REPORT OF PROCEEDINGS BEFORE

STANDING COMMITTEE ON SOCIAL ISSUES

INQUIRY INTO DENTAL SERVICES IN NEW SOUTH WALES

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At Sydney on Monday 14 November 2005

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The Committee met at 3.00 p.m.

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PRESENT

The Hon. J. C. Burnswoods (Chair)

The Hon. Dr A. Chesterfield-Evans
The Hon. K. F. Griffin
The Hon. C. J. S. Lynn
The Hon. R. M. Parker
The Hon. I. W. West

TONY GENTILE, Chief Executive, Australian Beverages Council Ltd and Executive Director, Australasian Bottled Water Institute, Suite 4, 6-8 Crewe Place, Rosebery

CHAIR: In what capacity do you appear before this committee?

Mr GENTILE: As Executive Director, Australasian Bottled Water Institute Inc.[ABWI] and Chief Executive of the Australian Beverages Council Ltd [ABCL].

CHAIR: Were you aware of this inquiry and have you had a chance to look at the evidence the committee has taken over a considerable period?

Mr GENTILE: No, regrettably I have not. Until I was contacted by the secretariat I was not aware of it. I have prepared a short statement to answer your first question, and will leave it to the committee to ask the rest of the questions. The first question is fairly simple in terms of who we are.

CHAIR: I asked you that preliminary question because the committee started this inquiry some time ago and to some extent the appearance of witnesses today has arisen out of some of the comments that have been made to the committee in evidence.

Mr GENTILE: Yes, that is what I assumed.

CHAIR: And members may assume that you have an awareness that you perhaps do not have.

Mr GENTILE: I understand the nature of the comments. They have been in the media from time to time for quite a while. I am the Chief Executive of the Australian Beverages Council Ltd and Executive Director of the Australasian Bottled Water Institution Inc. A list of members of the two organisations is attached to my statement, which I hand to you. The Australasian Bottled Water Institute Inc. is an association and certifying body of the bottled water industry in Australasia. Founded in 1995, ABWI is the regional member of the International Council of Bottled Water Associations [ICBWA], an organisation based in Ottawa Canada.

ABWIs members produce and distribute more than 85 per cent of total bottled water sales in Australasia. ABWIs primary goal is to ensure consumer confidence and enjoyment of a safe, high quality, good tasting bottled water supply. ABWI works closely with its member companies, international affiliates, other industry groups and governments to achieve its objectives. These are: to promote the use of bottled water; to assist members to fulfill government requirements and to attain and maintain the highest standards of quality; and to encourage self-regulation and foster technical expertise within the industry.

The Australian Beverages Council Ltd is a slightly different organisation. It is the peak representative body for the non-alcoholic water and juice-based beverages sector in Australia. The products currently covered by the council's membership include: bottled water, carbonated flavoured beverages, formulated caffeinated beverages, fortified water and juice-based beverages, fruit juice and fruit juice drinks, mineral and mineralised waters, sports and isotonic drinks and tea and coffee ready-to-drink beverages.

The primary function of the council is to represent the interests of the industry with governments at all levels in the areas of: food regulatory affairs and policy, health and nutrition, consumer policy and protection, taxation and economic policy, water and water resources policy and environmental policy. The council is an active member of the Australian Chamber of Commerce and Industry and of the International Council of Beverages Associations, an organisation based in Brussels, Belgium. With regard to this inquiry, both ABWI and ABCL are happy to assist the committee in its inquiry and to answer any questions to the best of my ability on available information.

CHAIR: Do members of the institute cover 85 per cent of the bottled water industry?

Mr GENTILE: Of the bottled water, yes. There is a greater coverage of the general beverage.

CHAIR: Membership of the industry is not mandatory in any way. Do you have a code of conduct that only apply to members of the institute?

Mr GENTILE: The bottled water institute has what we call a model code. This code is a good manufacturing practice code. The code requires members to abide by it. Unlike other organisations, unless you abide by the code, and you are audited to the code once a year, you cease to be a member of the organisation. I was pleased that the bottled water supplied by the committee has marked on the bottle "ABWI" certified bottler. The purpose of that is to ensure that, first of all, Australians have confidence in the bottled water industry; and that our members maintain the highest possible standard because water, unlike carbonated beverages, can be contaminated and can cause illness to consumers. So there are water-borne bugs and we must ensure that people get good quality water.

The Hon. IAN WEST: The institute does the certification?

Mr GENTILE: That is correct.

The Hon. IAN WEST: The Australasian Beverages Council is the Federal and international body or is it affiliated to international organisations?

Mr GENTILE: They are both affiliated with different international organisations.

CHAIR: I think the beverages council is the one that covers all the soft drinks and other bottled products. And every bottled drink that is non-alcoholic—

Mr GENTILE: The bottled water institute is much more of a technical certifying organisation to bring up the standards of water bottling in Australia.

CHAIR: The links are that the institute is a member of the beverages council because it is a broader body?

Mr GENTILE: No, we provide the administrative service and representation work for the institute, as there is a great commonality of members to both organisations.

CHAIR: Are you executive director of both?

Mr GENTILE: I am the executive director of one, and chief executive of the other. I know there is a play on titles. One implies that I implement policy under direction and the other one implies I just implement policy and that I do not need the direction.

CHAIR: In fact, the titles could be the same because you are the head of each one?

Mr GENTILE: Yes.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: That means we can ask you questions about—

Mr GENTILE: You can ask me questions about anything to do with my members' products.

CHAIR: Is the majority of the industry based in New South Wales?

Mr GENTILE: No, proportionate to population, probably about 40 per cent is in New South Wales and a similar amount in Victoria. As you get to the outlying States, Tasmania and South Australia there are fewer plants there, mainly major bottlers in those plants, but they do not necessarily produce all products in those plants. For example, Coca-Cola Amatil would produce more bottled water mainly in New South Wales, Western Australia than it does in South Australia.

The Hon. IAN WEST Is Coca-Cola a member?

Mr GENTILE: Yes.

The Hon. IAN WEST: With certification?

Mr GENTILE: Yes, it is certified.

The Hon. IAN WEST: Is the certification voluntary?

Mr GENTILE: Not to the bottled water institute.

The Hon. IAN WEST: Are the 15 per cent who are not members of the institute certified?

Mr GENTILE: No. That does not mean they are not ethical bottlers; it just means they do not wish to pay the cost of membership and certification in many cases. In others it may mean whatever.

The Hon. IAN WEST: You cannot be certified and not a member?

Mr GENTILE: That is correct.

CHAIR: Can you provide the committee with statistics about bottled water consumption versus tap water consumption?

Mr GENTILE: Not versus tap water consumption. First of all, I can give you a statistic which is that bottled water sold in retail packs is about 370 million litres a year. There is a further, and I am more confident of the first figure than the second, amount of somewhere about 300 million litres which is sold in the big bottles which go on water coolers. You might have seen them—Neverfail and similar companies. Because that particular market is so dominated by one company, it is difficult to get statistics because essentially it could be revealing of their business. But it is approximately that level.

CHAIR: Do you have any statistics on the regional variations?

Mr GENTILE: No, there is no great regional variation between consumption of bottled water. Certainly there is more of it consumed in hot climates of Australia, and that applies to all beverages. Northern Territorians consume more of all beverages, and that is very much related to their climate. As you go south it declines, but except for the Northern Territory and maybe Northern Queensland, we do not keep statistics by State and I would say that, with the exception of the Northern Territory, the variations would not be statistically significant between, say, New South Wales and Victoria.

The Hon. ROBYN PARKER: Is consumption increasing?

Mr GENTILE: For bottled water, yes. It has been increasing at about 10 per cent—sometimes a bit more, sometimes a little bit less—per year in volume terms. You have got to appreciate that bottled water does not compete with tap water, especially water packaged for retail. Bottled water packaged for retail is primarily a commercial beverage and it competes with all other commercial beverages. The amount of it consumed in lieu of tap water would be absolutely negligible. A little bit less so on the 15-litre cooler side where that is more, I assume, replacement for some tap water. But even then most industry information is that if you place the cooler at work in an office or in a factory it increases the consumption of water but it does not actually replace consumption of tap water. People drink more of it because it is cold, refreshing and it is ready there, you can go with a cup and fill it up instead of going somewhere down the hall in a bathroom or a kitchen and getting tap water which is not cold.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: You are saying that they simply drink more per day, otherwise—

Mr GENTILE: They would drink less overall.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: So the total fluid consumption would increase and if it is not there they simply would not consume anything?

Mr GENTILE: That has been the marketing estimation of companies that the two are not really competitive with one another, that in actual fact the cooler market assists considerably in hydration in workplaces where the lack of a cooler would lead people to drink less.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: So if I were to say that somebody needs two litres of liquid a day and they would drink two litres—

Mr GENTILE: I do not have statistics but I would say they would drink more if they had a cooler.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: So they might drink a bit less than two litres and have periods of dehydration if they did not have a cooler in the room. They might drink more than two litres, more than they actually needed if they had one?

Mr GENTILE: What you need of course is dependent on your size and on the level of work and the type of work that you do. If you are working in a factory in hot conditions you are going to need a lot more. But even in an air-conditioned office you find that air-conditioning increases dehydration so you need to drink more if you work in an air-conditioned office than, say, otherwise.

The Hon. ROBYN PARKER: This is a relatively new industry and phenomena, is it not, drinking bottled water? I am just wondering if you can pinpoint when the trend began for people to drink bottled water and carry around bottled water and what created that understanding that it was good for you to drink lots of water?

Mr GENTILE: There are two very distinct markets. Let us look at the retail market first of all. Bottled water in the retail market has slowly taken off as people have been looking for a healthier commercial beverage. So if you look at the statistics you will see that the carbonated soft drinks market has not only plateaued but that on a per capita basis it has been in slow decline. The bottled water market has been growing and there is some trade-off. Whenever you bring a new commercial beverage on the market, there is always some trade-off in that it replaces consumption of some existing beverages but it also brings new consumers to the industry. The bottled water market has certainly replaced some of the other beverages and it has brought to the market individuals who may not have bought a carbonated soft drink but will buy a bottle of water from a refrigerator if they are out and about at the beach in Manly or wherever else.

The Hon. CHARLIE LYNN: Do you think there is a subtle message maybe in the marketing somewhere that perhaps bottled water is more healthy and tap water is less healthy for you?

Mr GENTILE: We do not market bottled water in those terms. I stress that if you were to check every interview that I have ever done on radio I have gone to great pains not to suggest that tap water, from a health point of view, is in any way inferior to bottled water. We market it as a refreshing, convenient beverage.

The Hon. CHARLIE LYNN: It seems to be the yuppie in-thing, if you like, or the yuppie healthy thing at the moment. You cannot get people to butter your toast now in Sydney because butter is apparently bad for you. It seems to be the same with water: bottled water is good and tap water is sort of a bad second prize almost.

Mr GENTILE: If people believe that, it is because they have chosen to believe that. There is a lot of resistance. A lot of consumers will tell me—and this is purely anecdotal, there are no statistics or whatever—that they drink bottled water because they do not like the taste of chlorine. I know that you can let the chlorine evaporate and the water will taste better, but that requires them to do something.

The Hon. CHARLIE LYNN: Do you put any fluoride or anything in the bottled water?

Mr GENTILE: No.

The Hon. CHARLIE LYNN: There is none?

Mr GENTILE: You are not allowed to call anything "natural spring water" or "natural mineral water". If you add anything to the water it stops being water, it stops being a food under the GST terminology and becomes GST payable. No one here covers the area—you are all upper House members.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: We all cover New South Wales.

Mr GENTILE: I know. But if you go to Taren Point, there is Bertshell, which is a company that has been run by the Shelley's family for a long time, they produce Unique Water. Unique Water is a mineralised water, because they actually add minerals to standardise the formulation. That water pays GST.

CHAIR: So you are saying that fluoride is not in bottled water because if it were, under Federal laws and regulations it would change the product and change its tax status, if you added fluoride?

Mr GENTILE: First of all let me say that you are not allowed to add fluoride.

CHAIR: By whom?

Mr GENTILE: It is against the law to add fluoride.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Because you cannot add anything? It is not specifically against the law to add fluoride, it is against the law to add anything without changing the nature of it and the labelling?

Mr GENTILE: I am sorry, you are not allowed to add fluoride to bottled water.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Is it a specific prohibition?

CHAIR: Can you say by whom and for what reason?

Mr GENTILE: The food regulations are fairly specific in that if something is not specifically permitted then it is not permitted.

CHAIR: So you are talking about a health—

Mr GENTILE: No, the food regulations.

CHAIR: What I am trying to get straight—and I think this is where we have got a bit of confusion—you mentioned tax and GST.

Mr GENTILE: I mentioned that in terms of adding anything.

CHAIR: What I am trying to get straight is that you are saying the food regulations, which primarily have a health focus, prevent the addition of things and if certain things are added—you gave the example of Unique Water—then different rules apply?

Mr GENTILE: I mean no disrespect but the primary function of food regulations is to provide a safe food supply. That is the primary function. The food regulations specifically state what is permitted in foods. My understanding is—and we have queried that with Food Standards Australia and New Zealand fairly recently because one of my members wanted to produce a fluoridated water—that we are not permitted to add fluoride. Fluoride, apparently—and I am not a technical expert, so you will have to excuse me; I am not a scientist—can be used as a processing aid. But the regulations state that if you use anything as a processing aid there must be none left at the end of the process.

CHAIR: You said one of your members wanted to add fluoride.

Mr GENTILE: Was interested; was inquiring about it.

CHAIR: Does the institute have a policy one way or the other? Does it seem to the institute that it would be a good thing if fluoride were to be added?

