

DEVELOPMENT OF SOUTH AMERICAN SPECIFICATIONS AND TESTING — BRAZILIAN EXPERIENCE ±

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SYNOPSIS

The author analyses the persons and Institutions involved in a Specification Program for Dental Materials. The difficulties encountered and related to the acceptance of a Specification Program are also analysed. Specifically the experience in Brazil, with the Brazilian Dental Materials Group working towards the acceptance of such a program and the results already obtained, are mentioned. Suggestions are presented to other Southamerican Countries who would like to start a Specifications Program for Dental Materials.

During the last 35 years, in many Dental Meetings, throughout South America, a great number of speakers talked about the importance and necessity of a national program of Specifications for Dental Materials.

Sometimes Thesis were approved ^{1,2} by General Assemblies, concerning this subject. On other occasions, spe-

cif dental materials were tested according to existing ADA or FDI specifications and many articles were published, of which I mention only a few. ^{3,4,5}

In Brazil, many Thesis, from teachers belonging to Prosthetic Dentistry or Operative Dentistry Departments, were completed in Dental Materials Departments and, in most instances, A. D. A. or FDI Specifications were used as a guidance.

The effort of Degni³ in 1949 should have been the beginning of a **Specification Program in Brasil**. The effort of Pinto ⁴ in 1962 should also have been the beginning of a **regular Specification Program for Dental Materials** in Argentina.

Why did other people fail, each time they intended to start a Specification Program, in different Countries in South America?

The answer to these questions is precisely what I intend to analyse and later on, when I give you a brief report about our «Brazilian Experience» during the last four years, I hope this could be of some benefit to other South American Countries.

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1 — PERSONS AND INSTITUTIONS INVOLVED IN A SPECIFICATION PROGRAM.

1.1 THE DENTIST AND THE DENTAL SCHOOL

A Specification program has to involve first of all, the **Dentist**. What does **he think** about a specification program? How much does he **care** about a specification program? How much does he know about **specifications**?

I think it is fair to state that the Dentist is a product of his Dental School. If you want to know about the **quality of teaching** of any School of Dentistry in South America, you should analyse the **curriculum**, you should find out about **integration** of teaching programs, you should find out about teaching **facilities**, but you should also be able to evaluate the **teachers** themselves! How much do **they** know about specifications and the complexities of a Specification Program?

I think that any attempt to start a Specification Program, in any South American Country, in which only a **minority** of the Dental Teachers has a fair knowledge about the subject, the Program is going to be a failure.

The whole teaching staff has to have, at least, a reasonable amount of knowledge about the problem, so that the students and later on, the Dentists, as a consequence, will have developed the necessary mental attitude to understand and accept such a Specification Program!

This also means, of course, that the Dental Societies, consequently will easily accept and **work** towards the Program's acceptance. No preparation of mental attitude, no acceptance.

As we see, our first vicious circle can only be cut, preparing our teaching staff in our Dental Schools.

1.2 THE DENTAL DEALER AND THE DENTAL INDUSTRY

I remember, back in 1954, in Brazil, I was criticized by my colleagues of the teaching staff of my Dental School, because I was introducing my students through lectures, visual aids and demonstrations, to the newly developed Elastomeric Impression Materials. They reasoned: «Why teach it? Those materials are not available at the Dental Dealers in Brasil».

My colleagues agreed with me, however, when I answered: «The Dental Dealers do not carry these products, because there is no demand for them on the part of the Dentist. There is no demand on the part of the Dentist, because we teachers, at the Dental School, do not mention the product!»

This is another vicious circle that very often happens in South American Dental Schools.

Through the Dental Schools, the Dental Industry will get involved in a Specification Program.

1.3 THE DENTAL SOCIETIES

It used to be a policy of past-Presidents of the Brazilian Dental Asso-

ciation, to nominate a Committee of Dental Materials: a Presidente, a Secretary and usually two or three members.

For many years the by-laws of the Brazilian Dentall Association refer to Specifications and a Specification Program. The simple nomination of a Committee of Dental Materials, however, used to be the beginning and the end of a Specification Program! I think this is true for many South American Dental Societies. The mental attitude towards acceptance of such a program, was not prepared. Noe even all the Dentists realized it's importance.

At the same time as the Committee was nominated, new Dental Schools were created, with teaching staffs, in most instances, not well prepared for teaching. Yet those teachers, would some how prepare Dentist's which, of course would join the Dental Society. I think, around 3.500 Dentists graduate each year from the approximately 70 Dental Schools in South America.

To get the Dental Societies involved in a Specification Program, we have to start the work, seriously, with all the Dental **Students**.

