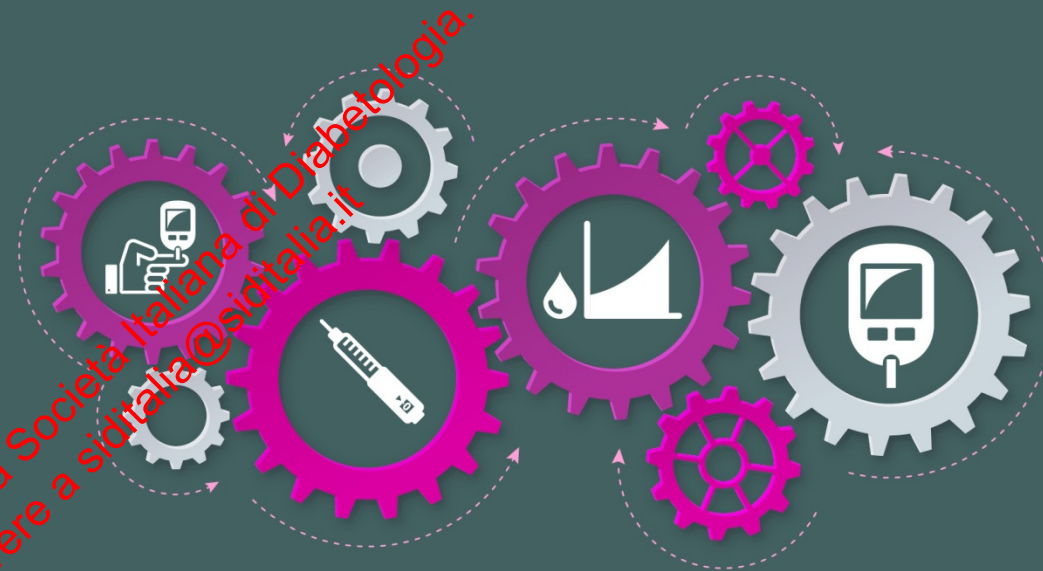


MONITORAGGIO GLICEMICO NEL DIABETE DI TIPO 2:

EVIDENZE, INNOVAZIONE
E PROSPETTIVE CLINICHE

8 OTTOBRE 2025

ROMA Hotel The Building



La condivisione dei dati da remoto è un valore aggiunto?

Sergio Di Molfetta, MD, PhD

Unità Operativa Complessa di Endocrinologia
Azienda Ospedaliero Universitaria Consorziale Policlinico di Bari
Direttore Prof. Francesco Giorgino



Diapositiva preparata da SERGIO DI MOLFETTA e ceduta alla Società Italiana di Diabetologia.
Per ricevere la versione originale si prega di scrivere a siditalia@siditalia.it

Il Dr Sergio Di Molfetta dichiara di aver ricevuto negli ultimi due anni compensi o finanziamenti dalle seguenti Aziende Farmaceutiche e/o Diagnostiche:

- Ascensia Diabetes Care
- Menarini Diagnostics
- Movì SpA
- Roche Diabetes Care Italy
- Sanofi
- Theras Lifetech Srl

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...)

Continuous Glucose Monitoring

Current Glucose Reading

Glucose Graph

Trend Arrow

 Glucose Alarms



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

									
Approved Age, years	≥2	≥2	≥2	≥18	≥2	≥2	≥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 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

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	21x21x 2.9	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, ...Laviola L et al. Diabetes Ther. 2024 Sep 30

Share 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
	i..... R.....	Every 3 minutes	10	Sensor status, current glucose value, trend arrows, glucose history graph (24h), customizable glucose alerts
	L.....	Every 1 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

CGM, continuous glucose monitoring

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%)	6155 (95.0%)	
	13–18	376 (5.1%)	6940 (94.9%)	
Adherence (days per week)	2–5	4.8 (1.8)	6.1 (0.7)**	✓
	6–12	4.7 (1.9)	6.2 (0.7)**	✓
	13–18	4.9 (1.9)	5.9 (0.9)**	✓
Glucose (mg/dL)	2–5	188.2 (50.8)	187.3 (36.8)	
	6–12	192.6 (49.3)	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	46.5% (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 * $p < 0.01$; ** $p < 0.001$

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

Survey, n = 315, Age 42.8±12.8 yrs, Female 57.6%

	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)

