Review

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The Oral Health Surveillance Policy in Brazil: progresses and challenges

ABSTRACT

This comprehensive critical review, carried out in a descriptive-discursive style, presents the oral health surveillance policy currently in force in Brazil. Based on an appraisal of the national and international literature on the subject of health surveillance, it examines the formulation of a scientific and political agenda for oral health surveillance, which is anchored in the institutions of the Brazilian Public Health System. The accomplishment of this agenda is exemplified by the presentation of the most recent Brazilian Oral Health survey (SBBrasil 2010). A conclusive summary is presented on the search for a theoretical and methodological convergence of both the identification of the obstacles and weaknesses still detectable in this policy, and the recognition of its virtues already confirmed by important advances and achievements.

DESCRIPTORS: Health Public Policy. Public Health Dentistry. Dental Health Surveys. Dental Health Services. Public Health Surveillance. Review.

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INTRODUCTION

In Brazil, currently, health surveillance is understood to a structural component of the utmost importance in organizing and managing the practice of the *Sistema Único de Saúde* (SUS, public health care system).[a] This understanding was confirmed by the creation of the *Sistema Nacional de Vigilância em Saúde* (SNVS, National Health Surveillance System).[b] The Brazilian initiative of establishing and developing the SNVS is in line with the view predominant in the international health community, which is increasingly recognizing the importance of strengthening and consolidating national health care systems, covering essential public health functions, among them health surveillance.[22,23]

Bringing about the main global health care targets means putting into action political processes and organizing movements by societies and nation states, without which comprehensive health care and the wellbeing of the population cannot be developed. With these global targets in mind, there are essential tasks to be performed by health care bodies in order to improve health care practices by strengthening their institutional capabilities.[c] From more general health care objectives, such as the Millennium Development Goals, to objectives focused on more specific programs, such as those for controlling HIV/AIDS[5] or for monitoring and assessing oral health,[24] success depends on the existence of health care systems capable of effectively and efficiently executing critical public health functions, providing key actions and services.

The World Health Organization (WHO) describes health care systems as a set of six interlinked blocks: i) providing services; ii) health care workforce performing well; iii) the functioning of health care information systems; iv) provision of and access to essential products such as vaccines and health care technologies; v) adequate financing and vi) leadership and governance.[37] This paper is particularly interested in understanding the abovementioned third block, the functioning of health care information systems and their overlap with the concept of health surveillance.

Therefore, the central objective of this article was to approach the concept of health surveillance, as applied in the oral health area, and its conceptual and operational developments in Brazil, using the most recent national oral health epidemiological survey – the SBBrasil 20101 Project.

METHODS

The methodology is based on participative research,[7,10] as the authors were also involved with formulating and implementing the oral health monitoring policy and the SBBrasil 2010.

A critical and comprehensive review of the relevant literature was undertaken,[6,11] from a theoretical and contextual point of view. As highlighted by Bastos,[3] this review was guided by the criteria of quality and readability. Whenever possible, the RATS (Relevance, Appropriateness, Transparency, Soundness) checklist was used. The PubMed/Medline and SciELO databases were used, complemented by non-repeated references found in the BVS/Bireme database and institutional documents from the Brazilian Ministry of Health, the Pan-American Health Organization, the Conselho Nacional de Secretários de Saúde and the US Centers for Disease Control and Prevention. The following search terms were used: surveillance; health status; oral health surveillance; oral health surveys.

CONCEPTS OF HEALTH SURVEILLANCE AND THEIR APPLICATION IN ORAL HEALTH

In Brazil, there are various conceptual possibilities, and even different expressions, such as "surveillance of health" and "surveillance in health" for the term health surveillance.[d,e] This undoubtedly reflects the irradiation of a polisemic expression and varied use within health care services and academic research, in different contexts and at different times.[1,16,21,28]

For the purposes of narrative simplicity and clarity in this review, this "multi-faceted" conceptual construct will be understood as "the systematic collection, analysis and interpretation of data on specific health problems which affect the population, essential to the planning, implementation and evaluation of public health care practice, being integrated with the rapid dissemination of information to all of those responsible for prevention and control of aforesaid health problems". [1,17,34,35]

