

FROM THE "ART OF CUTTING THE UMBILICAL
CORD" BY DR. J. B. LALANGUE TO THE
"MIDWIFERY" BY PROF. DR. A. LOBMAYER
AND PROF. DR F. DURST

OD "MEŠTRIJE PUPKOREZNE"
J. B. LALANGUEA DO "PORODILJSTVA"
PROF. DR. A. LOBMAYERA I PROF. DR. F. DURSTA

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SUMMARY

A short survey of midwifery and obstetrics development in the northwest part of Croatia is presented in this paper, from J.B. Lalangue's coming to Varaždin, through the founding and work of Midwifery School and National Maternity in Zagreb to the persons without whom this would not be possible or it would be quite different. Lalangue, being an expert on obstetrics, noticed in a very short period of time, all misfortune caused by incompetent work of then's midwives, so he published the book "Brevis institutio de re obstetrica illiti kratek navuk od mestrie pupkorezne...", and started first midwifery courses for peasant women. Focus of this paper is on Prof. Dr Antun Lobmayer textbook analyses, and he was the first professor of midwifery, and the director of the "Royal Midwifery School" and the "National Maternity" in Zagreb. Textbooks for midwives named "Midwifery- Learning Book for Midwives", had six editions over 50 years and they represent the basis of Croatian midwifery textbook literature. Prof. Dr Franjo Durst, the assistant and successor of Prof. Lobmayer completed and partially revised the last two editions.

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Besides the biographies of the “Midwifery School” professors, an analysis and critical review on the mentioned textbooks is given from today’s medicine point of view.

Key words: midwifery; history; midwifery textbooks; Midwifery School; National Maternity; Croatia; Zagreb; Varaždin.

MIDWIFERY ORIGIN AND ITS HISTORICAL DEVELOPMENT

Helping with labor is one of the oldest medical crafts. For a long time midwifery was performed only by women since by giving birth to their own children, they instinctively realized how they should help. Although men also gave their great contribution to it, through different periods of midwifery history, and raised it to the scientific level in the end, it has basically remained women’s occupation until today. At first, midwifery training was done only within a family. It was the most common practice that mother handed the experience down to daughter, and at the later stages it became and maintained a character of a craft for a long time, which was taught firstly by skilful elderly women and later by healers and surgeons. Even later, it was taught by rarely educated doctors, and finally a midwives training became professional and performed at midwifery courses and schools within medical faculties [1,2].

The XVI century, according to Fassbender [1] and other prominent medical historians, represented the turning point in the history of obstetrics and midwifery. In addition to the appearance of the first regulations regarding the midwives work and first midwifery textbooks, as well as the introducing professional exams for midwifery job, men began to be gradually included in obstetrics. They were mainly barbers and surgeons. In 1630 Paris midwives united into a special association, and they founded in the old Paris hospital Hôtel Dieu, the first maternity and the first European Midwifery School, which was the leading obstetrics school in Europe in the following 100 years, where students taught even their midwifery teachers (*Maitresse de sage-femme*) [3,4].

In the 16th century, or in 1513 more precisely, the first European middle aged midwifery textbook appeared. Eucharius Roesslin (Rösslin), medical doctor from Worms and later physician in Frankfurt, wrote it. The book “Der swangern Frawen und Hebammen Rosengarten” (*The rose garden of pregnant women and midwives*), had 20 illustrations. Second book in a row intended for midwives and doctors, was published in Germany as well, in 1544. It was written by Jacob Rueff (1500-1558), a doctor, surgeon and obstetrician

in Zürich, who published it under the name “De conceptu et generatione hominis” (*About the conception and child birth*). The book was translated into English in 1637 and was named “The expert midwife” [1,4].

About 100 years upon the foundation of midwifery school in the Hôtel Dieu in Paris, Johann Jakob Fried founded in 1728 the maternity department intended also for midwives education in the City hospital in Straßburg, and in 1737 he turned it into the Clinical Institute for educating midwives and medical students. This was an important event for the historical development of midwifery, because, following its model, many similar institutes were founded, first in Germany and then, in the whole Europe. In 1751, obstetrics schools were founded in Berlin and Göttingen and in 1754 the proto-medicus of Austria and personal physician of the Queen Maria Theresa, Dr Gerhard van Swieten (1700-1772) founded the Midwifery School in Vienna and appointed Dr Johann Crantz (1722-1797) a teacher [1,4,5]. Gerhard van Swieten reforms were crowned by passing the Central medical law for the whole Austria “Generale Normativum in Re Sanitatis”, which was declared by the Queen Maria Theresa in 1770. Within the “Instructions for midwives” (*Hebammeninstruction*) as a part of “Normativum”, regulations on midwifery work were stipulated in nine articles. The law did not allow, among other things, the persons without appropriate qualifications to practise midwifery, that is, the ones who were not approbated by the master of obstetrics, or, if this was not available, by the district or city physician, and they should have been confirmed and sworn in by city authorities. However, many more years and decades upon the regulations in “Normativum” came into force, still there were no approbated midwives in remote provinces, especially in villages [6,7].

The van Swieten’s reform made Vienna’s obtetrics the most famous obtetrician school in the whole Europe, gathering students of medicine, physicians, midwives and everybody who wanted to be trained in midwifery through theory and practice, while the textbooks by professors of “Vienna obstetrics school” were the most popular ones at that time. Raphael Johannes Steidelle (1737-1823), professor of theoretical obstetrics at the The first Vienna obstetrics School, alongside many publications, wrote a textbook “Unterricht für Hebammenn” (Vienna, 1774), which had two editions. Almost a hundred years later, professor of obstetrics and manager of the Second midwifery clinic in Vienna, Dr Joseph Späth, also wrote the midwifery textbook, “Lehrbuch für Hebammen” (Vienna, 1869) and published it in 3 editions.

The influence of the First Vienna obstetrics school in Slovenia and Croatia was exerted through Anton Makovic and Jean Baptiste Lalangue, students of professor Steidelle, and also through Alojz and Alfred Valenta, as well as Antun Lobmayer, who took as a model the representatives of the Second Vienna obstetrics school, where the Dr Joseph Späth was the leading professor [8-10].

The aim of this paper is, after a short introductory review of the obstetrics development and persons deserving credit for starting midwives professional training in the north-west Croatia, about which many of our medical historians used to write, to point out their importance for further development of Croatian obstetrics by means of critical analysis of the first midwifery textbooks in that part of Croatia and from today's medicine point of view.

