Introduction & Purpose

Minnesota is one of the healthiest states in the country. However, not all Minnesotans have the same chances to be healthy. These health disparities and health inequities cannot be explained by biogenetic factors and instead are the result of serious social, economic and environmental disadvantages such as structural racism and a widespread lack of economic and educational opportunities\(^1\). The 2014 MDH report “Advancing Health Equity in Minnesota: Report to the Legislature” identified e-health as a tool for advancing health equity. For example, EHRs can capture social determinants of health, which can allow providers, patients, and public health to understand the factors affecting health.

To contribute to advancing health equity, the Office of Health Information Technology (OHIT), in collaboration with the Minnesota e-Health Initiative (Initiative), studied the status, barriers, and opportunities in using EHRs to collect social determinants of health. In addition, particular focus was placed on the implications of using the social determinants of health captured in the EHR to stratify clinical quality measures to provide input for report requested by the 2014 Legislature\(^2\).

Methods

The Initiative’s Standards and Interoperability Workgroup (the Workgroup) met on November 7, 2014 and January 30, 2015. During the November meeting, the Workgroup invited a panel, comprised of local, state and national partners, to discuss

- Capability of EHRs to capture disability, race, ethnicity, language, and other sociodemographic factors
- Capacity of EHRs to capture disability, race, ethnicity, language, and other sociodemographic factors
- Challenges to using disability, race, ethnicity, language, and other sociodemographic factors collected in the EHRs

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In addition, the Workgroup reviewed the Advancing Health Equity in Minnesota Report, Capturing Social and Behavioral Health Domains in Electronic Health Records: Phase 1\(^3\), and the Minnesota e-Health Profile for assessment data on social determinants of health.

The findings of the meeting were shared with the Minnesota e-Health Advisory Committee and compiled into two legislative reports, Minnesota e-Health Initiative Report to the Minnesota Legislature 2015\(^4\) and Stratifying Health Care Quality Measures Using Socio-demographic Factors\(^5\).

During the January meeting, the workgroup focused on semantic standards for social determinants of health, use of social determinants, and considerations when collecting, using, and sharing social determinants of health. This work used Phase 2 of the IOM report\(^6\), MDH’s Draft Standard for Race, Ethnicity, Language, Sexual Orientation and Gender Identity Data Collection (REL) Report\(^7\), and Handbook on the Collection of Race/Ethnicity/Language Data in Medical Groups (Handbook)\(^8\). The Workgroup reviewed the IOM’s recommended social determinants of health and proposed standards with three additional social determinants of health identified as priority based on the REL Report and the Handbook (Table 1).

<table>
<thead>
<tr>
<th>Social Determinant of Health</th>
<th>Proposed Semantic Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alcohol use</td>
<td>Audit–C</td>
</tr>
<tr>
<td>2. Country of Origin/U.S. Born or Non-U.S. Born *</td>
<td>US census bureau, long form</td>
</tr>
<tr>
<td>3. Depression</td>
<td>PHQ-2</td>
</tr>
<tr>
<td>4. Education</td>
<td>Educational Attainment</td>
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<td>5. Exposure to violence: intimate partner violence</td>
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<td>6. Financial resource strain</td>
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<td>7. Neighborhood and community compositional characteristics</td>
<td>Residential address</td>
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<tr>
<td></td>
<td>Census tract-median income</td>
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<tr>
<td>8. Physical activity</td>
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</tr>
<tr>
<td>9. Preferred Language*</td>
<td>Speak, read, and hear</td>
</tr>
<tr>
<td>10. Race/Ethnicity</td>
<td>U.S. Census</td>
</tr>
</tbody>
</table>


\(^4\) https://www.health.state.mn.us/facilities/ehealth/legrpt/docs/legrpt2015.pdf


Social Determinant of Health | Proposed Semantic Standards  
--- | ---  
11. Sexual Orientation* | California Health Interview Survey  
12. Social connections and social isolation | NHANES III  
14. Tobacco use and exposure | NHIS  
*Minnesota-specific identified social determinant of health

Findings

The findings suggest support from across the care continuum for using e-health to advance health equity, particularly using the EHR to capture and use social determinants of health, but numerous gaps and barriers exist. The following pages summarize the findings.

