Reference	Study type	Intervention duration	Participants	Social media use (Channel)	Outcomes
Stellfson, 2013 [33]	Systematic review	Several durations	8 studies specifically on diabetes	Not specified (Social media in general)	Clinical effects A 4-month study period, Web 2.0 engagement among individuals with diabetes was not associated with any improvements in biological or clinical outcomes. 2 RCT[a]s reported greater declines in HbA1c[b] associated to Web 2.0 participation, and 2 RCTs reported reductions in blood pressure. Effects on behavior Medication adherence: 2 RCTs studying individuals with T2D[c] suggested that self-monitoring using Web 2.0 did not improve medication adherence. Physical activity: 1 RCT found no effect of Web 2.0 participation on physical activity. In other studies of individuals with diabetes, self-monitoring of physical activity behaviors improved with concomitant reductions in dietary fat intake. Health-related quality of life and depressive symptoms: several RCTs of individuals with diabetes reported that Web 2.0 participation was associated with improved generic health-related quality of life and a reduction in depressive symptoms.
Toma, 2014 [39]	Systematic review	Several durations	34 RCTs	Not specified (Social media in general)	Clinical effects HbA1c: significant mean difference of 0.45% (95% CI: 0.60 to 0.29, $P<0.001$) favoring intervention groups (social media) between baseline and follow-up but with significant heterogeneity (I^2=81%). Meta-analysis including non-randomized additional studies showed a significant mean reduction in HbA1c favoring the intervention groups (0.49%, 95% CI: −0.64 to −0.34, I^2=86%). Triglycerides: at follow-up: 10 studies with a total of 989 patients reported significant reduction of 11.05% (95% CI: 20.92 to 1.18, P=0.03, I^2=0) in those using social media. Systolic and diastolic blood pressure: 5 studies with a total of 2580 patients (1317 intervention and 1263 control) reported significant mean difference in systolic (3.47 mmHg, 95% CI: 5.01to 1.94, $P<0.001$, I^2 = 0%) and diastolic (1.84 mmHg, 95% CI: 2.98 to 0.70, P=0.002, I^2=29%) blood pressures on follow-up, favoring the intervention groups.
Alanzi, 2018 [60]	Systematic review	Several durations	5 studies	Not specified (Social media in general)	Clinical effects Significant decrease in HbA1c values reported in 1 study.
Nordfeldt, 2011 [27]	Randomized intervention	1 year	463 participants (young people with T1D[d] and their families)	As supporting tool of the intervention (Own social networking in the portal)	Clinical effects Those patients where someone in the family visited the website 5 times or more had lower HbA1c after 1 year (P=0.01). Effects on behavior No effects were found on health-related quality of life, empowerment, or quality of information.

Petrovski, 2010 [26]	Randomized intervention	6 months	38 patients with T1D using insulin pumps with glucose sensors (ages 13-22)	As supporting tool of the intervention (Facebook chat and Skype)	Clinical effects Significant HbA1c improvement in both groups (groups 1 and 2: 7.4±0.9% and 7.5±1.1% on beginning and 6.2±0.8% and 6.3±1.0%, $P<0.05$, at 6 months, respectively). Effects on behavior Internet visits were more preferred by patients.
Petrovski, 2011 [28]	Randomized intervention	6 months	42 patients with T1D using insulin pumps with glucose sensors (ages 14-23)	As supporting tool of the intervention (Facebook chat and Skype)	Clinical effects Significant HbA1c improvements in both intervention and control groups (groups 1 and 2: 7.6±0.9% and 7.7±1.1% on beginning, and 6.3±0.8% and 6.2±1.0%, $P<0.05$, at the end of the study, respectively). Effects on behavior Internet visits were more preferred by patients.
Petrovski, 2012 [30]	Randomized intervention	1 year	78 patients with T1D using insulin pumps with glucose sensors (ages 14-23)	As supporting tool of the intervention (Facebook chat and Skype)	Clinical effects HbA1c improvements in both groups ($P<0.05$). HbA1c in Group 1 went from 7.45±0.9% to 6.22±0.8% and from 7.68±1.1% to 6.09±1.0% in Group 2 at 1 year. The significant improvement was performed in the first 6 months and it was maintained. Effects on behavior The authors state that internet visits were preferred by patients, but no numbers or methods measuring this were reported.
Petrovski, 2013 [32]	Randomized intervention	1 year	91 adolescents with T1D (ages 12-21)	As supporting tool of the intervention (Facebook chat and Skype)	Clinical effects HbA1c improvements in both groups ($P<0.05$). HbA1c in Group 1 went from 7.65±0.9% to 6.12±0.8% at 12 months and from 7.59±1.1% to 6.05±1.0% in Group 2.
Petrovski, 2014a [34]	Randomized intervention	1 year	124 adolescents with T1D (ages 16-23)	As supporting tool of the intervention (Facebook chat and Skype)	Clinical effects HbA1c improvements in both groups ($P<0.05$). HbA1c in Group 1 went from 7.8±0.7% to 6.4±0.8%, and from 7.9±1.0% to 6.3±1.2% in Group 2 at 6 months. After crossover, patients maintained HbA1c values.
Petrovski, 2014b [35]	Randomized intervention	1 year	114 adolescents with T1D (ages 13-23)	As supporting tool of the intervention (Facebook chat and Skype)	Clinical effects HbA1c improvements in both groups ($P<0.05$). HbA1c in Group 1 went from 7.8±0.7% to 6.4±0.8% and from 7.9±1.0% to 6.3±1.2% in Group 2 at 6 months. After crossover, patients maintained HbA1c values (6.5±0.7% and 6.4±0.6%).
Petrovski, 2015a [45]	Randomized intervention	1 year	56 patients with T1D	As supporting tool of the	Clinical effects Both groups improved HbA1c at 12 months. Regular group: 7.7±1.6% (61±17.5 mmol/mol) at