Mr GENTILE: No. The institute does not have a policy on fluoride. The institute takes the view that if the regulations were to permit fluoridation—I am talking here about voluntary fluoridation—there would be some bottlers that would produce fluoridated bottled water, if the market is there for that water. We do not actually have a view that fluoride is good or bad for you.

The Hon. CHARLIE LYNN: Have you had representations from the dental industry to add fluoride to bottled water?

Mr GENTILE: Dental experts have never come straightforward to us with representations, they have on radio and television and claimed that, somehow, bottled water is increasing the incidence of dental decay in children. We say this is absolute nonsense, for a couple of reasons: first of all, the primary consumers of bottled water are adults; not children.

CHAIR: What statistics can you give us in relation to that?

Mr GENTILE: I know for a fact that the number one target group for retail packs of bottled water are young women between the ages of about 18 and 40.

CHAIR: What statistics are available relating consumption to age?

Mr GENTILE: I am not privy to individual members' marketing.

CHAIR: no, I am not talking about marketing. Children make up a certain percentage of the population, children under 18 years of age, for example. Do we have any statistics on their consumption, compared with the remainder of the age group?

Mr GENTILE: We know for a fact that children are very small consumers of bottled water.

CHAIR: In proportion to their share of the market?

Mr GENTILE: In proportion to the rest of the population. I am not saying to all of the rest of the population. First of all, the greatest consumption of water by children is in the home and the greatest consumption of water in the home use tap water. Very, very few homes—less than 5 per cent of households—would have a cooler within the home. Where there is a cooler, it tends to be a family of higher socioeconomic background where dental hygiene is usually something attended to by the parents. I am not suggesting that parents in the lower socioeconomic backgrounds do not care, but usually the pressures of life at that end of the market can lead them sometimes to overlook such things. Most of the bottled water consumed in the home tends to be in higher socioeconomic households, because, very simply, they can afford it.

CHAIR: What about at school? There have any statistics in that regard?

Mr GENTILE: There is increasing level of bottled water consumption in schools at the moment, probably because of your schools canteens policy, which has taken a number of products out of schools. If children do not want to go and drink from the hot bubbler, they may buy bottled water. Again, anecdotally, if you were to go into a school, bottled water would be mainly consumed in high schools and predominantly by girl students. By that time, let me say, dental hygiene is the most important thing. It is a totally different thing to very small children who are yet developing teeth. By the time they get to high school, dental hygiene is the single most important thing in maintaining good oral dental health.

The Hon. ROBYN PARKER: Has any marketing or research being undertaken by your members that determines whether people drink bottle water because of the absence of fluoride? Have you done any research to understand whether there would be greater consumption if fluoride were added?

Mr GENTILE: First of all, there is certainly a group of consumers that buys bottled water because it is not fluoridated. There is a view amongst a section of the community that they are anti-fluoridation; they believe it is bad for them. There is also a philosophical view amongst a section of the community that they are against mass medication, believing that that should be an individual responsibility, to medicate. That is a philosophical point of view amongst some people. Other people actually fear the presence of fluoride because they believe the accumulation—I have no scientific evidence; I do not take a position on it. I might as a citizen, but I do not as executive director of the institute. I do not actually believe that if fluoridation was voluntarily permitted in bottled water, it would slightly increase the total consumption of bottled water, but I do not believe that the vast bulk of people buy bottled water because it is or is not fluoridated; they buy it in lieu of a soft drink.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: They may not have thought about it. They do not think about whether there is fluoride in it or not, do they? They buy it because they are thirsty or they want the image, or whatever?

Mr GENTILE: Absolutely. People do not buy soft drinks because they are fluoridated, or they do not buy fruit juices. They buy them because they are thirsty, because they want a beverage with their meal, something refreshing. That is the role of the refreshment average industry.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Use said when talking about the consumers of bottled water that they were mainly adults because they are targeted by the marketing.

Mr GENTILE: We do target—

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Forgive me. I have been in this game for a while. It does have shades of the old, "We do not market to children," which the tobacco industry used to say, "therefore children do not see our marketing and therefore children do not smoke cigarettes." The idea that they are not marketing to children and therefore children will not consumers insignificant quantities is a non sequitur, of course.

Mr GENTILE: I never suggested that. I never suggested that bottled water is not marked to children. What we find, first of all, is that bottled water is hardly marketed at all. You do not see a lot of advertisements for bottled water.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: I am not sure that advertisements are the only things that one sees in marketing these days. Is marketing not less and less about advertising and more and more about other things?

Mr GENTILE: It might very well be the case. I do not disagree with you that marketing is much broader than advertising. All I am saying to you is—if I may give you an example, Mount Franklin became the number one bottled water in Australia without an advertisement appearing, simply because it was in Coca-Cola fridges, and people chose it in lieu of other things in Coca-Cola fridges.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: And it was the only bottled water in Coca-Cola fridges.

Mr GENTILE: No, there were others. There have always been others. There have always been imported bottled waters. In Australia there is a long history of bottled water.

CHAIR: I think you said in Coca-Cola fridges.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: I said in Coca-Cola fridges.

Mr GENTILE: No, there was not. There was not any other, in that fridge. All I am saying is that the availability of bottled water meant that people bought it from those fridges. Buying it from those fridges implied is that they are not buying something else from that fridge.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Very often Coca-Cola has the only fridge in many shops.

Mr GENTILE: I am sure that a lot of my members would like to have that company's marketing skills.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: And its fridges.

Mr GENTILE: That is a matter of investment.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: You said that consumption of bottled water is mainly by adults and you said that that was generally understood. Do you have any facts as to the amounts consumed? You referred to commercial in confidence when talking about marketing. Do you have any facts about the amount of bottled water that is consumed by the age groups? If so, how solid are those facts?

Mr GENTILE: No. I do not know.

CHAIR: would it be possible for you to take that question on notice and get back to the Committee?

Mr GENTILE: I can certainly take that question on notice and I can ask. You have to appreciate that bottlers, when they do marketing, do not normally worry about totals; they worry how many people are drinking their brands.

CHAIR: For instance, there must be some information on the supply to school canteens. There must be some indicative figures.

Mr GENTILE: I can ask my members as to whether they are willing to provide you in confidence with some brand take-up according to different age groups, if they have it.

CHAIR: I asked you at the beginning about how aware you were of evidence that had been given at previous hearings. Some people have argued to the Committee that if fluoride were in bottled water, particularly in relation to children, then it would have a major health effects in reducing dental caries. If that is the case, obviously, the Committee is very interested in the statistics of the consumption of bottled water by children. In a sense we are interested in the statistics as to be extent to which children have reduced their consumption of tap water and, in turn, what your policy would be.

Mr GENTILE: You are the Government. The New South Wales Parliament is the Government. You can find out things a lot better than I can in many ways.

CHAIR: No, we are asking you some questions about the break-up of sales. The second half of a question we sent you, very straightforward question, was: Do you think fluoride should be added to bottled water?

Mr GENTILE: Compulsorily? Absolutely not!

CHAIR: Why not, if fluoride is that it to Sydney tap water, for instance?

Mr GENTILE: Because some people do not want it.

CHAIR: What philosophical distinction do you draw between adding it to Sydney tap water and is not adding it to bottled water consumed in Sydney?

Mr GENTILE: The people who do not want to consume fluoride at the moment, from Sydney tap water, have a choice. They can either distil their water at home and get rid of it through a filter, or they can buy bottled water.

CHAIR: Is this your view or the view of the Institute?

Mr GENTILE: No, it is a fact that if you do not want to drink if fluoride, you have two choices as to what you do.

CHAIR: In terms of the choice you have given us in relation to bottled water. Are you giving us the Institute's view or your view?

Mr GENTILE: The Institute has no problem with the voluntary addition of fluoride. If a market is there—

CHAIR: But the institute as such is opposed to the compulsory addition of fluoride?

Mr GENTILE: We are opposed to compulsory addition of anything to our beverages, because we do not believe that our beverages should be used as medicine. They are refreshment beverages.

CHAIR: The reason I am trying to pursue this question he is that earlier you basically said, "We are not allowed to do this." In other words it was irrelevant because Foods Standards Australia and New Zealand does not allow you to add fluoride. But you are now saying that the institute does have a definite philosophical position that you should not add anything to bottled water.

Mr GENTILE: I did not say that. I said that an individual member, if he or she is permitted to add something and wants to add that ingredient and market it, believing that there is a market for water with that ingredient, or beverages with that ingredient, should be free to do so. But I would not support, and my members would not support, being compulsorily required to add fluoride.

CHAIR: So, why did you make the reference to medication?

Mr GENTILE: Simply because it is an issue.

CHAIR: Voluntary medicine is okay?

Mr GENTILE: I am sorry, but if you believed that the vast majority of the New South Wales population is constipated, would you then ask to add a laxative to the water in question and with all due respect, I do not believe that food and beverages should necessarily be used in that manner. By all means let us permit the addition of fluoride, and by all means let us permit the addition of vitamins and minerals if we believe that people want those things; and if people want that, my members will produce them and they will be sold. To compulsorily put something into the food supply is not something we are philosophically in favour of. We believe in choice. We believe that consumers should have the right to choice. At the moment if they want to drink fluoridated water, it is in every tap the New South Wales.

The Hon. ROBYN PARKER: No, it is not.

Mr GENTILE: Well, certainly in Sydney.

CHAIR: But your belief in choice has not gone so far as for the institute to lobby the Federal Government, for instance, to make it possible for those bottlers that choose to to put fluoride in their water?

Mr GENTILE: The simple reason is that there has not been a demand. If there was a demand—the institute is looking at it at the moment—putting in an application to Food Standards Australia New Zealand and to get that application dealt with expeditiously is quite an expensive exercise.

CHAIR: What is the application for?

Mr GENTILE: In order to be allowed to add fluoride you have to put in an application to Food Standards Australia New Zealand. If you want that application dealt with next year instead of in the next 10 years you have to pay for it to be dealt with. The cost depends on the complexity of the application from the point of view of Food Standards Australia New Zealand.

CHAIR: Did you say that the institute has prepared such an application or is in the process?

Mr GENTILE: No, the institute has considered it. No decision has been made simply because there is not a huge demand amongst our members for it.

CHAIR: When did the institute start considering it?

Mr GENTILE: If there was a majority demand amongst our members to do so we would.

CHAIR: No, when did the institute start considering making an application?

Mr GENTILE: The first inquiry we had from a member was about six months ago.

CHAIR: And the institute decided then to consider it?

Mr GENTILE: We inquired then as to whether it was legally permissible to do so.

The Hon. CHARLIE LYNN: The addition of Staminade or Gatorade or a twist of lemon, is that different? Is that just seen as flavouring or food?

Mr GENTILE: Everything is either permitted or not permitted . Every flavour is either permitted or not permitted. Every preservative is listed. You cannot use a preservative unless it is a permitted preservative. The food law is very specific, and for good reason: the safety of Australia's population. Fluoride is not a normal food ingredient. It is not an ingredient that people have been wanting to add to anything because it does not provide flavour, colour, vitamins, minerals or nutrition. The other problem is that fluoride is of itself a difficult product to handle, especially in a food plant. It can be poisonous if mishandled.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Poisonous?

Mr GENTILE: If you ingest enough fluoride it is poisonous.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: That is so for just about any product in a factory.

Mr GENTILE: No, not really. Fluoride would have to be stored separately from other ingredients.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Would not every ingredient have to be stored separately from other ingredients?

Mr GENTILE: No, not really. Colours and preservatives do not have to be stored separately.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: What, you can mix them all up?

Mr GENTILE: Yes, but they are mixed up in controlled amounts. Fluoride would have to be added in a very controlled manner.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Like any other additive.

Mr GENTILE: Yes, but if I add a little more colour it is unlikely to hurt anybody.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: What about caffeine?

Mr GENTILE: You will find that nearly everybody puts less caffeine than the maximum permitted level in order to avoid that mistake. If you add a little extra caffeine it would not hurt the individual.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: It would not hurt if you added a little extra fluoride either.

Mr GENTILE: You do not know that.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Yes I do, because the therapeutic index is quite large. The difference between a toxic dose and a normal dose is 20 or 30 times, so you would have to make a fair blunder.

Mr GENTILE: All I can say to you is that fluoride would have to be handled separately and stored separately. This is the advice that I am getting from food scientists. I am an economist so you will have to excuse me. But the advice that I get from food scientists is that we could add it if we wanted to and we were permitted to do so but it would require controls within the plant of a very high order to protect public safety.

CHAIR: Does that mean there would be extra costs for bottlers?

Mr GENTILE: Without a doubt.

CHAIR: Would that be any different to a decision to add any other sort of flavouring or something else for health reasons?

Mr GENTILE: The decision on extra cost is based on market demand, and that is not a problem.

CHAIR: But if you have a plant where you might add 10 different things—flavouring or whatever—would the addition of an eleventh thing make any real difference to the cost structure?

Mr GENTILE: Fluoride, on the advice of food technologists, would require considerable additional safety and quality controls to ensure the safety of the final product.

CHAIR: Earlier you said that in the past you had not received many requests or whatever but about six months ago people suggested—

Mr GENTILE: One member inquired.

CHAIR: You said before that the institute has given consideration to making an application to Food Standards Australia New Zealand. Does that mean it is in the early stages and members are discussing it?

Mr GENTILE: It simply means that it came to the technical committee of the institute and it considered it. There was not general support or a rush by anybody to want to add it. In that situation the institute is not going to incur a cost to all members for the benefit of one member.

CHAIR: So have you got it on hold or have you rejected the idea or—

Mr GENTILE: We have not got it on anything at the moment. It is just something that is there. If one day a majority of members wanted it we would consider putting in an application. But there is nothing to stop the New South Wales Government, which is part of the Food Regulation Standing Committee, and the Minister is a member of the Food Regulation Ministerial Council from proposing to Food Standards Australia New Zealand that it consider it.

