**SUPPLEMENTAL MATERIAL**

**Title**

The impact of stroke public awareness campaigns differs between sociodemographic groups

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# Supplemental Table I. Characteristics of individual FAST campaigns.

| **Campaign** | **Date of press release** | **Duration (days)** | **Total investment (CAD $)** | **Global PSA value (CAD $)a** | **French campaign budget (%)** | **Interviews and known coverage** | **Spokespersons (celebrities)** | **Impressions generatedb** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2016 | March 30th, 2016 |  108 | 152,037  | >1,300,000 | 100 | 43 | 38 (ML, JD) | 20,270,300 |
| Spring 2017  | April 3rd, 2017 |  70 | 134,703  | 678,299**c** | 75 | 75 | 34 (JB, LPR) | 16,543,253 |
| Fall 2017  | None |  22 | 286,326  | 59 | NA | NA (JB, LPR) | NA |
| Spring2018  | May 28th, 2018 |  35 | 170,667  | 212,090 | NA | 7 | 41 (JB, LPR) | 2,346,446 |
| Fall2018  | October 29th, 2018 |  48 | 390,700 |  NA | NA  |  NA |  41 (JB, LPR) | 9,161,608 |

**a**Public service announcements (PSA) refer to donated ad time or space. bImpressions refer to prints and screen displays. cCombined spring and fall 2017 campaigns. Abbreviations: CAD $, Canadian dollars; JB, Josée Boudreault; JD, Jacques Demers; LPR, Louis-Philippe Rivard; ML, Michel Labrecque; NA, not available; PSA, public service announcements.

# Supplemental Table II. Individual FAST stroke signs named by respondents per wave.

| **Stroke sign named** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Total** |
| --- | --- | --- | --- | --- | --- |
| Face | 20.8 (16.7, 25.4) | 34.0 (29.1, 39.1) | 30.4 (25.8, 35.4) | 36.2 (33.0, 39.5) | 31.9 (29.8, 34.0) |
| Arm  | 42.8 (37.6, 48.1) | 54.8 (49.5, 60.0) | 53.9 (48.6, 59.1) | 53.8 (50.5, 57.2) | 51.9 (49.7, 54.2) |
| Speech  | 44.1 (38.9, 49.4) | 51.3 (46.1, 56.6) | 57.3 (52.0, 62.4) | 54.4 (51.0, 57.8) | 52.5 (50.2, 54.7) |

Frequencies are presented in % weighted proportions (95% confidence interval). Face refers to answers equivalent to “face drooping”. Arm refers to answers equivalent to “inability to raise arms”, “paralysis” or “weakness of one side of the body”. Speech refers to answers equivalent to “slurred or jumbled speech”.

