

Supplementary Table 1: List of IHCI districts and selected districts for the survey

| States | IHCI project districts | Community survey districts |
|----------------|--|----------------------------|
| Punjab | Mansa, Bhatinda, Gurdaspur, Pathankot, and Hoshiarpur | Bhatinda, Hoshiarpur |
| Madhya Pradesh | Bhopal, Chhindwara, and Ratlam | Chhindwara, Ratlam |
| Maharashtra | Bhandara, Satara, Sindhudurg, and Wardha | Wardha |
| Telangana | Karimnagar, Jagtial, Rajanna Siricilla, Peddapally, Jayashankar Bhupallapally, Warangal (Urban), Warangal (Rural), Jangaon and Mahabubabad | Jagtial, Jangaon |
| Kerala | Kannur, Thiruvananthapuram, Thrissur, and Wayanad | Kannur, Thrissur |

Supplementary Table 2: Mean age, body mass index, systolic and diastolic blood pressure (average of second and third reading) among all people with hypertension, among those aware of the diagnosis, and newly detected hypertensives in nine districts in India, 2018-19.

| | Hypertension | | | Aware of Hypertension Diagnosis | | | Newly Detected Hypertension | | |
|---------------------------------|---------------------|--------------------|-----------------|--|--------------------|-----------------|------------------------------------|--------------------|-----------------|
| | Male (n=2956) | Female (n=4091) | All (n=7047) | Male (n=1264) | Female (n=2427) | All (n=3691) | Male (n=1692) | Female (n=1664) | All (n=3356) |
| | Mean (SD) | Mean (SD) | Mean (SD) | Mean (SD) | Mean (SD) | Mean (SD) | Mean (SD) | Mean (SD) | Mean (SD) |
| Age | 48 (13) | 53 (11) | 51 (12) | 53 (11) | 55 (10) | 54 (11) | 45 (13) | 50 (12) | 47 (13) |
| Systolic blood pressure (mmHg) | 152 (18) | 152 (19) | 152 (19) | 151 (21) | 150 (21) | 150 (21) | 153 (15) | 155 (16) | 154 (15) |
| Diastolic blood pressure (mmHg) | 92 (11) | 87 (11) | 90 (12) | 90 (13) | 86 (12) | 87 (12) | 94 (10) | 90 (10) | 92 (10) |
| Body mass index (kg/m2) | 25.1 (4.6) | 26.0 (5.2) | 25.6 (5.0) | 25.7 (4.6) | 26.7 (5.2) | 26.4 (5.0) | 24.6 (4.5) | 25.0 (5.1) | 24.8 (4.8) |

Supplementary Table 3: Prevalence, awareness, treatment, and control of hypertension by age groups and gender in nine districts in India, 2018-19.

