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Assessment of Prenatal Alcohol Exposure Screening Practices in Minnesota Clinics

Contact

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Greetings!

Over the past year, Proof Alliance has had the incredible opportunity to collaborate with a talented team at ACET, Inc. to explore more deeply screening for prenatal alcohol exposure in prenatal care settings across the state of Minnesota. This report, including the findings and recommendations, would not be possible without the support and guidance of our dedicated staff on this project, Kendra Gludt, MPH., and Sarah Brown, MPH. We are also grateful for the financial support from the Minnesota Department of Health.

We would especially like to thank the core team at ACET, Maggi Seybold, M.S.B.S., PA., and Will Hopkins, BA., who co-led the assessment, and Carlos Gallego, M.Ed., for all his intensive outreach and completing the interviews. We also want to thank Trisha Netsch Lopez, Ph.D., MPH., who co-created the multi-level code book and coding process and Sandy Donovan, MA., who assisted with the analysis and report writing. Their commitment to this project was exemplary.

In a state where healthcare is busier than ever, we are thankful for the commitment from the following clinics to provide their knowledge and background on screening practices in place for alcohol use:

- Axis Medical Center
- Community Health Service – Moorhead, Rochester, Willmar (3 locations)
- Douglas Health
- Everyday Miracles
- Face to Face
- HealthFinders Collaborative
- HealthPartners Health Center for Women
- Hennepin Healthcare Clinic and Specialty Center
- Indian Health Board of Minneapolis
- myHealth for Teens and Young Adults
- Neighborhood HealthSource
- NorthPoint Health and Wellness Center
- OBGYN West
- Open Cities Health Center and Nubian Moms (2 locations)
- Pipestone County Medical Center and Family Clinic Avera
- Roots Community Birth Center
- Southside Community Health Services
- United Family Medicine

We are indebted to many community and healthcare organizations, school programs, and personal connections for spreading the word about the opportunities around this important work. We sincerely hope that this assessment provides information that can support clinics and empower patients as we work together to prevent FASD in the state of Minnesota and beyond.

With Gratitude,
Sara Messelt
Executive Director

Executive Summary

Proof Alliance, collaborated with ACET, Inc. to examine how prenatal and primary care clinics screen for alcohol use and provide brief interventions with patients who are pregnant, trying to get pregnant, or at risk of becoming pregnant. The goal of the assessment is three-fold: (1) to describe how clinics screen for alcohol use and provide brief interventions; (2) to identify needs for alcohol screening and brief interventions (SBI); and (3) use the findings to better support clinics in efforts to reduce fetal alcohol spectrum disorder (FASD).

A total of 21 clinics in Minnesota participated in the assessment through in-depth interviews with clinic staff. The interviews centered on the groundwork for alcohol SBI, alcohol SBI procedures, practices to support alcohol SBI, as well as refinement and promotion. Key findings follow:

- **Participating clinics:** The 21 clinics represented a broad range, serving both urban and rural populations. Each assessment included between 1 and 13 clinic staff, with close to half of the assessments completed in person.
- **Groundwork for SBI:** Participants reported that nearly all staff at their clinic shared the same knowledge that no alcohol consumption is safe during pregnancy, including the earliest stage of pregnancy. When asked about leadership support, participants provided examples of firm commitment and clear communication about alcohol SBI.
- **Alcohol SBI procedures:** Nearly all participants were aware of their clinics' plan for screening and described their screening tools and procedures. Nearly all described screening patients for alcohol use but many indicated that the screenings tended to be less formally embedded in clinic policies and more generally managed by nurses or other providers. Some also noted that while both screening and intervention procedures were usually followed for pregnant patients, they were less likely to be followed for patients not yet pregnant or those in between pregnancies. When asked to describe brief interventions provided to patients who screen positive, responses varied more widely. Often, the type of intervention offered was in oral form from the provider letting patients know about alcohol-related health consequences and providing a recommendation to stop consuming alcohol during pregnancy.
- **Practices to support alcohol SBI:** Participants often described training and onboarding of alcohol SBI offered as partially in place rather than fully in place. Trainings were often self-guided through reading materials or attending seminars for continuing education. Rarely did participants talk about instruction or practice opportunities for SBI functions or as part of onboarding new staff.
- **Refinement and promotion of alcohol SBI:** Monitoring and evaluation components were often described by participants as either partially in place or not yet in place. Participants talked about the usefulness of implementing these measures and expressed interest in assessing successes and improving tracking systems.

This report includes recommendations on ways FASD organizations and future funding sources can support clinics with alcohol SBI and prevent FASD.

Introduction

This report details findings from a needs assessment conducted for Proof Alliance, formally known as the Minnesota Organization on Fetal Alcohol Syndrome. The goal of the needs assessment is three-fold: (1) to describe how clinics screen for alcohol use and provide brief interventions for people who are pregnant, trying to get pregnant, or at risk of becoming pregnant; (2) to identify needs for alcohol SBI; and (3) use the findings to better support clinics in efforts to reduce FASD. Funding for this assessment was supported by the Minnesota Department of Health (MDH).

