Prenatal Nutrition Tool:

2021 Evaluation Activities

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Alberta Health Services

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This report has been prepared by Nutrition Services, Alberta Health Services

Background

The Alberta Health Services (AHS) Prenatal Nutrition Tool (PreNuT) was developed to support focused conversations on nutrition topics between care providers and pregnant clients in order to influence maternal and infant health outcomes. The tool was developed after a literature review, an environmental scan of existing tools, and an audience analysis revealed the need for a consistent, evidence-based approach to identify and address critical nutrition topics during pregnancy. The tool, which includes a questionnaire and a conversation guide, was developed using a systematic 9-step Product Development Process (PDP) that combined findings from literature review, expert opinion, and perspectives of frontline care providers. The PreNuT and further information on its development can be accessed on the AHS Nutrition Services Tool Site.

Methods

The scope of evaluation activities was limited by a pandemic context. However, four evaluation activities were undertaken and are outlined in brief below. For more detailed information on methodology, please contact PublicHealth.Nutrition@ahs.ca.

1. **Key informant (KI) interviews (Jun 2021)**: A total of seven KI interviews were held with a purposive sample of stakeholders. The sample captured both users and non-users of the PreNuT, and the aim was to explore why they have or have not chosen to use it.
2. **Environmental scan (e-scan) (Jan 2021)**: An internet search was conducted to identify online references to the PreNuT (e.g. posted to a website, discussed in a blog, referenced in a document, etc.).
3. **Web analytics (Jan 2020–Dec 2020)**: Data from AHS NS website traffic was reviewed to quantify site visits applicable to the PreNuT.
4. **Perpetual survey (Apr 2019–Dec 2021)**: A survey was made perpetually available on the PreNuT subpage of the AHS website to capture customer perceptions of tool characteristics.

Findings

Findings for all 4 activities are presented in the following sections of this report. The information presented is primarily in reference to the KI interviews.

Please note that this evaluation data cannot be used to draw conclusions about the overall uptake or 'use' of the PreNuT; representative quantitative data was not collected. Rather, the focus was on in-depth qualitative exploration with a limited number of purposively selected stakeholders. The aim was to explore why these key stakeholders have or have not chosen to use the PreNuT. Findings are described below and pertain to both tool characteristics as well as dissemination strategies.

In the context of this qualitative exploration, some (limited) information about tool use and disuse was mentioned by stakeholders. To note as an aside: tool use was reported by some Canadian Prenatal Nutrition Programs (CPNPs) while disuse was reported by some AHS RDs, Primary Care Networks (PCNs), and Indigenous Services Canada (ISC). Two CPNP projects have integrated the tool into routine practice, while tool use in one other CPNP project remains based on individual care provider decisions:

"…they do it once clients enter the program and then once a month."

"[It is currently] not a formal program, where they must do it… more of a practitioner decision [whether or not] to use the tool".

Tool Characteristics

KI interviewees and perpetual survey respondents who reported that they use the PreNuT expressed appreciation for its conversation support aspect. Furthermore, they approved of the existence of a tool that is both standardized and flexible. They found the tool most useful to support practice when they applied their own clinical judgement as to when and how to use it:

"Some of [the clinicians] will take certain questions and use them as conversation starters… they have their own way of asking very similar questions to elicit the responses that they are trying to get."

"I thought the links to the different resources were very helpful."

Interviewees who reported that they don't use the tool noted that they didn't see a need for it or that tool characteristics didn't fit their needs:

"I [an RD] don't need it for individual assessments… more useful for other [non-RD] providers… I feel comfortable doing this without the tool, [I] haven't used it with the client."

"[The clinicians in my program] are not using it… they are quite comfortable… about nutrition in prenatal care. Have been working 10+ years in this area…"

"If someone says yes or no, it was difficult to say what to do next. [More] client resources or… conversation [guidance] is needed to use the tool… If they score low, then what? What to do next… On-hand resources would support use of the tool… more interactive tools that work better. Make it more engaging for pregnant women."

Several interviewees described that specific aspects of the PreNuT questionnaire and conversation guide were barriers to their use, citing a mismatch between the tool and their conversation support needs. In regard to the questionnaire, barriers cited included its length, flow, and perceived inflexibility:

"…do we have to do this, this is kind of long… A lot of the visits that we have are pretty short and have a lot of topics to cover… won't have time to go through the whole tool."

"Questions can be restrictive, not meeting people where they are at… the flow doesn't follow what I would usually use."

In regard to the conversation guide, barriers cited included lack of low literacy resources, lack of online optimization, and disconnect with existing charting systems/requirements:

"Pet peeve with the tool [is that] it predominately refers to… high literacy resource[s], so it feels like it is lacking in follow up."

"It's one more thing that they have to use and document on… tool is different than what would be used in charting system (fill out paper, don't have time to transcribe)."