| State - District | | Prevalence | | Aware | | Treatment | | Control | | Treatment among aware | | Control among aware | |
|------------------------------------|------|------------|------------------|-------|------------------|-----------|------------------|---------|------------------|-----------------------|------------------|---------------------|------------------|
| | N | n | % (95% CI) | n | % (95% CI) | n | % (95% CI) | n | % (95% CI) | n | % (95% CI) | n | % (95% CI) |
| Punjab - Hoshiarpur | | | | | | | | | | | | | |
| Male | 1178 | 442 | 37.5 [34.8,40.3] | 185 | 41.9 [37.3,46.5] | 147 | 33.3 [29.0,37.8] | 26 | 5.9 [4.0,8.5] | 147 | 79.5 [73.0,84.7] | 26 | 14.1 [9.8,19.8] |
| Female | 1970 | 591 | 30.0 [28.0,32.1] | 419 | 70.9 [67.1,74.4] | 378 | 64.0 [60.0,67.7] | 122 | 20.6 [17.6,24.1] | 378 | 90.2 [87.0,92.7] | 122 | 29.1 [25.0,33.7] |
| <45 years | 1886 | 350 | 18.6 [16.9,20.4] | 164 | 46.9 [41.7,52.1] | 135 | 38.6 [33.6,43.8] | 54 | 15.4 [12.0,19.6] | 135 | 82.3 [75.7,87.4] | 54 | 32.9 [26.2,40.5] |
| >=45 years | 1262 | 683 | 54.1 [51.4,56.9] | 440 | 64.4 [60.8,67.9] | 390 | 57.1 [53.4,60.8] | 94 | 13.8 [11.4,16.6] | 390 | 88.6 [85.3,91.3] | 94 | 21.4 [17.8,25.4] |
| All | 3148 | 1033 | 32.8 [31.2,34.5] | 604 | 58.5 [55.4,61.4] | 525 | 50.8 [47.8,53.9] | 148 | 14.3 [12.3,16.6] | 525 | 86.9 [84.0,89.4] | 148 | 24.5 [21.2,28.1] |
| Punjab - Bathinda | | | | | | | | | | | | | |
| Male | 1280 | 403 | 31.5 [29.0,34.1] | 170 | 42.2 [37.5,47.1] | 103 | 25.6 [21.5,30.0] | 15 | 3.7 [2.3,6.1] | 103 | 60.6 [53.1,67.7] | 15 | 8.8 [5.4,14.1] |
| Female | 1854 | 476 | 25.7 [23.7,27.7] | 302 | 63.4 [59.0,67.7] | 219 | 46.0 [41.6,50.5] | 52 | 10.9 [8.4,14.1] | 219 | 72.5 [67.2,77.3] | 52 | 17.2 [13.4,21.9] |
| <45 years | 2061 | 370 | 18.0 [16.4,19.7] | 152 | 41.1 [36.2,46.2] | 84 | 22.7 [18.7,27.3] | 22 | 6.0 [4.0,8.9] | 84 | 55.3 [47.3,63.0] | 22 | 14.5 [9.7,21.0] |
| >=45 years | 1073 | 509 | 47.4 [44.5,50.4] | 320 | 62.9 [58.6,67.0] | 238 | 46.8 [42.5,51.1] | 45 | 8.8 [6.7,11.6] | 238 | 74.4 [69.3,78.9] | 45 | 14.1 [10.7,18.3] |
| All | 3134 | 879 | 28.0 [26.5,29.6] | 472 | 53.7 [50.4,57.0] | 322 | 36.6 [33.5,39.9] | 67 | 7.6 [6.0,9.6] | 322 | 68.2 [63.9,72.3] | 67 | 14.2 [11.3,17.6] |
| Madhya Pradesh - Ratlam | | | | | | | | | | | | | |
| Male | 1543 | 347 | 22.5 [20.5,24.6] | 75 | 21.6 [17.6,26.3] | 40 | 11.5 [8.6,15.3] | 11 | 3.2 [1.8,5.6] | 40 | 53.3 [42.1,64.3] | 11 | 14.7 [8.3,24.6] |
| Female | 1864 | 324 | 17.4 [15.7,19.2] | 116 | 35.8 [30.8,41.2] | 75 | 23.1 [18.9,28.1] | 19 | 5.9 [3.8,9.0] | 75 | 64.7 [55.6,72.8] | 19 | 16.4 [10.7,24.3] |
| <45 years | 2221 | 257 | 11.6 [10.3,13.0] | 39 | 15.2 [11.3,20.1] | 20 | 7.8 [5.1,11.8] | 6 | 2.3 [1.1,5.1] | 20 | 51.3 [36.0,66.4] | 6 | 15.4 [7.1,30.3] |
| >=45 years | 1186 | 414 | 34.9 [32.2,37.7] | 152 | 36.7 [32.2,41.5] | 95 | 22.9 [19.1,27.2] | 24 | 5.8 [3.9,8.5] | 95 | 62.5 [54.5,69.8] | 24 | 15.8 [10.8,22.5] |
| All | 3407 | 671 | 19.7 [18.4,21.1] | 191 | 28.5 [25.2,32.0] | 115 | 17.1 [14.5,20.2] | 30 | 4.5 [3.1,6.3] | 115 | 60.2 [53.1,66.9] | 30 | 15.7 [11.2,21.6] |
| Madhya Pradesh - Chhindwara | | | | | | | | | | | | | |
| Male | 1336 | 314 | 23.5 [21.3,25.9] | 53 | 16.9 [13.1,21.4] | 37 | 11.8 [8.7,15.8] | 12 | 3.8 [2.2,6.6] | 37 | 69.8 [56.3,80.6] | 12 | 22.6 [13.3,35.8] |
| Female | 1809 | 430 | 23.8 [21.9,25.8] | 110 | 25.6 [21.7,29.9] | 98 | 22.8 [19.1,27.0] | 25 | 5.8 [4.0,8.5] | 98 | 89.1 [81.8,93.7] | 25 | 22.7 [15.8,31.5] |

