FNFNES National Report Corrigendum April 2022

Corrigendum to the FNFNES Final Report for Eight Assembly of First Nations Regions: Draft Comprehensive Technical Report. November 2019.

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The authors regret to inform the readers that some results concerning *Mercury in Hair* were incorrect in the printed and online versions of the report.

In the process of adjustment of weighting variables for the population growth from 2008 to 2017, it was necessary to merge multiple data files to get all weighting variables in one place. After the publication of this paper, analysts from Statistics Canada's Centre of Excellence for Statistical Consultation and Analysis Methods, while providing technical guidance and assistance with further analysis of study data, discovered that an incorrect final survey weight was used during this merging process for the regions of Alberta, Manitoba, and Ontario. As a result, statistics published for these three regions were erroneous. Statistics Canada's Centre of Excellence for Statistical Consultation and Analysis Methods corrected the final survey weight and recalculated the statistics included in this corrigendum.

Changes to the text are in **red** along with Tables 6.6 and 6.7 with corrected mercury estimates for Alberta, Manitoba, and Ontario as follows:

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The concentrations of total mercury in hair among First Nations adults varied between regions (Table 6.6). The highest arithmetic means of hair mercury concentration were observed among First Nations living in Quebec (**1.39** µg/g) (in place of 1.45 µg/g), British Columbia (**0.59** µg/g) (in place of 0.58 µg/g), **Manitoba (0.43 µg/g)**, and Ontario (**0.42** µg/g) (in place of 0.41 µg/g), (while the geometric means for the corresponding regions were **0.39** µg/g (in place of 0.42 µg/g), **0.37** µg/g (in place of 0.36 µg/g), **0.15 µg/g**, and 0.19 µg/g, respectively). Among WCBA, the highest average concentrations of hair mercury were reported in Quebec (**0.74** µg/g) (in place of 0.85µg/g), British Columbia **0.42** µg/g (in place of 0.43 µg/g) and Ontario **0.30** µg/g (0.29 µg/g).

The distribution of mercury in the hair at the 95th percentile indicates that overall, mercury body burden is below the established Health Canada's mercury guidelines of 6 µg/g in hair (ranging from **0.19** µg/g (in place of 0.16 µg/g) to **3.63** µg/g (in place of 3.3 µg/g) across age and sex groups) in all regions except Quebec.

Table 6.6 Arithmetic mean (AM), geometric mean (GM), 95th percentile, and exceedances of total mercury in hair concentration (µg/g or ppm) for First Nations adults living on reserve, by region* *(with corrected values for affected regions)*

Manitoba														
Gender	**Age group**	**Sample size**	**Arithm. mean**	**Lower 95% CI**	**Upper 95% CI**	**Geo. mean**	**Lower 95% CI**	**Upper 95% CI**	**95th**	**Lower 95% CI**	**Upper 95% CI**	**exceed**	
												n	**%**
Total	19-30	46	0.23	0.08	0.38	0.12	<LOD	0.28	0.53	<LOD	1.02	6	13.0
	31-50	119	0.65	<LOD	1.46	0.16	0.06	0.42	3.63	<LOD	7.25	3	2.5
	51+	71	0.33	0.14	0.52	0.17	0.08	0.36	1.60	0.54	2.66	0	0
	Total	**236**	**0.43**	**<LOD**	**0.81**	**0.15**	**0.08**	**0.28**	**3.02**	**0.07**	**5.96**	**9**	**3.8**
Males	19-30	6	0.22	<LOD	0.42	0.14	<LOD	0.47	0.49	0.17	0.80	0	0
	31-50	21	1.10	<LOD	2.65	0.25	<LOD	1.65	3.63	<LOD	7.34	0	0
	51+	11	0.34	<LOD	0.66	0.16	<LOD	0.49	1.60	0.06	3.14	0	0
	Total	**38**	**0.61**	**<LOD**	**1.33**	**0.18**	**0.06**	**0.53**	**3.63**	**<LOD**	**7.34**	**0**	**0**
Females	19-30	40	0.25	0.09	0.41	0.10	0.06	0.19	0.79	<LOD	1.57	6	15.0
	31-50	98	0.20	0.15	0.25	0.10	0.08	0.13	0.76	0.31	1.20	3	3.1
	51+	60	0.32	0.16	0.49	0.18	0.10	0.36	1.14	0.45	1.82	0	0
	Total	**198**	**0.24**	**0.14**	**0.34**	**0.12**	**0.08**	**0.17**	**0.79**	**0.35**	**1.23**	**9**	**4.5**
WCBA	**19-50**	**138**	**0.22**	**0.13**	**0.31**	**0.10**	**0.07**	**0.15**	**0.79**	**0.33**	**1.25**	**9**	**6.5**
Ontario													
Gender	**Age group**	**Sample size**	**Arithm. mean**	**Lower 95% CI**	**Upper 95% CI**	**Geo. mean**	**Lower 95% CI**	**Upper 95% CI**	**95th**	**Lower 95% CI**	**Upper 95% CI**	**exceed**	
												n	**%**
Total	19-30	127	0.33	0.13	0.54	0.15	0.11	0.22	1.22	0.38	2.05	5	3.9
	31-50	303	0.43	0.23	0.62	0.19	0.15	0.24	1.47	0.20	2.73	8	2.6
	51+	314	0.51	0.34	0.68	0.25	0.20	0.31	1.83	0.59	3.06	5	1.6
	Total	**744**	**0.42**	**0.28**	**0.57**	**0.19**	**0.16**	**0.23**	**1.47**	**0.71**	**2.23**	**18**	**2.4**
Males	19-30	38	0.39	<LOD	0.78	0.16	0.08	0.30	1.29	<LOD	3.76	1	2.6
	31-50	90	0.53	0.20	0.87	0.23	0.17	0.33	2.43	0.30	4.57	2	2.2
	51+	108	0.57	0.35	0.79	0.29	0.20	0.43	1.93	0.56	3.30	2	1.9
	Total	**236**	**0.50**	**0.27**	**0.72**	**0.22**	**0.16**	**0.30**	**1.74**	**0.50**	**2.98**	**5**	**2.1**

