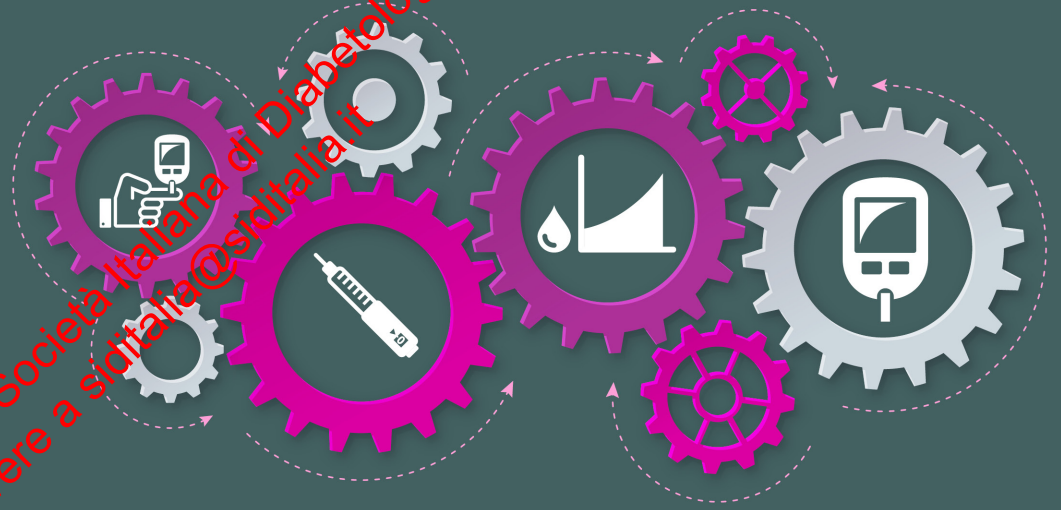
SID Società Italiana di Diabetologia
fondata nel 1964

MONITORAGGIO GLICEMICO NEL DIABETE DI TIPO 2:
EVIDENZE, INNOVAZIONE E PROSPETTIVE CLINICHE

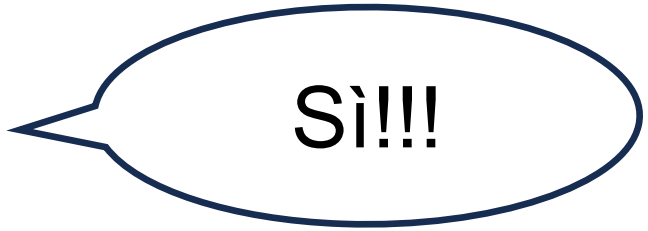


11 NOVEMBRE 2025

MILANO Starhotels E.c.ho.

La Condivisione dei Dati da Remoto è un Valore Aggiunto?

LUDOVICO DI GIOIA



Ente Ecclesiastico Ospedale Generale Regionale MIULLI

ENDOCRINOLOGY UNIT, "F. MIULLI" UNIVERSITY HOSPITAL, ACQUAVIVA DELLE FONTI (BA)
SECTION OF ENDOCRINOLOGY, DEPARTMENT OF MEDICINE AND SURGERY,
LUM UNIVERSITY, CASAMASSIMA (BA) - CHAIR: PROF. SEBASTIO PERRINI

UNIVERSITÀ LUM GIUSEPPE DEGENNARO

Ludovico Di Gioia dichiara di aver ricevuto negli ultimi due anni compensi o finanziamenti dalle seguenti Aziende Farmaceutiche e/o Diagnostiche:

Eli Lilly Italia (*board scientifici*);

Abbott, Eli Lilly Italia, Medtronic, Novo Nordisk,

Roche Diabetes Care, Sanofi, Theras Biocare

(relazioni a convegni, supporto per partecipazione a congressi)

Dichiara altresì il proprio impegno ad astenersi, nell'ambito dell'evento, dal nominare, in qualsivoglia modo o forma, aziende farmaceutiche e/o denominazione commerciale e di non fare pubblicità di qualsiasi tipo relativamente a specifici prodotti di interesse sanitario (farmaci, strumenti, dispositivi medico-chirurgici, ecc.).

La Condivisione dei Dati da Remoto è un Valore Aggiunto…

A) Per il paziente

B) Per paziente e per il caregiver

C) Per il paziente e per il team diabetologico

D) Per il paziente, per il caregiver e per il team diabetologico

Continuous Glucose Monitoring

Current Glucose Reading

Trend Arrow

High threshold

Glucose Graph

Low threshold

Glucose alerts

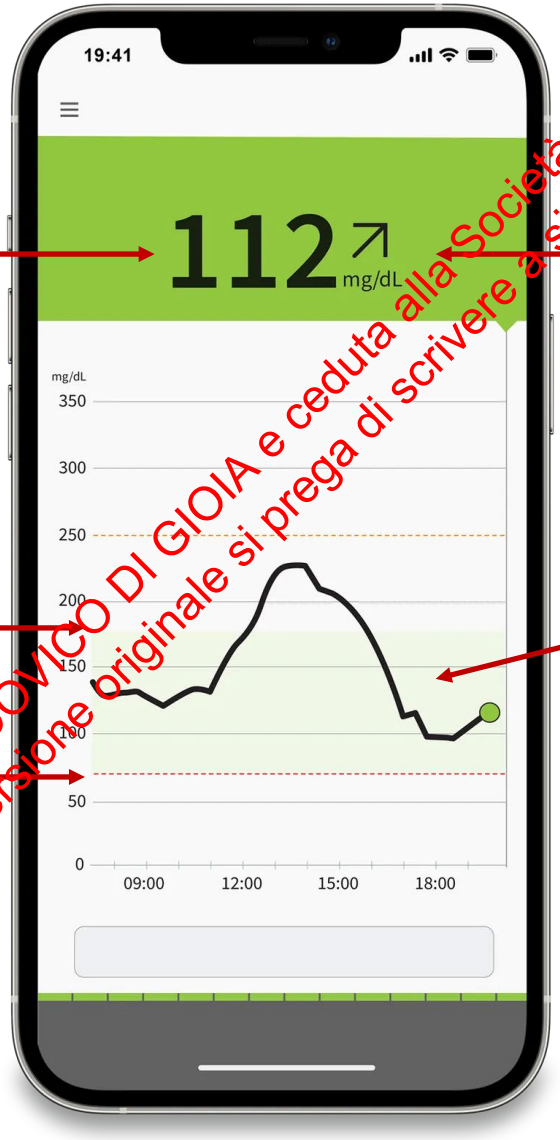
Continuous Glucose Monitoring

Current Glucose Reading

High threshold

Low threshold

Glucose alerts



Trend Arrow

Glucose Graph

Key Features of Main Available CGM Systems (1/2)

									
Approved Age, years	≥2	≥2	≥2	≥18	≥2	≥4	≥2	≥4	≥18
FDA's iCGM designation	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Threshold alerts (Range)	Yes, optional (Low: 60-100 mg/dL; High: 120-400 mg/dL)	Yes, optional (Low: 60-150 mg/dL; High: 100-400 mg/dL)	Yes, optional (Low: 60-150 mg/dL; High: 100-400 mg/dL)	Yes, high alert is optional (Low: 60-115 mg/dL; High: 125-350 mg/dL)	Yes, optional (Low: 60-90 mg/dL; High: 100-400 mg/dL)	Yes, optional (Low: 60-100 mg/dL; High: 120-400 mg/dL)	Yes, optional (Low 60-100 mg/dL; High: 120-400 mg/dL)	Yes, optional (Low: 60-100 mg/dL; High: 120-400 mg/dL)	Yes, optional (Low: 60-150 mg/dL; High: 80-450 mg/dL)
Rate of change alerts	Yes	Yes	No	Yes	Yes	No	No	No	Yes
Urgent Low Glucose	≤55 mg/dL	≤55 mg/dL (silenceable for 6 hours)	No	<40 mg/dL	≤54 mg/dL	No	No	No	<55 mg/dL
Predictive alerts	Yes (20 min before 55 mg/dL)	Yes (20 min before 55 mg/dL)	No	Yes (10-20-30 min before low and/or high)	Yes (up to 60 min before low and/or high)	No	No	No	Yes (20-30 min before low and/or 55 mg/dL)
Delay 1st High Alert	No	Yes	Yes	No	No	No	No	No	Yes
Snooze/ Repeat	No	Yes	Yes	Yes	Yes	No	No	No	Yes
Integration with other devices	Insulin pump, connected pen (through G……)	Insulin pump, connected pen (through G……)	Connected pen (through G……)	No	Smart pen	Connected pen	Connected Pens, Insulin Pumps	Insulin pump	No
Application Sites	Upper arm, abdomen, upper buttocks (2-17 years)	Upper arm, abdomen, buttocks (2-6 years)	Upper arm, abdomen, buttocks (2-6 years)	Upper arm	Upper arm, upper buttocks (2-17 years)	Upper arm	Upper arm	Upper arm	Upper arm

Di Molfetta S et al. Diabetes Ther. 2024 Sep 30

Key Features of Main Available CGM Systems (2/2)









Dedicated receiver	Yes	Yes	Yes	No	No	Yes	Yes	Yes (not in all countries)	No
Transmitter & sensor	Non-preassembled	Preassembled	Preassembled	Non-preassembled	Preassembled	Preassembled	Preassembled	Preassembled	Preassembled
Size, mm	36x19x8	24x27.3x4.6	24x27.3x4.6	Sensor: 18.3x3.5; transmitter: 37.6x48x8.8	29x29x4.7	35x35x5	35x5x5	21x21x2.9	24x24x3.5
Notes entry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Calibration	Optional	Optional	Optional	2x/day, from Day 21 1x/day	Optional	No	No	No	No
Interferences	Hydroxyurea, acetaminophen > 1 g every 6 hours	Hydroxyurea, acetaminophen > 1 g every 6 hours	Hydroxyurea, acetaminophen > 1 g every 6 hours	Mannitol, sorbitol, tetracyclines	Hydroxyurea, acetaminophen	Ascorbic acid > 500 mg/day	Ascorbic Acid > 1,000 mg/day	Ascorbic acid > 500 mg/day	Ascorbic acid, acetaminophen, xylose, maltose
Impermeability	IP28	IP58	IP58	IP67	IP48	IP27	IP27	IP27	IPX8
Sensor duration, days	10	10 (+12 optional hours)	10 (+12 optional hours)	180	7	14	15	14	14
Warm up, hours	2	0.5	0.5	24	0.5	1	1	1	1
Use in pregnancy	Indicated	Indicated	Indicated	Not tested	Not contraindicated	Indicated	Indicated	Indicated	Not contraindicated
Non-adjunctive use	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Data sharing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Download data platform	D…… C……	D…… C……	D…… C……	E…… DMS	C……	L……	L……	L……	S…… - Doctor

REMOTE MONITORING

Di Molfetta S et al. Diabetes Ther. 2024 Sep 30

Sharing Features of Main Available CGM Systems

CGM System	Follower App	Update Frequency	Max Followers	Follower Can See
	D…… F……	Every 5 minutes	10	Sensor status, current glucose value, trend arrows, glucose history graph (24h), customizable glucose alerts
	E…… N……	Every 5 minutes	5	Sensor status, current glucose value, trend arrows, glucose alert notifications, alert history, event log
	L……	Every minute	20	Current glucose value, trend arrows, glucose history graph (12h), customizable glucose alerts, logbook
	C…… C……	Every 5 minutes	5	Sensor status, current glucose value, trend arrows, glucose history graph (24h), glucose alert and system alert notifications, alert history, event log

Adapted from Di Molfetta S, 2025

Real-Time Sharing and Following of CGM Data in Youth with Diabetes

Retrospective study, n = 15,000, age 2 to 18 yrs

Metric	Age range (years)	Zero Followers	One or more Followers	
N (%)	2–5	76 (7.6%)	923 (92.4%)	
	6–12	330 (5.0%)	6335 (95.0%)	
	13–18	376 (5.1%)	6960 (94.9%)	
Adherence (days per week)	2–5	4.8 (1.8)	6.2 (0.7)**	✓
	6–12	4.7 (1.9)	6.2 (0.7)**	✓
	13–18	4.9 (1.6)	5.9 (0.9)**	✓
Glucose (mg/dL)	2–5	188.4 (50.8)	187.3 (36.8)	
	6–12	192.6 (39.3)	184.2 (30.5)**	✓
	13–18	192.6 (43.9)	186.5 (33.9)*	✓
Glucose values < 55 mg/dL (%)	2–5	1.4% (3.2%)	1.0% (1.4%)	
	6–12	1.3% (3.8%)	1.0% (1.4%)	
	13–18	1.5% (2.6%)	1.1% (1.5%)*	✓
Glucose values < 70 mg/dL (%)	2–5	4.1% (6.1%)	3.2% (3.7%)	
	6–12	3.4% (5.0%)	3.1% (3.0%)	
	13–18	4.0% (4.9%)	3.2% (3.1%)*	✓
Glucose values 70–180 mg/dL (%)	2–5	48.5% (21.8%)	49.6% (16.6%)	
	6–12	46.5% (19.9%)	51.0% (14.7%)**	✓
	13–18	46.1% (20.4%)	49.8% (16.2%)*	✓
Glucose values > 180 mg/dL (%)	2–5	47.4% (24.9%)	47.2% (18.4%)	
	6–12	50.1% (21.1%)	45.9% (15.9%)**	✓
	13–18	49.5% (22.0%)	47.0% (17.3%)	
Glucose values > 250 mg/dL (%)	2–5	24.2% (19.1%)	21.9% (14.5%)	
	6–12	23.9% (16.9%)	20.0% (12.3%)**	✓
	13–18	24.5% (18.6%)	20.7% (14.0%)**	✓

