

## OVERVIEW

# Vaccination in the 19<sup>th</sup> century in Italy and the role of the catholic church in public health: a historical overview

MARIANO MARTINI<sup>1</sup>, FRANCESCO BRIGO<sup>2</sup>, GIOVANNI RASORI<sup>3</sup><sup>1</sup>Department of Health Sciences, University of Genoa, Genoa, Italy;<sup>2</sup>Department of Neurology, Hospital of Merano (SABES-ASDAA), Merano, Italy; <sup>3</sup> Independent Scholar, Parma, Italy

## Key words

Smallpox • History of medicine • Pope Leo XII • Vatican State • Vaccine • Vaccination • Public health ethics

## Summary

Using the case of the vaccine against smallpox as an example, this article explores how the attitude and the politics of the Vatican State towards vaccination changed between the 18<sup>th</sup> and 19<sup>th</sup> century.

Despite some notable exceptions, the Catholic Church became progressively involved in supporting vaccination in Italy, exerting its temporal and spiritual authority to develop healthcare policies and to convince a population that still considered the vaccine as potentially harmful.

The brief historical overview on vaccine and vaccination shows that during the XIX century the Catholic church and in particular,

the political decision of the Pope, engaged temporal and spiritual power, high authority and persuasive influence to encourage the population, more than anyone the hesitant people, to get vaccine against smallpox.

Although with the due differences determined by the path of time and by the scientific, educational and social advances of modern-day, this view from the past can provide us, with actual COVID pandemic, a reason of deep thinking and also how to face the present COVID-19 pandemic and to prepare for forthcoming future.

Actually, it shows us how the terrible smallpox epidemic was handled and finally overcome, thanks to vaccination.

In the 19<sup>th</sup> century, medicine was deeply influenced by the introduction of vaccination in Europe. For the first time in history, humanity could face infective mass diseases. However, in the beginning, not everyone shared this optimistic view on the efficacy of vaccination in preventing the spread of infections.

In this article, we evaluate the attitudes and politics adopted by the Vatican State on the vaccination against smallpox.

In the 18<sup>th</sup> century, the Catholic Church, through his chief Pope Benedetto XIV (1675-1758), indirectly gave its support in the fight against smallpox by promoting vaccinations through homilies at Mass, aimed at convincing people to accept the inoculation. However, in this period the Church generally showed great caution and adhered slowly to the practice of vaccination:

*“The Popes are the last to innovate in these things. The slowness of their steps must reflect their age alongside their dignity. If I were an emperor or a king, because of the advantages that I see, the inoculation would now be allowed in my territories but I don’t want to alarm those who are shy and weak”* [1].

In the early 19<sup>th</sup> century, after the discovery of the cowpox vaccine by Edward Jenner (1749-1823) [2], the Vatican State became progressively involved with vaccination [3].

In one of his letters to Jenner, Joseph Marshall, a medical officer who had set up “Jennerian” institutes in Gibraltar

and Malta [4], declared:

*“It was not unusual to see in front of the hospital a procession of men, women, and children, during the day of public inoculation, conducted through the streets by a priest carrying a cross”* [5].

Not without irony, the author of this letter noted how the population considered the vaccination *“a blessing sent from the Heaven, discovered by one heretic and practiced by another”*.

Even in the clergy, there were different attitudes towards vaccination.

In 1808, the Archbishop of Turin Giacinto della Torre (1747-1814) wrote a pastoral letter to warn against the common belief that considered the inoculation of an animal liquid in a man to be immoral and unnatural:

*“Is it not true that men drink milk from cows and eat the meat without considering these substances dangerous in any way? There is, therefore, no risk of contamination with cows using their pus to prevent the spread of smallpox”* [6].

In 1809, in Bari, the Superintendent of Calabria Citeriore noticed the negative attitude of the clergy towards vaccination; thus, he promised a reward to those priests who had distinguished themselves in spreading vaccination:

*“The Government will always distinguish those priests, who will demonstrate the utmost zeal and commitment to the propagation of the vaccine inoculation. The official praise of their conduct will bring their names to the ear*

Fig. 1. The portrait of Pope Benedetto XIV (1675-1758).



*of His Majesty, which will be able to distinguish and recompense them with his sovereign magnificence” [7].*

In 1810, in Cerignola, Apulia, priests, and physicians worked together in supporting the practice of vaccination, emphasizing their advantages for the population: very often, they personally inoculated the vaccines [8].

The collaboration between clergy and doctors reached its peak in 1822 with the creation of the municipal councils that included priests.