1.4 THE PUBLIC HEALTH DENTAL SERVICES

It is unquestionable that Dentistry, all over the world, is seeking new methods, in an effort to extend its service to more and more people. This occurs through Dental Public Health Programs, either supported by governments or by private Institutions.

When it comes to Restorative Dentistry, based on what criterion do these Institutions buy Dental Materials? You and I know, that the research program at the National Bureau of Standards, was started in 1919, exactly to answer this question.

Specially with Government supported Dental Services, many programs in South America, are restricted by drastic budget cuts, and as a result, very often, cheaper dental products are acquired, unfortunately.

1.5 THE GOVERNMENT

I agree that Government of any Country has to participate in a Specification Program for Dental Materials. But on the other hand, I think is unwise to think that the Government of any South America Country should **start** such a program.

In most instances there are not enough funds available to finance adequately the National Standards Institutions!

There are still so many other important and basic problems to be solved by Governments of South American Countries that I think we do not have the right to expect them to start a Specification Program for Dental Materials. The Government must get involved and cooperate, but is not supposed to start the program!

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As we can see, Specifications Committees and Sub-Committees of Na-

tional Standards Institutions, need the **active participation** of Dental Materials Groups, The Dental Profession through State and National Associations, The Associations of Dental Research, The National and Latin-American Associations of Dental Schools and ... the Governments.

To be successful, any Specification Program for Dental Materials, needs the active participation, the cooperation of the whole group of Persons and Institutions involved!

2 — BRAZILIAN EXPERIENCE WITH A SPECIFICATION PROGRAM FOR DENTAL MATERIALS.

2.1 In Brazil, like in any other South American Country, we have excellent starting point: the tremendous amount of excellent work and experience accumulated during 50 years of your National Bureau of Standards; the excellence of post-graduate Courses offered by many Dental Materials Departments in the United States; all the information received through your Research Associations and Institutes; the American Dental Association; the excellent opportunities offered to Latin American dental teachers, through fellowships sponsored by Foundations such as W. K. Kellogg Foundation.

We also based the starting of a Specification Program in Brazil, on the experience of other Institutions, such as the Commonwealth Bureau of Dental Standards in Australia (22 years), the B. S. I., the D. N. A. (Deutscher Normenausschuss), the

A. F. NOR (Association Française de Normalisation), I. S. O. — TC/106; F. D. I.; the experience of excellent researchers of Switzerland, Sweden, Denmark and Japan, among others, who were always very cooperative, sending us informations.

2.2 THE BRAZILIAN DENTAL MATERIALS GROUP

42 out of the approximately 70 Dental Schools in South America, are located in Brazil. We felt that it was worthwhile to try to start a specification program through the Dental Schools in Brazil. The Dental School, we think, is the only place which we can prepare the mental attitude of the future Dentist, towards the acceptance of a Specification Testing Program. To achieve this with the 2.100 students who graduate each year from the Dental Schools in Brazil, we need first of all the understanding, the acceptance and cooperation of **all** the Dental Teachers. The starting point, of course, is the Teacher of Dental Materials, participating actively in the Brazilian Dental Materials Group.

We started the Group (GBMD: Grupo Brasileiro de Materiais Dentários) in September, 1965 when we had our first meeting in Porto Alegre, in the State of Rio Grande do Sul. Distances are great, in Brazil and we needed from the beginning, the active participation of as many Dental Materials Teachers as possible. For our first meeting, we used, as you might call it, a very good «bait»: to deliver us a Course in Den-

tal Materials and to present some Conferences, we were fortunate to have with us at the time, this extraordinary world-known authority in Dental Materials, DR. FLOYD A PEYTON, from University of Michigan! Besides Dr. Peyton's course, we had Group Discussions on the following subjects: 1) Dental Materials in the Dental Curriculum: lectures and Laboratory Course contents. 2) Integration of Dental Materials with Clinical Departments. 3) Research in Dental Materials Departments. 4) The establishment of a Brazilian Dental Materials Group and the adoption of Specifications.

There were over one hundred teachers attending the Course and the Meeting, most of the Teachers were Dental Materials Teachers. Thirty one Dental Schools were represented, out of a total of 38 than in existence, in Brazil!

For our 2nd Meeting, in 1966, in Belo Horizonte, State of Minas Gerais, we had as our guest lecturer Dr| Hector Maddalena, Head of the Dental Materials Departament in Buenos Aires, Argentina. Again we had a good Meeting, with Group Discussions related to teaching and research in Dental Materials and Specifications.

