

1 **COMPARISON OF THE EFFECTS OF LOCKDOWN DUE TO COVID-19 ON GLUCOSE**
 2 **PATTERNS AMONG CHILDREN, ADOLESCENTS, AND ADULTS WITH TYPE-1 DIABETES: A**
 3 **CGM STUDY**

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 5 **SUPPLEMENTARY MATERIAL**

6 **Supplementary Table 1. Continuous glucose monitoring (CGM) parameters before and after**
 7 **lockdown in Italy due to COVID-19 pandemic in the whole population.**

| | Pre-lockdown | Post-lockdown | P value |
|--|---------------------|----------------------|----------------|
| Sensor use, % | 95.6 (91.1-98.1) | 95.7 (89.8-98) | 0.201 |
| Mean glucose, mg/dL | 168 (152-191) | 165 (146-182) | <0.001 |
| Median glucose, mg/dL | 159 (142-188) | 158 (140-172) | <0.001 |
| Glucose Management indicator (GMI), % | 7.4 (7-7.9) | 7.3 (6.8-7.7) | <0.001 |
| Glucose Management indicator (GMI), mmol/mol | 57 (52-63) | 56 (51-60) | <0.001 |
| Standard deviation (SDglu) | 63.3 (55.1-71) | 59.9 (52-70.2) | 0.002 |
| Percent coefficient of variation (%CV), % | 36.8 (33.1-40.7) | 36.3 (33.1-40.4) | 0.491 |
| Time in range (TIR), % | 57.6 (44.2-65.5) | 60 (52-67.6) | <0.001 |
| Time below range 1 (TBR1), % | 1.9 (0.8-4.5) | 1.7 (0.9-4.6) | 0.131 |
| Time below range 2 (TBR2), % | 0.4 (0.1-1.2) | 0.3 (0.1-1.1) | 0.954 |
| Time above range 1 (TAR1), % | 26.8 (21.2-31.8) | 26 (19.6-30.3) | 0.002 |
| Time above range 2 (TAR2), % | 11.3 (5.4-19.2) | 9.5 (4.3-16.3) | 0.001 |
| Low blood glucose index (LBGI) | 0.7 (0.3-1.4) | 0.6 (0.3-1.4) | 0.337 |
| High blood glucose index (HBGI) | 8.6 (6.2-12.3) | 8.1 (5.5-10.5) | <0.001 |

Data are expressed as median with interquartile range in parentheses. TIR: time in range 70-180 mg/dL. TBR1: time below range 1 (54-69 mg/dL). TBR2: time below range 2 (<54 mg/dl). TAR1: time above range 1 (180-250 mg/dL). TAR2: time above range 2 (>250 mg/dL).

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Supplementary Table 2. Continuous glucose monitoring (CGM) parameters during the period January 30, 2020 - February 19, 2020 (School-open) and before lockdown (February 20, 2020 - March 10, 2020), when the schools have been closed, in Italy due to COVID-19 pandemic in children (≤ 12 years), teenagers (13-17 years), and adults (≥ 18 years).