^aItems 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

Perceived Value of CGM Data Sharing in Caregivers of People w/ T1D

Survey, n = 515, Age 45.9±10.4 yrs, Female 48.5%

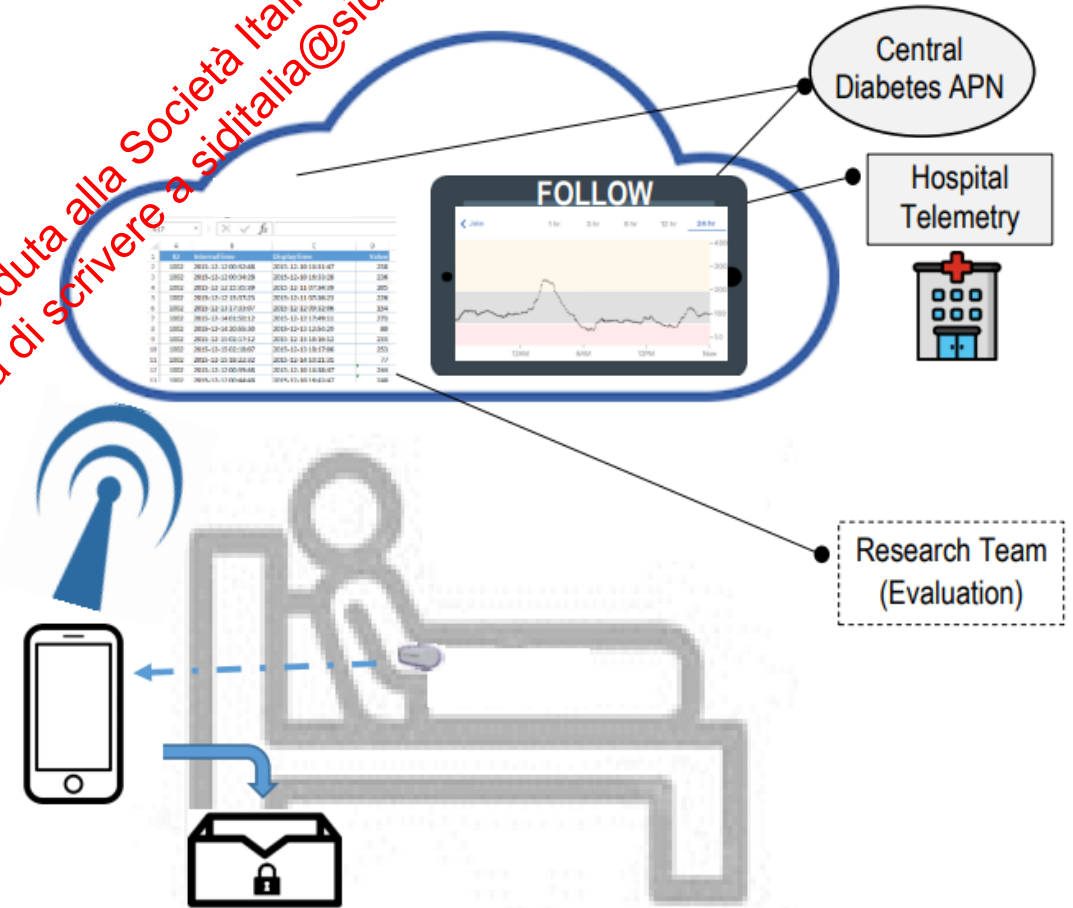
	N (%) agreed		P-value
	Partners (n = 212)	Parents (n = 303)	
Data sharing gives me peace of mind	286 (87.7)	268 (88.4)	.805
Because of data sharing, I am more critical about the choices my partner/ child is making about his/her diabetes	122 (57.5)	163 (53.8)	.399
Thanks to data sharing, if my partner/child 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 <i>less</i> anxious about my partner/child	183 (86.3)	257 (84.8)	.634
Because of data sharing, I now feel <i>more</i> 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.

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

Randomized Controlled Trial, 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)	0.0404
% Hyperglycemia			
>250 mg/dL	32.96 (20.40–68.75)	27.00 (16.01–46.97)	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; RT-CGM, real-time glucose monitoring; SD, standard deviation; T2D, type 2 diabetes; TIR, time in range; UC, usual care

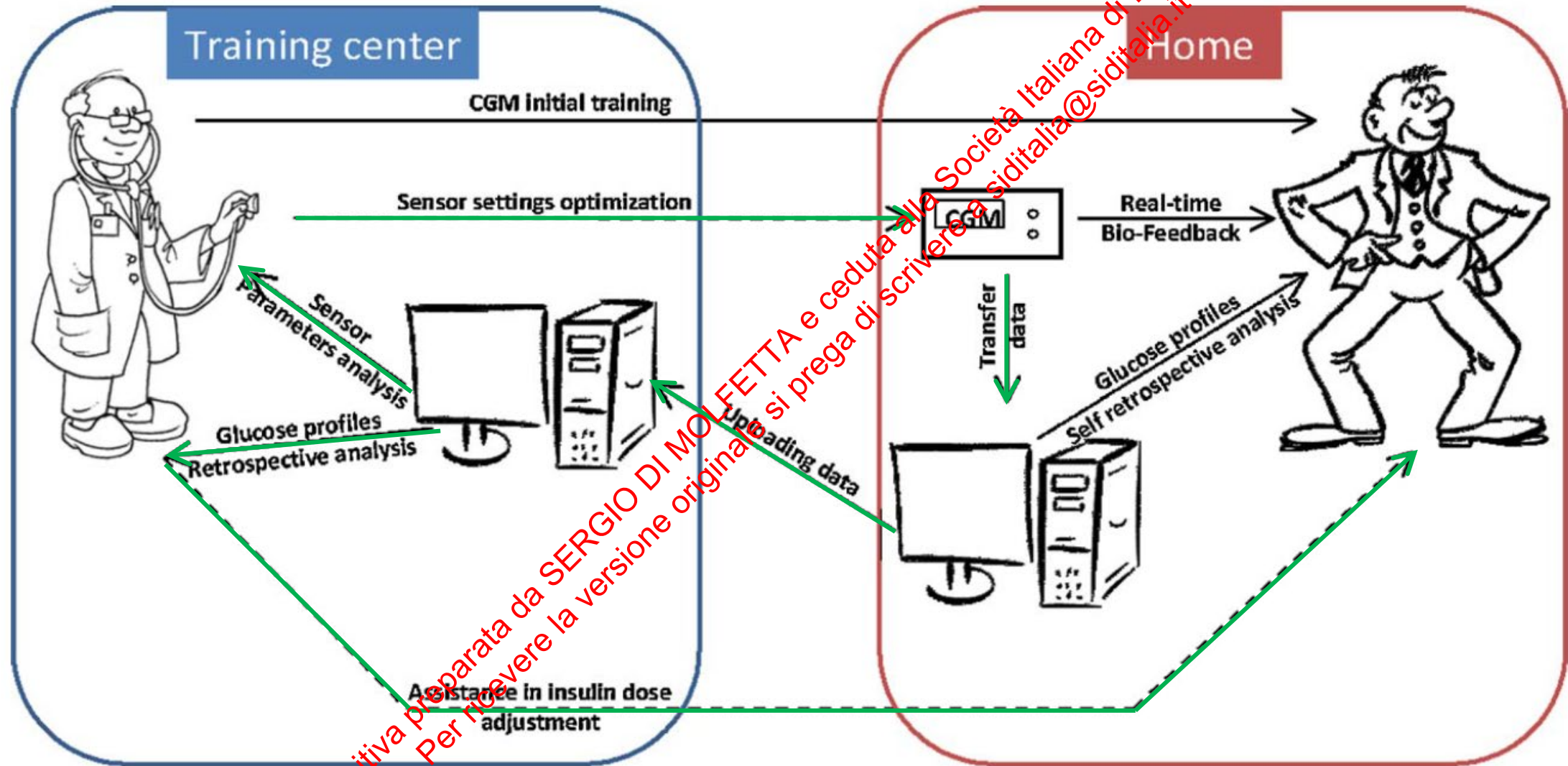
Reduction of Inpatient Hypoglycemia in People with Insulin-Treated T2D