In 1824, Luigi Sacco (1769-1836) was awarded the membership of the Golden Spur (conferred to those who committed to spreading the message of the Church) for his contribution to the mass vaccination that had occurred the same year.

In 1822, the smallpox vaccination became mandatory in the papal territories following the law, promulgated by Pope Pius VII (1742-1823), inspired by Cardinal Consalvi (1757-1824), and supported by Monaldo Leopardi (1776-1847) in the Recanati territories, central Italy, over which the pope had sovereignty. By that time, Leopardi, a philosopher, nobleman, politician, and writer who was one of the main Italian intellectuals of the counter-revolution, had already administered the vaccine to his children, providing a detailed evaluation of its usefulness. Monaldo Leopardi was the father of the famous Italian poet Giacomo Leopardi (1798-1837).

In 1823, after the death of Pius VII (1742-1823), Pope Leo XII (1760-1829) rose to the papal throne: he was nicknamed “the Pope of austerity” as he followed an economic policy aimed to reduce expenses and prevent the speculation in the Vatican State. On 15<sup>th</sup> of September 1824, after one year of the pontificate, he promulgated a circular that repealed the mandatory vaccination, making it optional (he was the first head of a state in Europe to take such a decision):

*“It remains the obligation of Doctors and Surgeons to perform it free of charge [the smallpox vaccination],*

*to those who wish to fight against it, since this is the treatment and protection of a disease which, like all the others, they are compelled to cure” [9].*

Hence, despite making vaccination optional, he prevented doctors from conscientious objection.

The possibility to choose whether to use vaccination or not was also related to economic reasons, as healthcare costs related to it were considerably high. In addition, with this statement, the pope attempted to get along with popular beliefs that were suspicious and skeptical towards vaccination.

Doctor Giacomo Tommasini (1768-1846) was one of the greatest opponents to this papal decision, following the anticlerical attitude showed by Giovanni Rasori (1766-1837), who in his *Rapporto sullo stato dell’Università di Pavia, 1797*, had compared the illicit trade of graduations to the sale of papal indulgences [10].

Giacomo Tommasini, who became director of the vaccine grafting commission of the Dukedom of Parma, Piacenza, and Guastalla, harshly criticized the Vatican’s attitude towards vaccination. In 1836, Tommasini claimed that the choice of Pope Leo XII had caused two smallpox epidemics in 1828 and 1835 and that they could have been prevented if vaccination had remained mandatory [11].

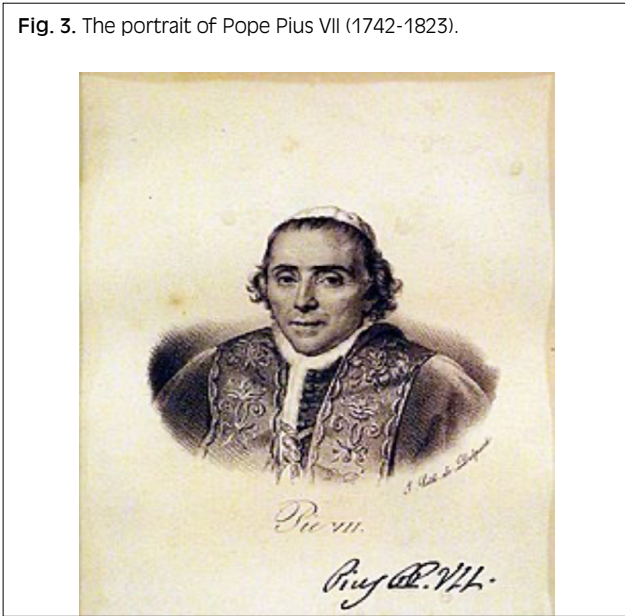
Tommasini examined the cases of smallpox in the Bolognese area between 1820 and 1828, discussing the spread of the epidemic and its manifestation. Specifically, his analysis emphasized that the smallpox epidemic occurring in Bologna in 1828 had caused a tremendous number of victims:

*“In the year 1828, the course of the smallpox epidemic had other and more deadly consequences. It is not difficult to find the explanation for this, if we reflect on what we have mentioned above, namely that from the year 1822 to the year 1828 the vaccination was neglected. It is a pity that there is no exact statistic to reproach the unbelievers and the negligent, for which*

Fig. 2. Portrait of Edward Jenner (1749-1823).



Fig. 3. The portrait of Pope Pius VII (1742-1823).



it would be possible to demonstrate, clearly and at a glance, how many deformed, how many blind, how many lame and how many deaths were due to the flu pox of that year. In the city of Bologna alone the deaths of smallpox from January to December of the year 1828 were 553. More frightening and exemplary would have been the figure of the sad consequences of having neglected the preventative measure of the Vaccination, if one had considered the massacre of the same epidemic in villages, in small lands, and the free countryside” [12].

