Transition to remote diabetes care in Covid-19 times: experiences from a specialized type 1 diabetes clinic

Giesje Nefs[1,2,3], Per Winterdijk [1], Martine de Vries[1], Pim Dekker[1], Theo Sas[1,4], Dick Mul[1], Henk Veeze[1],Henk-Jan Aanstoot[1]

[1]Diabeter; [2]Tilburg University; [3]Radboud UMC; [4]Erasmus MC – Sophia Children's Hospital

Background

- Technology-supported remote clinical care has shown value during public health emergencies[1,2]
- Our diabetes clinic had a telehealth infrastructure before the Covid-19 pandemic (data uploads; automated data overview; advice through e-mail or telephone contact)
- This facilitated rapid transition from (non-urgent) face-to-face to remote care during the first wave

Research questions

- During the first Covid-19 wave:
  - How do people experience their remote regular diabetes care appointment?
  - What lessons can we learn for the technology-based "care of the future"?

Study design

- People with type 1 diabetes aged 16+ years
- Face-to-face visit replaced with remote consultation
- From May-July 2020
- Purpose-designed online survey

Study parameters

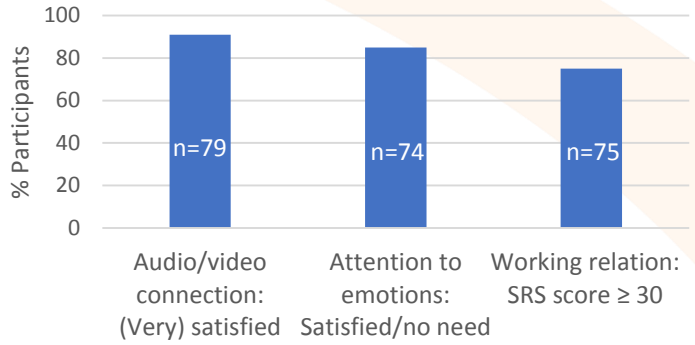
- Demographics
- Clinical information (self-report)
- Consultation descriptives and satisfaction, including working relation (Session Rating Scale, range 0-40)
- Quality of life (Qualimeter, range 1-10)

Results

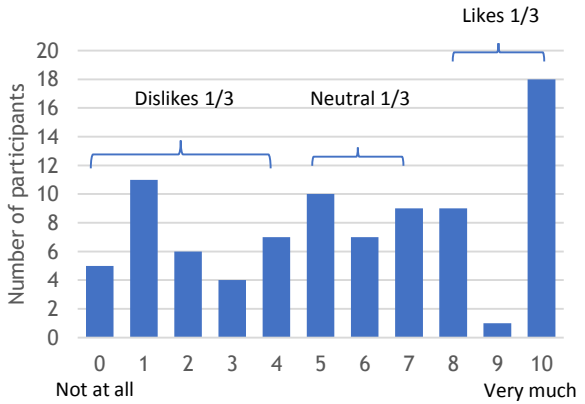
Sample characteristics n=87 (eligible n=1,073), % (n) or median (IQR)	
Gender, female	74% (64)
Age, 16-25 yrs	55% (48)
Diabetes duration, >5 yrs	76% (66)
Treatment modality, pump	65% (57)
"Relatively stable" glucose levels	52% (45)
Consultation characteristics	
Doctor-only Nurse-only Combination	24% (21) 58% (50) 18% (16)
Telephone call Audio consultation (internet) Video consultation (internet)	86% (75) 1% (1) 13% (11)
Undisturbed conversation	90% (78)
Discussion of actual HbA_{1c} [a]	29% (25)
Working relation, Session Rating Scale	34.4 (29.7 - 38.8)
Quality of life, Qualimeter	8 (7-8)

[a] n=6 lab-based; n=19 calculated

- Satisfaction about consultation:



- Reported advantage: time saving (24%)
- Suggestions: (more) video consultations with screen-sharing, set appointment times
- Continue with remote care post-pandemic:



- Linear regression: correlates of a more positive attitude towards future remote consultations

Factor	Standardized coefficient	Sig
Gender, female	-0.09	0.44
Age, 26+ yrs	0.10	0.37
Diabetes duration, ≤5 yrs	0.03	0.78
Treatment modality, pump	0.06	0.59
"Relatively stable" glucose levels	-0.08	0.51
Working relation (SRS total score)	0.14	0.32
Need more attention to emotions	0.04	0.72
Quality of life (Qualimeter)	0.28	0.03

Conclusions & Discussion

- Transition to remote care was generally well perceived
- One-third prefers continued remote care post-pandemic
- Response rate was relatively low (8%; survey "fatigue"?)
- Based on results, we have improved video-conferencing possibilities
- After the pandemic, we will keep the option of switching to remote care (including HbA_{1c} home-kits)

Disclosures

- **Healthcare contracts with all Dutch insurance organizations**
- **Diabeter was acquired by Medtronic in April 2015:** Diabeter is compliant with legal and healthcare policies and laws on independency for prescription, patient data, research and employee data. This includes supervisory board, client board, complaint board and transparency requirements.

References

[1]Lurie N, Carr BG: The Role of Telehealth in the Medical Response to Disasters. JAMA Intern Med 2018;178:745-746
[2]Hollander JE, Carr BG: Virtually Perfect? Telemedicine for Covid-19. N Engl J Med 2020