

Screening e diagnosi de diabete gestazionale nella pratica clinica: Sempre valide le linee guida ?

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"rete clinica diabetologica"

Dichiarazione Conflitti di Interesse

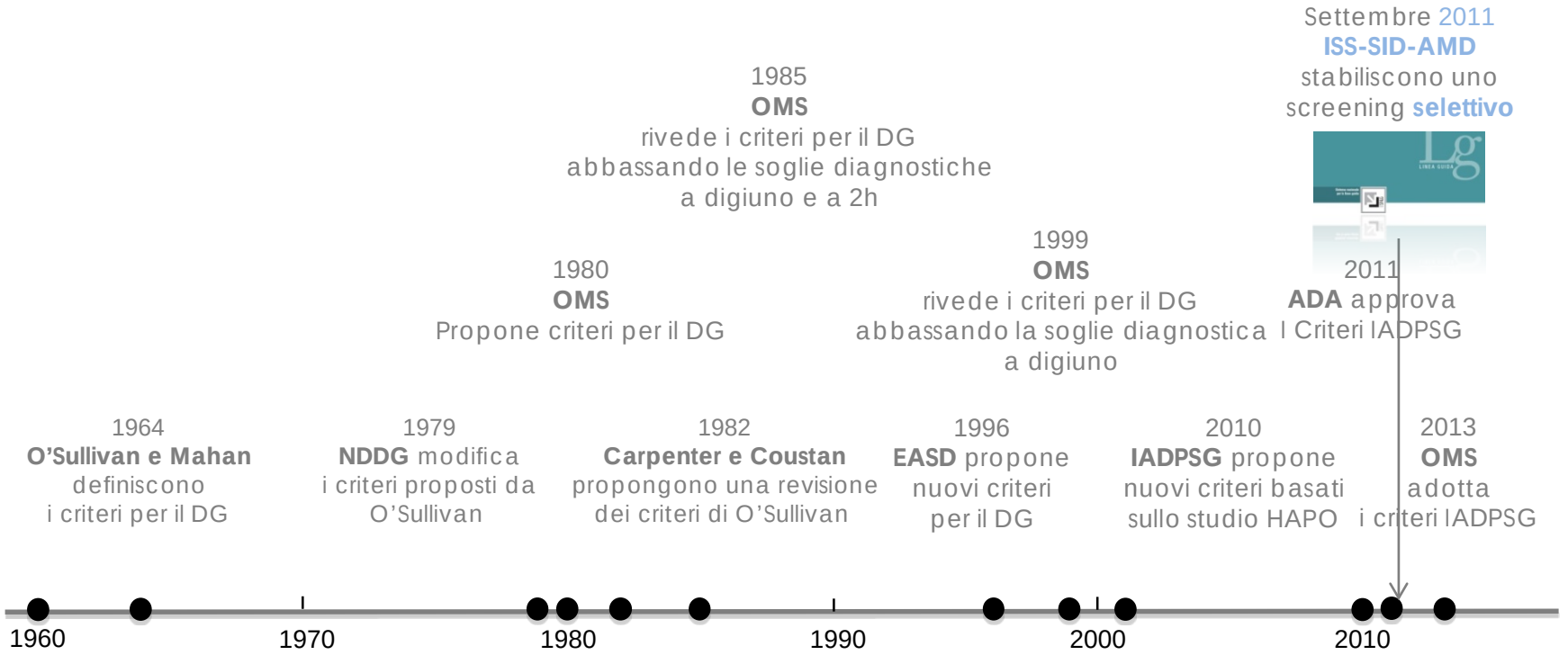
Il sottoscritto dott. Graziano Di Cianni

Dichiara

Di aver avuto negli ultimi due anni i rapporti anche di finanziamento con i seguenti soggetti portatori di interessi commerciali in campo sanitario:

Eli Lilly, Novonordisk, Sanofi
Merck, Jansen, Novartis,
Mediolanum, Astrazeneca,Takeda
Jonshon & Jonson, Roche Diagnostics, Menarini

GDM Screening



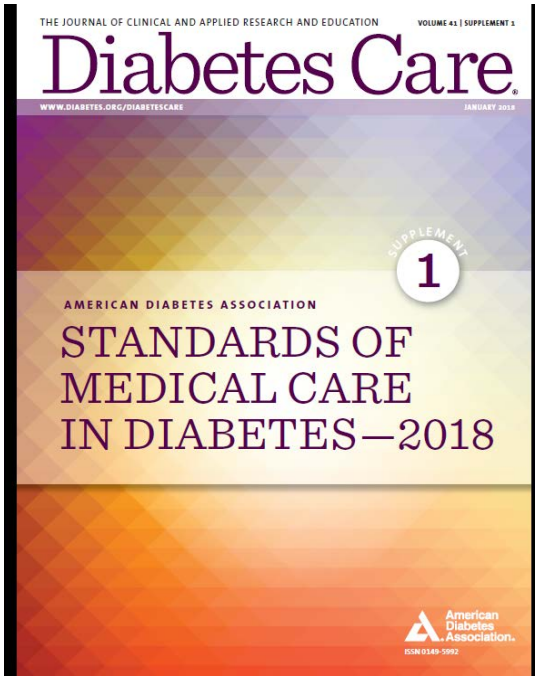
ADA: American Diabetes Association; ***EASD***: European Association for the Study of Diabetes; ***IADPSG***: International Association of the Diabetes and Pregnancy Study Groups; ***NDDG***: National Diabetes Data Group; ***OMS***: Organizzazione Mondiale della Sanità

- In March 2010, the International Association of Diabetes and Pregnancy Study Groups (IADPSG) recommendations were accepted in Italy.
- The use of these criteria resulted in higher rate of GDM.
- As a consequence, the Italian Public Health Authority, in September 2011, issued more restrictive guidelines

CURRENT PROTOCOLS FOR THE DIAGNOSIS OF GDM

IADPSG WHO AACE FIGO	**Universal screening 24-28 weeks**	**75gr OGTT**	
ACOG	Universal screening 24-28 weeks	50 g OGCT	100 gr OGTT In positive cases
CDA	Universal screening 24-28 weeks	50 g OGCT	75 gr In positive cases
NICE ADIPS	Selective screening At soon as possible	75 gr OGTT	Negative and at high risk 75 gr OGTT
ADA (2015)	Declare one o two step proach is accetable		

Screening for and diagnosis of GDM



One-step strategy

Perform a 75-g OGTT, with plasma glucose measurement when patient is fasting and at 1 and 2 h, at 24−28 weeks of gestation in women not previously diagnosed with overt diabetes.

The OGTT should be performed in the morning after an overnight fast of at least 8 h.

The diagnosis of GDM is made when any of the following plasma glucose values are met or exceeded:

- Fasting: 92 mg/dL (5.1 mmol/L)
- 1 h: 180 mg/dL (10.0 mmol/L)
- 2 h: 153 mg/dL (8.5 mmol/L)

Two-step strategy

Step 1: Perform a 50-g GLT (nonfasting), with plasma glucose measurement at 1 h, at 24–28 weeks of gestation in women not previously diagnosed with overt diabetes.

If the plasma glucose level measured 1 h after the load is ≥130 mg/dL, 135 mg/dL, or 140 mg/dL* (7.2 mmol/L, 7.5 mmol/L, or 7.8 mmol/L), proceed to a 100-g OGTT.

