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Obstetric outcomes for women coming to the Trento family planning centre for a voluntary termination of pregnancy. Data for 2003-2017

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SUMMARY: **Obstetric outcomes for women coming to the Trento family planning centre for a voluntary termination of pregnancy. Data for 2003-2017.**

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Aim. *The purpose of the study was to assess the obstetric outcomes in users of the Trento family planning centre who obtained voluntary termination certification between 01/01/2003 and 31/12/2017, by comparing the social and demographic characteristics of women who chose to have a termination with those of women who decide to continue their pregnancy.*

Methods. *The data concerning the users of Trento family planning centre who obtained termination certification are entered in a dedicated database. For each case, we collected a series of variables, most of which are the same as those recorded with the D12 template, the tool the Italian Institute of Statistics uses to monitor terminations. For each case relating to a woman residing in the province of Trento we assessed the obstetric outcomes in the 9 months following the issuance of the termination certificate, using the appropriate Trento health authority archives: births register, miscarriage register and the Accident & Emergency Dept. records. A multiple logistic regression model was used to evaluate the differences in the social and demographic characteristics of women who opted for a termination and those who decided to continue their pregnancy.*

Results. *Of the 3563 female residents to whom Trento family planning centre issued a termination certificate in the period 2003-2017, it was observed that, with the exception of 46 cases that could not be confirmed, 82.6% actually had a termination, 6.0% had a miscarriage after having planned a termination, 0.6% decided to continue their pregnancy and subsequently had a miscarriage and 9.6% decided to continue the pregnancy and actually gave birth. The trend over time for cases of termination is not statistically significant and the social and demographic factors associated with the likelihood of continuing the pregnancy are: age between 30 and 34 years rather than minors, being married/cohabiting rather than single, being of a non-EU nationality, being nulliparous or primiparous rather than pluriparous, not having had a termination in the past.*

Conclusion. *Issuance of a termination certificate does not automatically entail the performance of a termination procedure. By Italian law, women must be allowed adequate time to decide. The woman's social and demographic characteristics weigh heavily on the final decision. Family planning centres can provide great support to women's health when they interact correctly with the other health services. Interaction with local epidemiological services can afford a more accurate assessment of its work.*

What is new in this paper. *The issuance of a termination certificate does not necessarily lead to the performance of a termination procedure. 8 out of 10 cases actually have a termination. Women's social and demographic characteristics weigh heavily on their final decision. Interaction with local epidemiological services can afford family planning centres a more accurate assessment of their work.*

KEY WORDS: Voluntary termination of pregnancy - Family planning centre - Trentino Region.

Introduction

Italian Law 194 of 22 May 1978 "Regulations for the social protection of motherhood and on voluntary termination of pregnancy" helped to give family planning centres an important role with regard to its application and, more generally, with regard to the prevention of terminations (1). Consequently, the role of family planning centres, which were formally introduced just a few years earlier, was associated primarily with terminations, despite the fact that these facilities are attributed, by the same law that established them (2), broader functions regarding the protection of the individual, the couple and the family, also with regard to the promotion of responsible

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mother-/fatherhood (3, 4). This broader field of intervention, which was echoed by the *Progetto Obiettivo Materno Infantile* [Mother and Child Project] that, albeit with different regulations and organisational approaches in the various regions, gave family planning centres a new position that also involved associating them with the network of public health services (4, 5). Despite this, and due partly to ideological considerations, family planning centres were increasingly stigmatised and often considered as nothing more than centres that prescribe terminations, a consideration that has contributed to hindering their consolidation within the regional services network.

This said, it is important to bear in mind that the issuance of authorisation to have a termination by a family planning centre is not an automatic procedure, rather part of a counselling programme, in which the staff receive the woman, assess her situation, discuss the various options with her and then, if the woman actually decides to terminate her pregnancy, they organise a management plan according to the holistic criteria and procedures also implemented in other parts of Italy (6-10).

After the issuance of a termination certificate, by law the woman still has 7 days before she can be admitted to the hospital facility in which the termination procedure is to take place.

