

Supplementary Material

Medicare reimbursed telehealth exercise physiology services were underutilised through the coronavirus (COVID-19) pandemic: an ecological study

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Table S1 Data parameters used to export Exercise Physiology related codes from Medicare Australia

Mode	Medicare Item Number	Title	Introduction time (DD/MM/YYYY)
In-person	10953	Exercise Physiology CDM	01/01/2006
In-person	81110	Exercise Physiology T2DM assessment	01/05/2007
In-person	81115	Exercise Physiology group T2DM	01/05/2007
In-person	81315	Exercise Physiology provided to a person who is of Aboriginal or Torres Strait Islander descent	01/11/2008
In-person	93504	Exercise Physiology RACF assessment	10/12/2020
In-person	93518	Exercise Physiology RACF	15/09/2021
In-person	93527	Exercise Physiology RACF subsequent service	10/12/2020
In-person	93549	Exercise Physiology provided to a person who is of Aboriginal or Torres Strait Islander descent RACF assessment	10/12/2020
In-person	93571	Exercise Physiology provided to a person who is of Aboriginal or Torres Strait Islander descent RACF	15/09/2021
In-person	93582	Exercise Physiology provided to a person who is of Aboriginal or Torres Strait Islander descent RACF subsequent service	10/12/2020
In-person	93607	Exercise Physiology T2DM RACF assessment	10/12/2020
In-person	93614	Exercise Physiology initial group T2DM RACF	10/12/2020
In-person	93620	Exercise Physiology T2DM RACF	10/12/2020
Videoconference	93000*	AH CDM telehealth COVID	30/03/2020
Videoconference	93048*	AH provided to a person who is of Aboriginal or Torres Strait Islander descent VC	30/03/2020
Videoconference	93537*	AH RACF VC	10/12/2020
Videoconference	93592*	AH RACF provided to a person who is of Aboriginal or Torres Strait Islander descent VC	10/12/2020
Phone	93013*	AH CDM phone COVID	30/03/2020
Phone	93061*	AH provided to a person who is of Aboriginal or Torres Strait Islander descent phone	30/03/2020
Phone	93538*	AH RACF phone	10/12/2020
Phone	93593*	AH RACF provided to a person who is of Aboriginal or Torres Strait Islander descent phone	10/12/2020

*Codes where 2-10% of all claims were assumed to be for exercise physiology services

Abbreviations: CDM: Chronic disease management; T2DM: Type 2 Diabetes Mellitus; RACF: Residential aged care facility; AH: Allied Health; COVID: Coronavirus; VC: Videoconference

Table S2 Quarterly breakdown of exercise physiology Medicare item numbers based on delivery mode

Service	Delivery mode	Item #	2020				2021			
			Q1 ^a	Q2	Q3	Q4 ^b	Q1	Q2	Q3 ^c	Q4
Exercise physiology – CDM	In-person, n (% of total)	10953	76027 (99.9)	48,886 (93.6)	78,103 (97.2)	88,813 (98.1)	82,965 (98.8)	84,234 (99)	67,066 (97.7)	76,727 (98.2)
	Videoconference*, n (% of total)	93000	9 (0)	1125 (2.2)	748 (0.9)	507 (0.6)	306 (0.4)	254 (0.3)	519 (0.8)	453 (0.6)
	Phone*, n (% of total)	93013	24 (0.1)	2210 (4.2)	1487 (1.9)	1201 (1.3)	712 (0.8)	582 (0.7)	1062 (1.5)	936 (1.2)
Exercise physiology – Aboriginal and Torres Strait Islander descent	In-person, n (% of total)	81315	731 (99.7)	409 (69.4)	718 (90.2)	783 (92.7)	792 (93.4)	832 (94.7)	699 (90.4)	811 (94)
	Videoconference*, n (% of total)	93048	0 (0)	28 (4.8)	14 (1.8)	4 (0.5)	2 (0.2)	2 (0.2)	6 (0.8)	5 (0.6)
	Phone*, n (% of total)	93061	2 (0.3)	152 (25.8)	64 (8)	58 (6.8)	54 (6.4)	45 (5.1)	68 (8.8)	47 (5.4)
Exercise physiology – RACF	In-person, n (% of total)	93504, 93518, 93527	N/A	N/A	N/A	0 (0)	333 (100)	1241 (100)	3450 (100)	2999 (100)
	Videoconference*, n (% of total)	93537	N/A	N/A	N/A	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Phone*, n (% of total)	93538	N/A	N/A	N/A	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Exercise physiology – RACF Aboriginal and Torres Strait Islander descent	In-person, n (% of total)	93549, 93571, 93582	N/A	N/A	N/A	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Videoconference*, n (% of total)	93592	N/A	N/A	N/A	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Phone*, n (% of total)	93593	N/A	N/A	N/A	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