Minnesota Priority Social Determinants of Health

The Workgroup supported the IOM’s identified social determinants of health but identified additional social determinants of health which were important to include in the review - Country of Origin/U.S. Born or Non-U.S. Born, Preferred Language, and Sexual Orientation (Table 1). The review of the 14 priority social determinants of health found different settings such as behavioral health or dentistry used different processes and/or semantic standards to collect, use and share social determinants of health. For example, “alcohol use” can be asked as a stand-alone question or as part of an annual health assessment. In addition, some providers, such as local public health, ask about alcohol use in the household, beyond the individual’s use. These barriers were highlighted across all the social determinants of health, as well as considerations and use issues. Appendix A contains detailed comments for each of the 14 social determinants of health.

Additional findings were also identified during the review.

The CMS EHR Incentive Program (meaningful use) and social determinants of health

Stage 2 meaningful use has standards and requirements for certain social determinants of health are used by most clinics and hospitals in the U.S. Stage 2 requires more than 80 percent of all unique patients have demographics recorded in the EHR. This includes preferred language, race and ethnicity. The standards and criteria of meaningful use will steer the collection of social determinants of health in EHRs.

Race, ethnicity and preferred language data collection in Minnesota varies

Some Minnesota providers collect race, ethnicity, and preferred language but varying workflows, data standards and best practices are used. Minnesota clinics are capturing some social determinants of health in the EHR including race, preferred language, Hispanic ethnicity, and country of origin. Most hospitals’ EHRs have the capability of capturing race and ethnicity
and preferred language\textsuperscript{9}. Conversations with providers from other settings indicate most capture, either on paper or in their EHR, race, ethnicity and primary language of patients. There are variations in the method used and type of information collected.

Privacy and consent

Gaps exist in understanding of privacy and consent laws and policies regarding collection, use and exchange of social determinants of health. Data related to social determinants of health are personal information but not all agree it is personal health information. Some providers were uncertain if social determinants of health such as race and ethnicity can be asked, how these data can be used within the organization, and how they can be exchanged with other providers. Often organizations did not have policies or best practices for the collection and use of social determinants of health.

Limited use or understanding on use of social determinants of health

The limited use is due in part to the lack of standards and privacy issues but also the lack of understanding how to use the social determinants of health. For example, certain social determinants of health may be considered outside the scope of “clinical practice” and providers may not be prepared to address or provide resources to an identified issue (e.g. housing instability). Some organizations are using social determinants of health in the EHR to advance health equity but there are no statewide best practices or implementation guidelines on use.

The following findings are specific to the issue of generating clinical quality measures of the EHR and relate to the legislative request in Minnesota Laws Chapter 312, Article 23, Section 10.

Clinical quality measures and health equity

Minnesota clinics and hospital are generating clinical quality measures from EHR but workflow, policy, standards, and information technology issues persist. Most Minnesota clinics with EHRs (86\%) used only their EHR (no paper) to collect and submit quality measures to outside organizations\textsuperscript{10}. Minnesota hospitals also have used EHRs for automated quality report. Eighty-three percent of hospital have an EHR that automatically generates hospital-specific quality measure, 56\% have an EHR that automatically generates physician-specific quality measures, and 50\% generate Medicare Inpatient Quality Reporting measures\textsuperscript{11}. Research has found

\textsuperscript{9} Minnesota Department of Health, Office of Health Information Technology, 2014.
\textsuperscript{10} Minnesota Department of Health, Office of Health Information Technology. (2014). Clinics: Adoption and Use of EHRs and Exchange of Health Information.
numerous challenges in the use of EHRs for clinical quality measurement and include workflow, policy, standards, and information technology issues\textsuperscript{12, 13}.

**Disability as a social determinant of health**

Research often includes disability as a social determinant of health but lacks an agreed-upon definition, and therefore is unready to measure. For example, patient-reported and medically-determined disability can be different assessments and can involve different data collection. The workgroup also discussed disability as a legal determination, such as by the VA or social security. The IOM report also noted data collection burden around disability and did not include in the study.

**Recommendations**

The review identified many recommendations and opportunities for actions that together start to create a Minnesota e-health framework for health equity. This framework will ensure all e-health activities connect to health equity, continue to identify and address gaps and opportunities, and focus on capturing and using social determinants of health incorporated into the EHR.