The accusation made by Tommasini had some contradictory elements. Vaccination in the papal territory had been mandatory between 1822 and 1824 and optional from 1824 to 1828: if the inoculation of the smallpox vaccine had been neglected, there could be no correlation with the shift from mandatory to optional vaccination. In 1828 the number of deaths in the city of Bologna, compared to the number of people living in the city, remained low; moreover, Alfonso Corradi (1833-1892) mentioned whooping cough and not smallpox as one of the main causes of death [13]. Finally, concerning mortality in the countryside, Tommasini himself referred that vaccine inoculation was often poorly performed:

“And let’s say it exactly, as twice we visited the people vaccinated by certain country health officials, of whom we praise the zeal and deplore the ignorance, who - not believing the vaccine matter was good unless the supuration of the pustules was not in an advanced state - instead of grafting the vaccine pustule, produced abnormal pustules, which sometimes degenerated into sordid ulcers and very difficult healing” [14].

Although the number of rural deaths could not be a direct consequence of optional vaccination, at that time, especially in the abovementioned areas, people frowned upon the vaccination.

In 1819 the Duchess Maria Luigia (1791-1847), ruler of the territories of Parma, Piacenza, and Guastalla, where Giacomo Tommasini held the position of protomedic,

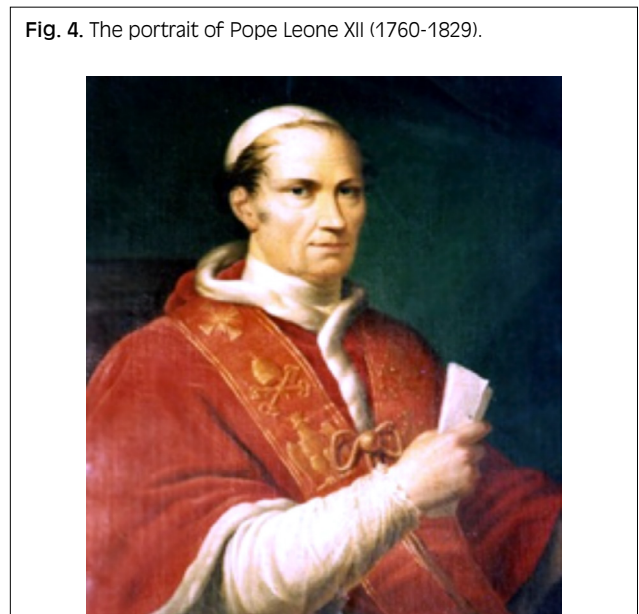
expressly requested the collaboration of the clergy with a decree:

“At the same time and immediately having begun the operations necessary to carry out the vaccination, you will write a circular letter to the Most Illustrious and Reverend Bishops of Parma, Piacenza, Borgo San Donnino, and Abbot of Guastalla, to participate in these My Dispositions, to assure them in My Name of the full confidence that I place in them, so that for their part, and with the voices of persuasion, and with the commandment if necessary, by their subordinate Archpriests, Provosts, Parish Priests, Parish Rectors, etc. they explain to the parishioners the good of these dispositions, and inspire in their obedience to the orders given to them only for their own advantage, to which aim all the aims of My Ordinations tend. These parish priests will also advise the people about the days, hours, and places of vaccination. I know that many of them have lent themselves with true Christian charity in the other periods of vaccination in this State; I, therefore, reserve the right to send some proof of My Sovereign gratitude to any of them, who will be worthily distinguished with this activity” [15].

In addition, the decree considered ten thousand vaccinated individuals as the goal of a vaccination campaign throughout the duchy: “Calculating approximately 500 per 10,000, that would be forty times that amount, namely 20,000, the vaccinated people of the State, but I would rather believe in less than more. If half of them could be vaccinated in this year it would be a great advantage to the population of My Duchies, and it is My firm intention to bring this to effect” [16].

Vaccination campaigns in the territories where vaccination was mandatory were so difficult to carry out that the four doctors who had performed more inoculations received a reward: “The four Doctors or Surgeons, one for each Duchy, and one for the Valtarese region, who will have distinguished themselves more in this operation, and

Fig. 4. The portrait of Pope Leone XII (1760-1829).



will have vaccinated more individuals (according to the country they had to travel, and the locality) will receive a check, as an extraordinary gratification from My Treasure, for this good duty that they exercised above the others” [17].