Step 2: The 100-g OGTT should be performed when the patient is fasting.

The diagnosis of GDM is made if at least two of the following four plasma glucose levels (measured fasting and 1 h, 2 h, 3 h after the OGTT) are met or exceeded:

	Carpenter/Coustan (59)	or	NDDG (60)
• Fasting	95 mg/dL (5.3 mmol/L)		105 mg/dL (5.8 mmol/L)
• 1 h	180 mg/dL (10.0 mmol/L)		190 mg/dL (10.6 mmol/L)
• 2 h	155 mg/dL (8.6 mmol/L)		165 mg/dL (9.2 mmol/L)
• 3 h	140 mg/dL (7.8 mmol/L)		145 mg/dL (8.0 mmol/L)

NDDG, National Diabetes Data Group. *The ACOG recommends either 135 mg/dL (7.5 mmol/L) or 140 mg/dL (7.8 mmol/L). A systematic review determined that a cutoff of 130 mg/dL (7.2 mmol/L) was more sensitive but less specific than 140 mg/dL (7.8 mmol/L) (55).

ACOG and NIH still support the two-step approach with universal screening

ADA concludes that… IADPSG criteria may be the preferred approach

Diabetologia (2018) 61:800–809
https://doi.org/10.1007/s00125-017-4506-x

CrossMark

ARTICLE

Danimarca

New diagnostic criteria for gestational diabetes mellitus and their impact on the number of diagnoses and pregnancy outcomes

Sarah H. Koning[1] · Jelmer J. van Zanden[2] · Klaas Hoogenberg[3] · Helen L. Lutgers[4] · Alberdina W. Klomp[1] · Fleurisca J. Korteweg[5] · Aren J. van Loon[5] · Bruce H. R. Wolffenbuttel[1] · Paul P. van den Berg[6]

Table 1 Number of GDM diagnoses according to the WHO 1999 and WHO 2013 criteria

Criteria mmol/l	WHO 1999 Fasting glucose ≥7.0 and/or 2HG ≥7.8	WHO 2013 Fasting glucose ≥5.1 and/or 2HG ≥8.5
Total cohort *n* = 10,642		
Total GDM, *n* (%)	2326 (22)	3364 (32)
GDM based on elevated fasting glucose, but with 2HG below the threshold, *n* (%)	14 (1)	2045 (61)
GDM based on the 2HG, but with fasting glucose below the threshold, *n* (%)	2267 (97)	634 (19)
GDM based on both elevated fasting glucose and elevated 2HG, *n* (%)	45 (2)	685 (20)

Abbreviations: 2HG, 2 h plasma glucose

WHO 2013 vs VHO 1999 GDM +45%
GDM by FPG 1 % vs 65%
GDM by 2h OGTT 97% vs 19%

WHO 1999 non consente la diagnosi di GDM (FPG) in donne obese che spesso sviluppano ipertensione; WHO 2013 esclude donne (2hOGTT) in cui il trattamento per GDM risulta efficace



National Guidelines for GDM Screening in Italy (2011)

Selective Screening according risk factors

High Risk (16th-18th weeks) *OGTT according HAPO study*	***Medium Risk (24th-28th weeks)*** *OGTT according HAPO study*
✓ *Personal history of GDM* ✓ *Pre-pregnancy BMI ≥ 30 Kg/m²* ✓ *FPG* at the first visit 100-125 mg/dl	✓ *Age ≥ 35 years* ✓ *Pre-pregnancy BMI ≥ 25 Kg/m²* ✓ *Previous macrosomia* ✓ *Family history of diabetes* ✓ *Family from areas with a high prevalence of diabetes*
If OGTT is normal, women with these risk factors must repeat the OGTT between 24th and 28th gestational weeks	

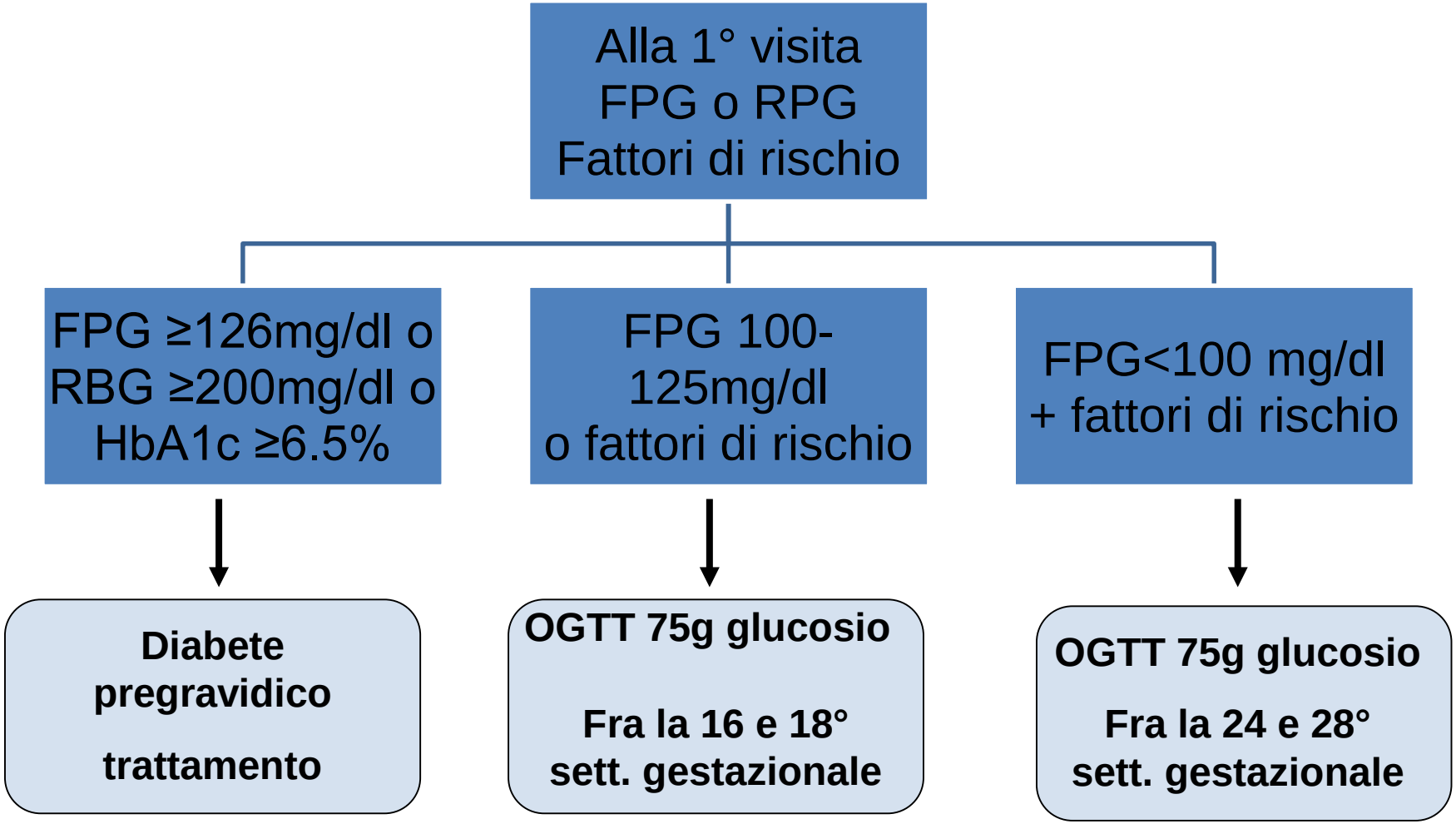
National Guidelines for GDM Screening in Italy (2011)