**Key components and principles**

1. Leverage the 14 social determinants of health identified during the review (Table 1).
2. Optimize the use of social determinants of health to address key needs such as population health activities and other health transformation work and to build support for collection and use of social determinants of health.
3. Develop and/or implement policies, best practices and training for collecting and using social determinants of health in the EHR. These practices should be for providers across the continuum of care including the Minnesota Departments of Health and Human Services and other state agencies.
4. Monitor and engage in the development and implementation of new e-health standards relating to social determinants of health using the Minnesota Approach for Recommending e-Health Standards, as described in the guide, “Standards Recommended to Achieve Interoperability in Minnesota.”
5. Align with Meaningful Use Stage 3 and other state and national activities including accountable care, the Office of the National Coordinator, the IOM framework on social determinants of health and EHRs and the Veterans Health Administration work on non-traditional determinants of health.
6. Continue to incorporate health equity into the activities of the Minnesota e-Health Initiative, its Advisory Committee and workgroups, and the Office of Health Information Technology.


7. Explore methods for integrating data from other data sources to provide proxy information for social determinants of health, such as geocoding the patient record and linking to demographic data.

8. Engage the consumer perspective in collecting and using social determinants of health. This includes addressing the discomfort of reporting sensitive information and related privacy concerns.

9. Increase diversity in the Minnesota e-Health Advisory Committee and workgroups representation to strengthen community relationships and partnerships.

10. Develop future-looking use cases for collecting and using social determinants of health and strategies to implement use cases.

11. Inventory sources of social determinants of health data and evaluate the potential use of data from providers across the continuum of care, including the Minnesota Departments of Health and Human Services.

12. Engage HIT vendors, including EHR vendors and HIE service providers, to assure the technology is capable of collecting and transmitting standardized data elements for the recommended social determinants of health.

13. Provide information, education and support to reduce gaps in understanding privacy and consent.

**Conclusion**

In summary, this study revealed support for implementation of social determinants of health into the EHR. Addressing the findings and implementing the recommendations will require the effort of health and public health across the care continuum at local, state, and federal level. Nonetheless, this effort is necessary as the addition and standardization of social determinants of health into EHRs will not only advance health equity but also spur policy, process and system redesign, interoperability, and innovation to improve health outcomes and reduce health care costs.

**Acknowledgements**

The Minnesota Department of Health (MDH) thanks the many members of the Minnesota e-Health Initiative for their ideas, expertise and time in this review. In addition, a number of other key stakeholders from a variety of health care settings contributed to this work.
### Alcohol Use

**IOM Recommended Stage 3 Meaningful Use Semantic Standard: Alcohol Use Disorders Identification Test Consumption (AUDIT-C)**

How often do you have a drink containing alcohol?
- Never
- Monthly or less
- 2–3 times a week
- 4 or more times a week

How many standard drinks containing alcohol do you have on a typical day?
- 1 or 2
- 3 or 4
- 5 or 6
- 7 to 9
- 10 or more

How often do you have six or more drinks on one occasion?
- Never
- Less than monthly
- Monthly
- Weekly
- Daily or almost daily

The questions are scored on a scale of 0 to 12: a = 0 points, b = 1 point, c = 2 points, d = 3 points and e = 4 points. A score greater than X for men or Y for woman is considered to be heavy or hazardous drinking.

**Minnesota-Specific Semantic Standards: None**

**Considerations**
- Adolescents, pregnant women and other special populations have different considerations.
- Frequency of asked/often is part of annual health assessment
- Alcohol plus the use of additional drug use
- Missing the issue/concept of alcohol is an issue in the household

**Use**
- This is collected in a variety of ways by providers across the care continuum.
- Can be a stand-alone question or part of an annual health and wellness assessment.
- Some providers incorporate into the EHR but tends to be non-structured data.
## Country of Origin/U.S. Born or Non-U.S. Born

<table>
<thead>
<tr>
<th>IOM Suggested Semantic Standard (Note recommended for Stage 3 Meaningful Use): U.S. Census Bureau’s long form</th>
</tr>
</thead>
</table>
| Question #12: Where was this person born?  
The United States. (Fill in state)  
Outside of the United States. (Fill in name of country) |
| **Question #14: When did this person come to live in the United States? (Fill in year)** |


In what country were you born?  
Birthplace - possible Minnesota relevant drop-down list choices include: A list containing over 33 countries


Country of Origin (including U.S. territories)  
Medical groups will report a patient’s country of origin (birth country):A list of over 100 countries listed.