In this complex context, Tommasini’s attack against the Pope is of particular interest and may have different reasons. In 1828, while holding the teaching chair in Bologna (at the time under papal control), Tommasini was accused of being a Carbonaro by the Vatican; during the legal process Tommasini succeeded in proving his innocence, but this incident led him to move away from the Bolognese territories. Furthermore, his strong friendship with the Italian writer Giacomo Leopardi (DATE), Monaldo’s son, may have led Tommasini to clash with the Pope, as he had removed the previous promulgation long supported by Monaldo himself.

In conclusion, this brief historical overview shows that throughout the 19<sup>th</sup> century the Catholic Church employed its temporal and spiritual authority to convince the population to accept inoculation and to develop vaccination politics.

## Conflict of interest statement

The Authors declare no conflict of interest.

## Funding sources

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## Authors' contributions

MM and GR designed the study, conceived and drafted the manuscript; MM, GR, FB revised the manuscript. MM, GR performed a search of the literature, MM and FB complete linguistic revision. All Authors critically revised the manuscript. All Authors have read and approved the latest version of the paper for publication.

## References

- [1] Fadda B. L’innesto del vaiolo. Milano: FrancoAngeli 1983, p. 60.
- [2] Bragazzi NL, Gianfredi V, Villarini M, Rosselli R, Nasr A, Hussein A, Martini M, Behzadifar M. Vaccines meet big data: state-of-the-art and future prospects. From the Classical 3Is (“Isolate-Inactivate-Inject”) Vaccinology 1.0 to Vaccinology 3.0, Vaccinomics, and beyond: a historical overview. *Front Public Health* 2018;6:62. <https://doi.org/10.3389/fpubh.2018.00062>
- [3] Orsini D, Martini M. From inoculation to vaccination: the fight against smallpox in Siena in the 18<sup>th</sup> and 19<sup>th</sup> centuries. *Infez Med* 2020;28:634-41.
- [4] Fisher RB. Edward Jenner 1749-1823. London: André Deutsch 1991, pp. 361. Published online by Cambridge University Press 05 January 2009, pp. 89-90.
- [5] Baron J. The life of Edward Jenner, with illustration of his doctrines and selection of his correspondence. I, 2014, p. 403.
- [6] Pastoral letter of Giacinto della Torre del 26 luglio 1808. “Non è forse vero che gli uomini bevono il latte delle mucche e ne mangiano le carni senza che tali sostanze nocciano loro in alcun modo? Non vi è pertanto alcun rischio di contaminarsi con I bovini utilizzando il loro pus per prevenire l’insorgenza del vaiolo”.
- [7] ASBa, Sanità pubblica, 2 1806-1846, fasc 15/1 circolare dell’intendente ai giudici di pace, sindaci e parroci della provincia del 24 febbraio 1809: “Il Governo distinguerà sempre que’ sacerdoti, i quali dimostreranno il massimo zelo ed impegno per la propagazione dell’innesto vaccino. Le ufficiali rimostranze di questa loro condotta farò giungere I loro nomi all’orecchio di Sua Maestà, la quale saprà distinguerli e compensarli colla sua sovrana munificenza”.
- [8] Lettera del Sottocomitato di vaccinazione di Cerignola all’intendente del 31 marzo 1810.
- [9] Leone XII, 15 September 1824. “Rimane obbligo a Medici e Chirurghi condotti di eseguirla gratuitamente [la vaccinazione antivaiolosa], a quanti vogliono prevalersene, essendo questa la cura ed il preservativo di una malattia alla quale, come a tutte le altre, essi hanno l’obbligo di riparare.”
- [10] Rasori G. Rapporto sullo stato dell’Università di Pavia, 1799. In: Cosmacini G. Scienze mediche e giacobinismo in Italia: l’impresa politico-culturale di Giovanni Rasori, 1796-1799. Milano: FrancoAngeli 1982.
- [11] Tommasini G. Raccolta completa delle opere mediche, Vol. 7. Bologna: Tipografia dall’Olmo e Tocchi 1836, p. 22.
- [12] Tommasini G. Raccolta completa delle opere mediche, Vol. 7. Bologna: Tipografia dall’Olmo e Tocchi 1836, pp. 22-23. “Nell’anno 1828 il corso dell’epidemia vaiuolosa ebbe ben altre e più luttuose conseguenze. Non si stenta a trovare di ciò la spiegazione, se si rifletta a quello che noi abbiamo superiormente accennato, e cioè che dall’anno 1822 all’anno 1828 la vaccinazione fu trasandata. Egli è un peccato, che non si abbia una statistica esatta da rimproverare agl’increduli ed ai neglenti, per la quale chiaramente ed a colpo d’occhio si vedesse, quanti deformati, quanti ciechi, quanti storpi e quanti morti si dovessero all’influenza vaiuolosa di quell’anno. Nella sola città di Bologna I morti di vaiuolo dal gennaio al dicembre dell’anno 1828 sommarono 553. Più spaventosa ed esemplare sarebbe stata la cifra delle triste conseguenze dell’aver neglimentato il preservativo della Vaccinazione, se si fosse tenuto conto della stragge della stessa epidemia ne’ villaggi, nelle piccole terre e nella libera campagna”.
- [13] Corradi A. Annali delle epidemie occorse in Italia, Vol. 4. Bologna: Tipografia Gamberini e Parmeggiani 1877, p. 983.
- [14] Tommasini G. Raccolta completa delle opere mediche, Vol. 7. Bologna: Tipografia dall’Olmo e Tocchi 1836, p. 22. “E diciamo esattamente perchè due volte ci siamo trovati nel caso di visitare I vaccinati di certi uffiziali di Sanità di campagna, de’ quali lodiamo lo zelo e deploriamo l’ignoranza, che non credendo buona la materia vacina se la suppurazione delle pustole non era bene inoltrata, invece d’innestare la pustola vaccina, producevano pustole anomali, che qualche volta degeneravano in ulceri sordide e di guarigione difficilissima”.
- [15] Sovereign disposal regarding vaccination 1819, 31 July 1819, pp. 4-5. “Contemporaneamente e subito incominciate le operazioni necessarie per eseguire la vaccinazione, ella vorrà scrivere una lettera circolare agli Illustrissimi e Reverendissimi Signori Vescovi di Parma, Piacenza, Borgo San Donnino, e Abate di Guastalla, per partecipar loro queste Mie Disposizioni, per assicurarli in Nome Mio della piena confidenza che in essi ripongo, ed affinché dal canto loro, e colle voci della persuasione, e col comandamento se fia duopo, dai loro subordinati Arcipreti, Preposti, Parrochi, Rettori ecc. delle Parrocchie facciano spiegare a’ Parrocchiani il bene di esse, ed ispirino in essi l’ubbidienza agli ordini dati a solo loro vantaggio, al quale scopo tendono tutte le mire delle Mie Ordinazioni. Per essi Parrochi si potrà anche far avere cognizione dei giorni, delle ore, e dei