OGTT 75 g

According HAPO Study

	mg/dl	mmol/l
basal	92	5.1
1-h	180	10.0
2-h	153	8.5

National Guidelines for GDM Screening in Italy (2011)



Stratificazione del rischio

	BassoRischio	Medio rischio	Alto
ISS	**No screeening**	**24-28 settimane**, - eta ≥35 anni - Sovrappeso macrosomia fetale in una gravidanza precedente - GDM in gravidanza precedente - anamnesi familiare DM 2 Etnia ad elevata prevalenza	A **16-18 settimane** : - Pregresso GDM - Obesità - Glicemia precedentemente/o all'inizio della gravidanza, di fra 100 e 125 mg/dl
ADA 2010	**No screening** Gruppo etnico a bassa prevalenza Familiarità negativa Anamnesi ostetrica negativa per eventi sfavorevoli Anamesi negativa per intolleranza glucidica Età < 25 aa Normopeso	**24-28 settimane** Caratteristiche intermedie	**Appena possibile**: Familiarità positiva Pregressa GDM Obesità Glicosuria marcata nella gravidanza in corso Pregresso neonato macrosoma/LGA PCOS
NICE 2015		**24-28 settimane** Obesità Pregressa macrosomia Pregresso GDM Familiarità per DM2 Etnia ad elevato rischio	**Appena possibile** Pregresso GDM Glicosuria nella gravidanza in corso

Pregnancy outcomes after IADPSG recommendation

	GDM n=2026	GDM ex NGT n=112	NGT n=1815
Delivery (g.w.)	38.6 ± 2.1	38.3 ± 2.9	38.7 ± 2.8
Cesarean section(%)	41 *	43.6 *	31.1 *
Fetal morbidity (%)	9.8	16.5	7.2
Macrosomia (%)	9.2	10.8	7.9
Birthweight (g)	3346 ± 519	3326 ± 590	3348 ± 478
Babies' length (cm)	49.2 ± 2.4	48.5 ± 3	49.4 ± 2.2
Ponderal index (g/cm^3)	2.81 ± 0.41 **	2.95 ± 0.61 **	2.77 ± 0.34 **
LGA (%)	19.5	18.1	15
SGA(%)	2.9	2.8	3.2

*** p<0,005 ** p< 0,0001**

Lapolla A Diabet Med,2011

DIABETES & METABOLISM

Perinatal outcome in a Caucasian population with gestational diabetes and preexisting diabetes first diagnosed in pregnancy

22/12/15
Doi : 10.1016/j.diabet.2015.11.007

F. Corrado [a] • , B. Pintaudi [b], R. D'Anna [a], A. Santamaria [a], L. Giunta [c], A. Di Benedetto [c]

«Overt Diabetes»: 7.7%

	GDM (n.379)	**ODM** (n. 32)	p
Age **(years) (mean ± SD)**	30.34 ± 5.08	31.50 ± 5.43	0.2
Prepregnancy BMI **(kg/h^2)**	26.8± 4.0	27.3 ± 3.7	0.4
PARA > 1 **(n & %)**	189 (49.9%)	12 (37.5%)	0.2
Family hystory of DM **(n & %)**	98 (25.9%)	15 (46.9%)	0.02
Week of diagnosis **(mean ± SD)**	25.9 ± 1.7	11.6 ± 1.0	0.0001
First trimester fasting glicemia **(mean ± SD)**	81.6 ± 10.5	129.5 ± 3.6	0.0001

J Matern Fetal Neonatal Med. 2015;28(15):1842-4. doi: 10.3109/14767058.2014.969701. Epub 2014 Oct 17.

Selective screening for GDM in Italy: application and effectiveness of National Guidelines.

Lacaria E[1], Lencioni C, Russo L, Romano M, Lemmi P, Battini L, Del Prato S, Bertolotto A, Di Cianni G.

Author information

Abstract

In September 2011 the Italian Public Health Authority established selective screening for GDM to be performed based on the presence of risk factors. In a cohort of 2552 Caucasian pregnant women we evaluated to which extent the new national guidelines (NGL) are correctly applied; moreover we estimated the prevalence of GDM assessed by NGL. Our data show that the NGL are still properly implemented since the screening test was performed in nearly the totality of the women at 24th and 28th week of gestation. GDM prevalence is 10.9%, 25% greater as compared to the one determined with the old criteria 10 years ago.

KEYWORDS: Epidemiology; gestational diabetes; pregnancy; screening

GDM **Prevalence** 10.9%

(25% greater as compared to the one determined with the old criteria 10 years ago)

Early screening for high risk women is not applied

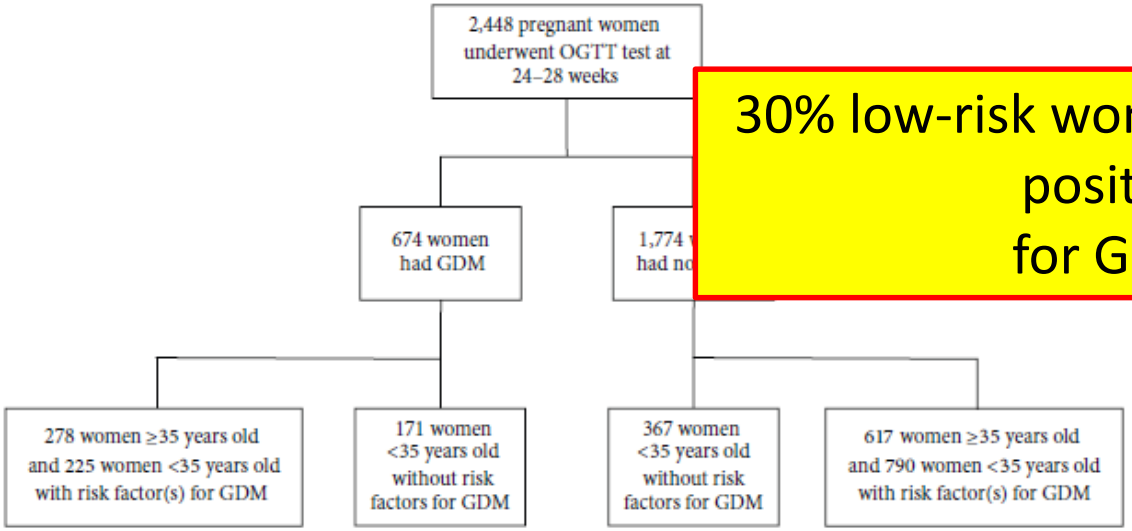
Hindawi Publishing Corporation
ISRN Endocrinology
Volume 2013, Article ID 387495, 8 pages
http://dx.doi.org/10.1155/2013/387495

Clinical Study

Gestational Diabetes Mellitus: Screening and Outcomes in Southern Italian Pregnant Women

Carmelo Capula,[1] Eusebio Chiefari,[2] Anna Vero,[1] Biagio Arcidiacono,[2] Stefania Iiritano,[2] Luigi Puccio,[1] Vittorio Pullano,[1] Daniela P. Foti,[2] Antonio Brunetti,[2] and Raffaella Vero[1]

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30% low-risk women with OGTT positive for GDM

Figure 1: Enrollment of pregnant women.

