Telehealth v face-to-face physiotherapy for knee osteoarthritis: a contingent valuation preference exercise

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AIM

Telehealth is an evidence based option to provide physiotherapy exercise based intervention for people with knee osteoarthritis[1-2]. Telehealth can be cost-effective, accessible and decrease travel time and resources to receive care[3]. Uptake of telehealth by adults with knee osteoarthritis may be influenced by cost and "digital divide" factors including age, education and confidence using the internet[4].

Aim: To determine willingness to pay for telehealth delivered physiotherapy in people with knee osteoarthritis and explore the reasons for the choice.

METHODS

The contingent valuation method was used[5-6] with a dichotomous choice survey developed and completed via an interview.
The survey included a hypothetical situation comparing face-to-face community-based physiotherapy (requiring 60 minutes total travel and a 4 weeks wait to commence) to immediate access to a physiotherapist via telehealth at home.
Willingness to pay for telehealth starting bids were set at $20, $40 or $60. A double-bounded model with two questions was used. The second bid was double the first if willing to pay the initial amount, or halved if not. (Figure 1)
Participants were adults aged over 50 years with knee osteoarthritis referred to a publicly funded Osteoarthritis Hip and Knee Service (OAHKS).

RESULTS

To date 66 participants have been recruited. 56% are female and the average age is 68. 74% have internet at home with 41% confident with using the internet. Almost half have experience with using video calls although only two participants have used video calls for telehealth (Table 1)
17 participants (26%) were willing to pay the first bid amount and 16 participants (24%) willing to pay the second bid amount. (Figure 2 & 3)