JEAN BAPTISTE LALANGUE (1743-1799), THE INITIATOR
OF THE FIRST MIDWIVES TRAINING AND A WRITER OF
THE FIRST MIDWIFERY TEXTBOOK IN CROATIA

In order to realize his plans concerning the organization of the health service in the territory of the whole Monarchy, according to the centralistic principles, van Swieten sent reliable and capable doctors to the main centres of remote provinces. Since Varaždin was cultural and administrative seat of the Banovina of Croatia, on the initiative of Maria Theresa, from the year 1767 to the great fire in 1776, and since, Franjo Nadaždi (Nadasdy), the Croatian ban, coincidentally asked Vienna to assign him a personal physician. The Empress assigned Jean Baptiste Lalangue from Luxembourg, at the proposal of van Swieten to become Ban's physician and physician of the Varaždin county; he was appointed on March 30, 1772 [11-12].

Dr Lalangue, being familiar with the heavy health circumstances in Croatia, before going to Varaždin, expanded his knowledge by studying obstetrics in the Saint Mark hospital in Vienna, with professor J. A. Rechberger, after which he was entitled *magistar artis obstetricitiae* [13-15]. Lalangue came to Croatia believing that he would stay there for a while and then return to Vienna. However, soon he got to like the area and people and in 1776, on his own request, he was admitted to the citizens of Varaždin and registered in the Album Civium [11]. Under the influence of van Swieten enlightening views he decided to try fighting for improvement health circumstances, by acting in various directions, in the first place by his work in health enlightening. Only after a few months upon his arrival to Varaždin, he started to

put into effect the regulations contained in *Normativum in re sanitatis*. In order to make everybody familiar with duties of city midwife, the City Magistracy in Varaždin published in 1787. "Instruction für eine Stadt Hebamme" written by Lalangue himself and which contained regulations from *Normativum*. Two years upon his arrival to Croatia, he wrote, and, in 1776, published a book "Medicina ruralis illiti Vrachtva ladanszka, za potrebochu musev, y sziromakov Horvatzkoga orszaga y okolu nyega, blisnesseh meszt".

In 1777 Jean Baptiste Lalangue published a new book, the first Croatian midwifery textbook. That book was printed by Trattner, in Zagreb, and its title is "Brevis institutio de re obstetritia illiti kratek navuk od mestrie pupkorezne za potrebochu muskeh sziromaskeh ladanskeh sen Horvatzkoga orszaga, y okolu nyega blisnesseh sztrankih".

It represents a sequel of Lalangue's work in health enlightenment and contains the instructions for peasant women and city midwives, and also male midwives, who were present among surgeons and obstetricians at that time [13,16,17]. As a good expert on midwifery, Lalangue perceived in a very short time all misery caused by incompetent work of midwives of that time, so, as he said in the preface, he decided to write a book about midwifery, because he was touched by the fate of many mothers from Croatia and their children, who died during labor or due to its complications which made them permanently ill. In villages, Lalangue says, the particular great misfortune would happen if "zvan-naravski" (*unnatural, pathological*) labor occurred. In addition, in Croatian villages, the women giving birth were given to drink too much wine and brandy. In cities, on the other hand, incompetent midwives aggravated even normal labor, since they unnecessarily tortured a mother, by asking her to push too early, impatiently kneading the belly or even with



The first midwifery textbook in Croatian by J. B. Lalangue, 1777

Prva knjiga za primalje na hrvatskom, J. B. Lalangue, 1777.

their hand expand by force the delivery path by their hand. That is why Lalangue decided to write and publish special “*navuke za pupkorezne babe*”, which, hopefully, would help women to learn midwifery skills and spare no effort to improve the midwifery in Croatia.

Although Lalangue pointed out that his book was not intended for professional midwives but for ignorant, poor women, by analyzing the matter presented in the textbook, and by the way in which he showed it, it may be said that “Kratek navuk” can be compared to the officially valid and popular midwifery textbooks at that time, as it is the one by Steidel “Unnterricht fur Hebamenn” (Vienna 1774), which served Lalangue, in addition to the textbooks by Crantz and Boerhave, during the writing of his own textbook. Since he was not yet very familiar with the Croatian language to write a book in it, he wrote it in Latin, and then, Varaždin’s friar, Eugen Klipmacher translated it into Croatian. This book was well received by readers, so Zagreb’s publisher Novosel published the second edition of “Kratki navuk” in 1801, after the author’s death [11,15,17,18].

The book has eight chapters. The features that each good midwife should have are listed in the first one and this part could be considered as the first deontological regulations for midwives in the Croatian language. The second part is dedicated to the anatomy of female genital tract, where the author used some original Kajkavian names instead of medical terms. The third part deals with normal pregnancy, the fourth one with a normal child birth and the fifth one with internal obstetrician examination. Although Lalangue’s advice was good at that time, from today’s medicine point of view some remarks can be made. It is true that the author warns a midwife to cut off her nails and oil or grease her index finger, but he mentions nowhere that her hands should be carefully washed. The examination was carried out with index finger while a pregnant woman was in a standing position, which was a common practice of the time. The sixth chapter of the book is the most extensive one, which is understandable, since it explains the behaviour of the midwife during a normal labor, and the procedure of a newborn and puerpere care, which, in fact, is a midwife job. The tools which she was obligated to have are especially interesting, since they reflect best a state of midwifery at the end of the 18th century. First of all, it was a labor chair, since it was used at the end of a labor, in the expulsion phase. Then, there were rounded scissors with the dull ending for cutting the umbilical cord off, tape for its ligation, clyster, Salmiak-Geist for putting it under a mother’s nose if she fainted, squirt for emergent christening of a child, piece of oak’s “goba”

for stopping the bleeding, firm rope for possible child pulling out by his leg, grease or oil for the lubricating the delivery paths and midwife's fingers, as well as the warm water with a little wine for a new born bathing. Regarding a midwife acting during labor, Lalangue stands for respecting the natural path of a delivery. The violent expanding of delivery paths with fingers in order to accelerate the dilatation phase and insisting on pushing up after the very first labor are particularly considered as very harmful.

The seventh part of the book describes what a midwife should do in case of pathological labor. This chapter is short, since a midwife should immediately call a doctor for help in case that labor is not progressing. The eighth and final part of the book contains 21 recipes for preparation various teas, enemas and compresses, and also the potions, with ingredients mainly of herbal and animal origin, like "*eyes of a crustacean*", "*fragments of an antler*"... [15,17].

