ABSTRACT

Objectives Social accountability is an equity-oriented health policy strategy that requires institutions to focus on local population needs. This strategy is well established in health professional education, but there is limited understanding of its application in healthcare service delivery. Building on what is known in the education setting, this study aimed to explore the development of a framework of comprehensive, evidence-based social accountability standards for healthcare service delivery institutions.

Design This qualitative, multipart, multimethods study consisted of a modified Delphi process guided by an evidence-based social accountability tool for health professional education and complementary methods including developmental evaluation and a review of select literature to capture emerging evidence and contextual relevance.

Setting The study took place in Northern Ontario, Canada at a medical school and a tertiary, regional academic health sciences centre that are both grounded in social accountability.

Participants Eight expert participants from diverse, multidisciplinary backgrounds, including a patient advocate, were purposefully recruited from both institutions, enrolled and seven completed the study.

Main outcome The resulting framework of social accountability standards is organised into 4 major sections that capture broad and critical concepts; 17 key component reflective questions that address key themes; 39 aspirations that describe objective standards and 197 indicators linked to specific expectations.

Results Three modified Delphi rounds were completed producing a framework of consensus derived standards. Developmental evaluation helped identify facilitators, barriers and provided real-time feedback to the study’s processes and content. The literature reviewed identified 10 new concepts and 43 amendments.

Conclusion This study highlights the development of a comprehensive, evidence-based framework of social accountability standards for healthcare service delivery institutions. Future studies will aim to evaluate the application of these standards to guide equity-oriented social accountability health policy strategies in healthcare service delivery.

INTRODUCTION

Social accountability is an attractive health policy strategy for healthcare service delivery institutions such as hospitals and medical clinics. It has been successfully advocated for on moral and ethical grounds and for the promising possibility of improving equity-oriented and local, context-specific outcomes.1–16 Social accountability’s allure as a health policy strategy has led to it being identified as an important part of academic health sciences centres’ quadripartite missions,2 as a key consideration for emergency departments,1 as critical in continual quality improvement and health learning systems,3 and as a strategy to better address community needs in primary care.7,9,11–13,15 Increasingly,
social accountability is becoming a core mandate in strategic plans within academic health science centres and primary care networks. Despite the aforementioned, social accountability as a health policy strategy remains enigmatic, difficult to define and apply, and is inconsistently implemented. There is evidence that social accountability in healthcare service delivery can include everything from very specific interventions such as screening for poverty or practising trauma informed care, to using socially accountable community score cards in maternal and reproductive health. It is also simultaneously described as a much more comprehensive strategy that can be articulated across micro, meso and macro levels of care. This has led not only to confusion about social accountability in healthcare service delivery settings, but also a paucity of clear evidence on how to implement it as a comprehensive health policy strategy.

Looking to the different, but linked environment of academic institutions and health professional education—this is not the case. In health professional education, social accountability is well defined by the WHO as the obligation to be accountable to society by directing activities (education, research and service) towards local priorities. At its core, social accountability is a feedback loop of coidentifying priorities with community, making changes and then assessing impact. Integral to a social accountability strategy is meaningful engagement with different partner groups (academics, health administrators, policy-makers, health professionals and linked sectors); along with the values of relevance, quality, cost-effectiveness and equity. Social accountability requires community contextualisation, anticipation of needs and validation with community that their needs are met, rather than an awareness (social responsibility) or reaction (social responsiveness) to community needs.

In health professional education, social accountability is widely implemented as a health policy strategy. It is supported by a global consensus, and it is the mandate of academic institutions in multiple countries and is recognised as an accreditation standard in Canada. More importantly, there are multiple tools that help academic institutions implement it as a health policy strategy. One of the tools developed for academic institutions is the Social Accountability Framework for Health Workforce Training (SAFHW). This is an internationally validated tool that was developed using a modified Delphi process. Education programmes that adhere to these standards show positive impacts on graduate retention, economic stimulation, graduate’s orientation towards generalist disciplines, graduate tendency to practice in smaller and lower income communities, and strengthening of community healthcare services.

To expand the impacts of social accountability beyond academic institutions and health professional education, there is a need for similar tools that support the implementation of social accountability as an equity-oriented health policy strategy in the different settings of healthcare service delivery. To fill this gap, this study aimed to explore the development of a framework of comprehensive, evidence-based social accountability standards for healthcare service delivery contexts.

METHODS
Research team
This study was developed and led by an emerging clinical researcher (AA) and mid-career education researcher (EC). Together, they brought expertise in social accountability, healthcare service delivery and qualitative research methodologies.

Design
The study design consisted of a modified Delphi process, a review of literature identified by the Delphi expert panel and developmental evaluation (DE) (figure 1). In total, three successive modified Delphi rounds were conducted, each one progressively focusing the framework of social accountability standard’s suitability to healthcare service delivery. DE was used to capture important data beyond the purpose of the modified Delphi process and ultimately informed and identified additional literature sources to review, which was done after the second modified Delphi round. Following the third modified Delphi round, consensus was decided by majority participant vote resulting in the main outcome of the study. This design took into consideration how to manage a modified Delphi study in complex and low-resource settings.