| | | | | | | | | | | | | | |
|----------------------------|------|-----|------------------|-----|------------------|-----|------------------|-----|------------------|-----|------------------|-----|------------------|
| <45 years | 2052 | 273 | 13.3 [11.9,14.8] | 31 | 11.4 [8.1,15.7] | 23 | 8.4 [5.7,12.4] | 7 | 2.6 [1.2,5.3] | 23 | 74.2 [56.2,86.5] | 7 | 22.6 [11.2,40.4] |
| >=45 years | 1093 | 471 | 43.1 [40.2,46.0] | 132 | 28.0 [24.2,32.3] | 112 | 23.8 [20.1,27.8] | 30 | 6.4 [4.5,9.0] | 112 | 84.8 [77.7,90.0] | 30 | 22.7 [16.4,30.7] |
| All | 3145 | 744 | 23.7 [22.2,25.2] | 163 | 21.9 [19.1,25.0] | 135 | 18.1 [15.5,21.1] | 37 | 5.0 [3.6,6.8] | 135 | 82.8 [76.2,87.9] | 37 | 22.7 [16.9,29.8] |
| Maharastra - Wardha | | | | | | | | | | | | | |
| Male | 1573 | 302 | 19.2 [17.3,21.2] | 104 | 34.4 [29.3,40.0] | 84 | 27.8 [23.1,33.1] | 46 | 15.2 [11.6,19.7] | 84 | 80.8 [72.1,87.2] | 46 | 44.2 [35.0,53.9] |
| Female | 1846 | 323 | 17.5 [15.8,19.3] | 167 | 51.7 [46.3,57.1] | 139 | 43.0 [37.7,48.5] | 63 | 19.5 [15.5,24.2] | 139 | 83.2 [76.8,88.2] | 63 | 37.7 [30.7,45.3] |
| <45 years | 2000 | 183 | 9.2 [8.0,10.5] | 42 | 23.0 [17.4,29.6] | 29 | 15.8 [11.2,21.9] | 11 | 6.0 [3.4,10.5] | 29 | 69.0 [53.7,81.1] | 11 | 26.2 [15.1,41.4] |
| >=45 years | 1419 | 442 | 31.1 [28.8,33.6] | 229 | 51.8 [47.1,56.4] | 194 | 43.9 [39.3,48.6] | 98 | 22.2 [18.5,26.3] | 194 | 84.7 [79.5,88.8] | 98 | 42.8 [36.5,49.3] |
| All | 3419 | 625 | 18.3 [17.0,19.6] | 271 | 43.4 [39.5,47.3] | 223 | 35.7 [32.0,39.5] | 109 | 17.4 [14.7,20.6] | 223 | 82.3 [77.3,86.4] | 109 | 40.2 [34.5,46.2] |
| Telangana - Jagtial | | | | | | | | | | | | | |
| Male | 1127 | 269 | 23.9 [21.5,26.4] | 155 | 57.6 [51.6,63.4] | 122 | 45.4 [39.5,51.3] | 52 | 19.3 [15.0,24.5] | 122 | 78.7 [71.6,84.5] | 52 | 33.5 [26.6,41.3] |
| Female | 2226 | 404 | 18.1 [16.6,19.8] | 262 | 64.9 [60.1,69.4] | 189 | 46.8 [42.0,51.7] | 93 | 23.0 [19.2,27.4] | 189 | 72.1 [66.4,77.2] | 93 | 35.5 [29.9,41.5] |
| <45 years | 2029 | 162 | 8.0 [6.9,9.3] | 67 | 41.4 [34.0,49.1] | 45 | 27.8 [21.4,35.2] | 20 | 12.3 [8.1,18.4] | 45 | 67.2 [55.1,77.3] | 20 | 29.9 [20.1,41.8] |
| >=45 years | 1324 | 511 | 38.6 [36.0,41.2] | 350 | 68.5 [64.3,72.4] | 266 | 52.1 [47.7,56.4] | 125 | 24.5 [20.9,28.4] | 266 | 76.0 [71.2,80.2] | 125 | 35.7 [30.9,40.9] |
| All | 3353 | 673 | 20.1 [18.7,21.5] | 417 | 62.0 [58.2,65.6] | 311 | 46.2 [42.5,50.0] | 145 | 21.5 [18.6,24.8] | 311 | 74.6 [70.2,78.5] | 145 | 34.8 [30.3,39.5] |
| Telangana - Jangaon | | | | | | | | | | | | | |
| Male | 1197 | 298 | 24.9 [22.5,27.4] | 145 | 48.7 [43.0,54.3] | 111 | 37.2 [31.9,42.9] | 38 | 12.8 [9.4,17.0] | 111 | 76.6 [69.0,82.7] | 38 | 26.2 [19.7,34.0] |
| Female | 1981 | 481 | 24.3 [22.4,26.2] | 298 | 62.0 [57.5,66.2] | 232 | 48.2 [43.8,52.7] | 92 | 19.1 [15.9,22.9] | 232 | 77.9 [72.8,82.2] | 92 | 30.9 [25.9,36.4] |
| <45 years | 1606 | 166 | 10.3 [8.9,11.9] | 65 | 39.2 [32.0,46.8] | 34 | 20.5 [15.0,27.3] | 13 | 7.8 [4.6,13.0] | 34 | 52.3 [40.3,64.1] | 13 | 20.0 [12.0,31.5] |
| >=45 years | 1572 | 613 | 39.0 [36.6,41.4] | 378 | 61.7 [57.7,65.4] | 309 | 50.4 [46.5,54.4] | 117 | 19.1 [16.2,22.4] | 309 | 81.7 [77.5,85.3] | 117 | 31.0 [26.5,35.8] |
| All | 3178 | 779 | 24.5 [23.0,26.0] | 443 | 56.9 [53.4,60.3] | 343 | 44.0 [40.6,47.5] | 130 | 16.7 [14.2,19.5] | 343 | 77.4 [73.3,81.1] | 130 | 29.3 [25.3,33.8] |

