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Tam ZN¹, Khoo GP¹, Chang CY¹, Cheng ZR², Chew ST³, Kan LM¹

¹KK Women's and Children's Hospital, Department of Pharmacy

²KK Women's and Children's Hospital Department of Respiratory Medicine

³KK Women's and Children's Hospital Department of General Pediatrics & Adolescent Medicine



A pilot study on the effect of TELEPHARMACY SERVICE

((---on the counselling of inhaler techniques in children---))

Introduction

The management of asthma involves the use of controller and reliever medications, given with an inhaler.^[1] However, patients often do not use the correct inhaler technique at home despite having received counselling at the clinic or ward. Pharmacists can help to address this problem by working in partnership with families, through the use of telepharmacy, **the provision of pharmacy services by a serving pharmacy to one or more remote sites through computer, video and audio link.**^[2]

Aims

1. To explore the effect of telepharmacy service via video calls on the counselling of inhaler techniques
2. To determine the level of satisfaction with regards to this service and whether it would be feasible for implementation in the future

Method

This was a single-centre, prospective study conducted at KK Women's and Children's Hospital (KKH) over a period of five months in 2015-2016. The video calls were made via VidyoPortal™, a secured platform provided by MOH Holdings.

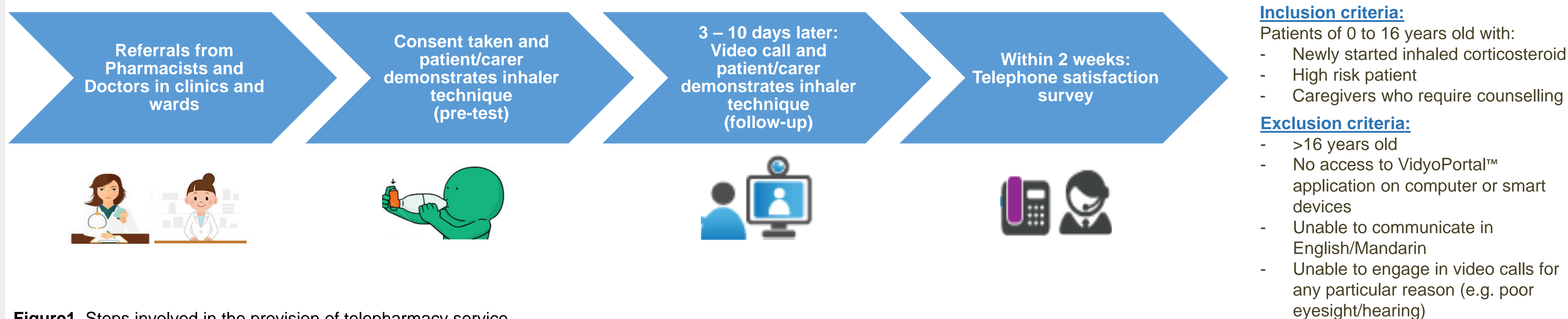


Figure 1. Steps involved in the provision of telepharmacy service

Results

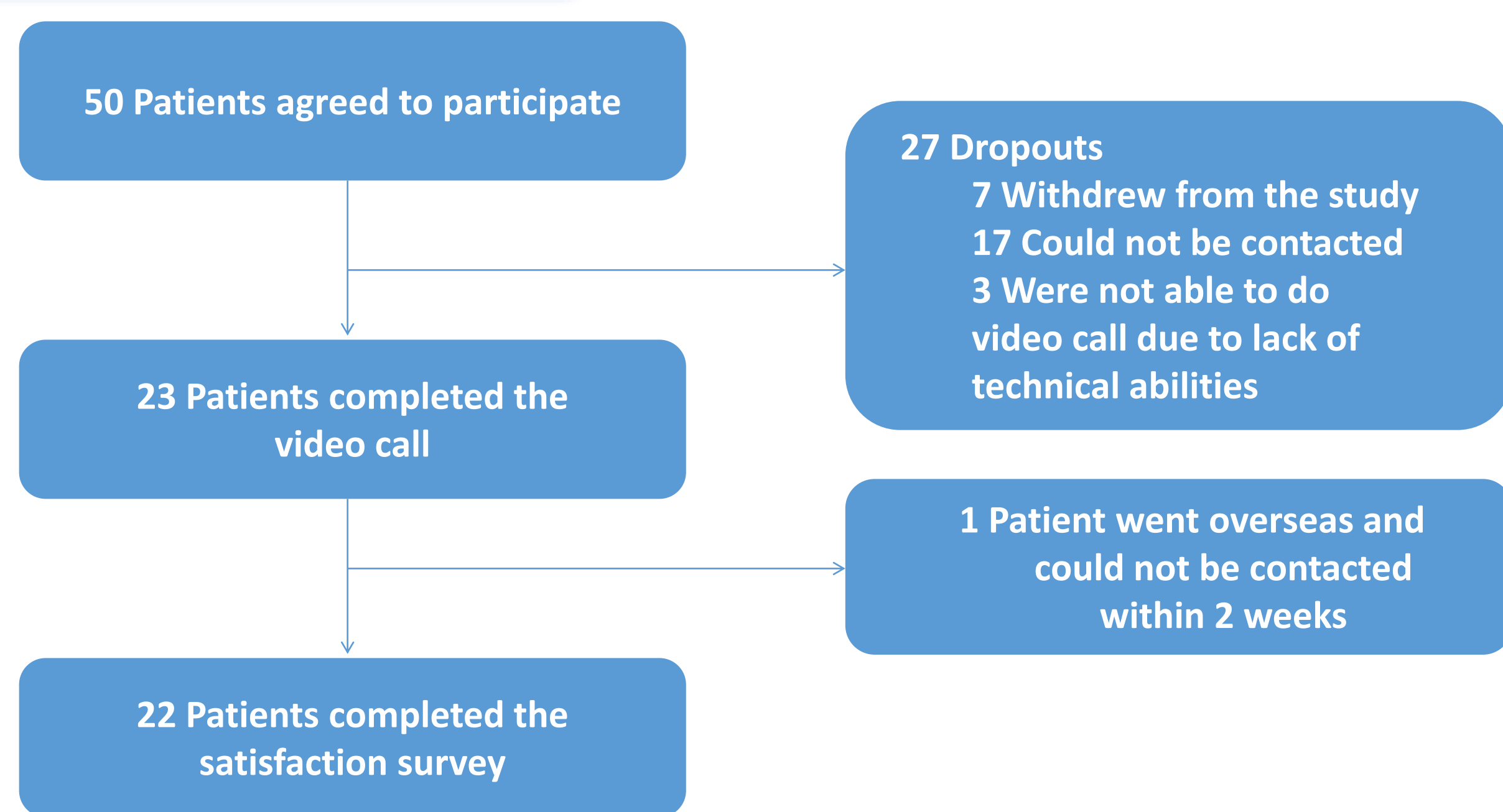


Figure 2. A total of 50 patients agreed to participate in the study; 23 of which completed the video call and 22 completed the satisfaction survey.

Table 1. The number(percentage) of participants who made mistakes at pre test (Day 0) and follow up test (Day 3-10) and the average number of mistakes made per patient.

	Participants who made mistakes [n (%)]	*No. of mistakes made per participant [mean (SD)]
Demonstration at Day 0 during recruitment (Pre-test)		
1 st attempt	35 (70)	3.7 (4.5)
2 nd attempt	0	0
Demonstration at Day 3-10 during Video consultation conducted (Follow up test)		
1 st attempt	14 (61)	1.2 (1.3)
2 nd attempt	0	0

***Steps with highest number of mistakes:**

1. Priming and cleaning of spacer and mask
-Prime spacer by pumping 10 doses into the chamber
-Clean spacer at least once a week
2. MDI with spacer or spacer with mask
-Shaking and wait for 1 minute before the next dose

Table 2. Twenty two participants completed the survey. A Likert scale of strongly disagree (rating of 1) to strongly agree (rating of 5) was used for the questions. The responses were classified into three main groups based on the scores – Agree (≥ 4), Neutral (3) and Disagree (≤ 2).

