

Original Research Article

A decade after the creation of the oral surgery specialized graduate degree in France: assessments and prospects

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Abstract – Introduction: The Oral Surgery Specialized Graduate Degree (Diplôme d'Études Spécialisées en Chirurgie Orale, DESCO) was created in France in 2011. The purpose of this study was to assess the current situation, ten years after its creation. The evaluation concerns both the training and the professional opportunities. **Material and Method:** An observational, cross-sectional, descriptive study was performed in 2022 on students who were enrolled in the DESCO-residencies and on former students from this residency. Eleven generations of students (from 2011 to 2021) were included in our study, which represents 330 persons. Each enrolled subjects had to fill an anonymous survey. **Conclusions:** The current situation's review obtained in this study is consistent with the initial purpose of this new degree's creation: training practitioners, specialized in oral medicine and surgery, to provide a quality healthcare in this sector in deficit.

Introduction

The Oral Surgery Specialized Graduate Degree (Diplôme d'Études Spécialisées en Chirurgie Orale, DESCO) was created in France in 2011 to meet a public health need [1]. Demographic projections showed a foreseeable lack of practitioners performing oral surgery. Students can enter this residency either after 6 yr of medical studies, or 5 or 6 yr of dental studies. This degree replaces the DESCB – a former dental degree (Diplôme d'Études Supérieures en Chirurgie Buccale) and the DESS – a former medical degree (Diplôme d'Études Supérieures en Stomatologie). The aim of this new degree is to train specialized practitioners to perform a broad field of activities in oral medicine and surgery.

The purpose of this study was to assess the current situation, ten years after the creation of the DESCO. The evaluation concerns both the training and the professional opportunities.

Context of the study

– Current demographics in stomatology in France [2]: 853 doctors practice stomatology, 22 of which are DESCO graduates (2,58%) (Fig. 1).

- Current demographics of oral surgeons in France [3]: 298 doctors are qualified in oral surgery, coming either from medical schools (24%) or in dentistry schools (76%). Medical doctors: 82% of them are DESCO graduates and 18% are qualified by a committee. Odontology doctors: 28% of them are DESCO graduates and 72% are qualified by a committee. Indeed, any practitioner who is not DESCO graduated but who does hold other training qualifications and/or substantial professional experience may submit a file to a qualification committee. This file must include a description of titles, functions and hospital and university works, activity and acts carried out over the last 2 yr, and a cover letter. The national committee is made up of university professors teaching the specialty, trade union representatives, and representatives of doctors or dentists' board. Based on the opinion given by the national committee of first instance, the board decides of favorable or unfavorable qualification (Fig. 2).
- Students' recruitment per year [4]: the number of oral surgery residency positions opened each year in France is set by decree of the Ministry of Labor, Employment and Health. The total number of positions over 10 yr equals 135 in medicine and 181 in odontology, *i.e.*, 42.7% of residents emerging from medical schools and 57.3% from odontology. There is a commission to evaluate training needs (Commission d'Évaluation des Besoins de Formation). They check if the number and nature of training places is in line with the number of

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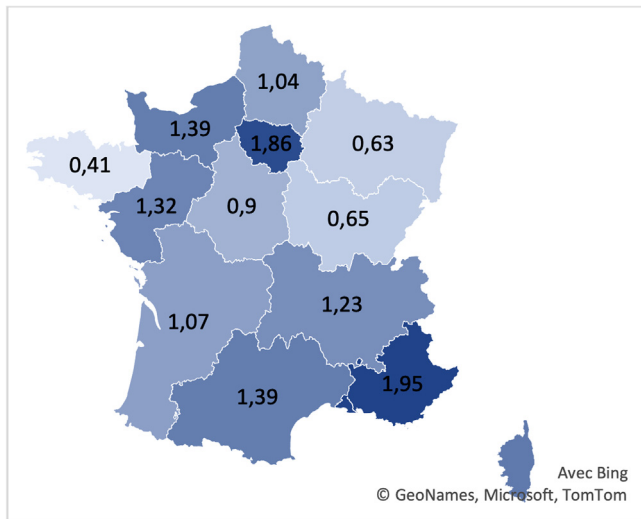


Fig 1. Ratio of stomatologists for every 100,000 inhabitants by region in 2022.