CHAIR: Has the institute also looked at the addition of fluoride to soft drinks other than the bottled water or have you limited it to water?

Mr GENTILE: No, the Beverages Council has not considered it and it has never been requested by anybody in the Beverages Council. It only came up once on the bottled water side. But again I put it to you that if the New South Wales Government believes that voluntary fluoridation is a positive and that it should be permitted, in whatever beverages you choose, it is well within the ambit of the New South Wales Government to propose that to food regulatory authorities.

CHAIR: As I said, this is a parliamentary committee. We are aware of that, but thank you for reminding us.

The Hon. ROBYN PARKER: Does imported water have fluoride in it?

Mr GENTILE: It would not be allowed to have fluoride because food law in Australia does not permit it.

The Hon. ROBYN PARKER: Is fluoride added to bottled water in other countries?

Mr GENTILE: In the United States fluoridation is permitted and a number of water bottlers fluoridate their water. The water is sold as fluoridated bottled water.

The Hon. ROBYN PARKER: Marketing research from those countries would give an indication of the popularity of fluoridated water as opposed to water without fluoride.

Mr GENTILE: I do not have an exact percentage but my understanding is that fluoridated bottled water in the US is a small percentage of the total bottled water market. It is available, it is there, but it is not something that consumers look for. Certain consumers obviously do, otherwise it would not be produced. This is why I keep saying to you that it is not an issue for the institute. We are not opposed to voluntary fluoridation. We would be opposed if you tried to make it mandatory. We would be happy for the New South Wales Government to propose that it be permitted.

The Hon. ROBYN PARKER: What is it that people do look for in bottled water? What is it that attracts consumers to one brand or bottle over another?

Mr GENTILE: Primarily taste and refreshment. You want a standardised product that tastes the same, that has a clean, crisp taste and that is available when you want to drink bottled water. The vast bulk of all water at retail is not consumed in the home. The vast bulk of retail bottles are consumed by people out and about, at the beach, at sporting functions, at picnics and so forth.

The Hon. ROBYN PARKER: So my assumption that people select a particular brand of bottled water because of the container—whether it be a pop-top lid—or because of the price is incorrect; it is taste over those sorts of factors?

Mr GENTILE: Bottled water is certainly price sensitive. It has quite a high elasticity of demand. It is probably at about 0.6. So a drop in price will increase consumption. It will not increase it forever; there are limits to everything in life. If you drop your price vis-a-vis your competitor you will get a boost in sales and your competitor will get a drop in sales. Will it increase your overall size in the market? Probably marginally.

The Hon. CHARLIE LYNN: What is the proportion of imported bottled water in the market?

Mr GENTILE: Imported bottled water tends to be more fashionable, as you mentioned before. Probably the person who drinks imported bottled water wants to make more of a fashion statement than the person who drinks Australian bottled water. But I really do not have any evidence except that Australian bottled water is of the highest quality. Why you would want to buy imported water—it is a matter of choice.

CHAIR: Does the Bottled Water Institute include the manufacturers of coolers and water dispensers?

Mr GENTILE: Yes. It is voluntary. Many of them are. One major one is not.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Which one?

Mr GENTILE: Palm Springs.

CHAIR: So you cover the very large bottle on the cooler?

Mr GENTILE: That is right.

CHAIR: Are any of your members connected to the suppliers of filters and things for domestic water consumption?

Mr GENTILE: No. It is an area people are investigating. At the moment filters are sort of in competition with bottled water. Some bottlers are supplying filters as well as bottled water to the consumer but the institute does not cover filters.

The Hon. IAN WEST: If the unofficial policy is that you are opposed to compulsory fluoridation, could you give us the reasons?

Mr GENTILE: We do not see that it is necessary for compulsion given that the greatest benefit of fluoridation of the water supply is for very young children, and very young children are very low consumers of bottled water. We do not believe that the whole of the population that drink bottled water should have to consume fluoridated bottled water.

The Hon. IAN WEST: So it is a philosophical reason; it is not a commercial or medical reason?

Mr GENTILE: It would certainly add to our costs. It would certainly help filters against our products by people who want to avoid fluoride, so it would be cost-competitive in that way. We would probably lose some sales to filters, but, again, it is not a question of fluoride. If you told us that you wanted to compulsorily add anything to water, we would probably philosophically be opposed to it.

CHAIR: The only thing you have taken on notice is whether there are any statistics on the consumption by children compared to their percentage of the population and that may also be partially answered if there are any statistics on the supply of bottled water to canteens.

Mr GENTILE: It would help me if I could receive a formal request by email. With regards to school canteens, you would appreciate that the consumption of beverages in school canteens is minute and I doubt whether people keep separate statistics.

CHAIR: It is more a matter of children carrying bottled water to school?

Mr GENTILE: Someone carrying bottled water does not necessarily mean that it has actually been purchased. It is often filled with the home tap.

CHAIR: The secretariat will write to you and will refer to the part of the transcript where we explored it with you. Thank you for coming along.

(The witness withdrew)

DEBORAH JANE COCKRELL, Head of Discipline of Oral Health, University of Newcastle, P. O. Box 127, Ourimbah, 2259, and

JANE AMELIA TAYLOR, Senior Lecturer, Discipline of Oral Health, University of Newcastle, Ourimbah Campus, P. O. Box 127, Ourimbah, 2259, affirmed and examined:

CHAIR: Are you appearing on behalf of the faculty or as individuals?

Associate Professor COCKRELL: On behalf of the faculty and the university.

CHAIR: We sent you some questions, which can guide our discussion but do either of you wish to make an opening statement?

Associate Professor COCKRELL: I think it might be useful for you to know how our initiative first came about and to give you the context as to where we are coming from. Approximately two years ago the University of Newcastle, which has a proud reputation of multidisciplinary education, identified that there was a gap in its offerings. It offered physiotherapy, nutrition, dietetics, medicine, the whole shebang, but nothing to do with oral health. They then commenced negotiations with the Metropolitan Dental School at the University of Adelaide that resulted in a unique partnership being established between those institutions that had several aims.

One of the aims was to offer a program in preventive oral health. The second aim was to provide extended rural and regional placements for dental students who were in their final year of studies at Adelaide and the third main agenda item was to introduce oral health education into a whole range of other health curricula within the faculty, so we now teach into every health course offered by the university. I thought that might provide you with just a snapshot of where we are coming from.

CHAIR: Can I ask: Why the University of Adelaide? We know in part, because we have had other evidence making it clear that the University of Adelaide, for whatever reason, has turned into the major supplier of dentists and many dentists who work in New South Wales come from Adelaide. Does your co-operation with them say anything about the role of the University of Sydney as the only university training dentists in New South Wales? Did you think of a partnership with the University of Sydney for instance?

Associate Professor COCKRELL: It pre-dated my appointment to the university and the negotiation between the university and the various dental schools was at a higher level; it was at the level of pro-vice chancellor and I guess you would have to ask him why he made that decision. I am not party to that information.

CHAIR: But there is no relationship between the University of Newcastle and the University of Sydney in relation to oral health?

Associate Professor COCKRELL: No formal agreement between the two, however, we enjoy really good positive relations with the University of Sydney and we are certainly talking about ways that we can work co-operatively together in the future. I think it is also fair to pick up on your point about the student population of Adelaide. Jane used to work at Adelaide and she would know better than I, but about 40 per cent or 50 per cent were from New South Wales anyway.

Dr TAYLOR: The eastern seaboard.

Associate Professor COCKRELL: This was a really nice opportunity to provide them with scope to come back and do at least part of their studies back in their home State and also make a very valuable contribution to oral health care in the areas where we need it most.

CHAIR: Would that percentage of students from the eastern seaboard be at the University of Adelaide doing dentistry now?

Dr TAYLOR: It fluctuates year to year but it has been fairly consistent over the last 10 years. I imagine it has not changed significantly.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Does the University of Adelaide have more of paradental, non-dentist dentistry than the University of Sydney, the newer courses—the dental hygienist, is it?

Dr TAYLOR: The University of Adelaide offers a bachelor of dental surgery and a bachelor of oral health, which is a dual outcome program, so the graduates will be able to register as both therapists and hygienists, which is similar to the course that is offered by the University of Sydney.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: So a bachelor of dental surgery is not a dentist?

Associate Professor COCKRELL: Yes it is. BDS.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: That is what the guy who does my teeth has.

Associate Professor COCKRELL: That is a relief.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: That is not a hygienist or a therapist?

Dr TAYLOR: No.

CHAIR: There are two courses.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: The bachelor of oral health is the old therapist and hygienist.

Associate Professor COCKRELL: I think we might go back a step, if that is all right with you, to just explain how this evolved.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Yes.

Associate Professor COCKRELL: The notion of having formal education at the tertiary level or degree level for allied dental personnel has been on the cards in New South Wales for quite some time and at that time we established the partnership with Adelaide there was no existing course for such personnel within New South Wales, so we thought of that as being a gap.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Within New South Wales universities or within New South Wales at all?

Associate Professor COCKRELL: Within New South Wales at all. Traditionally, the training for therapists and hygienists has been TAFE based. Until the introduction of these new degree programs, it was never a degree course; it was a diploma or an advanced diploma.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: So like pharmacy, it has gone from the technical colleges to universities but 30 or 40 years later, the same as optometry?

Dr TAYLOR: Yes.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: But the people who are called therapists, who do all the schoolwork, they have never gone to university, is that right?

Associate Professor COCKRELL: No, there was a training program at Westmead College of Dental Therapy, which is adjacent to Westmead Hospital, which was a two-year program.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: But that was a non-university course?

Associate Professor COCKRELL: Yes.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Those people seem to the dinosaurs in the sense that the new training will be better than theirs and they do not seem to be able to upgrade?

Associate Professor COCKRELL: I think you make two points. I am not sure I would say better, just different. We all talk about having new models of care and different approaches to how we deal with traditional problems. We believe that one of the issues that perhaps has been a barrier to progress in dealing with some of these issues is having this categorisation of different people, and you will understand how difficult it is to work out who does what to whom. We are all talking about creative ways of managing our shortage of the health work force generally and by looking at the combined skills set of therapists and hygienists and looking at it from a more preventive practice scope, we have set up a program that is going to look at primary preventive care for public sector patients and private sector patients. I do not know that it is better; I think different.

The second point you make are that there are no opportunities to convert. We actually have eight applications that we are ploughing through at the moment for therapists who are currently working in the public sector but who want to convert. We are using credit transfer arrangements within our institution to allow them an accelerated pathway through our degree and we suspect it will take the equivalent of one year full time for them to obtain that conversion.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: As opposed to what, two or three years?

Associate Professor COCKRELL: Three.

CHAIR: Can we go back to question one, which would enable you to describe your course and give the background to it?

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: I want to ask about certificate III, which is in the answers from the Health Department. You have presumably seen those answers?

Associate Professor COCKRELL: Yes. It was something I felt needed addressing. We do accept applicants with certificate III and we certainly did last year. One of the issues that we have is that we are very popular and we have gone up by 210 per cent in terms of expressions of interest through UAC this year. There are a lot of people wanting to do the program and you have to be able to rank people to do a program. A certificate III gives you a UAI equivalent that is much lower than a certificate IV and many other certificates, so what that means is that, yes, you can apply with a certificate III but if you have a certificate III and something else, you are more likely to be ranked higher in terms of applicant approval.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: So it is hard to get in, basically.

Associate Professor COCKRELL: No, we have several students at the moment who have certificate IIIs. Many of them have chosen to do open foundation to supplement certificate III, because it gives them a higher level of science background and introduces them into tertiary study skills. Many of them have been out of education for years. I suppose you could call them mature entries.

CHAIR: Does this mean that in your selection criteria you are basically going on the UAI or equivalent; you are not, for instance, setting aside places specifically for dental therapists?

Associate Professor COCKRELL: We have got the ability to set aside places specifically, and that is certainly going through the faculty at the moment.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Demand has not warranted it yet?

Associate Professor COCKRELL: No. We were a new program. We really had no idea how many people were going to be interested in doing it.

CHAIR: Why do you not describe your program, rather than us starting at the other end? Some of us have more knowledge than others. Tell us about the course, enrolments, the make-up of the students, qualifications, the intake, and why you have who you have?

Associate Professor COCKRELL: We will play tag team, if that is all right? It is a three-year degree program. Each year comprises eight courses, which gives you the 240 credit units to make up the degree. There is the option for enthusiastic students to do a fourth year honours degree if they wish to. That is under development at the moment. There are three basic themes as the program goes through. The first year is considering oral health in the community, so it is looking at population health, it is looking at basic sciences to support and underpin their clinical knowledge, working in teams and communication.

The second year looks at oral health and the individual, and that is very much focusing on the skills that a practitioner would provide on a one-on-one basis and the third year has been structured around the national oral health plan, looking at those target groups who have consistently been identified as having poor oral health outcomes, such as indigenous Australians, children, adolescents, elderly, special needs patients and rural residents. We have a final year that will see students visiting different institutions and locations to be able to provide preventive oral health services to those groups of people who need them.

That is the three-year structure. In terms of the numbers of students, we currently have 51 students enrolled. We have lost one. We started with 52. We did a full survey of all the students at the beginning of the program to determine who they were, where they came from and that paper is in process at the moment. I noticed that one of your questions was how many were going to work in New South Wales when they graduate and the answer is, at this stage all of them. One of the significant issues that we found looking at that survey outcome was the number of people who want to work part time. We have three boys and 48 women and the vast majority of them want to work part time.

CHAIR: When did the course start?

