Atlantis
Critical Studies in Gender, Culture & Social Justice
Études critiques sur le genre, la culture, et la justice

Making Space for All Body Sizes in Pre-, Peri-, and Post-natal Care in Atlantic Canada

A Patient-Informed Hospital Equipment Inventory

Assurer l'inclusion de la diversité corporelle dans les soins pré-, péri- et postnataux au Canada atlantique

Un inventaire de l'équipement hospitalier fondé sur l'expérience des patientes

Rachel Waugh, Maxine Bernard, Megan Gray, Raashsni Chandrasekar, Vanessa DeClercq, Jillian Coolen, Barbara Hamilton-Hinch, Erna Snelgrove-Clarke and Shannan Grant

Volume 47, Number 1, 2026

"Healing is an Act of Communion": Critical Perspectives on Women's Health, Wellness, and Disease

URI: https://id.erudit.org/iderudit/1125576ar
DOI: https://doi.org/10.7202/1125576ar

See table of contents

Publisher(s)

Mount Saint Vincent University

ISSN

1715-0698 (digital)

Explore this journal

Cite this article

Waugh, R., Bernard, M., Gray, M., Chandrasekar, R., DeClercq, V., Coolen, J., Hamilton-Hinch, B., Snelgrove-Clarke, E. & Grant, S. (2026). Making Space for All Body Sizes in Pre-, Peri-, and Post-natal Care in Atlantic Canada: A Patient-Informed Hospital Equipment Inventory. *Atlantis*, *47*(1), 145–162. https://doi.org/10.7202/1125576ar

Article abstract

Background: Diverse, versatile, and readily accessible equipment is essential for healthcare provision, to maximize care quality, minimize complications, and eliminate weight stigma and discrimination. Hospital equipment inventories (inventories) and audits can be completed by internal or external reviewers and are not always publicly available or subject to peer review, despite hospitals receiving significant public funding for care and research. Objective: The objective of this research was to complete an inventory audit to identify, count, and describe (type, weight capacity) bariatric equipment in nine units/ clinics in the Women's Building of a maternal-newborn hospital in Atlantic Canada. Methods: Six registered nurses completed inventories using a standardized form, including type and weight capacity of all bariatric equipment, in 2018 and 2021, at nine units/clinic sites within an urban maternal-newborn tertiary care facility in Atlantic Canada. Results: The inventory audits conducted in 2018 and 2021 show that additional bariatric beds, stretchers, and blood pressure cuffs were purchased. Nonetheless, findings agree with existing peer-reviewed literature that show bariatric equipment is lacking in Canadian tertiary care settings. Conclusion: The objective of this project was met, confirming an increase in the availability of specific bariatric inventory between 2018 and 2021; however, the current availability and amount of bariatric equipment is not adequate. This quality improvement initiative highlights a strength of local clinician-researcher efforts, relationships, and engagement with patient-centred implementation science.

Atlantis: Critical Studies in Gender, Culture & Social Justice
Issue 47.1 (2026)
Special Issue: "Healing is an Act of Communion": Critical Perspectives on Women's Health, Wellness, and Disease Research

Making Space for All Body Sizes in Pre-, Peri-, and Post-natal Care in Atlantic Canada: A Patient-Informed Hospital Equipment Inventory

by Rachel Waugh,[1] Maxine Bernard,[1] Megan Gray, Raashsni Chandrasekar, Vanessa DeClercq, Jillian Coolen, Barbara Hamilton-Hinch, Erna Snelgrove-Clarke, Shannan Grant

Abstract: Background: Diverse, versatile, and readily accessible equipment is essential for healthcare provision, to maximize care quality, minimize complications, and eliminate weight stigma and discrimination. Hospital equipment inventories (inventories) and audits can be completed by internal or external reviewers and are not always publicly available or subject to peer review, despite hospitals receiving significant public funding for care and research. Objective: The objective of this research was to complete an inventory audit to identify, count, and describe (type, weight capacity) bariatric equipment in nine units/ clinics in the Women's Building of a maternal-newborn hospital in Atlantic Canada. Methods: Six registered nurses completed inventories using a standardized form, including type and weight capacity of all bariatric equipment, in 2018 and 2021, at nine units/clinic sites within an urban maternal-newborn tertiary care facility in Atlantic Canada. Results: The inventory audits conducted in 2018 and 2021 show that additional bariatric beds, stretchers, and blood pressure cuffs were purchased. Nonetheless, findings agree with existing peer-reviewed literature that show bariatric equipment is lacking in Canadian tertiary care settings. Conclusion: The objective of this project was met, confirming an increase in the availability of specific bariatric inventory between 2018 and 2021; however, the current availability and amount of bariatric equipment is not adequate. This quality improvement initiative highlights a strength of local clinician-researcher efforts, relationships, and engagement with patient-centred implementation science.

Keywords: women; weight; mass; obesity; fat; bariatric equipment; clinical practice guidelines

Résumé : Contexte : Un équipement diversifié, polyvalent et facilement accessible est essentiel pour la prestation de soins de santé, afin de maximiser la qualité des soins, de réduire les complications et d'éliminer la stigmatisation et la discrimination liées au poids. Des examinateur·trice·s internes ou externes peuvent effectuer les inventaires d'équipement hospitalier (inventaires) et les vérifications et ces derniers ne sont pas toujours rendus publics ni soumis à un processus d'évaluation par les pairs, bien que les hôpitaux reçoivent un financement public considérable pour les soins et la recherche. Objectif : L'objectif de cette recherche était de réaliser une vérification de l'inventaire afin de recenser, compter et décrire (type, capacité pondérale) l'équipement bariatrique dans neuf unités ou cliniques du pavillon des femmes d'un hôpital de soins maternels et néonataux du Canada atlantique. Méthodes : Six infirmières autorisées ont réalisé des inventaires à l'aide d'un formulaire normalisé, comprenant le type et la capacité pondérale de tous les équipements bariatriques, en 2018 et 2021, dans neuf unités ou cliniques au sein d'un établissement de soins maternels et néonataux tertiaire urbain au Canada atlantique. Résultats : Les vérifications d'inventaire effectuées en 2018 et 2021 indiquent l'acquisition de lits bariatriques, de civières et de brassards de pression artérielle supplémentaires. Toutefois, les résultats concordent avec les publications évaluées par les pairs, lesquelles montrent que l'équipement bariatrique est insuffisant dans les établissements de soins tertiaires au Canada. Conclusion : L'objectif de ce projet a été atteint,

confirmant une augmentation de la disponibilité de certains équipements bariatriques entre 2018 et 2021. Cependant, la disponibilité et la quantité actuelles de ces équipements ne sont pas suffisantes. Cette initiative d'amélioration de la qualité souligne les efforts, les relations et l'engagement des clinicien·ne·s-chercheur·se·s locaux envers la science de la mise en œuvre centrée sur les patients.

Mots clés : femmes; poids; masse; obésité; graisse; matériel bariatrique; recommandations de pratique clinique

Authors: Rachel Waugh is a Registered Dietitian and an Interdisciplinary PhD Student at the University of Victoria. Her research interests include weight stigma, women's health, healthcare provider education and training, and health equity.

Maxine Bernard, RNC, BScN, MHS, is the Clinical Leader of Development (CLD/Clinical Educator) in the Birth Unit at IWK Health in Halifax, Nova Scotia. She is a Fetal Health Surveillance Instructor, NRP, BLS and ACLS Instructor, and an active member on the CAPWHN Clinical Practice Committee (CPC). Her work primarily includes creating and implementing staff orientation and ongoing education, policy development and implementation, as well as development and implementation of quality initiatives.

Megan Gray is a PhD in Health Candidate at Dalhousie University and Registered Dietitian with the Nova Scotia Regulator of Dietetics. Her research focuses on using implementation science methodologies to improve the care of pregnant people and their infants during conception, pregnancy, birthing, and postpartum periods.

Raashsni Chandrasekar holds a Bachelor of Science in Applied Human Nutrition from Mount Saint Vincent University and works in Research Data Management, supporting the collection, validation, and analysis of study data. Originally from Malaysia, they view food as an essential part of culture and have always been interested in connecting culture, diet, and health.