# Supplemental Table III. Individual non-FAST stroke signs named by respondents per wave.

| **Stroke sign named** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Total** |
| --- | --- | --- | --- | --- | --- |
| Confusion | 10.6 (7.6, 14.3) | 12.3 (9.2, 15.9) | 16.0 (12.4, 20.2) | 12.1 (10.1, 14.4) | 12.6 (11.2, 14.1) |
| Numbness | 15.4 (11.5, 20.0) | 16.4 (12.7, 20.6) | 9.5 (6.5, 13.3) | 10.1 (8.1, 12.4) | 12.1 (10.7, 13.7) |
| Do not know | 17.9 (13.9, 22.4) | 11.5 (8.2, 15.6) | 9.8 (6.5, 14.0) | 9.3 (7.5, 11.3) | 11.4 (10.0, 12.9) |
| Loss of consciousness | 12.8 (9.6, 16.5) | 10.7 (7.5, 14.7) | 13.6 (10.4, 17.4) | 9.9 (8.0, 12.2) | 11.3 (9.9, 12.8) |
| Dizziness | 10.9 (7.8, 14.5) | 10.7 (7.9, 14.0) | 12.0 (8.9, 15.7) | 9.3 (7.4, 11.5) | 10.3 (9.0, 11.7) |
| Vision problem | 8.7 (6.1, 11.9) | 7.6 (5.2, 10.6) | 8.3 (5.7, 11.5) | 9.2 (7.2, 11.5) | 8.6 (7.4, 10.0) |
| Chest or other pain | 9.8 (6.6, 13.8) | 10.2 (7.6, 13.4) | 4.9 (2.9, 7.8) | 6.9 (5.3, 8.8) | 7.7 (6.5, 8.9) |
| Headache | 9.1 (6.3, 12.6) | 6.1 (4.1, 8.8) | 8.4 (5.5, 12.0) | 5.1 (3.8, 6.6) | 6.6 (5.6, 7.8) |
| Problem with coordination or balance | 6.5 (3.8, 10.2) | 3.7 (2.3, 5.6) | 5.5 (3.5, 8.1) | 2.3 (1.4, 3.4) | 3.9 (3.1, 4.8) |
| Shortness of breath | 3.7 (2.0, 6.1) | 7.0 (4.4, 10.4) | 3.5 (2.1, 5.6) | 2.9 (1.9, 4.3) | 3.9 (3.1, 4.8) |
| Other | 6.7 (4.4, 9.7) | 3.9 (2.3, 6.3) | 5.2 (3.1, 8.0) | 1.1 (0.6, 1.9) | 3.4 (2.7, 4.3) |
| General weakness | 1.9 (0.8, 3.8) | 0.8 (0.1, 2.5) | 1.0 (0.3, 2.3) | 1.3 (0.6, 2.4) | 1.3 (0.8, 1.9) |
| Vomiting | 0.9 (0.3, 2.1) | 1.4 (0.6, 2.9) | 1.9 (0.7, 4.0) | 0.5 (0.2, 1.1) | 1.0 (0.6, 1.5) |
| Sweating | 0.9 (0.1, 3.8) | 0.8 (0.2, 2.0) | 1.2 (0.3, 3.3) | 0.5 (0.2, 1.0) | 0.7 (0.4, 1.3) |
| Seizure | 0.4 (0.0, 2.3) | 0.0 (0.0, 0.7) | 0.8 (0.1, 2.8) | 0.8 (0.3, 1.9) | 0.6 (0.3, 1.2) |
| Problem with blood pressure | 1.5 (0.6, 3.1) | 0.2 (0.0, 0.9) | 0.4 (0.0, 2.3) | 0.3 (0.1, 0.9) | 0.5 (0.3, 1.0) |

Frequencies are presented in % weighted proportions (95% confidence interval). The proportions do not sum up to 100% because FAST signs are presented in a separate table and participants could name multiple signs. We collapsed the following answers: “confusion, difficulty thinking, memory loss” and “incoherence in general” into a single “confusion” answer; “sudden headache” and “headache in general” into a single “headache” answer.

# Supplemental Figure I. FAST stroke signs identified per statistically significant variables (multivariable model) in wave 4.



# Supplemental Table IV. Method by which respondents became aware of the FAST campaigns.

| **Method** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Total** |
| --- | --- | --- | --- | --- | --- |
| Television | 80.6 (73.2, 86.6) | 67.9 (60.2, 75.0) | 82.2 (75.1, 88.0) | 83.3 (79.4, 86.7) | 80.1 (77.3, 82.7) |
| Social media | 11.5 (6.9, 17.7) | 17.7 (12.4, 24.2) | 12.5 (7.5, 19.0) | 12.6 (9.7, 16.1) | 13.3 (11.1, 15.7) |
| Radio | 15.4 (9.9, 22.4) | 24.1 (17.8, 31.4) | 11.5 (7.4, 16.9) | 7.4 (5.2, 10.2) | 12.2 (10.2, 14.4) |
| Newspaper | 6.8 (3.7, 11.2) | 3.4 (1.4, 7.0) | 5.8 (3.0, 9.9) | 4.6 (3.0, 6.6) | 4.9 (3.8, 6.3) |
| Other | 10.4 (6.1, 16.2) | 5.2 (2.4, 9.6) | 3.6 (1.6, 6.8) | 2.5 (1.3, 4.4) | 4.3 (3.1, 5.7) |
| Word of mouth | 1.3 (0.3, 3.7) | 0.4 (0.0, 2.0) | 4.1 (1.1, 10.3) | 4.2 (2.2, 7.3) | 3.1 (1.9, 4.9) |
| Online searches, banner ads | 0.4 (0.0, 2.4) | 3.6 (0.9, 9.6) | 3.6 (1.4, 7.3) | 1.9 (1.0, 3.3) | 2.3 (1.4, 3.5) |
| Do not know | 1.4 (0.1, 5.5) | 1.5 (0.3, 4.3) | 0.4 (0.0, 2.2) | 1.7 (0.8, 3.2) | 1.4 (0.8, 2.3) |
| Billboards, bus shelters | 0.0 (0.0, 0.7) | 1.0 (0.1, 3.7) | 1.5 (0.4, 3.9) | 0.8 (0.2, 1.8) | 0.9 (0.4, 1.6) |
| Magazines | 1.0 (0.1, 3.7) | 0.0 (0.0, 0.7) | 0.7 (0.1, 2.5) | 0.4 (0.1, 1.3) | 0.5 (0.2, 1.0) |

Frequencies are presented in % weighted proportions (95% confidence interval). Frequencies are for respondents who reported being aware of the previous FAST campaign. The proportions do not sum up to 100% because participants could give multiple answers.