Associate Professor COCKRELL: At the beginning of this year.

CHAIR: So all of them have just finished first year?

Associate Professor COCKRELL: Yes.

CHAIR: How many do you expect to have in your first year next year?

Associate Professor COCKRELL: We expect to take between 55 and 60. That will include some of those conversion students that I referred to earlier, who will be considered as a discrete group of applicants.

CHAIR: Would you expect the same gender breakdown?

Dr TAYLOR: Yes, roughly.

Associate Professor COCKRELL: I suspect so.

The Hon. ROBYN PARKER: Your intake numbers, given the reorganisation of that work force, are such that they are working part-time. Does your intake reflect that, or does your intake assume every student as having graduated as a full-time employee?

Associate Professor COCKRELL: It is difficult for us to assume anything. Things change all the time, and some want to be part time and some want to be full time. It is not something that we take into account in terms of accepting students for enrolment.

CHAIR: Do any of your students hope to become dentists eventually? Is there provision for conversion?

Associate Professor COCKRELL: In the survey we conducted, I am sure it was seven of them expressed an interest to go on and study dentistry. As you know, dentistry is a graduate program now. Whether those seven would actually get in to study dentistry, we do not know until the end of the degree program. But certainly 7 out of the 51 are interested. In terms of accelerated pathways, no,

that system does not exist at the moment, because you require a degree to enter into dentistry. However, I believe that having the skills and expertise that we will provide the students with will certainly be beneficial to them during their studies.

CHAIR: When you say all the students are intending to practise in proper New South Wales, does that mean you do not have any overseas students?

Dr TAYLOR: No, currently we do not. And this current cohort of students are all from New South Wales.

CHAIR: We have heard evidence, from right across the field of dentistry as well as from others, of growing numbers of overseas students. Is there a reason why that is the case? For example, does it have a lot to do with the gender breakdown, or is it the oral health area as such?

Dr TAYLOR: The program was not open to international students for our first intake, and it will be made open in subsequent years. In a lot of the health professions, one of the things that students need to be aware of when they study abroad is a recognition of qualifications. Our graduates will be able to register as dental hygienists, and that is not a member of the rural health team that a lot of other countries use. In a lot of countries where the cohort of international students come from, that is not a qualification that is at all familiar to them. So that may need a little bit of marketing from that perspective as well.

CHAIR: Therefore, at this stage the demand from overseas students is not there?

Dr TAYLOR: I do not think it will be very high at all.

Associate Professor COCKRELL: The other thing that is important to point out is that the university is a regional university and it is very committed to supporting the areas in which it is based. So that over two-thirds of the students are either from the coast, which is where we are based, or from Newcastle. That was very much the intention, and that is where they want to go back and work. I think one of the significant issues about oral health education being based in the city is that because you study in the city, you want to stay in the city, because that is where all your friends are, that is where your social life is based, and that is where your family is based. Whilst we do not have international students, I have to say we do not see that as being disadvantageous.

The Hon. ROBYN PARKER: So the Hunter and the Central Coast are going to do well out of this?

Dr TAYLOR: We hope so, yes.

CHAIR: But you do not select your students to come from those areas?

Dr TAYLOR: No, not at all.

CHAIR: The argument is that because they study there, their friends and their contacts are there, and they know the area, they are much more likely not to want to go to Sydney.

Associate Professor COCKRELL: The average age of our cohort is 27, which is probably a little different from most undergraduate programs. Many of them have children, most of them live locally, and they are certainly not going to "up sticks" and move the whole family to Sydney when there is a huge amount of work and a huge need on the coast.

The Hon. CHARLIE LYNN: Have many of them worked in the industry before?

Associate Professor COCKRELL: The vast majority.

The Hon. CHARLIE LYNN: So they are coming back—?

Dr TAYLOR: They have been chairside assistants, so they are in a way upskilling; they want a career path and they see this as a really good opportunity.

The Hon. ROBYN PARKER: You are confident that there will be sufficient places for them to fill once they graduate?

Associate Professor COCKRELL: Absolutely.

The Hon. ROBYN PARKER: Are those positions vacant at the moment, or will they be newly created positions?

Associate Professor COCKRELL: Probably a bit of both. There is a huge shortage, and there is an agency set up to recruit people to work in these positions from overseas, amongst other places. We do not believe that there will be any shortage. One thing that does concern us a little is that because the existing awards system does not recognise the level of skill that these people have, they would return to the public sector at a lower salary than when they left as chairside assistants.

We have two students at the moment both of whom have worked on the coast as dental nurses, both of whom are highly motivated, both of whom would love to go back and work in those public clinics, but they probably will not because, as I said, the salary is lower than the salary they were receiving when they left.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Would you say there is a big problem with the salary scales across public dentistry at all levels?

Associate Professor COCKRELL: Yes. I think that is one of the most significant matters. I am a member of the work force review group at the moment, which is looking at some of the issues relating to public sector dentistry, particularly from a work force perspective. There are two issues that come up time and again. The first is awards: the lack of recognition of progression, and also the lack of ability to have a structured career pathway. It is not like medicine, where you do this job, then this job, and then you get to this position. You tend to fall into a career rather than have a career that is in any way guided for you.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Do you mean your starting salary is your finishing salary? In other words, you work for 30 years, and then you retire, with the CPI increases in the meantime, is that right?

Associate Professor COCKRELL: You certainly work your way up the pathway, but only if you want to go into administration. This is one of the biggest frustrations. For example, a dentist who supports our dental students from Adelaide when they come on placement is an extremely able clinician but he cannot be recognised for career advancement for his clinical ability; he is only recognised for his administrative ability. If you want to advance and you want to get higher up the tree, you have to be an administrative person, which seems somewhat ironic.

CHAIR: The last part of the question asked you whether you knew whether your graduates would intend to work in the private or public sector. It sounds as though you are saying that most of them have come to you from the private sector anyway, because you mentioned two who would have difficulty going back to the public sector.

Associate Professor COCKRELL: I think there are more who have come from the public sector. That is just an anecdote I am relating to you to give you an example that those two people have given to me. It is probably about one-third from the public sector and two-thirds of those who have been in dentistry before from the private sector. We have students who have indicated to us that they would like to teach, which is wonderful. We also have students who want to do research, which again is wonderful because it means that we can start to generate a whole new type of dental academic who can support our program. So it was very rewarding for us to find that out.

CHAIR: On the whole, would you say that the public sector is likely to be the loser in terms of the extra skills and so on that your students are getting?

Associate Professor COCKRELL: In the absence of a review of the award, yes. But two years is a long time.

CHAIR: This probably comes back to where we started: about the needs the university identified in the dental and oral health professions that the university felt were not being met, and therefore the origins of the course. You have already said something about that, and about the commitment to meet some of the needs of rural and regional areas. Would you like to expand on that?

Dr TAYLOR: I am in a similar position to Deborah, in that the initial discussions happened before my employment at the university. In discussions with the pro vice-chancellor, certainly they identified a need within their offering of courses. But when they investigated what parts of oral health they could offer, when it was pointed out to them that there had never been a training program at the dental hygiene level in New South Wales, they were particularly interested in that when they could be shown the data that said there was a very strong need for that cohort of graduates.

One of your other questions asked about whether we were interested in training dentists. The university certainly looked at that when it was looking at what it wanted to offer, and in the end decided that it is really not financially viable to start a new dental school from basics.

CHAIR: Can you expand on that a little? We have had evidence about the difficulty of universities in terms of the Commonwealth funds available for training what are quite expensive professions, for example, with regard to the cost of placements.

Dr TAYLOR: It is my understanding that dentistry is the second most expensive course to run in the university sector; it falls just marginally behind veterinary science. If you have no existing teaching hospital against which to use the facilities that are there—which is the case in Newcastle and the Central Coast—first, you would have to build all those facilities, but you also need to have a very broadly trained range of specialist dentists to teach all the aspects of dentistry that you need to teach to a very high standard. Attracting people to work in the tertiary sector currently is not one of the easiest things we have found across Australia. To get high-quality dental academics is a struggle for many universities. So to start from a baseline of the two of us I think would be very difficult.

CHAIR: Deborah, you mentioned the way in which the university believes that oral health would fit into other areas in the whole spread of the health discipline, so oral health is now added to what other people are doing, including medicine I guess.

Associate Professor COCKRELL: One of the things that really appealed to both of us was that dentistry has always been sitting on the side somehow. I think that is part of the reason why we are in the mess we are in at the moment. There are so many emerging links and proven links between good general health and good oral health, and we should really be in the health basket. So we both saw that as being a great opportunity to make a difference at a level where students are actually learning about things: Rather than waiting until they are qualified and have had all their education, let us bring these right into the undergraduate curriculum.

In medicine, for example, we teach oral health content in years 1, 3 and 5. With regard to nutrition and dietetics, our students work together on a particular program, so there is coeducation and the sharing of knowledge and information during that program. We are in the process of evaluating that. Jane has evaluated some of the teaching we have done into pharmacy, and we have even managed to get assessment items into some exams, because students only learn what they are going to be assessed in. So that has been a great achievement.

CHAIR: Presumably, that is welcomed by the people running the other courses?

Associate Professor COCKRELL: Absolutely, yes.

CHAIR: They share the notion that oral health should be considered as part of general health?

Associate Professor COCKRELL: Really there is very little awareness. It is always: That is a dentist's problem. There are so many things that can be very easily and quickly picked up by anybody. The premise we are using when we are teaching the students in other areas of health is, "This is what a nice mouth looks like, and this is what a horrid mouth looks like" and "This is what

causes this, and this is how this relates to this," and then building on that so that people actually see oral health as being an important part of somebody's general health and wellbeing. We believe that through educating other health practitioners, we are more likely to have more of an impact than just by staying as a little group of independent practitioners on the side.

CHAIR: Have funding issues and student fees had much impact on either the level of enrolment or the kinds of students who are able to enrol in your course?

Associate Professor COCKRELL: We have HECS places available for all of our students. We were talking about this earlier. Funding is a bit of a circle for staff and infrastructure. It kind of goes round and round. More funding does not necessarily mean more places or more availability because, as Dr Taylor just mentioned, it is difficult to recruit academics. It is also incredibly expensive to set up the infrastructure required to teach more students. I do not believe the funding is negatived.

CHAIR: What about whether many of your students would like to study part-time, which the Hon. Robyn Parker raised earlier?

Associate Professor COCKRELL: There is certainly the ability for them to study part time if they want to. There are elements of our program that are delivered on-line so that they can maintain a full-time enrolment, but can also maintain part-time employment. That is particularly popular for the bulk of the female students we have with us at the moment. We also are encouraging them to work as oral health teams so that they take responsibility for how they work as a team and they work co-operatively, so that if someone cannot be there at eight o'clock someone else can be there at eight and they get to work as a team as students, thus mimicking what they are will be doing when they work in practice or clinics.

CHAIR: Where do they go for practical experience?

Dr TAYLOR: It is a combination. We are in the process building a 17-chair clinic on campus. We will do a proportion of the clinical experience there and we will send them on placements, as Associate Professor Cockrell explained, in the final year of their course to community clinics, nursing homes, Aboriginal health services and places like that.

The Hon. ROBYN PARKER: You talked about salaries in public dental health. One of the other issues that has been raised with us is the equipment and facilities available in public dentistry. You are building a brand new, you-beaut clinic. Is the reality going to be that those graduates go out into the public sector and find there is not the same standard and, therefore, choose to work in the private sector?

Associate Professor COCKRELL: I do not believe so. It may be you beaut, but it is not that you beaut—this is a university remember. I am surprised that you have had comments that the facilities on the coast and in the Hunter are anything other than good. All our students report back that in many cases the facilities are actually better than those they are now using.

Dr TAYLOR: For our graduates working as hygienists, there is not a lot of high-end high-tech equipment that is necessary to undertake those skills. For some dental graduates, yes, that may well be an issue. A lot of the higher end, technical innovations that are happening in the profession are not in the public sector, but I do not think that relates to hygiene as much.

CHAIR: Are there differences between your course and the course at the University of Sydney? Do any differences that exist create problems—you spoke about awards and different qualifications? Are there problems in aligning different courses?

Associate Professor COCKRELL: I do not believe so. Two weeks ago we co-hosted a conference in Sydney, which involved oral health educators from all over Australia. It was actually agreed that the diversity of offerings was a real advantage and that we should not look towards a more informal approach.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Will those not make it difficult to work out salary scales?

Dr TAYLOR: The graduates come out with a qualification that enables them to either register as a dental therapist or a dental hygienist, or both. All the courses must be accredited by the Australian Dental Council so that outcomes are consistent and so that all of them are trained to do the range of duties required under the registration Act.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Are there steps in the registration process that will allow salary steps?

Dr TAYLOR: Yes. And once you engage with an employer, be it a private or public employer, you then negotiate your way up the salary scale. But on graduation you have qualifications necessary to register and start in the work force in either of those two professions, or both if you have done a dual outcome program.

CHAIR: We have heard evidence suggesting that perhaps some of the people in the allied dental health area should be able to undertake more than they are permitted to undertake at the moment. Some of what you are talking about suggests that the whole profession is in a bit of flux. Perhaps that was a rigid idea: Here is the dentist, here is this person and so on.

Dr TAYLOR: Both of us would support that concept. Certainly previously there has been fixed ideas about what the dentist did, what a hygienists did and what a therapist did. To meet the demands in some of the areas of need within the profession we are changing the boundaries of what people are able to do and rethinking the profession practices, which is something that needs to happen.