Setting
The research team was based at the Northern Ontario School of Medicine University (NOSMU) and Health Sciences North (HSN). NOSMU is an international leader in socially accountable medical education, and HSN is an academic health sciences centre prioritising social accountability through its strategic plan.

Participants
Given the access to local, equity-oriented and content-specific expertise about social accountability in healthcare, the study purposefully recruited, through professional networks, eight expert participants with multidisciplinary backgrounds from Northern Ontario with affiliations to NOSMU and/or HSN including a patient advocate. Emphasis was placed on the identification, recruitment and selection of an expert panel to reflect a niche of important local contextual knowledge with applying social accountability in both education and service delivery contexts and exposure to broader knowledge of social accountability in other global contexts through professional networks. Given these requirements, only a small number of participants could be identified that suited the study’s objective. The expert panel size, although small, was consistent with the criteria of more than seven participants as the minimum group size.
RECRUITMENT OF EXPERT PARTICIPANTS

Recruitment, enrolment and orientation of expert panel members to the study.

FIRST MODIFIED DELPHI ROUND

SAFWHT standards revised by expert panel for relevance to healthcare service delivery context.

Developmental evaluation check-ins with expert panel members.

Participant’s voting and feedback refine the framework of standards.

SECOND MODIFIED DELPHI ROUND

Framework of standards re-circulated to participants to improve clarity.

Developmental evaluation check-ins with expert panel members. Request to validate with additional sources of literature.

Participant’s voting and feedback further refine the framework of standards.

Review of Select Literature Identified by Expert Panel

Core concepts mapped to the framework of standards and gaps addressed.

THIRD MODIFIED DELPHI ROUND

Framework of standards re-circulated to participants to improve utility within health care service delivery context.

Developmental evaluation check-ins with expert panel members.

Participant’s voting, feedback and literature review findings further refine the framework of standards.

CONSENSUS VOTE

Main Outcome: Approval of the Framework of Social Accountability Standards for Health Care Service Delivery

Figure 1 Study design. Multimethod study design that includes an expert panel undertaking a modified Delphi process, developmental evaluation and review of select literature identified by the expert panel. SAFWHT, Social Accountability Framework for Health Workforce Training Tool.

for reasonable reliability of a Delphi Study.\textsuperscript{45} \textsuperscript{46} Participant inclusion criteria reflected: (1) place or affiliation to NOSMU or HSN in Northern Ontario; (2) expertise in social accountability or related field in healthcare service delivery and/or health professional education and (3) commitment to the project in terms of availability, interest and time. Participant characteristics including age, gender, geographical location and professional roles were collected.

Given the need for global expertise but local contextual knowledge, the research team also doubled as participants and insider researchers.\textsuperscript{47} \textsuperscript{48} The benefits of having researchers as participants in this specific study design included having a shared professional identity, deep understanding of the content language and a shared experiential base with the expert panel members. This was conceptualised to benefit participant recruitment, enrolment and obtaining a greater richness of data.
The benefits were also understood as bringing content expert knowledge to a complex and niche subject matter; better rapport and acceptance in leading an expert panel through the modified Delphi process; and, commitment to complete a complex study. To mitigate the risks of confirmation and design bias, participant data were anonymised and the researchers were blinded during data analysis; participant researchers engaged in self-check-ins to ensure they respected the confines of the study’s design and methodology; notes of their activities were kept; and, feedback from participants was consistently solicited and reviewed about the process and evolving framework of social accountability standards.

**Patient and public involvement**

One participant was recruited and enrolled as a patient and family advocate from the academic health sciences centre. They were provided an opportunity for input into the study protocol, participated fully in the modified Delphi process, reviewed study results and were offered authorship. Results of this study will be shared with all participants.

**Modified Delphi process**

Based on known social accountability tools and frameworks in health professional education,18 23 28–31 35 49 THEnet’s SAFHWT (https://thenetcommunity.org/theframework/) was identified by the research team as the only comprehensive and validated tool with a framework of standards that could inform this study’s modified Delphi process. The SAFHWT standards served as the starting point to inform participants of the concepts, theme and expectations when exploring the development of a framework of social accountability standards for the different, but linked context of healthcare service delivery.24 30 33 In 2013, The SAFHWT was developed through transnational collaboration with 27 experts with a multistep research methodology similar to a modified Delphi process. It serves as a key tool for health professional training throughout THEnet’s global network.20 33 The SAFHWT is organised into four major sections that capture broad and critical concepts; 21 key component reflective questions that address key themes; 55 aspirations that describe objective standards and 163 indicators linked to the specific, expected actions of a socially accountable health professional academic institution.