Vanessa DeClercq, PhD, is a Research Associate and Adjunct Professor in the Departments of Pharmacology and Community Health and Epidemiology at Dalhousie University. Her research interests include nutrition, healthy aging, chronic disease prevention, biomarker discovery, and human-microbial interactions.

Jillian Coolen (she/her) is an Associate Professor at Dalhousie University and a Maternal-Fetal Medicine specialist at IWK Health, in Halifax, Nova Scotia, Canada. Dr. Coolen's clinical expertise includes diabetes in pregnancy and fetal ultrasound but her passion is medical education. Outside of her academic practice, Dr. Coolen enjoys exploring the outdoors, practising yoga, and playing basketball.

Barbara-Ann Hamilton-Hinch, is a Professor in the School of Health and Human Performance at Dalhousie University in the faculty of Health and the Assistant Vice-Provost Equity and Inclusion. Her research exams the structural, institutional, and systemic racism and oppression that exists for populations that have been marginalized but particularly people of African descent. Her work looks closely at the social determinants of health and crosses all disciplines from education to health to justice. Barb identifies as an 8th generation African Nova Scotian and is the first African Nova Scotian to graduate with a PhD from Dalhousie University.

Erna Snelgrove-Clarke is a Professor in the School of Nursing, Faculty of Health Sciences, Queen's University. Her research focuses on Implementation Science and Women's Health. She is interesting is how evidence is used, or not used, amongst providers in health care and the person centred approach to caring for others.

Shannan Grant is an adjunct professor in the Department of Women's Studies at Mount Saint Vincent University and in Dalhousie University's Faculty of Medicine, Department of Obstetrics and Gynecology. She is especially proud of her work with The Alexa McDonough Institute for Women, Gender and Social Justice, and *Atlantis: Critical Studies in Gender, Culture & Social Justice*. She is also an affiliate scientist at IWK, Department of Obstetrics and Gynecology, where she continues to engage in practice-based research, and education.

Introduction

Weight stigma is a form of negative bias towards an individual based on their body size or weight. Weight stigma includes negative perceptions, stereotypes (e.g., higher-weight individuals are lazy, lack willpower, have bad hygiene, are less intelligent), attitudes, and beliefs, and can impact individuals across the weight spectrum, however, more predominantly impact higher-weight individuals due to widespread societal beliefs around thinness and health (Hill et al. 2021; Lacroix et al. 2017; Lawrence et al. 2021; Puhl and Heuer 2009; Nutter et al. 2018, 2019; Stoll 2019; Wu and Berry 2018). Weight stigma is pervasive not only in society and media but also in workplace settings, education, and in healthcare, where research has found that patients delay and avoid seeking care for fear of stigmatizing attitudes from providers and health systems (Amy et al. 2006; DiGiacinto et al. 2015; Merrill and Grassley 2008). Weight stigma has negative impacts on psychological and physical health and on morbidity and mortality. Weight stigma also reduces quality of care received from health care providers, including in women's health during the pre-, peri-, and post-natal periods and where gestational weight gain is closely monitored in pre-natal care visits (Alberga et al. 2025; Kirk et al. 2020; Puhl and Heuer 2009; 2011). A recent systematic review confirmed that a facilitator of weight stigma in the pre-, peri-, and post-natal periods is an unaccommodating environment, such as the absence of facility systems and equipment suitable for women living in larger bodies (Hailu et al. 2024a). Historically, feminist and fat studies scholars have highlighted the lack of consideration for women's and pregnant women's voices and experiences (Earle 2003; Verseghy and Abel 2018), including the body-related pressures to conform to (or "achieve") a certain size (Earle 2003; Friedman 2014; Verseghy and Abel 2018; Ward and McPhail 2019), and have made strides notably in the last decade to study this topic (Basinger and Quinlan 2024; LaMarre et al. 2020; Parker and Pausé 2017) in parallel with clinically oriented advocacy and research efforts (Alberga et al. 2025; Papini et al. 2025; Saw, Aung, and Sweet 2021). In women's health research, fear of weight stigma has been described by patients when attempting to "fit into" hospital gowns, blood pressure cuffs, clinic chairs, examination tables, and scales, that were noted to be too small to be functional (Amy et al. 2006; Merrill and Grassley 2008; Parker and Pausé 2017). Comparatively, Amy et al. (2006) found in their sample that not all (80% of N = 129) health care providers reported having access to equipment for larger bodies, such as longer speculums for pelvic exams.

Clinical Practice Guidelines (CPGs) guide best practices for clinical care management. Relevant to women's health, pregnancy, and weight management, are CPGs from the Society of Obstetrics and Gynecology of Canada (2019), Obesity Canada and the Canadian Association of Bariatric Physicians and Surgeons (2020), and Diabetes Canada (2018) (Maxwell et al. 2019a; 2019b; Piccinini-Vallis et al. 2020; Rasmussen and Yaktine 2009; Wharton et al. 2018; 2020), all of which have mixed reception by healthcare providers (Feig et al. 2018; Snelgrove-Clarke et al. 2020). SOGC (2019) states in their guidelines that "implementation of these guidelines … may increase obstetrical provider recognition of the issues affected pregnant individuals with obesity, including … equipment and human resource planning" (Maxwell et al. 2019a). This is in agreement with other Canadian CPGs, recommending that clinical environments be accessible, safe, and respectful for patients of all sizes (Wharton et al. 2020). That said, existing original and meta-analysis research describe several examples of the impacts that a lack of inventory has on patient risk, experience, and treatment (Amy et al. 2006; Broome et al. 2015; Chelmow, Rodriguez, and Sabatini 2004; McGinley and Bunke 2008; Parker and Pausé 2017). For instance, without appropriate equipment and routine care, atypical pressure sores can present in patients due to ill-fitting chairs, beds, and/or wheelchairs, pressure within skin folds, or pressure around tubes and catheters (Broome et al. 2015). Specific to pre- and post-natal care, women with higher weights are at a higher risk for postsurgical complications such as wound dehiscence and infection, whereas adapting wound closure procedures to larger bodies (e.g., reapproximation at C-section) can significantly reduce this risk (Chelmow, Rodriguez, and Sabatini 2004; Feig et al. 2018; Maxwell et al. 2019a, 2019b; Snelgrove-Clarke et al. 2020).

In both medical and social weight-related dialogues, it is essential to understand terms used, and/or any underpinnings or origin(s) of terms, to ensure everyone has a shared understanding of how terms are defined and applied, dependent on context and setting (Waugh et al. 2025). The term "bariatric" is derived from the Greek root word "baros," meaning weight (Wood 2024). In medical care, bariatric refers to specialized care of people with bodies classified as "obese." Historically, "obesity" has been defined by higher body mass index (BMI) (of 30 kg/m^2 or higher; resulting from a calculation using weight [in kilograms] divided by height [in metres] squared). In 2025, however, scholars continue to advocate for transition of the definition to consider more than BMI, including individual markers of risk and adiposity function impairment (Rubino et al. 2025; Rueda-Clausen et al. 2020), as science has found health can occur across body sizes, and language (i.e., how we describe bodies) can perpetuate weight stigma.[2] Although there is no universal weight range used to define bariatric, bariatric equipment is typically designed to support bodies weighing 270 kg (595 lbs) to 500 kg (1,102 lbs) (Wood 2024). Despite this, bariatric equipment weight capacities in practice (Table 1) can vary and are considered equipment for bodies up to and over 150 kg (350 lbs). Canadian surveillance and monitoring data, specifically the Canadian Community Health Survey (2018), found 27% of Canadian adults are classified as obese (as defined by a BMI of 30 kg/m^2 or higher), with prevalence in Nova Scotia (NS), New Brunswick (NB), and Prince Edward Island (PEI) at 34%, 35%, and 38%, respectively (Statistics Canada 2022; Wharton et al. 2020). Furthermore, for women of childbearing age, prevalence of obesity defined by BMI is also high in the Atlantic provinces. For instance, 31% , 26%, and 37% of women aged 18 to 34 years are considered obese defined by BMI in NS, NB, and PEI, respectively. Even higher rates of obesity rates are found in women aged 35 to 49 years in Atlantic Canada, with 49.5% in NS, 45% in NB, and 34% in PEI (Statistics Canada 2017). Twells et al. (2014) estimate class II (BMI 35.0 to 39.9 kg/m^2) and III obesity (BMI $\geq$ 40 kg/m^2) make up a little less than 5% of the Canadian population, increasing since 1985. However, Twells et al. (2014) used 2011 data, meaning rates have likely increased in the past decade, given current population health records. While Canadian data is collected based on BMI data and not weight status (e.g., how many Canadians are over 270 kg/595 lbs or 500 kg/1102 lbs [Wood 2024]), it is impossible to extrapolate to how many Atlantic Canadian women require bariatric equipment during their medical care. Instead, it is known that many Atlantic Canadian women of childbearing age, thus including pregnant women, have higher BMIs or are living in larger bodies, meaning hospitals should be equipped with bariatric-sized equipment to provide inclusive care.