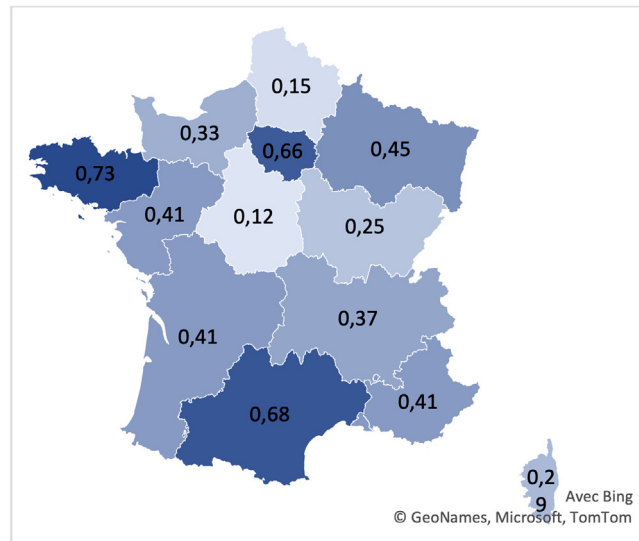


Fig 2. Ratio of oral surgeons for every 100,000 inhabitants by region in 2022.

students registered in the different phases of each specialty, for a smooth running of training models (maquette). They give an opinion to the general director of the regional health agency on the minimum number of positions to be opened, each semester, for each specialty's phases (Fig. 3).

Materials and methods

An observational, cross-sectional, descriptive study was performed in 2022 on students who were enrolled in the DESCO-residencies and on former students from this residency. Eleven generations of students (from 2011 to 2021) were included in our study, which represents 330 persons. Each enrolled subjects had to fill an anonymous survey.

Inclusion criteria: students or former DESCO students (including those who did not complete the entire residency or who changed specialty). Enrolled subjects were then divided into 4 groups: DESCO current students, DESCO former students doing an assistantship, DESCO former students working after residency alone, DESCO former students working after a residency and an assistantship.

Exclusion criteria: practitioners performing oral surgery without this degree.

Data collected were:

- For all enrolled subjects: medical or dental studies, year of DESCO residency beginning, region where the residency was made, number of semesters in each department, semesters in another region, research year, master degree, additional university degree during internship, change of specialty, gap year, temporary liberal replacements during residency.
- For current DESCO students: wish to do an assistantship.
- For former DESCO students doing an assistantship: region of assistantship, department of assistantship, assistant's status, additional university degree during assistantship, private training during assistantship, temporary liberal replacement during assistantship.

- For former DESCO students working after a residency alone: type of practice? If liberal activity: with which status? If associated with other health professionals: from which specialty? If working in public health system: in which department? Type of activity performed?
- For former DESCO students working after a residency plus assistantship: region of assistantship, department of assistantship, assistant's status, additional university degree during assistantship, private training during assistantship, temporary liberal replacement during assistantship, type of practice. If liberal activity: with which status? If associated with other health professionals: from which specialty? If working in public health system: in which department? Type of activity performed?

All collected data was analyzed using Microsoft Excel and Word.

Results

- The participation rate was 53,3% (173 subjects completed the survey).
- Status, region of residency and year of beginning

Amongst participants, 43% were current DESCO students, 26% were former DESCO students working after a residency plus assistantship, 19% were former DESCO students doing an assistantship, and 12% were former DESCO students working after residency alone (Figs. 4, 5 and 6).

- Training during internship
- Training department: in our study, each participant spent on average 2,98 semesters in an odontology department, 2,75 semesters in a maxillofacial surgery department and the remaining semesters in other departments (ENT, plastic surgery, neurosurgery, dermatology...).