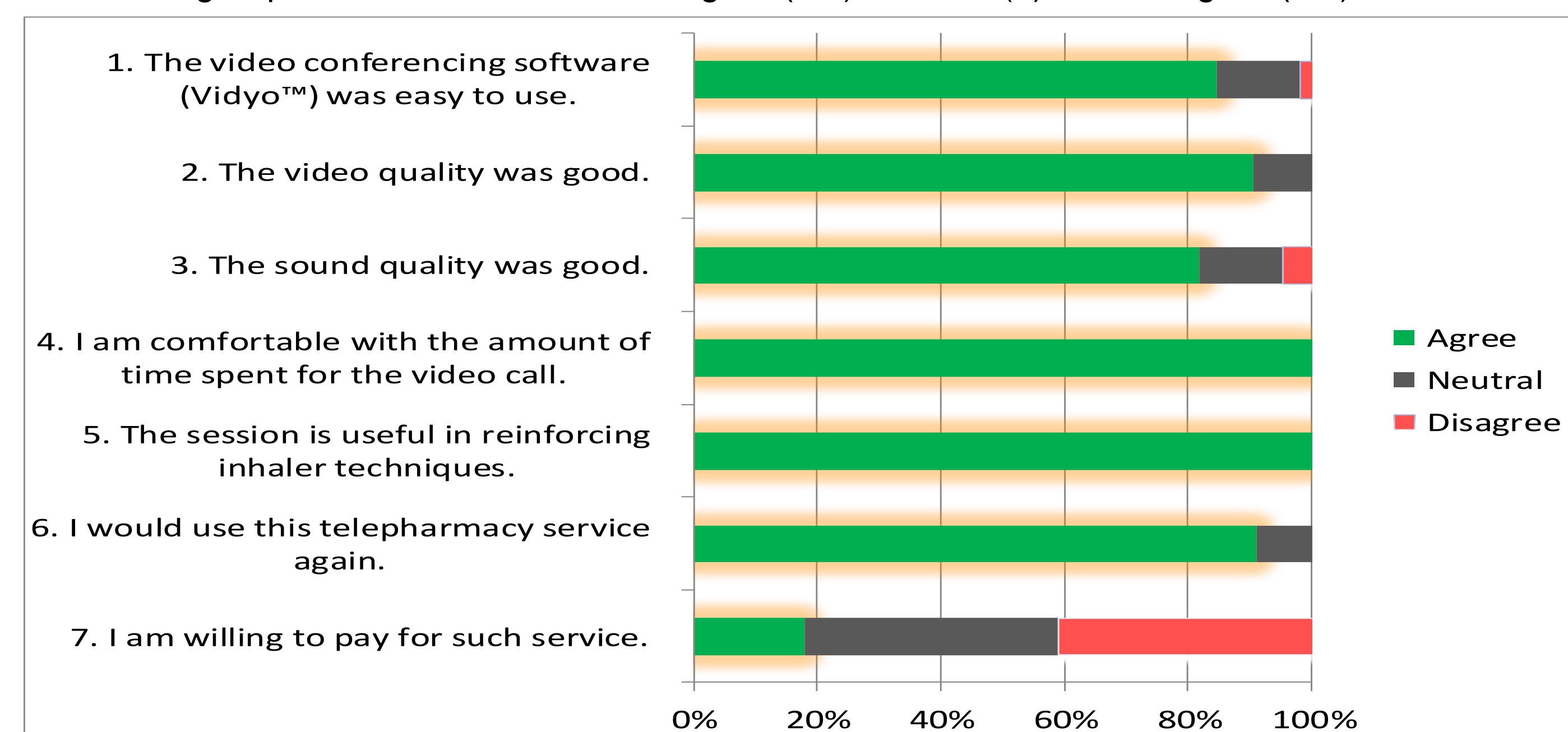


Figure 3. Examples of Feedback given during the survey

Conclusion

This exploratory pilot study provided valuable and critical learning points for the implementation of remote services for healthcare provider-patient consultations as this is the first time a pediatric video-conferencing service has been reported in Singapore. The telepharmacy service seemed to be promising as all participants described their video call experiences as being positive and mistakes made were addressed and corrected with the video consultation at an early stage. Further studies are necessary to confirm these initial findings and address the challenges of such remote services such as the selection of the appropriate patient population and information technology support.

Funding

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References

- [1] Global Initiative for Asthma. Pocket Guide for Asthma Management and Prevention 2015.
- [2] Pharmaceutical Society of Singapore. Guidelines for Telepharmacy 2009