Bariatric equipment is more expensive than standard-sized equipment, both to purchase (e.g.; "extra-large" blood pressure cuffs cost $179.99 Canadian dollars while "classic" cuffs cost $59.99 Canadian dollars) and use (i.e., staffing, service, and space) (Diconsiglio 2006; LifeSource n.d.). For instance, a bariatric hospital bed can support a weight of more than 227 kg (500 lbs) and has a width of 90 cm (35 inches) which requires three staff to move it (Alberta Health Services 2022). Equipment availability is also important for the safety of the health care providers as musculoskeletal injuries are common especially when providing care to heavier patients (Choi and Brings 2015; Muir and Gerlach 2003). Additionally, the use of appropriately fitting equipment is essential to accurate use/measurement and monitoring outcomes, one example being blood pressure cuffs (Ashline 2020; Pickering et al. 2004).

Patient rooms must be spacious enough to accommodate all bariatric-sized equipment if needed for a given patient (Broome et al. 2015; McGinley and Bunke 2008). Equipment is frequently transferred from unit to unit through hallways, doorways, and hospital rooms that accommodate equipment of this size (Broome et al. 2015). In some accommodations, patients may have to be placed in larger rooms, such as negative pressure isolation rooms, which can be problematic, especially as seen during the era of COVID-19. Moving forward, it is important to consider facility design when renovating hospitals or adding to existing units (McGinley and Bunke 2008). Regionally relevant, an initiative known as Access By Design 2030 aims to make Nova Scotia more inclusive by 2030, which includes making "buildings, streets, sidewalks, and shared spaces accessible to all" (Government of Nova Scotia 2017).

Process-mapping or systems-based approaches have been deemed useful to help determine the equipment, as-

sistance, and/or space needs for a given patient and facility (Alberta Health Services 2016; Broome et al. 2015; Clarkson et al. 2018; Pearce n.d.). Canadian health authorities such as Alberta Health Services provide open-access resources (e.g., Bariatric Friendly Hospital Initiative & Guidelines for the Care of Hospitalized Patients with Bariatric Care Needs) and step-wise checklists to begin creating more accessible and inclusive healthcare spaces for larger body sizes (e.g., Equipment and Environment Checklist for Office and Clinical Settings) (Alberta Health Services 2016; 2022; Pearce n.d.). Systems-based approaches can be extremely valuable as a problem can be addressed from not only the perspective of the patient and healthcare providers but also the system and design, while considering risks involved (Clarkson et al. 2018).

Survey research and quality assurance projects, in the form of audits or inventories, are a common and effective means of engaging in systems-based care evaluation and best practice(s) (Khaleghi 2017; Merchant et al. 2022; Mulepo, Niwa, and Date 2011; US EPA 2020; WHO 2011; 2023). Several agencies and organizations, including the World Health Organization and Health Canada, disseminate and apply audit and inventory results as part of ongoing needs assessment, intervention evaluation, knowledge translation, and gap analysis (Health Canada 2017; US EPA 2020; WHO 2011; 2023). There are several methods that can be used in surveying research, including hospital equipment inventories (e.g., beds, protective personal equipment, ceiling track hoist systems), which are not always publicly available data. This type of inventory garnered increased attention during the COVID-19 pandemic due to preventable interruptions and delays in healthcare supply chain that impacted care and safety of patients and hospital staff (Cohen and Rodgers 2020; Merchant et al. 2022; Pearce n.d.). Publicly available data and research are lacking on if and how Canadian hospitals are meeting the equipment needs of all healthcare providers and patients, including for women living with obesity or in larger bodies, which is essential to creating more inclusive healthcare spaces. The objective of this inventory audit reported here was to identify, count, and describe (type, weight capacity) bariatric equipment in nine units/clinics in the Women's Building, of a maternal-newborn hospital in Atlantic Canada.

Methods

Bariatric equipment inventory improvement efforts (led by Maxine Bernard), in collaboration with nurses and other healthcare providers at the facility, have occurred at the facility since 2008 (initial inventory audit), with a focus on equipment available for larger body sizes and prevention of healthcare provider injuries. The inventory was organized by unit and type of equipment, focusing on equipment frequently used in pre-, peri-, and post-natal patient care, as women are a key population that the facility serves. Information related to equipment specifications was collected through discussion with unit representatives, managers, the hospital's Clinical Engineering team, and through Community of Practice (CoP) meetings. The TEEMOB (Translating Evidence to Enhance Maternal Newborn Outcomes—Obesity) CoP is an intersectional women-led group made up of clinicians, researchers, and policy makers from various disciplines (e.g., nursing, physiotherapy, dietetics, medicine, psychology, communications) with various professional (and personal) lived experiences with body size, ethnicity, sexuality, and (dis)ability. Input from women with lived experience was also considered throughout the inventory efforts to echo marginalized accessibility efforts: "Nothing about us without us" (Government of Canada 2020).

In 2018 and 2021, six nurses recorded weight capacities of equipment using a standardized form in nine hospital units/clinics in the Women's Building, including the Birth Unit, Perinatal Centre , Prenatal Special Care Unit/Adult Surgery/Obstetrical Day Unit, Postpartum Discharge Clinic, Early Labour Assessment Unit, Family Newborn Unit, Ambulatory Clinics, Fetal Assessment & Treatment Clinic, and Diagnostic Imaging. Data collection included type and quantity of each piece of bariatric equipment available at the hospital in both 2018 and 2021. For this inventory, all equipment designed to support bodies greater than or equal to 350 lbs was included. Quantities are expressed in counts, and all weight capacities available are included in rounded brackets. Reported data was descriptive, using counts. Comparisons were done using simple differences (subtractions) between the 2021 and 2018 counts.

Results

Improvements (increases) were found in the availability (number) of bariatric equipment in the inventory in 2021 compared to the earlier inventory audit in 2018 (Table 1). Between 2018 and 2021, six exam tables (400 lb capacity) with built-in stools were purchased for the Perinatal Centre. For the Birth Unit, two operating beds with width extensions (1000 lb capacity), three stretchers with width extensions (1000 lb capacity), and eighteen "extra-large" and "large" blood pressure cuffs were purchased (2018-2022). No additional purchases were made in seven of the nine units/clinics, including the Postpartum Discharge Clinic, Early Labour Assessment Unit, Family Newborn Unit , Ambulatory Clinics, Prenatal Special Care Unit/ Adult Surgery/ Obstetrical Day Unit, Fetal Assessment & Treatment Clinic, and Diagnostic Imaging. Higher inventory numbers noted for the Early Labour Assessment Unit is reflective of a newer space and purchases made as part of recent renovations and development costs. Most recently (2022), hospital funding was confirmed to purchase five additional stretchers/beds for the Birth Unit. In both inventory audits (2018 and follow-up in 2021), bariatric stretchers and beds were found to be available in lower quantities compared to other pieces of equipment such as wider (wheel) chairs, step stools, and scales combined.

Table 1. Bariatric equipment inventory at study hospital in 2018, 2021, and purchases completed between 2018 and 2021.