luoghi della vaccinazione. So che molti di essi si sono prestati con vera carità cristiana nelle altre epoche della vaccinazione in questo Stato; mi riservo quindi di far pervenire ad alcuno di loro, che si sarà sotto questo rapporto meritevolmente distinto, qualche prova della Mia Sovrana gratitudine”.

- [16] Sovereign disposal regarding vaccination 1819, 31 July 1819 pp. 2-3. “Calcolando approssimativamente a 500 per 10.000, sarebbero quaranta volte tanto, ossia 20.000 I vaccinandi dello Stato, ma crederei piuttosto in meno che di più. Se in quest’anno si potesse vaccinarne la metà sarebbe un gran vantaggio alla

popolazione de’ Miei Ducati, ed è Mia ferma intenzione di portare ciò ad effetto”.

- [17] Sovereign disposal regarding vaccination 1819, 31 July 1819 p. 4. “I quattro Medici o Chirurghi, uno per ogni Ducato, ed uno per il Valtarese, che si saranno maggiormente distinti in questa operazione, ed avranno vaccinati più individui (proporzione fatta per paese da percorrere, e della località) riceveranno un assegno, come gratificazione straordinaria per una volta dal Mio Tesoro, per questa loro bene esercitata incombenza al di sopra degli altri”.

Received on February 14, 2022. Accepted on February 25, 2022.

**Correspondence:** Mariano Martini, Department of Health Sciences, University of Genoa, Genoa, Italy, Largo R. Benzi 10, Pad 3 – E-mail: mariano.yy@gmail.com - mariano.martini@unige.it

**How to cite this article:** Martini M, Brigo F, Rasori G. Vaccination in the 19<sup>th</sup> century in Italy and the role of the catholic church in public health: a historical overview. *J Prev Med Hyg* 2022;63:E104-E108. <https://doi.org/10.15167/2421-4248/jpmh2022.63.1.2518>

© Copyright by Pacini Editore Srl, Pisa, Italy

*This is an open access article distributed in accordance with the CC-BY-NC-ND (Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International) license. The article can be used by giving appropriate credit and mentioning the license, but only for non-commercial purposes and only in the original version. For further information: <https://creativecommons.org/licenses/by-nc-nd/4.0/deed.en>*