Similar to other studies that have developed social accountability standards,25 36 a modified Delphi process was chosen for this study. Modifications included a smaller, more focused expert panel and the integration of DE data. The modified Delphi process was led by AA who oriented the expert panel to the SAFHWT and the modified Delphi process via written instructions and one-on-one sessions. Three modified Delphi rounds were conducted by email between July 2019 and December 2021, with a 5-month study interruption due to COVID-19. Members of the expert panel completed their work independently for each Delphi round and were instructed to vote in the following way: (A) accept the standard without modification, (B) accept the standard with modification (suggest modifications), (C) reject the standard or (D) suggest new standards. Their votes and qualitative responses (ie, modifications to existing or newly suggested standards) were submitted to a research assistant (RA) on standardised forms, using Microsoft Word and Excel Tools, who anonymised data. Data were synthesised and the framework of standards was updated based on the expert panel member votes simply by continuing to include, removing, modifying or adding new content to the framework of standards. If there were any incongruencies across the votes, a simple majority was used. Feedback was provided for each round based on results from the modified Delphi process and integration of DE data: round 1—relevance, experts were asked to revise standards to reflect a healthcare service delivery setting; round 2—clarity, experts were asked to revise standards to improve succinctness and reduce redundancy and round 3—utility, experts were asked to revise standards to improve flow and format.

For each round, the total number of standards that were (1) accepted, (2) newly proposed and/or modified, (3) rejected and (4) missing feedback and, the total number of standards by major sections, key components, aspirations and indicators were tracked across the expert panel. The number of edited and newly proposed standards were grouped together for practicality. It was predetermined that observing an increasing trend in the total number of standards that were accepted and a declining trend in the total number of standards that were modified or newly proposed, rejected and missing feedback would trigger consideration for an expert panel consensus vote for approval of the final framework of standards.

**Developmental evaluation**

The DE31–35 was led by EC and interwoven into each step of the study’s design including using DE data to further inform the modified Delphi process, as well as, sourcing feedback on the study’s processes and content from the expert panel. The main objectives of DE were to explore process and content facilitators and barriers and to help inform ongoing refinements of the standards.

DE data consisted of reflective notes made by the expert panel members, research team communications (team meetings, agendas and notes), and ‘reflective check-ins’ after each modified Delphi round (emails, interviews). In these check-in’s panel members were asked to reflect on what went well, what to change and what’s next. Additional questions helped panel members to consider the contextual factors influencing the standards and tool development (box 1). Data were captured through detailed research notes by the DE lead, transcribed into Microsoft Excel and underwent a content analysis by the DE lead and an RA.

Preliminary DE data were used to focus the modified Delphi process after each round, and to adjust the study’s processes and content in real time. At the completion
of the study, DE data were summarised through content analysis, using a process of open coding (to identify categories and subcategories) and axial coding (to derive meaning across and between the categories). The DE lead and RA coded the material independently and then met to finalise the results.

**Literature identified to consult by expert panel**

As a key theme that emerged from DE, the expert panel referred to literature pointing at gaps in the framework of standards. After the second modified Delphi round, led by a final year medical student (JH), the literature identified by the expert panel was reviewed by the research team. Sources were included based on agreed criteria (language: English; years: 1995–2020; location: all geographies considered; format: all formats considered) and based on relevancy and applicability driven by three major questions: (1) Is this article used to guide health professional education and/or healthcare service delivery? (2) Does the article represent a milestone in the evolution of social accountability? and (3) Can the article apply to the context of healthcare service delivery?

Core concepts were extracted and mapped to this study’s social accountability standards. Gaps were identified and described. Redundant gaps and those that did not apply to developing a framework of standards were excluded. Remaining gaps were grouped and described as new concepts, which were integrated into the third modified Delphi round’s framework of standards by the Delphi lead. The total number and a description of amendments were recorded.

**Final consensus vote**

Trending Delphi data and the expert panel’s capacity for additional rounds triggered a vote on the final iteration of standards. Expert panel members were emailed a survey asking them to indicate whether they agreed or did not agree that the standards in each of the evaluation tool’s four major sections were ready for pilot testing and asked for participant’s comments. Consensus was defined as simple majority.

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**Box 1 Developmental evaluation reflective questions**

<table>
<thead>
<tr>
<th>What do we need to pay attention to?</th>
<th>What do we need to learn?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What opportunity are we trying to address?</td>
<td>1. What opportunity are we trying to address?</td>
</tr>
<tr>
<td>2. What are the key drivers around this initiative?</td>
<td>2. What are the key drivers around this initiative?</td>
</tr>
<tr>
<td>3. What resources do we have to work with?</td>
<td>3. What resources do we have to work with?</td>
</tr>
<tr>
<td>4. What are the leverage points?</td>
<td>4. What are the leverage points?</td>
</tr>
<tr>
<td>5. What are the potential challenges, gaps and road blocks?</td>
<td>5. What are the potential challenges, gaps and road blocks?</td>
</tr>
<tr>
<td>6. Who are the key stakeholders and what are their roles?</td>
<td>6. Who are the key stakeholders and what are their roles?</td>
</tr>
<tr>
<td>7. What are the potential challenges, gaps and road blocks?</td>
<td>7. What are the potential challenges, gaps and road blocks?</td>
</tr>
<tr>
<td>8. What are the potential challenges, gaps and road blocks?</td>
<td>8. What are the potential challenges, gaps and road blocks?</td>
</tr>
<tr>
<td>9. How does the group (the expert panel) make decisions?</td>
<td>9. How does the group (the expert panel) make decisions?</td>
</tr>
<tr>
<td>10. What are the potential challenges, gaps and road blocks?</td>
<td>10. What are the potential challenges, gaps and road blocks?</td>
</tr>
<tr>
<td>11. What are the strengths and weaknesses of the group?</td>
<td>11. What are the strengths and weaknesses of the group?</td>
</tr>
</tbody>
</table>