A "certificate" for termination does not, therefore, necessarily lead to an actual termination. A variety of contingent situations regarding the woman, her living conditions, and the support provided by a partner, friends and family can influence the final decision.

This study investigates the obstetric outcomes of users of Trento family planning centre who obtained termination certification, in order to identify the social, demographic and clinical characteristics of those women who decide to continue their pregnancy compared to those who go ahead with the termination. Of the 11 family planning clinics in Trentino region, Trento family planning centre is the only one that, since 2008, has taken the form of a single facility staffed by a multidisciplinary team; it serves a significant proportion of users with regard to termination certification and management.

Materials and methods

The study population consisted of users who contacted Trento family planning centre between 01/01/2003 and 31/12/2017 to whom the centre issued a termination certificate. The term 'certificate' refers to both the document confirming the request for a termination and the actual certificate that, pursuant to Italian Law 194/78, has an urgent value. The population does not include those women who, although they initially contacted the family planning centre for termination certification, then changed their mind either during the first interview with a reception counsellor or during management by the gynaecologist. Women requesting a termination after the 90-day cut-off who, pursuant to article 7 of Law 194/78, cannot be managed by family planning centres, were also excluded from the study.

User details, which were initially recorded in a paper record during the initial interview, were gradually entered in a purpose-designed electronic database created using the EPI Info package, whose variables are largely identical to those used in the ISTAT D12 template, the tool used for the epidemiological vigilance of terminations. The digitalisation of this information was completed by family planning centre staff in April 2018. The entries make it possible to obtain the exact number of termination certificates issued during the study period and to identify the social and demographic characteristics of resident and domiciled users. The Cochran-Armitage test was used to test the significance of the trends over time.

For users residing or domiciled in the province of Trento alone, the study also assessed the obstetric outcomes, by connecting the purpose-designed family planning centre database with the current information sources available (Cedap, ISTAT D11 flow, ISTAT D12 flow, hospital discharge reports) and assessing the occurrence of a delivery or termination or miscarriage, for each user, in the 9 months following the issuance of the certificate. This involved the use of the hospital information system (HIS), which also records A&E admissions and specialist appointments. The data of interest in each case was retrieved by family planning centre staff using the archives made available by the Clinical and Evaluational Epidemiology Service, which amongst other things, monitors births, miscarriages and terminations in the population. The combined, anonymous database put together by the family planning centre team proceeded, using the SAS System 9.1.3 package, with bivariate analyses to analyse the significance of the associations between the woman's social, demographic and clinical variables and the decision to continue or ter-

minate the pregnancy. A chi-square test p-value of ≤ 0.05 was considered significant. Lastly, multiple logistic regression analysis was performed considering the decision to continue or terminate the pregnancy as the outcome variable. The results were expressed as odds ratio (OR) with their respective 95% Wald confidence intervals.

Results

Between 2003 and 2017, Trento family planning centre issued a total of 3,870 termination certificates, amounting to 23.7% of all termination patients in the province of Trento between 2003 and 2017 and 57.6% of all users issued a certificate, during the study period, within the province of Trento and from outside the province (Table 1).

Most Trento family planning centre users reside or are domiciled in the province of Trento; on average a mere 5.7%, during the study period, came from outside the province, with a proportion that has dropped dramatically since 2011. The trend over time suggests a decrease in the number of certificates issued (-21% between 2003 and 2017), which is consistent with the decrease in the number of terminations performed in the province (-42.8% between 2003 and 2017) and with the corresponding national figures obtained with the ISTAT D12 flows (11, 12).

Over the same period, there was an inversion in the place of certification, with a substantial increase in the certificates issued by family planning centres that since 2011 have exceeded the number issued by general practitioners in the province of Trento (Figure 1).