### Considerations
- Results from these questions can alert a health care provider to ask about the patient’s preferred language, and can potentially result in effective culturally and linguistically appropriate treatment.
- There may be sensitive issues in asking a patient’s country of origin, which might inhibit accurate reporting and adversely affect patient–provider communication and trust.
- For infants, children and adolescents ask information on the parent’s country of origin.
- Knowing parental country of origin/nativity may assist in improving the clinical outcome of these populations.
- Concerning immigration status, an infant, child, or adolescent of immigrant or refugee parents should be given special attention because questions are not asked of parents.
- Issue is not only where born but where did you come from (last country before arriving in U.S.) which acknowledges the role of refugee and displacement camps in health.
- This question can be applicable to those serving overseas and their families.

### Use
- Primarily captured for refugee programs/health area.
- Manual entry of country born leads to lots of misspellings, drop down menus are ideal for high quality data.
## Depression

**IOM Recommended Stage 3 Meaningful Use Semantic Standard: Patient Health Questionnaire-2 (PHQ-2)**

Over the past 2 weeks, how often have you been bothered by any of the following problems:
- Little interest or pleasure in doing things
- Not at all
- Several days
- More than half the days
- Nearly every day

Feeling down, depressed or hopeless
- Not at all
- Several days
- More than half the days
- Nearly every day

**Minnesota-Specific Semantic Standards: None**

**Considerations**
- Depending in the level of disability, individuals with intellectual disability may present with atypical symptoms of mood disorders (i.e., depression, anxiety), and may have limited speech capabilities
- The health system may face challenges in following up on what may be a substantial number of patients who have a positive depression screen
- Should the standard questions for depression include PHQ-9?
- What are the referral guidelines for Behavioral Health follow up?
- Need good patient-provider relationship and/or patient buy-in to answer questions honestly.

**Use**
- A medication list is often a “screening” for depression.
- Can collect and refer to services but does not mean individual will follow-up with referral.
### Education

**IOM Recommended Stage 3 Meaningful Use Semantic Standard: Education attainment**

For highest level of school that an individual completed, he or she is asked:
What is the highest level of school you have completed? Check one.
- Elementary School
- High School
- College
- Graduate/Professional School
- 01 – 20+ years

For highest degree earned by the individual, he or she is asked:
What is the highest degree you earned? Check one.
- High school diploma
- GED
- Vocational certificate (post high school or GED)
- Association degree (junior college)
- Bachelor’s degree
- Master’s degree
- Doctorate

**Minnesota-Specific Semantic Standards: None**

**Considerations**
- Neither measure captures the quality of education received
- Education attainment can be problematic to measure for young adults
- Education level does change, particularly for those in their 20s
- This is a complicated question for immigrants, as degrees differ/do not correlate to U.S. categories.

**Use**
- This information is collected numerous ways by the Office of Vital Records (birth certificates), Departments of Education and Humans Services, and Family Home Visiting Program.
### Exposure to Violence: Intimate Partner Violence

**IOM Recommended Stage 3 Meaningful Use Semantic Standard: Humiliation, Afraid, Rape, Kick (HARK)**

Within the last year, have you been humiliated or emotionally abused in other ways by your partner or ex-partner?
- Yes
- No

Within the last year, have you been afraid of your partner or ex-partner?
- Yes
- No

Within the last year, have you been raped or forced to have any kind of sexual activity by your partner or ex-partner?
- Yes
- No

Within the last year, have you been kicked, hit, slapped, or otherwise physically hurt by your partner or ex-partner?
- Yes
- No

**Minnesota-Specific Semantic Standards: None**

**Considerations**
- Highly sensitive information potentially causing patient discomfort
- Narrow focus of intimate partner violence, rather than a larger lens of interpersonal violence
- Immigrant women may be hesitant to report intimate partner violence because of differences in cultural perceptions or for fear of deportation.
- Adolescent females are a population that has reported experiencing physical dating violence; however, assessments of intimate partner violence for adolescents or children are not currently available.
- Trauma and violence terminology differs by culture. For example, “rape” to some refugee and other cultures involves violence verses power imbalance.