Interviewees were directly asked for their recommendations on improving the PreNuT. They recommended that NS consider tool edits such as adding low literacy resources, adding interactive elements, adding visuals, strengthening the conversation guide, reformatting the tool into an all-in-one document, directing users when to refer to an RD, and including more specific talking points:

"[I suggest] more visuals – it is plain."

"[We need an] explanation on how to talk to some of the answers… a prepopulated quick answer…"

"[I suggest] a one-pager of the questions just so they can see the questions quickly. A cue to use [like the] cards that we have for the ADIME statements… we don't have time to flip through everything."

"[Need] more interactive… a way to bring some of the pieces to life."

Dissemination Strategies

Web analytics revealed that the Considerations across the Life Cycle subpage of the AHS website received 2428 visits during 2020. During this time period, the PreNuT was located on this subpage alongside other NS products, including several Nutrition Guidelines. The web analytics from this time period cannot differentiate between the page visits that involved a user accessing the PreNuT versus the page visits that involved a user accessing the other products on the page. It is expected that the new PreNuT webpage – which went live on April 19th, 2021 – will allow for easier, more direct access to the PreNuT. However, the impact of this webpage change cannot be assessed based on the 2020 web analytics data.

Based on the e-scan, the AHS website was the easiest point of online access to the PreNuT in 2021. The CPNP website additionally facilitated access to the PreNuT questionnaire but not the conversation guide. No other websites (outside of AHS and CPNP) were found to host or cite any of the PreNuT materials.

KI interviewees described hearing about the PreNuT via working group participation, email distribution, manager direction, word of mouth (either coworkers or interagency connections), and tool education sessions:

"…a PowerPoint presentation for nurses who work with the CPNP nutrition program."

"Manager brought it down… saying can we pilot this."

"Email works really well for communication- I can share it with the nurses."

There were several suggestions for further dissemination opportunities made by KI interviewees, who emphasized the importance of word of mouth communication. They encouraged NS to use existing meeting settings and technology as well as consider the need for repeat communication:

"…pre-recorded videos - having those things that if they just joined the team this year, and they missed the original communication, they have something saved [to refer back to]."

"Multiple avenues… the different ways are helpful. Some RDs hear it one way but not another…"

It was also noted that there was an oversight in the original stakeholder consultation activities, where Indigenous CPNP projects were not directly engaged throughout the PreNuT development process in the same manner as other Albertan CPNP projects. This gap was a result of a misunderstanding of the structure of the Alberta CPNP Coalition Network. Moving forward, more engagement is needed with projects and programs that provide prenatal nutrition care to targeted populations, including those vulnerable to poor health outcomes.

KI interviewees also made suggestions about the content of dissemination material. Namely, they recommended that NS emphasize practical use, the conversation guide, and evaluation findings in future implementation efforts:

"[I'd] like to know what's happening, if people are using it… is it meeting prenatal health... how are you measuring those kinds of results. More reminders to say [and] maybe I might use it."

"I know there was a video, but don't know if any of them found it useful… [instead, we need] talking points for it once you use it."

Limitations

Evaluation activities consisted of seven key informant interviews, an internet e-scan, some web analytics, and a perpetual online survey. Each of these activities had notable limitations.

KI interviews findings, which informed the majority of this summary report, should be interpreted in the context of the limited number and diversity of interviewees. Data saturation was not achieved with seven interviews, and five of the seven interviewees were dietitians (who were not the primary intended care provider group targeted for this tool).

Additionally, only two responses were received via the perpetual survey during the 2.5 years between its posting on the PreNuT webpage and the date of data retrieval. As a result of this small sample of respondents, quantitative data was discarded and only qualitative comments were examined.

It must be noted that e-scan findings relate only to where (in the online environment) the PreNuT was ‘hosted’ or cited. This data cannot be used to determine tool ‘use’.

As described in the findings section, web analytics that pertains to 2020 have limited applicability to the PreNuT in view of their lack of specificity. The extent of PreNuT access can be more accurately quantified (during future evaluation activities) once web analytics data becomes available for April 2021 and onwards.

It should also be noted that the majority of both implementation and evaluation activities occurred in the context of a global pandemic. This impacted the ability of NS to provide continuous communication and dissemination of the tool itself. Usage of the tool itself may have also been impacted by the pandemic (e.g. staff redeployment, use of telehealth, etc.).

Recommendations

In view of these findings, the following three quality improvement activities are recommended. A critical, client-centred viewpoint should be applied throughout the entire process of these quality improvement activities, and all historical elements of the PreNuT should be carefully considered in the context of its current direction in order to best adapt its format to its function (as a means of client-centred conversation support, not a screening tool).

1. Consider format adjustment

At present, the PreNuT consists of questions intended to identify client-specific needs (the questionnaire) and resources intended to support conversations about these needs (the conversation guide). This current form of the PreNuT as two separate documents arose from the context of the idea's conception. The initial request that spurred the development of the PreNuT was for a screening tool that would help non-RD professionals identify clients at nutritional risk and triage referral of these clients to RDs. Through consideration of practical factors (such as limited RD appointment time) as well as through evidence review (both literature search and consultation work via Delphi Process), it became evident that a screening tool might not be the best fit for the realities of prenatal care in Alberta. This led to the reimagining of the 'screening' questions into a 'questionnaire' as well as the subsequent development of the conversation guide.