# Supplemental Table V. Logistic regression models for awareness of the previous campaign in wave 4.

| Variables | Univariable model | Multivariable model |
| --- | --- | --- |
| OR (95% CI) | p-value | OR (95% CI) | p-value |
| Male sex | **0.59 (0.46, 0.74)** | **<0.001** | **0.66 (0.49, 0.88)** | **0.006** |
| Age (reference: ≥55 years) |
| 18-24 | **0.38 (0.25, 0.56)** | **<0.001** | **0.33 (0.16, 0.66)** | **0.002** |
| 25-34 | 0.72 (0.50, 1.02) | 0.064 | 0.73 (0.42, 1.27) | 0.259 |
| 35-54 | 1.17 (0.87, 1.58) | 0.299 | 0.99 (0.61, 1.60) | 0.964 |
| Education completed (reference: university) |
| Elementary school | **0.33 (0.21, 0.50)** | **<0.001** | **0.45 (0.26, 0.75)** | **0.002** |
| High school | **0.71 (0.51, 0.99)** | **0.042** | 0.88 (0.59, 1.32) | 0.543 |
| College | 0.79 (0.58, 1.06) | 0.121 | 0.99 (0.70, 1.42) | 0.973 |
| Marital status (reference: married/common-law) |
| Single (never married) | **0.57 (0.44, 0.75)** | **<0.001** | 1.04 (0.72, 1.51) | 0.820 |
| Divorced/separated | 0.87 (0.56, 1.34) | 0.522 | 1.11 (0.66, 1.89) | 0.687 |
| Widowed | 0.83 (0.47, 1.46) | 0.508 | 0.84 (0.40, 1.76) | 0.652 |
| Occupation (reference: working) |
| Retired | 1.05 (0.77, 1.41) | 0.772 | 1.06 (0.63, 1.79) | 0.834 |
| Student | 0.67 (0.41, 1.09) | 0.111 | 1.21 (0.63, 2.31) | 0.571 |
| Unemployed | 0.66 (0.41, 1.05) | 0.085 | 0.78 (0.44, 1.37) | 0.395 |
| Household income (reference: CAD $≥80,000) |
| <40,000 | **0.42 (0.30, 0.58)** | **<0.001** | **0.52 (0.34, 0.80)** | **0.003** |
| ≥40,000 to <80,000 | **0.68 (0.49, 0.94)** | **0.021** | 0.73 (0.50, 1.07) | 0.105 |
| English language | **0.52 (0.35, 0.78)** | **0.002** | 0.66 (0.40, 1.09) | 0.110 |
| Landline contact method | **1.96 (1.54, 2.50)** | **<0.001** | **1.47 (1.05, 2.05)** | **0.026** |

All models are weighted. Multivariable model includes all variables. Abbreviations: CAD $, Canadian dollars; CI, confidence interval; OR, odds ratio.

# Supplemental Table VI. Stroke definition as per respondents by wave.

| **Stroke definition** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Total** |
| --- | --- | --- | --- | --- | --- |
| Blockage of blood circulation to the brain | 28.5 (23.9, 33.4) | 39.3 (34.3, 44.5) | 35.7 (30.7, 40.9) | 35.3 (21.1, 38.6) | 34.8 (32.7, 37.0) |
| Problem with the heart | 40.6 (35.3, 46.1) | 30.4 (25.8, 35.3) | 23.7 (19.6, 28.2) | 28.8 (25.8, 31.9) | 30.4 (28.3, 32.4) |
| Rupture of blood vessel to the brain | 6.3 (4.3, 9.0) | 13.7 (10.6, 17.4) | 20.0 (16.1, 24.4) | 20.0 (17.4, 22.8) | 16.3 (14.8, 18.0) |
| Problem with the brain (unspecified) | 21.0 (16.9, 25.6) | 13.8 (10.4, 17.7) | 13.4 (10.1, 17.4) | 13.4 (11.2, 15.9) | 14.9 (13.4, 16.6) |
| Problem with blood flow (unspecified) | 7.1 (4.4, 10.7) | 28.9 (24.3, 33.8) | 9.5 (6.8, 12.8) | 9.2 (7.3, 11.4) | 12.3 (10.9, 13.9) |
| Paralysis of the brain or body | 6.4 (4.2, 9.2) | 12.7 (9.2, 16.9) | 15.1 (11.5, 19.3) | 9.3 (7.3, 11.6) | 10.4 (9.0, 11.9) |
| Do not know | 8.0 (5.4, 11.2) | 7.3 (4.6, 11.0) | 7.8 (4.8, 12.0) | 7.8 (6.1, 9.8) | 7.8 (6.6, 9.1) |
| Problem with brain function | 0.6 (0.1, 2.0) | 2.7 (1.3, 4.9) | 3.9 (2.1, 6.5) | 4.2 (2.9, 5.7) | 3.2 (2.5, 4.1) |
| Other | 3.1 (1.7, 5.3) | 0.2 (0.0, 1.3) | 2.0 (1.0, 3.7) | 0.3 (0.1, 0.8) | 1.1 (0.8, 1.6) |
| Problem with oxygen to the brain | 0.6 (0.1, 2.3) | 0.8 (0.1, 2.5) | 2.1 (0.6, 4.8) | 0.0 (0.0, 0.3) | 0.6 (0.3, 1.2) |
| Serious condition (unspecified) | 1.7 (0.5, 4.4) | 0.0 (0.0, 0.7) | 1.6 (0.5, 3.6) | 0.0 (0.0, 0.3) | 0.6 (0.3, 1.2) |