Unit name	2018	2021	Purchases (2018-2021)
Perinatal Centre (PNC)	Quantity (count)	Quantity (count)	Quantity (count)
Exam table (600 lb)*	4	4	0
Exam tables with stool built in (400 lb)	3	9	6
Scale (880 lb) - Shared with ELAU	1	1	0
Waiting room chair (700 lb)	1	1	0
Postpartum Discharge Clinic			
Chairs (500 lb)	3	3	0
Early Labour Assessment Unit (ELAU)			
Wider chairs (500 lb)	7	7	0
Stryker Stretcher (495 lb)	7	7	0
Birth Unit (BU)			
Operating room bed with extensions (1000 lb)	1	3	2

Stretchers Stryker (495 lb)	3	3	0
Stretcher (500 lb)	1	1	0
Stretcher (700 lb)	1	1	0
Stretcher (850 lb)	1	1	0
Stretcher (1000 lb), with extensions	0	3	3
Wheelchair Medline (unknown capacity)	4	4	0
Commode (1000 lb)	1	1	0
Sandel Ergo Step Stool (500 lb)	20	20	0
Yellow Fin Stirrups (500 lb each stirrup)	2	2	0
Affinity III beds (600 lb)	2	2	0
Affinity IV bed (500 lb)	7	7	0
Birthing balls (600 lb)	3	3	0
Peanut balls (variety of size)	10	10	0
Extra large and large blood pressure cuffs	2	20	18
Friction reduction devices for moving patients rollers sliders	 1 2	 1 2	 0 0
AirPal	1	1	0
Wedge – for intubating (e.g. difficult airway)	1	1	0
Ultrasound (for epidural placement)	1	1	0
Floor mounted toilets (in all rooms and public bathrooms)	18	18	0
Family Newborn Unit (FNCU)			
Scale (770 lb)	1	1	0

Commode (550 lb)	1	1	0
Wheelchair (600 lb)	1	1	0
Bed (1000 lb)	1	1	0
Blood pressure cuffs 5B	2	2	0
Ambulatory Clinics			
Lift (600 lb)	1	1	0
Scales (880 lb)	2	2	0
Prenatal Special Care Unit (PSCU)/ Adult Surgery/ Obstetrical Day Unit (ODU)			
Scale (440 lb)	1	1	0
Fetal Assessment & Treatment Clinic (FATC)			
Waiting room chairs (700 lb)	2	2	0
Diagnostic Imaging			
XRAY			
Ysio (660 lb)	1	1	0
Proteus (484 lb)	1	1	0
BCL (Gastric Room) (440 lb)	1	1	0
CT			
Table (450 lb). Bore diameter 78cm.	1	1	0
MRI			
(350 lb). Bore diameter 60cm.	1	1	0
Nuclear Medicine			
Symbia (450 lb)	1	1	0
GE (500 lb)	1	1	0
Bone Density (350 lb)	1	1	0

Ultrasound (500 lb)	1	1	0

**Note.* All weight capacities are in brackets.

Discussion

The inventory audit identified, counted, and described (type, weight capacity) the available bariatric equipment in nine units/clinics in the Women's Building of a local maternal-newborn hospital in Atlantic Canada. This study demonstrates the lack of universal weight ranges for bariatric equipment. Of all units surveyed (Table 1), the lowest weight capacity for a piece of equipment was 350 lb and the highest was 1,000 lb. This finding highlights the need for accurate labelling within facilities and the importance of provider awareness, training, and education, which agrees with existing research (McGinley and Bunke 2008).

Stretchers are rectangular, traditionally made of two poles and fabric stretched between them, and are used for transporting patients who are unable to mobilize on their own (Cambridge Dictionary n.d.). When the initial inventory audit was completed (2008), the availability of bariatric stretchers for patient transport was very low, with one per unit in most units. In practice, this is challenging if more than one patient requiring a higher-weight capacity item is admitted at one time. The five additional stretchers/beds purchased (2022) for the Birth Unit are predicted to increase the ease of patient transport and decrease physical stress on nursing staff; when motorized stretchers are not available, nursing staff must co-lift or transfer the patient themselves without the help of appropriate equipment. In the case of purchasing bariatric equipment alongside construction of a new unit (Early Labour Assessment Unit), incorporating these purchase costs into the overall cost of building the facility can be more efficient than trying to secure funding as part of capital equipment (i.e., operational costs). Funding for capital equipment upgrading is competitive and bariatric purchases may not be identified as a "critical need," which is a challenge in procurement efforts.

Blood pressure cuffs also increased in quantity since 2018, as they are used frequently in terms of number of patients, in triage efforts, and in and across units such as outpatient units/clinics. Correctly fitting blood pressure cuffs are essential for several reasons including receiving accurate readings for proper care, intervention development, medication prescription, and maintaining patient dignity (Ashline 2020; Pickering et al. 2004).

Given the thousands of women attending this hospital each year and the prevalence of obesity, the current availability and amount of bariatric equipment is not adequate. Relevant to women's health, the hospital also equips 3,646 women's health surgeries and 7,242 mammograms yearly (data from 2019) (IWK Health n.d.). This is not considering the 206,791 outpatient clinic visits and 14,606 acute inpatient admissions yearly that are split between maternal and pediatric care. Based on these statistics, 4,498 women gave birth in 2019 at the facility, meaning approximately 1,339 (30.5%) women living with obesity (defined by BMI) delivered at the hospital that year and had the potential to require bariatric equipment (IWK Health n.d.; Government of Canada 2017; McPhee 2020). This comparison agrees with survey research in Canada conducted 10-20 years ago (Kirk et al. 2010; Singh et al. 2007). In Atlantic Canada, previous research found three quarters of respondents reported equipment with higher weight capacities (e.g., delivery beds, operating room tables, hospital beds) were needed but not available in birthing care delivery (Kirk et al. 2010). Additionally, a Rapid Response Service review by the Canadian Agency for Drugs and Technologies in Health (CADTH) found the lack of clinical trials and randomized designs in the literature on this topic suggests further research is needed on the demand/needs, utility, and cost of appropriate equipment and technology to provide equitable healthcare for higher-weight patients (CADTH 2012).

In a Canadian emergency department, questionnaire scores collected in 2005 found an inverse relationship between nurse equipment adequacy scores and patient BMI (Singh et al. 2007). In 2021, a survey of clinical nurse managers of acute hospitals in Ireland (N = 132) found two of three principle barriers for the provision

of care for bariatric patients were lack of equipment (75.0%) and lack of training (57.6%) (Dockrell and Hurley 2021). Availability, utility, and training for bariatric equipment are essential for enhanced patient care, safety, and health care worker injury prevention (Muir and Gerlach 2003). Inclusion of proper training and team lifting programs has been shown to reduce patient handling-related employee injuries by 38.5% (13 to 8) (Walden et al. 2013). This is important not only for safety of the patient but also for safety of the healthcare providers, as musculoskeletal injuries are common especially when providing care to higher-weight patients (Choi and Brings 2015; Muir and Gerlach 2003). Beyond education related to caring for patients in larger bodies, staff should be aware of weight capacities for standard equipment (e.g., commodes, beds, scales, chairs) available to them and be familiar with operating procedures (Alberta Health Services 2016; Broome et al. 2015; McGinley and Bunke 2008). Having an easily accessible and known protocol or standard operating procedure (SOP) for patients of larger body sizes can aid staff in not only being familiar with the equipment to use but also knowing how many people are needed to safely move a patient of a given weight (McGinley and Bunke 2008). Alongside this, unit-specific education related to caring for and procedures specific to patients living in larger bodies and/or living with obesity is essential for patient dignity and evidence-informed practice. Areas for improvement have been noted in the literature, such as epidural administration and fetal monitoring for bodies with higher amounts of adipose tissue (Basinger and Quinlan 2024). Education efforts should also include inclusive language and respect driven person-first communication strategies to minimize weight stigma and promote equitable and affirming healthcare operations (Basinger and Quinlan 2024). Conceptual models like SWIPE (Stigma of Weight in the Preconception, Pregnancy, and Postpartum Experience) and the WOMBS (Weight gain, Obesity, Maternal-child Biobehavioral pathways, and Stigma) framework have been developed specifically with an aim to inform interventions for women during pre-, post-, and peri-natal periods to reduce weight stigma (Hailu et al. 2024b; Incollingo Rodriguez and Nagpal 2021).