He dedicated his midwifery textbook to Eleonora Niczki, a daughter of a chancellor of the Kingdom of Hungary, Franjo Esterhazi, as a gratitude for the financial aids, which a countess gave for Elizabeth Gärtin, a midwife, schooling, with whom Lalangue intended to found a school in Varaždin, where peasant women could have been taught midwifery skills through consecutive courses. However, only publishing the midwifery book was not enough for Lalangue, since he was aware that most women were unable to use it, since they were illiterate. In his intention to keep his promise regarding midwifery improvement in Croatia, he decided to organize direct teaching lessons for young women who were interested in midwifery. For this purpose he chose Elizabeth Gärtin who already practised midwifery for a few years in Varaždin together with her mother; he himself had taught her first, and after that he sent her for further advanced training to Vienna with professors Lebmacher and Steidelle, where she successfully passed the midwifery exam, and, on returning to Varaždin, she became the main Lalangue's co-worker during midwifery training. Unfortunately, Lalangue did not receive any state support to organise his midwives teaching in Varaždin, but he did not give up. He even acquired models of women's pelvis and a wooden gadget for practising obstetric's procedures (*fantom*). Elizabeth Gärtin used Lalangue's book and Steidel's midwifery textbook for her teaching and praxis. Considering all that, Mirko Dražen Grmek proved, on the basis of his findings, that Lalangue still managed to accomplish his goal and that midwifery courses were really held in Varaždin. Although they were not official, that is, established by central state authorities, they can be considered as

the first attempt of organized midwifery training in Croatia, and Lalangue's book "O meštiji pupkoreznoj" (*The art of cutting the umbilical cord*), as the first Croatian midwifery textbook [11,12,15]. Jean Baptiste Lalangue died in Varaždin in 1799.

HEALTH CONDITIONS IN CROATIA AND SLAVONIA IN THE XIX CENTURY

The number of doctors and other medical personnel was still small, especially in villages. Diseases raved and newborns died, women suffered during labor and men from severe accidents due to inability to receive a professional help. The number of hospitals and hospital beds was not satisfactory. There was no a single medical or midwifery school at the territory of the whole Croatia and Slavonia, and in 1876 there were only 186 midwives in service. A number of them were still trained by some doctors and on the basis of this they had a medical licence, although that manner of gaining qualification was forbidden by legal acts many times. A new "Health law for Croatia and Slavonia" from 1874 and the second one from 1894 marked the turning point in the organization of health service in that area [19].

FOUNDING AND THE FIRST WORKING YEARS OF THE ROYAL MIDWIFERY SCHOOL IN ZAGREB

Idea and the initiative for founding the first Midwifery School in Zagreb had existed for almost one whole century before it was founded in reality. However, since that idea was linked to the idea of founding the Medical Faculty in Zagreb, all attempts for its realization failed. The year of 1876 was the turning point, when very energetic secretary of the Country Government, Dr Ante Schwarz explained in details the need of having domestic midwifery school, in the Zagreb's daily paper "Obzor", which was supposed to "attract women from the villages to dedicate themselves to midwifery and then, to return homes again, where the deficit of educated midwives was the greatest". In the same year, 1876, Ban (Vice King) Ivan Mažuranić submitted a request regarding the founding of the "National Maternity" and "The Royal Midwifery School" to the King Franz Joseph I. Ban Mažuranić also suggested "Legal basis for the organization and work of the Midwifery School" which was made by Dr Ante Schwarz, and a debate in the Croatian Parliament on the suggested Legal basics followed, so at the second Parliament session "The law on the organization of the Royal Midwifery School in Zagreb" passed,

and the King Franz Joseph I sanctioned it on October 29, 1876. By that, the “Midwifery School in Zagreb” was finally founded [20-22].

“The law on the organization of the Midwifery School”, made by Dr Ante Schwarz, provided that a candidate to be admitted to “Midwifery School” should not have been younger than 20 or older than 40, should be moral, sane and overall healthy, not pregnant, and to know how to read and write. Students from villages were educated at the expense of the community or the government and they had a free lodging, food, clothes and pocket allowance, and at the end of their schooling they would have got a midwifery textbook and instruments for free, and in return they had to commit to practise midwifery at their hometowns, after finishing school. School lasted for five months, and at the end students were passing a strict exam in front of a board. After that, they took an oath and received a degree. Supervision over the Midwifery School, according to this law belonged to the counsellor of the Health division of the Royal country government (protomedicus), and the classes were in charge of the midwifery professor being also the physician at the maternity, and also of the school midwife, who was obligated to be present at every child birth, to teach all the students and to watch the order, hygiene, and finally in charge of assistant professor. Professor was appointed by the King, at the proposal of Ban, the school midwife was appointed by Ban at the professor’s proposal, as well as the assistant [23-25].

In April, 1877, the Government got the approval from the “Sisters of Charity Convent” for accommodation the “Midwifery School” and the “National Maternity” in the premises of the “Sisters of Charity Hospital” in 83 Ilica Street [21,24]. When premises had been provided, the Government informed the City Authorities that they decided to start the first course of the “Midwifery School” at the beginning of November in 1877, on the occasion of which the Maternity would be open as well [20].

After that they announced an open competition to fill the position of a midwifery professor and the first school master, and eleven candidates applied. Ban Ivan Mažuranić, without any hesitation, nominated Dr Antun Lobmayer, whom Franz Joseph I appointed a professor of the Midwifery School and primarius of the National Maternity, so *Dr Antun Lobermayer*, after taking an oath, only formally started to work on August 31, 1877, since he got a two months off for visiting clinics in Vienna. Fourteen female candidates applied for the position of Midwifery School midwife, and a midwife from Zagreb, *Milka Pichler*, married Krkac, was appointed [26-28].



Prof. Dr. Antun Lobmayer

The interest for school was enormous, and 60 candidates applied for the first course, but due to accommodation limitations only 15 of them could be admitted. The second course in 1868 was attended by 16 students, and this number was approximately the same until 1893, since when it was 20 students per a course. Two five-month courses were held every year [21,24].

The “Advisory regulations for a midwifery teacher”, regulated his position and his duties. Midwifery professor was also the “Midwifery School” master and the “National maternity” primarius. Classes had to be held by him every day, except for

Sundays and holidays, an hour of theory and clinical praxis (with mothers) and 2 hours of regular praxis. Besides practising on a mother, practical classes should have been carried out both on the phantom and corpses, under the supervision of the professor.