Considering the resident users (n=3.563) alone, it was observed that over the study period 46% of users of Trento family planning centre were of foreign nationality, with a trend that increased up to 2011, before returning to the original level (Figure 2). Amongst the women of foreign nationality, the most common areas of origin were non-EU Europe (34.2%), Africa (22.3%), Central and Southern America (17.7%) and EU countries (16.4%). Asian women accounted for 9.4% of foreign resident users.

The modal age class was 20-24 years, a characteristic that remained stable over time; the average age was 28.3 years, with a standard deviation of 7.5. 48%

TABLE 1 - TERMINATION CERTIFICATES ISSUED BY TRENTO FAMILY PLANNING CENTRE FOR RESIDENT USERS AND TOTAL TERMINATIONS MANAGED IN THE PROVINCE. PER YEAR. 2003-2017 PERIOD.

Year	Termination certificates issued by Trento family planning centre			Total terminations managed in the province of Trento
	Resident users	Not resident users	Total users	
2003	238	23	261	1229
2004	288	21	309	1316
2005	256	23	279	1243
2006	273	22	295	1358
2007	250	20	270	1284
2008	234	14	248	1144
2009	246	18	264	1078
2010	222	16	238	909
2011	268	6	274	916
2012	238	14	252	874
2013	218	13	231	801
2014	218	5	223	758
2015	201	7	208	726
2016	208	12	220	684
2017	205	3	208	703
Total	**3.563**	**217**	**3.780**	**15.023**

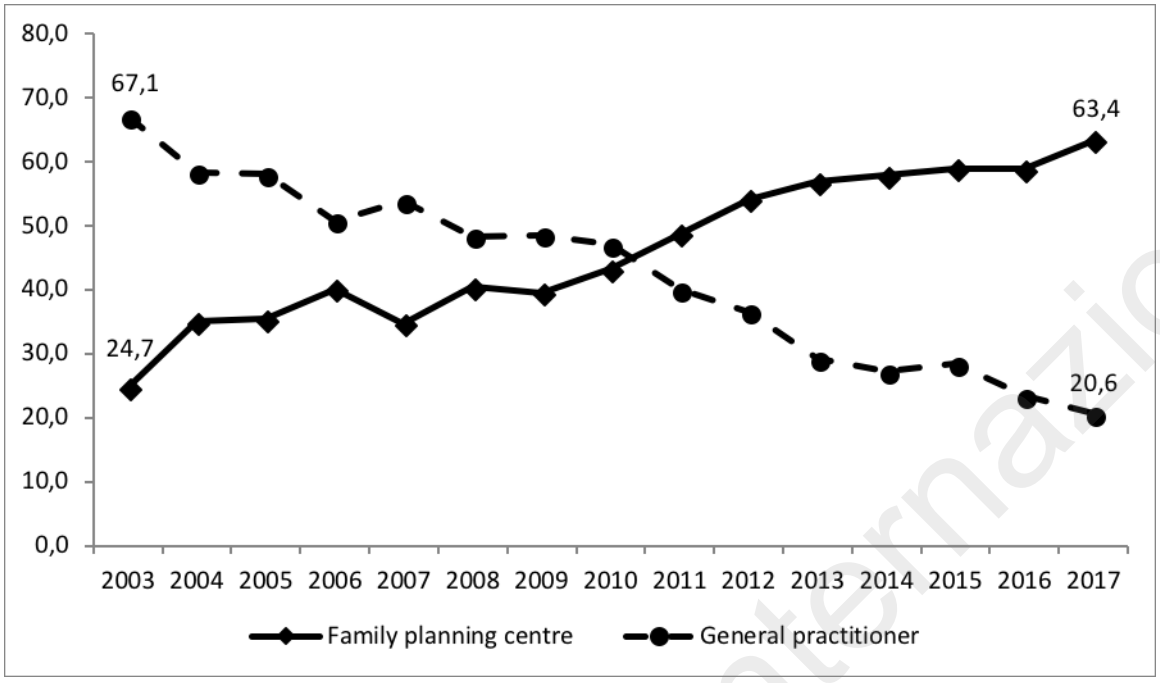

Figure 1 - Province of Trento. Proportion of termination certificates issued by family planning centres and GPs of users managed in the province of Trento. Per year. 2003-2017 period.