Inventory-based research was a growing topic of interest during the COVID-19 pandemic and put a spotlight on the need for adequate amounts of protective equipment for all staff (Cohen and Rodgers 2020; Merchant et al. 2022; TruMed 2022). For patients, lack of bariatric equipment in hospitals has been a historical problem due to many factors, such as cost, education, and space. Policy and procedure-based action are required to provide respectful, evidence-based care which includes use and availability of adequate and appropriately sized-equipment for all body sizes (Alberta Health Services 2016; Pearce n.d.). While audit and inventory-based research is often seen as less valuable than more empirical forms of research, such as clinical trials, clinical trials did not help prevent inaccessibility of equipment (e.g., personal protective equipment) during the COVID-19 pandemic; audits and inventories are an important starting point for effective clinical practice guideline implementation (Feig et al. 2018; Maxwell et al. 2019a; 2019b; Merchant et al. 2022; Rasmussen and Yaktine 2019; Snelgrove-Clarke et al. 2020; Wharton et al. 2018; 2020). Research led by allied health care providers and clinicians is invaluable and necessary to integrate "on the floor" experience into facility-specific program planning, research, and practice, all of which inform one another (Cordrey et al. 2022; Wenke et al. 2017). Furthermore, inventory audits are not always peer-reviewed or publicly available, both of which bring a level of rigor, accountability, and advocacy for future quality improvement and patient and provider safety efforts.

Traditionally, women have been excluded from health research and women's health research has been underfunded (Smith 2023; Yakerson 2019). Echoing calls for health equity, inclusion of women, and sex-specific outcomes in research (Gahagan and Grant 2023; Yakerson 2019), future research should explore the experiences of women living in larger bodies navigating pre-, peri-, and post-natal care and sex-specific healthcare (e.g., breast exams, vaginal and uterine health) and the stigma they continue to face. For example, a study from 1990 showed that women with higher BMIs reported trouble accessing birth control from their gynecologists, citing their providers "had difficulty believing the women were sexual" (Packer 1990, 162, quoted in Merrill and Grassley 2008). More recent examples include Basinger et al.'s 2023 survey study, which explored structural barriers for women living in larger bodies navigating pre-, peri-, and post-natal care. In that survey, women recalled their bodies being blamed in their experiences rather than the inadequately equipped medical facilities. For instance, women described experiences where they had birthing balls taken away, were told by nursing staff that the balls would not support their weight, reported that "even though the room had a tub, I

was not a 'good candidate' for it," and were given smaller gowns than appropriate for their bodies when waiting for a mammogram (Basinger et al. 2023, 3073; Robinson et al. 2024). Appropriate equipment is essential for the physical safety of patients and providers and the emotional safety of patients; the toll of systemic weight stigma needs to be considered more widely for patients. For instance, research has documented experiences of women with higher BMIs being denied care (Basinger and Quinlan 2024; LaMarre et al. 2020), such as fertility treatment or their desired mode of birth, receiving negative weight-focused and presumptive comments (e.g., incapable of feeling pressure changes in labour and birthing due to their weight), and being recipients of judgmental stereotypes (e.g., "fat mothers are bad mothers") (Basinger et al. 2023; Nutter et al. 2025a). Notably, weight discrimination does not have concrete legal protections in Canada (Nutter et al. 2025b). In Nova Scotia, the media has covered poor patient experiences such as being denied breast cancer surgery due to BMI stipulations per facility, and in this case, the Nova Scotian woman eventually did receive care due to her self-advocacy efforts (Macdonald 2025). Research shows this self-advocacy is often essential for women living in larger bodies to receive adequate healthcare (Buxton and Snethen, 2013; LaMarre et al. 2020; Nutter et al. 2025a). This hospital equipment inventory audit is one example of advocacy and mobilization efforts by clinicians, also essential to addressing systemic weight stigma (Tran et al. 2025). Future research initiatives by the co-authors of this paper and CoP include a chart audit and interviews with healthcare providers at the study's facility to further examine implementation of the SOGC's CPGs to support women living with obesity (defined by BMI) during pre-, peri-, and post-natal care.

Conclusion

There are calls within and beyond women's healthcare to eliminate weight bias, stigma, and discrimination (Rubino et al. 2020). Appropriately fitting equipment is essential to provide safe, just, and evidence-based care to all body sizes. Lack of equipment with higher weight capacities is a barrier to supporting care for larger bodies and the solution requires system-level problem solving, considering not only funding but also space and healthcare provider education and training. Hospital equipment inventory audits are not commonly publicly available data or research, despite the importance of adequate equipment for health equity for all. Calls for awareness of the importance of EDIA (Equity, Diversity, Inclusion and Accessibility) in teaching, care provision, and research by the public are increasing, and it is our responsibility to address inequities and "-isms" in healthcare settings (e.g. #Metoo, #BlackLivesMatter, #MMIW, #HealthAtEverySize) (American Medical Association n.d.; Balch 2020; Khubchandani, Kumar, and Bowman 2019; Penney and Kirk 2015; Tribal Health 2022). Healthcare and wellness institutions, healthcare provider training programs (e.g., teaching hospitals), and others, are actively trying to engage in anti-racist, anti-ableist actions, such as revising policies, protocols, and procedures that promote such -isms. High-quality evidence that supports person-focused care is the best care, and it cannot be performed without correct fitting equipment or inclusive healthcare spaces for all bodies (Maxwell et al. 2019a, 2019b; Wharton et al. 2020).

Endnotes

1. Rachel Waugh and Maxine Bernard are first authors of this paper.

2. While fat studies scholars advocate for the use and reclamation of the word "fat" to describe body size, the authors instead use terms like "larger bodies," "higher-weight," and "obesity defined by BMI" in an aim to reach diverse audiences (e.g., search terms and review methods), minimize perpetuating weight stigma, and in alignment with literature summarizing patient perspectives on weight-related terminology (Puhl 2020).

Acknowledgements

This manuscript is co-first authored by Rachel Waugh, TeemOB Research Coordinator, Registered Dietitian, Obstetrics and Gynaecology Research, IWK Health, and former graduate student, Department of Applied Human Nutrition, Mount Saint Vincent University, and Maxine Bernard, Lead Surveyor/ Auditor, Registered Nurse, Birth Unit, IWK Health.

This study was supported by the Canadian Institutes for Health Research and an IWK Health Embedded Clinician Researcher Salary Award. The views expressed in this manuscript are the views of the authors and do not necessarily reflect the views of the author's affiliations. Special thanks to Maxine Bernard, RN (Birth Unit (BU)), Susan Cahill RN (Perinatal Centre), Elizabeth Courtney RN (previous Clinical Leader of Operations (CLO) on BU, current CLO on the Prenatal Special Care Unit (PSCU)), Teri-lyn Holm-Laursen, RN (previous CLO/Projects for BU, current Operations Manager for BU), Nancy Herritt, RN (previous CLO for Family Newborn Unit, retired), and Linda Mason (previous CLO for PSCU, retired) for their contributions to data collection tool development, entry, and record keeping. Thank you also to the TEEMOB (Translating Evidence to Enhance Maternal Newborn Outcomes – Obesity) Community of Practice for continued support of this work.

Financial Support

This research was made possible by an Embedded Clinician Researcher Salary Award, at Canadian Institutes for Health Research and IWK Health, health by Dr. Erna Snelgrove- Clarke, and Dr. Shannan Grant, and a standard grant from the Committee on Research and Publications (CRP), Mount Saint Vincent University, held by Dr. Shannan Grant.

Works Cited

Alberga, Angela S., Angela C. Incollingo Rodriguez, and Taniya S. Nagpal. 2025. "Unintended Consequences of Measuring Gestational Weight Gain: How to Reduce Weight Stigma in Perinatal Care." *BMC Pregnancy and Childbirth* 25(1): 756. doi.org/10.1186/s12884-025-07898-1.