Level of implementation of guidelines on screening and diagnosis of gestational diabetes: a national survey.

B. Pintaudi et al. (2015)

Diabetes Research and Clinical Practice



Table 1. Results of the national survey on GDM screening and diagnostic procedures.

	Overall	Hospital	Territorial	P
N (%)	122 (100)	96 (78.7)	26 (21.3)	
Specialist who manages screening and diagnosis (%):				0.01
diabetologist	25.3	18.7	45.8	
gynecologist	17.2	14.7	25.0	
diabetologist and gynecologist with the same approach	45.4	53.3	20.8	
diabetologist and gynecologist with different approach	12.1	13.3	8.4	
Diagnostic strategy (%):				-
two-steps (glucose challenge test plus OGTT)	0.0	0.0	0.0	
OGTT alone	100	100	100	
Screening procedure (%):				0.03
selective risk factors-based	82.0	77.7	96.2	
universal	18.0	22.3	3.8	
Type of OGTT performed (%):				0.87
100-g glucose	3.3	3.2	3.8	
75-g glucose	96.7	96.8	96.2	
Gestational age when the OGTT is performed in patients at high risk (%):				0.75
as soon as possible	6.5	5.3	8.0	
16-18 weeks' gestation	84.0	79.8	84.0	
24-28 weeks' gestation	9.5	14.9	8.0	
Diagnostic criteria used for the interpretation of the OGTT (%):				-
IADPSG	100	100	100	
Carpenter and Coustan	0.0	0.0	0.0	
OGTT execution in the case of FPG ≥ 5.1 mmol/l (92 mg/dl) (%):				0.08
yes	65.8	31.0	50.0	
no	34.2	69.0	50.0	

ted Manuscript

REGIONE TOSCANA - PERCORSO ASSISTENZIALE DIABETE GESTAZIONALE

REGIONE TOSCANA
GIUNTA REGIONALE

ESTRATTO DAL VERBALE DELLA SEDUTA DEL 15-10-2012 *(punto N 18)*

Delibera *N 898* *del 15-10-2012*

Proponente
LUIGI MARRONI
DIREZIONE GENERALE DIRITTI DI CITTADINANZA E COESIONE SOCIALE

Pubblicita'/Pubblicazione Atto soggetto a pubblicazione integrale (PBURT/BD)
Dirigente Responsabile MARIA TERESA MECHI
Estensore CECILIA BERNI
Oggetto
Approvazione del documento "Percorso assistenziale e monitoraggio ostetrico del diabete gestazionale"

Allegato A

PERCORSO ASSISTENZIALE
MONITORAGGIO OSTETRICO-METABOLICO
DEL DIABETE GESTAZIONALE

Superata pertanto la disparità di procedure di screening e di diagnosi presenti per decenni anche nella nostra che Regione, si rende ora impellente uniformare e definire le modalità di trattamento e monitoraggio del diabete gestazionale. Un'azione di coordinamento fra le varie strutture interessate sia a livello territoriale che ospedaliero, finalizzata all'ottimizzazione dell'assistenza del diabete gestazionale, consentirebbe di ridurre le complicanze precoci e tardive legate a questa patologia, con indubbi effetti sociali positivi e sicuro risparmio in termini di spesa sanitaria.

La Regione Toscana propone pertanto per il diabete gestazionale un "Percorso Terapeutico Assistenziale " (PTA) con l'obiettivo di razionalizzare e uniformare a livello delle varie ASL la gestione ostetrico-metabolica di questa complicanza della gravidanza.