About Proof Alliance. Proof Alliance is a Minnesota-based nonprofit with a mission to eliminate disability caused by alcohol consumption during pregnancy and to provide identification, intervention, and support for people living with a FASD. Since 1998, Proof Alliance has been delivering awareness and education to pregnant individuals and providing resources and assistance to those living with FASD. Key projects with clinics include:

- Assembling a Medical Advisory Committee to create an algorithm on how to screen for FASD in pediatric settings. Proof Alliance piloted this FASD screening algorithm with four clinics from 2011 to 2014, which created opportunities for many lessons learned on what screening looked like in practice. The four clinics were able to add the FASD screening protocol into their electronic medical records, provide training to their staff on FASD and the screening method, and change their practice to embed alcohol screening into their standard of care.
- Convening a Prenatal Screening Task Force in 2019 comprised of primary care providers, nurses, and obstetrician-gynecologists from community clinics, and large and small health care systems to develop recommendations on screening for all providers in Minnesota.
- Providing training and technical resources to over 24 prenatal clinics since 2010 to increase knowledge of FASD and to add universal screening for alcohol use at every prenatal visit.

About FASD. FASD is a range of disabilities caused when an embryo is exposed to alcohol and can include physical, mental, behavioral, and/or learning disabilities with possible lifelong implications. The only known cause of FASD is prenatal alcohol exposure.[1] The prevalence of FASD has been reported in as many as 1 in 20 children in the United States.[2] However, universal screening for alcohol use at every prenatal visit is not a required practice in clinics. In 2008, for example, researchers found that when patients disclosed alcohol use at a prenatal visit, providers rarely discussed support services or took the opportunity to provide specific information regarding FASD.[3]

In a more recent study, researchers found that an overwhelming majority of pregnant patients considered verbal screening for alcohol use as acceptable and that they were willing to honestly confirm their use with their providers.[4] The preventable nature of the disorder makes it especially suited for investment in prevention strategies to screen and provide brief interventions to patients who are pregnant, trying to get pregnant, or at risk of becoming pregnant.

[1] Proof Alliance. Drinking during pregnancy can cause FASD. https://www.proofalliance.org/what-is-fasd/.
[2] May, P. A. *et al.* Prevalence of Fetal Alcohol Spectrum Disorders in 4 US Communities. *JAMA* 319, 474–482 (2018).
[3] Chang, J. C. *et al.* When pregnant patients disclose substance use: Missed opportunities for behavioral change counseling. *Patient Education and Counseling* 72, 394–401 (2008).
[4] Toquinto, S. et al. Pregnant women's acceptability of alcohol, tobacco, and drug use screening and willingness to disclose use in prenatal care. Women's Health Issues 30, 345–352 (2020).

Scope of the Clinic Assessment

The target for the assessment was 25 clinics from urban and rural settings throughout Minnesota, including a broad range of clinics from Federally Qualified Health Centers (FQHC) and certified Health Care Homes, Indian Health Service (IHS) clinics and Urban Indian Health programs, and private practices that serve people who are pregnant, trying to get pregnant, or at risk of becoming pregnant. To establish the sampling frame, a list was obtained from the Marketing Systems Group.[5] This list contained all Minnesota clinics and hospitals by a healthcare Standard Industrial Classification (SIC) code to include the line of business, employee size, and location information. Exclusions included ambulatory surgical centers, insurance organizations, hospitals, and specialties such as anesthesiology and radiology. The list was augmented with any additional information from the Minnesota Department of Health for Health Care Homes,[6] the Health Resources & Services Administration for FQHC,[7] and the Bemidji Area IHS for a list of IHS clinics and Urban Indian Health programs.[8] This yielded 2,787 clinics in the sampling frame.[9]

The next step involved the determination of a sampling approach. This included a review of probability (e.g., simple random, stratified, by cluster) and non-probability (e.g., purposive, convenience, snowball) sampling methods and the strengths and challenges. The initial sampling method was voluntary sampling through advertisement of the assessment in e-news and social media sources.[10] However, this initial approach did not yield the responses needed for the assessment. The effects of COVID-19 on healthcare settings and the current shortage of healthcare workers in Minnesota contributed to a lower response rate.[11] As such, multiple sampling methods were employed to reach the target of 25 clinics within the assessment timeframe. These included snowball sampling (i.e., participants helped with recruiting other clinics)[12] and at the mid-point of the study, quota sampling was used to ensure representation across clinic types and location through additional outreach and in-person visits.[13]

Data Collection. Using a variety of recruitment approaches, a total of 24 clinics agreed to be interviewed. Of this number, 21 interviews were completed between February 21 to July 5, 2022, reaching 84% of the target goal. The number of participants at each clinic varied from 1 to 13 staff with an average of 2. About half of the interviews were completed with 1 person answering all the questions while the other half had 2 or more staff present for the interview. Close to half of the interviews were completed in person and the other half through video conferencing. Position roles at participating clinics varied from clinical directors, medical doctors, and administrative staff to nurse practitioners and other specialists.

Interviews were conducted using a structured interview script with accompanying probes (see Appendix A for the script and checklist). The interviews ranged from 30 to 60 minutes in length, with an average of 45 minutes. At the beginning of the interviews, the project team did introductions, highlighted the goals of the project, and asked for their permission to record the interview. The interviews centered on the groundwork for alcohol SBI, alcohol SBI procedures, implementation practices, as well as monitoring and evaluation. The assessment was built using the step-by-step guide for primary care practice for risky alcohol use developed