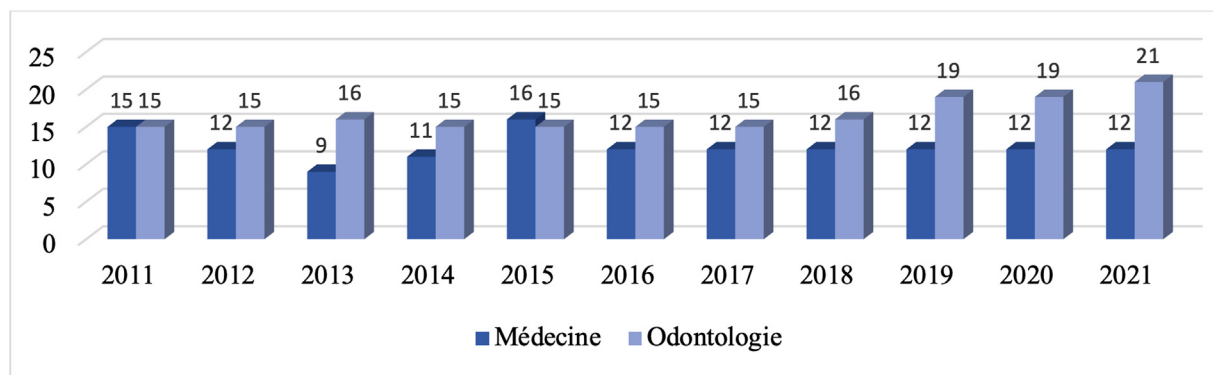


Fig 3. Number of positions per year for medicine or for odontology.

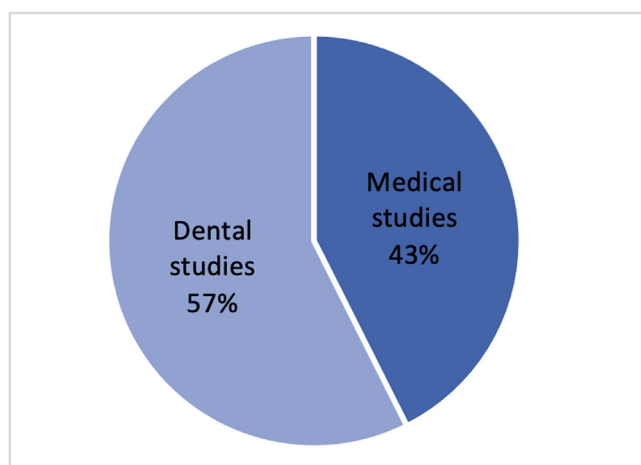


Fig 4. Distribution of initial studies amongst participants.

- Semesters in another region: more than one third of the participants (34,1%) spent one or more semester in another region (mainly in odontology or maxillofacial surgery departments).
- Research year: 4% of all participants did a research year on topics such as oral dermatology, oral cancerology, or oral implantology.
- Master degree: during internship, 16% of participants have completed a master 1 and 5,1% a master 2 (the most common master being "Biology and Health").
- Additional university degree: 58% of participants graduated in one or more additional university degree (mainly degrees concerning oral mucosa dermatology or oral implantology).
- Change of specialty: amongst participants, 10 subjects changed their initial internship specialty (general medicine, orthopedic surgery, pediatrics...) to oral surgery (5,7%).
- Gap year: 6,8% of participants took a gap-semester or a gap-year during their internship.
- Temporary liberal replacements during internship: 33,5% of the participants did replacements.

- Wish for assistantship: 79% of current DESCO students wish to pursue an assistantship after their internship.
- Training during assistantship
 - Assistantship's region: 68% of participants who did an assistantship stayed in the same region and 32% changed (Fig. 7).
 - Assistantship's department: Participants mainly did their assistantship in odontology (39%) or maxillofacial surgery departments (42%) but also in oral surgery, ENT or general surgery departments.
 - Status: amongst subjects who did an assistantship, 69,7% worked full-time, 21,1% worked part-time, and 9,2% shared work between hospitals.
 - Additional university degree: 57,7% of subjects doing an assistantship graduated in one or more additional university degrees during this time (mostly degrees concerning pre-implant surgery and injection techniques).
 - Private training: 34,6% of subjects doing an assistantship participated in one or more private training (mostly about oral implantology or pre implant surgery).
 - Temporary liberal replacements during assistantship: 51,3% of participants did replacements for few days.
- Activity after internship or assistantship
 - Type of practice: 57,5% of participants have a liberal activity, 15,1% have a mixed activity. 65, 2% of participants are working full-time, 17,4% work part-time and 17,4% share work between two types of practice (Fig. 8).
 - Private practice: amongst participants with liberal activity, different types of installation were found. The most common is to be associated with another professional (52%), most commonly with general dentists, or other oral surgeons. Other types of installations are collaboration (23%), own medical practice (21%) or replacements (4%).
 - Public practice: amongst participants working in public hospitals, most of them were working in oral surgery (40%) or maxillofacial surgery departments (35%).
 - Type of practice performed: amongst participants, all were performing "common" oral surgery (wisdom tooth extraction, pre-orthodontic surgery, maxillary cyst removal...) (Fig. 9).