| | | | | | | | | | | | | | | |
|-------------------|-------|------|------------------|------|------------------|------|------------------|------|------------------|------|------------------|------|------------------|--|
| Kerala - Kannur | | | | | | | | | | | | | | |
| Male | 957 | 227 | 23.7 [21.1,26.5] | 143 | 63.0 [56.5,69.0] | 107 | 47.1 [40.7,53.6] | 43 | 18.9 [14.4,24.6] | 107 | 74.8 [67.1,81.3] | 43 | 30.1 [23.1,38.1] | |
| Female | 2302 | 555 | 24.1 [22.4,25.9] | 388 | 69.9 [66.0,73.6] | 321 | 57.8 [53.7,61.9] | 121 | 21.8 [18.6,25.4] | 321 | 82.7 [78.6,86.2] | 121 | 31.2 [26.8,36.0] | |
| <45 years | 1580 | 93 | 5.9 [4.8,7.2] | 46 | 49.5 [39.5,59.5] | 26 | 28.0 [19.8,37.9] | 10 | 10.8 [5.9,18.8] | 26 | 56.5 [42.0,70.0] | 10 | 21.7 [12.1,35.9] | |
| >=45 years | 1679 | 689 | 41.0 [38.7,43.4] | 485 | 70.4 [66.9,73.7] | 402 | 58.3 [54.6,62.0] | 154 | 22.4 [19.4,25.6] | 402 | 82.9 [79.3,86.0] | 154 | 31.8 [27.8,36.0] | |
| All | 3259 | 782 | 24.0 [22.6,25.5] | 531 | 67.9 [64.5,71.1] | 428 | 54.7 [51.2,58.2] | 164 | 21.0 [18.3,24.0] | 428 | 80.6 [77.0,83.7] | 164 | 30.9 [27.1,34.9] | |
| Kerala - Thrissur | | | | | | | | | | | | | | |
| Male | 1222 | 354 | 29.0 [26.5,31.6] | 234 | 66.1 [61.0,70.8] | 173 | 48.9 [43.7,54.1] | 60 | 16.9 [13.4,21.2] | 173 | 73.9 [67.9,79.2] | 60 | 25.6 [20.5,31.6] | |
| Female | 1962 | 507 | 25.8 [24.0,27.8] | 365 | 72.0 [67.9,75.7] | 298 | 58.8 [54.4,63.0] | 133 | 26.2 [22.6,30.2] | 298 | 81.6 [77.3,85.3] | 133 | 36.4 [31.7,41.5] | |
| <45 years | 1521 | 124 | 8.2 [6.9,9.6] | 42 | 33.9 [26.1,42.6] | 27 | 21.8 [15.4,29.9] | 17 | 13.7 [8.7,21.0] | 27 | 64.3 [48.9,77.2] | 17 | 40.5 [26.9,55.7] | |
| >=45 years | 1663 | 737 | 44.3 [41.9,46.7] | 557 | 75.6 [72.3,78.5] | 444 | 60.2 [56.7,63.7] | 176 | 23.9 [20.9,27.1] | 444 | 79.7 [76.2,82.9] | 176 | 31.6 [27.9,35.6] | |