Values are presented as the mean with the standard deviation in parenthesis
*, **Significant difference between 0 and ≥ 1 Followers at *$p < 0.01$; **$p < 0.001$

Higher adherence

Lower mean glucose
(not 2-5 yrs)

Lower TBR
(only 13-18 yrs)

Higher TIR
(not 2-5 yrs)

Lower TAR
(not 2-5 yrs)

Welsh JB et al. Diabetes Ther. 2019 Apr;10(2):751-755

Perceived Value of Real-Time CGM Data Sharing in Adults with T1D

Survey, n = 315, age 42.8±12.8 yrs, female 59.6%

	Disagree (*n*/%)	Neutral (*n*/%)	Agree (*n*/%)
Data sharing gives me peace of mind[a]	20 (6.6)	13 (4.3)	269 (89.1)
Data sharing gives my CF peace of mind[a]	5 (1.7)	13 (4.3)	284 (94.0)
Data sharing makes me feel less alone with my diabetes[a]	14 (4.6)	48 (15.9)	240 (79.5)
Diabetes sharing has improved the relationship with my CF[a]	18 (6.0)	159 (52.6)	125 (41.4)
Because of data sharing, my CF is more understanding about how challenging diabetes can be[a]	20 (6.6)	42 (13.9)	240 (79.5)
Because of data sharing, I feel more judged than before[a]	180 (59.6)	51 (16.9)	71 (23.5)
Data sharing has caused more tension in my relationship with my CF[a]	247 (81.8)	27 (8.9)	28 (9.3)
Data sharing has given my CF too much information[a]	243 (80.5)	32 (10.6)	27 (8.9)

[a]Items rated on a 5-point Likert response scale: 5 = "strongly agree," 4 = "somewhat agree," 3 = "neutral," 2 = "somewhat disagree," 1 = "strongly disagree." Categories 5 and 4 ("agree"), and 2 and 1 ("disagree") were collapsed for presentation.
CF, chief follower; CGM, continuous glucose monitoring; T1D, type 1 diabetes.

Polonsky WH et al. Diabetes Technol Ther. 2021 Mar;23(3):195-202

Perceived Value of CGM Data Sharing in Caregivers of People with T1D

Survey, n = 515, age 45.9±10.4 yrs, female 68.5%

	N (%) agreed		
	Partners (*n* = 212)	Parents (*n* = 303)	*P*-value
Data sharing gives me peace of mind	186 (87.7)	268 (88.4)	.805
Because of data sharing, I am more critical about the choices my partner/child is making about his/her diabetes	122 (57.5)	163 (53.8)	.399
Thanks to data sharing, if my partner/child needs help, I have his/her back	196 (92.5)	287 (94.7)	.294
Using data sharing with my partner/child makes me feel like a member of his/her diabetes team	196 (92.5)	266 (87.8)	.086
Data sharing has improved the relationship with my partner/child	121 (57.1)	117 (38.6)	<.001
Because of data sharing, I feel more understanding about how challenging diabetes can be	192 (90.6)	264 (87.1)	.228
Using data sharing, I now feel more confident about helping my partner/child with his/her diabetes	200 (94.3)	279 (92.1)	.322
Because of data sharing, I now feel *less* anxious about my partner/child	183 (86.3)	257 (84.8)	.634
Because of data sharing, I now feel *more* anxious about my partner/child	23 (10.8)	41 (13.5)	.364
Data sharing has caused more tension in my relationship with my partner/child	20 (9.4)	38 (12.5)	.272
Data sharing has given me too much information.	18 (8.5)	28 (9.2)	.769

Data presented reflect *N* (%) of partner/parent respondents who (somewhat or strongly) agreed with each item.
Items were rated on a five-point Likert response scale: 1 = "Strongly Disagree," 2 = "Somewhat Disagree," 3 = "Neutral," 4 = "Somewhat Agree," 5 = "Strongly Agree." Items were analyzed as continuous variables for significance testing; however, response categories 4 and 5 were collapsed to reflect "Agreed" for data presentation purposes.

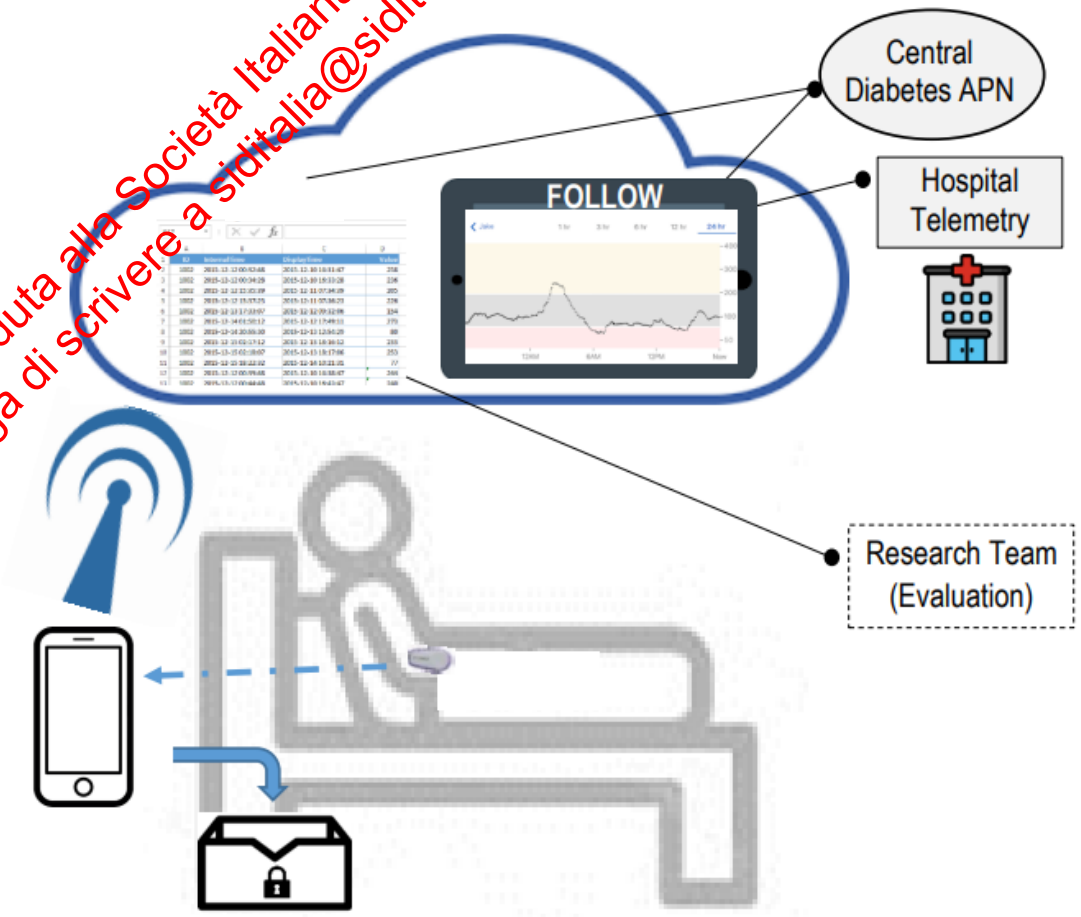
CGM, continuous glucose monitoring; QoL, quality of life; T1D, type 1 diabetes

Polonsky WH et al. J Diabetes Sci Technol. 2022 Jan;16(1):97-105

CGM in People with T2D Admitted in a non-ICU Setting

RCT, mean lenght of stay 5 days, n = 110, age 61.9±13.2 yrs, HbA1c 9.2±2.5%

	UC (n = 53)	RT-CGM (n = 57)	P value
Glucose outcomes[c]			
POC, mg/dL, mean (SD)	212.40 (45.91)	191.50 (38.89)	0.0115
CGM			
CGM duration, in h	47.75 (25.92–80.42)	51.00 (25.33–96.25)	0.8091
Mean glucose, mg/dL, mean (SD)	238.05 (45.26)	219.51 (43.75)	0.0311
SD glucose, mg/dL, mean (SD)	57.16 (19.44)	54.58 (16.94)	0.7041
CV glucose, mg/dL, mean (SD)	24.78 (9.20)	25.41 (8.07)	0.7041
% TIR			
70–180 mg/dL	19.89 (3.34–40.09)	25.31 (11.78–42.97)	0.1460
70–200 mg/dL	33.38 (10.90–55.74)	42.82 (25.66–58.53)	0.0615
70–250 mg/dL	63.95 (31.25–77.95)	72.83 (59.03–83.57)	0.0494
% Hyperglycemia			
>250 mg/dL	32.96 (20.40–68.75)	27.00 (16.01–40.97)	0.0403
>300 mg/dL	13.10 (2.90–39.40)	7.33 (2.03–18.54)	0.0512
% Hypoglycemia			
<70 mg/dL	0.00 (0.00–0.00)	0.00 (0.00–0.00)	0.2680
<54 mg/dL	0.00 (0.00–0.00)	0.00 (0.00–0.00)	0.8093
Hypoglycemic events[d]			
N (%) with ≥1 event(s)			
<70 mg/dL	5 (9.43)	11 (19.3)	
<54 mg/dL	2 (3.77)	4 (7.02)	