[5] Marketing Systems Group. Homepage. https://www.m-s-g.com/Pages/genesys/
[6] MDH. List of Certified Health Care Homes. https://www.health.state.mn.us/facilities/hchomes/documents/hchcert.pdf (2022).
[7] HRSA. FQHCs and LALs by State. https://data.hrsa.gov/data/reports/datagrid?gridName=FQHCs (2022).
[8] Indian Health Service. Healthcare Facilities. https://www.ihs.gov/bemidji/healthcarefacilities/.
[9] The count includes health systems with multiple clinics and network of providers.
[10] Murairwa, S. Voluntary Sampling Design. *International Journal of Advanced Research in Management and Social Sciences* 4, 185–200 (2015).
[11] Macht, C. & Schaffhauser, A. Critical Condition: the Health Care Workforce in Minnesota. *MNDEED* https://mn.gov/deed/newscenter/publications/trends/december-2021/critical.jsp (2022).
[12] Noy, C. Sampling Knowledge: The Hermeneutics of Snowball Sampling in Qualitative Research. *International Journal of Social Research Methodology* 11, 327–344 (2008).
[13] Acharya, A. et al. Sampling: Why and how of it. *Indian Journal of Medical Specialties* 4, 330–333 (2013).

by the CDC.[14] All participating clinics received a binder with the CDC guide and other resources from ACOG's risky alcohol use guide on FASD prevention[15] and recommendations from Proof Alliance on ways to communicate information to patients about alcohol use during pregnancy.[16] Participants were asked to respond to 33 questions grouped by these four key domains:

- **Groundwork for alcohol SBI** incorporated questions pertaining to staff knowledge about alcohol use during pregnancy and ways leadership supports alcohol SBI efforts. This included shared knowledge of staff that alcohol consumption at any stage of pregnancy places the child at risk for FASD.
- **Alcohol SBI procedures** honed into their plan for screening, family planning questions, screening instruments and any challenges encountered, systems in place to administer, score and provide brief interventions, efforts to deliver brief interventions, referral procedures, and follow-up with patients who screen positive for alcohol use.
- **Practices to support alcohol SBI** focused on training and onboarding of staff on alcohol SBI, implementation measures, and reimbursement for alcohol SBI services.
- **Refinement and promotion for alcohol SBI** asked questions about monitoring and evaluating efforts, including how clinics received information on latest research and resources.

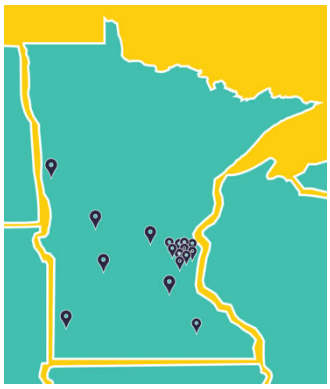
Analysis. Following the interviews, the audio files were transcribed and notes typed, files were imported into a qualitative data analysis program, and reviewed by two independent coders. This software provided the ability to query data coded and compare cases efficiently. Data quality measures included developing a multi-level codebook based on the four key assessment domains.[17]

Five meetings were held between the two coders to refine the codebook and improve data quality. The first meeting focused on the layout of the codebook. The second meeting honed into the accompanying codes. The third meeting was held after the first 3 interviews were coded to discuss any new codes or adjustments to the codebook. The fourth meeting was held to review highlighted quotes and check for inter-rater reliability. A final meeting was held after 10 interviews were fully coded to review the content agreement and discuss any codes to be added or dropped from the codebook. From this meeting, each coder went back to the 10 interviews and adjusted accordingly. The remaining 11 interviews were then coded to finish the coding process.

[14]CDC. *Planning and Implementing Screening and Brief Intervention for Risky Alcohol Use. National Center on Birth Defects and Developmental Disabilities* https://www.cdc.gov/ncbddd/fasd/documents/alcoholsbiimplementationguide.pdf (2014).
[15] ACOG. Risky Alcohol Use Guide. https://www.ct.gov/dmhas/lib/dmhas/publications/USAUDIT-2017.pdf (2009).
[16] Proof Alliance. *How to Talk with Your Patients About Alcohol Use During Pregnancy*. https://www.proofalliance.org/wp-content/uploads/2022/01/How-to-talk-with-your-patients-about-alcohol-use-during-pregnancy.pdf (2022).
[17] Guest, G. & MacQueen, K. M. *Handbook for team-based qualitative research.* (Rowman Altamira, 2008).

Participating Clinics

Of the 21 participating clinics, 14 clinics (67%) were in the Twin Cities metropolitan area and 7 (33%) were in rural Minnesota with coverage of central, northwest, southwest, and southeast Minnesota. The map on the right shows the distribution of clinics that participated in the assessment.



Participating clinics represented a variety of health services. Nearly half were certified Health Care Homes (43%), providing coordinated care with community services. A third were Federally Qualified Health Centers (33%), serving under- and uninsured patients as well as those receiving Medical Assistance. One was an Urban Indian Health Program (5%), providing care to tribal members living in urban settings. Table 1 shows the number of clinics participating by clinic type.

Table 1. Clinic type	Number	Percent
Certified Health Care Home	9	43%
Federally Qualified Health Center	7	33%
Urban Indian Health Program	1	5%

Other characteristics included behavior health services offered at the clinic (71%), community health education services (29%), large health system with more than 12 locations (14%), private or small practice (14%), and focused on youth and young adults (see Table 2 below). Please note that many clinics we interviewed included multiple characteristics.