Alberta Health Services. 2016. Equipment and Environment Checklist for Offices and Clinical Settings: Creating an Inclusive Environment for People with Overweight and Obesity. https://www.albertahealthservices.ca/assets/info/hp/phc/if-hp-phc-obesity-ee-checklist.pdf.

_____. 2022. "Guidelines for the Care of Hospitalized Patients with Bariatric Care Needs" Version 1.4. https://www.albertahealthservices.ca/assets/about/scn/ahs-scn-don-guidelines-for-hospitalized-patients-bariatric-needs.pdf.

American Medical Association. n.d. "#MeToo in Medicine: We Can All Be Allies." https://www.ama-assn.org/practice-management/physician-health/metoo-medicine-we-can-all-be-allies.

Amy, N. K., A. Aalborg, P. Lyons, et al. 2006. "Barriers to Routine Gynecological Cancer Screening for White and African-American Obese Women." *International Journal of Obesity* 30(1): 147–55. doi.org/10.1038/sj.ijo.0803105.

Ashline, Lindley. 2020. "14 Blood Pressure Monitors with Plus-Size Cuffs for Large Arms." Body Liberation Photos & Stock. https://bodyliberationphotos.com/2020/12/13/13-blood-pressure-monitors-with-plus-size-cuffs-for-large-arms/.

Balch, Bridget. 2020. "Is There a 'Cure' for Racism? Celebrated Anti-Racist Activist and Author Ibram X. Kendi Says Yes, There Is." AAMC, October 20. www.aamc.org/news-insights/is-there-cure-for-racism.

Basinger, Erin D., Margaret M. Quinlan, and Margaret Rawlings. 2023. “Memorable Messages about Fat Bodies Before, During, and After Pregnancy.” *Health Communication* 38(13): 3069-3079. doi.org/10.1080/10410236.2022.2131982.

Basinger, Erin D., and Margaret M. Quinlan. 2024. ““She Didn’t Think Fat Women Deserved to Have Children”: Memorable Messages From Healthcare Providers in the Context of Fat Pregnancy.” *Women’s Reproductive Health* 11(1): 33-47. doi.org/10.1080/23293691.2023.2174823.

Broome, Catherine A., Eric M. Ayala, Karie A. Georgeson, et al. Wells. 2015. “Nursing Care of the Super Bariatric Patient: Challenges and Lessons Learned.” *Rehabilitation Nursing* 40 (2): 92–99. doi.org/10.1002/rnj.165.

Buxton, Barbara K., and Julia Snethen. 2013. “Obese Women’s Perceptions and Experiences of Healthcare and Primary Care Providers: A Phenomenological Study.” *Nursing Research* 62 (4): 252.259. doi.org/10.1097/NNR.0b013e318299a6ba.

CADTH (Canadian Agency for Drugs and Technologies in Health). 2012. “Standard Equipment for the Usual Care of Bariatric Patients: A Review of the Clinical Evidence and Guidelines.” Canada’s Drug Agency. https://www.cda-amc.ca/sites/default/files/pdf/htis/jan-2012/RC0315%20Bariatric%20Pts%20Final.pdf.

Cambridge Dictionary. n.d. “Stretcher.” Cambridge Academic Content Dictionary © Cambridge University Press. https://dictionary.cambridge.org/dictionary/english/stretcher.

Chelmow, David, Elisa J. Rodriguez, and Marie M. Sabatini. 2004. “Suture Closure of Subcutaneous Fat and Wound Disruption after Cesarean Delivery: A Meta-Analysis.” *Obstetrics and Gynecology* 103 (5 Pt 1): 974–80. doi.org/10.1097/01.AOG.0000124807.76451.47.

Choi, Sang D., and Kathryn Brings. 2015. “Work-Related Musculoskeletal Risks Associated with Nurses and Nursing Assistants Handling Overweight and Obese Patients: A Literature Review.” WORK: A Journal of Prevention, Assessment & Rehabilitation 53(2): 439–48. https://doi.org/10.3233/WOR-152222.

Clarkson, John, John Dean, James Ward, et al. 2018. “A Systems Approach to Healthcare: From Thinking to -practice.” Future Healthcare Journal 5(3): 151–55. https://doi.org/10.7861/futurehosp.5-3-151.

Cohen, Jennifer, and Yana van der Meulen Rodgers. 2020. “Contributing Factors to Personal Protective Equipment Shortages during the COVID-19 Pandemic.” *Preventive Medicine* 141:106263. doi.org/10.1016/j.ypmed.2020.106263.

Cordrey, Terry, Elizabeth King, Emma Pilkington, et al. 2022. “Exploring Research Capacity and Culture of Allied Health Professionals: A Mixed Methods Evaluation.” *BMC Health Services Research* 22(1): 85. doi.org/10.1186/s12913-022-07480-x.

Diconsiglio, John. 2006. “Hospitals Equip to Meet the Bariatric Challenge. Rising Number of Obese Patients Necessitates Specific Supplies.” *Materials Management in Health Care* 15(4): 36–39.

DiGiacinto, Dora, Bradford Gildon, Elliott Stamile, et al. 2015. “Weight-Biased Health Professionals and the Effects on Overweight Patients.” *Journal of Diagnostic Medical Sonography* 31(2): 132–35. doi.org/10.1177/8756479314557278.

Dockrell, Sara, and Graham Hurley. 2021. “Moving and Handling Care of Bariatric Patients: A Survey of Clinical Nurse Managers.” *Journal of Research in Nursing* 26(3): 194-204. doi.org/10.1177/1744987120970623.

Earle, Sarah. 2003. "“Bumps and Boobs”: Fatness and Women’s Experiences of Pregnancy.” *Women’s Studies International Forum* 26(3): 245-252. doi.org/10.1016/S0277-5395(03)00054-2.

Feig, Denice S., Howard Berger, Lois Donovan, et al. 2018. "Diabetes and Pregnancy." *Canadian Journal of Diabetes* 42: S255–82. doi.org/10.1016/j.jcjd.2017.10.038.

Friedman, May. 2014. "Reproducing Fat-phobia: Reproductive Technologies and Fat Women's Right to Mother." *Journal of the Motherhood Initiative for Research and Community Involvement* 5(2): 27-41. https://jarm.journals.yorku.ca/index.php/jarm/article/view/39755.

Gahagan, Jacquie and Shannan M. Grant. 2023. "Dying to be Seen: Why Women's Risk for Heart Disease and Stroke is Still Higher than Men's in Canada." The Conversation, February 1. doi.org/10.64628/AAM.enfmqxjcn.

Government of Canada. 2020. "Introduction: Accessibility Strategy for the Public Service of Canada." Last modified May 7, 2020. www.canada.ca/en/government/publicservice/wellness-inclusion-diversity-public-service/diversity-inclusion-public-service/accessibility-public-service/accessibility-strategy-public-service-toc/accessibility-strategy-public-service-introduction.html.

Government of Nova Scotia. 2017. "Access by Design 2030: Achieving an Accessible Nova Scotia." Accessibility Directorate. https://novascotia.ca/accessibility/access-by-design/.

Hailu, Haimanot, Helen Skouteris, Angela C. Incollingo Rodriguez, et al. 2024a. "Drivers and Facilitators of Weight Stigma among Preconception, Pregnant, and Postpartum Women: A Systematic Review." *Obesity Reviews* 25(5): e13710. doi.org/10.1111/obr.13710.

Hailu, Haimanot, Helen Skouteris, Angela C. Incollingo Rodriguez, et al. 2024b. "SWIPE: A Conceptual, Multi-perspective Model for Understanding and Informing Interventions for Weight Stigma in Preconception, Pregnancy, and Postpartum." *Health Psychology Review* 18(4): 681-697. doi.org/10.1080/17437199.2024.2333801.

Health Canada. 2017. "Audit of Health Facilities Program at Health Canada Final Report." Government of Canada. Last modified August 1, 2017. www.canada.ca/en/health-canada/corporate/transparency/corporate-management-reporting/internal-audits/health-facilities-health-canada.html.