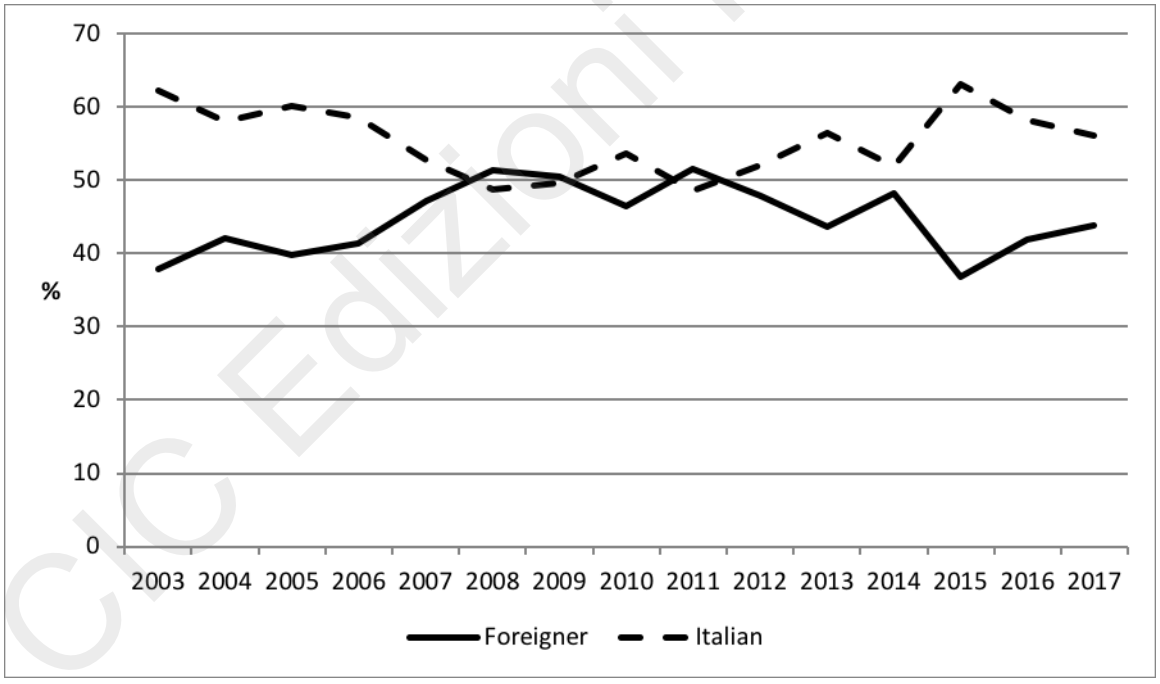

Figure 2 - Proportion of foreign and Italian users residing in Trentino. Trend per year. 2003-2017 period.

of users was single and 41% was married or cohabiting. Less than 6% of users had only received primary education and 11% had a university degree.

The obstetric outcomes, which were assessed for the 9 months following the issuance of the termination certificate, were studied for resident users alone. Terminations were not actually performed in all cases for which a termination certificate was issued. Linking the family planning centre's archives with the various current databases made it possible to as-

TABLE 2 - OBSTETRIC OUTCOMES AMONGST RESIDENT USERS FOR WHICH A TERMINATION CERTIFICATE WAS ISSUED BY TRENTO FAMILY PLANNING CLINIC. CERTIFIED IN THE 2003-2017 PERIOD.