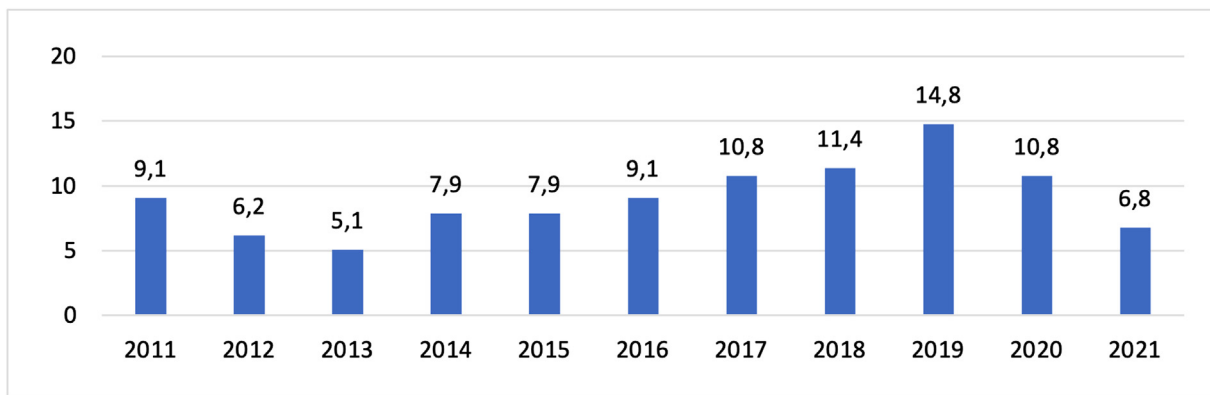


Fig 5. Year of DESCO beginning distribution amongst participants in percentage.

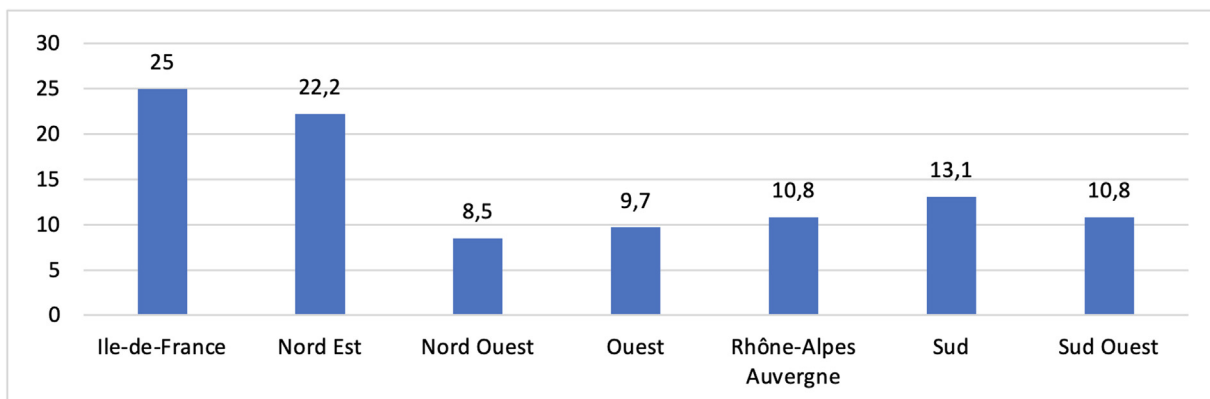


Fig 6. Distribution of internship's region amongst participants in percentage.

