to cost
  - 15.5% of Hispanics reported delay or non-receipt of needed medical care because of cost concerns
    - In 2012, Hispanic unemployment rate in Illinois was higher than the overall state rate at 17.6%
    - Without employment, there is no access to employees’ insurance or group insurance
  - In 2012, nationwide poverty for those of Hispanic origin was 25.0%, a rate higher than all other races except for Black
    - Poverty leads to inability to access or pay for health insurance (the cost of premiums or co-pays cannot be afforded)
  - Patients are responsible for an increasing portion of their healthcare costs
    - From 2013 through 2014, patients’ share of their costs grew 5.4% for established patients and 7.9% for new patients

Other Contributing Causes - Cost of Medicine

- Even for those who can afford to see a doctor, some cannot afford to fill a prescription
  - The average annual price of generic drugs prescribed for a chronic condition is $280 per year
    - 27% of all generic drugs have increased in price since 2013, and some have increased exponentially

- According to BRFSS 2014:
  - 11.7% of adults (ages 45-64) needed to fill a prescription for medication within the last 12 months could not...
  - ...because of cost
Another contributing cause: Uninsured and Medicaid:

- The uninsured and the Medicaid participants are less likely to get recommended care for:
  - Disease prevention and screening
  - Dental care
  - Counseling on healthy lifestyle
  - Vaccinations
  - Chronic disease management
- Why?
  - Many specialists and dentists do not accept Medicaid partially due to caps in doctors’ offices (accepting a limited percentage of Medicaid patients)

Existing Assets

- Eight primary care groups within Kendall County
- Staff participation in Latino Health Fairs
- Actively enrolling Kendall County residents into ACA insurance
- Ongoing Linkage and Referral
- Promotion of free medical clinic
- Access to discount cards for prescription medication
- Procurement of KAT gift cards for clients in need of transportation to/from medical appointments
- Active participation in Salvation Army
STIs

Presented by: Terri Olson

Key Demographics for Kendall County

- Caucasian alone, percent, 2013: 88.1%
- 2014 population: 121,350
  - 50.5% female
  - 49.5% male
- 30.2% are persons under 18 years
- 4.6% persons living in poverty (as of 2013)
- Education level:
  - 92.5% high school graduate or higher
  - 34.2% Bachelor's degree or higher
- Disabilities
  - 7,676 persons living with disabilities
    - 752 of them are persons under 18 years
- Unemployment within Kendall County: 6.00% in 2014
Kendall County Comparisons to Illinois and the US.

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<th>Chlamydia</th>
<th>Rate</th>
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Although our rates are lower than the state and national rates, STIs are still heavily prevalent in Kendall County.

STIs within Kendall County

- Health issue: STIs have been on the rise throughout the last 14 years. Chlamydia continues to rise.

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<td>34</td>
<td>29.6</td>
<td>4</td>
<td>3.5</td>
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</table>
Populations affected by Chlamydia

- Cases of Chlamydia in Kendall County (1/1/14 - 12/31/14)
  - Male: 72 cases (27.5%)
  - Female: 190 (72.5%)
  - Of all these cases, 45.8% were persons 20-24 years of age
  - Of all these cases, 27.1% were persons 15-19 years of age

Populations affected by Chlamydia

- Cases of Chlamydia in Kendall County by Race/Ethnicity (1/1/14 - 12/31/14)
  - 41.6% were Caucasian/White
  - 20.6% were Hispanic
Where were they tested? Treated?

- 27% of all cases were both tested and treated within a clinic as opposed to a private doctor's office.

Contributing Factors related to rise in STIs

- Age (late teens and early twenties)
  - More likely to exhibit feelings of invincibility (it won’t happen to me)
  - Today's social media glorifies sex
- Race/Ethnicity
  - Disparities in prevention and treatment due to cultural beliefs and norms
- Access to healthcare
  - Poverty STDs disproportionately affect disenfranchised people and people in social networks where high-risk sexual behavior is common
  - Lack of primary care
  - No clinics within county
Contributing Factors

- Stigma
  - Discomfort in discussing intimacy
- Sexual networks: refers to groups of people who can be considered “linked” by sequential or concurrent sexual partners
  - Just because you only have had 1 partner does not mean you are ‘safe’
  - Current technology to find partners – simply using a first name or completely anonymously
- Lack of comprehensive education
  - US has one of the highest STD rates in the industrialized nations
  - Chlamydia is asymptomatic for the majority of the highest risk population (15-24yo females)

Current Community Resource

- Health care and social assistance
- Growing faculty support and willingness to engage in the delivery of STI education within schools
- The community’s resources are underdeveloped in combating this health issue
  - As case numbers continue to grow...
    - ...More assets need to be obtained and utilized within Kendall County!
Risk Factors of Prostate Cancer:

**Age:** Less than 40 years old is rare
  Greater than 50 years old, your risk rises rapidly
  Greater than 65, 6 in 10 men will be diagnosed with prostate cancer
  As of 2013, 8.7% of Kendall County’s population were ages 65 and older.

