If only it was as simple as bugs

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EDITORIAL

It is a source of continuing amazement to me that, as humans, we have managed to construct such a towering profession and industry of oral healthcare on the basis of the behaviour of organisms that we cannot even see with the naked eye. Caries, periodontal disease, implants, toothpaste, appointment systems, research grants, school curricula, hierarchies of personnel, patient literature, myriad designs of instruments, equipment and gadgets, payment plans, court cases and even dental journals; and all based on the activity of bacteria.

As a consequence, the management of caries in particular has been fraught with variation, even given the well-thumbed and universally recognised Black classification of a century ago. The FDI World Dental Federation, meeting at their 100th Annual World Dental Congress later this month in Hong Kong, have been engaged for the past few years in the development of a caries classification and management system which aims to provide the basis for a new approach to caries prevention and treatment. Necessarily, being on the international stage, caries being such a multifactorial condition and with the plethora of interested parties and stakeholders, agreement on any new initiative has involved a gargantuan amount of work, negotiation and conciliation. However, the FDI Global Caries Initiative (GCI)¹ has now developed and published a Caries Matrix which it proposes will lead to a new understanding of how caries can be effectively managed with a greater emphasis on prevention and minimal restoration through early diagnosis and detailed clinical care.^{2,3}

In constructing the matrix, the FDI's Science Committee reviewed seven caries lesion systems that fulfilled one or all of the following criteria: that they were used in clinical practice or in large-scale epidemiological surveys, were promoted for use by national dental associations or that they included elements of a shift towards prevention. The complexity of the task is brought into focus when one realises that caries can be classified according to treatment (decayed, missing and filled surfaces and teeth), location of the lesion (occlusal, smooth surface and root), primary or secondary lesions, severity, extent, chronology (early childhood caries, adult or older adult), aetiology and affected tissues (enamel, dentine, cementum).

NON-COMMUNICABLE DISEASES

The fine words spun around such an apparently straightforward issue as tooth decay can be somewhat off-putting to the clinician who battles daily with its consequences. However, in order to get caries onto the health agenda of a multitude of agencies and onto those of individual governments, protocol has to be followed and the right boxes have to be ticked.

Thus, caries is considered in WHO and United Nations-speak as a non-communicable disease (NCD); a designation it shares with conditions such as the four main NCDs, cardiovascular diseases, chronic respiratory diseases, diabetes and cancer, as well as sharing some of the common risk factors, such as unhealthy diet, tobacco use and harmful alcohol use.

The NCD statistics are quite staggering; it is estimated that over the next 20 years they will cost more than US\$47 trillion, with 63% of all deaths worldwide currently stemming from them. As so often, the highest burden will be carried by low- and middle-income countries.

The urgency and need for global action has even been recognised by the UN with a High-level Meeting on Control and Prevention of NCDs held in New York in September 2011. This was only the second time the UN has dedicated a meeting to health, the first being the HIV AIDS pandemic. Approval was given to the UN Political Declaration on Prevention and Control of NCDs, which recognised the significance of oral diseases, with paragraph 19 stating that 'renal, oral and eyes diseases pose a major health burden for many countries and that these diseases share common risk factors and can benefit from common responses to NCDs' and mandating the WHO to develop a Global Monitoring Framework along with a set of targets and indicators.

The first phase of the FDI's work with the GCI has established both a policy base in support of the new paradigm of caries management and developed instruments that will enable its implementation, including the FDI Caries Matrix. Additionally, there has been significant progress in defining new pathways for caries management with the Caries Management Pathways (CMP) conference⁵ in June 2012, providing the foundation for future work.

Such changes and developments are both exciting and challenging at all levels; as individual clinicians and in the wider context of health care and society. If only bacteria in their plaque microcosms realised the extent of the troubles which their behaviour creates.

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