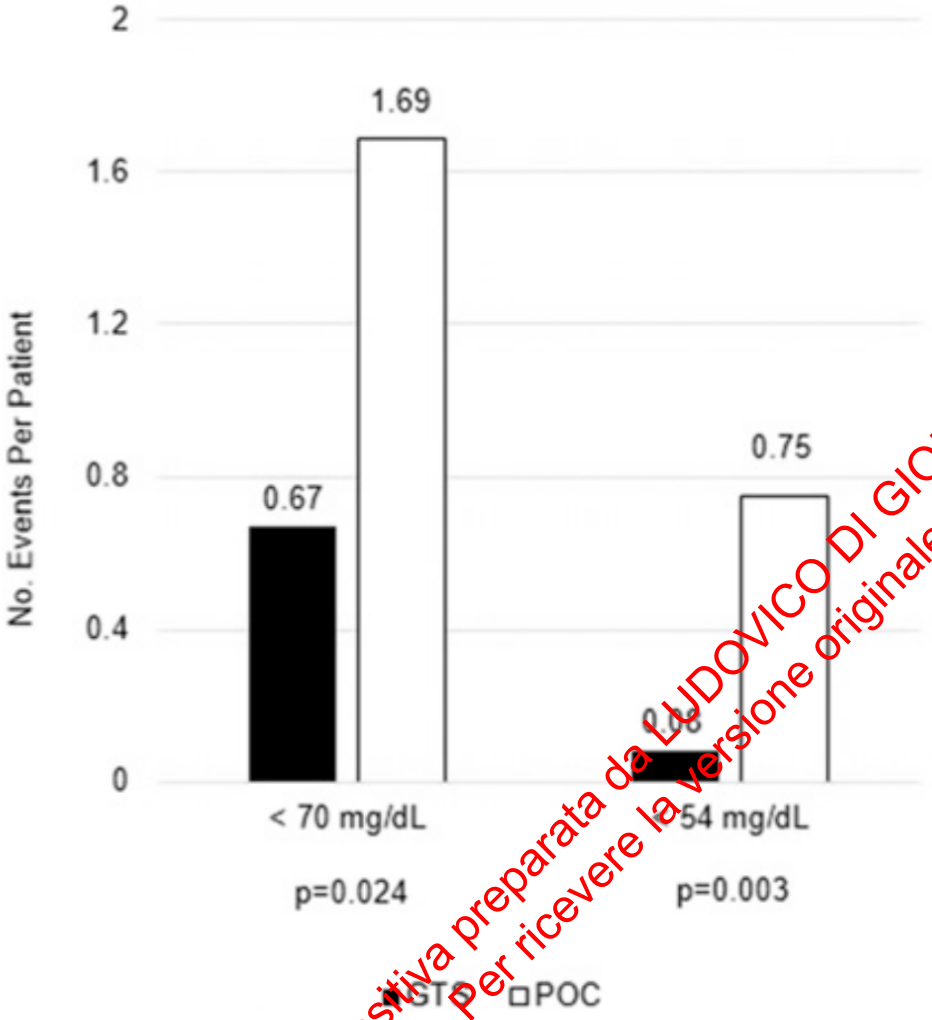


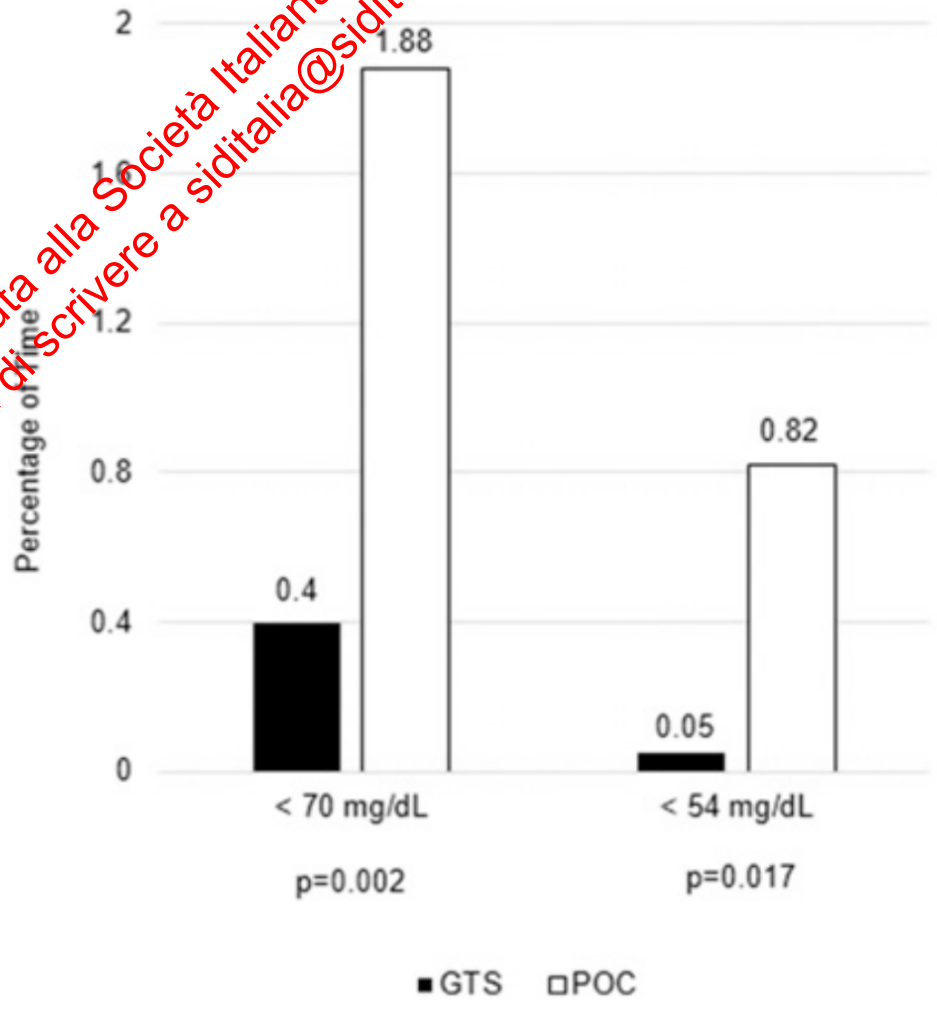
APN, advanced practice nurse; CGM, continuous glucose monitoring; CV, coefficient of variation; POC, point-of-care; RCT, randomized controlled trial; RT-CGM, real-time glucose monitoring; SD, standard deviation; T2D, type 2 diabetes; TIR, time in range; UC, usual care.

Adapted from Fortmann AL et al. Diabetes Care. 2020 Nov;43(11):2873-2877

CGM Reduces Hypoglycemia Among Hospitalized People with Insulin-treated T2D

RCT, n = 36 RT-CGM/GTS vs. 36 POC, Age 68±10 yrs, ≥1 RF for Inpatient Hypoglycemia

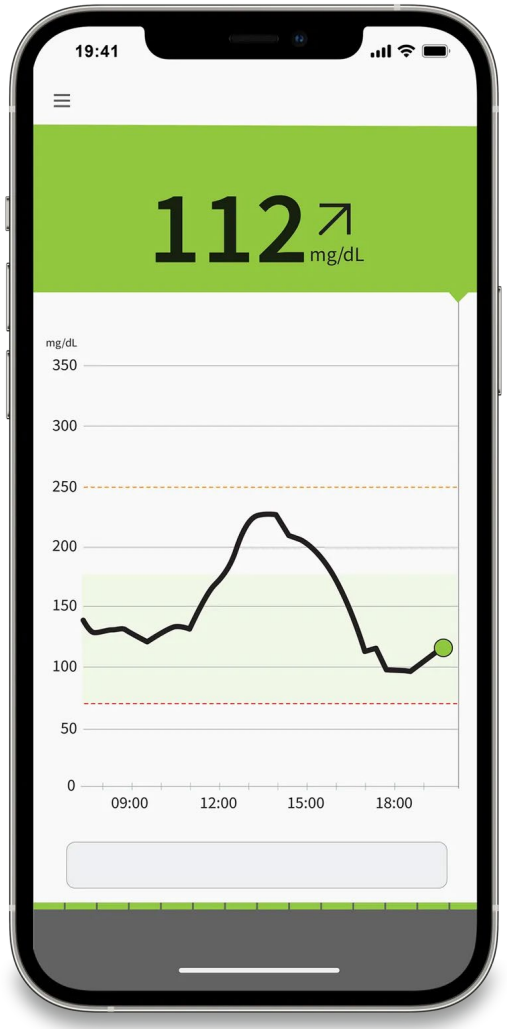




GTS, glucose telemetry system; POC, point-of-care; RT-CGM, real-time CGM; RF, risk factor; TAR, time above range; TBR, time below range; TIR, time in range; T2D, type 2 diabetes

Singh LG et al. Diabetes Care. 2020 Nov;43(11):2736-2743

Daily Use vs. Retrospective Analysis of CGM Data



Report AGP

27 ottobre 2025 - 9 novembre 2025 (14 Giorni)

STATISTICHE E TARGET GLUCOSIO

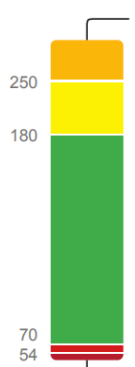
27 ottobre 2025 - 9 novembre 2025	**14 Giorni**
Tempo in cui il sensore è attivo:	**99%**

Intervalli e target per	Diabete tipo 1 o tipo 2
Intervalli di glucosio	**Target** (% di letture (Ora/Giorno))
Intervallo stabilito 70-180 mg/dL	Superiore a 70% (16h 48min.)
Inferiore a 70 mg/dL	Inferiore a 4% (58min.)
Inferiore a 54 mg/dL	Inferiore a 1% (14min.)
Superiore a 180 mg/dL	Inferiore a 25% (6h)
Superiore a 250 mg/dL	Inferiore a 5% (1h 12min.)
Ogni aumento del 5% del tempo nell'intervallo (70-180 mg/dL) è clinicamente vantaggioso.	

Valore medio del glucosio	**157** mg/dL
Indicatore di gestione del glucosio (GMI)	**7,1% o 54 mmol/mol**
Variabilità del glucosio	**42,5%**

Definito come percentuale del coefficiente di variazione (%CV); obiettivo ≤36%

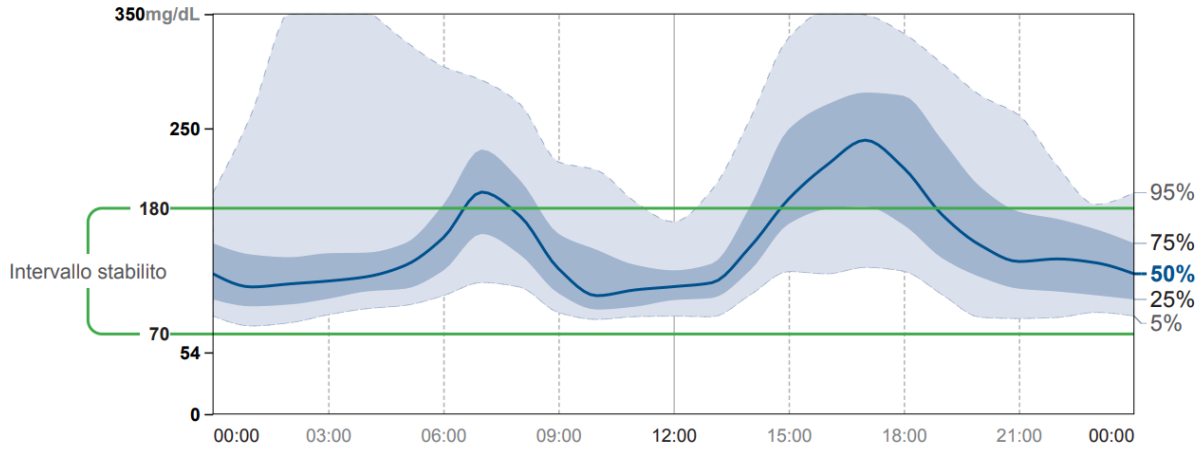
TEMPO NEGLI INTERVALLI



Molto alto	>250 mg/dL	**12%** (2h 53min.)
Alto	181 - 250 mg/dL	**16%** (3h 50min.)
Intervallo stabilito	70 - 180 mg/dL	**72%** (17h 17min.)
Basso	54 - 69 mg/dL	**0%** (0min.)
Molto basso	<54 mg/dL	**0%** (0min.)

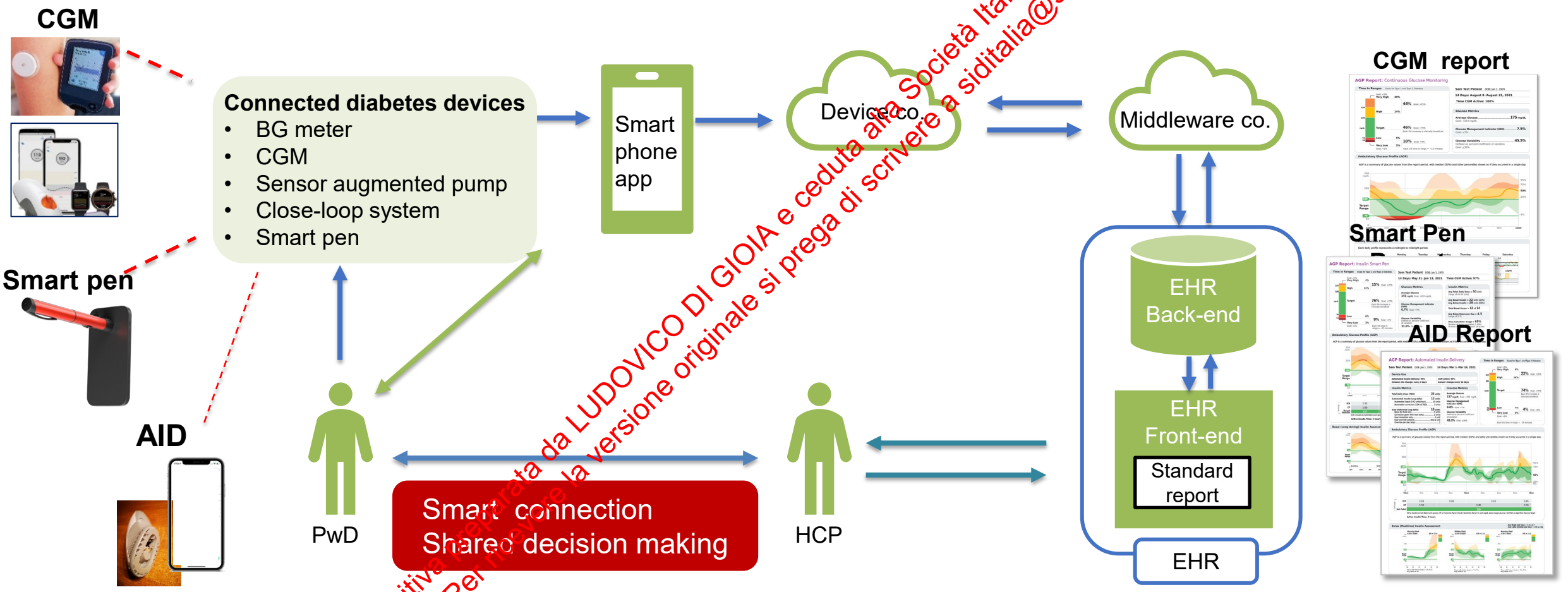
PROFILO DI GLUCOSIO AMBULATORIALE (AGP)

AGP è un riepilogo dei valori di glucosio del periodo di riferimento, con la mediana (50%) e gli altri percentili mostrati come se si fossero verificati in un solo giorno.