Table 2. Other clinic characteristics	Number	Percent
Behavior health services	15	71%
Community education services	6	29%
Large health system with 12+ locations	3	14%
Private or small practice	3	14%
Focused on youth and young adults	2	10%

The majority of clinics included in their mission or vision statement 2 or more aspects of the following components: serving all people, providing quality care, advancing health equity, or providing culturally tailoring services. Sample mission statements follow:

- *"to improve the health of our communities by providing quality health care services that are affordable and accessible, while advancing health equity for all."*
- *"to improve the lives and health of all people in our region by providing excellent patient-centered care."*
- *"to provide culturally tailored primary and preventive health care and related services to all people throughout the Twin Cities metropolitan area."*
- *"to improve birth outcomes and reduce health disparities by providing evidence-based education, compassionate and culturally aware support and a non-judgemental, caring community."*

Detailed Findings

This section presents the findings from the 21 clinic interviews that were conducted from February 21 to July 5, 2022. The interviews were executed in hopes of learning how clinics screen for alcohol use and provide brief interventions for people who are pregnant, trying to get pregnant, or at risk of becoming pregnant, what the needs are for alcohol SBI, and use the findings to better support clinics in efforts to reduce FASD. The findings are presented by domain.

Domain 1: Groundwork for alcohol SBI. Staff at clinics may have different levels of knowledge regarding risky drinking and how leadership support alcohol SBI. This included all staff sharing the same knowledge that there is no known safe level of alcohol use during pregnancy and no time during pregnancy when it is safe to drink.[18] Having this knowledge can help clinics to adapt their practice to build common knowledge and organizational support for alcohol SBI.

With this first domain, a majority of participants described having groundwork for alcohol SBI as fully in place at their clinics (see Table 3 below).

Table 3. Groundwork for alcohol SBI	Fully in place	Partially in place	Not yet in place
A. Staff knowledge of risky alcohol use	20 (95%)	1 (5%)	0 (0%)
B. Leadership support for alcohol SBI	17 (81%)	3 (14%)	1 (5%)

A. Staff knowledge of risk of alcohol use. Nearly all participants (95%) felt that staff at their clinics shared the same knowledge about risky alcohol use, with one describing, "*it's common knowledge amongst everyone that alcohol use in pregnancy is not safe.*" Another participant shared that they had engaged in a process to dispel any misunderstandings about risky drinking: "*We're trying to get a class together that, one, is informational, but two, isn't trying to bash the client or trying to make them feel bad.*"

The participant who described this item as being partially in place said that awareness had increased since the clinic started participated in an initiative to promote alcohol SBI, but that there *"is always room for improvement." They echoed concerns amongst several clinics that many patients and some providers continue to follow outdated information regarding alcohol use during pregnancy, "I think the old tried-and-true thoughts of, "Oh, well, a glass here and there is fine"—I think that myth still lingers."*

B. Leadership support. Over three-quarters (81%) of participants described leadership support as fully in place with clear commitment for alcohol SBI. As one stated, *"It's written into our policies and procedures that is part of our intake and ongoing counseling throughout the prenatal episode."* Another participant recalled management that "*regularly block[s] time off for staff to do trainings and participate in learning sessions*." Others described systems where support for alcohol screening is fully in place, but they do not necessarily communicate with leadership about the efforts. As one clarified "*I feel like we've just done a great job having leadership implement some of those different tools that allow for that assessment instead of leaving it on just providers to be asking those questions."*

One participant who said leadership support was partially in place explained: "*There's good support for screening and pregnancy from leadership. I just think that it's not quite as robust for pre-pregnancy or just general women who could be pregnant."* The participant who described leadership support as not

[18] CDC. *Planning and Implementing Screening and Brief Intervention for Risky Alcohol Use*. Page 29.

yet in place shared that since their clinic is decentralized, there's little leadership direction to individual clinicians.

Domain 2: Alcohol SBI procedures. Having a plan in place for both alcohol SBI is a critical component of implementation. A complete alcohol SBI plan outlines who will be screened, how often, identifying what screening instrument(s) will be used, who and how the screenings will be administered, scored, shared, and stored, as well as who would deliver the brief intervention, elements of interventions provided, referral procedures and follow-up. As such, the plan can create a shared understanding among staff about alcohol SBI patient flow.

With the second domain, participants' assessment of how fully in pace these procedures were at their clinics varied more widely. Nearly all indicated that questions to address family planning were firmly in place, but fewer than half said there was a plan in place for brief interventions for patients screening positive for alcohol use, or that follow-up systems were in established (see Table 4 below).

Table 4. Alcohol SBI procedures	Fully in place	Partially in place	Not yet in place
C. Plan for alcohol screening	15 (71%)	5 (24%)	1 (5%)
D. Questions about family planning	18 (86%)	3 (14%)	0 (0%)
E. Screening instrument used	16 (76%)	1 (5%)	4 (19%)
F. System in place for alcohol screening	14 (66%)	6 (29%)	1 (5%)
G. Plan for brief intervention when positive for use	9 (43%)	10 (48%)	2 (9%)
H. Referral procedures	15 (71%)	6 (29%)	0 (0%)
I. Follow-up system	10 (48%)	7 (33%)	4 (19%)

C. Screening plan. Nearly three-quarters (71%) reported that their clinics had a plan in place for screening patients for alcohol. The majority of those said all patients, pregnant or not, are screened but several said that they are not sure if non-pregnant patients are always screened. One noted, "*We need to do a lot better in screening our patients who are not pregnant.*" Another explained "*When it's for just a patient here for routine health, there's a section in the computer where they're supposed to put in how many drinks they have per week, so it's kind of a one-one time question. And I think it's all over the place as how much providers pay attention to even what they put in that.*" As far as frequency, most participants said screenings were conducted at each annual or prenatal visit, although three said they were conducted only once per trimester for pregnant patients. Screenings were conducted most often by nurses or medical assistants or through self-assessment, and occasionally by front-office staff.