The goal of the PreNuT is to support focused, client-centred conversations on nutrition topics between care providers and pregnant clients. Evaluation findings suggest that the above described (past) reimagining was a step in the right direction towards achieving this goal. However, evaluation findings suggest that reconsideration of the approach itself may be beneficial. The need for changes to the content itself appears to be minor, as there have been no substantial changes to the evidence-based recommendations for prenatal nutrition (nor were any concerns raised about content in the evaluation). Rather, it is the format of this content and approach to using the tool that may benefit from adjustment.

As noted previously, this tool was initially imagined as a way for care providers to screen for prenatal clients with nutritional concerns (and potentially refer them for further support where available). However, we have learned that – in most cases – the provider who initially asks the client the questions is the only one to provide nutrition advice and support.

This reality, coupled with the tool being more 'provider led', has given rise to the need to shift the tool format to become more 'client-centred': the goal is for the tool to aid care providers in speaking with the client about the client's concerns and advise/support accordingly.

Suggestions that reflect the changes in approach and formatting are as follows:

- Merge the questionnaire and conversation guide into one document.
- Consider creative format options that will truly put the client at the center of identifying priority topics.
- When considering format options, note that there are demands for the tool in both the in-person care environment as well as the virtual care environment.
- Avoid numbering the questions (or using other formats that indicate a prescribed and inflexible order to questionnaire flow).
- Add visual and interactive elements that support the learning of the client (consumer).
- Populate the conversation guide with 'at-a-glance' speaking points for the providers, rather than requiring providers to spend time searching through lengthy source material.
- Include the resources developed by the Maternal Low English Literacy Working Group (as an accompaniment to the links to Healthy Parents Healthy Children).

2. Integrate into Connect Care

KI interviewees who are AHS staff cited the perceived 'double-charting' expectations imposed by the PreNuT as a barrier to its use (in view of time constraints and competing priorities). Integrating the questionnaire portion of the PreNuT into a Connect Care template would mitigate this barrier amongst Connect Care users (internal stakeholders).

Findings also show that few clinics have integrated the PreNuT into routine practice; rather, decisions on whether to use it rest with individual care providers. Connect Care integration of the PreNuT could help facilitate more routine use by incorporating it into the direct field of vision and workflow of Connect Care users (internal stakeholders). Consideration should be given to exactly where in the Connect Care environment this is done in view of which healthcare providers the activity is intended to reach (primarily non-RD providers).

3. Strengthen the communication and dissemination strategy

Knowledge translation (KT) activities used thus far (performed mainly in 2019) included email communications, a promotional video (detailing the tool's characteristics and development process), and live presentations to CPNP stakeholders. Evaluation findings suggest that these efforts led to an uptake of the PreNuT among some internal (AHS) stakeholders and other close partners (CPNP stakeholders). Consider further KT efforts:

- Optimize the online accessibility of the PreNuT on the AHS website.[1]
- Engage more closely with projects and programs that provide prenatal nutrition care to targeted population groups, such as Indigenous Services Canada (ISC).[2]
- Continue to engage with CPNP stakeholders. For example, collaborate to optimize the CPNP website posting of the PreNuT.
- Consider broader engagement strategies outside of targeted population groups (e.g. PCNs).

Evaluation findings also revealed that frontline care providers are most interested in hearing about practical elements of tool use. While existing dissemination materials communicate the details of the rigorous processes used in tool development, frontline care providers recommended that the content of future dissemination materials adopt a more practical focus. This could be achieved via the following:

- Record a new PreNuT promotional video that is tailored to the needs and interests of frontline prenatal care providers. Suggested video content includes a mock/demo provider-client interaction that highlights PreNuT implementation and in client-centred care.
- Continue to disseminate the current PreNuT promotional video to academic stakeholders.
- Consider the need for written promotional materials that are also tailored to the needs and interests of frontline prenatal care providers (e.g. one-page 'how-to' guide).

[1]Of note, some optimization activities have occurred between the time of these evaluation activities and the time this report was written. Namely, a dedicated PreNuT subpage (which hosts both the questionnaire and conversation guide) was developed for the AHS website and made live on April 19th, 2021. The impact of this subpage was not captured in the evaluation activities of this report, but additional Web Analytics are planned for a future stage of evaluation to assess the impact of the updated webpage.

[2]Some action has already been taken on this front. Namely, an ISC representative was added to the PreNuT Evaluation Activity group and Reproductive Health Working Group. Additionally, a Scan Activity has been initiated by the Working Group to ensure that all critical stakeholder groups for the reproductive health target population – National, Provincial, and AHS Zone Level – are identified. This work will support NS to engage with these stakeholders for future communication, implementation, and dissemination.