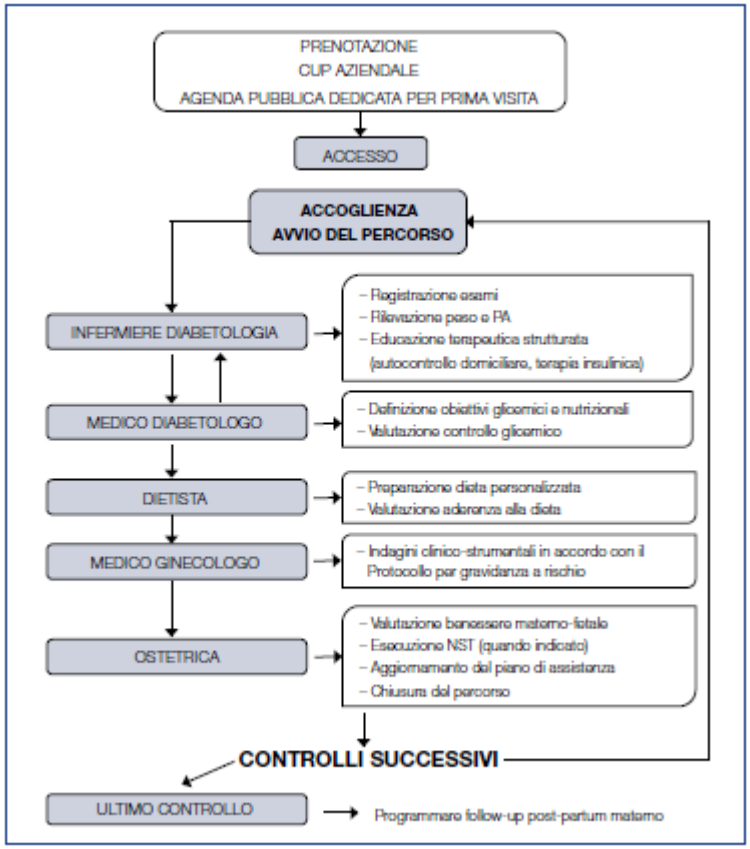
G It Diabetol Metab 2013;33:183-189

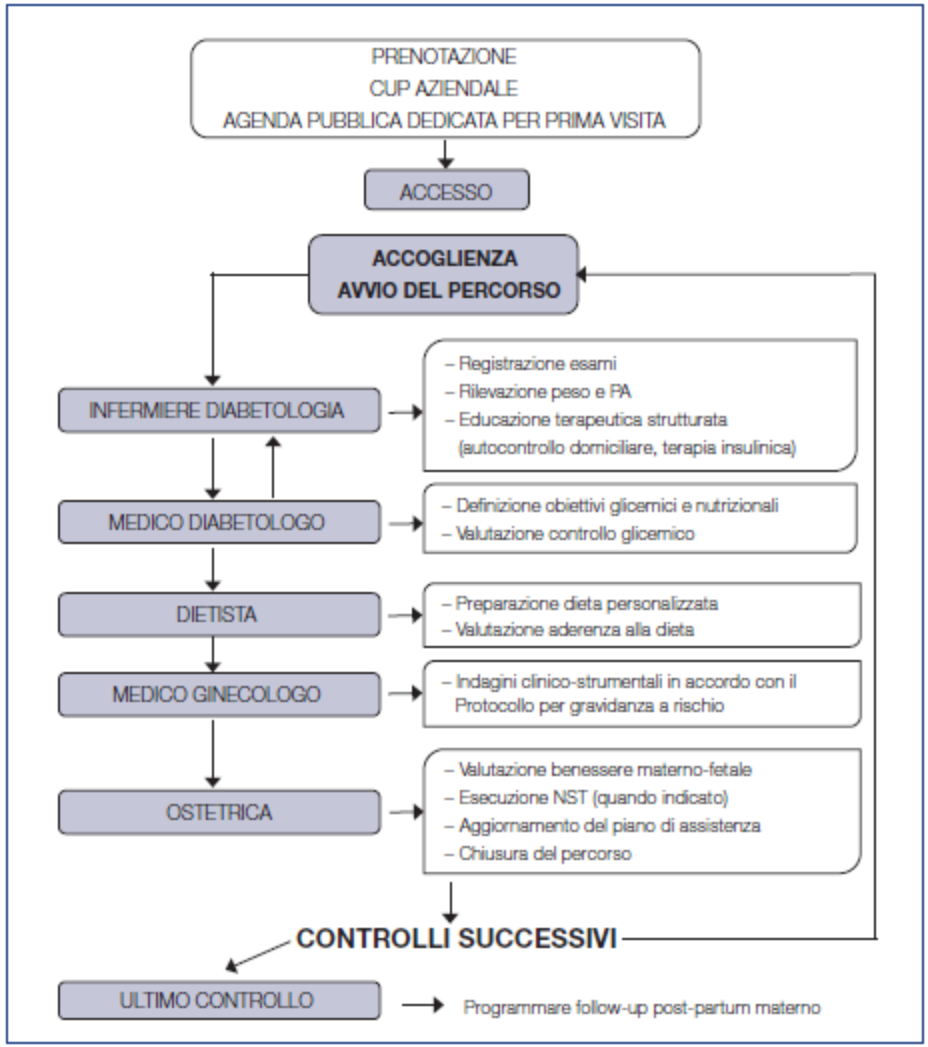
Rassegna

Diabete gestazionale: ripensare il percorso assistenziale dopo l'adozione dei nuovi criteri diagnostici

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PRENOTAZIONE
CUP AZIENDALE
AGENDA PUBBLICA DEDICATA PER PRIMA VISITA
ACCESSO
ACCOGLIENZA
AVVIO DEL PERCORSO
INFERMIERE DIABETOLOGIA
– Registrazione esami
– Rilevazione peso e PA
– Educazione terapeutica strutturata (autocontrollo domiciliare, terapia insulinica)
MEDICO DIABETOLOGO
– Definizione obiettivi glicemici e nutrizionali
– Valutazione controllo glicemico
DIETISTA
– Preparazione dieta personalizzata
– Valutazione aderenza alla dieta
MEDICO GINECOLOGO
– Indagini clinico-strumentali in accordo con il Protocollo per gravidanza a rischio
OSTETRICA
– Valutazione benessere materno-fetale
– Esecuzione NST (quando indicato)
– Aggiornamento del piano di assistenza
– Chiusura del percorso
CONTROLLI SUCCESSIVI
ULTIMO CONTROLLO
Programmare follow-up post-partum materno

DIABETES RESEARCH AND CLINICAL PRACTICE 132 (2017) 149–156

Contents available at ScienceDirect

Diabetes Research and Clinical Practice

journal homepage: www.elsevier.com/locate/diabres



Screening for gestational diabetes in Tuscany, Italy. A population study

Graziano Di Cianni[a], *Elisa Gualdani*[b], *Cecilia Berni*[c], *Alessandra Meucci*[c], *Lorenzo Roti*[c], *Cristina Lencioni*[a], *Emilia Lacaria*[a], *Giuseppe Seghieri*[b,*], *Paolo Francesconi*[b]

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METHODS

This is a retrospective study based on two administrative sources

A database of certificate of care and delivery (CEDAP) including information about pregnancy, delivery newborn and parents
A regional flux dataset of lab prescription including all prescriptions of OGTT performed since the 16th gestational week from the 12 local health care units of Tuscany

All women who delivered in Tuscany in the year 2014 were identified by CEDAP and their data after excluding those with pregestational diabetes, were linked to the regional flux of all specialists' visit including prescription of OGTT performed since the 16th week of gestation.

All pregnant women were classified as eligible and not eligible according to NGL.

In the two groups, for each stratum, a logistic regression was performed to evaluate the chance of being tested by the OGTT, after adjusting for maternal age, marital status, education degree, ancestry, employment status, parity, smoking habit, pregestational BMI, first visit setting.



Total group of women who delivered in 2015
(n. 23270)

Women with pre-gestational diabetes: 446

Women tested before 16th week: 94

22730 pregnant women

Medium-High risk women (Eligible for screening test) **n. 12840 (56.4%)**
Low risk women (Non eligible for screening test) **n. 9890 (43.5%)**

OGTT
18006 (79.2%)

No OGTT
4724 (20.8%)

Eligible
10,015 (55.6%)

Not Eligible
7,991 (44.4%)

Eligible
2,825 (59.8%)

Not Eligible
1,899 (40.2%)



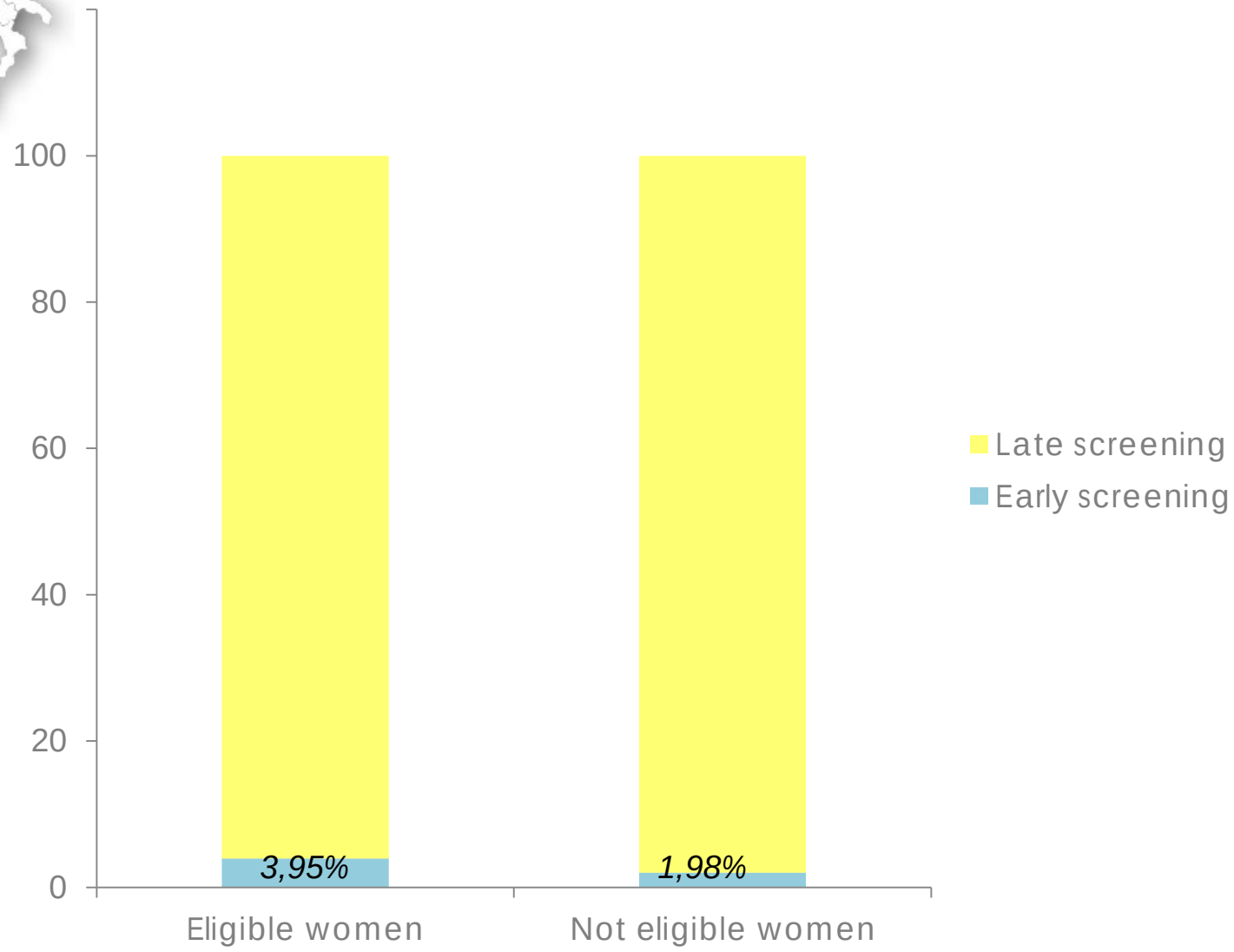
Chance of being testes by the OGTT
Logistic regression analysis