The Digital/Virtual Diabetes Clinic

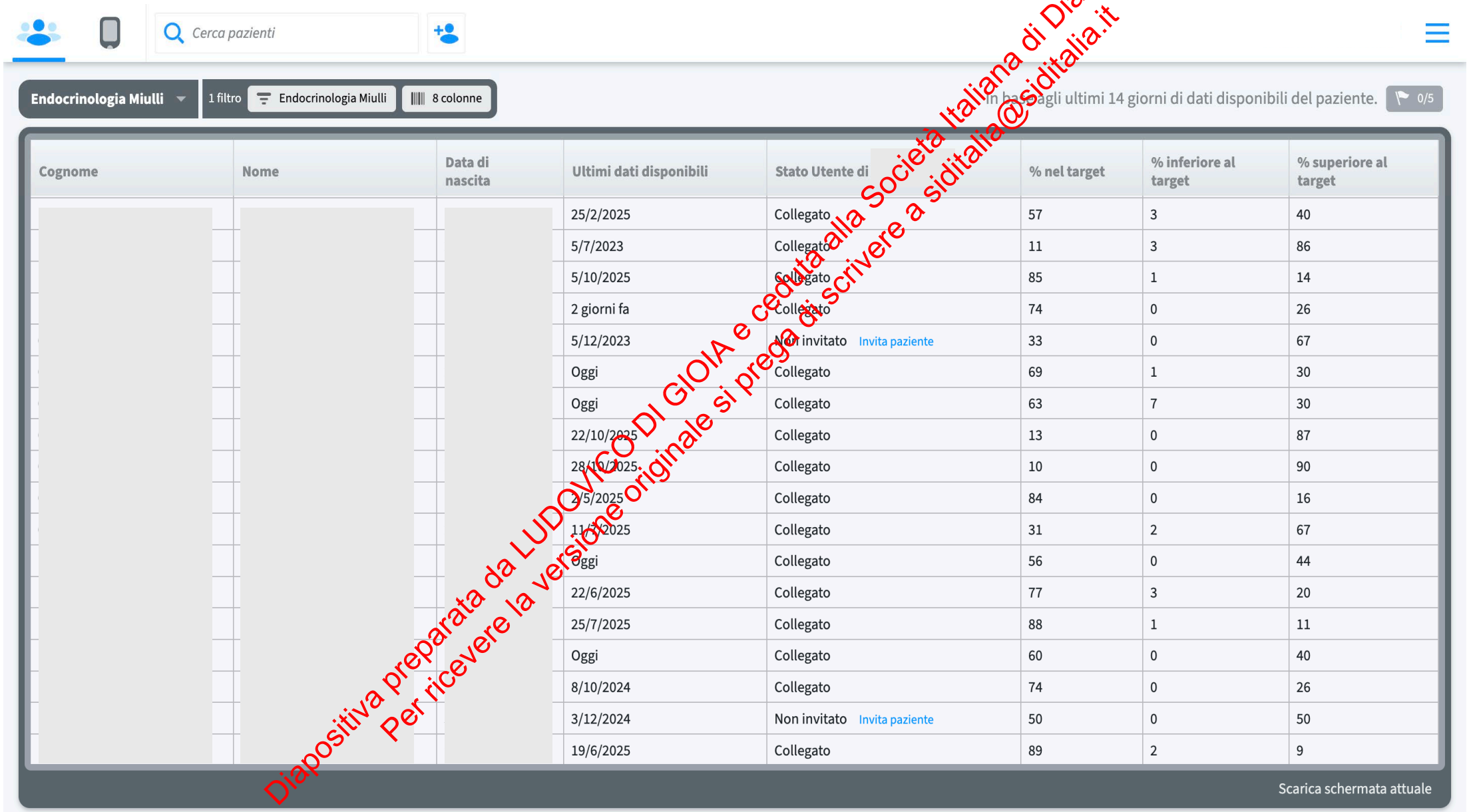
Recommendations from the International Panel on Diabetes Digital Technology



AID, automated insulin delivery; BG, blood glucose; CGM, continuous glucose monitoring; EHR, electronic health record; HCP, healthcare professional; PwD, person with diabetes.

Phillip M et al. Diabetes Technol Ther 2020;23:146–154.

Piattaforme per la Gestione dei Dati del Diabete - Dashboard

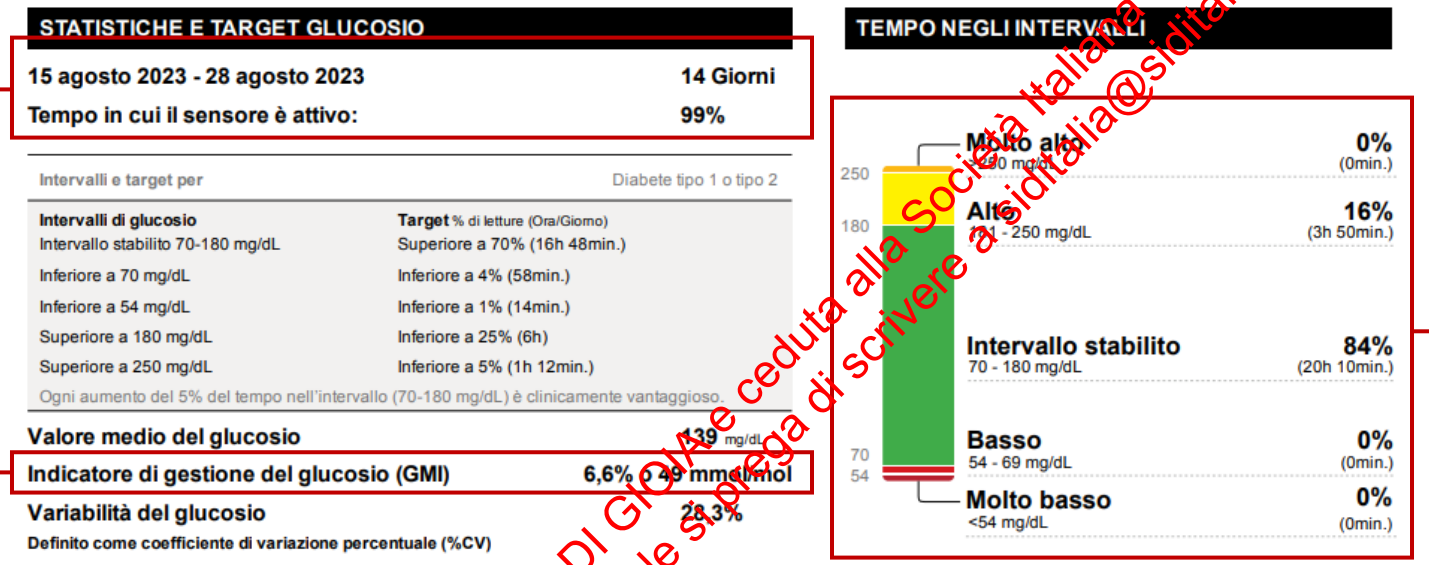


Cognome	Nome	Data di nascita	Ultimi dati disponibili	Stato Utente di	% nel target	% inferiore al target	% superiore al target
			25/2/2025	Collegato	57	3	40
			5/7/2023	Collegato	11	3	86
			5/10/2025	Collegato	85	1	14
			2 giorni fa	Collegato	74	0	26
			5/12/2023	Non invitato Invita paziente	33	0	67
			Oggi	Collegato	69	1	30
			Oggi	Collegato	63	7	30
			22/10/2025	Collegato	13	0	87
			28/10/2025	Collegato	10	0	90
			2/5/2025	Collegato	84	0	16
			11/3/2025	Collegato	31	2	67
			Oggi	Collegato	56	0	44
			22/6/2025	Collegato	77	3	20
			25/7/2025	Collegato	88	1	11
			Oggi	Collegato	60	0	40
			8/10/2024	Collegato	74	0	26
			3/12/2024	Non invitato Invita paziente	50	0	50
			19/6/2025	Collegato	89	2	9

Indicatori di Controllo e Variabilità Glicemica Ricavabili dal CGM

Affinché le metriche del glucosio possano essere ritenute rappresentative è richiesta una valutazione di **almeno 14 giorni** e un impiego del sensore per **almeno il 70% del tempo**

L'**indicatore di gestione del glucosio (GMI)** mostra il livello di HbA1c stimato sulla base dei valori medi del glucosio rilevati con il sensore in un periodo minimo di 14 giorni



STATISTICHE E TARGET GLUCOSIO

15 agosto 2023 - 28 agosto 2023	**14 Giorni**
Tempo in cui il sensore è attivo:	**99%**

Intervalli e target per — Diabete tipo 1 o tipo 2

Intervalli di glucosio	**Target** % di letture (Ora/Giorno)
Intervallo stabilito 70-180 mg/dL	Superiore a 70% (16h 48min.)
Inferiore a 70 mg/dL	Inferiore a 4% (58min.)
Inferiore a 54 mg/dL	Inferiore a 1% (14min.)
Superiore a 180 mg/dL	Inferiore a 25% (6h)
Superiore a 250 mg/dL	Inferiore a 5% (1h 12min.)

Ogni aumento del 5% del tempo nell'intervallo (70-180 mg/dL) è clinicamente vantaggioso.

Valore medio del glucosio	**139** mg/dL
Indicatore di gestione del glucosio (GMI)	**6,6% o 49 mmol/mol**
Variabilità del glucosio	**28,3%**

Definito come coefficiente di variazione percentuale (%CV)

TEMPO NEGLI INTERVALLI

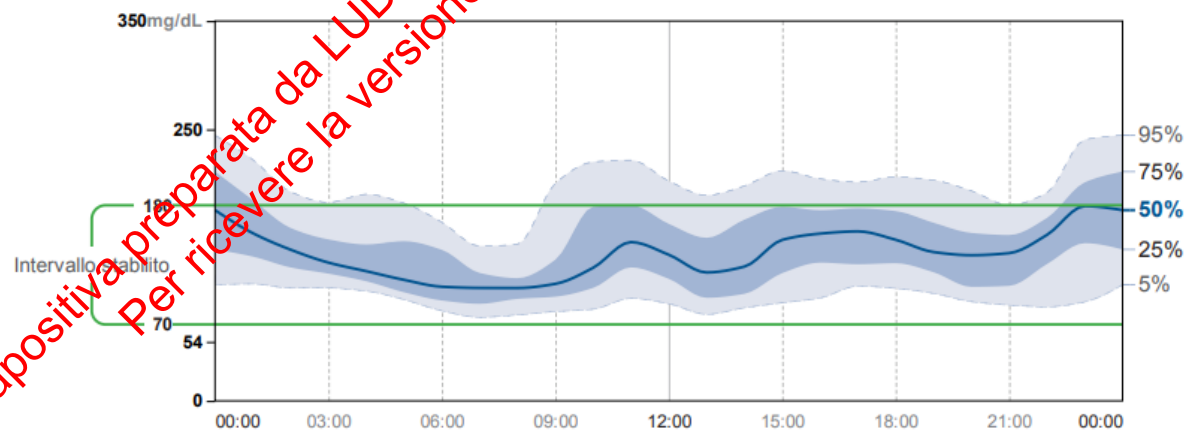
Molto alto	>250 mg/dL	**0%** (0min.)
Alto	181 - 250 mg/dL	**16%** (3h 50min.)
Intervallo stabilito	70 - 180 mg/dL	**84%** (20h 10min.)
Basso	54 - 69 mg/dL	**0%** (0min.)
Molto basso	<54 mg/dL	**0%** (0min.)

250 180 70 54

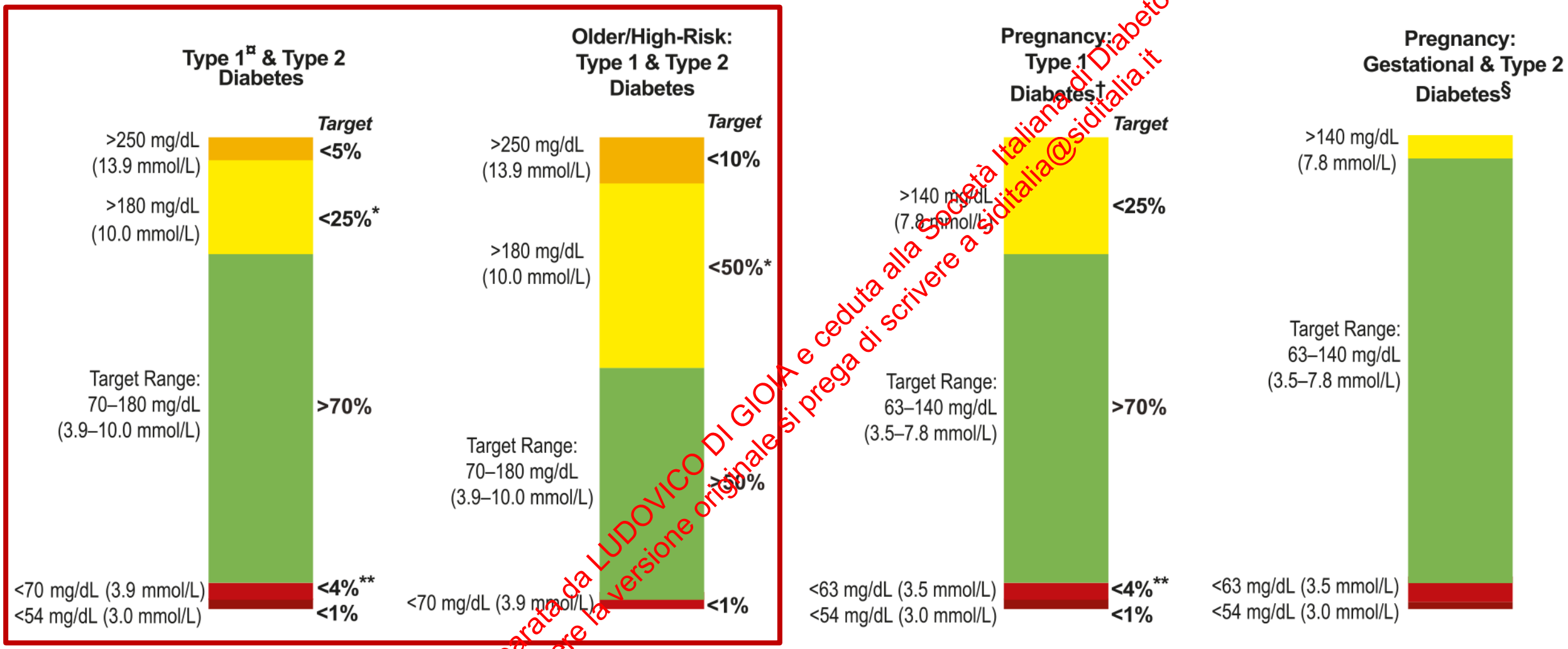
Rappresenta il tempo trascorso all'interno (**TIR**), sopra (**TAR**) e sotto (**TBR**) l'intervallo di glucosio desiderato

PROFILO DI GLUCOSIO AMBULATORIALE (AGP)

AGP è un riepilogo dei valori di glucosio del periodo di riferimento, con la mediana (50%) e gli altri percentili mostrati come se si fossero verificati in un solo giorno.