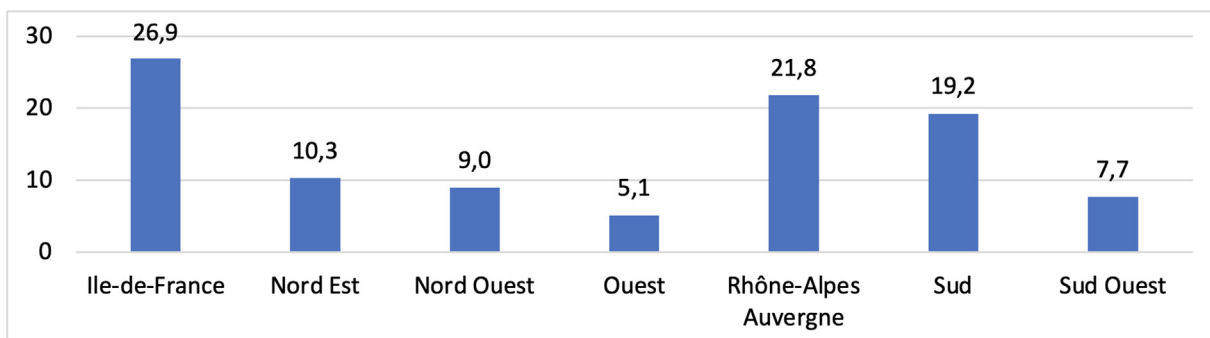


Fig 7. Distribution of assistantship's region amongst participants in percentage.

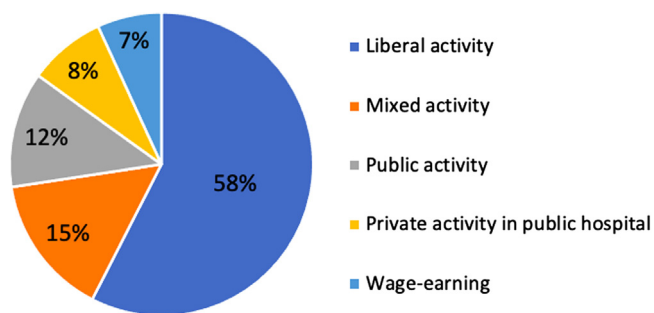


Fig 8. Distribution of practice's type amongst participants in percentage.

Discussion

To our knowledge, our study is the only one collecting data about the Oral Surgery Specialized Graduate Degree (Diplôme d'Études Spécialisées en Chirurgie Orale, DESCO), created in France ten years ago. It seemed to us, it should be interesting creating this database, which can be used for studies in the future. The current situation's review obtained in this study is consistent with the initial purpose of this new degree's creation: training practitioners, specialized in oral medicine and surgery, to provide a quality healthcare in this sector in deficit.

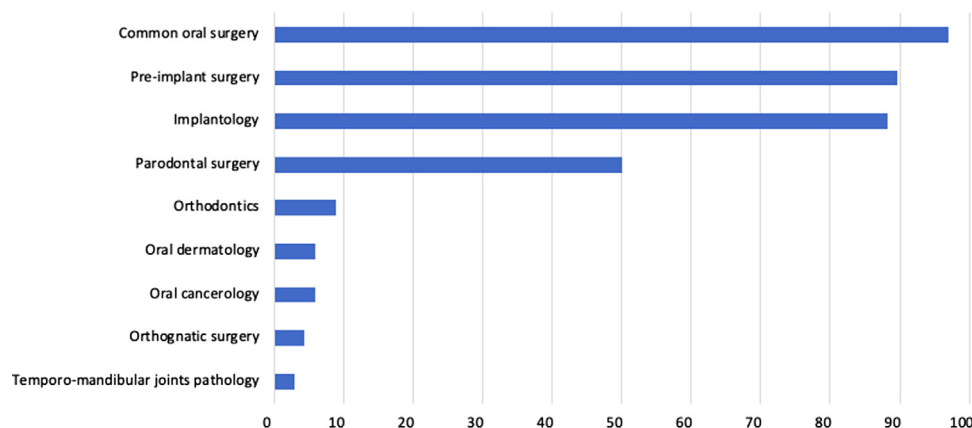


Fig 9. Distribution of activities type amongst participants in percentage.