**Race:** African American and Caribbean greater chance than any other ethnic group.
  As of 2013, 6.2% of Kendall County’s population were African Americans.

**Family History:** Appears to be a genetic factor; having a brother or a father
developing this disease increases your risk to acquire prostate cancer.

**Diet:** Men who consume red meat or high fat dairy products appear to be at higher risk.

**Work place exposure:** Firefighters (due to exposure to toxic substance products)
as well as farmers who were exposed to toxic chemicals in
past years appear to be at higher risk.

**Note:** Smoking and obesity have not yet been proven to be relevant risk factors.
Cancer in Illinois 2014:

In general: Cancer is the second leading cause of death among Americans.

Every day in Illinois:
- 179 people are diagnosed with cancer.
- 26 women are diagnosed with breast cancer.
- 17 people are diagnosed with colorectal cancer.
- 25 people are diagnosed with lung cancer.
- 23 men are diagnosed with prostate cancer.

In fact the highest rate of cancer in men is prostate cancer at 25.8%, with lung and bronchus being the second highest at 14.7%. (Women: Breast cancer is the highest at 29.4)

Cancer Incidence - Prostate

This indicator reports the age adjusted incidence rate (cases per 100,000 population per year) of males with prostate cancer adjusted to 2000 U.S. standard population age groups (Under age 1, 1-4, 5-9,..., 80-84, 85 and older). This indicator is relevant because cancer is a leading cause of death and it is important to identify cancers separately to better target interventions.

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Male Population</th>
<th>Average New Cases per Year</th>
<th>Annual Incidence Rate (Per 100,000 Pop.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall County, IL</td>
<td>55,027</td>
<td>54</td>
<td>147.4</td>
</tr>
<tr>
<td>Illinois</td>
<td>6,272,579</td>
<td>9,158</td>
<td>149.4</td>
</tr>
<tr>
<td>United States</td>
<td>150,740,224</td>
<td>220,000</td>
<td>142.3</td>
</tr>
</tbody>
</table>

Note: This indicator is compared with the state average.
Data Source: National Institutes of Health, National Cancer Institute, Surveillance, Epidemiology, and End Results Program, State Cancer Profiles, 2007-11. Source geography: County
Importance of Early Detection

• Local stage means that there is no sign that the cancer has spread outside of the prostate. This corresponds to AJCC stages I and II. About 4 out of 5 prostate cancers are found in this early stage.

• Regional stage means the cancer has spread from the prostate to nearby areas. This includes stage III cancers and the stage IV cancers that haven’t spread to distant parts of the body, such as T4 tumors and cancers that have spread to nearby lymph nodes (N1).

• Distant stage includes the rest of the stage IV cancers – cancers that have spread to distant lymph nodes, bones, or other organs (M1).
Key statistics for Prostate Cancer in the US in 2015.

- There are about 220,000 new cases of prostate cancer.
- There are about 27,540 deaths from prostate cancer.

- About 1 in 7 men will be diagnosed with prostate cancer during his lifetime.

- About 6 cases in 10 are diagnosed in men 65 years and older and it is rare before 40 years of age.
  - The average age at the time of diagnosis is about 66.

- About 1 in every 38 men will die of prostate cancer.

- Prostate cancer can be a serious disease, but most men diagnosed with prostate cancer do not die from it due to early detection.

Obesity

Community Health Services
Kendall County Health Department

Presented by: Terri Olson
The Center for Disease Control uses BMI as a guideline to measure Obesity.

Obesity

35.1% of adults aged 20 and older self-report that they have a Body Mass Index (BMI) greater than 30.0 (obese) in the report area. Excess weight may indicate an unhealthy lifestyle and puts individuals at risk for further health issues.

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population Age 20+</th>
<th>Adults with BMI &gt; 30.0 (Obese)</th>
<th>Percent Adults with BMI &gt; 30.0 (Obese)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall County, IL</td>
<td>79,196</td>
<td>18,014</td>
<td>23.1%</td>
</tr>
<tr>
<td>Illinois</td>
<td>9,449,812</td>
<td>2,592,853</td>
<td>27.0%</td>
</tr>
<tr>
<td>United States</td>
<td>231,417,834</td>
<td>63,316,403</td>
<td>27.1%</td>
</tr>
</tbody>
</table>

Note: This indicator is compared with the state average.