Randomized Controlled Trial, n = 82, Age 68±10 yrs, ≥1 Risk Factors for Inpatient Hypoglycemia

	RT-CGM/GTS group (n = 36)	POC group (n = 36)	P value
Hypoglycemic events/patient			
<70 mg/dL	0.67 (0.34–1.30)	1.69 (1.11–2.58)	0.024
<54 mg/dL	0.08 (0.03–0.26)	0.75 (0.51–1.09)	0.003
Nocturnal hypoglycemic events/patient			
<70 mg/dL	0.19 (0.02–0.49)	0.33 (0.19–0.59)	0.26
<54 mg/dL	0.03 (0.01–0.24)	0.11 (0.04–0.33)	0.26
Hypoglycemic events (<70 mg/dL)/patient/day	0.12 (0.06–0.24)	0.35 (0.23–0.54)	0.011
TBR <70 mg/dL (%)	0.40 (0.18–0.92)	1.88 (1.26–2.81)	0.002
TBR <54 mg/dL (%)	0.05 (0.01–0.43)	0.82 (0.47–1.43)	0.017
TIR 70–180 mg/dL (%)	59.12 (52.47–66.61)	54.69 (47.96–62.37)	0.39
TAR >180–250 mg/dL (%)	29.88 (26.11–34.19)	30.10 (26.11–34.70)	0.94
TAR >250 mg/dL (%)	10.60 (7.15–15.73)	13.33 (9.20–19.37)	0.41
CV (%)	26.09 (24–28.19)	27.89 (25.41–30.36)	0.28
Data are mean (95% CI).			

CV, coefficient of variation; CI, confidence interval; GTS, glucose telemetry system; POCT, point-of-care testing; RT-CGM, real-time CGM; TAR, time above range; TBR, time below range; TIR, time in range; T2D, type 2 diabetes

Personal vs. Retrospective Use of CGM



CGM, continuous glucose monitoring

Piattaforme per la Gestione dei Dati del Diabete - Classificazione

	Agnostiche	Proprietarie
Compatibilità	Supportano più marchi e tipologie di dispositivi	Tipicamente limitata a un solo marchio o linea di prodotti
Flessibilità	Consentono di cambiare dispositivo senza dover cambiare piattaforma	Il cambio di dispositivo richiede spesso il passaggio a un'altra piattaforma
Integrazione dei dati	Combinano dati provenienti da diverse fonti per offrire una visione completa	Gestiscono i dati di un solo dispositivo – possono creare silos informativi
Monitoraggio da Remoto	Compatibili con attività di tele salute; consentono l'accesso agli operatori sanitari	Dipende dal marchio — le funzionalità da remoto possono variare
Ottimizzazione delle Funzionalità	Strumenti e analisi standardizzati per tutti i dispositivi compatibili	Integrazione profonda con le funzionalità specifiche del dispositivo
Informazioni sullo Stile di Vita	Supportano l'analisi multidimensionale dei dati tramite dispositivi indossabili e app	Raramente considerano indicatori di salute generali oltre ai livelli di glucosio
Esempi	T....., G....., R..... D..... C..... P.....	C..... C....., D..... C....., L.....

Piattaforme per la Gestione dei Dati del Diabete - Dashboard

Cerca pazienti

Ambulatorio Diabetologia Policlinico Bari1 FiltroAmbulatorio Diabetologia Policlinico Bari8 Colonne

In base agli ultimi 14 giorni di dati disponibili del paziente.0/5

Cognome	Nome	Data di nascita	Stato Utente	Ultimi dati disponibili	Giorni di tempo in cui il sensore è attivo	% nel target	% inferiore al target
			In sospeso Rinvia	Nessun caricamento			
			Collegato	18/3/2023	7	56	0
			Collegato	17/5/2023	55	29	1
			Collegato	10/7/2023	98	66	22
			In sospeso Rinvia	Nessun caricamento			
			Collegato	Oggi	61	45	9
			Collegato	2/12/2021	100	92	0
			Collegato	Oggi	87	46	1
			Collegato	Oggi	98	56	0
			Non invitato Invita il cliente	9/2/2023	91	41	5
			Collegato	Oggi	99	70	4
			Collegato	4 giorni fa	53	38	0
			Collegato	17/7/2022	74	31	0
			Collegato	6/3/2022	31	86	14
			Collegato	3 giorni fa	60	30	0
			Collegato	Oggi	99	88	9
			Collegato	3/6/2023	6	16	0
			Collegato	Oggi	74	57	6
			Collegato	19/4/2022	95	73	0

Scarica schermata attuale

Diapositiva preparata da SERGIO DI MOLFETTA e ceduta alla Società Italiana di Diabetologia.
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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)