Of the participants who said a screening plan was partially in place or not yet in place, one shared about capturing people between pregnancies: "*The part that we will work on strengthening is screening parents once the child is born and before another child is born.*"

D. Family planning questions. Of the seven items related to SBI procedures, questions about family planning was the area that the majority (86%) described as fully in place. Participants talked to most if not every patient about their plans for contraception. One clarified the timeline of their check-ins with pregnant patients: "*I touch base at the beginning of the antepartum, and then at 36 weeks, they touch base again. And it is part of our birth plan that we review with the patients when they're getting ready for labor.*" Another further described, "*The part that we're working on strengthening again… is going to be screening parents during the well-child checks of their children 0 to 24 months.*"

E. **Screening instruments used.** Three-quarters (76%) of participants said that their clinic used tools to screen for alcohol use. Nearly half of those indicated that the screening generally consisted of a single or a few questions. Some said they had been asking these question for decades while others said they were more recently (a few in the past year) added to clinic protocol. Typical questions mentioned included *Do you drink alcohol? And how many a day do you drink? Have you had alcohol since you've been pregnant?* and *When was the last time you drank*? A few reported that they asked more specific questions such as *Do you regularly drink more than you plan to? Have people annoyed you by criticizing your drinking or drug use?* and *Have you felt you ought to cut down on your drinking or drug use?* Formal instruments mentioned included the AUDIT-1-3, CAGE, ASSIST, TWEAK and CRAFFT. A few clinics used single questions for initial screenings, with more comprehensive screening tools available in the Electronic Health Record in the case of a positive result.

One participant who indicated they did not have a formal screening instrument in place clarified that "*I've never even thought to create maybe five questions for every [staff] that they could ask. If the question has been yes, we just leave it to the knowledge of the [staff]. But I definitely think getting at least one to five proactive questions if the client is using alcohol, I think that could be really helpful.*" Most clinics reported that accuracy in self-reporting alcohol use was the most significant challenge for screening. One offered, "*Whether they're truthful or not we don't know, but I feel like they're willing to answer. And sometimes our pregnant patients will say, 'Well, I wasn't sure I was pregnant at the time, but I did have a couple drinks.' And then most of the time, they're forthcoming*." Another felt the challenge stemmed from the screening method: "*I like for patients to do the screening on their own, but a lot of our rooming staff just want to put it directly into the computer, so they'll ask the patients the questions and I feel like people aren't as honest. Someday, we'd like to have them fill it out in their online check-in before they get here. I think people potentially could be more honest if they're doing it on their own.*" A few providers noted that reporting accuracy also depended on community experiences, "*if you ask about substance use, many people will not report accurately for fear of getting in trouble, particularly cultural communities who have a long history of CPS involvement if you report any use.*"

F. **Screening system in place.** Two-thirds (66%) of participants reported having a system in place for alcohol screening. Many described the process as informal, for instance: "*It's just like a screening checklist, I would say, within our document. And the nurse does that. . . and then that is saved in that document for that visit and then carried on to the doctor for when they get to see the patient.*" Another described a more formal process: "*It doesn't really score, but it tells us what issues they have and what referrals we should make and what follow-up they will need from that assessment.*" Of those who used an electronic screening instrument, most reported that they were automatically scored. Of those who described their instruments as consisting of provider-asked questions, most reported that the clinician or nurse scored them. Several described the system as the nurse or other screener verbally passing on the information to the obstetrician.

Of those who reported that screening systems were partially in place, some said that they did have a system but that rather than being formally embedded, it might depend more on the provider remembering. One explained, "*For example, substance abuse disorder might be a diagnosis that we include in there and then including that in the warm handoff to the pediatric team. So right now, certainly it's noted in the patient's medical record and added as a diagnosis so that when they go into the hospital for delivery, everybody can see that information. But now the next step is going to be strengthening the handoff to the pediatric team about that history as well as using the appropriate patient-centered diagnoses*."

G. Plan for brief intervention when positive for use. Under half (43%) of participants said their clinic had an established plan for brief interventions if patients disclosed alcohol use. A majority described their plan as partially in place. As one described their process in detail: "*Anyone who flags a yes on any of those questions would have a positive questionnaire—there's a little flag in the computer then that will pop up a referral to what we call our [name of] program, and then a specialist who is either a nurse or a medical social worker will meet with a patient, go over their concerns and refer them on to further treatment if needed. So that is an initial intervention, and I guess if more intervention is needed, a referral to treatment, then that specialist would take over on that.*"

Many participants reported offering oral advice incorporating several approaches: providing patient education about FASD and the effects of alcohol use on mother and baby, utilizing motivational interviewing to assess intervention needs, asking what they like or do not like about drinking, and developing an option plan via discussions with the patient. Some emphasized a focus on the cause of substance use in addition to the risks of FASD. As one participant stated, "*depending on what's reported, the focus is basic education, assessment for dependency and life stressors, taking an anti-racist perspective. We believe if they're using chemicals, that the source of the problem is not the chemical, but the stressors causing them to need to self-medicate.*"

As for materials, many participants said that their clinics have pamphlets and documents from the CDC, Proof Alliance, ACOG, the March of Dimes, MDH and other state agencies, and other organizations. Several participants, however, said they did not have written materials. As one noted, "*It would be really awesome to have either a packet of information that's directly towards this, or maybe a clinic in their area that directly works with birthing people and alcohol.*" Another noted that they advocated for fewer brochures in the clinic because they become outdated.