The second regulation was the “Advisory regulations for the school midwife”. She was subordinate to a midwifery professor, and her duty was to observe strictly the behaviour of pregnant women, women about to give birth, confinement mothers as well as of all students of the Midwifery School, also to take care of hygiene both in the maternity and in school. Her duty was also to perform practical work with students and to conduct every normal labor in the presence of two previously selected students, and in case of difficult labors, together with students, she had to provide all necessary things for such a situation, let midwifery professor know and assist him while he was delivering a woman.

Having passed the exam, a candidate had to take an oath and afterwards she got a degree, written on the pergament and sealed by the “Royal midwifery School in Zagreb”.

Since 1904 the chief school midwife was *Sidonija Marošević*, who stayed longest at that position, that is, until she retired in 1939. She was born in

Šarengrad in Srem in 1868, graduated from the Midwifery School in Zagreb in 1891, and then she worked for six years as a community midwife in Šarengrad. In 1897, at the request of Dr Antun Lobmayer, she took over the duty of an assistant midwife at the Midwifery School in Zagreb, and in 1904 she became a chief school midwife. For her long and hard work at the “Midwifery School” and the “National Maternity” she was decorated with an Order of Sveti Sava of V rank. She died in the same year, 1939, when she was retired [29].



Sidonija Marošević

During the first year of its work, 103 labors were performed in the maternity, and in 1895 there were already 253 of them, nearly three times more and the number kept increasing. In the Maternity of Prof. Dr Antun Lobamayer, besides normal child births, all necessary obstetrics surgeries were performed, except for a Cesarean section. The “Royal Midwifery School” and the “National Maternity” gained a high reputation due to their work and professional quality, and so by the “Circular of the Royal Country Government, Department for the worship and education” in 1904, the importance of its degrees was acknowledged in the whole Hungarian Kingdom and Rijeka. During 28 years of Lobermayer’s work in the Midwifery School, 1000 female students passed through it [23,30-31].

In 1905, due to his illness, Prof. Dr Lobmayer handed over the Midwifery School Chair to his assistant *Dr Franjo Durst*, with whom a new era started, not only in history of the “Midwifery School” and the “National Maternity” but also in general Croatian gynecology and midwifery, since Dr Durst was the first in Zagreb who united midwifery with conservative and operational gynecology, the latter being dealt only by surgeons until then [22]. He managed for that purpose to found “Gynecology hospital department” in 1910 in the premises of the “National Maternity” [33].



Prof. dr. Franjo Durst

The number of labors and number of gynecological cases increasingly grow, so Prof. Durst made a great effort to interest responsible bodies, in 1910, in building a new “National Maternity with Midwifery School”. They started a new building in 1912, but when it was finished, the First World War broke out. After its rearranging, the Midwifery and Maternity moved into a new, modernly equipped building in 13 Petrova Street in autumn 1920 and started working. In 1921, when “Gynecological-obstetrics clinic” was established in the newly-founded “School of Medicine, University

of Zagreb” (1917), and Prof. Dr Franjo Durst was appointed a professor of gynecology and obstetrics and the Clinic director, the “Royal Midwifery School” and the “National Maternity” were joined with the Clinic, and it remained like that as long as after the World War II [26,29]. At the same time, after signing the Treaty of Rapallo, since he was not able to stay in Zadar any longer as he himself said, Dr Srećko Zanela, a son of the former prominent Zadar’s professor of midwifery at local “Midwifery School”, Dr Vinko Zanela, moved to the “Gynecological-obstetrics clinic” and the “Midwifery School” in Zagreb, with Prof. Durst [34].

After the occupation in 1941, Prof. Dr. Durst was retired, and his substitute in the “Midwifery School”, Dr Srećko Zanela was released from his duty [35]. During the war the principal’s position in school and clinic took *Dr Stjepan Vidaković* [29], and in the Midwifery School taught *Dr Andrijan Selestin* [28]. After the liberation in 1945 Professor Dr Franjo Durst and Assistant Professor Dr Srećko Zanela were returned to their duties, except Dr Zanela took over the “Midwifery School” and became its principal, and Prof. Durst stayed at the position as a chief of the Department at the “Gynecological-obstetrics Clinic” [35].

In 1947 Assistant professor Dr Srećko Zanela took over the new “Gynecological-labor department” in the “Sisters of Charity Hospital” in the Vinogradarska street, where the “Midwifery School” with the boarding



Royal Midwifery School and National Maternity in Zagreb

Kraljevsko primaljsko učilište i Zemaljsko rodilište u Zagrebu

school for students was transferred, so that the “Midwifery School” was now separated from the “Gynecological-obstetrics clinic” and returned to the “Sisters of Charity Hospital” again, where it was originally founded, while this hospital was still in 83 Ilica Street [24,26]. In 1960 Assistant professor Dr Srećko Zanela retired, and *Prim Dr Velimir Kirhmaher* [20], took over the position of a principal and held it until 1981.

PROFESSORS OF ZAGREB MIDWIFERY SCHOOL

Professor of midwifery in the Zagreb Midwifery School was its principal as well. From its founding to the eighties of the last century five professors of midwifery were heads of the “Royal Midwifery School” in Zagreb.

Dr Antun Lobmayer – was born in Ruma, in Srem, on August 12, 1844. His father was nobleman’s notary in Ruma, also named Antun Lobmayer, and his mother was Marija. Her maiden name was Pukanić. Antun Lobmayer finished elementary school in Ruma in 1855, and High School in Vinkovci in 1863. Being an excellent student, he was granted a scholarship by the Royal Office for medical studies in Vienna, where he was promoted on March 23, 1869. After the promotion he worked as a secondary physician in the Vienna General Hospital, and then, two years as an surgeon’s assistant at the Surgery



Generation of midwives with
Prof. Dr. Franjo Durst

*Generacija primalja sa
Prof. Dr. Franjo Durstom*

Clinic by professor H. A. Billotha, improving obstetrics parallelly at the Clinic by professor Karl R. Braun von Fernwald. Upon returning to the country in 1872, he worked first as a private physician and then as a railroad and court physician in Osijek. In the same year he was appointed a part-time county physician by Virovitica-Srem Counties [21,26]. In Osijek in 1874, Dr Lobmayer together with a few prominent Osijek doctors

founded “*Society of Slavonia physicians*) and he was one of the founders of that society magazine named (*Gazette of the Society of Slavonia physicians*), and was also the editor of the first nine numbers of that magazine [21,35]. Due to his merits, he became a member of the Croatian Medical Association in 1876. At that time Dr Lobmayer had already enjoyed a high reputation in leading medical circles in Croatia, as a prominent doctor, health enlightener and publicist. He spoke foreign languages, kept informed about current medical events in the world and regularly published it in the *Gazette of the Society of Slavonia physicians*. He left behind almost a hundred published papers and notes in the the field of hygiene, nursing care, first aid and health enlightenment. Owing to his abilities he was appointed the first midwifery professor and the first principal of the newly founded “Royal Midwifery School” and the “National maternity” in Zagreb in 1877.