CGM-based Targets for Different Diabetes Populations



¤ For age <25 yr., if the A1C goal is 7.5%, then set TIR target to approximately 60%. (See *Clinical Applications of Time in Ranges* section in the text for additional information regarding target goal setting in pediatric management.)

† Percentages of time in ranges are based on limited evidence. More research is needed.

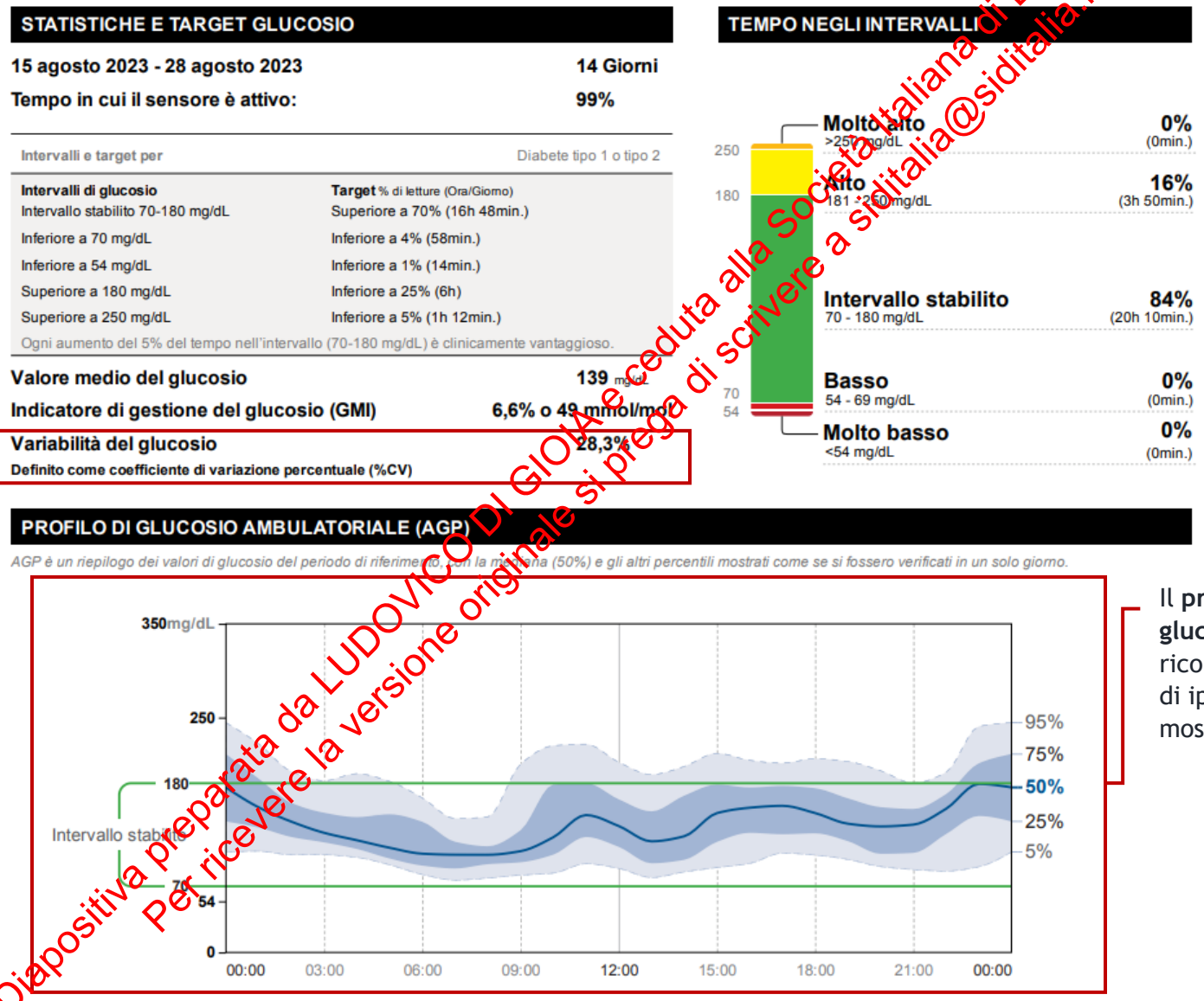
§ Percentages of time in ranges have not been included because there is very limited evidence in this area. More research is needed. Please see *Pregnancy* section in text for more considerations on targets for these groups.

* Includes percentage of values >250 mg/dL (13.9 mmol/L).

** Includes percentage of values <54 mg/dL (3.0 mmol/L).

Battelino T et al. Diabetes Care 2019;42:1593–1603

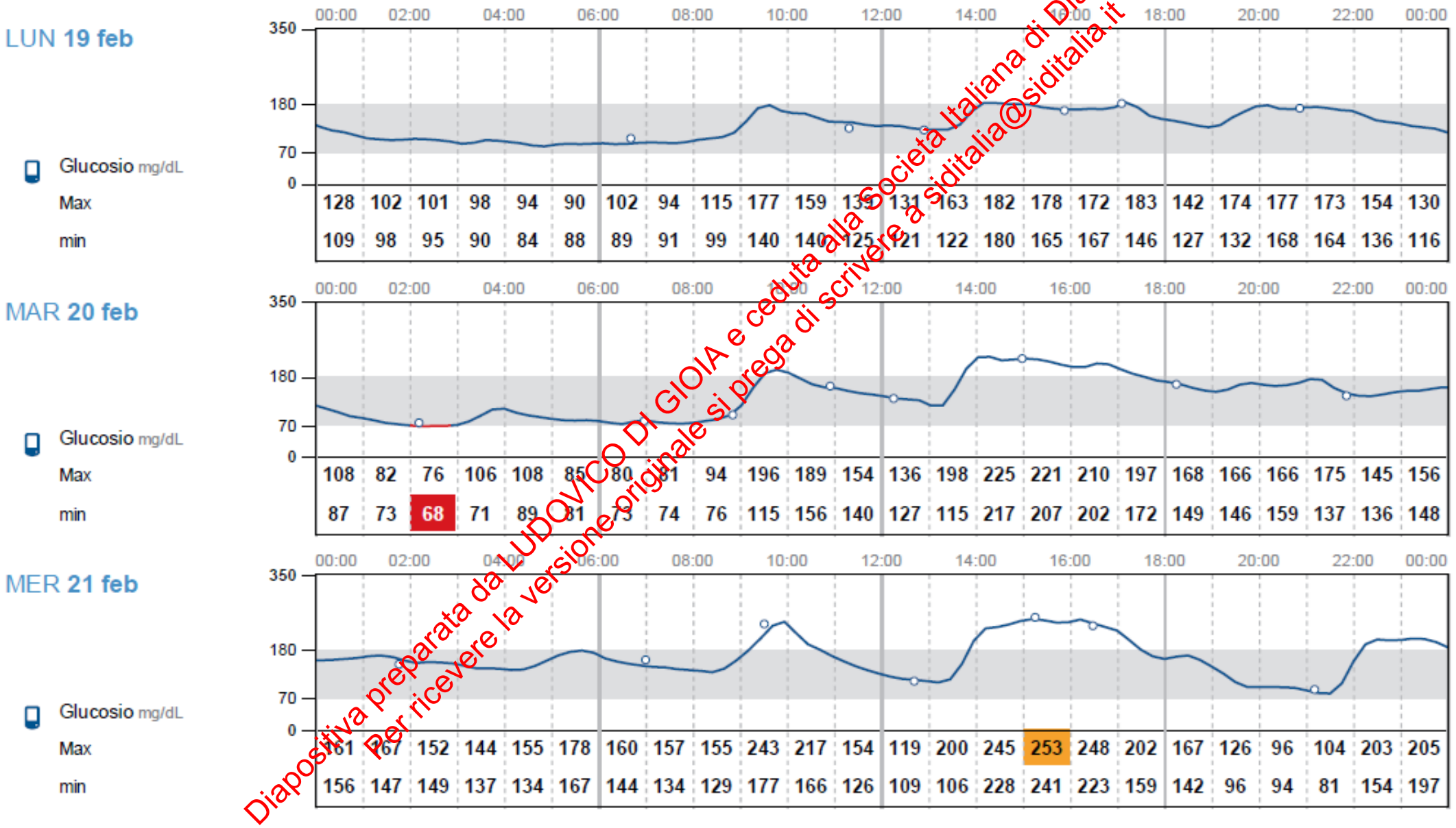
Indicatori di Controllo e Variabilità Glicemica Ricavabili dal CGM



La variabilità glicemica, espressa con il **coefficiente di variazione (CV)**, rappresenta l'ampiezza delle oscillazioni del glucosio intorno al valore medio. Un CV pari o inferiore al 36% indica una variabilità glicemica accettabile.

Il **profilo ambulatoriale del glucosio** (AGP) favorisce il riconoscimento degli andamenti di ipoglicemia ed iperglicemia e mostra la variabilità glicemica

Profili Giornalieri del Glucosio



Per Prendere Decisioni Terapeutiche, Ritieni Sufficienti i Dati Forniti in Questi Report?

A) Sì, è del tutto sufficiente già così

B) Sì, ma gioverei di altri dati, per esempio l'insulina somministrata

C) Sì, ma gioverei di altri dati, per esempio il quantitativo di carboidrati assunti

D) No, ma mi basta discutere con il paziente per ottenere altre informazioni

Integrating CGM Reports with Data from Connected Insulin Pens

Snapshot

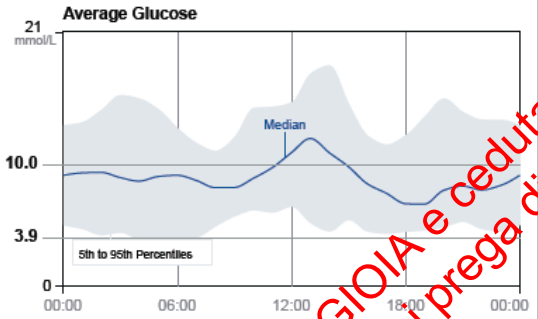
6 January 2022 - 19 January 2022 (14 Days)

Glucose

GMI 7.2% or 55 mmol/mol

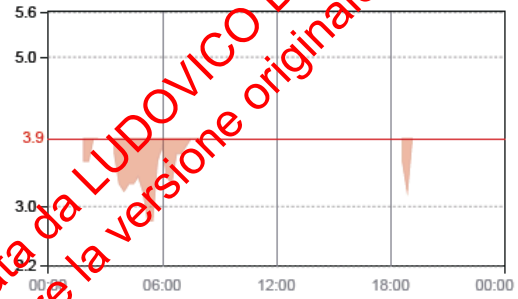
AVERAGE GLUCOSE	9.0 mmol/L
% above target	33 %
% in target	65 %
% below target	2 %

Average Glucose



LOW GLUCOSE EVENTS	3
Average duration	115 Min

Low Glucose Events



Sensor Usage

% TIME SENSOR IS ACTIVE	100 %

% Time Sensor is Active

Carbs

DAILY CARBS

INSULIN

RAPID-ACTING INSULIN

LONG-ACTING INSULIN

Total Daily Insulin

Comments

• Gaps found in food d

reporting period have

events.