Of participants who said partially in place, they shared challenges related to staffing capacity, system and societal barriers. For instance, one shared, "*Lack of cultural-congruent providers to refer people to, lack of funding, low Medicaid reimbursement for care, a very strong culture of wanting to penalize pregnant people that's pervasive in our society.*" Another participant stressed the challenges of providing appropriate care to populations experiencing trauma, *"there needs to be a sense of urgency, especially to community clinics that are serving BIPOC and people of color because we have already so many other things going against us. If we can have our baby not be exposed to alcohol prenatally then that will be great because they're already born too early and too small. There's just this compounding trauma that you experience and I think there needs to be special attention to communities of color, usually by community clinics because that's who they serve, in training people.*"

H. Referral procedures. Most (71%) of participants indicated that their clinics had referral procedures fully in place. A few said they had behavioral health teams or addiction specialists within their clinic systems. But more said that they had existing partnerships with external alcohol treatment providers and other supports for patients. The most commonly identified referrals were to mental health and chemical dependency programs in the community. One described that they felt they could improve their referral knowledge base for alcohol abuse: "*I would say depending on their level of use, potentially Maternal Fetal Medicine just to assess the risk to baby, what they've had during the pregnancy. Social work referral to help them coordinate some of this, and then a lot of times starting with just a therapist. But I would tell you, I don't know that we have very great resources of people who specialize in alcohol abuse*." Many described their referral procedures as a mix of in-house and external. For example, one said, "*If it's somebody who's not pregnant in that moment, if they're at risk of becoming pregnant or if they would like to become pregnant, then if they're needing help or asking for extra help, then they*

would be referred in house. If they are already pregnant, then a referral would follow them [to their prenatal provider]."

I. **Follow-up systems.** Just under half (48%) of participants reported that follow-up procedures are fully in place. One described the process at their clinic: "*Care coordinators will put that on the problem list so that it's identified and can be followed up if they—when they come and see their providers. And the providers do a really good job of reading that intake note, and then they will continue to do the education and follow up with the patient at their 12-week mark.*" Participants added that the timeframes for follow-up ranged from every 1 to 2 weeks to every trimester, often dependent upon the severity of the substance use. For example, *"likely at their next visit, which is probably going to be between four and six weeks. Unless it's something really—if a patient says she's drinking a bottle of wine every day, then we would try to call her sooner."* Most follow-ups were conducted in person during appointments, but some participants reported that providers reached out via telephone calls.

Many participants described that some procedures are in place but that they are inconsistent. For instance, one shared, "*So I would say in your obstetrical patients, probably every visit it's readdressed to see if they have any concerns, what progress they've made, if they're still using outside of pregnancy, I would say our follow-up is probably a little lacking, because we don't have a great system in process to track it long term."* Several noted that inconsistencies also stemmed from the division of health services for prenatal care. Some maternal health providers felt follow-up care was adequate during prenatal care, but it is hard or impossible to maintain follow-up after their final post-partum visit. Similarly, clinics that do not provide prenatal/obstetric services often could not follow-up as patients left the practice once a pregnancy was diagnosed. As one participant stated, "*if they're pregnant, they're not going to come back to me for another 12 months. If they're not pregnant, yes, I would follow-up."*

Domain 3: Practices to support alcohol SBI. The success of alcohol SBI in practice also relies on providing current knowledge through training and onboarding for alcohol SBI, measuring how SBI efforts are implemented, and improving the quality of screening and interventions. Another consideration is understanding how, if any, clinics are getting reimbursed for alcohol SBI.

With this domain, very few participants reported having these systems fully in place (see Table 5). Some participants talked about potential future trainings or review of implementation measures. Several indicated that they would like to understand options for reimbursement more thoroughly if eligible.

Table 5. Practices to support alcohol SBI	Fully in place	Partially in place	Not yet in place
J. Training and onboarding for alcohol SBI	3 (14%)	5 (24%)	13 (62%)
K. Implementation measures to review data	6 (29%)	4 (19%)	11 (52%)
L. Reimbursement for alcohol SBI	2 (9%)	5 (24%)	14 (67%)

J. **Training and onboarding.** Few participants (14%) said that their clinic had well-established training and onboarding procedures for alcohol SBIs, and more than half (13 of 21) said they were not yet in place. One described why it can be difficult to integrate SBI trainings: "*I'll be honest, as a clinic director, it's pretty overwhelming trying to get all the—we just had diversity training for the staff and youth involvement, and so we have another one training in June on STIs… So you have those. You have pregnancy—there are so many different trainings. So would it be the time to have another training in."*

Another described previous SBI trainings were successful, but the impact faded over time and as staff changed. For example, "*One of my other colleagues had brought up something like five or six years ago they did have a training in that. I think it was specifically geared towards the CRAFFT and that it was beneficial. And then for that time after the training occurred, the screenings, interventions had increased. So yeah, I would love to have that be a part of the onboarding process as well as just an annual training for providers and medical staff.*" Others shared that there's often an assumption that nurses and other staff already have SBI knowledge: "*We're making a bit of an assumption that our clinicians and nurses and staff are coming in with a baseline of knowledge… we're not being intentional about providing additional training or making sure that that baseline knowledge is there.*"

K. Implementation measures. Although most clinics noted their charting systems were capable of tracking various measures of SBI implementation, less than one-third (29%) reported regular tracking or reporting of that data. Many said they regularly track other outcomes, but SBIs for alcohol are not specifically included. As one described, "*It's not like smoking cessation or something like that where like HRSA or someone is asking us for numbers.*" Others said that there may be some tracking done in relation to other reported data, but it was not purposeful review: "*There are some substance use questions in there that we would want to report. We look at them. We don't use them everyday.*"

A few participants said their electronic reporting systems tracked data on SBIs, while a few others said they asked questions to measure implementation success. One described, "*At the beginning of this year, we did add in a question. It's something like, were you using alcohol while pregnant? Did you disclose that to your [staff], and if yes, was your [staff] able to provide you with resources to help with your situation? I know we started that this year, and we get the results every six months or yearly.*"

L. Reimbursement for SBI. Very few (9%) participants noted that they got reimbursed by health insurance for alcohol SBI services. A majority said they were either unaware of whether their clinics did get reimbursed (often because the person responsible for billing was not at the interview), or whether it was possible (because they were not familiar with reimbursement rules, or whether reimbursement was available for certain types of payment such as Medicaid or other government/grant sources). This particularly applied to Federally Qualified Health Centers and clinics serving uninsured patients.

