

Annex 6.1

Tables on measured physical performance

Table 6A.1. Grip strength, by age in 2004–05 and sex

	52–59	60–64	65–69	70–74	75–79	80+	All	p-value
	kg	kg	kg	kg	kg	kg	kg	
Men								
% unable to do test	0.2	0.7	0.5	0.7	0.8	1.4	0.6	
Mean	45.5	41.5	38.9	37.0	33.0	28.4	39.6	<0.001
(95% CI)	(44.9–46.0)	(40.7–42.4)	(38.1–39.6)	(36.3–37.7)	(32.1–33.8)	(27.6–29.2)	(39.3–40.0)	
5 th percentile	31	24	24	25	20	16	22	
25 th percentile	41	37	34	32	29	23	34	
50 th percentile	46	43	40	37	33	30	40	
75 th percentile	51	49	45	42	38	34	47	
95 th percentile	60	55	52	50	46	40	55	
Women								
% unable to do test	0.8	0.5	1.1	1.6	1.5	3.8	1.5	
Mean	26.9	25.0	23.8	21.9	19.4	16.6	23.0	<0.001
(95% CI)	(26.5–27.3)	(24.5–25.5)	(23.4–24.3)	(21.3–22.4)	(18.9–19.9)	(16.1–17.1)	(22.8–23.2)	
5 th percentile	16	14	14	12	9	8	11	
25 th percentile	24	22	21	18	16	13	19	
50 th percentile	27	26	24	22	20	17	24	
75 th percentile	31	29	28	26	24	20	28	
95 th percentile	37	35	33	32	28	25	34	
Weighted N								
Men	1,184	589	565	459	368	363	3,528	
Women	1,201	646	587	515	483	666	4,098	
Unweighted N								
Men	1,060	578	595	501	360	351	3,445	
Women	1,253	707	668	550	450	554	4,182	

Notes: Numbers may not add up due to rounding of weighted data. People with information not available, including refusals and those not attempted test for safety reasons, are excluded: 23 men (1%); 88 women (2%).

Table 6A.2. Grip strength, by mobility ADL difficulties: respondents aged 60 years and over

	Number of mobility ADL difficulties			All	p-value
	0	1–2	3+		
	kg	kg	kg	Kg	
Men					
% unable to do test	0.4	1.6	2.7	0.7	<0.001
Mean	37.8	33.4	30.3	36.7	
(95% CI)	(37.3–38.2)	(32.4–34.5)	(28.0–32.6)	(36.2–37.1)	
5 th percentile	23	17	10	20	
25 th percentile	32	27	21	31	
50 th percentile	38	34	30	37	
75 th percentile	44	40	40	44	
95 th percentile	52	51	50	52	
Women					
% unable to do test	1.2	1.7	7.1	1.6	<0.001
Mean	22.7	18.4	14.8	21.4	
(95% CI)	(22.5–23.0)	(17.8–18.9)	(13.8–15.8)	(21.2–21.7)	
5 th percentile	13	9	5	10	
25 th percentile	19	15	10	18	
50 th percentile	23	18	15	22	
75 th percentile	27	23	20	26	
95 th percentile	32	29	25	32	
Weighted N					
Men	1,825	398	121	2,345	
Women	2,132	582	182	2,895	
Unweighted N					
Men	1,876	394	115	2,385	
Women	2,211	551	166	2,928	

Notes: Numbers may not add up due to rounding of weighted data. Respondents for whom data are unavailable, including refusals and those not attempted test for safety reasons, are excluded: 21 men (1%); 72 women (2%). Number of mobility ADL difficulties is the number of problems reported with the following six activities: walking 100 yards; sitting for about two hours; getting up from a chair after sitting for long periods; climbing several flights of stairs without resting; climbing one flight of stairs without resting; stooping, kneeling or crouching.