Upon moving to Zagreb, Dr Lobmayer was actively involved in work of the “Croatian Medical Society”; he became its board member in 1878, a secretary in 1885, and finally, a president in 1893. Since he was a man of letters, he actively cooperated with “Doctor’s News magazine of the “Croatian Medical Society” Besides his regular publishing activity(reviews and articles) , he was also an editor-in-chief of that magazine from 1885 to January,1897 and over that time he edited 138 numbers of that magazine [37],.

He used all his knowledge, intellectual, living and working energy as a professor and principal of the “Royal Midwifery School” and the “National Maternity”, as a writer of many scientific and popular medical articles and

books and as a writer of the midwifery textbook. In 1892 he published a booklet "Curing with cold water in Josipovac above Zagreb", which was situated in his own house, since he was a supporter and propagator of then's modern healing with cold water. For the same reason he translated a book by Sebastian Kneipp from German, "My curing with cold water," in 1898 [35,36,38].

In 1888 Dr Antun Lobmayer became an assistant professor of Forensic Medicine and Health Legislation at the Law Faculty, the University of Zagreb, and in 1892 he was elected for the people's representative at the Croatian Parliament and spent 10 years at that position. Besides that, he was a city's councilor of Zagreb and for a certain time the County health advisor [26,35].

Prof. Dr Antun Lobmayer stopped working on February 1, 1905, due to illness, he handed over the Department of Midwifery at the "Royal Midwifery School" and jurisdiction over the "National Maternity" to Dr Franjo Durst. Soon after, he died in Zagreb on March 21, 1906, at the age of 62. He was buried in Zagreb at the Mirogoj Cemetery [21,26,35].

Prof. Dr Franjo Durst – the creator of the modern gynecology and midwifery in Croatia and the first professor at the Department of Gynecology and Obstetrics at the School of Medicine, University of Zagreb, took over Prof. Dr Antun Lobmayer's position of the professor at the "Royal Midwifery School" and the director of the "National Maternity". His family originated from the Czech Republic, and his grandfather and father were foresters in the Military Border Department. His mother was from Jasenovac, her maiden name was Črndak, and she gave birth to her son on September 6, 1875. He finished elementary and secondary schooling in Zagreb, and graduated from medicine in Graz in 1899. Soon after, he started working at the "Department of Surgery" by Dr Wickerhauser in the "Sisters of Charity Hospital", which had just moved from 83 Ilica Street into a new building at Vinogradska cesta.. At the famous "School of Surgery" by Dr Wickerhauser, which had also the rich gynecological-obstetrics casuistry, Dr Durst acquired basic knowledge for his later work [39,40]. On February 1, 1905, due to illness of Dr Antun Lobmayer, Dr Durst was transferred for the service needs, and he became executive professor and principal of the school and maternity. That is how a new era in Prof. Durst work started, when he definitely dedicated himself to gynecology and midwifery. He reorganized work at the Department and the "Royal Midwifery School", renewed premises and improved results of its work. In 1907, Dr Durst was appointed a director of the "National maternity"

and a professor of the “Royal Midwifery School” [39,41]. During holidays he was improving his skills at clinics of R. Chrobak, A. V. Rosthorn, H. Peham, F. Schauta and E. Wertheim [8], and in 1909 he himself performed vaginal extirpation of the uterus due to cancer of uterine body, in 1910 first vaginal hysterectomy by Schauta and in 1911 first radical hysterectomy by Wertheim. He managed to interest the responsible factors in the construction of a new building for the Maternity and the School, which, owing to him started to work in 1920 in 13 Petar Street, and as at that time the “School of medicine” at the University of Zagreb was founded, that institution was converted into the “Gynecological-obstetrics Clinic.” Professor Durst was appointed the first gynecology and obstetrics professor and a director of the newly founded Clinic. He stayed at that position until his retirement in 1952, and he was a teacher to most Croatian gynecologists. Prof. Durst was one of the first who introduced obligatory teaching of obstetrics-gynecological propaedeutics for the medical students [39,40,42]. Prof. Dr Durst was awarded many prizes for his long work. “Croatian Society of Physicians” elected him in 1935 for their honorary member. He was directly elected for the professor of the “School of Medicine, University of Zagreb”, for the regular member of the “Yugoslav Academy of Art and Science”, as well as for the member of the Czechoslovakian and German gynecological society. He was decorated with the Order of Work of the first rank., and at the Congress in Ljubljana in 1956, he was elected for a lifetime honorary member of the “Society of the gynecologists and obstetricians of Yugoslavia”. Prof. Dr Franjo Durst died in Zagreb in 1958, when he was 83 [39,43].

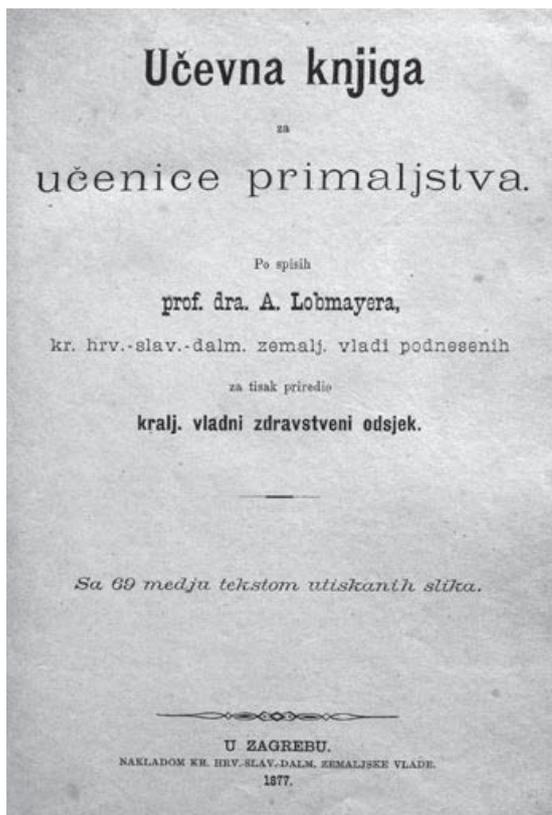
Prof. Dr Stjepan Vidaković – was born in Varaždin in 1890. He attended elementary school in Varaždin and Vukovar Classical gymnasium in Vukovar and Slavenska Požega; he started his medical studies in Prague, and finished them in Graz in 1914. During the war he worked as a military doctor, and towards the end of the war in 1918 he started working as an assistant at the “Midwifery School” in Zagreb. When it was integrated with the Clinic, he became an assistant to Prof. Dr Durst at the “Gynecological-obstetrics clinic of the School of medicine, University of Zagreb”. In 1928 he was elected for a docent, in 1937 for an associate professor and in 1944 for a full professor. He was chosen for a dean of the “School of Medicine, University of Zagreb” in the school year 1950/51, and in 1952 for a head of the “Clinic for female diseases and child births”, and he held this post until his retirement in 1961. In the period between 1941 and 1945 he held the posts of a headmaster and professor of the “Royal Midwifery School” and the “National Maternity”,

also of a headmaster of the Clinic, instead of Prof. Durst, who was temporarily suspended from his duty [43-45].