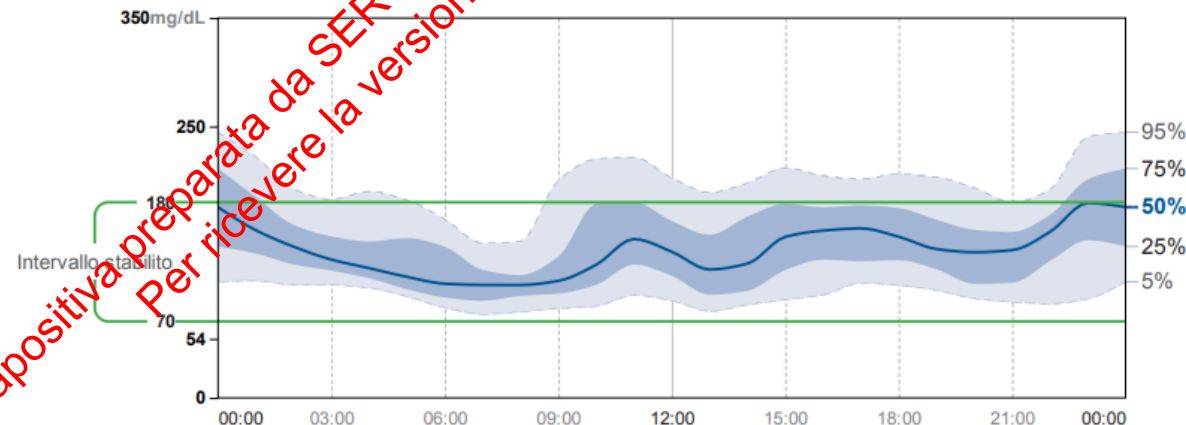
TEMPO NEGLI INTERVALLI



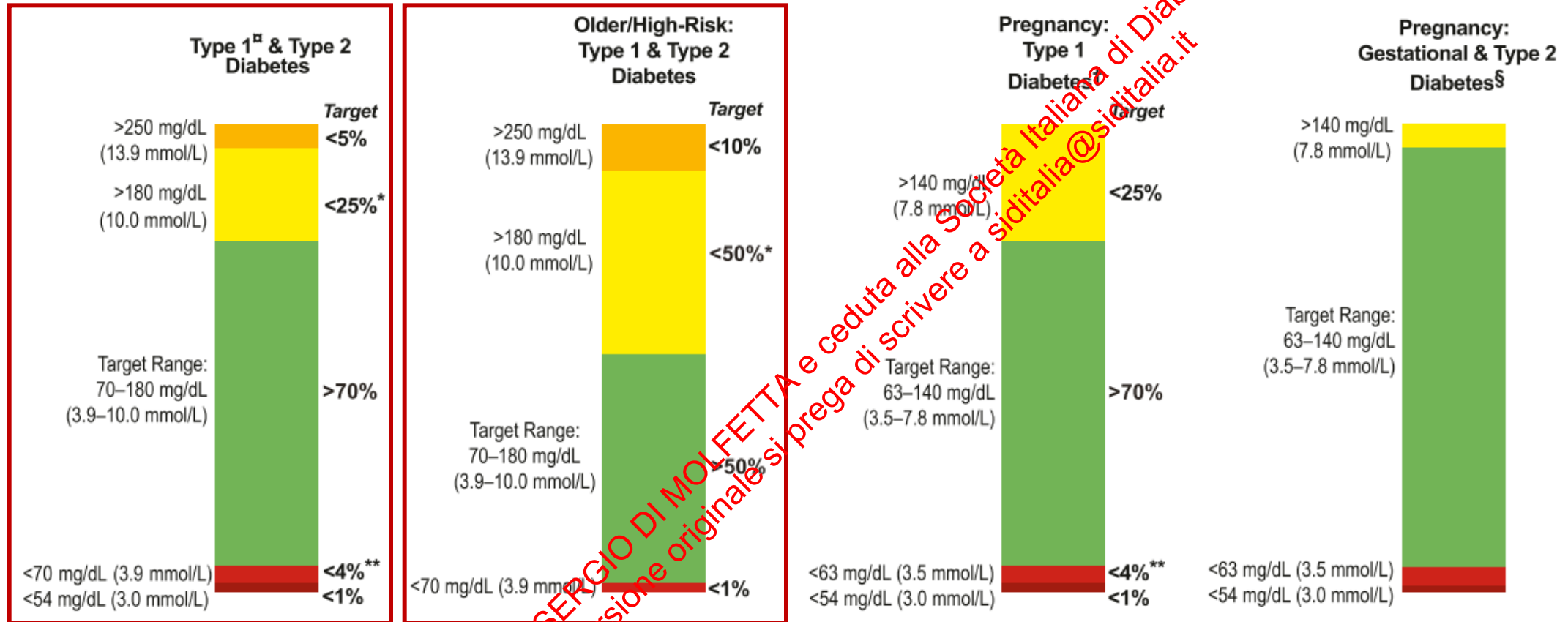
Rappresenta il tempo trascorso all'interno (TIR), sopra (TAR) e sotto (TBR) l'intervallo di glucosio desiderato

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.



TIR Goals for Different Populations with Diabetes



▣ 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).

Indicatori di Controllo e Variabilità Glicemica Ricavabili dal CGM

STATISTICHE E TARGET GLUCOSIO

15 agosto 2023 - 28 agosto 2023

14 Giorni

Tempo in cui il sensore è attivo:

99%

Intervallo e target per

Diabete tipo 1 o tipo 2

Intervallo di glucosio	Target % di letture (Ora/Giorno)
Intervallo stabilito 70-180 mg/dL	Superiore a 70% (16h 48min.)
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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%