**Use**
- Asked by local public health with different questions such as the HARK-C asks has your child/children verses have you for these questions.
- LPH asks on has your child seen violence and do you feel unsafe now.
Financial Resource Strain

IOM Recommended Stage 3 Meaningful Use Semantic Standard: Overall Financial Resource Strain

How hard is it for you to pay for the very basics like food, housing, medical care, and heating?
Would you say it is...
- Very hard
- Somewhat hard
- Not hard at all

Minnesota-Specific Semantic Standards: Proposed by HCMC

Housing insecurity/Homelessness
What best describes your living situation?
- An apartment
- A house/townhouse/condo
- A shelter/transitional living situation
- Residential treatment/supervised housing
- Car
- Hotel/motel
- Government housing
- Mobile home/trailer
- Living with friends/family
- Room/rented room
- No steady place to sleep at night
- Other:_________________________

Have you been without housing/someplace to live in the past 12 months?
- Yes
- No
- Don’t know/Refused

During the last 12 months, was there a time when you were not able to pay the mortgage or rent on time?
- Yes
- No
- Don’t know/Refused

How many places have you lived since [name of current month] of last year?

________# of places

Food insecurity
Within the past 12 months we worried whether our food would run out before we got money to buy more.
## Financial Resource Strain

- Often true
- Sometimes true
- Never true

Within the past 12 months the food we bought just didn’t last, and we didn’t have money to get more.
- Often true
- Sometimes true
- Never true

### Energy Insecurity

Has your household been threatened or experienced a utility shut-off in the last year?
- Yes
- No
- Don’t know/Refused

### Considerations

- Children and youth should have questions asked of parents
- Low income individuals are a vulnerable population and should be asked these questions on a regular basis
- Need to consider the “conditions” such as safe housing, healthy food, adequate medical care et al.
- Should consider moved more than 3 times in the past 12 months
- Minnesota Material Vital Signs contains important information on housing insecurity/homelessness, food insecurity, and energy insecurity.

## Use
## Neighborhood and Community Compositional Characteristics

<table>
<thead>
<tr>
<th>IOM Recommended Stage 3 Meaningful Use Semantic Standard: Residential address and Census tract-median income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address: House number + Directional (such as North, South, etc.) + Street Name</td>
</tr>
</tbody>
</table>

### Minnesota-Specific Semantic Standards: None

### Considerations

- Patients who move often or are without stable and permanent housing.
- For geocoding to work, it must be completely standardized.
- Median household income by census tract is relevant for all age groups.
- Other neighborhood characteristics such as proximity to schools and playgrounds may be particularly relevant for children; environmental exposures may be particularly relevant to individuals with asthma or other respiratory ailments; and the age structure and proximity to pharmacies and health care may be particularly relevant to older individuals.
- More policies should be connected to “Neighborhood and Community Compositional Characteristics” such as include Smoke-Free Housing.

### Use
<table>
<thead>
<tr>
<th>Physical Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IOM Recommended Stage 3 Meaningful Use Semantic Standard: Exercise Vital Signs</strong></td>
</tr>
<tr>
<td>On average, how many days per week do you engage in moderate to strenuous exercise (like walking fast, running, jogging, dancing, swimming, biking, or other activities that cause a light or heavy sweat)? (0-7 days)</td>
</tr>
<tr>
<td>On average, how many minutes do you engage in exercise at this level? (block of 10 minutes, from 0-150 or greater)</td>
</tr>
<tr>
<td><strong>Minnesota-Specific Semantic Standards: None</strong></td>
</tr>
<tr>
<td><strong>Considerations</strong></td>
</tr>
<tr>
<td>▪ Sedentary tools are not yet well-developed.</td>
</tr>
<tr>
<td>▪ The health care team will need training on how to use these measures with people with disabilities or high-need patients.</td>
</tr>
<tr>
<td>▪ Opportunity to incorporate mobile devices/personal devices</td>
</tr>
<tr>
<td><strong>Use</strong></td>
</tr>
<tr>
<td>▪ LPH asks about food, juice, soda, screen time, eating breakfast, water</td>
</tr>
</tbody>
</table>
**Preferred Language**

<table>
<thead>
<tr>
<th>Suggested Semantic Standard:</th>
<th>Currently no IOM suggestion for semantic standards</th>
</tr>
</thead>
</table>