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**Table 1 Participant characteristics and participation rates**

<table>
<thead>
<tr>
<th>Participant characteristics</th>
<th>No of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation rates</td>
<td></td>
</tr>
<tr>
<td>Total recruited</td>
<td>8</td>
</tr>
<tr>
<td>Total enrolled</td>
<td>7 (88%)†</td>
</tr>
<tr>
<td>Consented to report demographic characteristics</td>
<td>6*</td>
</tr>
<tr>
<td>Author status</td>
<td>3</td>
</tr>
<tr>
<td>Modified Delphi round 1</td>
<td>5/7 (71%)</td>
</tr>
<tr>
<td>Modified Delphi round 2</td>
<td>4/7 (57%)</td>
</tr>
<tr>
<td>Modified Delphi round 3</td>
<td>3/7 (43%)‡</td>
</tr>
<tr>
<td>Final vote</td>
<td>6/7 (86%)</td>
</tr>
<tr>
<td>Participant characteristics</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3</td>
</tr>
<tr>
<td>Female</td>
<td>3</td>
</tr>
<tr>
<td>Self-described</td>
<td>0</td>
</tr>
<tr>
<td>Age range</td>
<td>29–72</td>
</tr>
<tr>
<td>Geographic location</td>
<td></td>
</tr>
<tr>
<td>Northern Ontario</td>
<td>6</td>
</tr>
<tr>
<td>Professional experiences (at any point in a participant’s career)§</td>
<td></td>
</tr>
<tr>
<td>Currently a learner</td>
<td>2</td>
</tr>
<tr>
<td>Health administrator</td>
<td>1</td>
</tr>
<tr>
<td>Front-line healthcare worker</td>
<td>4</td>
</tr>
<tr>
<td>Health professional educator</td>
<td>3</td>
</tr>
<tr>
<td>Researcher</td>
<td>3</td>
</tr>
<tr>
<td>Academic administrator</td>
<td>3</td>
</tr>
<tr>
<td>Patient advocate</td>
<td>1</td>
</tr>
</tbody>
</table>

*One participant opted not to report demographic characteristics due to the small sample size.
†One recruited participant opted out of the study for personal reasons.
‡Participation impacted by COVID-19 pandemic as noted in the Methods section.
§Participants held multiple, overlapping professional roles throughout their careers.

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**Statistical analysis**

Descriptive statistics were used to present summarised results of participant data, each modified Delphi round, the review of literature identified by the expert panel and the final consensus vote.

**RESULTS**

**Study participants**

Participation rates and participant characteristics are listed in table 1. Participation rates expectedly declined with each modified Delphi round, which is common but also reflected the significant impact of the COVID-19 pandemic.
Modified Delphi process
Over the three modified Delphi rounds, the number of standards accepted without changes trended up; the number of new or edited, rejected and standards with missing feedback trended down. In the third iteration, the total number of standards remained consistent with the SAFHWT (online supplemental figures 1 and 2).

DE: language, context and engagement matter
At the completion of the study, content analysis of DE data identified three main themes across all rounds of the modified Delphi process. All expert panel members identified the need to focus on language that defines important differences between health professional education and healthcare service delivery, and the need for a framework of standards that uses relevant terminology. Context matters was also a core theme identified in both the study’s setting and the need for a framework of standards to allow for contextual differences. Expert panel members brought the context of living through the COVID-19 pandemic to the development of the framework and expressed a lack of time to commit to the modified Delphi process. The DE provided them with a way to express the contextual factors influencing all aspects of their lives. Lastly, engagement was identified referring to being engaged or disengaged through the modified Delphi process and the need for continued engagement with key leaders, organisations and knowledge users to ensure the future, successful implementation of this framework of standards.

DE also identified specific modifications, which informed alterations to the study’s processes and content in real time as the study progressed. This included: the need for a glossary of terms; the need to consult additional literature identified by the expert panel (ie, other tools); alterations to the timeline; gaps in the proposed framework of standards; and, measures to address barriers while leveraging key drivers and facilitators towards the study’s primary outcome. As the study progressed, this real-time feedback helped the research team modify its processes to better meet the needs of the participants, to achieve the study’s objectives and resulted in more robust outcomes namely the proposed framework of social accountability standards for healthcare service delivery and process factors beyond the standards that can inform implementation.