Assistant Professor Dr Srećko Zanela - was a long-time assistant of Prof. Durst, and from 1947 he took a position of a professor at the “Royal Midwifery School” and a director at the “National Maternity” in Zagreb, when these institutions separated from the “Gynecological-obstetrics Clinic” and moved into the “Sisters of Charity Hospital” in Vinogradska Street. Dr Srećko Zanela was born in Zadar in 1891. His father was Dr Vinko Zanela, long-time famous professor of the “Zadar Midwifery School” and primarius at the “Labor department”. He finished High School in Zadar and studied medicine in Vienna, Innsbruck, Munich, Graz and Prague, where he graduated in 1920. During World War I he interrupted his studies, because he was mobilized for an army. At first, after graduating, he worked as an assistant of a famous Zadar doctor and surgeon Dr Božo Peričić, and as early as December, 1920, after the Italians took over the city government, he left Zadar and moved to Zagreb to the “Clinic for gynecology and obstetrics” of newly founded “School of Medicine, University of Zagreb” (34). As Prof. Durst was too busy working at two departments, Dr Zanela worked first as an professor of the “Royal Midwifery School” and as a secondary physician at the “National Maternity”, and in 1923 he also got involved in teaching at the “School of Medicine, University of Zagreb”, and became an assistant at the “Clinic for the gynecology and obstetrics”. In 1930 he became primarius, and in 1936 he was elected for a private docent at the “School of Medicine, University of Zagreb”. In 1947, when the “Royal Midwifery School” separated from the “Gynecological-obstetrics clinic”, Dr Srećko Zanela was appointed a chief of the Department and principal of the “Royal Midwifery School” and stayed there until the retirement in 1960. Assistant professor Dr Zanela died in Zagreb in 1988, when he was 97 [45,46].

MIDWIFERY TEXTBOOKS BY PROFESSORS OF ZAGREB MIDWIFERY SCHOOL

Even before he was appointed a professor of the “Zagreb Midwifery School”, Dr Antun Lobmayer wrote a textbook for midwives, using Späth’s book “Lehrbuch der geburtshilfe für Hebamenn, Vienna, 1869”. Dr Lobmayer presented the manuscript of this textbook to the Royal Country Government for inspection. The Government handed his manuscript, together with the manuscript of a assistant professor of hygiene *Dr Franjo*



Textbook by Prof. Dr. A. Lobmayer -
the first edition from 1877

*Udžbenik Prof. Dr. Lobmayera - prvo
izdanje iz 1877.*

into four parts: "Anatomy and physiology of female genitals and its examinations" with a short introduction of general anatomy of human, "Normal pregnancy", "Normal child birth" and "Normal postpartum period". The second section "About the diseases of female genitals" consisted of five sections: "About female infertility", "Patology of pregnancy", "Patology of labor" and, as the author himself said, "About a midwifery job, which midwife may do without a doctor". Each of those nine parts of the book was divided into chapters, and chapters into paragraphs, which made a book confusing to some extent and inappropriate for learning from it. The language was quite archaic, and so much consistent regarding the national medical terminology that it leaves the impression of bizzareness. The author said that the reason for this was that the beginners of the Midwifery school were mostly women from the inside of the country, poorly educated, even illiterate, so he had the intention to simplify this strange and, for them, unknown matter and to bring it closer to their educational level, so that they can comprehend the matter faster and easier. "Advisory book for midwives" was added to the

Hensler, to a special commission, which preferred Lobmayer's text, because it suited better for the purpose "from scientific and language points of view" [23,24].

The full name of the textbook was "UČEVNA KNJIGA za učenice primaljstva po spisih prof. dra. A. LOBMAYERA - U Zagrebu, nakladom kr. hrv. slav. zemaljske vlade, 1877." Vladimir Bazala states that when Dr. Lobmayer saw Hensler's translation of Späth's book at Royal Country Government, he usurped it, and after some minor changes, published under his name.

The book had 251 pages with 69 figures, and it was divided into two main sections. The first section "About a healthy female genitals and its functions", was divided

book on August 15, 1877 and legally regulated duties of midwives were listed there. At the end of the book there was a text of an oath which every midwife had to take when starting a duty.

The chapter about the anatomy of the bony and tissue parts of the delivery path was discussed in detail with precise illustrations, mainly of topographic-anatomical relations in small pelvis. However, from today's point of view, special attention should be paid to the description of the external and internal examination of pregnant woman and woman in labor, and to a way how doctors performed it. Three basic principles characterized it: the respect of women's shame, examination with bare fingers without mentioning a disinfection of hands and instruments of a midwife during the internal examination. It is obvious that professor Lobmayer, who kept informed about all the medical discoveries, while writing this book, still was not familiar, or did not accept the principals of the antisepsis, which were at that time sporadically introduced to the surgical and obstetrics praxis (Semmelweis, 1847, Lister, 1865). It is supported by the part of the text about puerperal fever, as a deadly disease, where he suggested that possible causes could be catching cold, eating improperly, dirt, breathing in dirty air, weak heart condition, fear, long and difficult labor, residual and desolving placenta, and only at the end, "transfer of infectious organism from the sick pregnant woman to the healthy one".

Professor Lobmayer took very expectative attitude regarding a labor conducting, and suggested that a midwife should not hasten its natural course, or use something to increase labors. In the expulsion phase he does not mention episiotomy, and in the third labor stage he allows detaching of the placenta, "by pulling the umbilical cord".