Females	19-30	89	0.28	0.18	0.37	0.15	0.10	0.21	1.01	0.65	1.38	4	4.5
	31-50	213	0.31	0.24	0.38	0.15	0.13	0.19	1.15	0.83	1.47	6	2.8
	51+	206	0.45	0.29	0.61	0.21	0.17	0.26	1.65	0.31	2.98	3	1.5
	Total	**508**	**0.35**	**0.26**	**0.43**	**0.17**	**0.14**	**0.20**	**1.18**	**0.85**	**1.50**	**13**	**2.6**
WCBA	**19-50**	**302**	**0.30**	**0.23**	**0.36**	**0.15**	**0.12**	**0.18**	**1.14**	**0.88**	**1.41**	**10**	**3.3**
Alberta													
Gender	**Age group**	**Sample size**	**Arithm. mean**	**Lower 95% CI**	**Upper 95% CI**	**Geo. mean**	**Lower 95% CI**	**Upper 95% CI**	**95th**	**Lower 95% CI**	**Upper 95% CI**	**exceed**	
												n	**%**
Total	19-30	68	0.08	<LOD	0.11	<LOD	<LOD	0.07	0.27	0.12	0.42	0	0
	31-50	176	0.19	0.14	0.25	0.11	0.09	0.13	0.77	0.27	1.26	1	0.6
	51+	125	0.42	0.12	0.73	0.15	0.09	0.27	1.49	<LOD	3.76	1	0.8
	Total	**369**	**0.20**	**0.12**	**0.28**	**0.09**	**0.07**	**0.11**	**0.80**	**0.35**	**1.26**	**2**	**0.5**
Males	19-30	16	0.07	<LOD	0.12	<LOD	<LOD	0.09	0.19	<LOD	0.44	0	0
	31-50	52	0.21	0.12	0.30	0.13	0.09	0.17	1.04	0.27	1.82	0	0
	51+	53	0.69	0.07	1.31	0.27	0.09	0.77	2.21	<LOD	6.65	1	1.9
	Total	**121**	**0.26**	**0.11**	**0.42**	**0.11**	**0.07**	**0.16**	**1.04**	**0.38**	**1.70**	**1**	**0.8**
Females	19-30	52	0.08	<LOD	0.12	<LOD	<LOD	0.07	0.27	0.11	0.43	0	0
	31-50	124	0.18	0.11	0.25	0.09	0.08	0.12	0.77	<LOD	1.56	1	0.8
	51+	72	0.17	0.11	0.24	0.09	0.06	0.14	0.81	0.44	1.17	0	0
	Total	**248**	**0.14**	**0.10**	**0.18**	**0.07**	**0.06**	**0.09**	**0.48**	**0.23**	**0.73**	**1**	**0.4**
WCBA	**19-50**	**176**	**0.13**	**0.09**	**0.17**	**0.07**	**0.06**	**0.08**	**0.43**	**0.18**	**0.68**	**1**	**0.6**

Use with caution, CV between 15% and 35%

CV greater than 35% or the estimate is thought to be unstable

If >40% of a sample were below the LOD, means are thought to be meaningless and should not be used

**Estimates have been adjusted for non-response and are post-stratified to population counts within age/sex group. Bootstrap weights were adjusted for population changes over a 10-year period of data collection (2008 – 2017).*

Estimates should be used with caution due to high CVs. Note that CV does not reflect bias, only sampling error: Good (CV is up to 15%), Use with caution (CV is between 15% and 35%), Unreliable (over 35%).