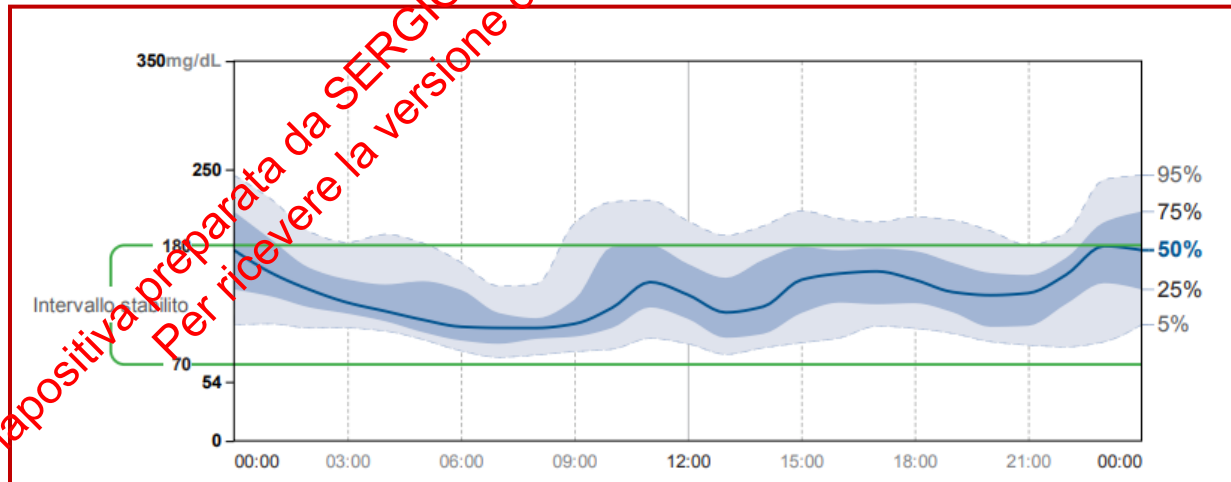
Definito come coefficiente di variazione percentuale (%CV)

TEMPO NEGLI INTERVALLI



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.



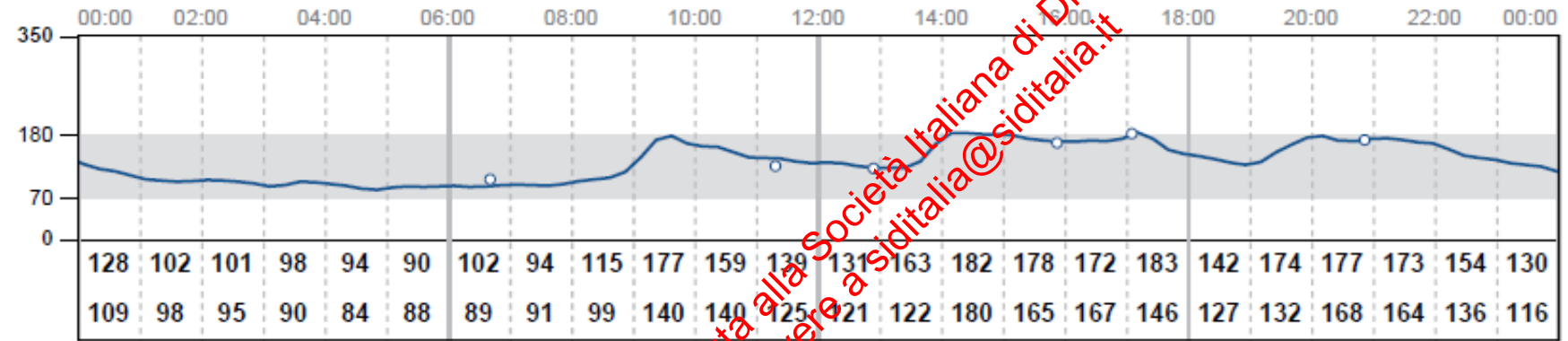
Il profilo ambulatoriale del glucosio (AGP) favorisce il riconoscimento degli andamenti di ipoglicemia ed iperglicemia e mostra la variabilità glicemica

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.