| | Children (≤ 12 years) (n=30) | | | Teenagers (13-17 years) (n=24) | | | Adults (≥ 18 years) (n=76) | | |
|--|---------------------------------------|----------------------------------|--------------|-----------------------------------|----------------------------------|--------------|-------------------------------------|----------------------------------|---------|
| | School-open | Pre-lockdown (schools closed) | P value | School open | Pre-lockdown (schools closed) | P value | School open | Pre-lockdown (schools closed) | P value |
| Sensor use, % | 96.4 (87.2-98.4) | 96.5 (87.5-98.8) | 0.605 | 94.8 (88.2-98.4) | 97 (93.4-98.5) | 0.082 | 95.8 (90.1-97.9) | 95.1 (91-97.5) | 0.530 |
| Mean glucose, mg/dL | 171 (155-199) | 181 (161-206) | 0.753 | 167 (150-179) | 168 (141-180) | 0.273 | 166 (148-188.) | 164 (145-191) | 0.692 |
| Median glucose, mg/dL | 164 (146-192) | 171 (153-196) | 0.594 | 160 (141-173) | 157 (135-172) | 0.423 | 162 (143-181) | 159 (137-189) | 0.481 |
| Glucose Management indicator (GMI), % | 7.4 (7-8.1) | 7.7 (7.2-8.3) | 0.753 | 7.3 (6.9-7.6) | 7.4 (6.7-7.6) | 0.273 | 7.3 (6.9-7.9) | 7.3 (6.8-7.9) | 0.692 |
| Glucose Management indicator (GMI), mmol/mol | 57 (53-65) | 60 (55-67) | 0.753 | 56 (52-59) | 57 (50-60) | 0.273 | 56 (52-62) | 56 (51-63) | 0.692 |
| Standard deviation (SDglu) | 65.6 (57.7-71.2) | 67.4 (58.6-74.8) | 0.538 | 62.6 (54.8-69.3) | 59.1 (48.6-66.9) | 0.041 | 62.5 (52.7-70.6) | 63 (54-70.9) | 0.586 |
| Percent coefficient of variation (%CV), % | 35.4 (33.7-40) | 37.4 (33.4-40.4) | 0.913 | 37.6 (32.5-41.7) | 36.3 (32.4-41.6) | 0.211 | 36.8 (32-41.6) | 36.6 (33.1-41.8) | 0.709 |
| Time in range (TIR), % | 58.3 (43.8-66.7) | 53.3 (39.8-62) | 0.266 | 57.2 (52.2-70.9) | 61 (50.8-72.4) | 0.219 | 55.3 (45.5-65) | 57.7 (43.5-67.3) | 0.127 |
| Time below range 1 (TBR1), % | 1 (0.6-2.1) | 1.2 (0.7-2.7) | 0.719 | 2 (0.7-4.9) | 1.6 (0.6-4.9) | 0.452 | 2.9 (1.1-4.8) | 2.5 (1.1-5.4) | 0.507 |
| Time below range 2 (TBR2), % | 0.2 (0.1-0.5) | 0.4 (0-0.8) | 0.645 | 0.3 (0.1-1) | 0.2 (0-0.7) | 0.290 | 0.5 (0.1-1.8) | 0.4 (0.1-1.7) | 0.078 |
| Time above range 1 (TAR1), % | 25.5 (21.8-31.3) | 28.1 (25.1-31.0) | 0.047 | 26.9 (18.3-29.2) | 24.4 (17.5-34.4) | 0.524 | 26.8 (19.2-31.5) | 26.5 (19.3-31.7) | 0.169 |
| Time above range 2 (TAR2), % | 11.8 (8.3-23.1) | 14.5 (9-26.3) | 0.741 | 12.6 (5.1-14.6) | 9.6 (4.3-15.2) | 0.186 | 9.9 (4.5-18.5) | 11.1 (4.5-19) | 0.935 |
| Low blood glucose index (LBGI) | 0.4 (0.3-0.8) | 0.5 (0.3-0.9) | 0.765 | 0.6 (0.3-1.4) | 0.7 (0.2-1.3) | 0.636 | 0.8 (0.4-1.8) | 0.8 (0.4-1.7) | 0.132 |
| High blood glucose index (HBGI) | 9 (7-13.4) | 10.3 (7.5-15) | 0.792 | 9.1 (5.4-9.8) | 8.3 (5-10.1) | 0.204 | 8.3 (5.3-11.6) | 8.3 (5.4-12.2) | 0.518 |

Data are expressed as median with interquartile range in parentheses. P values refer to paired samples T-tests performed for each parameter in the three groups of patients divided by age range. CV: coefficient of variation. TIR: time in range 70-180 mg/dL. TBR1: time below range 1 (54-69 mg/dL). TBR2: time below range 2 (<54 mg/dl). TAR1: time above range 1 (180-250 mg/dL). TAR2: time above range 2 (>250 mg/dL).