^aItem numbers 93000, 93013, 93048 & 93061 introduced 30th March 2020. ^bItem numbers 92504, 93527, 93537, 93538, 93549, 93582, 93592 & 93593 introduced 10th December 2020. ^cItem numbers 93518 & 93571 introduced 15th September 2021.

Abbreviations: n: Number, Q1: Quarter 1, Q2: Quarter 2, Q3: Quarter 3, Q4: Quarter 4, CDM: Chronic Disease Management plan, RACF: Residential Aged Care Facility health service, N/A: Not applicable (quarter pre-dates item introduction).

* Assuming 5% of Allied Health consultation codes were performed by exercise physiologist

Table S3 Quarterly data for exercise physiology services per 100,000 state population reimbursed by Medicare

State	NSW	VIC	QLD	SA	WA	TAS	ACT	NT
In-person quarter totals per capita, n								
Q1 2020 ^a	329	228	521	644	321	353	301	196
Q2 2020	197	108	351	284	196	218	233	225
Q3 2020	326	128	569	738	382	429	395	319
Q4 2020	365	222	598	646	403	413	417	233
Q1 2021	353	220	570	667	334	340	417	156
Q2 2021	369	222	600	730	368	366	382	157
Q3 2021	240	163	542	614	344	317	361	130
Q4 2021	311	201	545	615	348	307	354	131
Videoconference* quarter totals per capita, n								
Q1 2020 ^a	0 [0-0]	0 [0-0]	0 [0-0]	0 [0-0]	0 [0-0]	0 [0-0]	0 [0-0]	0 [0-0]
Q2 2020	4 [1-7]	7 [3-13]	5 [2-10]	2 [1-5]	3 [1-6]	3 [1-6]	5 [2-10]	1 [0-1]
Q3 2020	2 [1-4]	7 [3-15]	2 [1-3]	1 [0-1]	1 [0-1]	1 [0-2]	3 [1-6]	1 [0-1]
Q4 2020	1 [1-3]	5 [2-10]	1 [0-2]	0 [0-1]	0 [0-1]	0 [0-1]	2 [1-3]	0 [0-1]
Q1 2021	1 [0-2]	3 [1-5]	1 [0-1]	0 [0-1]	0 [0-1]	0 [0-0]	1 [0-2]	0 [0-0]
Q2 2021	1 [0-2]	2 [1-4]	1 [0-1]	0 [0-0]	0 [0-1]	0 [0-0]	1 [0-2]	0 [0-0]
Q3 2021	3 [1-5]	3 [1-7]	1 [0-2]	0 [0-1]	0 [0-1]	0 [0-1]	3 [1-7]	0 [0-1]
Q4 2021	2 [1-4]	3 [1-7]	1 [0-2]	0 [0-0]	0 [0-1]	0 [0-1]	2 [1-5]	1 [0-1]
Phone* quarter totals per capita, n								
Q1 2020 ^a	0 [0-0]	0 [0-0]	0 [0-1]	0 [0-0]	0 [0-0]	0 [0-0]	0 [0-0]	0 [0-0]
Q2 2020	6 [3-13]	9 [4-18]	14 [6-29]	9 [4-18]	10 [4-19]	7 [3-14]	4 [2-8]	3 [1-7]
Q3 2020	3 [1-7]	12 [5-23]	6 [2-12]	2 [1-5]	4 [2-9]	2 [1-5]	3 [1-7]	1 [0-2]
Q4 2020	2 [1-5]	10 [4-19]	5 [2-10]	3 [1-5]	3 [1-7]	2 [1-3]	3 [1-5]	1 [0-2]
Q1 2021	2 [1-3]	4 [2-9]	4 [2-8]	1 [0-2]	3 [1-7]	2 [1-5]	2 [1-4]	1 [1-3]
Q2 2021	1	3	4	1	3	2	1	1