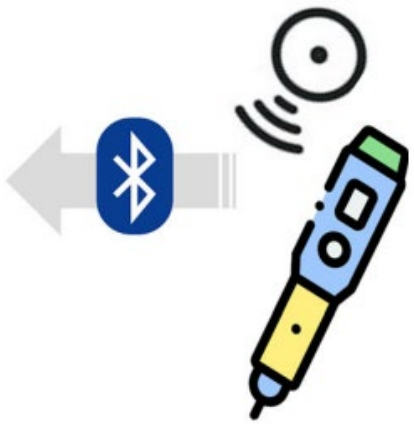
INSULIN

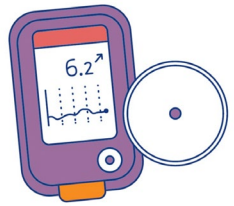
RAPID-ACTING INSULIN	22.2 units/day
LONG-ACTING INSULIN	25.0 units/day
Total Daily Insulin	47.2 units/day

Comments

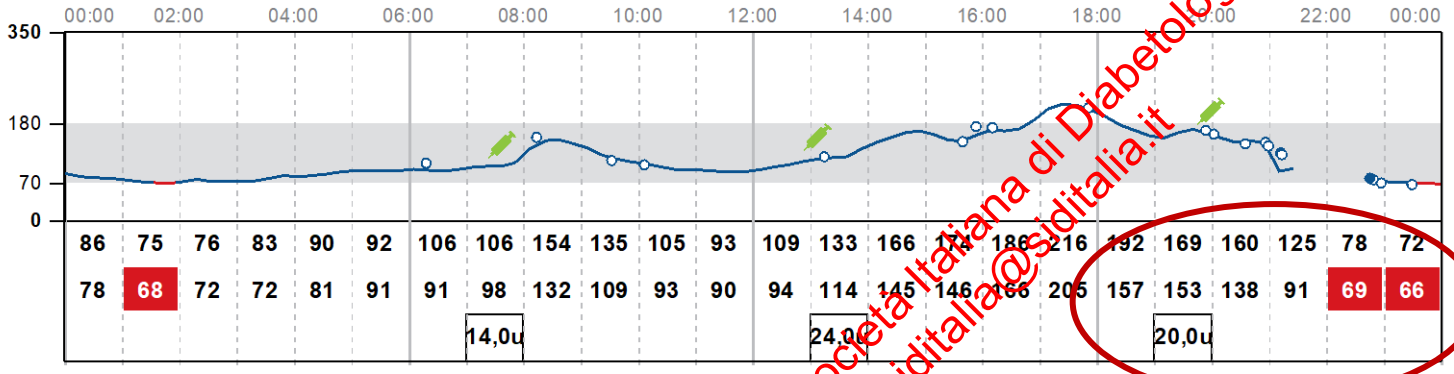
• Gaps found in food data. 14 days in this

reporting period have no recorded food



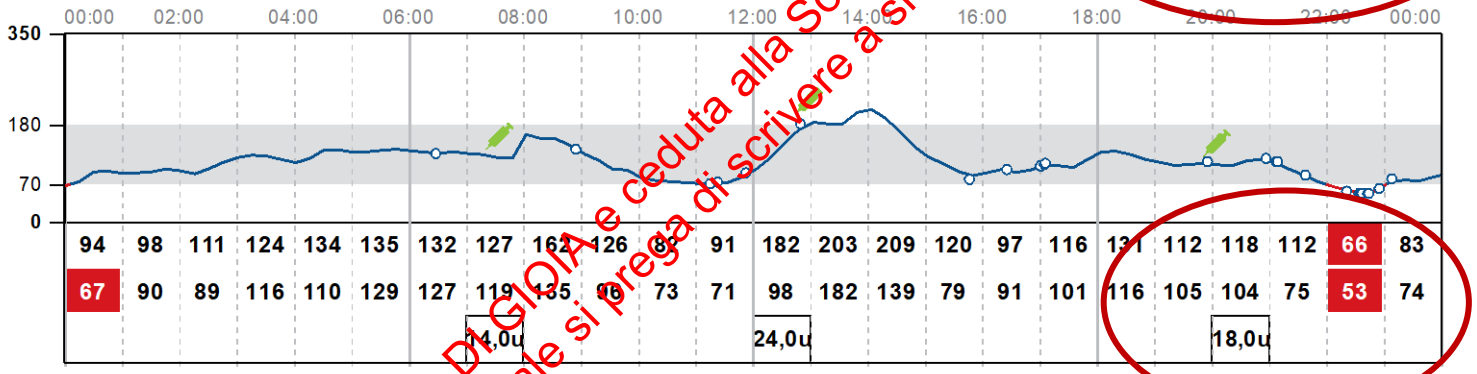


MAR **9 apr**



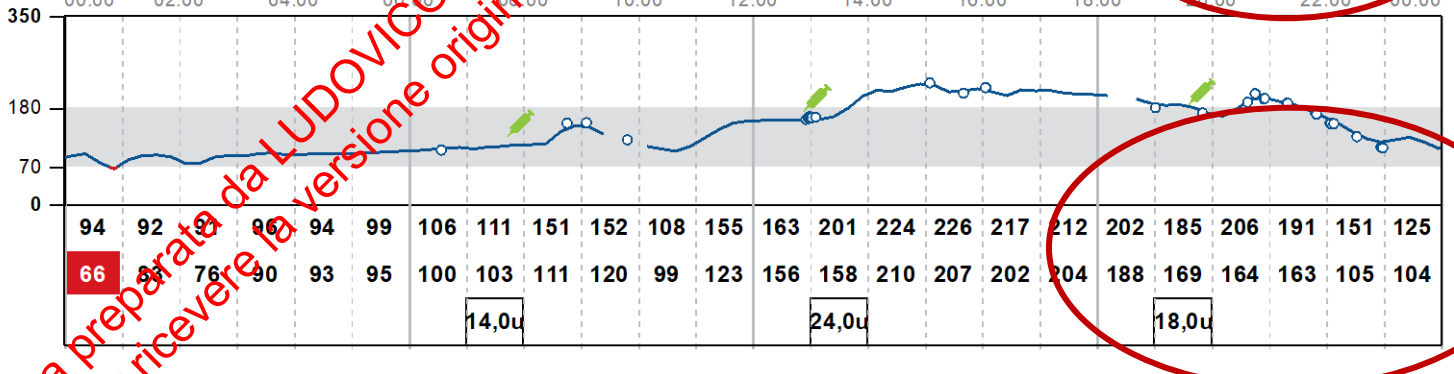
Glucosio mg/dL – Max	86	75	76	83	90	92	106	106	154	135	105	93	109	133	166	174	186	216	192	169	160	125	78	72
Glucosio mg/dL – min	78	68	72	72	81	91	91	98	132	109	93	90	94	114	145	146	166	205	157	153	138	91	69	66
Insulina ad azione rapida								14,0u						24,0u						20,0u				

MER **10 apr**



Glucosio mg/dL – Max	94	98	111	124	134	135	132	127	162	126	87	91	182	203	209	120	97	116	131	112	118	112	66	83
Glucosio mg/dL – min	67	90	89	116	110	129	127	119	135	96	73	71	98	182	139	79	91	101	116	105	104	75	53	74
Insulina ad azione rapida								14,0u					24,0u								18,0u			

GIO **11 apr**

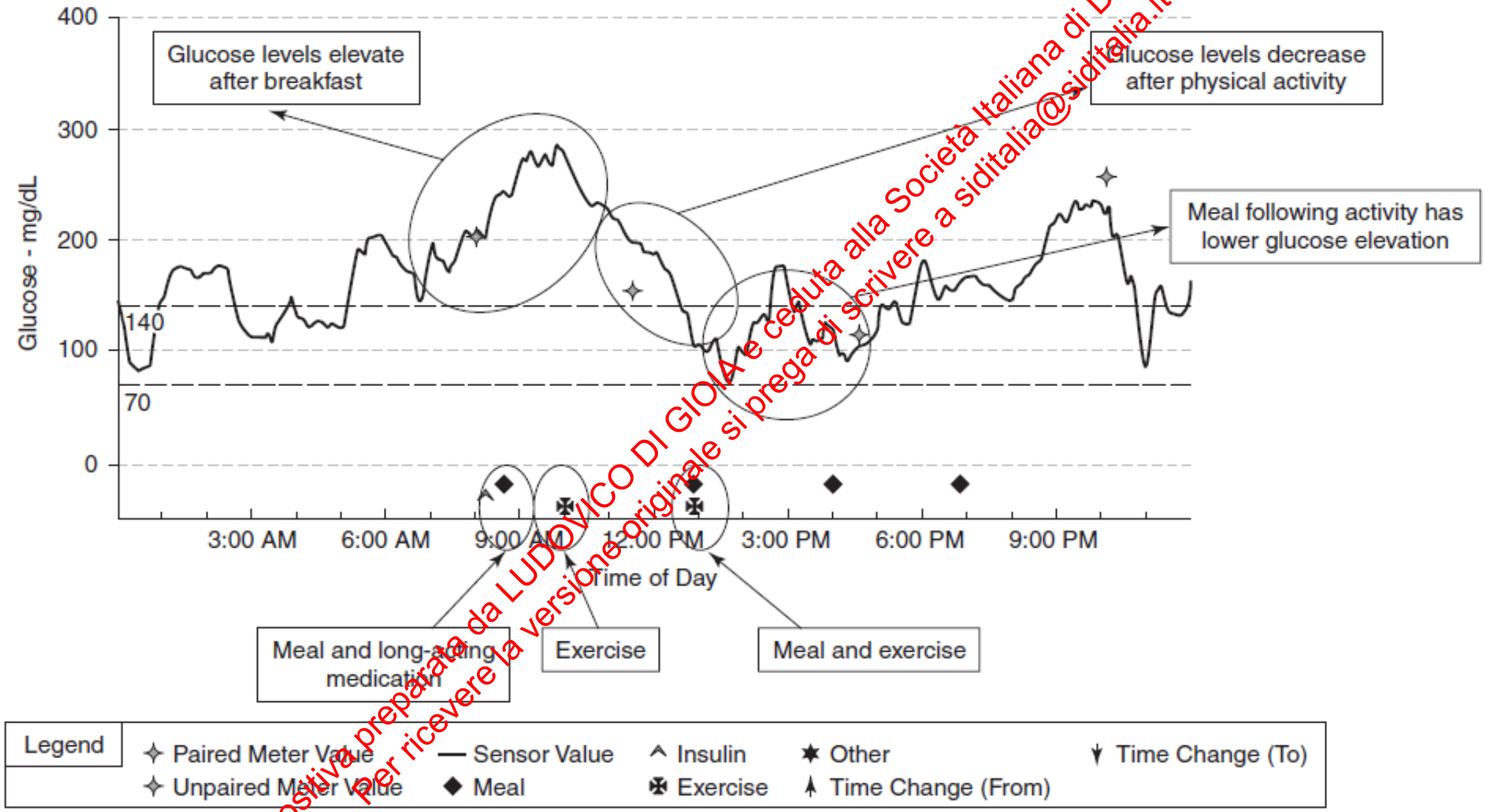


Glucosio mg/dL – Max	94	92	91	96	94	99	106	111	151	152	108	155	163	201	224	226	217	212	202	185	206	191	151	125
Glucosio mg/dL – min	66	83	76	90	93	95	100	103	111	120	99	123	156	158	210	207	202	204	188	169	164	163	105	104
Insulina ad azione rapida								14,0u						24,0u							18,0u			

Legenda Glucosio alto (>200) Glucosio basso (<70) Scansioni/Visualizzazioni Registrato Picco postprandiale Nuovo sensore Modifica ora

17,0u-2,0+0=15,0u Pasto + Correzione + Modif. utente = Totale * Test con striscia

Dietary- and Exercise-Teaching Events With CGM Graphs



Allen NA et al. Diabetes Technol Ther. 2009 Mar;11(3):151-8

Six-Step Approach for Using CGM Data in Clinical Practice

Step 1: Evaluate data sufficiency

Step 2: Evaluate the GMI

Step 3: Evaluate TIR together with TBR

Step 4: Identify patterns of hypo/hyperglycemia

Step 5: Assess glucose variability (CV)

Step 6: Navigate using daily glucose profiles

CV, coefficient of variation; GMI, glucose management indicator; TBR, time below range; TIR, time in range

Di Molfetta S et al. Diabetes Res Clin Pract. 2022 May;187:109867

STEP 3

Set the appropriate glucose target range (70-180 mg/dL) and look at the time-in-ranges bar graph

TIR >70% and TBR <4%

Any TIR and TBR ≥4%

TIR ≤70% and TBR <4%

Look at TAR

Reduce hypoglycemia severity and frequency

Reduce hyperglycemia severity and frequency

STEP 4

Look at AGP

Detection of patterns of hypoglycemia: nocturnal/ preprandial/postprandial

- **High priority:** either the median or 25th percentile values are ≤70 mg/dL, or the 5th percentile value is ≤54 mg/dL
- **Moderate priority:** the 5th percentile value is ≤70 mg/dL

STEP 4

Look at AGP

Detection of patterns of hyperglycemia: nocturnal/ preprandial/postprandial

- **High priority:** either the median or the 75th percentile values are >180 mg/dL, or the 95th percentile value is >250 mg/dL
- **Moderate priority:** the 95th percentile value is >180 mg/dL

STEP 5

Look at CV

CV ≤36% | CV >36%

No change to ongoing treatment

Enhanced Management Plan (BOX 1)

STEP 6

Look at the daily glucose profiles

List of possible interventions (BOX 2)

STEP 5

Look at CV

CV ≤36% | CV >36%

List of possible interventions (BOX 3)

STEP 6

Look at the daily glucose profiles

STEP 5

Look at CV

CV ≤36% | CV >36%

List of possible interventions (BOX 4)

STEP 6

Look at the daily glucose profiles

List of possible interventions (BOX 5)

MM ♀, 64 aa, DM2, MDI

STATISTICHE E TARGET GLUCOSIO

11 giugno 2024 - 24 giugno 2024 — **14 Giorni**

Tempo in cui il sensore è attivo — **97%**

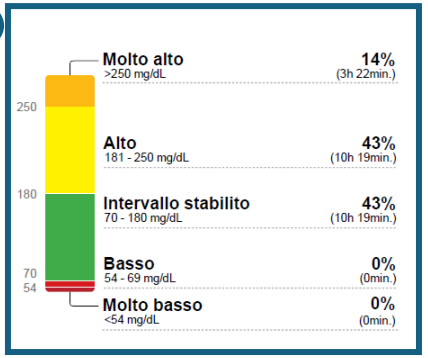
Intervalli e target per	Diabete tipo 1 o tipo 2
Intervalli di glucosio	**Target** % di letture (Ora/Giorno)
Intervallo stabilito 70 - 180 mg/dL	Superiore a 70% (16h 48min.)
Inferiore a 70 mg/dL	Inferiore a 4% (58min.)
Inferiore a 54 mg/dL	Inferiore a 1% (14min.)
Superiore a 180 mg/dL	Inferiore a 25% (6h)
Superiore a 250 mg/dL	Inferiore a 5% (1h 12min.)