Table 6A.3. Grip strength, by age-specific wealth quintile

	Poorest	2 nd	3 rd	4 th	Richest	All	p-value
	kg	kg	kg	kg	kg	kg	
Men							
% unable to do test	1.4	0.6	0.7	0.5	0	0.6	
Mean	37.0	38.5	39.8	40.5	40.9	39.6	<0.001
(95% CI)	(35.9– 38.0)	(37.6– 39.3)	(39.0– 40.6)	(39.7– 41.2)	(40.3– 41.6)	(39.2– 39.9)	
5 th percentile	19	20	22	23	25	22	
25 th percentile	31	32	34	34	35	34	
50 th percentile	38	39	41	42	41	40	
75 th percentile	44	46	47	48	48	47	
95 th percentile	53	56	56	56	56	55	
Women							
% unable to do test	2.4	1.9	1.4	0.9	0.6	1.5	
Mean	21.2	22.0	23.1	24.0	24.9	23.0	<0.001
(95% CI)	(20.6– 21.7)	(21.5– 22.6)	(22.7– 23.6)	(23.5– 24.4)	(24.4– 25.3)	(22.7– 23.2)	
5 th percentile	10	10	11	14	14	11	
25 th percentile	17	18	19	20	21	19	
50 th percentile	22	23	24	25	25	24	
75 th percentile	26	27	28	28	30	28	
95 th percentile	32	34	34	35	35	34	
Weighted N							
Men	493	648	763	786	817	3,507	
Women	881	815	845	762	752	4,055	
Unweighted N							
Men	421	607	724	797	876	3,425	
Women	839	811	872	801	816	4,139	

Notes: Numbers may not add up due to rounding of weighted data. People with information not available, including refusals and those not attempted test for safety reasons, are excluded: 25 men (1%); 88 women (2%).

Table 6A.4. Percentages maintaining balance test positions for the required numbers of seconds, by age in 2004–05, with 95% confidence intervals

	52–59	60–64	65–69	70–74	75–79	80+	All	p-value
	%	%	%	%	%	%	%	
Men								
Side-by-side (10 secs) ^a	99.6 (99.2–100.0)	100	99.3 (98.5–100.0)	97.5 (96.1–99.0)	98.9 (97.9–100.0)	95.6 (93.3–97.9)	98.9 (98.5–99.2)	<0.001
Semi-tandem (10 secs) ^a	98.7 (98.0–99.4)	98.8 (97.7–99.9)	96.6 (95.1–98.1)	95.0 (92.9–97.1)	93.9 (91.2–96.6)	85.4 (81.4–89.4)	96.1 (95.5–96.8)	<0.001
Full-tandem (10 secs) ^a	96.4 (95.2–97.6)	93.8 (91.6–96.0)	91.0 (88.6–93.3)	83.4 (79.9–87.0)	72.7 (67.8–77.5)	55.5 (49.7–61.3)	87.1 (85.9–89.3)	<0.001
Full-tandem (30 secs) ^a	91.6 (89.8–93.3)	87.5 (84.6–90.4)	80.4 (77.1–83.8)	–	–	–	87.9 (86.5–89.3)	<0.001
Leg raise, eyes open (30 secs) ^{a,b}	76.1 (73.5–78.8)	64.2 (60.1–68.3)	54.9 (50.6–59.2)	–	–	–	68.2 (66.1–70.2)	<0.001
Leg raise, eyes shut (30 secs) ^{a,c}	3.8 (2.6–5.0)	2.8 (1.5–4.1)	1.7 (0.6–2.8)	–	–	–	3.1 (2.3–3.8)	0.023
Women								
Side-by-side (10 secs) ^a	99.5 (99.0–100.0)	99.3 (98.6–100.0)	98.5 (97.5–99.4)	97.5 (96.1–98.9)	97.6 (96.1–99.1)	91.4 (88.6–94.1)	97.6 (97.1–98.2)	<0.001
Semi-tandem (10 secs) ^a	98.2 (97.4–99.0)	97.5 (96.3–98.8)	96.2 (94.7–97.7)	92.0 (89.7–94.4)	89.8 (86.8–92.9)	70.9 (66.5–75.3)	92.1 (91.1–93.1)	<0.001
Full-tandem (10 secs) ^a	94.0 (92.6–95.4)	89.1 (86.7–91.6)	86.3 (83.5–89.0)	73.0 (69.1–76.8)	57.6 (52.6–62.6)	33.7 (29.2–38.2)	76.6 (75.1–78.1)	<0.001
Full-tandem (30 secs) ^a	86.4 (84.4–88.3)	78.0 (74.9–81.0)	70.8 (67.3–74.4)	–	–	–	80.4 (78.9–82.0)	<0.001
Leg raise, eyes open (30 secs) ^{a,b}	67.3 (64.5–70.0)	52.8 (48.9–56.7)	41.0 (37.1–44.9)	–	–	–	57.3 (55.2–59.3)	<0.001
Leg raise, eyes shut (30 secs) ^{a,c}	2.3 (1.4–3.2)	1.1 (0.3–1.8)	0.6 (0.0–1.2)	–	–	–	1.6 (1.1–2.1)	0.005
Weighted N								
Men	1,171	574	546	451	362	333	3,437	
Women	1,196	639	579	498	467	598	3,977	
Unweighted N								
Men	1,048	564	576	493	354	325	3,360	
Women	1,249	701	659	534	435	499	4,077	