	[0-2]	[1-7]	[1-7]	[0-2]	[1-5]	[1-5]	[0-2]	[0-1]
Q3 2021	5 [2-10]	6 [2-12]	4 [2-8]	2 [1-3]	2 [1-5]	1 [0-2]	3 [1-5]	1 [1-3]
Q4 2021	4 [2-8]	5 [2-11]	3 [1-7]	2 [1-4]	2 [1-4]	1 [0-1]	2 [1-5]	1 [1-3]

^aTelehealth item numbers introduced 30th March 2020. Abbreviations: NSW: New South Wales, VIC: Victoria, QLD: Queensland, SA: South Australia, WA: Western Australia, TAS: Tasmania, ACT: Australian Capital Territory, NT: Northern Territory, n: Number, Q1: Quarter 1, Q2: Quarter 2, Q3: Quarter 3, Q4: Quarter 4.

* Assuming 5% of Allied Health consultation codes were performed by exercise physiologists (item numbers 93000, 93048, 93537, 93592, 93013, 93061, 93538, 93593), range of 5-15% presented in []

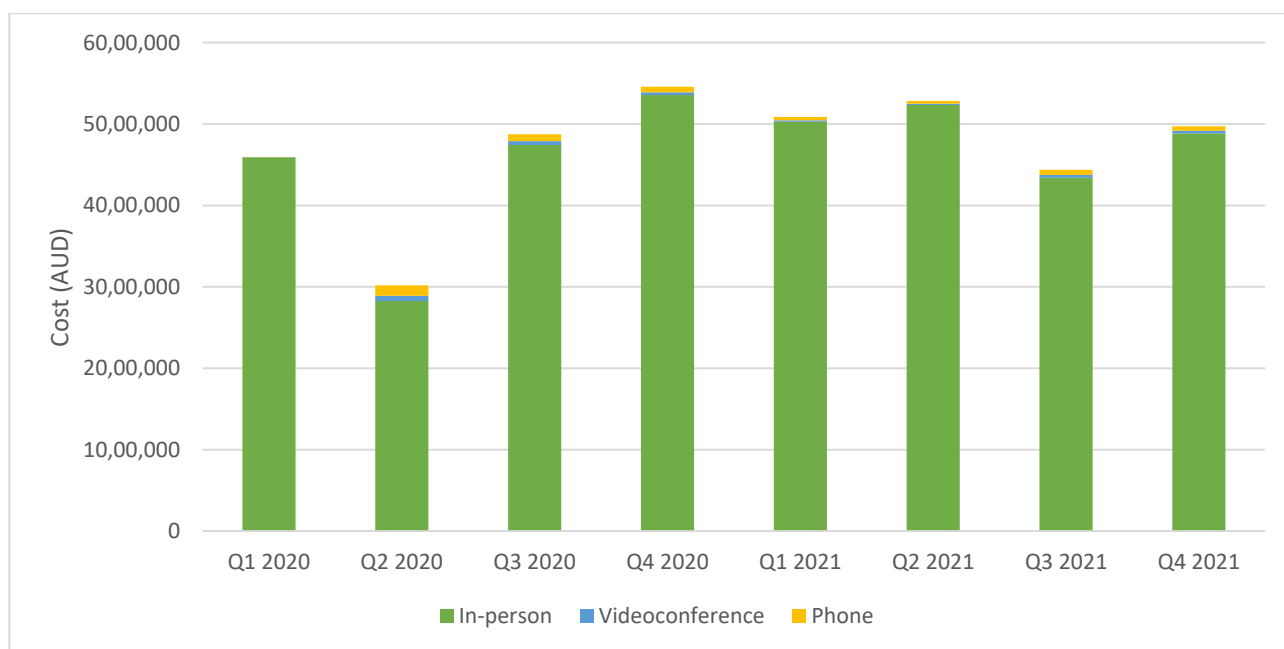


Fig S1. Quarterly cost of Medicare reimbursement for exercise physiology services between Q1 2020 and Q4 2021, delineated by in-person, phone and videoconference consultations (assuming 5% of allied health item numbers were exercise physiology services)