Obstetric outcome	**Frequency**	**%**
Termination	2,942	82.6%
Miscarriage after having planned a termination	212	6.0%
Pregnancy having a baby	342	9.6%
Miscarriage after having continued the pregnancy	21	0.6%
Unknown	46	1.3%
Total	**3,563**	**100.0%**

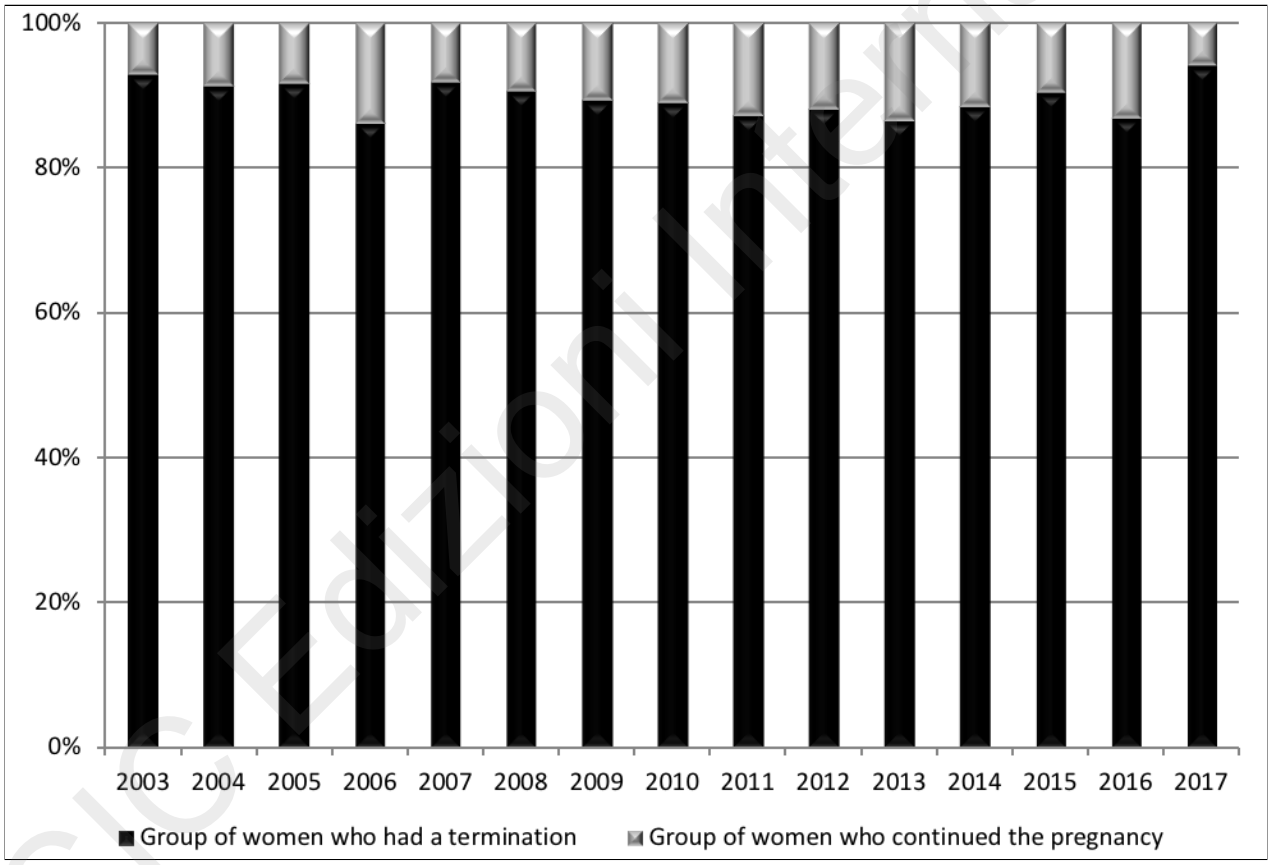

Figure 3 - Obstetric outcomes amongst resident users for which a termination certificate was issued by Trento family planning clinic. Per year. 2003-2017 period.

certain (Table 2), excluding the 46 cases that could not be tracked, that 82.6% actually had a termination, 6.0% had a miscarriage after having planned a termination, 0.6% continued their pregnancy but had a miscarriage and 9.6% continued their pregnancy and had a baby. The trend for the cases of termination (termination + cases of miscarriage in women who had planned a termination) and the women who continued their pregnancy (delivery + miscarriage following a decision to continue the pregnancy) did not undergo any statistical change over time: the Cochran-Armitage trend test had a p-value of 0.280 (Figure 3).