A lot of space referred to the pathology of pregnancy, labor and postpartum period, first and foremost because midwives often, if doctor was not available, had to intervene by themselves even in case of any pathology, and also because they had to tell pathological from normal, which was crucial in their decision if they would call a doctor or not. In therapy of irregular labors spasmolytics are not mentioned, neither are uterotonics, but for all stimulation of uterus contractions in case of weak labors and ruptured amniotic sac, injecting warm water into the vagina and steaming over a hot pot of heating water are suggested, as such a procedures were very common at that time. The last part of the book was very instructive. There were procedures that midwives were allowed to perform, but only in cases when doctors were

unavailable. Those were only manipulations which were possible to do with bare hands: positioning the small parts of fetus that fell out during labor, so called “midwife twist” to head or legs, external or internal, as well as the hand extraction for legs with previously turned fetus into that position [47].

Twelve years after the first edition, in 1889, Prof. Dr Lobmayer published *the second completely revised edition*, named: “Primaljstvo – učevna knjiga za primalje”.

It was the time of general acceptance of Semmelweis’s, Lister’s and Neuber’s discoveries and their application in praxis, so Dr Lobermayer, now already very familiar with those significant medical events, said in the preface of this edition :” It is well known today that diseases are spread mostly by germs, which can be prevented with disinfection, so everything around pregnant woman, woman in labor and midwife should be as clean as possible, and a midwife should disinfect herself and everything she has with her. Special attention was paid to this throughout this book, from the beginning to the end”. Accordingly, the chapter about the internal obstetrics exam, preparation of a midwife and her instruments, a pregnant woman herself, about the nursing of pregnant woman and puerperal fever are quite thoroughly described. The process of disinfection consisted of: washing the hands up to the elbows with warm water, soap and a brush for a few minutes, washing with a brush in 2-3% of carbolic acid for a few minutes, wiping with a clean towel and lubricating the hands with carbolic acid. After this procedure hands were ready for the exam. As for the instruments, midwife was asked to wash thoroughly all her gadgets, like rinse for the clyster, catheter, tube.... after every use with warm water, carbolic solution and lubricate with carbolic oil. Also, before every internal exam and obstetric intervention, vagina of a mother should have been washed with 0,5% solution of the carbolic acid.

In this edition of the textbook the matter referring to the pathology of pregnancy was expanded. Some chapters are added (“Syphilis in pregnancy”, “Edema”, “Vomiting”. “Premature labor”), some are significantly expanded (“Work of the midwife in case of miscarriage”, “Miscarriage” and “Molar pregnancy” - Mola hydatidosa). In the chapter about irregular pelvis, part about the description for taking external pelvis’ measurements was inserted, and interferences in labor are divided into interference by a mother and by a fetus, which was not a case in the previous edition.

All these amendments, refined language and style, still close to common speech, but more understandable and more comprehensible, with simpler

structure of sentences, and the matter divided more clearly, with finely defined headings and subheadings, make this book more valuable, in comparison to the first edition, and it can be considered the first modern Croatian midwifery textbook, and the most significant Lobmayer work [48].

The third edition of the Lobmayer's textbook appeared in 1898, nine years after the previous one. In this book the author purified and improved the language, and "thoroughly revised and complemented" the text. Hygiene codes prevailed here, so the antiseptic chapter was expanded and overworked, and as a disinfection aid, instead the carbolic acid, 2% lysol was introduced, since it "served best for the midwife and was the cheapest". Lysole was actually introduced in the midwife practice as less caustic and toxic agent than carbolic acid (phenol). As more and more attention was paid to asepsis, the focus of the book was transferred to the external obstetrics exams, number of internal exams significantly decreased. The puerperal sepsis was more thoroughly processed and a chapter about eclampsia was added. Special attention was paid to the principles of asepsis in midwifery, which every midwife had to observe strictly both in her life and work, which came down to the next procedures: if she had to examine any pregnant woman, she was not allowed to visit or touch a person who suffered from any contagious disease before it, especially in case of puerperal fever. Her hands needed always to be clean, without blisters, warts, wounds and scratches, and nails always shortened. Before the examination, she needed to wear a clean white apron, and her hands and forearms needed to be disinfected. The procedure of managing the third labor period was altered in this book, since a midwife was allowed to push the placenta only through the abdominal wall, and "pulling for the umbilical cord" was strictly forbidden. For the first time the indirect manner of measuring conjugata vera with conjugata diagonalis was described, determined through the internal obstetrics exam.

Although a great influence of Dr Piskaček's popular midwifery textbook can be felt in the third edition of the Lobmayer's textbook, this rearranged book can be compared with most of then known European midwifery textbooks, by its scientific value and a way of presenting the matter [49].

The fourth edition of Dr Lobmayer's textbook appeared in 1906, the same year he died. Unlike previous editions, this one was unaltered, identical to the third one [50].

In 1913, *the fifth edition of the "Midwifery"* by Dr Lobmayer was published, this time very different from the previous one, since Prof. Dr Franjo Durst,

the successor of Prof. Lobayer at the Department of Midwifery at the “Royal Midwifery School” in Zagreb revised and amended it. Dr Durst introduced some new chapters: “Midwifery help with narcosis”, where he explained how she could assist a doctor with application of chloroform mask, which was introduced in practice in the meantime; then “Transferring the pregnant woman”, where he described the way of transfer a woman from one bed to another. “Cancer-wound at the uterus”, “Children of the parents with venereal disease”, “Inflammation of femoral vein with pregnant woman”, and in the end, the chapter about the signs of the threatening intrauterine death of fetus during labor, where, besides all irregularities in baby’s heart-beat, he pointed to the pathognomonic significance of the fresh meconium in the amnion fluid in case of head-down fetal position. Some of chapters revised by Prof. Durst are: “External exam”, “Holding the perineum”. “The procedures of midwife during the third phase of labor”, “Skin diseases of genitals”, “Folded uterus”, “Blood flow in pregnancy”, “Extrauterine pregnancy”, “Bloodflow in the third labor phase”, “Narrow pelvis”, “Frank breech position”, “Transverse lie”, “Complete breech”, “Stillborn child”...

In the chapter about the external obstetrics exam, Dr Durst pointed to the significance of the Leopold Pawlick’s maneuvers, and in the chapter about watching the perineum, as a specifically midwife’s field, he strictly banned a midwife to lubricate the perineum and vagina with any kind of oil or grease, which was very common in earlier periods. If she noticed that perineum is high and rigid, the midwife should have called a doctor who would “cut the perineum at the time when the head came out, and later stitched it”, that is, he would perform episiotomy. During the arrival of placenta, midwife was allowed to wait for its detachment, which can be recognized according to characteristic signs described in the textbook, but if placenta would not detach spontaneously after a while, a midwife had to call a doctor.