Associate Professor COCKRELL: It is interesting if you look at some of John Spencer's work about the predicted oral health needs of the community. As time goes by it is polarising more and more; those patients who have incredibly high needs, whether they be maintaining existing care or new care, and those patients who have really very low needs. You may well have children who do not have any cavities at all. Many do not these days. The concept of having a team that has three groups of people, all of them can do different bits and pieces, largely defined historically perhaps has had its day now. Looking at how we can utilise preventive practitioners far more constructively would seem to be a sensible way forward. I do not believe anybody would take issue with that. The two common diseases we are talking about are almost entirely preventable, but we are not preventing them. We really are not making any effort to try to prevent them because we are so busy trying to deal with the acute problems that arise. To have a dedicated work force that is committed totally to preventive practice would seem to have huge merit.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: To put the Chair's question a bit more bluntly, are the people in the profession working up to their competence level or down to their station?

Associate Professor COCKRELL: It is very difficult to talk about a profession. There are people right the way through all the different extremes within any one profession.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: The people who are doing the schools, are they called dental nurses?

Associate Professor COCKRELL: No, they are called dental therapists.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: I understand that they also do fillings, but they are doing only simple fillings. What is a simple filling as opposed to a slightly more complicated filling?

Dr TAYLOR: They do fillings on the deciduous teeth.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: They are allowed to do deciduous teeth only?

Associate Professor COCKRELL: Yes.

Dr TAYLOR: And small fillings, your word for "simple", on the first molars.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: If you can do a filling on a deciduous tooth, presumably you can do a filling on a permanent tooth. The filling is similar, is it not?

Associate Professor COCKRELL: I guess it depends on whether you are looking at it from a mechanistic carpentry type perspective or whether you are looking at it from a decision-making type perspective. You could have someone who could see a hole and put a filling in it. That might be one way that that a group of people might be defined: Here is the treatment that needs doing, let's do the treatment. You would need to recognise that having a four-year degree would allow you to have much more information about the treatment planning side of things, working out the relative merits of the various treatment options to allow you to come up with the best overall treatment plan; hence our decision with our program to say that all of that stuff is affected fundamentally by somebody's oral health status. If somebody does not have a very well cared for mouth and has no idea how to maintain their oral health and has no idea of the potential impact of that on their general health there is not much point of putting in fillings.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: But if you assume that the person who is reaching upwards of their maximum level of competence to put in a filling normally does the preventive work, that is not a problem. But if you are saying that some huge strategy is needed when perhaps to fill the hole is what is needed and the preventive stuff is happening, and if you say that the main barrier to treatment is not the competency of the practitioner but the availability of the practitioner in the economic environment in which we find ourselves then one would have to say that, surely, this person who does the preventive and reaches up to do simple fillings might have to reach up a bit further and perhaps could be facilitated to do so.

Associate Professor COCKRELL: I would contend your point that prevention is being done—

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: That is economic, too, is it not?

Associate Professor COCKRELL: But if you have a group of people who want to work to the upper limit of their skills, they will work to the upper limit of their skills. What will happen is that oral health promotion and the preventive stuff that should lie underneath just will not happen. We can all see examples of how this occurs in public clinics at the moment whereby you have a toothache, you go in, and whether you are a child or an adult and no matter who does it, you have the acute treatment and you go home.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: And the expertise takes up all the time?

Associate Professor COCKRELL: If there is an adjacent tooth, it has the potential to become more acute in six months. That is not what you are there for: you are there for the one tooth. In six months you have the same cycle again. What that leads to invariably is tooth loss, and then you have the whole gamut of problems that is associated with tooth loss and replacing the teeth that are lost. Whereas if we had intervened earlier with the ability to provide that person with dietary counselling and smoking cessation counselling if required, and talk to that person about how the impact of their oral health will affect the general health then there is the possibility that you can turn around the mindset of that particular individual, and lead to a more positive outcome.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: But are you saying to me that because of the non-availability of people in an absolute sense, my question about competence and what people do is not the primary question rather than saying that it is not a valid question?

CHAIR: Another way of putting it might be to look at question No. 8, dealing with the public dental service and the extent to which the problem is an economic one.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: She could answer yes or no to my question first.

Associate Professor COCKRELL: Ask me again and I will answer yes or no.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: I asked you about relative competences and what people were doing, and you more or less said that because there is no time that prevention does not get done and therefore, whether the person is competent to do two things, to do more advanced things or if we say that treatment is more advanced than prevention, which is a common belief in the healing profession, then you are saying that the absolute shortage of people is biasing the thing towards more interventive treatment or more acute treatment and then, because that is the more important question, the kind of leads on to my other question about competence levels and living up to the competence or down to the station.

Associate Professor COCKRELL: There are some other points I would like to make that tie into this. We were funded by the NHMRC to look at what the community wants. At the end of the day these are the people who are on the receiving end of any care, whether it is a hygienist, a therapist or a dentist. These are the people who want to know about oral health. We went to four rural communities, which are described consistently as having really poor oral health outcomes as a group and who have very limited access to dental practitioners, whether a therapist, hygienist or dentist. Those people do not want dentists or therapists, they want information. They want people to talk to them and explain to them whether they should use fluoride toothpaste, what they should do, whether a particular type of drink is good for them and what type of toothbrush they should buy.

There is so little preventive information anywhere that that is what the community wants. They want people who can go out there. Someone put forward a notion of the oral health bus like the breast screening bus with someone who has information, someone who can educate local groups, someone who can go to school canteens, someone who can go to the Country Women's Association and someone who can educate and attempt to prevent two preventable diseases. We seem always to come back to this notion that we have to fix it, we have do fillings, we have to take things out, we have to fix them. But what we are not really doing is recognising the ability and intelligence of the community to prevent some of these problems and to take responsibility for their own health outcomes, let alone their oral health outcomes because there are so many shared factors.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: We need the molar patroller?

Associate Professor COCKRELL: Yes.

CHAIR: You are saying that a large part of the problem is not to do with the provision of funds to employ more dentists or allied health professionals, but really it is the mindset?

Associate Professor COCKRELL: I believe very strongly that it is. You could employ 500 dentists tomorrow, if you could find them. But if your philosophy is to deal with acute dental care and then those people will be taken up all day every day dealing with acute care because there will always be acute needs until we can go back to the beginning of the problem and say, "Let's take some responsibility for this. Let's look at our sugary soft drink input. Let's look at what we do with our diet."

CHAIR: For instance, if this committee were to say "What can we do to improve oral health?" the answer would not be more dentists but a change of philosophy and an increase in the kinds of people being trained?

Associate Professor COCKRELL: I believe so. I also believe very strongly that we have to be looking to form alliances with other health professionals, and even with schools. My 11- and 13-year-old daughters told me they do not do teeth in healthy Harold. That might be that they were just not paying attention when they were supposed to be. Having said that, I have it on authority that 20 minutes in the entire primary school health education is devoted to oral health. So there are lots of ways that we could be improving oral health outcomes by working much more co-operatively with other groups of people.

The Hon. IAN WEST: Have there been any cost effective studies in the preventative area?

Associate Professor COCKRELL: The problem with cost effectiveness and prevention is that it takes so long to see whether or not your outcome has been successful. But it is very difficult to get valid information. Professor Evens would have more expertise to say.

CHAIR: Should fluoride be added to bottled water and soft drinks? I know you were here when Mr Gentile was being questioned about some of these issues. What is your view about the fluoridation of water?

Associate Professor COCKRELL: I could maybe give you one or two of the statistics that the committee was looking for. In 1989 a study was done in Colorado that looked at the intake of bottled water in children. In a paediatric dental practise in 1989,which is a while ago now, it was 10 per cent, so one would assume that it has gone up.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Ten per cent of children drank bottled water or 10 per cent of the children's intake was bottled water?

Associate Professor COCKRELL: Ten per cent of children drank bottled water.

CHAIR: Presumably mostly to the exclusion of tap water?

Associate Professor COCKRELL: Yes, but it was interesting that the paper also showed that it analysed the fluoride content of bottled water and it ranged from 0.04 to 1.4 parts per million.

CHAIR: Accidentally?

Dr TAYLOR: No, fluoride is a naturally occurring mineral. It can occur in the water source.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: It may be in there already and they just do not know about it?

Associate Professor COCKRELL: It is interesting looking at the bottled water institute web site that it actually has ANZ standards and its own standards for the concentration of fluoride that you can actually have in bottled water. The maximum is considered by the institute to be 1.5 part per million, by ANZ food standards to be 2 parts per million which, of course, is higher than the therapeutic dose anyway. If you look at a bottle of water you would have no idea how much is in it.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: There is nothing stopping the institute putting it in now?

Associate Professor COCKRELL: It is probably in a lot of it. I suppose you could go around with a probe and measure the fluoride.

CHAIR: As far as you know have any measurements been done?

Associate Professor COCKRELL: Wendell was discussing this earlier and he is an authority in this area, so he could provide much more valid information than I can.

CHAIR: Do you have any comments on the submissions to this committee about some of the adverse effects of fluoridation?

Associate Professor COCKRELL: Having just spent this semester talking about fluoridation, between us I think we have covered every bit of literature. I think it is fair to say that all the reports come out saying that there is really no valid studies that say one way or the other whether it is or is not. There are definitely no proven studies that talk about skeletal fluoroses. The only time you see skeletal fluorosis is with extremely high concentrations of fluoride in very hot countries. There has been one case reported in Europe, apparently, and that was a toxic industrial accident of some sort, the details of which I do not know.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: It is almost non-existent?

Associate Professor COCKRELL: Yes. I think with many of these papers, and Jane has got all this written down, the review has come back as saying that all the literature that is put up against fluoride is flawed basically. There is as much for it as there is against, and the design of the studies has not got the scientific validity or reliability that allows you to make the conclusions that you make.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: You are talking about the anti-fluoride case, not the fluoride case?

Dr TAYLOR: There has been one systematic review done by the group at the University of York and its conclusions were basically that overall the research is not of a high quality whether it ends up being pro-fluoride or anti-fluoride. From what it could distil from looking at all of the papers that it reviewed, probably the predominant adverse outcome was fluorosis of the teeth but for other adverse medical effects it could find no evidence to support the fact that—

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: At what level does one get fluorosis of the teeth in parts per million or daily intake?

Associate Professor COCKRELL: It depends on which index you use—again Professor Evans is the expert—to assess fluorosis. At one part per million one study reports as high as 48 per cent fluorosis. However, it is pointed out that there are other reasons why people get opacity on their teeth, other than fluoride, and that fluorosis of aesthetic concern, as the way it described it, was at 12½ per cent when we had one part per million. For that reason Canada and Ireland and other countries have adjusted their recommended dose to between 0.6 and 0.8 parts per million, with an average of 0.7.

CHAIR: What is it in New South Wales?

Associate Professor COCKRELL: It is 1.0. Based on the evidence that we have read, you are looking at a therapeutic level going up and a fluorosis coming down, and you want to look for your optimal therapeutic value for your minimal side effect. It would seem to me from the literature that I have read that would be around about 0.8 parts per million.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Should fluoride be added to bottled water, soft drinks and other beverages?

Associate Professor COCKRELL: The comments about bottled water stand, that it may well be in bottled water that we drink anyway, depending on where that water comes from as to whether and how much fluoride is in there.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: If it were not, what level should it be at?

Associate Professor COCKRELL: My personal opinion, based on the literature I have read, would be 0.8 parts per million.

CHAIR: Would you support a voluntary or a compulsory addition of fluoride to bottled water?

Associate Professor COCKRELL: Compulsory.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Would you include soft drinks?

Associate Professor COCKRELL: The soft drink issue, I would like to say the fluoride thing can get very dominant. Whilst fluoride is a great measure, and water fluoridation is hugely effective in dealing with social issues and giving a greater equitable outcome, a greater significance in today's society is sucrose in soft drink consumption.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: You would like the soft drinks removed rather than put fluoride in them?

Dr TAYLOR: The acidity of the soft drinks on dental erosion.

Associate Professor COCKRELL: The cola drinks have phosphoric acid in them.

CHAIR: Would you ban soft drinks?

Associate Professor COCKRELL: I would certainly put a health warning on them.

CHAIR: On all of them, regardless of whether they are cola or the sweetened fruit drinks?

Associate Professor COCKRELL: The black cola drinks are supposed to be the worst because of the concentration of phosphoric acid, especially if you have a twist of lime in it because you have got a bit of citric acid in it as well. All of the soft drinks have the same effect in terms of erosion of enamel, and sugar consumption. You know all you have got to do is walk into a well-known supermarket at the weekend and look at the amount of snack sugary food that goes into a trolley. So if you actually take away the responsibility—and the sugary things impact the diabetes, the obesity and all of those other health issues too—so putting fluoride into them is really saying "Well, we know it is not very good for you but you can have it anyway now because we have put a magic substance in it."

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Like a filter on a cigarette?

Associate Professor COCKRELL: Exactly.

CHAIR: Would you support an educative approach to these public health issues with health warnings and a more heavy handed compulsory approach? For instance, would you put a maximum level of sugar on certain things or would you ban certain things?

Associate Professor COCKRELL: I do not think you would even need to be that heavy handed. When you talk to people about the risks and you explain it in very simple language, whether it be on a group or individual basis, you may not change everybody's behaviour—I am not naïve enough to think that you would—but you will affect the behaviour of a certain proportion of the population. At the moment, those people are not getting the simple messages to which they are entitled to allow them to make that decision as to whether they want to change their behaviour.

CHAIR: It really comes back to the staffing, and even more, the philosophy of public dental services, and reaching out to communities and children?

Associate Professor COCKRELL: I believe so, and there are lots of analogies in general health where we adopted a preventative approach to that particular health problem. For example had we continued to graduate more and more plastic surgeons in relation to melanoma instead of the health promotion aspect, it is an interesting thought.

CHAIR: We know that that campaign has worked with families and children?

Associate Professor COCKRELL: Yes. When was the last time you saw an oral health message in the media?