Hill, Briony, Heidi Bergmeier, Angela C. Incollingo Rodriguez, et al. 2021. "Weight Stigma and Obesity-Related Policies: A Systematic Review of the State of the Literature." *Obesity Reviews: An Official Journal of the International Association for the Study of Obesity* 22(11): e13333. doi.org/10.1111/obr.13333.

Incollingo Rodriguez, Angela C., and Taniya S. Nagpal. 2021. "The WOMBS Framework: A Review and New Theoretical Model for Investigating Pregnancy-related Weight Stigma and its Intergenerational Implications." *Obesity Reviews* 22(12): e13322. https://doi.org/10.1186/s12884-020-03202-5.

IWK Health, n.d. "About." https://iwkhealth.ca/about.

Khaleghi, Tannaz. 2017. "Reusable Medical Equipment Inventory Assessment at a Detroit Medical Center." M.S. Thesis, Wayne State University. https://digitalcommons.wayne.edu/oa_theses/571.

Khubchandani, Jagdish, Raman Kumar, and Sharon L. Bowman. 2019. "Physicians and Healthcare Professionals in the Era of #Metoo." *Journal of Family Medicine and Primary Care* 8(3): 771–74.doi.org/10.4103/jfmpc.jfmpc_228_19.

Kirk, Sara F. L., Lisa Cramm, Sheri L. Price, et al. 2010. "The State of Obesity Management for Women Giving Birth in Atlantic Canada." *Maternal and Child Health Journal* 14(3): 453–58. doi.org/10.1007/s10995-009-0455-4.

Kirk, Sara F. L., Ximena Ramos Salas, Angela S. Alberga, et al. 2020. "Canadian Adult Obesity Clinical Practice Guidelines: Reducing Weight Bias in Obesity Management, Practice." Obesity Canada. https://obesitycanada.ca/guidelines/weightbias.

Lacroix, Emilie, Angela Alberga, Shelly Russell-Mathew, et al. 2017. "Weight Bias: A Systematic Review of Characteristics and Psychometric Properties of Self-Report Questionnaires." *Obesity Facts* 10(3): 223–37. doi.org/10.1159/000475716.

LaMarre, Andrea, Carla Rice, Katie Cook, et al. 2020. "Fat reproductive justice: Navigating the boundaries of reproductive health care." *Journal of Social Issues* 76(2): 338-362. doi.org/10.1111/josi.12371.

Lawrence, Blake J., Deborah Kerr, Christina M. Pollard, et al. 2021. "Weight Bias among Health Care Professionals: A Systematic Review and Meta-Analysis." *Obesity* 29(11): 1802–12. doi.org/10.1002/oby.23266.

LifeSource, n.d. "Upper Arm Blood Pressure Monitors." n.d. LifeSource by A&D Medical. Accessed January 24, 2023. https://lifesourcecanada.com/product-category/blood-pressure-monitors/upper-arm-blood-pressure-monitors/.

Macdonald, Ella. 2025. "Unheard. Unserved: Woman Denied Breast Cancer Surgery by Hospital Due to BMI." Global News, October 8. https://globalnews.ca/news/11466266/unheard-unserved-womens-health-bmi-surgery-cancer/.

Maxwell, Cynthia, Laura Gaudet, Gabrielle Cassir, et al. 2019a. "Guideline No. 391-Pregnancy and Maternal Obesity Part 1: Pre-Conception and Prenatal Care." *Journal of Obstetrics and Gynaecology Canada* 41(11): 1623–40. doi.org/10.1016/j.jogc.2019.03.026.

_____. 2019b. "Guideline No. 392-Pregnancy and Maternal Obesity Part 2: Team Planning for Delivery and Postpartum Care." *Journal of Obstetrics and Gynaecology Canada* 41(11): 1660–75. doi.org/10.1016/j.jogc.2019.03.027.

McGinley, Laurie D., and JoAnn Bunke. 2008. "Best Practices for Safe Handling of the Morbidly Obese Patient." *Bariatric Nursing and Surgical Patient Care* 3(4): 255–60. doi.org/10.1089/bar.2008.9951.

McPhee, John. 2020. "IWK Health Centre Fundraisers Look Outside the Box amid Pandemic." *The Chronicle Herald*, September 24. https://www.saltwire.com/nova-scotia/iwk-health-centre-fundraisers-look-outside-the-box-amid-pandemic-501573.

Merchant, Tazim, Sean Hormozian, Roger S. Smith, et al. 2022. "Ethical Principles in Personal Protective Equipment Inventory Management Decisions and Partnerships Across State Lines During the COVID-19 Pandemic." *Public Health Reports* 137(2): 208–12. doi.org/10.1177/00333549211058734.

Merrill, Emily, and Jane Grassley. 2008. "Women's Stories of Their Experiences as Overweight Patients." *Journal of Advanced Nursing* 64(2): 139–46. doi.org/10.1111/j.1365-2648.2008.04794.x.

Muir, Marylou, and Susan Gerlach. 2003. "Reducing the Risks in Bariatric Patient Handling: The Crucial Need for Ensuring Worker Safety While Treating All Patients with Respect Prompted One Healthcare Facility to Develop a Program Targeted Toward Management of the Obese Patient." *The Canadian Nurse* 99(8): 29–33.

Mulepo, Sitra, Akiko Niwa, and Takuji Date. 2011. "Establishing an Inventory-Based Medical Equipment Management System in the Public Sector: An Experience from Uganda." *Health and Technology* 1: 47–56. doi.org/10.1007/s12553-011-0002-3.

Nutter, Sarah, Shelly Russell-Mayhew, Nancy Arthur, et al. 2018. "Weight Bias as a Social Justice Issue: A Call for Dialogue." *Canadian Psychology* 59(1): 89–99. doi.org/10.1037/cap0000125.

Nutter, Sarah, Alana Ireland, Angela S. Alberga, et al. 2019. "Weight Bias in Educational Settings: A Systematic Review." *Current Obesity Reports* 8(2): 185–200. doi.org/10.1007/s13679-019-00330-8.

Nutter, Sarah, Rachel Waugh, Lawrence Armo Biney, et al. 2025a. "'The doctor said there's no way I could be a good mom': Experiences of Weight Stigma in Women's Healthcare." *International Journal of Behavioral Medicine* 32(1): S26-S27. doi.org/10.1007/s12529-025-10383-w.

Nutter, Sarah, Rachel Waugh, Erin McEachran, et al. 2025b. "The Legality of Weight Discrimination in Canada: An Environmental Scan of Case Law and the Limits of Canadian Legislation." *International Journal for Equity in Health* 24(1): 244. doi.org/10.1186/s12939-025-02606-z.

Papini, Natalie M., Taniya S. Nagpal, Anna R. Whelan, et al. 2025. "Addressing Weight Stigma in Perinatal Care: Strategies for Health Care Providers and Organizations." *Women's Health Issues* 35(1): 3-6. www.doi.org/10.1016/j.whi.2024.11.002.

Parker, George, and Cat Pausé. 2017. "Pregnant with Possibility: Negotiating Fat Maternal Subjectivity in the 'War on Obesity.'" *Fat Studies* 7(2): 124–34.www.doi.org/10.1080/21604851.2017.1372990.

Pearce, Nicole. n.d. "Bariatric Friendly Health Care Service." Obesity Canada. https://obesitycanada.ca/resources/bariatric-friendly/.

Penney, Tarra L., and Sara F. L. Kirk. 2015. "The Health at Every Size Paradigm and Obesity: Missing Empirical Evidence May Help Push the Reframing Obesity Debate Forward." *American Journal of Public Health* 105 (5): e38–42. doi.org/10.2105/AJPH.2015.302552.

Piccinini-Vallis, Helena, Kristi Adamo, Rhonda Bell, et al. 2020. "Canadian Adult Obesity Clinical Practice Guidelines: Weight Management Over the Reproductive Years for Adult Women Living with Obesity." Obesity Canada. https://obesitycanada.ca/guidelines/reproductive.

Pickering, Thomas G., John E. Hall, Lawrence J. Appel, et al. 2004 "Recommendations for Blood Pressure Measurement in Humans and Experimental Animals: Part 1" *Hypertension* 45(1). doi.org/10.1161/01.HYP.0000150859.47929.8e.