Table 1 – Rates with age-adjusted relative risks of performing an OGTT during pregnancy in Tuscany in year 2015, according to considered variables. (Statistically significant results in italics).

	OGTT screening		Total	Adj. Relative Risk	P
	Yes (n, %)	No (n, %)			
Maternal age					
<25 yr	1533 (70.5)	641 (29.5)	2174	1 (Ref.)	
25–29 yr	3490 (74.7)	1184 (25.3)	4674	1.046 (0.973–1.125)	NS
30–34 yr	*5801 (77.8)*	*1655 (22.2)*	*7456*	*1.115 (1.039–1.196)*	*0.003*
35–39 yr	*5370 (85.5)*	*936 (14.5)*	*6306*	*1.212 (1.129–1.300)*	*0.0001*
≥40 yr	*1812 (85.5)*	*308 (14.5)*	*2120*	*1.219 (1.131–1.314)*	*0.0001*
Total	*18006 (79.2)*	*4724 (20.8)*	*22,730*		
Place of birth					
Italy	13439 (80.9)	3172 (19.1)	16,611	1 (Ref.)	
PSA	192 (75.3)	63 (24.7)	255	0.941 (0.843–1.052)	NS
PFPM	4370 (74.6)	1486 (25.4)	5.665	0.997 (0.960–1.035)	NS
Total	18001 (79.2)	4721 (20.8)			
Marital status					
Married	9,953 (79.2)	2613 (20.8)	12566	1 (Ref.)	
Unmarried	7047 (79.2)	1846 (2.8)	8893	1.006 (0.981–1.032)	NS
Separated/Divorced	415 (80.4)	101 (19.6)	516	1.037 (0.969–1.109)	NS
Education degree					
None-low	397 (71)	166 (29)	539	1 (Ref.)	
Low-medium	*3946 (77.2)*	*1038 (22.8)*	*4984*	*1.118 (1.031–1.213)*	*0.007*
Medium-high	7690 (80)	1944 (20)	9634	1.068 (0.985–1.159)	NS
Graduated	5700 (76.5)	1464 (23.5)	7164	1.049 (0.965–1.140)	NS
Employment					
Employed	11188 (79.6)	2870 (20.4)	14058	1 (Ref.)	
Unemployed	1958 (76.3)	607 (23.7)	2565	0.988 (0.953–1.023)	
Housewife	*3341 (73.2)*	*1225 (26.8)*	*4566*	*0.960 (0.929–0.991)*	*0.013*
Student	*213 (67.6)*	*102 (32.4)*	*315*	*0.778 (0.611–0.991)*	*0.042*
Parity					
Pluriparous	8532 (78.1)	2385 (21.9)	10917	1 (Ref.)	
Nulliparous	8930 (76.9)	2688 (23.1)	11618	1.068 (0.962–1.185)	NS
Body weight (BMI)					
Normal weight (18.6–24.9)	12184 (78.6)	3320 (21.4)	15504	1 (Ref.)	
Underweight (<18.5)	*1336 (75.5)*	*434 (24.5)*	*1770*	*0.935 (0.890–0.982)*	*0.007*
Overweight (25–29.9)	3049 (82.6)	645 (17.4)	3694	1.027 (0.998–1.056)	NS
Obese (≥ 30)	1001 (83.6)	196 (16.4)	1197	1.031 (0.986–1.078)	NS
Smoking in pregnancy					
Non smoker	15463 (79.6)	3961 (20.4)	19424	1 (Ref.)	
Smoker	1471 (79)	392 (25)	1863	0.984 (0.944–1.027)	NS
Setting					
Hospital	2039 (76.8)	616 (23.2)	2655	1 (Ref.)	
Obstetrical Outp. Clinic	*4945 (77.6)*	*1424 (22.4)*	*6369*	*1.052 (1.009–1.096)*	*0.017*
Private Medical Clinic	10245 (81.1)	2382 (18.9)	12627	1.038 (0.999–1.077)	NS
None	*133 (51.1)*	*127 (48.9)*	*260*	*0.588 (0.445–0.777)*	*0.0001*



TIME OF SCREENING TEST



STIMA DELLA PREVALENZA DEL DIABETE GESTAZIONALE

Definizione dell'algoritmo diagnostico

Donne che effettuano curva OGTT (flussi Spa)

+ almeno una delle seguenti condizioni

- **Donne che effettuano terapia insulinica (flussi Spf e Fed)***
- **Donne che effettuano una visita diabetologica (flussi Spa)***
- **Donne che effettuano una terapia educazionale per diabete (flussi Spa)***
- **Donne che effettuano OGTT entro 6 mesi dal parto (flussi Spa)**

** Data di erogazione prima del parto*



VALIDATION OF GDM DIAGNOSIS

Table 2 – Validation of GDM diagnosis. Measurements of accuracy were done matching GDM diagnosis by algorithm with GDM diagnosis obtained by OGTTs carried out in Florence (A), Livorno (B) or recorded by hospital discharges with ICD-9 code 6488 (C).