All over France, DESCO students received a demanding and diversified training for four years [5]. Not only theoretical training (basic training and frequent participation to master degrees or additional university degrees), but also practical training in different hospital departments (oral surgery, odontology, maxillofacial surgery...). Students often prolong this training with an assistantship to consolidate their knowledge. Once their degree completed, practitioners can choose between different types of activities. Even if the main activity mode remains private practice, they can also work in public hospitals.

Our descriptive study shows some limits. We had a participation rate of 53%. It could therefore be interesting to collect more answers in order to be more representative. Furthermore, this is a declarative questionnaire, so that we likely have reporting or recall bias. Some data could have been collected by other means (for instance, the public national health insurance – Caisse primaire d'assurance maladie – might have data on practitioners' activity). Moreover, this being a descriptive study, so we cannot establish any direct causal relationship between factors, as we only present raw data, and describe the target population. It would also have been interesting to collect data on subjects' feelings on the quality of the training obtained, and limits or points to be improved to their opinions. Lastly, a longer-term study would be more interesting. Indeed, the study reviewed only six generations of practitioners.

Besides, improvements could be made on training or career opportunities after training.

Disparities exist between regions in France, in terms of theoretical training and in available training grounds. National harmonization would therefore be desirable. For instance, each intern can spend two semesters in a department of his choice, according to the DESCO model (maquette). In some regions, these semesters are mostly carried out in oral surgery or maxillofacial surgery departments, while in other regions, interns spend their two semesters in ENT, dermatology or neurosurgery departments. In addition, there are national theoretical training seminars.

However, interns in some regions receive more extensive theoretical training (extra teaching sessions, workshops, case reports, conference participation ...).

The possibility of a European harmonization of the curriculum was also mentioned, with the creation of a double degree as done in certain countries (for instance, in Germany or Belgium, only graduates from both medical and dentistry schools can apply for the OMFS program). After 6 yr of medical and 5 yr of dental studies, 2 yr of basic continuing education followed by 3 yr of specialized continuing education in surgery leads to the degree of oral and maxillofacial surgeon [6]. Indeed, the nature of the initial training (medical or dental) remains a subject of debate and controversy to this day.

Since November 11th 2017, the diploma of Oral Surgery for practitioners emerging from dental studies is recognized by the European Union. It allows an equivalence of the diploma and the possibility of practicing in the 20 member countries of the E.U. Since May 23th 2023, the diploma for practitioners emerging from medical studies is also recognized by the European Union.

This specialty finds its richness from the two branches it emerges from (the teaching given to the students guarantees the homogeneity of the diploma despite the difference in basic training) and won recognition within the surgical community. However, the specialty could benefit from an even closer collaboration with neighboring specialties, especially dentists, maxillofacial surgeons, or ENT surgeons.

In addition, difficulties exist for replacements between oral surgeons from odontology and oral surgeons from medicine, as well as installation difficulties related to the original curriculum, perhaps due to a separate board (Conseil de l'Ordre) for each branch.

Some adjustments will likely be made in the upcoming years.

Conclusion

The Diploma of Specialized Studies in Oral Surgery (DESCO) was created in 2011 to respond to a growing public health need, in the face of a foreseeable lack of practitioners

carrying out the missions of the oral surgeon. The singularity of this training lies in its double entry *via* the second cycle of either medical or dentistry school. Ten years after its creation, the purpose of this study was to establish a state of the art of the specialty, concerning both the training received by the residents and assistants, but also the outlets and the activity of the graduated practitioners. The results obtained by our descriptive observational study seem to show the initial objectives at the creation of this specialty have been reached. Nonetheless, there is still room for improvement.

A new survey in the longer term and with a larger sample would provide a better analysis of training and job opportunities in this field.

Conflicts of interest

All authors state that they have no conflicts of interest.

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Ethical Approval

Ethical approval was not required.

Informed Consent

This article does not contain any studies involving human subjects.

Authors contributions

J. Le Maître: Investigation, Methodology, Writing original draft; A. Alpy: Supervision, Reviewing.

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