Several said they were interested in learning more about the possibility of SBI reimbursement. One said, "*I would say we could use strengthening in that area when it comes to billing. We haven't had any formalized training for that, and it's definitely an area to grow and would be beneficial for us. A lot of our patients use Medicare, so we certainly get a flat rate for certain visits. But it would help us demonstrate the complexity of the visits that we're addressing.*"

Domain 4: Refinement and promotion of alcohol SBI. Monitoring and evaluating SBI procedure is another success factor and the CDC has identified as important components of successful SBI procedures. This may involve reviewing implementation measures to embed alcohol SBI as part of quality improvement and staying current with SBI research. Overall, participants indicated that this step was not fully in place at their clinics (see Table 6).

Table 6. Refinement and promotion	Fully in place	Partially in place	Not yet in place
M. Monitoring and evaluation	5 (24%)	4 (19%)	12 (57%)

M. Monitoring and evaluation. Some (24%) participants indicated that they had a formal monitoring or evaluation in place for their SBI efforts. As one described, "*The IT specialist and I generally are the ones who pull and run reports, but they're really centered mostly around what we're required to report…*" Another said, "*Not that I'm aware from a quality perspective. But I think if it comes to billing and increasing our smart phrases we're utilizing, then we really can track and pull from all the electronic records how it's formally being address and not just on a case-by-case basis.*" Another noted that they have done some monitoring and evaluation, but it hasn't been formal: "*It's something that when I have time, I'll take a look at or one of our other project managers will take a look at if we see any major gaps. So we do have the means to monitor, but I don't know that it's very formal that it is monitored…*"

Technical assistance interest. All participants indicated that they would be interested or potentially other clinic staff in receiving additional technical assistance, training around SBI policies, procedures, and evaluation, and/or be recipients of resources. As one noted, "I *just feel like going through this questionnaire and even when I was asked if I would do the interview, thinking about the process that we do our alcohol screening and feeling that it does kind of lack definitely and areas that we could maybe improve, whether it's discussions with our patients or education. I feel like there's definitely need for improvement, and if there's any resources or anything, studies, like you said, monitoring the data of different aspects of this whole study, that would—I would definitely be interested in being a part of that.*"

One participant described their ongoing learning around SBIs, and their interest in continuing that process: *"We're really just kind of taking in all the information we learned from the [name of] sessions and developing processes going forward to really wrap things up and have a more formalized measure to address it. So I'm looking forward to that. And it will be really good, actually, to learn more about the billing process as well."* Another described their past success and interest in future training opportunities: "That'd be great. *We'd be very much open to that. I think one of my other colleagues had brought up something like five or six years ago they did have a training in [SBI-related procedures]. I think it was specifically geared towards the CRAFFT and that it was beneficial. And then for that time after the training occurred, the screenings, interventions had increased. So yeah, I would love to have that be a part of the onboarding process as well as just an annual training for providers and medical staff."*

Study limitations. Although a wealth of qualitative data was collected for this study from 21 clinics in diverse areas of Minnesota, there were some limitations to these findings. First, given the time constraints, it was not possible to interview any clinics in the northeast part of the state. Second, participants emphasized that SBI implementation was dependent upon multiple staff members, including administrators, front-office staff, nurses, clinicians, care-coordinators, social workers. As such, the participants represented this full range of positions, often in joint interviews of various clinic staff (average of 2 staff per interview). However, representation of specific staff positions was not consistent across clinics interviews. This was due in part to scheduling challenges, and due to the variety of service structures among participating clinics. Finally, some participants were new to their positions and had limited insight into their clinic's history or SBI efforts.

Conclusion and Recommendations

Overall, participating clinics described various ways they engaged staff to support and implement alcohol SBI. For the most part, each clinic had multiple elements in place for successful alcohol SBI. Elements fully in place focused on having a plan in place for screening, the screening instruments, making referrals when needed, leadership support, and knowledgeable staff. Elements partially in place or not yet in place focused on next steps following the screening itself, whether it is consistent SBI implementation, follow-up procedures, continued support through training and onboarding of new staff, and monitoring and evaluation efforts. It is important to note that no clinics said they had all elements in place or all elements not yet in place. Factors that inhibited the implementation of alcohol SBI included staff shortages, screening of other substance uses, prioritizing of COVID-19 duties, and the need to survive as a business.

In reflecting on the findings, there are multiple ways to support alcohol SBI in Minnesota. The following are recommendations on ways an FASD prevention organization, future funding sources, and health systems can support clinics with alcohol SBI to better prevent FASD.

FASD prevention organizations. FASD prevention organizations provides ongoing efforts to develop FASD awareness and support efforts to promote alcohol SBI. Participating clinics highlighted the greatest need for assistance in establishing systematic approaches to alcohol SBI, providing patient education materials tailored to specific populations, and providing opportunities for continued system improvements.