Notes: Numbers may not add up due to rounding of weighted data. People with information not available, including refusals, those unable to understand the test and those not attempted test for safety reasons, are excluded. *Men* – side-to-side: 71 (2%); semi-tandem: 116 (3%); full-tandem: 132 (4%); leg raise, eyes open: 37 (2%); leg raise, eyes shut: 42 (2%). *Women* – side-to-side: 118 (3%); semi-tandem: 175 (4%); full-tandem: 207 (5%); leg raise, eyes open: 51 (2%); leg raise, eyes shut: 58 (2%).

^aParticipants not able to do the test, not able to hold position unassisted or did not hold preceding position(s) for required length of time are classed as not passing the test.

^bOnly under-70s.

^cOnly under-70s who could hold side-to-side for 10 seconds.

Table 6A.5. Single chair-stand, by age in 2004–05 and sex

	52–59	60–64	65–69	70–74	75–79	80+	All	p-value
	% standing without using their arms							
Men	99.3	98.4	99.0	98.2	99.5	90.9	98.2	<0.001
(95% CI)	(98.7– 99.9)	(97.2– 99.6)	(98.1– 99.9)	(96.9– 99.4)	(98.5– 100.0)	(87.2– 94.6)	(97.7– 98.7)	
Women	99.4	98.6	98.4	97.0	92.4	86.0	96.3	<0.001
(95% CI)	(99.0– 99.9)	(97.6– 99.6)	(97.3– 99.5)	(95.5– 98.4)	(89.7– 95.2)	(82.4– 89.5)	(95.6– 96.9)	
Weighted N								
<i>Men</i>	1,077	530	497	402	318	273	3,097	
<i>Women</i>	1,108	588	542	455	411	459	3,563	
Unweighted N								
<i>Men</i>	970	526	525	447	314	267	3,049	
<i>Women</i>	1,161	646	619	493	381	390	3,690	

Notes: Numbers may not add up due to rounding of weighted data. Respondents for whom data are unavailable, including refusals, those unable to understand the test and those not attempted test for safety reasons, are excluded: 452 men (13%): 5% no suitable chair available, 6% participant or nurse thought test would be unsafe, 1% used arms to stand; 647 women (15%): 5% no suitable chair available, 7% participant or nurse thought test would be unsafe, 3% used arms to stand.

Table 6A.6. Repeated chair-stands, by age in 2004–05

	52–59	60–64	65–69	70–74	75–79	80+	All	p-value	
	secs	secs	secs	secs	secs	secs	secs		
Rise five times									
Men									
% unable to do	1.5	2.0	2.2	2.4	3.0	13.3	3.0	<0.001	
Mean	9.9	10.7	11.0	12.5	14.0	15.3	11.4		
(95% CI)	(9.7–10.2)	(10.4–11.0)	(10.7–11.3)	(12.1–12.9)	(13.4–14.7)	(14.5–16.1)	(11.3–11.6)		
5 th percentile	5.8	6.3	6.3	7.3	8.4	8.7	6.3		
25 th percentile	7.9	8.6	8.7	9.9	10.9	11.2	8.7		
50 th percentile	9.5	10.1	10.5	11.9	12.8	14.4	10.6		
75 th percentile	11.4	12.4	12.7	14.1	15.8	18.3	13.0		
95 th percentile	15.0	16.5	16.4	19.2	22.8	24.2	18.7		
Women									
% unable to do	1.1	2.5	2.7	4.9	11.3	20.3	5.7		<0.001
Mean	10.3	11.1	11.7	13.5	14.5	15.7	12.1		
(95% CI)	(10.1–10.5)	(10.8–11.4)	(11.4–12.1)	(13.1–14.0)	(13.8–15.1)	(15.0–16.4)	(11.9–12.3)		
5 th percentile	6.1	6.3	6.9	8.0	8.5	9.2	6.6		
25 th percentile	8.0	8.7	9.3	10.6	11.2	12.0	9.1		
50 th percentile	9.7	10.5	11.1	12.7	13.5	14.4	11.2		
75 th percentile	11.9	12.8	13.4	15.4	16.3	18.1	13.8		
95 th percentile	15.7	17.1	18.7	22.5	22.9	26.7	20.1		
Rise ten times^a									
Men									
% unable to do	2.4	3.1	2.3	–	–	–	2.6	<0.001	
Mean	20.8	22.8	23.3	–	–	–	21.9		
(95% CI)	(20.4–21.2)	(22.1–23.4)	(22.7–23.9)				(21.5–22.2)		
5 th percentile	12.1	12.9	13.6	–	–	–	12.7		
25 th percentile	16.5	18.2	18.4	–	–	–	17.2		
50 th percentile	20.0	21.9	22.5	–	–	–	21.0		
75 th percentile	24.4	26.0	26.8	–	–	–	25.3		
95 th percentile	30.8	34.1	35.0	–	–	–	33.2		
Women									
% unable to do	1.9	3.8	5.7	–	–	–	3.3		<0.001
Mean	21.6	23.6	24.3	–	–	–	22.7		
(95% CI)	(21.2–22.0)	(23.0–24.1)	(23.7–24.8)				(22.4–23.0)		
5 th percentile	12.8	13.3	14.9	–	–	–	13.2		
25 th percentile	17.0	18.6	19.7	–	–	–	18.0		
50 th percentile	20.8	22.5	23.5	–	–	–	21.9		
75 th percentile	24.9	27.2	28.0	–	–	–	26.3		
95 th percentile	32.7	35.7	36.5	–	–	–	34.7		
Weighted N									
Men	1,069	520	482	399	310	263	3,043		
Women	1,102	574	536	450	397	439	3,497		
Unweighted N									
Men	963	517	512	443	308	259	3,002		
Women	1,155	632	612	488	370	373	3,630		