Puhl, Rebecca M. 2020. "What Words Should We Use to Talk about Weight? A Systematic Review of Quantitative and Qualitative Studies Examining Preferences for Weight-related Terminology." *Obesity Reviews* 21(6): e13008. doi.org/10.1111/obr.13008.

Puhl, Rebecca M., and Chelsea A. Heuer. 2009. "The Stigma of Obesity: A Review and Update." Obesity 17(5): 941–64. https://doi.org/10.1038/oby.2008.636.

_____. 2011. "Obesity Stigma: Important Considerations for Public Health." *American Journal of Public Health* 100(6): 1019–28. doi.org/10.2105/AJPH.2009.159491.

Rasmussen, Kathleen M. and Ann L. Yaktine, eds. Weight Gain During Pregnancy: Reexamining the Guidelines. 2009. Washington, D.C.: National Academies Press. doi.org/10.17226/12584.

Robinson, Kathleen M., Kimberley A. Robinson, Aaron M Scherer, et al. 2024. "Patient Perceptions of Weight Stigma Experiences in Healthcare: A Qualitative Analysis." *Health Expectations* 27(5): e70013. doi.org/10.1111/hex.70013.

Rubino, Francesco, David E. Cummings, Robert H. Eckel, et al. 2025. "Definition and Diagnostic Criteria of Clinical Obesity." *The Lancet Diabetes & Endocrinology* 13(3): 221-262. doi.org/10.1016/S2213-8587(24)00316-4.

Rubino, Francesco, Rebecca M. Puhl, David E. Cummings, et al. 2020. "Joint International Consensus Statement for Ending Stigma of Obesity." *Nature Medicine* 26(4): 485–97. doi.org/10.1038/s41591-020-0803-x.

Rueda-Clausen, Chirstian F., Megha Poddar, Scott A. Lear, et al. 2020. "Canadian Adult Obesity Clinical Practice Guidelines: Assessment of People Living……with Obesity." Obesity Canada. https://obesitycanada.ca/guidelines/assessment.

Saw, Lauren, Wintnie Aung, and Linda Sweet. 2021. "What are the Experiences of Women with Obesity Receiving Antenatal Maternity Care? A Scoping Review of Qualitative Evidence." *Women and Birth* 34(5): 435-446.dx.doi.org/10.1016/j.wombi.2020.09.014.

Singh, Navneet, Heather M. Arthur, Andrew Worster, et al. 2007. "Emergency Department Equipment for Obese Patients: Perceptions of Adequacy." *Journal of Advanced Nursing* 59(2): 140–45. doi.org/10.1111/j.1365-2648.2007.04266.x.

Smith, Kerri. 2023. "The Funding Gender Gap." *Nature* 617: 28-29. www.nature.com/immersive/d41586-023-01475-2/index.html.

Snelgrove-Clarke, Erna, Shannan M. Grant, and Jennifer Brenton-Peters. 2020. "Weight Management Guidelines for Patients With Gestational or Type 2 Diabetes During Pregnancy: Are the Current Guidelines Reflective of Shared Decision Making?" The Diabetes Communicator Spring 2020 Edition: 18-20. https://crm1.diabetes.ca/BBIS_CRMLive/file/diabetes-communicator/The-Diabetes-Communicator-Spring-2020.pdf

Statistics Canada. 2017. "Body Mass Index, Overweight or Obese, Self-Reported, Adult, Age Groups (18 Years and Older)." Government of Canada. Last modified March 22, 2017. www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310009620.

_____. 2022. "Health Characteristics, Two-Year Period Estimates." Government of Canada. Last modified April 19, 2022. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310011301.

Stoll, Laurie Cooper. 2019. "Fat Is a Social Justice Issue, Too." *Humanity & Society* 43(4): 421–41. doi.org/10.1177/0160597619832051.

Tran, Chloe, Stephanie Pirotta, Haimanot Hailu, et al. 2025. "Structural Weight Stigma in Healthcare toward Preconception, Pregnant, and Postpartum Women: A Systematic Review." *Obesity Reviews* 26: e13933. doi.org/10.1111/obr.13933.

Tribal Health. 2022. "Missing and Murdered Indigenous Women Are a Healthcare Issue." Tribal Health: Transforming Indigenous Healthcare. Last modified April 18, 2022. https://tribalhealth.com/mmiw/.

TruMed. 2022. "How COVID-19 Changed Inventory Management in Healthcare." TruMed Systems. Last modified April 18, 2022. https://trumedsystems.com/blog/how-covid-19-changed-inventory-management-in-healthcare/.

Twells, Laurie K., Deborah M. Gregory, Jacinta Reddigan, et al. 2014. "Current and Predicted Prevalence of Obesity in Canada: A Trend Analysis." *CMAJ Open* 2(1): E18-26. doi.org/10.9778/cmajo.20130016.

US EPA (United States Environmental Protection Agency). 2020. "Procedures for Equipment Inventory and Management in the Laboratory Services and Applied Science Division." EPA. Last modified February 28, 2020. www.epa.gov/quality/procedures-equipment-inventory-and-management-laboratory-services-and-applied-science.

Verseghy, Judy, and Sam Abel, eds. 2018. *Heavy Burdens: Stories of Motherhood and Fatness*. Demeter Press.

Walden, Christine M., Scott B. Bankard, Bradford Cayer, et al. 2013. "Mobilization of the Obese Patient and Prevention of Injury." *Annals of Surgery* 258(4): 646–651. doi.org/10.1097/SLA.0b013e3182a5039f.

Ward, Pamela, and Deborah McPhail. 2019. "Fat Shame and Blame in Reproductive Care: Implications for Ethical Health Care Interactions." *Women's Reproductive Health* 6(4): 225-241. www.doi.org/10.1080/23293691.2019.1653581.

Waugh, Rachel, Amy Mireault, Melissa A. Rothfus, et al. 2025. "Identifying and Mapping Canadian Registered Dietitians' Perceptions and Knowledge of and Experiences with Weight-Related Evidence: A Scoping Review." *Canadian Journal of Dietetic Practice and Research* 86(1): 40–47. doi.org/10.3148/cjdpr-2024-026.

Wenke, Rachel J., Elizabeth C. Ward, Ingrid Hickman, et al. 2017. "Allied Health Research Positions: A Qualitative Evaluation of Their Impact." *Health Research Policy and Systems* 15(1): 6. doi.org/10.1186/s12961-016-0166-4.

Wharton, Sean, David C.W. Lau, Michael Vallis, et al. 2020. "Obesity in Adults: A Clinical Practice Guideline." *Canadian Medical Association Journal* 192(31): E875–91. doi.org/10.1503/cmaj.191707.

Wharton, Sean, Sue D. Pedersen, David C.W. Lau, et al. 2018. "Weight Management in Diabetes." *Canadian Journal of Diabetes* 42: S124–S129. doi.org/10.1016/j.jcjd.2017.10.015.

Wood, Michael. 2024. "Recommended Bariatric Equipment For Hospitals." Innova Care Concepts. Last modified April 17, 2024. www.innovacareconcepts.com/blog/care-beds/recommended-bariatric-equipment-for-hospitals/.

WHO (World Health Organization). 2023. "Cold Chain Equipment Inventory and Gap Analysis Tool." www.who.int/publications/m/item/cold-chain-equipment-inventory-and-gap-analysis-tool.

_____. 2011. "Introduction to Medical Equipment Inventory Management." https://www.who.int/publications-detail-redirect/9789241501392.

Wu, Ya-Ke, and Diane C. Berry. 2018. "Impact of Weight Stigma on Physiological and Psychological Health Outcomes for Overweight and Obese Adults: A Systematic Review." *Journal of Advanced Nursing* 74(5): 1030–42. doi.org/10.1111/jan.13511.

Yakerson, Alla. 2019. "Women in Clinical Trials: A Review of Policy Development and Health Equity in the Canadian Context." *International Journal for Equity in Health* 18(1): 56. doi.org/10.1186/s12939-019-0954-x.