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: When we asked for voluntary codes in the tobacco industry look how far we got in 50 years. If we ask for voluntary codes for soft drink manufacturers I ask the same question.

CHAIR: But these witnesses are suggesting a public education campaign.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: That is what the British medical association said about tobacco in 1960, dare I say.

CHAIR: Would you provide the committee with details of the Colorado study and other things like that that we have not got access to. There may be some other more technical questions that might arise, could we contact you afterwards?

Associate Professor COCKRELL: We would be delighted to help.

(The witnesses withdrew)

ROBIN WENDELL EVANS, Associate Professor, Head of Discipline, Community Oral Health and Epidemiology, University of Sydney, affirmed and examined:

CHAIR: In what capacity are you appearing before the Committee?

Associate Professor EVANS: I am not certain under which capacity I was invited so I do not know whether I am here as an individual or as a representative of the university. Certainly I have not had anything cleared by the university for what I am to say, but I am assuming I am here because I am a member of the faculty of dentistry.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: That is an expert witness, is it not?

Associate Professor EVANS: I prefer to be here as an expert witness.

CHAIR: You are technically here speaking on behalf of the university?

Associate Professor EVANS: No, I am not speaking on behalf of the university, I am speaking as an expert witness.

CHAIR: You are going to give us your presentation and then we will ask you some of these questions, or you may answer a lot of our questions as we go.

Associate Professor EVANS: The first part of the presentation is what I want to say as part of an opening statement and the other parts are just in answer to some of the questions. You have given me 16 questions and I do not know whether you are going to ask me them all.

CHAIR: Why don't we hand over to you for a while and try not to interrupt. In your opening statement and during the presentation we can note the questions you have answered and perhaps we can come to anything that we are puzzled by.

Associate Professor EVANS: That sounds a good idea. Half of the questions you asked me seem to be related to the area of fluoride, which is my area of expertise. The other half seem to be related to factors relating to the faculty and its arrangements. I am not sure why you have addressed them to me rather than to the Dean or to somebody else. I can answer them.

CHAIR: I think it is partly because we did speak to a representative of the faculty earlier but since then things have been said to us by other witnesses and in submissions, so because you were coming we thought we may as well give these questions to you. But if you wish to take them on notice or you think it is not appropriate for you to answer them please say so and we will take them up elsewhere.

Associate Professor EVANS: No, they are not inappropriate.

CHAIR: I think we have learned a lot more as the inquiry has gone on, which often happens, and we wished we had asked some of these questions earlier but we did not.

Associate Professor EVANS: What I wanted to say as my opening statement is to just refer to some oral health trends that identify why this issue is before the Legislative Council; it is because dentistry is in a rather unusual state and what we have to cope with. During the next 20 years there will be two important things happen: firstly, there will be a dramatic decline in endentulism—that means people with no teeth will continue. The first figure shows that. That shows that in 1979, which is the top line of that graph, for example, if you take people aged 65 to 74, you will see that approximately 60 per cent of them had no teeth in 1979. Due entirely to water fluoridation and the use of fluoridated toothpaste we can see now that the people with no teeth in that age group is about 40 per cent. By 2020 that would be down to 10 per cent.

So the impact of that is that the number of teeth that are not being extracted now, and because they are still in people's mouths of my generation, is going to rise dramatically. The next diagram

shows that people in the age group of 35 to 44 at the moment in 1989, which is where the first arrow points, shows that because of fluoridation the mean number of decayed and filled teeth, which is the load that people carry, will drop from 15 per person to about 10.

The next graph shows that the numbers of teeth will increase in these age groups. The first arrow shows that in the age group 45 to 54, the number of permanent teeth in that age group will increase from 50 million to 80 million. The second arrow shows that in 1999 as at 1999 the number of teeth in the age group of 59 to 64 will increase from 20 million to more than 60 million. These are the most dramatic things that are happening, and suddenly people will be aware of the effects, just like the tsunami hitting Southeast Asia; suddenly the people in dentists' waiting rooms will have a totally different profile. But the number of teeth requiring treatment for caries will halve in the age groups below 35 years but double in the age groups above 55 years.

So because of fluoridation the decay requiring treatment will go from 6.5 million down to 3.5 million. But on the next graph it shows that for the age group of 55 to 64—these are the baby boomers—that is going to go from 3 million to 7 million. These are really dramatic findings and show why there is a desperate need to address the looming problem of the lack of dental services and lack of dental staff to deal with these problems. That is what I wanted to say by way of introduction, to introduce the need for this review. Further down your asked me to address the Cochrane standards. Do you want me to move on to that now?

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: The health department gave a very good exposition of the fact that the Cochrane standards were not appropriate for this sort of preventive public health strategy. Would you basically give the same evidence as that?

Associate Professor EVANS: I was basically going to say that in a more simple way I think. That is basically what I have said, but I want to point out why.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Far be it from me to stop you saying it your way.

CHAIR: You decide how you will present it and then we will come back and see what we still need to talk about.

Associate Professor EVANS: So the levels of evidence were: Level A—this is the highest quality; then there is Level B, which is the evidence of what is referred to as moderate quality; and then Level C, which is the lowest level of evidence, according to the Cochrane Collaboration. Perhaps I will come back to that. What I want to talk about now is the difficulty of meeting the standards of A. it is important to meet Level A standards when the disease in question is rare or life-threatening or impacts seriously on health, and for which the effect of the related treatment or preventive method is being tested. However, dental caries, which is tooth decay, is very common; it is almost never life-threatening and is easy to detect. Water fluoridation impacts dramatically on disease incidence and prevalence.

In these circumstances it is not warranted to expend the enormous financial resources nor to commit the survey subjects to the level of disruption that would otherwise be necessary to meet Level A standards of evidence. Evidence from the best studies conducted according to Level C is entirely sufficient for the purpose of demonstrating the clear-cut effectiveness of water fluoridation. It is most unfortunate that the Cochrane Collaboration has seen fit to label, in a blanket manner, Level C evidence as the lowest quality of evidence. Further, the Cochrane Collaboration has a focus on the disease incidence rate as the main outcome measure. With regard to dental caries, or tooth decay, the outcome measure of great importance is the reduction in the DMFT index, which measures the load of dental disease that we all carry.

That is a highly refined measure in comparison with the crude instance rates that the Cochrane collaboration refers to. I want to illustrate that. For example, as seen in the next slide showing the effect of water fluoridation in Australia, the decayed, missing and filled teeth [DMFT] index, that is, the load of tooth decay carried by individuals, is reduced by two-thirds—this is because of water fluoridation—yet the incidence of people experiencing any decay has only been decreased by 20 per cent. According to the Cochrane standards that is a weak outcome.

Here we see 1954, which shows the distribution of tooth decay in 12-year-old Australian children. You can see that almost zero children had no decayed or filled teeth. The average was about nine decayed and filled teeth each in 1954, and there were people who had 21 decayed, missing or filled teeth at that age. Since water fluoridation has been introduced you see that in 1982 the mean number of decayed teeth that children were carrying had dropped to about three. There has been a dramatic fall, yet you can see that the prevalence of people who have some decay has only decreased by about 20 per cent. So, only 20 per cent of people had no decay at that time. According to the Cochrane collaboration, it is a weak outcome if only 20 per cent of people benefited. The Cochrane collaboration does not show how the load of tooth decay has dropped from 10 to three per child.

Since then, the effect of toothpaste has brought the DMFT of the Australian child aged 10 to less than one; and approximately 80 per cent of 12-year-olds have no decay, but that is not reflected in these earlier studies. If we go back to why that is the case, level A requires that we start with children and follow them on and on and on, whereas level C is what most studies do, it follows a cross-section.

I want to now illustrate the most recent effect of water fluoridation in Australia, which was the extension of water fluoridation from Sydney into the Blue Mountains region. Water fluoridation was only extended to the Blue Mountains in 1993. I and my department conducted the follow-up study in 2003, 10 years later. It was a cross-sectional study. In 1993 the baseline conducted was looking at all the children in school in the Blue Mountains, which was not fluoridated, and samples of children at school in Hawkesbury, which was fluoridated in 1969 when Sydney was fluoridated so we could compared the fluoridated Hawkesbury area with the non-fluoridated area. That was a cross-sectional study. We are not looking at the children who were fluoridated in 1993 and looking at them now at age 16 and 20; we are looking at all the children then and we are now looking at all the children at school at this time. I want to show you the dramatic results that we got there.

The Hon. IAN WEST: Sorry, all the children in the Blue Mountains and a sample in—

Associate Professor EVANS: It was a sample in both cases. These were representative, random samples of children in both areas. So, this was the situation in the Blue Mountains in 1993, which is on the top line, and in the Hawkesbury area. The value there of 1.91 mean DMFT means that the primary teeth—that children aged six to eight had, on average, nearly two decayed, missing and filled teeth, compared with children in the fluoridated Hawkesbury, which was 1.12. The little "3" above the 1.91 indicates that there was 71 per cent more decay in the Blue Mountains, compared with Hawkesbury, which was fluoridated in 1969.

The Hon. IAN WEST: What was the sample?

Associate Professor EVANS: The sample was 400, nearly 500, children in both groups. The survey that we did in 2003 is on the next line down and you can see that in both areas to the mean number of decayed, missing and filled teeth is 0.83 and 0.85. So, it is almost equivalent in both areas and now children in the Blue Mountains have the same level of oral health as children who continue to have the benefits in Hawkesbury. The note there at the bottom indicates that this is 57 per cent less decay than when they started out 10 years previously. These are the dramatic results you get with water fluoridation and it is shown by looking at the DMFT index, not just looking at the percentage of children who have decay.

That is for the primary teeth. If we look at the data now for the permanent teeth of children you can see that in the Blue Mountains before fluoridation the average 9- to 11-year-old had 0.74 verses 0.49. That was 51 per cent more decay that the children were carrying, compared with those in Hawkesbury. Now, 10 years later, the average child has one-third of a tooth that is decayed, that is, 65 per cent less than they started off at. This is showing the truly dramatic results that are there for all to see captured by using the DFMT index. Of course, now we know—it does not show here—that approximately 80 per cent of the children have no decay at all at age 12. This data is new. I understand that it is in the transcript now, but I will be wanting to publish this. Do I have to get Hansard's permission to do that?

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: No.

Associate Professor EVANS: Okay. What I wanted to show here was that the focus has always been on children but does it affect adults. The effect on children is well known because it is easy to go to schools and check children. Here is data from Colorado Springs. Colorado Springs is where the first investigation of the effect of fluoride was commenced in 1901. It took until 1931 to discover why it was like this, but in the nearby town of Boulder in Colorado there are the DMFT levels for the people there. In 1931 it was discovered why the people in Colorado Springs had such good dental health, and that was because the water supply contained a 1.2 parts per million of fluoride, whereas in Boulder it was close to zero.

What you are seeing there is the number of missing teeth per person. For example, in the age group of 40 to 44 the average Boulderite had 15 missing teeth, compared with about three for those in Colorado Springs. This is just illustrating the dramatic effect that is in adults and children. So long as we have teeth we are at risk to have decay and so long as fluoride is on the water we get a reduction in it. It is not just something for children; it is for adults and children. Further to illustrate the effect in adults, the declining level of having no teeth is due entirely to the benefits of water fluoridation plus the addition that comes from having fluoridated toothpaste. Over and above the benefit you get from water fluoridation, there is another added 20 per cent reduction due to fluoridated toothpaste. For every increasing the number of times you brush your teeth per day you get another 8 per cent benefit, and that is also shown in the Cochrane report.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Is this the 1931 study?

Associate Professor EVANS: Yes, this is about that.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: So this is an old study. This comes out of an old book, by the look of it?

Associate Professor EVANS: Yes, it does.

CHAIR: Did you say that with fluoridated toothpaste it is 20 per cent on top of fluoridated water?

Associate Professor EVANS: Yes, it is.

CHAIR: Getting back to our questions and to Mr Gentile, if someone drinks nothing but bottled water but they use fluoridated toothpaste, then they are getting some protection but they have lost five-sixths of their protection, so to speak?

Associate Professor EVANS: When you were speaking to Mr Gentile you focused always on bottled water and I think he thought you meant water. I understood he represented the whole beverage industry. Where does the water come from? If it comes from Sydney, it contains fluoride at one part per million. So, they are not taking fluoride out of the water. Where are they getting the water from? Fluoride is a natural element and the thirteenth most abundant in the earth's crust. It is in rocks and soil at 800 parts per million, so all water contains fluoride. If it is rainwater, then it contains less fluoride. With most reticulated water systems that rely on lakes and rivers there is little fluoride—that is why it has to be adjusted upwards—but if it is well water often it has quite high levels of fluoride. If they are using mineral water it will have naturally occurring fluoride.

CHAIR: If their water is coming from the ordinary Sydney water supply, for instance, it is likely to have whatever percentage—

Associate Professor EVANS: Yes, as does beer. Only in Brisbane would there be low levels of fluoride in bottled water that children drink.

CHAIR: They would not be taking it out?

Associate Professor EVANS: No. Of course not.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Would they filter it, though, to dechlorinate it and would that dechlorination not take out the fluoride as well?

Associate Professor EVANS: I am not aware that they do.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: These filters take it out, do they not?

Associate Professor EVANS: Some of the filters to, but do they filter the water in that process? I wish you had asked those questions.

CHAIR: I wish we had had you as a witness before Mr Gentile. We could perhaps have asked more informed questions.

Associate Professor EVANS: As far as I know it is still there. Some of the filters to remove fluoride but they have to be changed. They soon become clogged and are not effective. I think that some of them are not very effective at all.

The Hon. IAN WEST: Is there a sample on this?