Literature identified to consult by expert panel: gaps and concepts
Sixteen articles were selected for review and comparison with the developed framework of standards. Summary findings are outlined in table 2, online supplemental figure 3 and online supplemental table 1. Twenty-five gaps were identified and described. After excluding redundant gaps and those that did not apply to developing social accountability standards, 10 new concepts were integrated during the third modified Delphi round with expert panel member feedback and contributed 43 amendments to the framework of standards. All the core concepts identified in the review of literature were mapped to the proposed framework of social accountability standards.

Final consensus vote
Six out of seven (86%) expert panel members voted. All voting expert panel members (100%) approved the final framework of social accountability standards for pilot testing. No participant comments were received.

Main outcome: framework of social accountability standards
The main outcome of this study explored and demonstrated that a framework of social accountability standards can be developed for healthcare service delivery institutions (ie, hospitals). This study led to the development of a framework of standards that are organised into 4 major sections, which are divided into 17 key components, 39 aspirations and 197 indicators. Major sections represent key social accountability concepts. Key components are reflective questions that subdivide the major sections into core themes. Aspirations are linked to key components and represent focused objectives, which are supported by indicators that outline specific expectations. For select examples from the framework of standards, please see online supplemental table 2.

Creating a continuum: linking academic and service delivery institutions
The study also identified that social accountability can be shared between the different, but linked environments of education and healthcare service delivery and preserved established social accountability concepts, themes and expectations that exist for health professional education programmes (ie, medical schools). In comparing the developed framework of standards to existing standards in health professional education, the preservation of concepts, themes and expectations was evident in both the structure and content. Standards that reflected the shared operational goals between these two environments required only minor alterations such as those relating to research, education and service delivery; identifying communities served; and, intentions to address priority needs. In contrast, the most divergent areas were clustered around indicators that reflected the operational differences between these two environments and required restructuring or new standards. For example, some standards for health professional education programmes identify training a future health workforce through a comprehensive admission process and curriculum. For healthcare service delivery institutions, this concept resonated more with human resource planning and maintaining a health workforce that can deliver the necessary healthcare services. Lastly, as the study evolved, standards became more aligned with the key operations of a healthcare service delivery institution.

The preservation of structure and content, along with the shared and divergent operational goals of these two
Table 2  Summary of new concepts and description of amendments made based on the review of literature identified to consult by the expert panel

<table>
<thead>
<tr>
<th>New concept</th>
<th>Action taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practicality (length of tool/volume of standards)</td>
<td>Total no of standards condensed from 518 to 253 during third Delphi round. Example: see online supplemental figure 2.</td>
</tr>
<tr>
<td>Positive language/appreciative inquiry</td>
<td>All standards structured with negative inquiries edited. Example: Evidence that the current local healthcare system acts on and impacts the social determinants of health. (Edited to remove ‘lack of evidence.’)</td>
</tr>
<tr>
<td>Teaching cost-effectiveness</td>
<td>Additional standards added. Example: Concepts of cost-effectiveness such as fiscal responsibility, budgeting, managing healthcare resources, value analysis and return on social investment analysis are taught.</td>
</tr>
<tr>
<td>Racism and systemic racism</td>
<td>Standards that address equity and discrimination expanded to explicitly reference racism and systemic racism. Example: The health institution has anti-racism processes that address the impact of racism, systemic racism, discrimination and inequity in all its activities.</td>
</tr>
<tr>
<td>Accreditation processes</td>
<td>Standards that address the value of quality amended to explicitly include accreditation. Example: The health institution has quality assurance and improvement process that promote high-quality, comprehensive healthcare services that are in-line with accreditation and expected professional standards, the expectation of key stakeholders and of those the health institution serves.</td>
</tr>
<tr>
<td>Widely accessible health information</td>
<td>Additional standards added. Example: The health institution has a process that allows a patient to access their own personal health information.</td>
</tr>
<tr>
<td>Environmental accountability</td>
<td>Additional standards added throughout. Example: The health institution continually evaluates its environmental accountability and the impact of environmental degradation on the health of those it serves.</td>
</tr>
<tr>
<td>Diversity and inclusiveness of marginalised populations</td>
<td>Standards that reference populations who are marginalised, underserved and that experience inequity amended to reflect ‘sociodemographic, ethnic, cultural, gender and regional diversity.’ Example: The desired sociodemographic, ethnic, cultural, gender and regional diversity of the health workforce and leadership team mirrors that of those the health institution serves, inclusive of the diversity of those who are marginalised, underserved or who experience health inequity.</td>
</tr>
<tr>
<td>Public and private sector collaboration</td>
<td>Additional standards added. Example: There are partnerships that exist across resource rich versus resource poor defined settings (ie, public vs private or primary vs secondary vs tertiary levels of care or urban vs rural).</td>
</tr>
</tbody>
</table>
environments underline the possibility of a social accountability continuum that includes health professional education programmes, their graduate’s and institutions responsible for the delivery of healthcare services. These institutions working together with shared and linked equity-oriented social accountability strategies could act as catalysts for a more robust mechanism to transform healthcare systems towards equity-oriented outcomes that focus on local population needs (figure 2).