All shaded figures would not normally be released due to high CVs or the high percentage of respondents below the limit of detection. Variance estimation for non-linear statistics such as percentiles is itself subject to variability, particularly with small sample sizes. Confidence intervals that are inconsistent for percentages typically imply all such percentages should only be used with extreme caution.

Due to a small sample size of adults aged 71+, the data were combined into the 51+ age group.

Table 6.7 Comparison of estimates on whole blood total mercury concentrations* (µg/L) of the First Nations populations living on reserve south of 60th parallel (FNFNES, 2008-2016) and the Canadian population (Canadian Health Measures Survey (CHMS) cycle 1 (2007–2009), cycle 2 (2009–2011), cycle 3 (2012–2013) and cycle 4 (2014-2015) aged 19–79 years by sex *(with corrected values for affected regions)*

Population	Sex	Count (n)	%<LOD[a]	A.M (95% CI)	G.M (95% CI)	10th (95% CI)	25th (95% CI)	50th (95% CI)	75th (95% CI)	90th (95% CI)	95th (95% CI)
MB (2010)	Total	236	28.4	1.71 F (0.19-3.23)	0.59 F (0.31-1.12)	.	.	0.57 F (0.10-1.03)	1.35 F (0.35-2.35)	3.16 F (6.77-13.09)	12.06 F (0.28-23.84)
	Female	198	28.3	0.97 E (0.56-1.37)	0.46 E (0.31-0.70)	.	.	0.45 E (0.15-0.75)	1.04 E (0.34-1.74)	2.47 E (1.32-3.62)	3.16 E (1.42-4.91)
	Male	38	28.9	2.43 F (-0.01-5.30)	0.73 F (0.25-2.12)	.	.	0.63 F (-0.39-1.66)	1.95 F (-6.00-9.90)	12.06 F (0.69-24.81)	14.51 F (0.32-29.35)
ON (2011/12)	Total	744	13.3	1.69 E (1.12-2.26)	0.77 E (0.65-0.92)	<LOD (<LOD-0.15)	0.35 (0.29-0.41)	0.67 (0.51-0.83)	1.76 (1.33-2.20)	3.83 E (2.27-5.39)	5.87 E (2.83-8.9)
	Female	508	14.4	1.38 (1.05-1.71)	0.67 (0.57-0.78)	<LOD	0.33 E (0.15-0.52)	0.62 (0.5-0.74)	1.46 E (0.93-1.99)	3.21 (2.41-4.02)	4.71 (3.4-6.01)
	Male	236	11	2.00 E (1.10-2.90)	0.89 E (0.65-1.21)	<LOD F (<LOD-0.38)	0.38 E (0.27-0.50)	0.82 E (0.46-1.18)	1.92 E (1.06-2.78)	4.59 E (1.92-7.26)	6.95 F (1.99-11.91)
AB (2013)	Total	369	40.6	0.80 E (0.47-1.13)	0.35 E (0.29-0.43)	<LOD	<LOD	0.24 F (0.09-0.39)	0.75 F (0.49-1.01)	1.55 F (0.53-2.58)	3.21 F (1.39-5.03)
	Female	248	47.17	0.55 E (0.41-0.70)	0.30 E (0.25-0.35)	<LOD	<LOD	<LOD F (<LOD-0.25)	0.53 F (0.27-0.80)	1.19 F (0.82-1.57)	1.91 F (0.91-2.9)
	Male	121	27.27	1.05 E (0.42-1.67)	0.42 E (0.28-0.62)	<LOD	<LOD F (<LOD-0.18)	0.37 F (<LOD-0.7)	0.90 E (0.48-1.31)	2.22 F (0.11-4.34)	4.17 E (1.54-6.81)

** - A hair/blood ratio of 250/1 was used to convert hair mercury values to blood mercury concentrations for the FNFNES participants. The equation is as follow: Hair value (mg/kg) = (blood value (µg/L) x 250/1000) (Legrand et al., 2010)*

[a] - The limit of quantitation for total mercury in hair was 0.06 ppm (or µg/g)

E - Use data with caution, CV was between 15% and 35%

F – Estimates are thought to be unstable; CV was greater than 35%

"." means that the survey estimates couldn't be calculated