^aUnder-70s only.

Notes on next page.

Notes to Table 6A.6

Numbers may not add up due to rounding of weighted data. Of those eligible to attempt the five chair-stand test (i.e. those who had successfully completed a single stand), 81 men (3%) and 118 women (3%) had missing data or did not complete the test for safety reasons. Of those eligible to attempt the ten chair-stand test (i.e. those younger than 70 who had successfully completed five stands), 35 men (2%) and 37 women (2%) had missing data or did not complete the test for safety reasons.

Table 6A.7. Gait speed, by age in 2004–05 and sex: 60 years and over only

	60–64	65–69	70–74	75–79	80+	All	p-value
Men							
% with gait speed ≤0.5 m/s	7.5	7.5	7.9	12.5	26.2	11.2	<0.001
Speed (metres/second)							
Mean	0.99	0.95	0.88	0.80	0.69	0.89	<0.001
(95% CI)	(0.97–1.02)	(0.92–0.97)	(0.86–0.91)	(0.77–0.83)	(0.66–0.72)	(0.87–0.90)	
5 th percentile	0.6	0.5	0.5	0.4	0.3	0.4	
25 th percentile	0.8	0.8	0.7	0.7	0.5	0.7	
50 th percentile	1.0	0.9	0.9	0.8	0.7	0.9	
75 th percentile	1.2	1.1	1.0	1.0	0.8	1.1	
95 th percentile	1.4	1.4	1.3	1.2	1.1	1.3	
Women							
% with gait speed ≤0.5 m/s	6.3	8.7	15.3	21.6	45.9	19.8	<0.001
Speed (metres/second)							
Mean	0.95	0.91	0.81	0.73	0.58	0.80	<0.001
(95% CI)	(0.93–0.97)	(0.89–0.93)	(0.79–0.84)	(0.70–0.76)	(0.56–0.60)	(0.79–0.81)	
5 th percentile	0.5	0.4	0.4	0.3	0.2	0.3	
25 th percentile	0.8	0.7	0.7	0.6	0.4	0.6	
50 th percentile	1.0	0.9	0.8	0.7	0.6	0.8	
75 th percentile	1.1	1.1	1.0	0.9	0.7	1.0	
95 th percentile	1.4	1.3	1.2	1.1	1.0	1.3	
Weighted N							
Men	567	539	433	351	330	2,220	
Women	623	571	502	468	619	2,783	
Unweighted N							
Men	558	566	474	344	321	2,263	
Women	683	650	539	435	519	2,826	

Notes: Numbers may not add up due to rounding of weighted data. People with information not available, including refusals and tests not attempted for safety reasons, are excluded: 153 men (6%); 181 women (6%).