Data Source: Center for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion. 2012 County Geographic County

Note: BMI of 18.5 to 24.9 means you are a healthy weight. Overweight is defined as a BMI (Body Mass Index) of 25 to 29.9. Obesity is defined as a BMI equal to or greater than 30. If you fall in the obese range, according to the guidelines, you are at risk for heart disease and need to lose weight.

Percent Adults Obese (BMI > 30.0) by Year, 2004 through 2012

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</tr>
</thead>
<tbody>
<tr>
<td>Kendall County, IL</td>
<td>23.1%</td>
<td>24.2%</td>
<td>25%</td>
<td>25.3%</td>
<td>24.8%</td>
<td>25.3%</td>
<td>25.5%</td>
<td>30%</td>
<td>35.1%</td>
</tr>
<tr>
<td>Illinois</td>
<td>22.6%</td>
<td>23.5%</td>
<td>24.5%</td>
<td>25.0%</td>
<td>26.1%</td>
<td>27.0%</td>
<td>27.8%</td>
<td>26.9%</td>
<td>27.0%</td>
</tr>
<tr>
<td>United States</td>
<td>22.0%</td>
<td>23.7%</td>
<td>24.8%</td>
<td>25.6%</td>
<td>26.6%</td>
<td>27.5%</td>
<td>27.8%</td>
<td>27.9%</td>
<td>27.1%</td>
</tr>
</tbody>
</table>

Percent Adults Obese (BMI > 30.0) by Year, 2004 through 2013

Download Data
Other health issues that go along with Obesity.

High Blood Pressure (Adults)

36.7% or 31.2% of adults aged 18 and older have ever been told by a doctor that they have high blood pressure or hypertension.

High Blood Pressure, Percent of Adults Age 18+ by County, BRFSS 2008-12

- Over 51.0%
- 41.1 - 50.9%
- 31.0 - 40.9%
- 21.0 - 30.9%
- Under 21.0%
- No Data or Data Suppressed

Download Data

Report Area | Total Residents (Age 18+) | Total Adults with High Blood Pressure | Percent Adults with High Blood Pressure
---|---|---|---
Kendall County, IL | 78,091 | 26,780 | 25.7%
Illinois | 18,563,683 | 5,722,996 | 30.6%
United States | 250,326,916 | 65,476,522 | 26.1%
High Cholesterol (Medicare Population)

This indicator reports the percentage of the Medicare fee-for-service population with hyperlipidemia, which is typically associated with high cholesterol.

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Medicare Beneficiaries</th>
<th>Beneficiaries with High Cholesterol</th>
<th>Percent with High Cholesterol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall County, IL</td>
<td>5,993</td>
<td>3,425</td>
<td>49.6%</td>
</tr>
<tr>
<td>Illinois</td>
<td>1,623,784</td>
<td>754,150</td>
<td>46.4%</td>
</tr>
<tr>
<td>United States</td>
<td>34,126,305</td>
<td>15,273,852</td>
<td>44.7%</td>
</tr>
</tbody>
</table>

Note: This indicator is compared with the state average.
Data Source: Centers for Medicare and Medicaid Services, 2012. Source geography County

In order to stay healthy, individuals need approximately 30 minutes of exercise 3–5 days a week.

Adults with No Leisure-Time Physical Activity by Gender

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Males with No Leisure-Time Physical Activity</th>
<th>Percent Males with No Leisure-Time Physical Activity</th>
<th>Total Females with No Leisure-Time Physical Activity</th>
<th>Percent Females with No Leisure-Time Physical Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall County, IL</td>
<td>7,987</td>
<td>21.6%</td>
<td>8,605</td>
<td>22.6%</td>
</tr>
<tr>
<td>Illinois</td>
<td>947,129</td>
<td>20.2%</td>
<td>1,149,795</td>
<td>22.3%</td>
</tr>
<tr>
<td>United States</td>
<td>21,071,587</td>
<td>21.2%</td>
<td>21,244,293</td>
<td>23.3%</td>
</tr>
</tbody>
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Percent Adults Physically Inactive by Year, 2004 through 2012