Health surveillance is an effort to integrate actions by the health care sector concerning various dimensions of the health-disease process, especially from the point of view of social determination. With a more totalizing vision, it seeks to develop new proposals for

[a] Ministério da Saúde, Secretaria de Vigilância em Saúde. Vigilância em saúde no SUS: fortalecendo a capacidade de resposta aos velhos e novos desafios. Brasília (DF); 2006. (Série B. Textos Básicos de Saúde).
[b] Ministério da Saúde. Projeto VIGISUS: estruturação do Sistema Nacional de Vigilância em Saúde. Brasília (DF); Fundação Nacional de Saúde; 1998.
[c] Conselho Nacional de Secretários de Saúde. Relatório do 1º Encontro de gestores estaduais, provinciais e departamentais de sistemas sul-americanos de saúde. Brasília (DF); 2005. (CONASS, 9).
[d] Teixeira C, Paim JS, Vilasbôas AL, editores. Promoção e vigilância da saúde. Salvador: Instituto de Saúde Coletiva; 2002.
[e] Waldman EA, Rosa TEC. Vigilância em Saúde Pública. São Paulo: Faculdade de Saúde Pública da USP; 1998. (Saúde & Cidadania, 7).

the deployment of health systems, with the premise of an immersion in the territorial context of the actions.[9]

It is important to note the mistake made when, in diagnoses of living conditions and health status, the elements constituting the production and reproduction of social life, in different places, are taken to be content disconnected from the territory – not only in a physical, but also a human sense. Recognizing social dynamics, habits and customs is of great importance in determining vulnerabilities and risk and protection factors for human health, originating in interactions of social groups in specific geographical spaces.[20]

Therefore, health surveillance has a more encompassing concept, beyond simple analysis of the situation or institutional integration between environmental and epidemiological health surveillance. It foresees interventions in health problems; the emphasis is on problems which require continuous attention and monitoring; operationalizing the concept of social determination and its implications on factors of protection and risk and preventing harm; coordinating actions of promotion and prevention and care; inter-sector actions; actions within the territory; and interventions informed by evidence on the type of operations which promote health.[2,12,25,26]

The area of oral health should play a strategic role in the health care system, contributing to the scientific, technological and organizational development of surveillance practices, aiming to understand and act on the population's levels of health.[24]

In countries with longstanding traditions of epidemiological surveillance applied to oral health, such as the USA, the national oral health surveillance system was established under the leadership of the Association of State and Territorial Dental Directors and with substantial support from the Division of Oral Health at the Centers for Disease Control and Prevention.[18] This was considered the first step in routinely supporting oral health programs recording and explaining the needs of the population, in parallel with impact studies produced by respective oral health programs, with standardized, viable methods.

In 1999, seven indicators of oral health were approved for surveillance in the USA, with another two added later. Four indicators are for adults and the elderly: having visited the dentist within the last year and dental prophylaxis within the last year for those aged ≥ 18; prevalence of total edentulism and loss of six or more teeth for those aged ≥ 65. Data from the Behavioral Risk Factor Surveillance System are used for these indicators. Another three indicators are for students in the third grade: percentage of treated dental caries or lack of

caries; percentage of untreated dental caries; percentage of dental sealants in at least one permanent molar. In addition, there are two other, comprehensive, indicators: percentage of the population served by the fluoridated public water supply, monitored through reports from the Water Fluoridation Reporting System, and the prevalence of cancer in the oral cavity and pharynx.

The US National Oral Health Surveillance System website[f] was launched in 2001, with data on adults and on fluoridated water for all of the states. Indicators for children and adolescents were added later. These data are now electronically available for the majority of states (including the District of Columbia), depending on the indicator, functioning as a "situation room" which helps to signal the progress of each state towards the desired improvement in the oral health indicators monitored.