How well do you speak and understand English?
- Very well
- Well
- Not well
- Not at all

In what language do you prefer to **read** about health information? A list of 40 languages
In what language do you prefer to **hear** about health information? Same as above


Medical groups will report a patient’s specific language preference. MNCM has set a minimum list of language categories based on the collaborative work done by the Minnesota Immigrant Task Force. Medical groups may report additional language categories if they are collecting them. The minimum data categories are: A list of over 40 languages

**Considerations**
- Need to look towards the future, funders do not always keep up with influx.
- Possible question could be how do you learn best (health literacy/patient engagement angle)
- Sign language has languages within
- Interpreter need is often the path into this question.

**Use**
### Race/Ethnicity

**IOM Recommended Stage 3 Meaningful Use Semantic Standard: U.S. Census Question #5 and Question #6**

**US Census Question 5:** Is the person of Hispanic, Latino, or Spanish origin?
- No, not Hispanic, Latino, or Spanish origin
- Yes, Mexican, Mexican American, Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, another Hispanic, Latino, or Spanish origin (with fill in option)

**US Census Question 6:** What is the person’s race? Mark one or more races to indicate what this person considers himself/herself to be.
- White
- Black, African American, or Negro
- American Indian or Alaskan Native (with fill in option)
- Asian Indian
- Chinese
- Filipino
- Japanese
- Korean
- Vietnamese
- Native Hawaiian
- Guamanian or Chamorro
- Samoan
- Other Pacific Islander (with fill in option)
- Other Asian (with fill in option)
- Some other race (with fill in option)


**Are you Hispanic or Latino?** Mark (x) one box:
- Hispanic or Latino
- Not Hispanic or Latino

**What is your race?** Mark (x) one or more boxes to indicate what you consider yourself to be:
- American Indian or Alaska Native
- Asian
- Black/African American or African
- Native Hawaiian or Other Pacific Islander
- White
- Some Other Race, please specify ______
- Unknown
Race/Ethnicity

What is your ancestry/ethnic origin? Granular Ethnicity - possible Minnesota relevant drop-down list/checkbox choices include:
List includes over 50 ancestries and ethnic origins

What is your tribal affiliation? Mark (x) one or more boxes to indicate what you consider yourself to be: Tribal Affiliation (Minnesota relevant choices)
- Bois Forte Band of Chippewa
- Fond du Lac Band of Lake Superior Chippewa
- Grand Portage Band of Lake Superior Chippewa
- Leech Lake Band of Ojibwe
- Lower Sioux Indian Community
- Mille Lacs Band of Ojibwe
- Prairie Island Indian Community
- Red Lake Band of Chippewa Indians
- Shakopee Mdewakanton Sioux Community
- Upper Sioux Community
- White Earth Band of Ojibwe
- Other, please specify_________________


- American Indian or Alaska Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian/Other Pacific Islander
- White
- Choose not to disclose/Declined
- Unknown

Considerations
- Children and adolescents may find self-reporting their racial and ethnic identity to be challenging.
- Minnesota Community Measurement and the Minnesota Department of Health semantic standards for race/ethnicity do not align with each other and the recommended national semantic standard.
- Important Note: Patients must self-report race and be able to select more than one category to show multi-racial status.
### Sexual Orientation

**Suggested Semantic Standard (not IOM recommended for Meaningful Use Stage 3):**
California Health Interview Survey

In the past 12 months, have your sexual partners been male, female, or both male and female?

Do you think of yourself as straight or heterosexual, as gay (lesbian) or homosexual, or bisexual?


Do you consider yourself to be:
- Lesbian, gay or homosexual
- Straight or heterosexual
- Bisexual
- Queer

**Considerations**
- More detailed questions may be more useful
- Some individuals may not want to answer questions
- Adolescence can be a particularly challenging time for teens
- Suggest asking these questions at age 13
- Should be asked in examination or consultation room, not on paper form to be handed to a registration clerk
- Update to reflect youth terminology
- Should include transgender, M to F, F to M, in trans process, questioning
- There is a difference between what you identify as and your sexual identity