Associate Professor EVANS: I do not know the sample size, but I know that it is considerable. We had had the Australian data that John Spencer shows, where there are hundreds of thousands of people. Now people have so few teeth missing. This means the problem is that the baby-boomer generation of elderly people will be moving into retirement with mouths full of teeth that are heavily restored and will require a lifetime of expensive maintenance. That is the problem looming. On the other hand, we now know that tooth decay and gum disease are entirely preventable and that is where we come to your other questions.

This is just a starter on the effectiveness of fluoride. It has been most unfortunate that the York report has made it appear that water fluoridation is not effective and that the evidence is very weak. We would argue that they are using the wrong index and that the reduction in dental caries is highly dramatic. Equally dramatic is the improvement in oral health. The evidence is entirely robust, and completely overwhelming and dramatic. It is so obvious, and the costs related to a reduction in dental services to children is so clear.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Would you say that York has got it wrong—to put not too fine a point on it?

Associate Professor EVANS: This is the first time it has been analysed in that way. It has become clear that it may be appropriate to use that method for other diseases but certainly not for dental caries. I think it was inappropriate to apply that methodology to demonstrate or to affirm the quality of the evidence, which they have said is poor.

CHAIR: Why is there such an apparent lack of studies of the evidence?

Associate Professor EVANS: To do what they say, to do the Blue Mountains study, we would have to organise to take the children to a place—where they did not know whether they came from the Hawkesbury or not—and somehow prevent them from telling the people who are examining them where they come from. It is an enormous problem actually going to schools to get their co-operation to do it. This has been done in the United Kingdom, where they have bussed children to a third location and told them not to wear their school uniforms and not to tell anybody what they had done. That has been done and, clearly, the results are just the same. The question is that bias can creep into things. Of course, bias can creep into things, but when the results are so clear-cut and there is no question that this has occurred, it is not so important. But if you're working at a very fine line of your diagnosis and have to be absolutely sure, then of course the extra robustness of requiring level A evidence is necessary. But blind Freddie can see: you just get children to open their mouth. We are only measuring decay at a very gross level: can you see a hole in the tooth. We are not using X-rays. It is blatantly obvious whether people have holes in their teeth or fillings that are replacing holes.

CHAIR: One of the arguments of those opposed to fluoridation is focused on the studies and so on. Although to you the answer may seem obvious it is not obvious to some of the people involved in the argument. But you are saying that for the kind of measurement we want to carry out the grosser

test is adequate, and that high standard of evidence is applicable perhaps to a new wonder drug that is to treat something that people are about to die of but not to a population-wide thing like fluoridation?

Associate Professor EVANS: It is only gross in one sense. In the York report they just asked people whether they had decay or not, whereas the DMFT measures the quantity of decay carried by people. It is not the case that fluoridation will eliminate all decay; it just reduces the bulk of it to the extent that it is not tooth threatening any more as it previously was.

CHAIR: As you would have heard from earlier evidence, for some people there are the philosophical issues, of voluntary versus compulsory and so on. Can you give us a rough history of fluoride in toothpaste? Does all toothpaste have fluoride? Who made the decision to put it in and when? Have the people worried about the fluoride in water looked at the toothpaste issue?

Associate Professor EVANS: The people who added fluoride to toothpaste were the researchers in United States. It was originally thought that the effect of fluoride came from incorporation of fluoride into tooth enamel as teeth are developing. That is definitely true and the more fluoride you are exposed to the more is in the tooth enamel. So people naturally thought that the protective effect came from having fluoride incorporated into the tooth enamel during tooth development. People then looked to see whether the quantity of fluoride in tooth enamel correlates with the amount of to the decay. It clearly did not. Then people focused on the topical effect of the fluoride in the water as well, and it was shown that the effect in toothpaste is entirely a topical effect, as with fluoride rinses.

We now understand that the greater effect of the fluoridated water comes from the topical effect, being there every day. In cases where water fluoridation has been stopped and people had their teeth develop up to age six under the full benefit until fluoridation was stopped then their teeth became at risk to decay again just as much as previously. Six years later you could see that all the children had decay in their teeth again so another referendum was held and fluoridation was commenced. After the 1970s most toothpaste contained fluoride. Today 80 to 90 per cent of toothpaste marketed by the main companies is fluoridated. Really it was the manufacturers of toothpaste who took the lead in putting it in so that they could claim it had the great effect that it does have.

CHAIR: In other words they saw it as a marketing plus?

Associate Professor EVANS: Sure. That is some of the best research. Then it can be a totally double-blind controlled study. Children and adults also were given toothpaste and they did not know whether it was fluoridated or not and people then examined their teeth. They are the most robust studies showing the effect of toothpaste. You cannot do double-blind studies of fluoridated water because people know it is in the water but you can with the toothpaste, and that has been done. People, especially dentists, also used to treat their children with fluoride tablets but that just led to their getting too much fluoride and they had a little bit of fluorosis and it did not do that much for the prevention of tooth decay. Fluoride tablets are not really recommended now because the people who need it do not get it—it depends on home administration—and the people who do get it do not need it. They also then get more of the associated fluorosis.

CHAIR: That covers the three major areas. It seems that the bottled water simply reflects the local water supply.

Associate Professor EVANS: As far as I know it does. As Dr Cockrell pointed out, some of it is very acidic and some of it contains lots of sugar.

CHAIR: This is soft drinks more broadly rather than bottled water?

Associate Professor EVANS: Yes. At a conference I attended in Adelaide it was reported that there is data to show that in the last 10 years the exposure to fluoride has decreased in the order of 15 per cent amongst children. They are saying that it may be due to the increased consumption of not just bottled water per se but the consumption of soft drinks. When I was a child my fluid intake came from milk until I was aged 10. Having soft drink and fizzy drink was a special treat. Now it seems that it is just what people drink.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: The answer to prepared question 7 is obviously yes. We have covered 8. We were challenged with the idea that there had never been a study of how much fluoride kids actually get. I gather that the NH and MRC suggested doing this and decided it was too expensive or it was not done. Is that right? Is that a bad thing?

Associate Professor EVANS: I think this question has been put up by opponents of fluoridation.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Oh yes, it certainly has.

Associate Professor EVANS: The simple answer is that people's intake of fluoride comes from their food and from the water. If you have fluoridated water half of your daily fluoride comes from water and half would come from food and a tiny little amount from toothpaste that is swallowed. But if there is negligible fluoride in the water then there is not enough fluoride anywhere to give you enough fluoride to prevent dental caries. So really the marker of whether you have enough fluoride is whether there is fluoride in the water. There is no need to measure total doses of fluoride.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: They are saying that the thing has a low therapeutic index. My understanding is that the therapeutic index is the gap between the therapeutic dose and the toxic dose. Is that correct?

Associate Professor EVANS: I am not so sure either.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Interestingly, the answer from the health department was a definition of therapeutic goods, which it seemed to me to be slightly off at a tangent. My memory of this matter is that the therapeutic index indicates how safe something is: how much you have to have to overdose, the difference between the therapeutic dose and the high dose. The people opposed to fluoride say it depends how much water you drink, how much you use, and therefore we might be getting doses that would give us skeletal or dental fluorosis because though we are putting it in the water at *x* concentration we are not measuring what the customer gets.

Associate Professor EVANS: The point is that as you increase the fluoride level in the water from zero upwards, once you get to one part per million or approximately that amount the beneficial effect in reducing decay does not increase any further. If you have double or triple the amount of fluoride you do not get any further benefit against tooth decay. The amazing thing is that as this was being discovered in the 1930s it was then demonstrated that above one part per million you start to see the earlier signs of dental fluorosis. That is why they hit on the optimal concentration. At one part per million you get the maximum protection against caries. But they were looking for the lowest dose that would not give you signs of dental fluorosis. It corresponded to one part per million. But as you increase the level of fluoride in the water above one part per million that is when you get dental fluorosis.

At Colorado Springs they had higher levels of fluoride in the water, and they were having signs of fluorosis. It was the guy who first investigated that—he took 30 years to find out what it was—that found that the fluoride in the water was causing the low levels of dental caries but the high levels of fluorosis. The therapeutic level for fluoride in the water is about one part per million, or more if you live in a colder climate. The amount you take is related to the ambient temperature. In Canada they would have 1.2 parts per million of fluoride in the water and in tropical countries such as Hong Kong it is 0.5.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Because you drink twice as much water.

Associate Professor EVANS: Yes, so you are exposed to the topical effect of the water. So there is every good reason not to have higher than one part per million. But to get skeletal fluorosis—it is observed in remote parts of China, India and Africa where the fluoride concentration naturally occurring in the water is more than eight parts per million and people have been exposed to that level over a lifetime. It just does not occur in industrial societies where fluoride in the water is at one part

per million. If you go to Sydney hospitals you will see no cases of skeletal fluorosis. It just does not exist.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: The case that was given to us with some emotion at Port Macquarie concerned a tooth with a nasty brown mark in it.

Associate Professor EVANS: That would be dental fluorosis, not skeletal fluorosis.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Yes. But this anti-fluoride person was saying that this was because the total dose of fluoride was not being measured in the Australian population. You have talked about levels in the water; they were talking about levels in people. They would say that is the bottom line of the processes. This person was a victim of dental fluorosis because of the lack of measurement of fluoride levels in the Australian population.

Associate Professor EVANS: That is simply not true. There is nowhere in Australia that water levels contain that much fluoride naturally occurring. The only other way people would get that amount of fluoride would be if, as a child, they were swallowing toothpaste, which has quite a high concentration. A tube of toothpaste is fluoridated at 1,000 parts per million, and we do hear that children eat toothpaste. I have been to conferences where people say that they spread out the fluoride gel in the deep-freeze and give it to their children as confectionery. That is the sort of thing that happens.

CHAIR: What sort of variation is there in naturally occurring fluoride in New South Wales water?

Associate Professor EVANS: It would be about 0.1 to 0.2 parts per million naturally occurring. It just depends on the geology of the area in which you live. If your water comes from a deep well it will have more fluoride but if it is just rainwater and lake water the level will be really negligible.

CHAIR: So the fears that we are talking about do not correctly stem from natural variations in water across the State?

Associate Professor EVANS: No, it is totally safe.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: So you are telling me that it need not be measured because there is no possibility of its being at a dangerous level?

Associate Professor EVANS: That is right. It does not exist. We would all know about it if it existed.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: We would know about it because of the high incidence of dental fluorosis?

Associate Professor EVANS: Yes. That would be clear. If it was the level they are saying—I just do not know that that was positively diagnosed as being fluorosis.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: What would you say is the incidence of dental fluorosis or the prevalence of dental fluorosis in Australia?

Associate Professor EVANS: In fluoridated areas you expect that about 10 to 15 per cent of the children would have the mildest form of fluorosis. That is at a level that it takes an expert to diagnose.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: And a visual monitoring index?

Associate Professor EVANS: Yes. In addition, children feed themselves fluoridated toothpaste, and parents give their children fluoride rinses, which they should not, they have fluoride tablets, and if children eat fluoride, there are some children who do have levels of fluorosis that are obvious to a layperson but they did not get that from the water.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: We have done question 10, question 11, 12 and to question 13 you presumable would say that the answer is none.

Associate Professor EVANS: That is true. There are no countries that have done that.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: The other point that the anti-fluoridist made was that research has been done on sodium fluoride, sodium fluoride silicon and sodium tetra fluoride were other fluoride compounds or ionic mixtures which were different in their properties, is that so or not so? I would have thought they exist as ions, do they not?

Associate Professor EVANS: They all exist as ions and when they are dissolved in water it is a fluoride ion.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: And the ions of the other substances are not toxic?

Associate Professor EVANS: No. All this research has been done in great detail in the United States. The Centers of Disease Control at Atlanta do all this research. It is not done in Australia because there is no point in doing it.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: There is no point in repeating it, that is reasonable. Fluoride silicate, the silicate ion itself is not harmful, is it?

Associate Professor EVANS: No.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: I do not know what tetra fluoride means.

Associate Professor EVANS: It is sodium fluor-fluoride.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: That seems an odd one to me.

Associate Professor EVANS: Yes, I agree.

CHAIR: We have talked about the risk of overdose.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: The iodine and overdose.

Associate Professor EVANS: That is just a claim that has no substance whatever. We all evolved in the presence of fluoride. It is everywhere; you cannot escape from it. It is a naturally occurring substance. It is in the seawater at 1.2 parts per million.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: It is not involved in cretinism.

Associate Professor EVANS: It is lacking in areas such as Nepal where there is lack of iodine, so that is why there is fluoridated iodised salt.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: You should have one part per million in bottled water and drink no soft drink, is that the answer to the last question?

Associate Professor EVANS: I am not going to say that we should not have soft drink but I think it is in the water because the water must come from town supply.

CHAIR: There is nothing about the processes involved that would dilute or limit the fluoride.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: It would be filtered, which would take the chlorine and fluoride out, surely.

CHAIR: Do home filters take the fluoride out?

Associate Professor EVANS: Some do and some do not.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: The ones that have carbon filters in would.

Associate Professor EVANS: Some are clogged up and we found in the study in the Blue Mountains that some of the children who were still on tank water had half the fluorosis and three times the amount of decay, so that was the telling item there.

CHAIR: We thought the best way of handling this might be that in the material we send to Mr Gentile to ask additional questions about the fact that fluoride occurs in the water and about filtering.

Associate Professor EVANS: You need to know whether they are removing it. I am sure they are not.

CHAIR: I am very conscious that you were on time and we were very late. If you have prepared answers for the first six questions you could table them.

Associate Professor EVANS: I have some written material but mostly I was going to go through them.

CHAIR: Do you want to start at the beginning?