DISCUSSION
Principal findings
There are two notable findings discovered while exploring the development of social accountability standards for healthcare service delivery. The first and primary outcome is that social accountability can be a shared obligation between the different, but linked environments of health professional education and healthcare service delivery setting the stage for transformation of healthcare systems towards social accountability and equity-oriented outcomes that focus on local population needs. Second, that an educational framework for social accountability (ie, the SAFHWT) can be adapted and can be a determinate point of reference for social accountability frameworks in healthcare service delivery.

Limitations
There were two notable limitations in the study. First, the expert panel for the modified Delphi Process can be perceived as both a limitation and a strength. Given the highly focused, niche area of study, the inclusion of immersed, motivated and content expert ‘insider researchers’ with well situated subject knowledge was necessary to organise the methods and results from a valid social accountability determinate point of reference. This raises the possibility of confirmation and design bias; however, steps were taken to mitigate these risks in the
study’s methods. Similarly, participants were purposefully recruited to prioritise experts with the diversity, experiential depth and unique knowledge of social accountability in health professional education and healthcare service delivery from two institutions grounding themselves in the concept. Prioritising a small, local, expert panel carries the risk of selection and respondent bias, but also results in a panel with the characteristics to achieve the study’s objectives. Second, the COVID-19 pandemic affected the study in many ways, specifically with regard to the Delphi process engagement. Despite this, almost all participants reviewed the final iteration of standards and participated in the final vote. Although the focus of this study was to explore how social accountability in health professional training programmes could inform service delivery settings, in future research, it may be worth considering other existing, alternative frameworks.

Strengths
The study’s design allowed expert opinions to be captured, compared and validated in a timely, responsive and controlled manner through a structured modified Delphi process. Additionally, real-time feedback captured through DE allowed for the integration of DE data not only help inform the modified Delphi process, but also allowed for real-time adaptations of the study’s processes and content ensuring the study’s success. All standards were mapped to core concepts from the additional literature identified to consult by the expert panel through DE, which helped to resolve a relatively small number of gaps. The critical concepts, themes, objectives and expectations for social accountability in healthcare service delivery remained consistent with those for health professional education found in the SAFHWHT.

Comparison with other studies
There are no studies that the authors are aware of that have developed a comprehensive, evidence-based framework of social accountability standards for healthcare service delivery institutions (ie, hospitals) that extend from existing social accountability concepts, themes and expectations for academic institutions (ie, medical schools). This study demonstrated that the core idea of social accountability is applicable and relevant to a healthcare service delivery setting supporting the moral and ethical arguments and growing calls-to-action. Noting, that social accountability is a shared obligation between the different, but linked environment of health professional education and healthcare service delivery settings adds to the established knowledge base of social accountability strategies in health professional education and provides a practical means to implement a shared equity-oriented health policy strategy that focuses on local population health outcomes.

In light of this, there are important definitional changes needed to, for example, the frequently referenced WHO definition for the social accountability of medical schools, to better account for the contextual difference within healthcare service delivery settings. This study proposes the following definition for social accountability in healthcare service delivery:

… the obligation for health institutions to direct their health care services, research and education towards addressing the priority health needs, social needs and health inequities of the patients, populations, communities and region they are mandated to serve, and that this obligation extends to the needs of those who are marginalized, underserved and who experience inequity. Priority needs must be identified in partnership with key stakeholders, through meaningful community engagement and be guided by the values of relevance, quality, cost-effectiveness and equity.55

CONCLUSION
Accounting for the limitations and strengths of the study’s design, the proposed framework of social accountability standards for healthcare service delivery are comprehensive, evidence-based and in-step with the social accountability of health professional education programmes. This framework of standards will be included in the SAFE for Health Institutions Project’s toolkit, which is intended to be a practical means that can help healthcare service delivery institutions, health administrators, policy-makers and clinicians implement social accountability as an equity-oriented health-policy strategy that focuses on local population needs. These standards will next be piloted and further explored in the setting of an academic health sciences centre’s emergency department.