Aumento del tempo nell'intervallo (70-180 mg/dL) è clinicamente vantaggioso.

Valore medio del glucosio	**193** mg/dL
Indicatore di gestione del glucosio (GMI)	**7,9% o 63 mmol/mol**
Variabilità del glucosio	**26,8%**

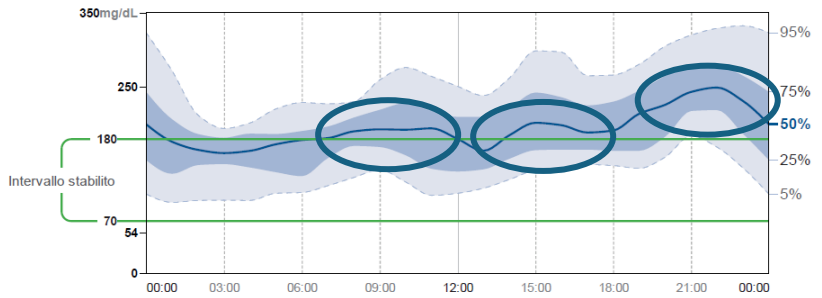
Definito come percentuale del coefficiente di variazione (%CV); obiettivo ≤36%

TEMPO NEGLI INTERVALLI



PROFILO DI GLUCOSIO AMBULATORIALE (AGP)

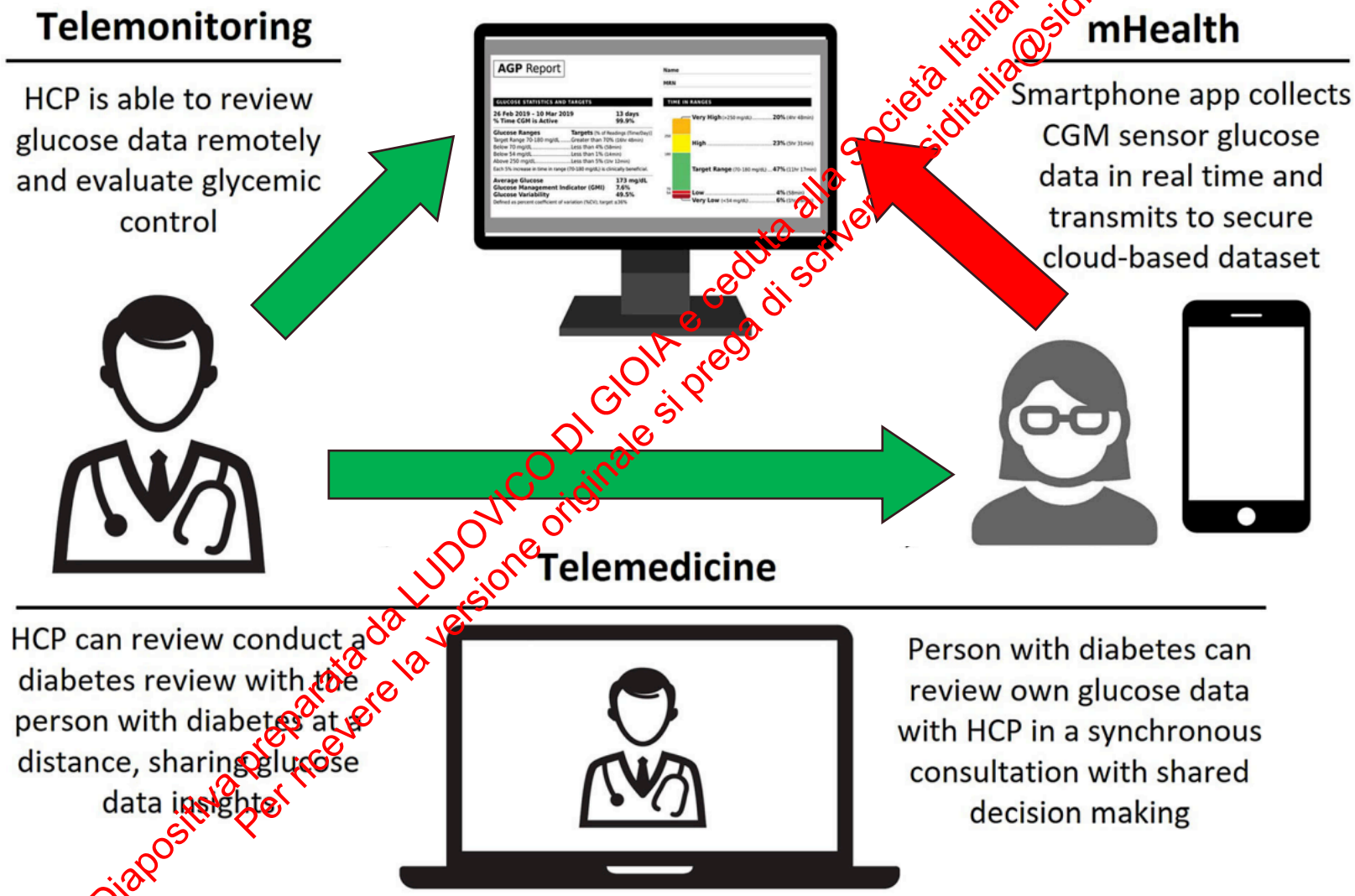
AGP è un riepilogo dei valori di glucosio del periodo di riferimento, con la mediana (50%) e gli altri percentili mostrati come se si fossero verificati in un solo giorno.



Box 4
Possible interventions for hyperglycaemia reduction.

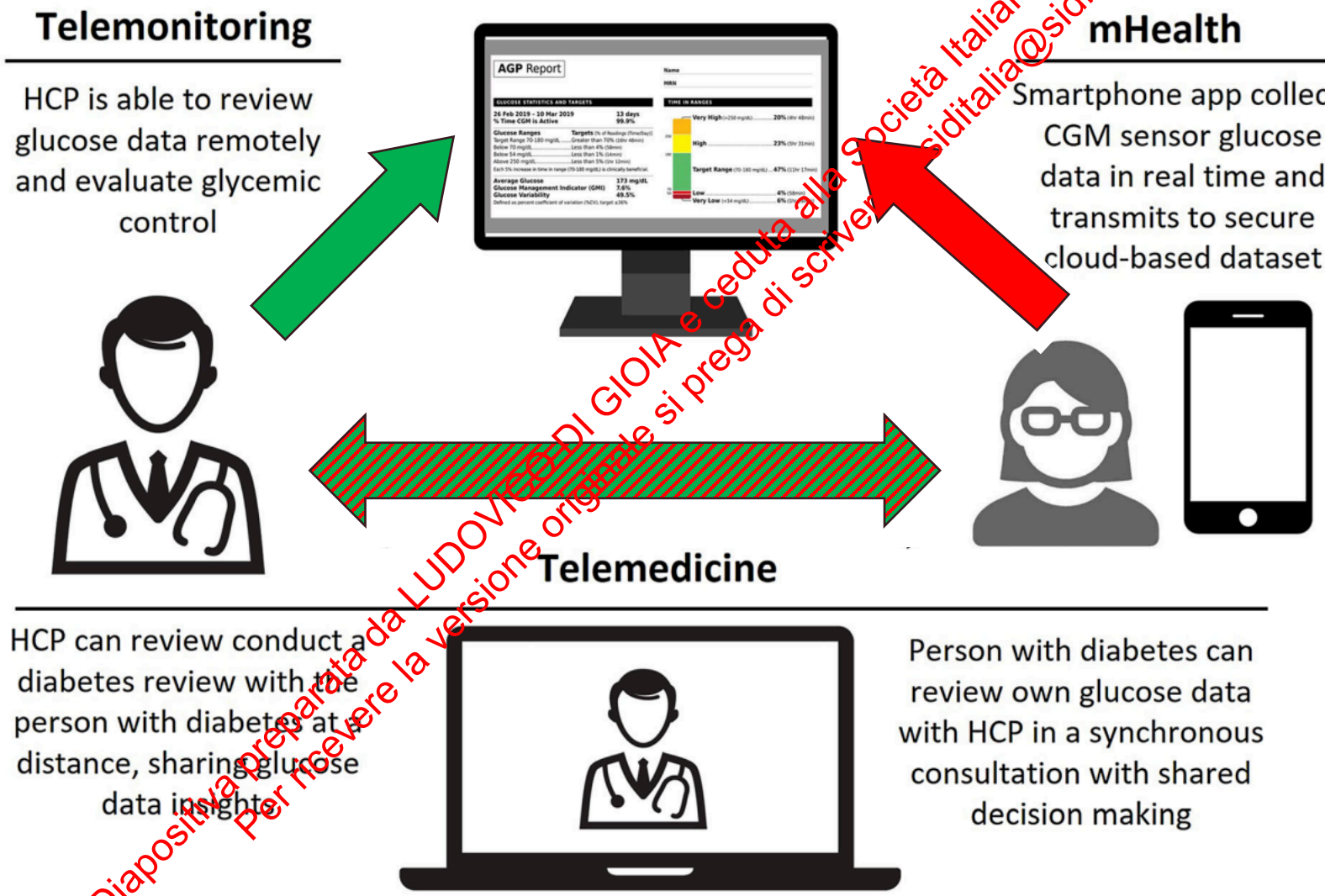
- Consider intensification of insulin therapy. → **AUMENTARE BOLO A COLAZIONE, PRANZO E CENA**
- Suggest increasing the frequency of daily scans with FGM system.
- Review carbohydrate-counting principles.
- Review hyperglycaemia correction principles with insulin sensitivity factor.
- Ask about prior episodes of severe hypoglycaemia and fear of hypoglycaemia (using the FH-15 scale [63]).
- Reinforce principles for diabetic ketoacidosis (DKA) prevention and early detection in patients whose time in hyperglycaemia >250 mg/dL is > 5%.
- Consider adding non-insulin treatment if applicable or implement ongoing non-insulin treatment.

Successful Integration of mHealth, Telemonitoring and Telemedicine in Diabetes



Adapted from Choudhary P et al Diabetes Ther. 2021 Aug 14;12(9):2311–2327.

Successful Integration of mHealth, Telemonitoring and Telemedicine in Diabetes



Adapted from Choudhary P et al Diabetes Ther. 2021 Aug 14;12(9):2311–2327.

Efficacy of Telemedicine in People with T1D Using CGM Devices

Retrospective Study, n = 71, Age 41.9±14.3 yrs, HbA1c 7.5±0.9%, CSII 45.1%

Table 2 Glycemic control before and after telemedicine visit.

Parameter	4 weeks before TM	4 weeks after TM	*p*
Mean glucose (mg/dl), mean (SD)	161.1 (23.1)	156.3 (21.5)	0.001
GMI (%), mean (SD)	7.16 (0.56)	7.05 (0.53)	0.002
CV (%), mean (SD)	33.9 (4.8)	33.9 (5.5)	0.9
Time in target (%), mean (SD)	63.6 (15.3)	66.3 (15.1)	0.0009
Time in hypoglycemia (%), mean (SD)	3.0 (2.7)	3.2 (3.4)	0.6
Time in hyperglycemia (%), mean (SD)	33.4 (15.7)	30.5 (15.3)	0.002
Sensor use (% per period) mean (SD)	92.6 (14.3)	92.3 (15.1)	0.9

CGM, continuous glucose monitoring; CSII, continuous subcutaneous insulin infusion; CV, coefficient of variation; GMI, glucose management indicator; TM, telemedicine; SD, standard deviation