(A)

GDM by algorithm	GDM by OGTT (Florence)		
	Yes	No	Total
Yes	410	99	509
No	481	4110	4591
Total	891	4209	5100

Sensitivity = 0.460; Specificity = 0.976; Positive Predictive Value = 0.805; Negative Predictive Value = 0.895

(B)

GDM by algorithm	GDM by OGTT (Livorno)		
	Yes	No	Total
Yes	38	3	41
No	35	380	415
Total	73	383	456

Sensitivity = 0.520; Specificity = 0.990; Positive Predictive Value = 0.9; Negative Predictive Value = 0.91

(C)

GDM by algorithm	GDM by ICD-9-code 6488		
	Yes	No	Total
Yes	505	1495	2000
No	115	15491	15606
Total	620	16986	17606

Sensitivity = 0.814; Specificity = 0.911; Positive Predictive Value = 0.252; Negative Predictive Value = 0.992

GDM DIAGNOSIS

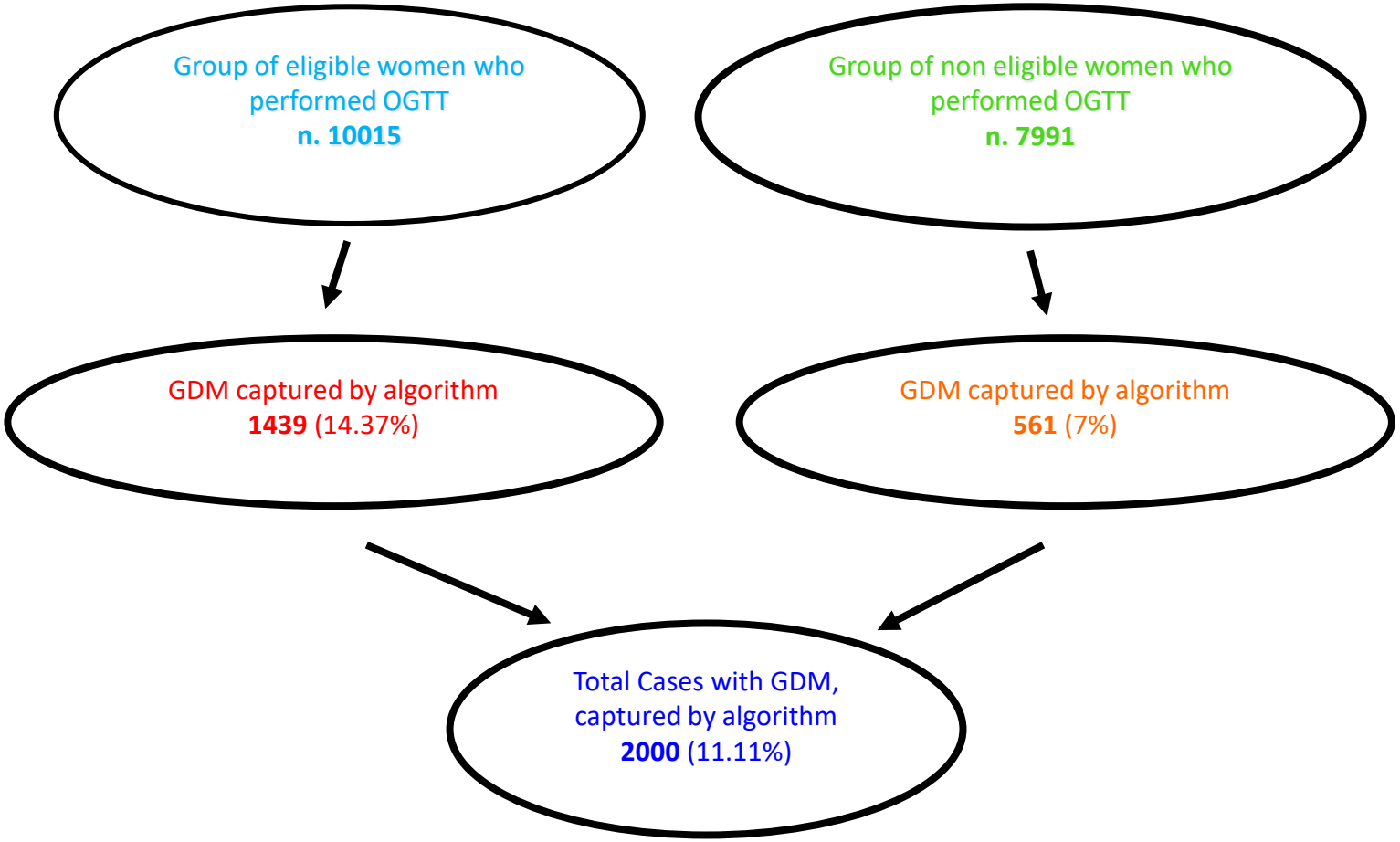
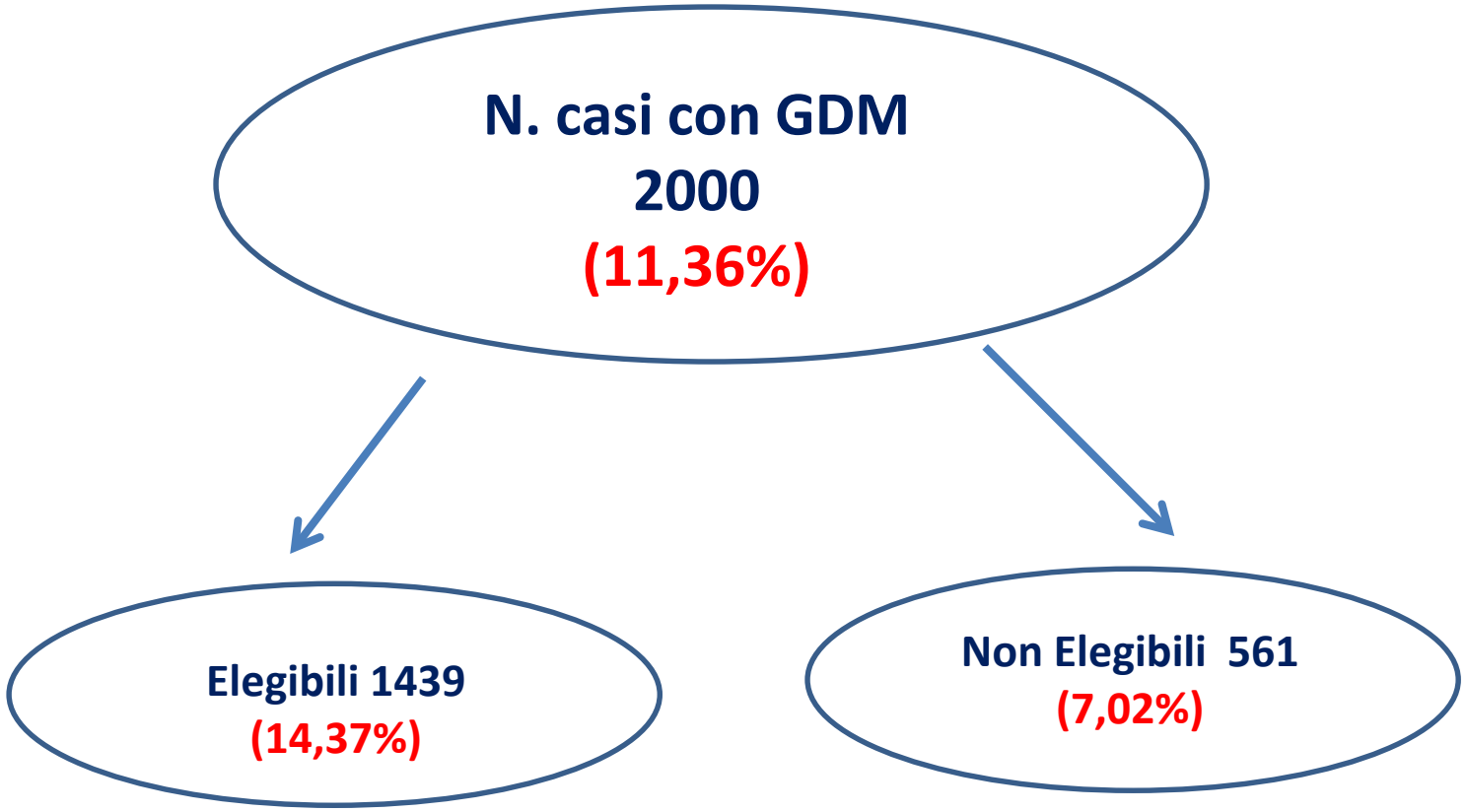