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</thead>
<tbody>
<tr>
<td>Kendall County, IL</td>
<td>21.3%</td>
<td>20.3%</td>
<td>19.1%</td>
<td>22.3%</td>
<td>24.4%</td>
<td>24.4%</td>
<td>24.4%</td>
<td>19.7%</td>
<td>22.1%</td>
</tr>
<tr>
<td>Illinois</td>
<td>23.2%</td>
<td>22.6%</td>
<td>22.1%</td>
<td>23.0%</td>
<td>23.6%</td>
<td>23.3%</td>
<td>23.2%</td>
<td>22.6%</td>
<td>21.8%</td>
</tr>
<tr>
<td>United States</td>
<td>22.3%</td>
<td>22.8%</td>
<td>22.3%</td>
<td>23.2%</td>
<td>23.5%</td>
<td>23.0%</td>
<td>23.5%</td>
<td>22.4%</td>
<td>22.6%</td>
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</table>
Assets within the Community

- Local work out facilities
- YMCA after school programs
- Physical education within schools
- Informational resources through Kendall County Health Department and online sites regarding BMI, weight, healthy eating, and healthy living
- Blood pressure cuffs for purchase
- Local health markets and grocery stores
- Weight-Loss and nutritional programs such as Seattle Sutton and Weight Watchers
- Park District and Forest Preserve
The Kendall County Health Department is grateful for the many community partners which have been thoughtful participants in our community health assessment process thus far; especially community interviewees, Aurora University and Northern Illinois University Interns, and Rush-Copley Medical Center.

Please feel free to contact Amaal at the Kendall County Health Department with question or comments on the preceding Community Health Status Assessment data, at (630) 553-8097.
Forces of Change Brainstorming Worksheet  
November 18, 2015  

Threats and Opportunities Worksheet  
*Mobilizing for Action through Planning and Partnerships (MAPP)*

<table>
<thead>
<tr>
<th>Forces (Trends, Events, Factors)</th>
<th>Threats Posed</th>
<th>Opportunities Created</th>
</tr>
</thead>
<tbody>
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</table>
1. **Identify the strategic issue.** Phrase the issue as a question. (Example: How can the public health community ensure access to population-based and personal health care?)

2. **Why is this an issue?** What convergence of external opportunities and threats, system strengths and weaknesses, health status findings or community themes makes this an issue?

3. **What are the consequences of not addressing this issue?**
Forces of Change Brainstorming Worksheet
November 19, 2015

Strategic Development Worksheet

*Mobilizing for Action through Planning and Partnerships (MAPP)*

1. Based on your review of the vision and strategic issues, what is the apparent goal?

2. What broad alternatives might members of the public health system pursue?

3. What are the barriers to realizing these alternatives?

4. What implementation details accompany each strategy alternative?
INDEX

Ethnographic Interviewing – Information on this interviewing technique, employed by Kendall County Health Department in its Community Themes and Strengths Assessment and involving culturally sensitive use of non-scripted questions and discourse in order to understand the lived experiences of others, can be found on pages 15, 26, 37, 62, 88 and 90.

Community Health Plan Worksheets - Community Health Plan Worksheets supporting the three health priorities can be found on pages 50, 51, 66, 67 and 68.

Community Participation – Evidence of efforts made to engage participation from the Kendall County community can be found on pages 7, 11, 13, 23, 36 and 37.

Board of Health Acceptance – A letter from the Kendall County Health Department’s Board of Health President to the Illinois Department of Public Health endorsing the Health Department’s IPLAN, can be found on page ii.

Health People 2020 – Information describing how Kendall County Health Department’s 2016-2021 Community Health Improvement Plan priorities may serve to support one or more of the Center for Disease Control and Prevention’s Health People 2020 objectives can be found on pages 45, 56, 63 and 78.

Health Problem Analysis Worksheets - Health Problem Analysis Worksheets supporting the three health priorities can be found on pages 52, 65 and 81.

Illinois State Health Improvement Plan - Information describing how the State of Illinois’ Illinois State Health Improvement Plan served to inform the Kendall County Health Department’s 2016-2021 Community Health Improvement Plan can be found on pages 2, 19, 45, 56, 64, 73, 74

IQuery – Information describing how the Illinois Department of Public Health’s community health data tool, IQuery served to inform the Kendall County Health Department’s 2016-2021 Community Health

Mobilizing Action through Planning and Partnerships (MAPP) – A description of MAPP, the community-driven strategic planning process for improving community health, employed by Kendall County Health Department, can be found on pages 1, 2, 11, 13, 34, 56, 159 and 160.

Selection of Priorities - Information describing how Kendall County Health Department’s 2016-2021 Community Health Improvement Plan priorities were selected by consensus can be found on pages 9, 13, 18, 19, 35, 37, 38 and 45.
Kendall County Health Department
811 West John Street
Yorkville, IL  60560