Out of 78 figures in the fourth edition of the textbook, only 50 were kept in the fifth one, and 32 new ones were selected from the Piskaček’s and Bumm’s textbooks [51].

In 1923, ten years after the fifth, *sixth and the last, unaltered edition of the “Midwifery” by Prof. Dr Antun Lobmayer and Prof. Dr Franjo Durst* appeared; in the meantime the latter became a Department Chairman and Director of the “Clinic for female diseases and labors at the School of Medicine, University of Zagreb”.

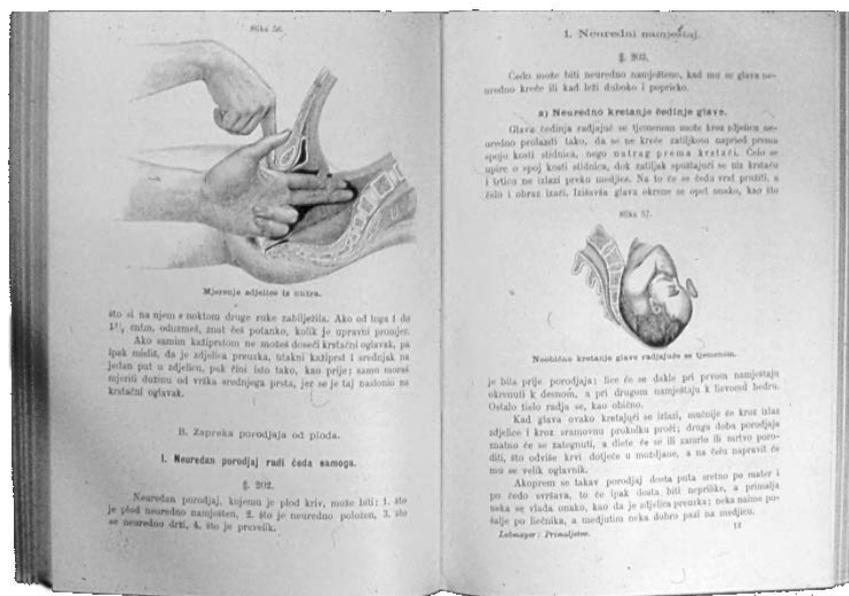
Meanwhile, important changes occurred between the fifth and the sixth editions of this text book. A new country, the Kingdom of Yugoslavia was founded, so the Ministry of Public Health already announced in 1919 the publishing of a new, uniform midwifery textbook for all midwifery schools in the Kingdom. Since it did not happen, and the latest edition of the Durst's and Lobmayes's "Midwifery" was already sold out, "Health section for Croatia, Slavonia and Međimurje County" decided that this book should be published again [52].



A common midwifery textbook, due to various difficulties appeared only in 1932 both in Cyrillic and Latin, 1000 copies of each. The book was printed in Belgrade as an edition of Science bookstore "Sciencija", Belgrade and "Nauka", Zagreb. This book, under the name "Midwifery textbook for midwives and students of midwifery schools in the Kingdom of Yugoslavia", was composed by then's professors of midwifery and directors of "Gynecological-obstetrics clinics" in Belgrade, Zagreb and Ljubljana, Prof. Dr Milan Stajić, Prof. Dr Franjo Durst and Prof. Dr Alojz Zalokar. While writing this book, the associates of the authors were: Prof. Dr Matija Ambrožić, Prof. Dr Ernest Majerhofer and Assistant Prof. Dr Marija Lipold-Krajinović, for the chapters about pediatrics and neonatology, Prof. Dr Stjepan Vidaković and Assistant professor Dr Srećko Zanela for some chapters about gynecology and midwifery, while director of the Central hygienic Institute in Belgrade, Dr Stevan Z. Ivanić wrote a part about anatomy and physiology of a human, about hygiene and science of illnesses.

Unique midwifery textbook from 1932.
Jedinstveni udžbenik za primalje iz 1932.

This, first and the only common Yugoslav textbook for all midwifery schools in the country was used in Belgrade and Zagreb midwifery schools as



Indirect measurement of the conjugata vera from the
Lobmayer-Durst textbook

Indirektno mjerenje conjugata vera iz udžbenika Lobmayer-Durst

long as the first post-war years, when local midwifery textbooks reappeared, and curricula started to be formed for each republic separately [53,54].

INSTEAD OF A CONCLUSION

Between Lalangue's edition from 1777. and the sixth one of Lobmayer-Durst midwifery textbook from 1923 the beginning and further development of midwives education took place in the whole Croatia: from the "pupko-rezna baba ("woman who cut the umbilical cord") through approbated midwife and licensed midwife, and midwife with lower midwifery school, to the nurse-midwife.

Considering the number of editions and almost five decades of its existence, and compared to all previous midwifery textbooks, the "Midwifery" by Prof. Dr Antun Lobmayer was the first complete, modern, genuine and the most significant midwifery textbook in Croatia, which served as a basis for writing future obstetrics textbooks for students of medicine.

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SAŽETAK

U radu je predstavljen kratak pregled primaljstva i razvoj porodiljstva u sjeverozapadnom dijelu Hrvatske od dolaska J. B. Lalangue-a u Varaždin, preko osnivanja i rada Škole za babice i Zemaljskog rodilišta u Zagrebu, do osoba bez kojih taj razvoj ne bi bio moguć ili bi bio sasvim drugačiji. Lalangue, koji je bio vrstan porodničar, primijetio je vrlo brzo sve nesreće izazvane nestručnim radom tadašnjih babica, pa je napisao i objavio knjigu "Brevis institutio de re obstetricia illiti Kratek navuk od meštrie pupkorezne..." i započeo prve tečajeve za seoske žene. Težište samog rada je na analizi udžbenika Prof. dr. Anatuna Lobmayera, koji je bio prvi profesor porodiljstva i ravnatelj "Kraljevske babičke škole" i "Zemaljskog rodilišta" u Zagrebu. Udžbenici za babice pod nazivom "Porodiljstvo – Učevna knjiga za primalje" doživjeli su šest izdanja, za preko 50 godina i predstavljaju osnovu za primaljsku udžbeničku literaturu u Hrvatskoj. Prof. dr. Franjo Durst, asistent i nasljednik Prof. dr. A. Lobmayera dovršio je i dijelom revidirao posljednja dva izdanja ovog udžbenika.

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Ključne riječi: primaljstvo; povijest; primaljski udžbenici, Primaljska škola, Zemaljsko rodilište, Hrvatska, Zagreb, Varaždin