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Contributors AA acted as the principal investigator (PI) and colead for all aspects of this study. The SAFE for Health Institutions project was conceived by AA who was responsible for all administrative aspects of the study; established all protocols; secured a grant through the Northern Ontario Academic Medicine Association (NOAMA); submitted the ethics application to Health Sciences North (HSNR) Research Ethics Board (REB); recruited and oversaw research participants; oversaw the hiring and work of a research assistant (RA); participated in the modified Delphi process; oversaw the collection of participant data and feedback from the modified Delphi process; worked closely with participant data to aggregate all Delphi data and feedback into subsequent iterations of the SAFE for Health Institutions Evaluation Tool’s social accountability standards; reviewed and analysed the data from the modified Delphi process; provided oversight of a summer research student who undertook the review of literature identified by the expert panel; reviewed and analysed the data from the review of literature identified by the expert panel; participated in developmental evaluation; reviewed the developmental evaluation data; drafted the current manuscript; reviewed feedback from other authors and provided revision; has approved the final version of the manuscript; agrees to act as a guarantor to the work; and, is the corresponding author. EC acted as the main Co-Investigator (Co-I) and co-lead for all aspects of this study. EC was the main Co-I who substantially helped to further develop the idea for the SAFE for Health Institutions Project and its protocols; reviewed and revised the NOAMA grant application; reviewed and revised the ethics application; assisted in the recruitment and oversight research participants and the work of the RA; participated in the Delphi process; assisted with the collection of participant data and feedback from the modified Delphi process; reviewed and analysed the data from the modified Delphi process; revised and analysed the data from the modified Delphi process; reviewed and analysed the data from the cross-section review of...
literature; acted as the lead for developmental evaluation methods, data collection and analysis; assisted in drafting the current manuscript; reviewed feedback from other authors and provided revisions; has approved the final version of the manuscript; and agrees to act as a guarantor to the work. JH acted as a research team member and participated in all aspects of this study. JH reviewed and provided feedback for the study’s protocols; reviewed the NOAMA grant application; reviewed the ethics application; participated in the Delphi process; reviewed and analysed the data from the modified Delphi process; led the review of literature identified by the expert panel; was a recipient of NOSMU’s Summer Studentship Grant; provided a summary of findings for the review of literature identified by the expert panel; participated in developmental evaluation; assisted in drafting the current manuscript; reviewed feedback from other authors and provided revisions; has approved the final version of the manuscript; and agrees to act as a guarantor to the work.

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Competing interests
None declared.

Patient and public involvement
Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication
Not applicable.

Ethics approval
This study involves human participants and was approved by Health Sciences North Research Ethics Review Board, Project #019-016. Participants gave informed consent to participate in the study before taking part.

Provenance and peer review
Not commissioned; externally peer reviewed.

Data availability statement
Data are available on reasonable request. Portions of the study’s data can be made available for review on request. For all inquiries for data access, please email aanawati@nosm.ca or ercameron@nosm.ca.

Supplemental material
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REFERENCES
Supplemental Figure 1 - Total Aggregated Participant Feedback by Delphi Round

- Accepted
- New or Edited
- Rejected
- Feedback Missing

Delphi Round 1
Delphi Round 2
Delphi Round 3
Supplemental Figure 2 - Number of Social Accountability Standards in the SAFHWT Compared by Delphi Round

- SAFHWT
- Delphi Round 1
- Delphi Round 2
- Delphi Round 3
Supplemental Figure 3. Summary findings of article review, data extraction and synthesis.

- **Identification**
  - Articles identified by participants during DE (n = 39)

- **Screening**
  - Articles retrieved (n = 39)
  - Articles screened and assessed for eligibility (n = 39)
    - Reports excluded: (n = 23)
      - Publication year (n = 1)
      - Failed to pass screening questions (n = 22)
    - Other tools (n = 5)
      - Journal Articles (n = 8)
      - Position Statements (n = 3)
    - Concepts not Relevant to Standards (n = 5)
    - Redundant Concepts (n = 10)

- **Included**
  - Articles included in review (n = 16)

- **Data Extraction**
  - Concept Gaps (n = 25)
  - New Concepts (n = 10)

- **Synthesis**
  - Amendments to standards (n = 43)
### Supplemental Table 1. Summary findings of the review of literature.