Table 6A.8. Incidence of gait speed impairment (≤ 0.5 m/s) between 2002–03 and 2004–05, by age-specific wealth quintile and sex

	Poorest	2 nd	3 rd	4 th	Richest	All	p-value
Men							
% ≤ 0.5 m/s in 2004–05, not in 2002–03 (95% CI)	10.6 (5.7–15.5)	8.0 (4.4–11.6)	7.7 (4.7–10.8)	5.0 (2.9–7.1)	3.8 (2.0–5.5)	6.3 (5.1–7.5)	<0.001
Women							
% ≤ 0.5 m/s in 2004–05, not in 2002–03 (95% CI)	11.4 (7.7–15.2)	14.8 (10.8–18.9)	6.3 (4.0–8.7)	10.2 (7.2–13.2)	5.2 (2.9–7.5)	9.5 (8.0–10.8)	<0.001
Weighted N							
Men	164	266	350	391	454	1,626	
Women	152	260	355	412	505	1,684	
Unweighted N							
Men	361	358	415	403	373	1,909	
Women	351	361	434	420	401	1,967	

Notes: Numbers may not add up due to rounding of weighted data. Respondents for whom data were unavailable, or who were impaired at wave 1, are excluded. *Men* – 603 (24%) data unavailable; 217 (10%) baseline impaired. *Women* – 738 (27%) data unavailable; 399 (17%) baseline impaired.

Table 6A.9. Impairment on Short Physical Performance Battery (SPPB) (score ≤ 8), by age in 2004–05 and sex: respondents aged 60 years and over

	60–64	65–69	70–74	75–79	80+	All	p-value
Men							
% with SPPB ≤ 8 (95% CI)	6.4 (4.1–8.7)	7.2 (4.8–9.6)	12.2 (8.9–15.5)	21.0 (16.1–25.8)	45.8 (39.3–52.2)	15.1 (13.5–16.7)	<0.001
Women							
% with SPPB ≤ 8 (95% CI)	8.6 (6.3–11.0)	10.2 (7.5–12.8)	26.4 (22.4–30.4)	35.6 (30.4–40.8)	55.2 (49.5–60.9)	24.8 (22.8–26.7)	<0.001
Weighted N							
Men	499	463	377	294	240	1872	
Women	557	513	439	375	383	2267	
Unweighted N							
Men	498	491	419	292	238	1938	
Women	613	586	477	350	331	2357	

Notes: Numbers may not add up due to rounding of weighted data. Respondents unable to perform test or excluded for other reasons: 451 men (19%); 598 women (20%).

Table 6A.10. Impairment on Short Physical Performance Battery (SPPB) (score ≤8), by age-specific wealth quintile and sex

	Poorest	2 nd	3 rd	4 th	Richest	All	p-value
Men							
% with SPPB ≤8	26.8	17.0	17.1	14.2	9.2	15.1	<0.001
(95% CI)	(20.1–33.5)	(12.8–21.2)	(13.2–21.0)	(11.0–17.4)	(6.7–11.7)	(13.5–16.7)	
Women							
% with SPPB ≤8	39.8	29.5	20.8	21.7	14.5	24.8	<0.001
(95% CI)	(34.6–44.9)	(24.8–34.1)	(17.0–24.6)	(17.7–25.7)	(11.2–17.8)	(22.8–26.7)	
Weighted N							
Men	185	321	394	441	522	1,863	
Women	427	413	482	476	453	2,253	
Unweighted N							
Men	171	316	397	466	579	1,929	
Women	419	422	506	502	493	2,342	

Notes: Numbers may not add up due to rounding of weighted data. Respondents unable to perform test or excluded for other reasons: 451 men (19%); 598 women (20%).

Table 6A.11. Impairment on Short Physical Performance Battery (SPPB) (score ≤8), by mobility ADL difficulties and sex: respondents aged 60 years and over

	Number of mobility ADL difficulties			All	p-value
	0	1–2	3+		
Men					
% ≤8	10.3	37.5	[58.5]	15.1	0.000
(95% CI)	(8.8–11.8)	(31.4–43.6)	(42.0–75.0)	(13.5–16.7)	
Women					
% ≤8	17.7	48.9	87.2	24.8	0.000
(95% CI)	(15.8–19.6)	(43.5–54.3)	(79.5–95.0)	(22.8–26.7)	
Weighted N					
Men	1,572	262	38	1,872	
Women	1,839	356	72	2,266	
Unweighted N					
Men	1,634	267	37	1,938	
Women	1,933	356	67	2,356	

Notes: Numbers may not add up due to rounding of weighted data. Respondents unable to perform test or excluded for other reasons: 451 men (19%); 598 women (20%). Number of mobility ADL difficulties is the number of problems reported with the following six activities: walking 100 yards; sitting for about two hours; getting up from a chair after sitting for long periods; climbing several flights of stairs without resting; climbing one flight of stairs without resting; stooping, kneeling or crouching.