Boscari F et al. Nutr Diabetes. 2021 Jan 5;11(1):1

Effectiveness of CGM with Telemonitoring in Non-Insulin-Treated T2D

Randomized Controlled Trial, n = 105, Age 57.3±11.8 yrs, HbA1c 8.1±1.4%

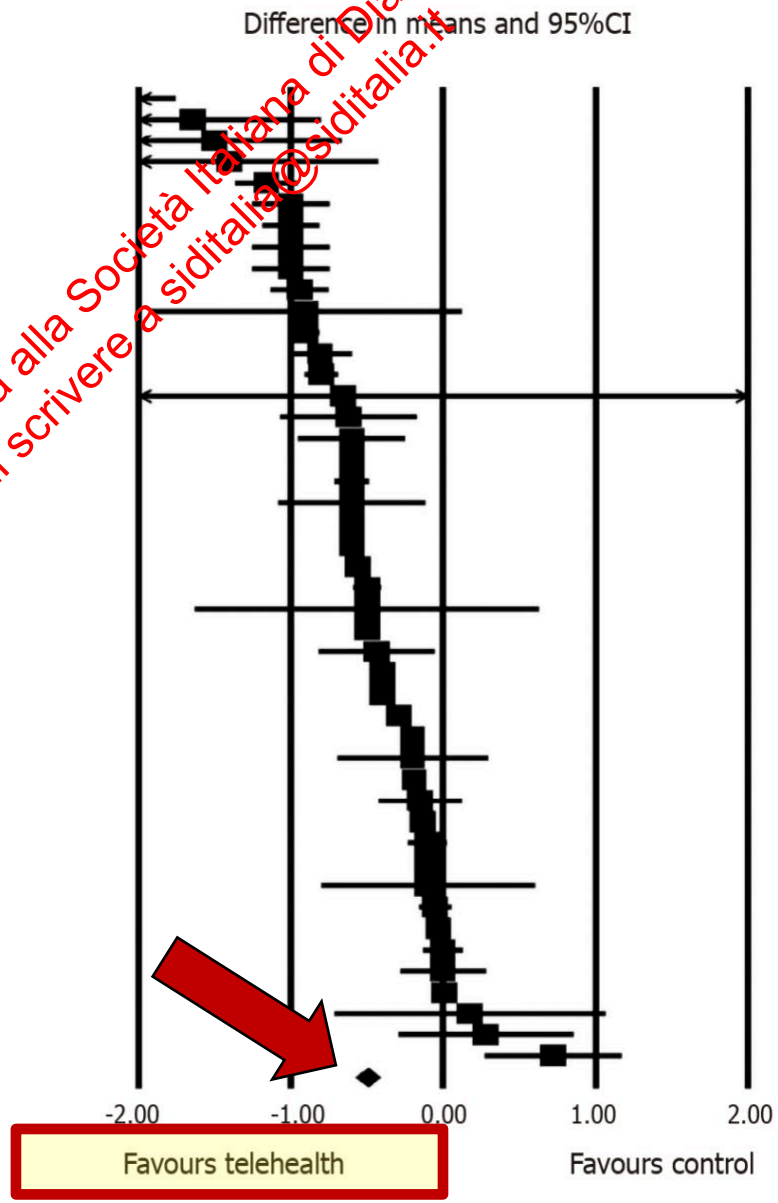
Variable	CGM Group (n = 45)	Enhanced Usual Care (n = 41)	*p* value
Glycated Hemoglobin (HbA1c)			
Baseline HbA1c (%/mmol/mol)	7.8 ± 0.9/62 ± 9.8	8.2 ± 1.3/66 ± 14.2	–
HbA1c at 12 Weeks, (%/mmol/mol)	7.1 ± 0.7/54 ± 7.7	7.8 ± 1.3/62 ± 14.2	–
Change from Baseline	−0.69 ± 1.0/ 7.5 ± 11.5	−0.33 ± 1.7/ −3.6 ± 19	0.26*
Adjusted Difference in HbA1c change % (95 % CI) mmol/mol (95 % CI)	−0.65 [−1.0 to −0.1] 7.1 [−10.2 to −1.9]		0.008**
Proportion with ≥ 0.5 % Reduction	27 (60 %)	15 (37 %)	0.03***
RR for ≥ 0.5 % Reduction (95 % CI)	1.92 [1.1 to 3.0]		
Weight			
Baseline, kg	89.3 ± 19.3	86.9 ± 19.7	–
Follow-up, kg	83.2 ± 17.7	86.3 ± 19.4	–
Change in Weight, kg (95 % CI)	−2.48 [−3.7 to −1.2]	−0.31 [−1.8 to 1.2]	0.02*
Blood Pressure (mmHg)			
Baseline Systolic	128.8 ± 11.0	132.3 ± 16.7	–
Follow-up Systolic	124.7 ± 12.4	127.3 ± 13.9	–
Change in Systolic, mmHg (95 % CI)	−3.7 [−6.9 to −0.4]	−4.9 [−9.8 to 0.04]	0.67*
Baseline Diastolic	82.4 ± 9.3	79.95 ± 10.5	–
Follow-up Diastolic	79.1 ± 10.9	78.6 ± 11.0	–
Change in Diastolic, mmHg (95 % CI)	−2.9 [−5.7 to −0.03]	−1.1 [−3.7 to 1.3]	0.36*

p-values are from paired t-tests for continuous variables. ** Adjusted for baseline HbA1c. *** p-values are from chi-square tests for categorical variables. CGM, continuous glucose monitoring; CI, confidence interval; HbA1c, hemoglobin A1c; RR, relative risk ratio; T2D, type 2 diabetes

Lau D et al. Diabetes Res Clin Pract. 2024 Nov;217:111899

Effects of Telehealth Intervention on HbA1c in Type 2 Diabetes

Study name	Difference in means	Lower limit	Upper limit	*P* value
Kim 2008	-2.020	-2.281	-1.759	0.000
Pacaud 2012 Intervention 1 Male	-1.640	-2.473	-0.807	0.000
Wang 2018	-1.500	-2.329	-0.671	0.000
Quinn 2016 Age >55 years	-1.400	-2.365	-0.435	0.004
Kim 2007	-1.160	-1.362	-0.958	0.000
Crowley 2016	-1.000	-1.249	-0.751	0.000
Fountoulakis 2015	-1.000	-1.179	-0.821	0.000
Luley 2011	-1.000	-1.251	-0.749	0.000
Welch 2011	-1.000	-1.248	-0.752	0.000
Yip 2002	-0.940	-1.123	-0.757	0.000
Quinn 2016 Age <55 years	-0.900	-1.922	0.122	0.084
Stone 2009	-0.900	-0.979	-0.821	0.000
Whittemore 2020	-0.810	-1.013	-0.607	0.000
Fortmann 2017	-0.800	-0.904	-0.696	0.000
Xu 2019	-0.660	-5.987	4.667	0.808
Alanzi 2018	-0.620	-1.067	-0.173	0.001
Kempf 2017	-0.600	-0.948	-0.252	0.001
Kim 2016	-0.600	-0.639	-0.561	0.000
Kleinman 2017	-0.600	-0.708	-0.492	0.000
Liou 2014	-0.600	-1.079	-0.121	0.014
Wild 2016	-0.600	-0.635	-0.565	0.000
Williams 2012	-0.600	-0.674	-0.526	0.000
Dafoulas 2014	-0.560	-0.620	-0.500	0.000
Lim 2016	-0.500	-0.585	-0.415	0.000
Pacaud 2012 Intervention 2 Male	-0.500	-1.621	0.621	0.382
Wang 2017	-0.500	-0.539	-0.461	0.000
Orsama 2013	-0.436	-0.811	-0.061	0.023
Kim 2019	-0.400	-0.428	-0.372	0.000
Vinitha 2019	-0.400	-0.456	-0.344	0.000
Nicolucci 2015	-0.290	-0.319	-0.261	0.000
Cho 2017	-0.200	-0.212	-0.188	0.000
Pressman 2014	-0.200	-0.691	0.291	0.425
Tang 2013	-0.190	-0.225	-0.155	0.000
Jeong 2018 Intervention 2	-0.150	-0.422	0.122	0.279
Rodriguez-Idigoras 2009	-0.130	-0.163	-0.097	0.000
Holmen 2014 Intervention 1	-0.100	-0.221	0.023	0.111
Or 2020	-0.100	-0.136	-0.064	0.000
Ramadas 2018	-0.100	-0.795	0.595	0.778
Wayne 2015	-0.050	-0.152	0.052	0.334
Lee 2019	-0.030	-0.080	0.020	0.240
Holmen 2014 Intervention 2	0.000	-0.126	0.126	1.000
Jeong 2018 Intervention 1	0.000	-0.277	0.277	1.000
Dario 2016	0.010	-0.023	0.043	0.550
Arora 2014	0.175	-0.706	1.056	0.697
Pacaud 2012 Intervention 1 Female	0.280	-0.292	0.852	0.338
Pacaud 2012 Intervention 2 Female	0.720	0.277	1.163	0.001
	-0.497	-0.573	-0.421	0.000



43 studies meta-analysis, n= 6.932 patients

De Groot J et al. World J Diabetes. 2021 Feb 15;12(2):170-197.

Tappe Fondamentali della Televisita

- Calendarizzazione degli appuntamenti per i pazienti candidati;

- Contatto telefonico preliminare per descrivere la modalità della televista;

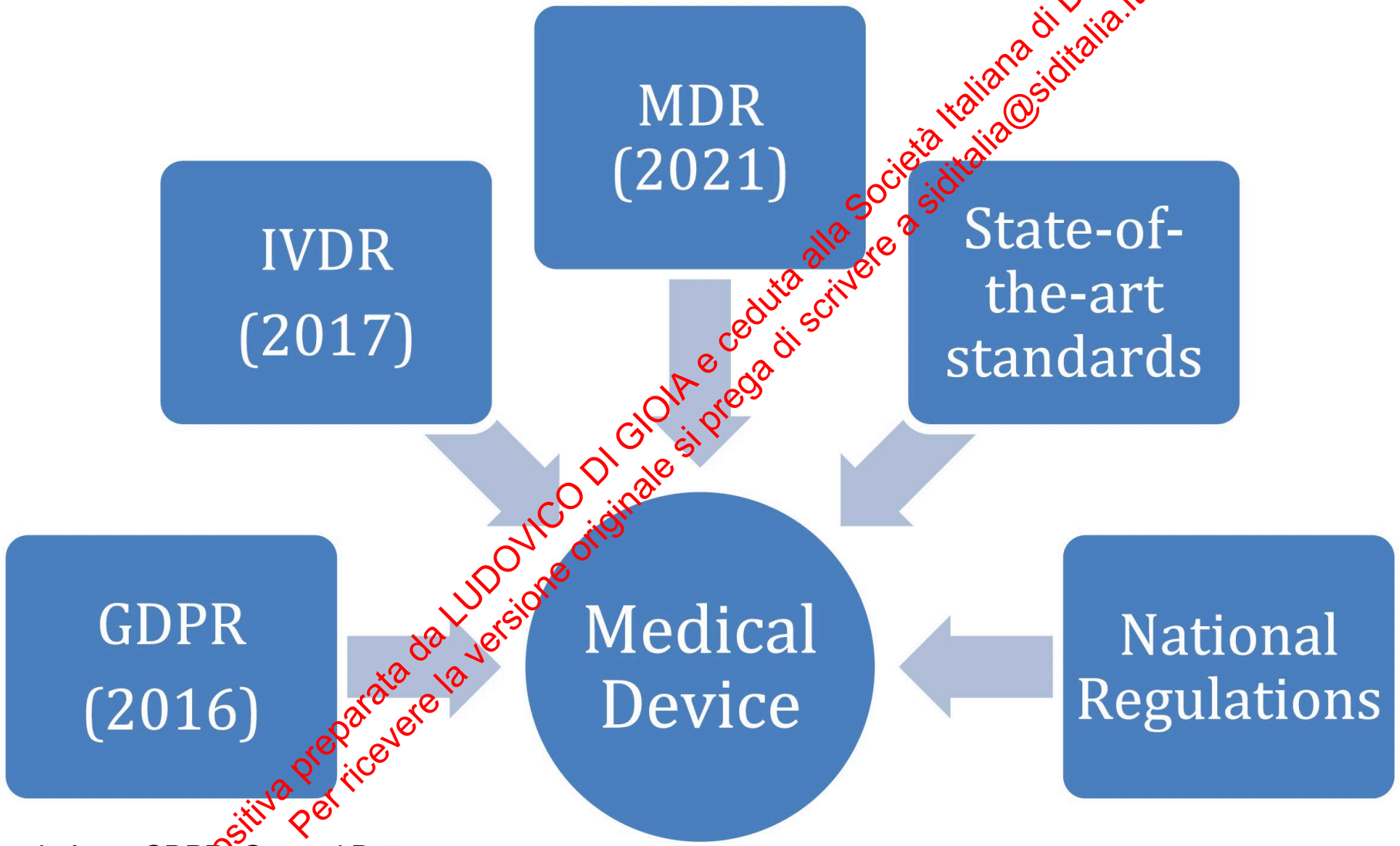
- Acquisizione della ricetta dematerializzata;

- Attività di televisita utilizzando infrastrutture di telecomunicazione atte a garantire la comunicazione verso l'utente, l'acquisizione e la trasmissione dei dati;

- Refertazione della televisita da inviare all'utente;

- Certificazione della prestazione sanitaria effettuata.

Regulations and Standards Affecting Medical Devices in EEA



EEA, European Economic Area; GDPR, General Data Protection Regulation; IVDR, In Vitro Diagnostic Medical Devices Regulation; MDR, Medical Devices Regulation.

Randine P et al. J Diabetes Sci Technol. 2025 May;19(3):611-619.

Take Home Messages

- **Data sharing from CGM devices offers significant benefits**, both when shared with caregivers (enhancing glycemic control and fostering a collaborative “team” approach to diabetes management) and when used for **retrospective glucose data analysis**, either independently by the person with diabetes or in collaboration with the diabetes care team, enabling targeted therapy adjustments.
- **Different CGM systems and platforms** provide diverse sharing options and reporting formats, all aligned with **standardized metrics** and current **data privacy regulations**.
- **Sharing CGM data enables telemedicine-based interventions** that effectively complement in-person visits, supporting **continuous and coordinated care** for people living with type 2 diabetes.

The content presented on this slide reflects the personal opinion and clinical interpretation of the Speaker.