The characteristics of the users who decided to

TABLE 3 - RESULTS OF THE BIVARIATE ANALYSIS COMPARING THE GROUP OF WOMEN WHO DECIDED TO CONTINUE THEIR PREGNANCY WITH THOSE WHO HAD A TERMINATION. STATISTICAL SIGNIFICANCE (P-VALUE) TESTED USING THE CHI-SQUARE TEST.

Variable		Women who had a termination (n=3,154)	Women who continued their pregnancy (n=363)	*p*-value
Age	<18	172 (92.5%)	14 (7.5%)	0.114
	18-19	249 (91.5%)	23 (8.5%)	
	20-24	765 (91.6%)	70 (8.4%)	
	25-29	627 (88.6%)	81 (11.4%)	
	30-34	597 (87.7%)	84 (12.3%)	
	35-39	492 (89.0%)	61 (11.0%)	
	≥40	252 (89.4%)	30 (10.6%)	
Nationality	African	268 (87.8%)	37 (12.1%)	0.005
	Asian	130 (83.9%)	25 (16.1%)	
	Centre-South America	244 (87.8%)	34 (12.2%)	
	Italian	1752 (89.9%)	196 (10.1%)	
	European Union	249 (94.7%)	14 (5.3%)	
	Europe not EU	510 (90.1%)	56 (9.9%)	
Educational level	Low	1214 (89.9%)	137 (10.1%)	0.865
	Medium-high	1813 (89.5%)	213 (10.5%)	
Marital status	Married-cohabiting	1269 (87.5%)	182 (12.5%)	0.004
	Unmarried-Single	1502 (91.3%)	144 (8.7%)	
	Already married	264 (91.4%)	25 (8.6%)	
Parity	Nulligravida	1145 (89.7%)	132 (10.3%)	0.292
	Nulliparous	275 (91.7%)	25 (8.3%)	
	Primiparous	665 (88.1%)	90 (11.9%)	
	Pluriparous	1069 (90.2%)	116 (9.8%)	
Previous abortion(s)	Yes	896 (91.8%)	80 (8.2%)	0.010
	No	2258 (88.9%)	283 (11.1%)	
Use of contraception	Yes	1254 (91.7%)	114 (8.3%)	0.002
	No	1898 (88.4%)	249 (11.6%)	

continue their pregnancy compared to those who decided to terminate it are given in Table 3. The multiple logistic regression analysis shows that the factors associated with a likelihood of continuing the pregnancy are: age between 30 and 34 years (rather than minors), being married/cohabiting rather than single, of non-EU nationality (in particular Asian, Central or Southern American or African), being a nulligravida or nulliparous or primiparous rather than pluriparous, not having had a previous termination and not having used contraceptive measures (Table 4).

Discussion and conclusions

A planning centre is an important community facility for prevention and the health of women, children and couples, as set forth in the Mother & Child

TABLE 4 - RESULTS OF THE MULTIPLE LOGISTIC REGRESSION ANALYSIS ON THE PROBABILITY OF CONTINUING THE PREGNANCY.

Variable		**OR**	**95% Wald confidence intervals**	
Age	<18	1.00	-	-
	18-19	1.26	0.63	2.54
	20-24	1.26	0.67	2.37
	25-29	1.85	0.97	3.55
	30-34	**2.02**	**1.04**	**3.94**
	35-39	1.95	0.97	3.92
	≥40	1.94	0.91	4.14
Nationality	European Union	1.00	-	-
	Asian	**3.10**	**1.53**	**6.27**
	Centre-South America	**2.85**	**1.48**	**5.50**
	African	**2.40**	**1.25**	**4.60**
	Italian	**2.08**	**1.17**	**3.68**
	Europe not EU	**1.89**	**1.02**	**3.49**
Educational level	Low	1.00	-	-
	Medium-high	0.93	0.72	1.20
Marital status	Unmarried-Single	1.00	-	-
	Married-cohabiting	**1.84**	**1.31**	**2.58**
	Already married	1.16	0.70	1.93
Parity	Pluriparous	1.00	-	-
	Nulligravida	**2.07**	**1.37**	**3.12**
	Nulliparous	**1.83**	**1.07**	**3.14**
	Primiparous	**1.57**	**1.15**	**2.15**
Previous abortion(s)	Yes	1.00	-	-
	No	**1.42**	**1.04**	**1.93**
Use of contraception	Yes	1.00	-	-
	No	**1.44**	**1.13**	**1.83**
Year		1.02	0.99	1.05