Associate Professor EVANS: The current enrolment in the courses: The bachelor of dentistry course, which is a four-year full-time course for training dentists, has an intake of 80 per year. That recently went up from 40 per year to 80 per year. When Westmead was built, it was built for 120 students per year and there has been an erosion of that and it got down to 40 or 45 but for the last two years the intake has been 80. The three-year bachelor of oral health degree program, which is the new program this year, there were 15 students and from next year there will be 20 students from 2006. Across the four years of the program there are 46 full paying international students.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Out of how many?

CHAIR: Out of 240 roughly?

Associate Professor EVANS: Something like that. I can tell you that for next year, 2006, the intake of 80, there will be 45 HECS places, so the other 35 will be made up of either 20 or 15 international full fee paying students and the other 15 or 20 are local full fee paying students or vice-versa. I am not sure.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: So you are only getting 60, assuming they all graduate, likely to stay in Australia?

Associate Professor EVANS: Yes.

CHAIR: Would you expect the 20 international ones to go back home to practise?

Associate Professor EVANS: Mostly they are from Canada and the United States and we expect that they will go back.

CHAIR: And has Canada and the United States been the source for some time?

Associate Professor EVANS: Yes, for this new course, which takes on graduate students. The new course has been operating since 2000 so last year were the first graduates.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: That is bad, is it not?

Associate Professor EVANS: But there were not so many then because we could not fill the classes because it was fee paying but now it is a full intake.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Will this mean that we can afford more dental academics?

Associate Professor EVANS: I was going to come to that.

CHAIR: We will see whether the level of enrolment is affected by funding issues or student fees.

Associate Professor EVANS: What I have said is that enrolment per se is not affected by funding issues or by student fees, but recent increase in the intake from 40 to 80 has placed severe pressure on the faculty. There is insufficient academic staff, insufficient education infrastructure, and it is difficult to attract new academic staff. But the decision to push up the intake has not affected student fees. Students are now willing to pay that amount to get in.

CHAIR: Why was the intake put up?

Associate Professor EVANS: Because there was a recognition that it should not have been dropped down and because of this data coming out that has been there for all to see, but it has just been ignored.

CHAIR: In terms of work force shortages.

Associate Professor EVANS: Work force shortages, surely, and just the funding of dental education.

CHAIR: It seems therefore slightly contradictory, having reacted to Australian or New South Wales data, the university is now filling a quarter of the places with American or Canadian students?

Associate Professor EVANS: A quarter of the places, yes.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Do you think that the national oral health strategy may have contributed to this?

Associate Professor EVANS: Contributed to what?

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: To the rise in the number of students?

Associate Professor EVANS: It is just a decision that was made really. The faculty said, "We are going to increase" and it was the unilateral decision.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: But how much of that increase was foreign fee payers? A fair bit, by the look of it.

Associate Professor EVANS: Yes, and to allow for local full fee paying students.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: So the number of HECS places has not gone up very much.

Associate Professor EVANS: No.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Is it true that more HECS places were offered and not accepted by the university?

Associate Professor EVANS: I cannot comment on that.

CHAIR: What are the fees?

Associate Professor EVANS: I am not sure.

CHAIR: Perhaps you could take that on notice.

Associate Professor EVANS: It is like $20,000 or more.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: We could ask Professor Schwarz.

Associate Professor EVANS: My post-graduate students, who are doing masters degrees in community oral health, pay $22,500 per year.

CHAIR: You have partly answered our second question in terms of international students. Do you have any data or anecdotal evidence about whether many will work in the public sector?

Associate Professor EVANS: No, we do not know that. We do know that some of the class like to start there because they will be exposed to new experiences but they leave after one year or partly through the first year if they do not go into general practice straightaway. But there are a few who come who do want to work in the hospitals, and they are then rotated to the community clinics.

CHAIR: The ones who choose that regard it as an internship where they learn on-the-job?

Associate Professor EVANS: That is right.

CHAIR: Then they go to private practice with a much greater range of experience and skill than they would get in an ordinary private practice?

Associate Professor EVANS: Yes. To go back to the funding issue, it does not affect students but the effect of the increase in the number of impacts on the staff: only 50 per cent of the fees that are paid to the university actually reaches the faculty of dentistry; 50 per cent is retained by the university. We point out that the university does not own any of the infrastructure in relation to dentistry. All our offices and clinics where we teach the students are all provided by Westmead Hospital and the Sydney Dental Hospital.

CHAIR: And they do not charge the faculty or the university for those facilities?

Associate Professor EVANS: I do not think they do.

CHAIR: The university does rather well out of the faculty, does it not?

Associate Professor EVANS: It is similar to medicine in a way. Medical students are trained in hospitals. Medical students do not treat patients. Dental students are fully trained in patient care in all disciplines so that when they graduate they are fully competent as dentists. They are not specialists though. That is another three or four years training.

CHAIR: The women from the University of Newcastle correctly said that the dentistry is the second most expensive course.

Associate Professor EVANS: Yes.

CHAIR: After veterinary science, but one of the implications of what you are saying is expensive to whom?

Associate Professor EVANS: Yes.

CHAIR: Because if Westmead, its facilities and equipment are provided by the State Government, dentistry is not so expensive for the university.

Associate Professor EVANS: That is right, and until recently there was quite a lot of difficulty in the relationships between these different organisations. That has certainly improved now. We are in a situation where there has been undermining of the capacity of the university to train

dentists and the facilities are not there or they are now very old and Westmead provides these facilities for us but we are under constant pressure. For example, we have just lost a conference room, which was previously taken out of student facilities and laboratory space when the faculty was run down a little bit, then a lot of the Western Sydney Area Health Service moved into that space, so now we need to grow again we have got no space to grow into.

Yet we are under pressure to lose space. For example, recently there has been pressure from ophthalmology to have some of our dental space. We are housed in very substandard circumstances, when you look around. People are just squeezed into places and it is really not very good. So we cannot attract staff; it is very difficult these days.

CHAIR: In that sense, there is little comparison with the teaching hospitals for training doctors?

Associate Professor EVANS: That is right; it is not equivalent at all in that sense—and also because of the structure of the training. The hospitals are where the training of specialists occurs, too. Dentistry specialists are all trained by the university, so it is not funded in that sense. I am a founding member of the Association for the Promotion of Oral Health [APOH], and we have set forward a plan of how that will answer many of the problems you have spoken about here—for example, how we can improve the quality of services in the public sector. The APOH presents arguments about how to develop the infrastructure for training and develop the hospital system so that it will train dentists and dental specialists similar to the way medical specialists are trained. Our plan is that that would solve many of the problems in rural and remote areas.

CHAIR: Can we say that with regard to the money that comes from the students, 50 per cent of it has gone from the university and is not, as far as you can see, used in your undergraduate programs?

Associate Professor EVANS: That is our understanding. It does not come to the faculty.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: It goes from the faculty to the university's central administration.

Associate Professor EVANS: No. It is collected by the university, and the faculty gets half of it.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Presumably, the faculty, not being particularly flush with funds, does not pay the health department for the premises at Westmead and is out-competed by the ophthalmology department. Is it all about money? Everyone does calculations on office space costs, or any other indoor space costs, and it tends to go to the highest payer.

Associate Professor EVANS: I am not sure that that is the case. I think we are just a small group who outmanoeuvred—and we are not the CEOs. It is down that end. Decisions are made that we do not know about, and we are just told, "You have to move out of the space."

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Is it office accommodation taking up what was your space in the conference rooms?

Associate Professor EVANS: Yes. It is all part of Western Sydney Area Health Service administration.

CHAIR: Would you tell us a little about the community oral health component and the Bachelor of Oral Health?

Associate Professor EVANS: Oral health is my department. We are involved in training specialists who will manage specialist public health services. We provide the preventive dentistry teaching within the course. Can graduates pursue a career in this area? It is only if they do a Master of Public Health and an appropriate Master of Community Dental Health. But that is for the management and planning of public health services; it is not public health dentistry. They are not dentists who work in a public health service; they are the people who plan and evaluate it.

With regard to the Bachelor of Oral Health in Newcastle and Sydney, I am not sure that there is a difference. The people we are training will have both dental hygienist and dental therapy skills, so they will be able to do the work of hygienists and dental therapists. The focus should be that they are deployed to focus on prevention rather than treatment. We now have the technology to prevent most disease, but dentistry has become institutionalised to sell replacement parts and to focus on the treatment of disease rather than on its prevention, and that is a major difficulty that has to be overcome.

CHAIR: When you say dentistry, do you mean the dentists, or do you mean the whole oral health industry?

Associate Professor EVANS: The whole industry really. It is seen that our job is to treat disease rather than to use our skills to prevent it. You have asked: Are we working up or working down? I think you can train any monkey to darn holes in things. What we have to do is learn how to apply the intensive preventive, which is much more cerebral, and work out how to deal with the complex issues of changing the behaviour of individuals and applying the appropriate technology. Of course, it is underplayed. People talk about chairside prevention, but the intensive prevention I am talking about is not really what is often practised in most places.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Similar to the medical industry?

Associate Professor EVANS: Probably.

CHAIR: Does that mean you should have 80 people in the oral health course and 20 people in the dentistry course?

Associate Professor EVANS: No. We need more of all of them at the moment. As we have seen, there is a gross shortage of dentists, and it will become evident in 5 to 10 years when people simply will not be able to find a spare chair anywhere. What needs to be done is to transfer the focus towards preventive care, which you have—

The Hon. IAN WEST: Have you done work on costing that?

Associate Professor EVANS: I was one of three people to get NHMRC grants in dentistry throughout Australia. It is a randomised control trial of dentist practices in New South Wales metropolitan, rural and remote areas. Dentists in pairs will be randomised to provide either standard care or the intensive preventive care that we are doing. The person who is doing that will do a complete economic evaluation of both parties. So this will provide the first evidence to determine whether or not it is cost effective to deliver preventive care. It has not been measured very well in the past. If you do an analysis, it shows that it just has not been done well enough to know whether it is cost effective.

The Hon. Dr ARTHUR CHESTERFIELD-EVANS: Is this a cohort study? Will that not take a long time?

Associate Professor EVANS: We hope to have results in three years. We expect it will be a lifetime's work and we will forecast forward and try to add data to the models as we go. It is entirely clear that if people want to have no dental decay from today onwards, we are more or less able to deliver that and also to stop gum disease, which is a little more difficult. But, for all practical purposes, there is no longer a need to have people's mouths full of decayed teeth. But it will require—

CHAIR: Does that mean you have to start from childhood?

Associate Professor EVANS: No; for you and me today, too. Our job is to maintain people's dental health from now on, whatever its status. We should be able to stop the risk of new decay occurring and make sure that the maintenance costs that come about as a result of the disease process are kept to a minimum.

The Hon. IAN WEST: Would it not be cheaper to rip all the teeth out and give the person false teeth?

Associate Professor EVANS: Well, you can say that.

The Hon. IAN WEST: I am thinking purely from the economist's point of view. We can talk about prevention until the cows come home—

Associate Professor EVANS: Certainly that is the case. When people come in with gross decay, it is beyond repair really. For many people that is the best thing. But for you today—I presume you have natural teeth—

The Hon. IAN WEST: But it will cost me a lot more to maintain them than it would if I ripped them all out and put in dentures.

Associate Professor EVANS: Well, would you like that to happen?

The Hon. IAN WEST: From a purely economic point of view, would that not be cheaper?

Associate Professor EVANS: I do not know.

The Hon. IAN WEST: It is costing me a fortune to maintain my teeth. I am thinking about the economic options and cost effectiveness—

Associate Professor EVANS: People would need replacement dentures every 5 to 10 years I suppose. So it may well be that it could be more cost-effective, but whether that is what people go for—the forced extraction of sound teeth—

CHAIR: I guess the other side of that question is whether the kind of study you are doing, of preventive dentistry, involves the kind of high cost that most of us have probably begun to experience with the dentists who are doing more and more elaborate and expensive work.

Associate Professor EVANS: The way we see it is that these new dental teams, with the therapists and the hygienists, will take care of the less complex things that need to be done and will focus on prevention. Dentists will be busy doing the more difficult things. That is why we need to have hygienists and therapists to do basic dentistry, and to focus on the delivery of the intensive prevention—which, as it goes, people take over themselves.

This longitudinal study has been going on for 20 years now in Sweden, where they have shown that you can take people of all ages and, provided you give them good intensive and follow-up care, gradually the time they need to implement this can be spread out and people will only need to see a dentist every 18 months and they can have really good oral health. It is just that this has been shown in special situations, and we are trying to demonstrate in this study whether, instead of just talking about it for 30 years, we can actually implement it.

I am running a clinic at Westmead hospital in which we are doing this now, because we are observing that patients come in to get treatment and they are put on a waiting list, they cannot get the follow-up treatment, and after 10 or 15 years you see that they are worse than when they started. That is because, with the overwhelming number of people who are coming in, it is just not institutionalised in a way to provide the proper preventive care, which works if you can provide it. It should not be necessary to have all your teeth extracted. It should not be expensive to maintain good oral health. Tooth brushing and minimal follow-up is all that we hope to demonstrate in our project, which is taking place now.

The Hon. IAN WEST: I note that many people I come across in my work simply could not afford to maintain their teeth through a lifetime.

Associate Professor EVANS: That is because of the unfortunate way the industry has developed.

CHAIR: I am conscious that you have other commitments. Given that question 6 refers to a series of factual details about Westmead, could we contact you and get those details from you in written form, as well as details about fees and so on?

Associate Professor EVANS: Yes, certainly.

CHAIR: Similarly, if you think of details regarding matters about which we did not ask you, you may be able to provide those details.

Associate Professor EVANS: Certainly.

(The witness withdrew)

The Committee adjourned at 6.13 p.m.