 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p> <p>PRIMARY HEALTH CARE OPERATIONAL GUIDELINES</p>	<p>Operational Guideline: Scale Calibration and Maintenance</p>	<p>Guideline Number: PCOG#19</p>
	<p>Approved By: Primary Care Service Area Leadership</p>	<p>Pages: 1 of 3</p>
	<p>Approval Date: April 27, 2022</p>	<p>Supersedes: October 23, 2017</p>

1. **INTENT:**

To provide guidance on the calibration and maintenance of mechanical or electronic patient scales to ensure accuracy and proper functioning

2. **DEFINITIONS:**

Mechanical Scales – Also known as beam scales, typically consist of balance beams each with a poise bar, a platform, and in some case a bar for measuring height. An alternate mechanical floor model consists simply of a platform with a manual weight display. Such scales usually have a weighing capacity of at least 300 lb (135 kg).

Electronic Scales – Consist of an electronic control panel with a digital display, a platform with an electronic weighing mechanism such as an electronic load cell.

Accuracy – The ability of a scale to provide a result that is as close as possible to the actual value.


Calibration – The comparison between the output of a scale or balance against a standard value. Calibration requires a standard weight and the balance to be set in the calibration mode.

Adjustment – To bring a balance/scale into the state of accuracy required for its use.

3. **GUIDELINE:**

<u>Equipment Recommended</u>
<i>Calibration weights are available for purchase through WRHA Logistics</i>
Up to five 10 lb (5 kg) calibration weights/bricks (for adult/pediatric scales)
One 1 lb (0.5 kg) calibration weight/brick (for infant scales)

- 3.1. There is no standard scale in the Primary Care setting; varying models and styles are currently in use. Whenever available, manufacturer's instructions should be followed to guide calibration and maintenance.
- 3.2. Regularly scheduled scale calibration should occur at a minimum interval of every 6 months and can be completed by any Administrative staff member within the Primary Care team.
- 3.3. Before each calibration, examine the exterior of the patient scale for cleanliness and general good physical condition. The examination includes ensuring the following:
 - Plastic housings are intact
 - All assembly hardware is present and tight

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p> <p>PRIMARY HEALTH CARE OPERATIONAL GUIDELINES</p>	<p>Operational Guideline: Scale Calibration and Maintenance</p>	<p>Guideline Number: PCOG#19</p>
	<p>Approved By: Primary Care Service Area Leadership</p>	<p>Pages: 2 of 3</p>
	<p>Approval Date: April 27, 2022</p>	<p>Supersedes: October 23, 2017</p>

- No sign of spilled liquids
- No sign of physical damage
- Batteries are new and functioning
- Scale is sitting on a flat, level, and stable surface

3.4. A zero calibration procedure should be performed prior to calibrating the accuracy of the patient scale in addition to whenever there is a discrepancy in the measured weight of a patient. Load the scale a few times to align the internal parts.

Mechanical – Place poise bars on the zero indicators for each beam. The beam pointer should be centered on its indicator. If the beam pointer or manual weight display (on a mechanical floor model) is not centered, adjust the balance screw or dial to center the pointer.

Electronic – With no weight bearing on the scale platform, turn the scale on. The display should read “0”. If it does not, refer to the manufacture’s operation manual for procedure on setting the scale to zero (process will vary between models).


3.5. Weight (mass) accuracy for mechanical scales - Place weight(s) on the scale as directed below. Move the poise bars on the balance beams to match the weight placed on the platform. When reading stabilizes, the beam pointer should be centered. The scale should indicate a weight that is within 1% of the test weights. For adult/pediatric scales, place up to five stackable 10 lb calibration weights on the platform and note the indicated weight. For infant scales, place the 1 lb calibration weight on the platform and note the indicated weight. Replace the 1 lb weight with a 10 lb weight and note the indicated weight.

3.6. Weight (mass) accuracy for electronic scales - Place weight(s) on the scale as directed below. When reading stabilizes, the scale should indicate a weight that is within 1% of the test weights. For adult/pediatric scales, place up to five stackable 10 lb calibration weights on the platform and note the indicated weight. For infant scales, place the 1 lb calibration weight on the platform and note the indicated weight. Replace the 1 lb weight with a 10 lb weight and note the indicated weight.

3.7. In conjunction with each scale calibration performed, documentation must be completed outlining site and scale specifics, status (pass or fail), quantitative tasks tested/measured, preventative maintenance completed, along with applicable notes. *Appendix A – Patient Scale Template* has been provided to assist with the documentation process.

3.8. Where successful adjustment was not possible after calibration, the patient scale should be taken out of use until such time as it is fixed or replaced.

3.9. If an issue is identified during the calibration process that can not be rectified at a site level, contact the vendor directly for service. Service assistance may also be available through the [Clinical Engineering Department - Winnipeg Regional Health Authority](#) on a cost recovery basis. Industry standard in Canada used regarding recommendation

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p> <p>PRIMARY HEALTH CARE OPERATIONAL GUIDELINES</p>	<p>Operational Guideline: Scale Calibration and Maintenance</p>	<p>Guideline Number: PCOG#19</p>
	<p>Approved By: Primary Care Service Area Leadership</p>	<p>Pages: 3 of 3</p>
	<p>Approval Date: April 27, 2022</p>	<p>Supersedes: October 23, 2017</p>

for service on most patient scales is “run to failure.”

4. SOURCE/REFERENCES:

- <http://www.quality-assurance-solutions.com/weight-scale-calibration.html>
- http://www.ehow.com/how_4812541_calibrate-weighing-scale.html
- Consultation with [Clinical Engineering Department - Winnipeg Regional Health Authority](#)

5. APPENDIX:

- APPENDIX A – Patient Scale Template

SCOPE: Applicable to all WRHA Primary Care Direct Operated Clinics and Walk In Connected Care Clinics (including McGregor, Access Fort Garry and Access Winnipeg West).

NOTE: While the Funded Community Health Agencies are out of scope of Primary Care Operating Guidelines, it is recommended the content and/or processes be adapted/adopted where applicable.

****Questions related this or any other Primary Care Operating Guideline should be directed to Primary Care Service Area Leadership***