Project launched in 2000 (5). In addition to the skill sets of its staff, the efficacy of its work is influenced by the ability to form a network with hospital services and other community medicine services (3, 4), an aspect that has been made necessary by the current demographic and epidemiological shifts associated with significant changes in family structure (13).

The management of terminations constitutes a significant part of the work of family planning centres, whose weight as a certifying facility has tended to increase over time, despite the constant decrease in terminations observed both nationwide and within the individual regions of Italy (12). The regions in which, in 2016, the number of certificates issued by family planning centres was far higher than the national average, indicating a more important role of these centres, were Emilia Romagna (68.1%), Piemonte (63.1%), Umbria (60.2%) and the Autonomous Province of Trento (58.9%). Generally speaking,

lower percentages are observed in southern Italy and the islands, most likely due to fewer services and staff (12).

In the province of Trento, in 2017, 63.4% (446/703) of terminations managed by community medicine were certified by family planning centres, a value that puts Trentino well above the national value for 2016 of 42.9% (11).

In 2017, Trento family planning centre alone certified 29.6% of all termination users managed in the province and almost 50% of all termination users certified by a family planning centre in the province.

This trend suggests a consolidation over time of the role played by family planning centres in the province of Trento, thereby providing users with increasing certainty with regard to the handling and management of their requests. In recent years, the Trento family planning centre has complemented the local health authority guidelines introduced in 2006 (14), with a series of documents intended to optimise the management of termination and interaction with public and private hospital facilities (15-18).

This consolidation of the role played by family planning centres appears to be even more important considering the specific characteristics of termination users compared to the overall characteristics of termination users served in the province of Trento. Indeed, the vast majority of family planning centre users reside in the province, are of foreign nationality and tend to be young and with a medium-low level of schooling (11).

The comparison with a usership characterised by aspects of vulnerability calls not merely for competent management, but also the possibility of assessment. It therefore appears essential to adopt an in-house information system able to provide staff with an overview of the services provided and user pathways that also make it possible to assess the outcomes achieved (19). Sharing the work between the family planning centre team and the local health authority's epidemiology service made it possible, with a view to providing a good example of integration, to expand the assessment of the work performed by the family planning clinic by making full use of the current information flows available.

Monitoring those users applying for termination certification showed that coming to the family planning clinic is not necessarily followed by a termination and that the decision as to whether to go through with a termination is strongly influenced by the characteristics of the woman. The reflection period imposed by law fully retains its importance.

Considering resident and domiciled users alone, 88.5% remained resolute in their decision to have a termination and 10.2% decided to continue their pregnancy; of the latter, some did not arrive at full term because they miscarried (0.6% in this study). The multivariate analysis shows that the factors associated with the probability of continuing a pregnancy, despite having obtained termination certification are: age between 30 and 34 years, being married/cohabiting, being nulliparous, not having had previous terminations and not using contraceptives. Belonging to certain nationalities also plays an important role. The overall variance given by the multiple logistic regression analysis is 62.8%. This would suggest that other factors that were not considered due to the nature of the study could provide a more complete description of the likelihood of continuing or terminating a pregnancy.

More subtle aspects, associated with the ethical and spiritual or religious values of the women, social and economic aspects or their relationship with their partner are undoubtedly to be considered important, but cannot be dealt with in this type of research.

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