Notwithstanding this national progress, there is repeated criticism in the US indicating the impending need to develop new techniques for constructing surveillance systems for diseases, conditions and behavior in the area of oral health at national, state and local levels to deal with new challenges.[4] The critical endeavors brought new components to advance the surveillance system, in the sense of collecting relevant data within a useful timespan: i) focus data collection at a state and local level; ii) seek to integrate other existing national surveillance systems, and those which are in progress; iii) use only visual (not tactile) examination protocols to collect data on oral health/disease; iv) concentrate on a variety of diseases, conditions and behavior; and v) analyze the data consistently and quickly, without wasting any time.

In a wider international context, the health care services in various countries are currently under enormous systematic pressure due to epidemiological, nutritional and demographic changes, which translates as a triple disease load (living with communicable diseases, strongly dominated by chronic non-communicable diseases/conditions, plus external causes). New proposals to deal with this situation, including in the area of oral health, have been discussed. A multi-component approach, derived from the concept of social determination of the health-disease process, inequalities in health care and on the "chronic disease model" is what is sought.[33,36]

It is certainly the case that new approaches for the Brazilian situation also need to be thought of, implementing the model of the health care networks, with the emphasis on health surveillance and promoting health and having the health care coordinator in primary health care.[19] Such an approach requires an additional effort from public health in constructing programs

involving networks of partnerships, timely monitoring of epidemiological population profiles, interventions in risk factors and behavior, implementing strategies of prevention (based on robust evidence) and rigorous assessment of actions and services, as systems of support in decision making.

In the SUS, these responsibilities are shared between federal, state and municipal level, including health surveillance as a structural component of managing the system. Many issues have been confronted with regards the decentralized management structure, stable and fair financing, reorganization and requalification of the health care information systems, institutionalizing periodic monitoring and evaluation cycles, strengthening health promotion competencies, epidemiological surveillance of communicable and non-communicable diseases and health problems, sanitary and environmental surveillance and monitoring health status, working with social determination of the health-disease process and risk/protection factors for oral health.

The structure and the establishment of the strategic component of oral health surveillance, within the National Oral Health Care Policy, meets the directives which were widely debated and approved by the 3rd National Conference on Oral Health.[g] Among other objectives, this component aims to analyze the epidemiological profile of diseases and health problems, enabling the oral health problems of the Brazilian population to be understood, discussed and faced.[14,27] Oral health surveillance includes the SBBrasil Project, which positions this component as part of the routine for managers and front line health care service workers, aiming to establish a culture of oral health surveillance which reaches to more decentralized levels of the SUS; the municipal health care networks.[30,31]

THE ORAL HEALTH SURVEILLANCE SYSTEM IN BRAZIL

From August 2004, the General Coordination of Oral Health set in motion a series of discussions with the Health Surveillance Department at Brazilian Ministry of Health, with the aim of incorporating oral health into surveillance practices. Considering the convergence of the purposes and the characteristics or oral health problems, the General Coordination for Surveillance of Non-Communicable Health Problems and Diseases was chosen as the ideal locus for establishing this partnership. These discussions originated from the perspective initially outlined in the SBBrasil Project, formerly known as the SB 2000, which, despite representing

the most extensive and comprehensive diagnosis of the Brazilian population's oral health conditions, did not place oral health as part of the routine of health surveillance managers, administrators and technicians, although the original scope suggested this need.[30]

The justifications for developing a new oral health surveillance strategy are due to the lack of systemization of this component in the national oral health policy at a federal level, with the same gap found at state and municipal levels, the following difficulties having been identified: 1) oral health surveys carried out by the Brazilian Ministry of Health and/or with its support in 1986, 1996 and the SBBrasil 2003 had heterogeneous methodologies, with temporal variations in the data collection, large concentrations of specific efforts, focus essentially on normative data (except the SB 2003) and, finally, they did not establish the desired culture of health surveillance at a local level; 2) Disarticulation and lack of integration in health care surveillance and other surveillance systems in the country, with the laudable exception of the Mortality Information System, regarding deaths from oral cancer; 3) Lack of oral health data in other important systems, such as the Primary Care Information System, bearing in mind that this is an administrative system and does not contain indicators relevant to oral health; 4) Oral health data within the SUS Outpatients Information System, which is also an administrative system, serving only as a health care reference, i.e., for carrying out orthodontic procedures.[13,14]

