Clinical Impact of Video Consultation in Primary Care

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INTRODUCTION

- Video consultation was implemented during the COVID-19 period
- A evaluation study was carried out as proof of value to mainstream video consultations in NHGP for chronic disease management

OBJECTIVES

To evaluate the clinical effectiveness of video consultation (**VC**) versus face-to-face (**FTF**) consultation

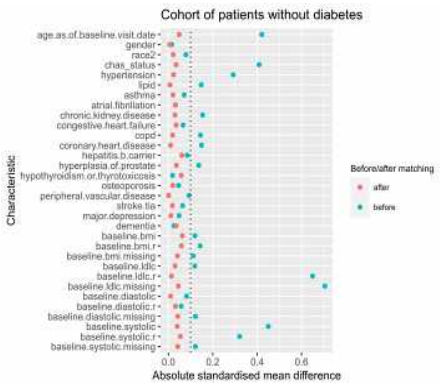
METHODOLOGY

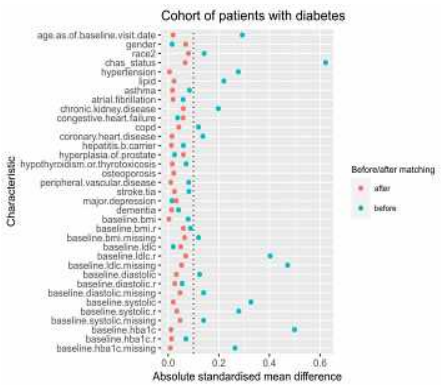
- This was a retrospective observational study on propensity score-matched cohorts
- Inclusion criteria:
  a) Had VC/FTF chronic doctor consultation between 7 Apr to 15 Aug 2020 (index visit)
  b) Has diabetes, hypertension or hyperlipidaemia
- Exclusion criteria (VC): Did not successfully complete VC
- Exclusion criteria (FTF):
  a) Had any video/telephone consultation in the 6 months of follow-up
  b) Had any chronic doctor visit to FP clinic, memory clinic, health mind service at baseline/6-months follow-up
  c) Was dispensed with wafarin in past 6 months before index visit
  d) Had nebuliser treatment in past 3 months before index visit
- Our study outcomes were the 6-month clinical readings of HbA1c, systolic BP and LDL-cholesterol levels
- Propensity score matching was carried out to match FTF controls to VC patients (2:1 ratio, greedy nearest neighbour matching, without replacement, propensity scores estimated by multivariate logistic regression)
- After conducting propensity score matching, an absolute standardised mean difference of <0.10 is used as the threshold to access for adequate balance
- We considered the following as the treatment effect estimate[1] of VC compared to FTF:
  a) Difference-in-differences, using linear mixed model: Difference in 6-month clinical readings between VC and FTF, compared against the corresponding difference at baseline
- Based upon the following non-inferiority (NI) margins, we evaluated the treatment effect estimates for non-inferiority in outcomes[2] between VC and FTF

Outcomes	Non-inferiority (NI) margin
HbA1c	+0.4%
Systolic BP	+5 mmHg
LDL-cholesterol	+0.26 mmol/L

RESULTS

Propensity score matching statistics





Matched cohort (without diabetes)		
Outcomes	Difference-in-differences (95% CI)	Within NI margin?
Systolic BP (mmHg)	-1.91 (-3.53 to -0.30)	✓
LDL-cholesterol (mmol/L)	+0.11 (-0.03 to 0.25)	✓

Matched cohort (with diabetes)		
Outcomes	Difference-in-differences (95% CI)	Within NI margin?
HbA1c (%)	-0.06 (-0.17 to 0.05)	✓
Systolic BP (mmHg)	-1.01 (-3.03 to 1.01)	✓
LDL-cholesterol (mmol/L)	+0.01 (-0.14 to 0.16)	✓

CONCLUSIONS

- VC is non-inferior to FTF consulation in the follow-up period of 6 months. Further work needs to be done to evaluate the clinical effectiveness of VC over a longer term
- For comprehensive evaluation of VC, ongoing work is being done in the areas of:
  a) Resource utilisation/costs
  b) Clinical safety audit
  c) Patient satisfaction & experience[3]
  d) Perspectives of physicians, organisational implementers/leaders and policymakers[3]

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