| All | 3184 | 861 | 27.0 [25.5,28.6] | 599 | 69.6 [66.4,72.6] | 471 | 54.7 [51.4,58.0] | 193 | 22.4 [19.8,25.3] | 471 | 78.6 [75.2,81.7] | 193 | 32.2 [28.6,36.1] | |
| All-District | | | | | | | | | | | | | | |
| Male | 11413 | 2956 | 25.9 [25.1,26.7] | 1264 | 42.8 [41.0,44.6] | 924 | 31.3 [29.6,33.0] | 303 | 10.3 [9.2,11.4] | 924 | 73.1 [70.6,75.5] | 303 | 24.0 [21.7,26.4] | |
| Female | 17814 | 4091 | 23.0 [22.4,23.6] | 2427 | 59.3 [57.8,60.8] | 1949 | 47.6 [46.1,49.2] | 720 | 17.6 [16.5,18.8] | 1949 | 80.3 [78.7,81.8] | 720 | 29.7 [27.9,31.5] | |
| <45 years | 16956 | 1978 | 11.7 [11.2,12.2] | 648 | 32.8 [30.7,34.9] | 423 | 21.4 [19.6,23.2] | 160 | 8.1 [7.0,9.4] | 423 | 65.3 [61.5,68.8] | 160 | 24.7 [21.5,28.2] | |
| >=45 years | 12271 | 5069 | 41.3 [40.4,42.2] | 3043 | 60.0 [58.7,61.4] | 2450 | 48.3 [47.0,49.7] | 863 | 17.0 [16.0,18.1] | 2450 | 80.5 [79.1,81.9] | 863 | 28.4 [26.8,30.0] | |
| All | 29227 | 7047 | 24.1 [23.6,24.6] | 3691 | 52.4 [51.2,53.5] | 2873 | 40.8 [39.6,41.9] | 1023 | 14.5[13.7,15.4] | 2873 | 77.8 [76.5,79.1] | 1023 | 27.7 [26.3,29.2] | |

Supplementary Table 4: Mean difference between first and second reading, first and third reading and second and third reading for systolic and diastolic blood pressure for community survey in nine districts in India, 2018-19.

| BP Readings (n = 7047) | First | Second | Diff (95% CI) | First | Third | Diff (95% CI) | Second | Third | Diff (95% CI) |
|---------------------------------|-----------|-----------|-----------------|-----------|-----------|-----------------|-----------|-----------|--------------------|
| | Mean (SD) | Mean (SD) | | Mean (SD) | Mean (SD) | | Mean (SD) | Mean (SD) | |
| Systolic blood pressure (mmHg) | 155 (20) | 152 (20) | 3.1 (2.8 - 3.3) | 155 (20) | 152 (19) | 3.7 (3.5 - 4.0) | 152 (20) | 152 (19) | 0.7 (0.4 - 0.9) |
| Diastolic blood pressure (mmHg) | 90 (12) | 89 (12) | 0.9 (0.8 - 1.1) | 90 (12) | 90 (12) | 0.6 (0.4 - 0.8) | 89 (12) | 90 (12) | -0.3 (-0.5 - -0.2) |