The National Oral Health Care Policy named *Brasil Sorridente* (Smiling Brazil) was launched by the federal government in 2004, creating the conditions necessary for establishing a new structural conception of the strategy of oral health surveillance within the SUS, making room for this area to be included in the SNVS. One of the first products of this discussion was the inclusion of the thematic model of oral health in the planning of research in 2006, investigating risk and protection factors in the health of schoolchildren aged 13 to 15 in the National Survey of Schoolchildren's Health, a cross-sectional population based study carried out between March and June 2009.[h]

Also in 2006, the Brazilian Ministry of Health established the Technical Assessor Committee to structure and establish oral health surveillance strategies within the National Oral Health Care Policy (CTA-VSB). The committee was established with the aim of "assessing the Primary Health Care Department, Technical Area of Oral Health (DAB/SAS/MS), in identifying priorities and formulating technical directives in the area of Oral

Health Surveillance, as well as systematic evaluations of the data quality".[i]

The agenda of the CTA-VSB included carrying out forums with surveillance technicians in states and state capitals, providing a wide-ranging discussion of the national policy of non-communicable disease and health problems and the possibilities of including oral health topics. An agenda was also created referring to some of the functions of health surveillance: epidemiological profiling of oral health problems; integration with academic research services and centers; proposals for monitoring and evaluating local, regional and national level interventions; predictions of demand and organizing service provision; professional training; and formulating policies specific to oral health surveillance. Key elements in the surveillance system were also considered, based on experiences reported in the literature were also considered: definition of case/event/condition to be monitored and of priority indicators; the population under surveillance; surveillance cycles; confidentiality; and social control mechanisms.[8,13-15] From this perspective, the surveys were initially established as a way of collecting nationwide primary data.

The CTA-VSB also made suggestions to deal with technical and operational issues, such as structuring a Network of Collaborating Centers. These Centers, based on the regional integration of health care services and universities, were thought up as strategies for producing analyses of the oral health situations in the regions under their influence, above all to overcome the fragility of services aimed at surveillance issues at the state and municipal level.

The first large scale national response from establishing oral health surveillance in the SNVS was the SBBrasil 2010 Project.[32] The Project was integrated between sectors and shared with a wide community of interested parties, having been submitted for public consultation in 2009 and, through eight Collaborative Centers, the Management Group responsible for executing the project was formed.

With the participation of the National Health Board, the National Board of State Health Care Departments and the National Board of Municipal Health Care Departments, the SBBrasil was supported by administrators in the 27 states, as well as the state capitals and the municipalities selected to take part in the research.

The SBBrasil 2010 took place between 2009 and 2010 and evaluated the principal health care problems for public health (dental caries, periodontal disease, malocclusion, edentulism and fluorosis), as well as socioeconomic data regarding use of health care services, perceived health and impacts of oral health on daily life.

With around 2,000 SUS workers from the three governmental spheres, as well as from universities, involved, 37,519 individuals were interviewed in their homes, with the aim of understanding the Brazilian population's oral health in 2010, thus enabling administrators to use the results in both planning and evaluating actions and services. Individuals aged five and 12, and those in the 15 to 19, 35 to 44 and 65 to 74 years old age group were examined and interviewed in the 27 state capitals and in 150 municipalities, of various sizes, in the interior (30 in each macro-region).[j,k]

The SBBrasil Project, therefore, is a key surveillance strategy for producing primary data on oral health, contributing to constructing a National Oral Health Care Policy guided by epidemiological based models of care.[29,32]

The main results of the SBBrasil 2010[l] show, for example, that Brazil moved from average to low prevalence of dental caries according to the classification adopted by the WHO.[m] The research revealed a 52% decrease in the need for prostheses in adolescents aged 15 to 19, and a 70% decrease in adults aged 35 to 44. However, among challenges still to be faced, the research highlighted the need to reduce regional inequalities, for advances in prosthetic rehabilitation in the elderly aged 65 to 74 and in improving oral health epidemiological indices in five-year-old children.