**Use**
- Often sexual activity is asked as related to STI/STDs.
<table>
<thead>
<tr>
<th>Social Connections and Social Isolation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IOM Recommended Stage 3 Meaningful Use Semantic Standard: NHANES III Social Connection and Isolation Questions</strong></td>
</tr>
</tbody>
</table>
| In a typical week, how many times do you talk on the telephone with family, friends, or neighbors?  
How often do you get together with friends or relatives?  
How often do you attend church or religious services?  
How often do you attend meetings of the clubs or organizations you belong to? |

<table>
<thead>
<tr>
<th>Minnesota-Specific Semantic Standards: None</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Considerations</strong></td>
</tr>
</tbody>
</table>
| ▪ The social integration versus isolation measure for a child’s parent or guardian may prove useful, as might measures of attachment and quality of relationship with parents or guardians.  
▪ Tools exist for geriatric populations to measure social isolation and disconnectedness, as older adults and those in worse health tend to experience greater levels of social isolation.  
▪ Another questions – who would you call for help/emergency and/or what would you do in an emergency |
<table>
<thead>
<tr>
<th><strong>Stress</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>IOM Recommended Stage 3 Meaningful Use Semantic Standard</strong></td>
</tr>
<tr>
<td>Stress means a situation in which a person feels tense, restless, nervous, or anxious, or is unable to sleep at night because his/her mind is troubled all the time. Do you feel this kind of stress these days? The response is recorded on a five-point Likert scale ranging 1—indicating not at all 2—a little bit 3—somewhat 4—quite a bit 5—indicating very much</td>
</tr>
<tr>
<td><strong>Minnesota-Specific Semantic Standards: None</strong></td>
</tr>
<tr>
<td><strong>Considerations</strong></td>
</tr>
<tr>
<td>▪ The adverse childhood experiences measure can be used for adult populations; comparable versions for pediatric populations have yet to be validated</td>
</tr>
<tr>
<td><strong>Use</strong></td>
</tr>
<tr>
<td>▪ Individuals may be asked about stress but not in every visit. ▪ Can ask about anxiety verses stress ▪ This question can lead to referrals</td>
</tr>
</tbody>
</table>
### Tobacco Use and Exposure

<table>
<thead>
<tr>
<th>IOM Recommended Stage 3 Meaningful Use Semantic Standard: NHIS Smoking Status Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you smoked at least 100 cigarettes in your entire life?</td>
</tr>
<tr>
<td>▪ Yes</td>
</tr>
<tr>
<td>▪ No</td>
</tr>
<tr>
<td>▪ Refused</td>
</tr>
<tr>
<td>▪ Do not know</td>
</tr>
<tr>
<td>If yes:</td>
</tr>
<tr>
<td>Do you NOW smoke cigarettes every day, some days or not at all?</td>
</tr>
<tr>
<td>▪ Every day</td>
</tr>
<tr>
<td>▪ Some days</td>
</tr>
<tr>
<td>▪ Not at all</td>
</tr>
<tr>
<td>▪ Refused</td>
</tr>
<tr>
<td>▪ Do not know</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minnesota-Specific Semantic Standards: None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Considerations</td>
</tr>
<tr>
<td>▪ Occasional or intermittent smokers may be missed with these screening questions.</td>
</tr>
<tr>
<td>▪ The measure also is limited in only asking questions about cigarette use and does not ask about tobacco exposure (e.g., if patient lives with someone who smokes indoors).</td>
</tr>
<tr>
<td>▪ The NHIS is used for ages 18 and above.</td>
</tr>
<tr>
<td>▪ The current tobacco use and exposure question in not useful as does not capture chew, e-cigs, and other and does not capture exposure to smoke</td>
</tr>
<tr>
<td>▪ More policy work should be connected to “Neighborhood and Community Compositional Characteristics”. Examples include Smoke-Free Housing.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Use</th>
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</thead>
<tbody>
<tr>
<td>▪ Ask about if they use and if they are interested in quitting</td>
</tr>
<tr>
<td>▪ Go beyond cigarettes to ask about chew and e-cigs</td>
</tr>
<tr>
<td>▪ LPH asks for numerous programs – pregnancy, newborns</td>
</tr>
</tbody>
</table>

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Minnesota Department of Health  
Office of Health Information Technology  
PO Box 64882  
St. Paul, MN 55164-0882  
mn.ehealth@state.mn.us  
https://www.health.state.mn.us/facilities/ehealth/

10/01/2015

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