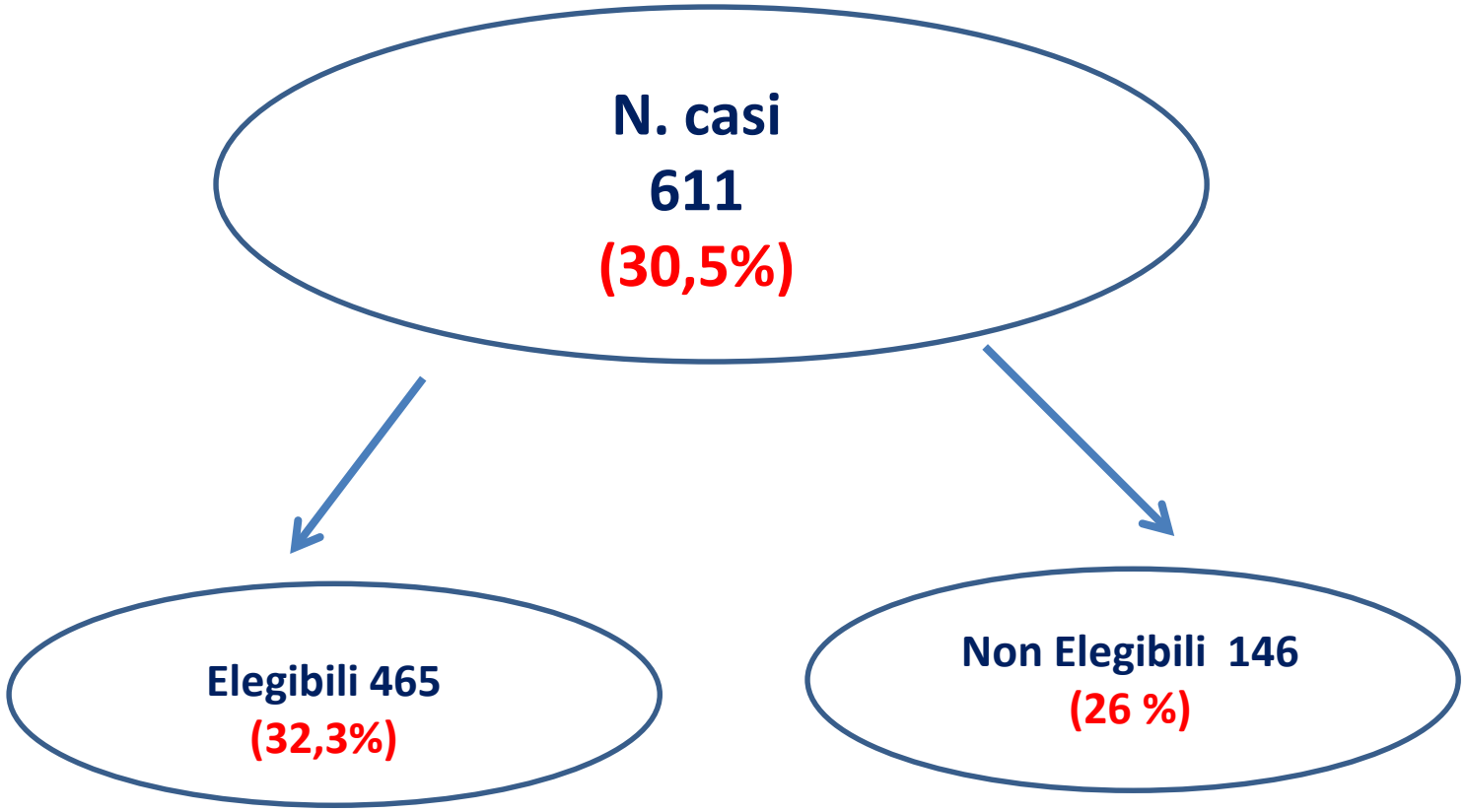
Fig. 2

Prevalenza del Diabete Gestazionale

Per le donne che hanno effettuato screening eleggibili e non eleggibili



Diabete Gestazionale in Trattamento Insulinico



Donne a basso Rischio per GDM che Non avrebbero dovuto eseguire lo screening secondo le Linee Guida Nazionali



- 10816 Donne Non Eleggibili
- 7991 Eseguono lo screening per GDM
- 561 Diagnosi di GDM
- 146 In trattamento Insulinico

Epoca del Parto in donne sottoposte a screening con e senza con GDM

	< 32 settimane (%)	32-36 sett. (%)	≥ 37 sett. (%)
Donne con GDM			
Eleggibili	**0,6**	**11,5**	**88**
Non Eleggibili	**0,4**	**8,4**	**91,3**
Donne no GDM			
Eleggibili	**1,0**	**7,2**	**91,7**
Non Eleggibili	**0,5**	**5,3**	**94,2**

Modalità del Parto in donne sottoposte a screening con e senza con GDM

	Spontaneo (%)	Operativo* (%)	Taglio Cesareo** (%)
Donne con GDM			
Eleggibili	**61,4**	**4,9**	**33,8**
Non Eleggibili	**64**	**5,7**	**30,4**
Donne no GDM			
Eleggibili	**63,9**	**5,4**	**30,7**
Non Eleggibili	**72,9**	**5,8**	**21,2**

**Parto Operativo = con uso di Forcipe o Ventosa*

***Taglio Cesareo d'elezione + in travaglio+ in urgenza*

Maternal and fetal complications in women with gestational and pregestational diabetes

- 85075 parti 2012 – 2016 (identificati da CeDAP)

In donne che hanno eseguito OGTT

  - NGT (Normale OGTT) 76922
  - GDM (Identificate mediante Algoritmo) 8153

  - Pre-GDM (database regionale) 476* (solo 2 anni)

Pre-GDM and GDM vs NGT

Macrosomia	
Pre – GDM GDM	IRR: 2.00 (CI 1.54-2.58) p < 0.001 IRR: 0.89 (CI 0.81-0.98) p =0.02
Caesarean Section	
Pre - GDM	IRR: 1.28 (CI 1.05 – 1.57) p<0.001
GDM	IRR: 1.11 (CI 1.05 – 1.17) p=0.02
Neonatal Distress (Apgar<7)	
Pre – GDM GDM	IRR : 1,59 (CI 0.80-3.16) ns IRR: 1.12 (CI 0,92 -1.39) ns



Reduced risk of Macrosomia in GDM women: this suggest an effective prevention of this complication in our population



CONCLUSIONS

- In Tuscany glucose metabolism is being tested in about the 80% of pregnancies
- Adhesion to guidelines is very low, with a large number of women not elegible who have been tested
- Rate of GDM, calculated by a validate algorithm is similar to the one found in other populations
- Insulin therapy is required in quite a third of GDM, including a significant number of not eligible women



CONCLUSIONS

This study represents an example of how significant information cam be obtained from administrative datasets.

Only universal glucose screening in pregnancies seems to be effective to adequately capture all GDM cases.



Grazie per l'attenzione