Frequencies are presented in % weighted proportions (95% confidence interval). The proportions do not sum up to 100% because participants could give multiple definitions.

# Supplemental Table VII. First response to a suspected stroke by respondents per wave.

| **First response** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Total** |
| --- | --- | --- | --- | --- | --- |
| Call EMS/911/Ambulance | 81.5 (77.3, 85.1) | 80.9 (76.7, 84.5) | 85.5 (81.5, 88.7) | 80.1 (77.4, 82.6) | 81.5 (79.7, 83.1) |
| Put in recovery position | 4.0 (2.4, 6.6) | 4.3 (2.4, 7.6) | 1.6 (0.8, 3.2) | 7.1 (5.5, 9.1) | 5.0 (4.1, 6.2) |
| Bring to hospital | 2.2 (1.1, 4.0) | 5.9 (4.2, 8.4) | 1.9 (1.0, 3.6) | 3.0 (2.2, 4.1) | 3.2 (2.6, 3.9) |
| Do not know | 2.9 (1.7, 4.9) | 2.1 (1.0, 4.3) | 3.2 (1.6, 6.2) | 2.6 (1.7, 3.8) | 2.7 (2.0, 3.5) |
| Make comfortable | 3.5 (2.2, 5.7) | 1.9 (1.1, 3.5) | 1.6 (0.8, 3.3) | 2.5 (1.7, 3.8) | 2.5 (1.9, 3.2) |
| Give aspirin or other medication | 0.9 (0.4, 2.1) | 1.6 (0.9, 3.0) | 2.2 (1.2, 3.9) | 1.3 (0.7, 2.2) | 1.4 (1.0, 2.0) |
| Assess responsiveness | 0.7 (0.2, 1.8) | 0.6 (0.2, 1.8) | 1.8 (0.8, 4.2) | 1.5 (0.9, 2.6) | 1.3 (0.8, 1.9) |
| Check vital signs | 1.7 (0.6, 4.4) | 0.9 (0.4, 2.1) | 0.2 (0.0, 1.1) | 1.1 (0.6, 1.9) | 1.0 (0.6, 1.5) |
| Perform cardiopulmonary resuscitation | 0.6 (0.2, 1.8) | 0.3 (0.1, 1.3) | 1.1 (0.4, 2.9) | 0.6 (0.3, 1.5) | 0.7 (0.4, 1.1) |
| Other | 1.5 (0.7, 3.1) | 0.4 (0.1, 1.6) | 0.5 (0.2, 1.5) | 0.3 (0.1, 0.8) | 0.6 (0.3, 0.9) |
| Help have a seat | 1.1 (0.4, 2.4) | 1.0 (0.3, 2.4) | 0.7 (0.1, 2.1) | 0.0 (0.0, 0.3) | 0.5 (0.3, 0.9) |
| Wait and see if it gets better | 0.6 (0.0, 2.2) | 0.3 (0.0, 1.2) | 0.0 (0.0, 0.7) | 0.0 (0.0, 0.3) | 0.2 (0.0, 0.5) |
| Get more information | 0.1 (0.0, 0.8) | 0.0 (0.0, 0.7) | 0.2 (0.0, 0.9) | 0.1 (0.0, 0.4) | 0.1 (0.0, 0.3) |

Frequencies are presented in % weighted proportions (95% confidence interval).