Profili Giornalieri del Glucosio

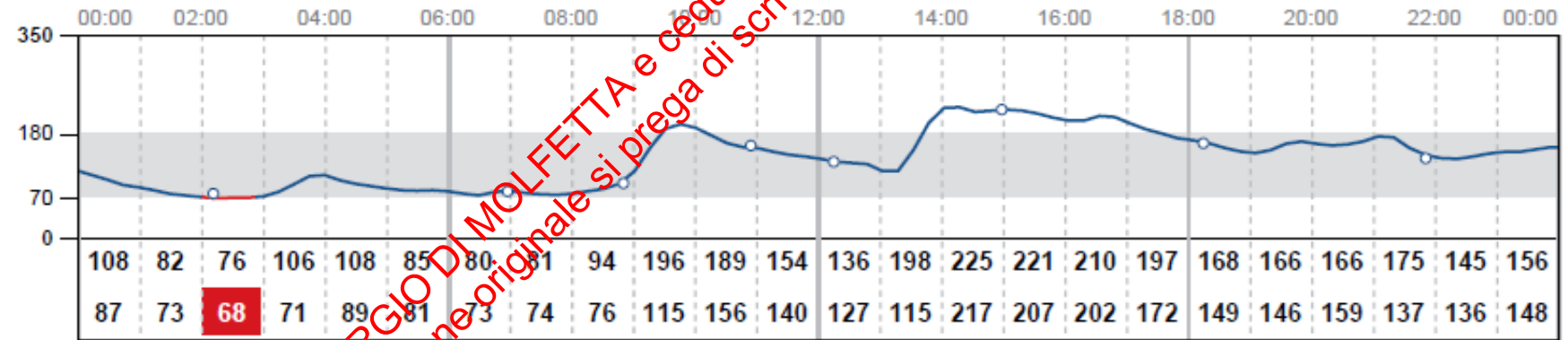
LUN 19 feb

Glucosio mg/dL
Max
min



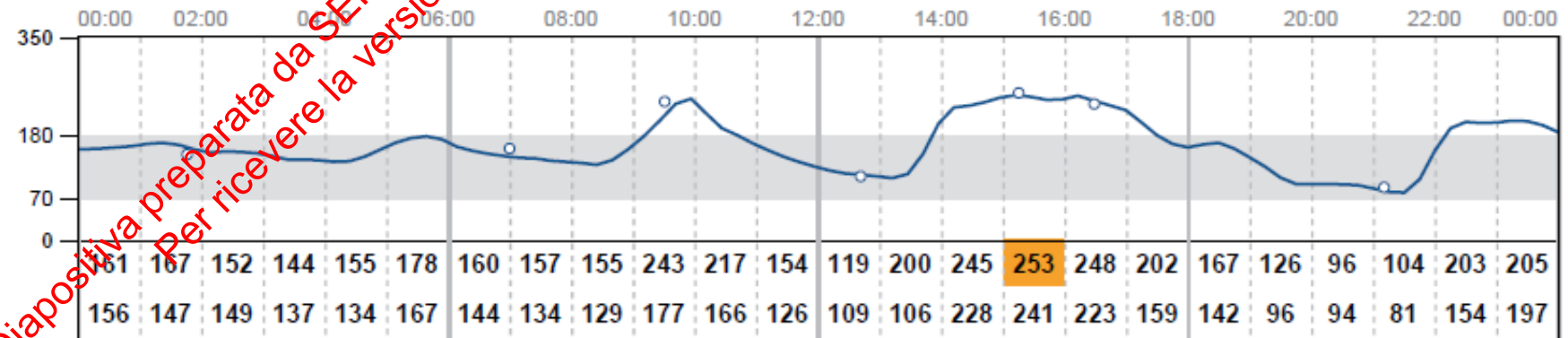
MAR 20 feb

Glucosio mg/dL
Max
min



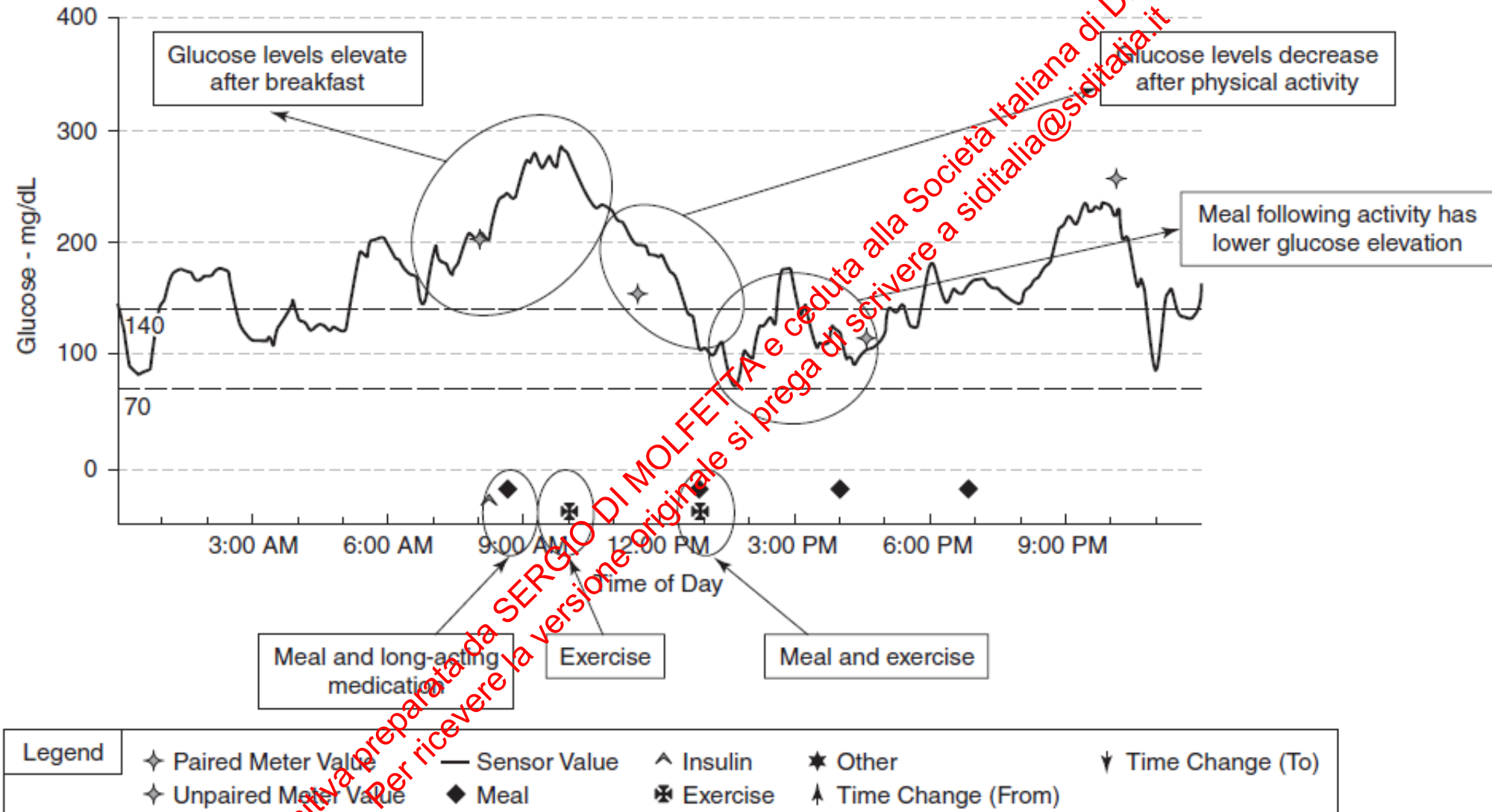
MER 21 feb

Glucosio mg/dL
Max
min



Diapositiva preparata da SERGIO DI MOLFETTA e ceduta alla Societa Italiana di Diabetologia.
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Dietary- and Exercise-Teaching Events With CGM Graphs



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 hypohyperglycemia

Step 5: Assess glucose variability (CV)

Step 6: Navigate using daily glucose profiles

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 TIR

Reduce hypoglycemia severity and frequency

Reduce hyperglycemia severity and frequency

STEP 4

Look at AGP

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

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

List of possible interventions (BOX 4)

STEP 5

Look at CV

CV ≤36%

CV >36%

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

Tempo in cui il sensore è attivo

STEP 1

14 Giorni
97%

Intervalli e target per

Diabete tipo 1 o tipo 2

Intervalli di glucosio
Intervallo stabilito 70-180 mg/dL
Inferiore a 70 mg/dL
Inferiore a 54 mg/dL
Superiore a 180 mg/dL
Superiore a 250 mg/dL

Target % di lettura (Ora/Giorno)
Superiore a 70% (16h 48min.)
Inferiore a 4% (58min.)
Inferiore a 1% (14min.)
Inferiore a 25% (6h)
Inferiore a 5% (1h 12min.)