- **Provide talking point materials to clinics.** Clinics and providers could greatly benefit from materials to guide them through SBI procedures during clinical encounters. Materials could vary widely from simple lists of talking points to flow charts that can help providers navigate patient responses to screening items. There is an opportunity for FASD organizations and/or individual clinics to be creative in how they design the materials to help manage the conversation. One model that has worked successfully in the field of cancer screening is to provide table tents with two sides of information—one client-facing side with key facts and recommendations paired with a provider-facing side with more detailed talking points and/or decision charts to guide the conversation.[19]
- **Disseminate e-news or other targeted content.** Sending newsletters or other types of media targeting identified areas of challenge could help providers and other clinic staff integrate new strategies into their policies. For instance, recommend alcohol SBI procedures for people who are not currently pregnant, between pregnancies, or trying to become pregnant; and short articles discussing charting strategies that can increase screening frequency and reliability. Other targeted content may include materials to support onboarding training of new staff, and professional development opportunities to improve approaches for patients experiencing trauma or co-occurring disorders.
- **Provide translated and/or targeted materials.** With many clinics serving specialized populations, providing materials aimed specifically at those communities could help clinics to increase awareness. Several clinics noted they did not use materials because they were not available in Spanish or were not accessible to patients with low reading comprehension. This could include producing materials for low-literacy populations, in languages other than English, and using approaches addressing the root causes of substance use in pregnancy.
- **Follow up with clinics to understand needs and provide technical assistance.** Continuing to engage with clinics as they strengthen and further embed alcohol SBI procedures will have long-term impacts. Participants indicated that clinics are interested in technical assistance and training, particularly in the area reimbursement as well as setting-up implementation and evaluation measures. This may also encourage continued improvement amid high staff turnover.

[19] CDC. Do You Want to Increase Screening? You'll Want These Tested Methods to Your Cache! in *National Cancer Conference* (2017).

- **Expand funding sources.** Establishing relationships with clinics driven to improve alcohol SBI gives Proof Alliance a unique opportunity to connect health systems with potential sources of funding for SBI quality improvement. New potential sources of funding (such as infant and maternity product manufacturers) can be developed and shared expand the reach and impact of new initiatives.

For funding organizations and grant agencies. Organizations providing funding assistance can help improve alcohol SBI by supporting quality improvement efforts, expanding professional development opportunities, and building a Community of Practice.

- **Directly fund clinics for SBI implementation needs.** Given that clinics can be at different stages of SBI implementation, funding could be set up in a three-tiered system of providing clinics seed money to make changes wherever they are in the continuum: (1) Planning and development grants for clinics still at the exploratory stage that could help clinics lay the groundwork for bringing all staff to a common understanding of what risky behavior is; (2) Implementation grants for clinics to develop or enhance their plan for alcohol SBI, including detailing implementation components or facilitating onboarding and training; and (3) Capacity building grants for those who already have strong SBI procedures in place to refine or promote alcohol SBI through evaluation, quality improvement, and sharing of best practices.
- **Explore options for professional development for clinic staff.** Providing additional avenues for ongoing learning for clinic staff would help increase their knowledge and facilitate their ability to embed alcohol SBI procedures in their clinics. This is another opportunity for partnering with outside organizations such as government agencies or other nonprofits to fund professional development. These opportunities can include targeted approaches to brief intervention, strategies for improving screening through EHR practices, and establishing monitoring systems within clinics.
- **Facilitate a Community of Practice or other best practices sharing for clinics.** A Community of Practice is a participant driven approach towards information exchange by encouraging communication across organizations, specialists, and philanthropic organizations. Clinics could benefit from being paired with other clinics at different stages of SBI implementation or from having a source for information sharing about best practices related to successful SBI implementation.

For clinics and health systems. Led by clinic leaders, healthcare teams can greatly impact practices, continue efforts to support successes, and promote alcohol SBI in their clinic or health system. With the support and guidance, they can encourage, facilitate, and empower the following changes to be made:

- Embedding SBI planning and procedure training in the onboarding curriculum;
- Implementing strategies to increase validity of alcohol screenings, including: motivational interviewing techniques, screening in private without the presence of parents/partners[20], self-administered screenings, electronic screenings,[21] and offering chemical biomarker screenings (with consent).[22]
- Increasing the dissemination of success stories and data with staff and other clinics;
- Adding alcohol SBI into quality improvement efforts and building aim statements to measure success;
- Developing and maintaining a strong referral base and follow-up system;
- Assessing and updating Electronic Health Record components that contribute to successful alcohol SBI and monitoring efforts, such as: expanding when screening questions are mandatory for chart

[20] Recommendations from participating clinicians.

[21] Jasik, C. B., et al. Teen Preferences for Clinic-Based Behavior Screens: Who, Where, When, and How? *Journal of Adolescent Health* 59, 722–724 (2016).

[22] Miller, P. M., Thomas, S. E. & Mallin, R. Patient Attitudes Towards Self-Report and Biomarker Alcohol Screening by Primary Care Physicians. *Alcohol and Alcoholism* 41, 306–310 (2006).

completion, incorporating more detailed screening tools if single question screens are positive, and standardizing prompts/flags for patients needing follow-up;
- Establishing routine health information requests for patients with positive screens who transfer out of the clinic for prenatal care;
- Encouraging managers and supervisors to continue their commitment in supporting or enhancing SBI practices throughout their clinics with frequent communications; and
- Continuing to focus on capacity building and the need to measure and evaluate alcohol SBI procedures.