			using insulin pumps with glucose sensors (ages 14-23)	intervention (Facebook chat and Skype)	baseline versus 6.6±1.5% (49±16.4 mmol/mol) at 12 months. Improvement occurred in the first 6 months and was maintained for 6 additional months. Effects on behavior The authors found that social media use allowed the patients to gain diabetes knowledge and information and interact in their daily insulin adjustments.
Petrovski, 2015b [44]	Randomized intervention	1 year	441 patients with T1D	As supporting tool of the intervention (Facebook group)	Clinical effects Significant decrease of 0.7% in HbA1c was found in intervention group (7.9±1.2% vs. 7.2±0.8%, *P*<0.05) compared to 0.2% in control group (7.9±1.4% vs. 7.6±1.9%, *P*=0.72). Effects on behavior Diabetes Quality of Life for Youth Inventory questionnaire showed a significant improvement (*P*<0.05) only in patients from intervention group.
Petrovski, 2016 [54]	Randomized intervention	6 months	72 T1D patients on insulin pumps	As main source for delivering the intervention (Viber)	Clinical effects Significant decrease of HbA1c (7.8±1.6% to 7.1±1.2% in Viber+Doctor+Educator group and 7.7±1.1% to 7.2±1.9% in Viber+Patients group).
Hanberger, 2013 [31]	Randomized intervention	1 year	163 T1D patients (ages 0-18) and their families	As supporting tool of the intervention (Own social networking in the portal)	Clinical effects No differences were found at baseline and after study year 1 between the intervention and control group, adolescents and parents, respectively, regarding the outcome variables (HbA1c, severe hypoglycemia, frequency of blood glucose self-control). Effects on behavior No differences were found at baseline and after study year 1 between the intervention and control group, adolescents and parents, respectively, regarding the outcome variables (HRQoL[e], empowerment, and perception of quality of care regarding information measured by DISABKIDS, Swe-DES-SF-10[f], and QPP[g] scales, respectively).
Whittemore, 2015 [48]	Randomized intervention	6 months	124 teens with T1D (ages 11-14)	As supporting tool of the intervention (Own social media)	Clinical effects Teens in both programs had no changes in HbA1c over 6 months. Effects on behavior There was no significant difference in self-management, perceived stress, diabetes self-efficacy, and quality of life between groups. Teens in both groups had an increase in diabetes communication (*P*<0.05) and medical self-efficacy (*P*<0.01). Posts to the discussion forum were higher in the social media group.
Vorderstrasse, 2017 [58]	Randomized intervention	6 months	208 adults with T2D (mean age 59)	As supporting tool of the intervention (Own social media)	Clinical effects HbA1c did not decrease significantly overall However, among those with HbA1c >10% at baseline there was a significant decrease (mean 11.42±1.53 to 8.77±1.49, *P*=0.018). Effects on behavior Significant improvement in self-reported physical activity (est 0.28, *P*=0.046) for those with

Study	Design	Duration	Population	Social media use	Main results
					the highest engagement in the site, and decreased sedentary time (Fitbit data) for the intervention group compared to control group (est −12.17, P=0.048).
Lapp, 2012 [29]	Randomized intervention	3 months	46 adolescents with T1D (mean age in intervention group 14.6, and in control group 15.4)	As main source for delivering the intervention (Social media channel not specified)	Clinical effects HbA1c did not statistically change between baseline and 3 months (9.6±1.5% at baseline vs. 9.8±1.5% at 3 months in intervention group and 10.1±1.8% at baseline vs. 9.9±2.0% at 3 months in control group) Effects on behavior Trend (P=0.06) for subjects in intervention group to report reduction in conflict on Diabetes Family Conflict Scale between baseline and 3 months. Parents of children in intervention group reported on PedsQL-DM[h] scale that the children had fewer treatment barriers (P=0.015) and better medication adherence (P=0.012).
McDarby, 2015 [42]	Randomized intervention	3-month intervention or assessments over 1 year	73 adolescents with T1D	As main source for delivering the intervention (Facebook closed group)	Clinical effects No significant differences in HbA1c. Effects on behavior Significantly increased diabetes knowledge on treatment and testing in the intervention group at 4 months, differences maintained at 8 and 12 months.
Pyatak, 2016 [55]	Randomized intervention	6 months	81 diabetic patients (mean age 22.6)	As supporting tool of the intervention (Social media in general)	Effects on behavior Fidelity maintained in over 95% of sessions.
Gomez-Zuniga, 2015 [40]	Nonrandomized intervention	Not reported	3916 people with diabetes	As supporting tool of the intervention (Various online social networks)	Clinical effects A mixed factorial analysis of variance comparing insulin-dependents versus noninsulin-dependents at both times of glucose measurement (before and after exercise) indicated that the change in glucose level was more pronounced among insulin-dependent participants, P<0.001. Effects on behavior The participants who reduced their blood glucose after exercise the least were those with lower self-efficacy (P=0.021 and P=0.029) and with lower perceived social support (not significant).

[a]HbA1c: glycated hemoglobin.

[b]RCT: randomized controlled trial.

[c]T2D: Type 2 diabetes.

[d]T1D: Type 1 diabetes.

[e]HRQoL: Health-Related Quality of Life.

[f]Swe-DES-SF-10: Swedish Diabetes Empowerment Scale-short form 10.

[g]QPP: Quality from the Patients' Perspective questionnaire.

[h]PedsQL: Pediatric Quality of Life Inventory.