Our 3rd Meeting, in 1967, was held in Piracicaba, State of São Paulo, and we had over 80 members of our Dental Materials Group present. Ahat oppodtunity Prof. Degni and staff, presented to the group the results of the controlled testing of Amalgams Alloys manufactured in Brazil. This information was later

on, sent to all teachers of Operative Dentistry in Brazil, to al the Deans of Dental Schools, to all Dental Associations in Brazil, to most Deental Government supported Services and to the Dental Industry.

Our guest lecturer was Dr. Guillermo Mac Pherson, from the Dental School of Santiago, Universidad de Chile. Tanks to Drs. Mac Pherson and Maddalena, our Group has now , a good number of members from Argentina and specially Chile.

We divided Brazil in 5 Regions, each having a Coordinator, who is responsible for special activties related to Dental Materials in his Region. We have one meeting each year and the meeting places are chosen 2 years in advance.

The fourth Meeting was in Fortaleza, Ceará and we had as our special guest lecturer Dr. George C. Paffenbarger who presented to us an ecellent Course in Dental Materials. Again we had, planned Group discussions, related to three main tropics: 1) Philosophy of the Teaching of Dental Materials; 2) Integration and 3) Teacher training in the specializer field of Dental Materials: teaching and research programs.

There were over 60 teachers present, an excellent attendance, if you consider the great distance of Fortaleza (in the very northern part of the Country) to Central an Southern Brazil, where most of the Dental School are. Dr. Paffenbarger has also been a great help to the Brazilian Dental Materials Group and eventhough, due to his many assignments, he could not attend our invi-

tation to visit at the time, the Dental School in the Central and Southern parts of the Country, we believe he has a very good idea of what we are trying to accomplish. Through Dr. Paffenberger we also wanted F. D. I. to know a little bit more about our activities in Brazil.

Our 5th Meeting was held this year, in July, in Baurú, State of São Paulo. I think it was an excellent meeting too, and I am sure Dr. John Stanford could tell you more about it than I, : he was our special guest lecturer. We appreciated very much his course and his conferences and I would be tempted to say that he probably returned with a better impression of our Group than our previous guests: the Dental Materials Teacher is now, I would say, much better prepared than he was four years ago. We notice the great difference, just reading the conclusions of the Group Discussions!

We make good use of the many excellent articles published in the Journal of Dental Education, specially the ones related to teachers and training program like the Workshop on teacher Education ⁶.

Our staff, of the Dental School in Porto Alegre, presented to the group, the results of the surveys related to two additional Dental Materials manufactured in Brazil : Investments for Gold Alloys and Alginate Impression Materials.

I am certain that the Dental Materials Teacher in Brazil, is now much better prepared to exert his influence in preparing the mental attitude of the other teachers of his

Dental School and, through them, of the dental students, towards acceptance of a Specification Program.

We are also noticing the greater interest and greater cooperation of the Dental Industry in Brazil, towards our Specification Program.

So far, tests with regard to what you might call a «Certification Program of Materials» in Brazil, were realized only in the Dental School of University of São Paulo and in the Dental School of Porto Alegre, University of Rio Grande do Sul.

The Dental Materials Departments of those two Schools are generally considered «Training Centers» for Dental Materials.

In São Paulo, specially under the leadership of Dioracy Fonterrada Vieira and Francisco Degni, we have accomplished quite a lot.

Sveral other Dental Materials Departments from other Dental School in Brazil are beeing prepared to participate actively in the Specification Program. The idea is to have those chosen Dental Materials Department, responsible for, say two, three or four specific materials, in the general Testing Program!

The results are distributed through the Brazilian Dental Materials Group. Our Group is recognized by the Brazilian Standards Association, (A. B. N. T.) as their Committee of Dental Materials.

We want the Government to enter the picture, but only later, when we have some concrete accomplishments to show!!

To finish my presentation, I would like all of you to know that we of

the Brazilian Dental Materials Group, are NOW quite aware of the fact that, the enormous prestige of your National Bureau of Standards, of many of your excellent Dental Materials Departaments, of your Dental Research Stitutions, this enormous prestige, I repeat, was neither easily, nor casually acquired!

S I N O P S E

O autor faz uma análise dos fato-

res que contribuem para dificultar o desenvolvimento e a efetivação de um programa de Especificações na América Latina. Apresenta ainda, algumas soluções para que tais dificuldades sejam sanadas, baseando-se na experiência brasileira neste sentido. Fala também do porquê da criação do Grupo Brasileiro de Materiais Dentários e de tudo aquilo que esta Instituição já fez em prol das Especificações para Materiais Dentários.

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