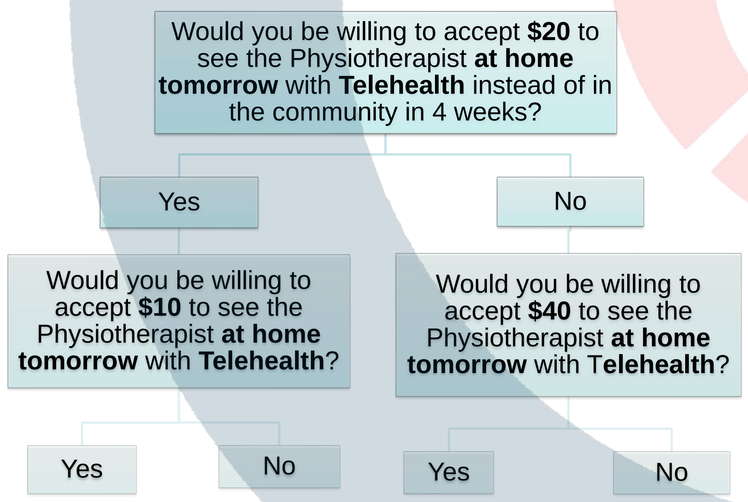

Figure 1: Willingness to pay question logic

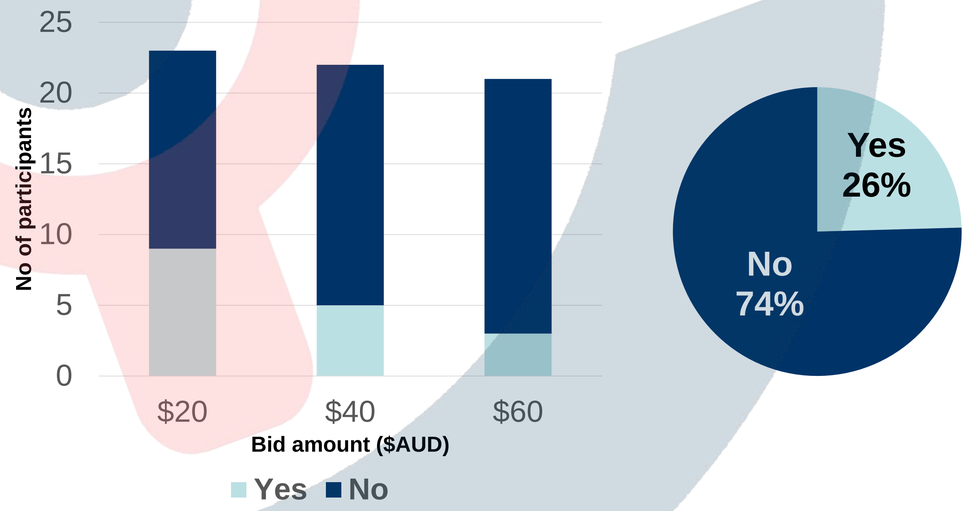

Figure 2: Willingness to pay results – first bid

42 participants (62%) were not willing to pay either the first nor the second bid amounts.
Reasons for not accepting either of the bid amounts:

- Preference to see health professional in person (36%)
- Financial barriers to pay for healthcare– Ability to pay (33%)
- Not confident they would be able to use telehealth (14%)
- Don't have a computer (12%)

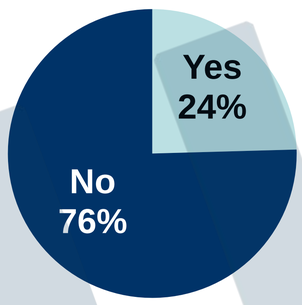

Figure 3: Willingness to pay results – second bid

Table 1: Demographics of participants

n=66	n	%
Age		68 (mean)
Female	37	56%
Resides – Metro	61	92%
Born in Australia	34	52%
Highest Level of Education		
Primary school	8	12%
Secondary school	39	59%
Further studies	19	29%
Current Employment status		
Paid employment	9	14%
Retired	48	73%
Other	9	14%
Previous Telehealth use	2	3%
Internet at home	49	74%
Previous video calls	31	47%
Level of confidence with internet use		
Very confident / confident	27	41%
Somewhat confident	14	21%
Not confident	11	17%
Never used internet	14	21%

DISCUSSION

Physiotherapist prescribed exercise program delivered using video calls significantly improves pain and physical function in participants with knee osteoarthritis and is an empowering experience for people.[1,2] However the majority of people attending a public hospital OAHKS clinic would not be willing to pay for physiotherapy intervention via telehealth. Preference to see health professionals face-to-face and financial constraints influenced the willingness to pay results. Financial barriers may impact the ability to pay for health services which in turn will have been a confounding factor in the study. These results may also be influenced by digital divide elements including very low previous exposure to telehealth, reduced perceived ability with use of video call functionality and variable levels of confidence with using the internet.

CONCLUSION

Preference to see health professional in person and financial barriers to pay for healthcare are the main reasons for most participants in a public hospital setting reporting that they are not willing to pay for telehealth delivered physiotherapy to manage knee osteoarthritis. This is despite telehealth being available to participants in a more timely and convenient manner than community-based physiotherapy. Data collection for this project is continuing and more detailed sub-group analysis will be completed to determine the willingness to pay amount for teleheath and if demographic factors influence outcomes.

References:

1. Bennell KL, Nelligan R, Dobson F, et al. Effectiveness of an internet-delivered exercise and pain-coping skills training intervention for persons with chronic knee pain: A randomized trial. Annals of Internal Medicine. 2017;166(7):453-62
2. Hinman et al : "Sounds a bit crazy, but it was almost more personal": A qual study of patient and clinician experiences of exercise for knee oa via Skype™. 2017 Arth Care Res: in press
3. World Health Organisation. Telehealth 2018 [Available from: https://www.who.int/sustainable-development/health-sector/strategies/telehealth/en/
4. Ma Q, Chen K, Chan AHS, Teh P-L, editors. Acceptance of ICTs by Older Adults: A Review of Recent Studies. Human Aspects of IT for the Aged Population Design for Aging; 2015 2015//; Cham: Springer International Publishing.
5. Carson TC. Contingent Valuation: A User's Guide. Environmental Science & Technology. 2000;34:1413-1418
6. McNamee P, Ternent L, Gbangou A, Newlands D. A game of two halves? Incentive incompatibility, starting point bias and the bidding game contingent valuation method. Health economics. 2010;19(1):75-87

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