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

Valore medio del glucosio

193 mg/dL

Indicatori di gestione del glucosio (GMI)

7,9% o 63 mmol/mol

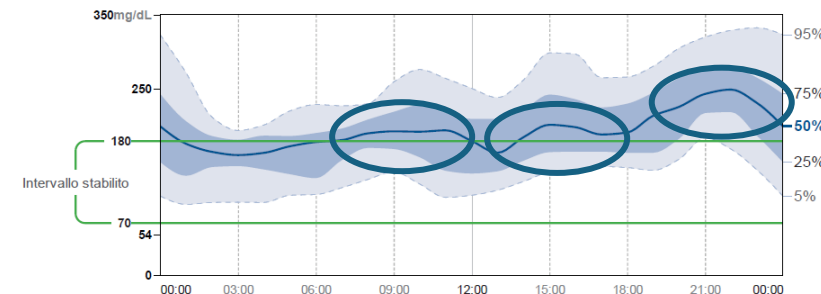
Variazioni del glucosio

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

26,8%

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.



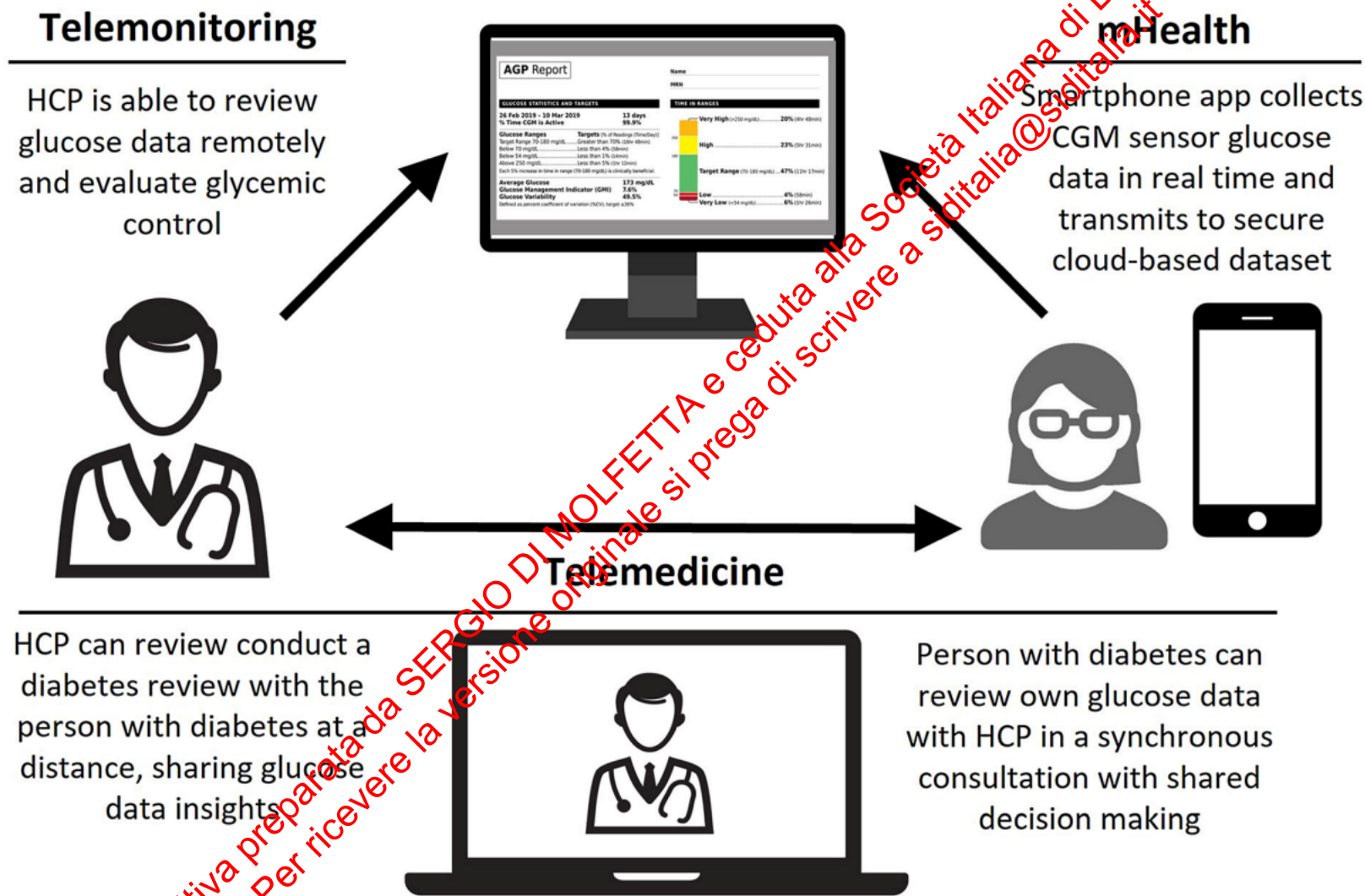
STEP 4

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.