<table>
<thead>
<tr>
<th>Title</th>
<th>Year</th>
<th>Author(s)</th>
<th>Core Concepts</th>
<th>Standards Mapped to Core Concepts</th>
<th>Gaps</th>
<th>Description of Gaps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenges and Opportunities for Partnership in Health Development</td>
<td>2000</td>
<td>Boelen, C.</td>
<td>27</td>
<td>391</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>Social Accountability: The Extra Leap to Excellence for Educational Institutions</td>
<td>2011</td>
<td>Boelen, C. &amp; Woollard, R.</td>
<td>9</td>
<td>162</td>
<td>4</td>
<td>Should not be a checklist. Define social needs in glossary of terms. Define the difference between social accountability, social responsiveness, and social responsibility. Conceptual leap of social accountability going from implicit to explicit and the degree it is integrated into practice to address social needs.</td>
</tr>
<tr>
<td>Best Advice on the Social Determinants of Health</td>
<td>2015</td>
<td>College of Family Physicians of Canada</td>
<td>22</td>
<td>173</td>
<td>1</td>
<td>Explicit reference to marginalized and underserved populations (LGBTQ2S+, those with disabilities and developmental delays, and refugees).</td>
</tr>
<tr>
<td>Practicing Social Accountability: From Theory to Action</td>
<td>2016</td>
<td>Buchman, S., et al.</td>
<td>8</td>
<td>151</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>Social Accountability at the Micro Level: One Patient at a Time</td>
<td>2016</td>
<td>Goel, R., et al.</td>
<td>18</td>
<td>46</td>
<td>1</td>
<td>Acknowledging and awareness of personal bias and privilege. Racism.</td>
</tr>
<tr>
<td>Social Accountability at the Meso Level: Into the Community</td>
<td>2016</td>
<td>Woollard, R., et al.</td>
<td>4</td>
<td>168</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>Social Accountability at the Macro Level: Framing the Big Picture</td>
<td>2016</td>
<td>Melli, R., et al.</td>
<td>5</td>
<td>80</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>Student's Toolkit: Social Accountability in Medical Schools</td>
<td>2017</td>
<td>IFMSA &amp; THEnet</td>
<td>68</td>
<td>121</td>
<td>4</td>
<td>Support and collaborate with other institutions nationally and internationally to attain common social accountability goals. Balance of graduates working in public and private sectors. &quot;How does this tool work&quot; section and/or scoring implications. This tool has fewer standards and is shorter in length.</td>
</tr>
<tr>
<td>An Appreciative Inquiry of social Accountability in Canada</td>
<td>2017</td>
<td>Woollard, R., et al.</td>
<td>21</td>
<td>227</td>
<td>1</td>
<td>Consistent positive, appreciative inquiry approach and language.</td>
</tr>
<tr>
<td>Health standards organization: Emergency Department</td>
<td>2017</td>
<td>Accreditation on Canada</td>
<td>77</td>
<td>352</td>
<td>2</td>
<td>Minimize the impact of the organization's operations on the environment. Easily accessible health record by clients.</td>
</tr>
<tr>
<td>ASPIRE for Excellence in Social Accountability Criteria</td>
<td>2018</td>
<td>ASPIRE</td>
<td>56</td>
<td>338</td>
<td>2</td>
<td>Environmental accountability standards (in medical education, professional development, as research program priorities, environmentally responsive health systems). This tool is shorter and with less standards.</td>
</tr>
<tr>
<td>Socially Accountable Health Sciences Centres: Pursuing a Quadripartite Mission</td>
<td>2019</td>
<td>Smitherman, H.C., Baker, R.S., &amp; Wilson, M.R.</td>
<td>10</td>
<td>245</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>Social Mission Metrics: Developing a Survey to Guide Health Professions Schools&lt;sup&gt;32&lt;/sup&gt;</td>
<td>2020</td>
<td>Batra, S., et al.</td>
<td>32</td>
<td>266</td>
<td>1</td>
<td>Diversity and inclusion of marginalized groups.</td>
</tr>
</tbody>
</table>
**Supplemental Table 2 - Selected examples from the developed framework of social accountability standards.**

| Major Section                               | Key Component                                                                 | Aspiration                                                                                                                                                                                                                                                                                                                                                     | Indicators                                                                                                                                                                                                                                                                                                                                
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Major Section 1</strong></td>
<td><strong>Who does the health institution serve, what are their needs and are those needs being met?</strong></td>
<td>Who does the health institution serve?</td>
<td>The patients, populations and communities who are marginalized, underserved and that experience health inequity are described and emphasized as groups the health institution is trying to better serve.</td>
</tr>
<tr>
<td><strong>Major Section 2</strong></td>
<td><strong>How does social accountability help organize the health institution?</strong></td>
<td>How does the health institution build partnerships with key stakeholders and pursue community engagement?</td>
<td>There are community engagement events or activities.</td>
</tr>
<tr>
<td><strong>Major Section 3</strong></td>
<td><strong>How does the health institution deliver health care services, direct research and engage in health professional education?</strong></td>
<td>Do health care services reflect social accountability and address the priority health needs, social needs and the health inequities of the patients, populations and communities the health institution serves?</td>
<td>The health institution acts on the social determinants of health.</td>
</tr>
<tr>
<td><strong>Major Section 4</strong></td>
<td><strong>Has the health institution’s activities transformed the health care system and impacted the needs of those it serves?</strong></td>
<td>Has the health institution’s response to the priority health needs, social needs and health inequities of the patients, populations and communities in</td>
<td>There has been improved access to more relevant, high-quality and equitable health care services for those the health institution serves, particularly for those who are marginalized, underserved and that</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| servs had an impact? | experience health inequity. | Key stakeholders and those the health institution serve express increased satisfaction with the health institution’s health care service delivery.  
Health care services are assessed and evaluated for excellence, against indicators established through the health institution’s community engagements, partnerships with key stakeholders, the community health needs assessment and those the health institution serves.  
Recognition from key stakeholders and those the health institution serves that health care services are relevant, culturally safe, account for socio-demographic context, are of high-quality, equitable and free from racism, systemic racism and discrimination. |
---|---|---|

These selected examples do not reflect the entirety of the proposed social accountability standards in the SAFE for Health Institutions Evaluation Tool.