Integration of mHealth, Telemonitoring and Telemedicine in Diabetes



Efficacy of Telemedicine in Persons 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	<i>p</i>
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 (15.5)	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

Effectiveness of CGM w/ 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 ± 1.3/60 ± 14.1	—
Change from Baseline	−0.69 ± 1.0/ −7.5 ± 11.5	−0.30 ± 1.7/ −3.6 ± 19.2	0.26*
Adjusted Difference in HbA1c change % (95 % CI)	−0.65 [−1.1 to −0.1] 7.1 [−2.2 to 1.9]		0.008**
mmol/mol (95 % CI)			
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	84.3 ± 19.3	86.9 ± 19.7	—
Follow-up, kg	84.2 ± 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

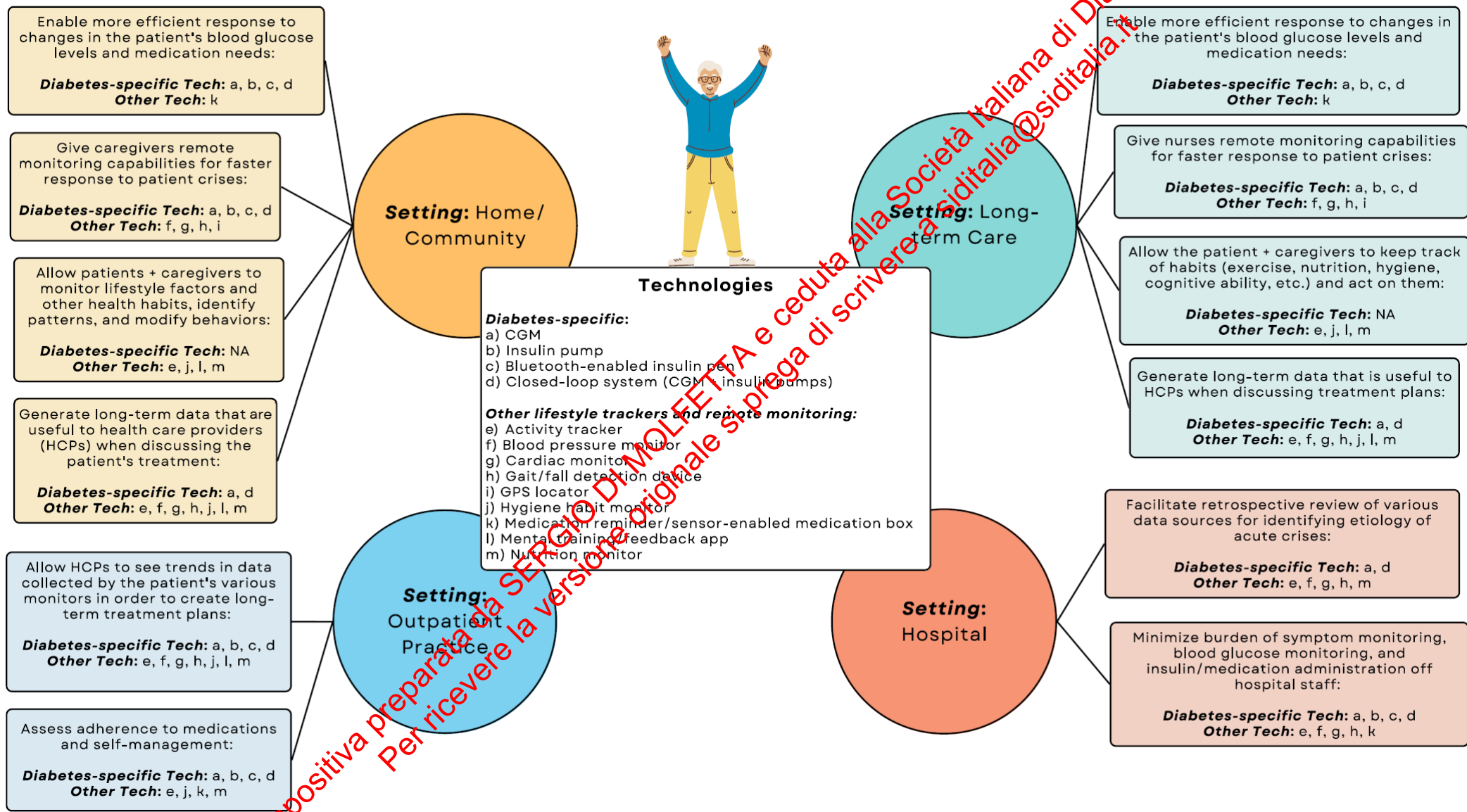
Remote CGM Monitoring for T2D in Resource-Limited Settings

Objective: To implement CGM and remotely monitor patients with T2D treated in a safety net clinic to allow for patient outreach between routinely scheduled visits and provide feedback to health care providers (HCP's) for algorithm-based medication management.

Methods: Patients were provided a [redacted] CGM and followed via [redacted]. Baseline clinical data and AGP's were evaluated by the PI and management recommendations were sent to the patient's HCP. Project staff reviewed the [redacted] portal daily and contacted subjects who had glucose values either above 250 mg/dl or below 70 mg/dl more than 5% of the time and provide diabetes education. Clinical data updates and AGPs were sent to the PI based on need (from weekly to monthly) so additional diabetes management recommendations could be provided. Measures administered at baseline, 6 months and 12 months were assessed for Shapiro-Wilk normality and paired dependent t-tests. A 2-sided alpha of 0.05 was used.

Results: Interim results of 137 of 200 enrolled subjects (52 not on insulin and 85 on insulin) showed improvements in the following measures from baseline to 6 months: Mean baseline A1C = 9.0% decreased to 7.8% by 6 months (-1.2 +/- 1.7 (SD), $p < .001$). TIR mean increase was 12.5 +/- 27.7 (SD), $p < .001$. GMI was reduced by -0.591 +/- 0.59, $p < .001$. A slight reduction in depression was seen -0.847 +/- 4.6 (PHQ8, $p = .036$). Diabetes Distress Scale (DDS) showed reduced stress for non-insulin users -1.23 +/- 3.5, $p = .012$ and for insulin users -2.8 +/- 4.6, $p = .005$. HCPs implemented recommendations 75% of the time and use of GLP-1 RA's doubled, based on recommendations sent to HCP's. Analysis of 91 subjects who completed 12 months show sustained outcomes.

Potential Roles of Technology in the Care of Older Adults with Diabetes



MONITORAGGIO GLICEMICO NEL DIABETE DI TIPO 2:

EVIDENZE, INNOVAZIONE
E PROSPETTIVE CLINICHE

8 OTTOBRE 2025

ROMA Hotel The Building



La condivisione dei dati da remoto è un valore aggiunto?

Certamente sì!

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Handwritten signature in blue ink, appearing to read "Molfetta".

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