In concordance with Roncalli,[29] carrying out the SBBrasil 2010 showed that it is possible to construct policies and operations with better integration between academia and health care services. Also, of particular interest to public oral health care services, it showed that it is possible to produce scientific knowledge with the effective participation of this network, with mechanisms of incorporation in the day-to-day activities of the services.

Implementing oral health surveillance strategically integrated in the SNVS is a key element in sustaining the National Oral Health Care Policy and for the population to progressively recognize good practice in the SUS.

[i] Ministério da Saúde (BR), Secretaria de Atenção à Saúde. Portaria nº 939, de 21 de dezembro de 2011. Brasília (DF): 2011 [cited 2012 Apr 7]. Available from: http://dtr2001.saude.gov.br/sas/PORTARIAS/Port2006/PT-939.htm

[j] Ministério da Saúde (BR), Secretaria de Vigilância à Saúde, Departamento Nacional de Saúde Bucal. Projeto SB Brasil 2010 - Pesquisa Nacional de Saúde Bucal. Brasília (DF); 2010 [cited 2012 Jan 10]. Available from: http://dab.saude.gov.br/cnsb/sbbrasil/index.html

[k] Ministério da Saúde (BR), Departamento de Atenção Básica, Coordenação Nacional de Saúde Bucal. SB Brasil 2010 - Pesquisa Nacional de Saúde Bucal: projeto técnico. Brasília (DF); 2011 [2012 Dec 12]. Available from: http://dab.saude.gov.br/cnsb/sbbrasil/index.html.

[l] Ministério da Saúde (BR), Secretaria de Atenção à Saúde; Secretaria de Vigilância em Saúde, Departamento de Atenção Básica, Coordenação Geral de Saúde Bucal. SB Brasil 2010 - Pesquisa Nacional de Saúde Bucal: resultados principais. Brasília (DF); 2011 [cited 2012 Apr 13]. Available from: http://dab.saude.gov.br/cnsb/sbbrasil/index.html.

[m] World Health Organization. WHO Global Oral Health Database. WHO Collaborating Centre for Education, Training and Research in Oral health; 2011 [cited 2012 Apr 15]. Available from: http://www.mah.se/CAPP/

REFERENCES

1. Arreaza ALV, Moraes JC. Vigilância da saúde: fundamentos, interfaces e tendências. *Cienc Saude Coletiva*. 2010;15(4):2215-28. DOI:10.1590/S1413-81232010000400036

2. Barcellos C, Quitério LAD. Vigilância ambiental em saúde e sua implantação no Sistema Único de Saúde. *Rev Saude Publica*. 2006;40(1):170-7. DOI:10.1590/S0034-89102006000100025

3. Bastos FI. Revisão, revisão sistemática e ensaio em saúde pública [editorial]. *Cad Saude Publica*. 2007;23(6):1252-3. DOI:10.1590/S0102-311X2007000600001

4. Beltrán-Aguilar ED, Malvitz DM, Lockwood SA, Rozier RG, Tomar SL. Oral health surveillance: past, present, and future challenges. *J Public Health Dent*. 2003;63(3):141-9.

5. Bloland P, Simone P, Burkholder B, Slutsker L, De Cock KM. The role of public health institutions in global health system strengthening efforts: the US CDC's perspective. *PLoS Med*. 2012;9(4):e1001199. DOI:10.1371/journal.pmed.1001199

6. Botelho LLR, Cunha CCA, Macedo M. O método da revisão integrativa nos estudos organizacionais. *Gestao Soc* [Internet]. 2011 [citado 2013 ago 18];5(11):121-36. Disponível em: http://www.gestaoesociedade.org/gestaoesociedade/article/view/1220

7. Brandão CR, editor. Repensando a pesquisa participante. 2.ed. São Paulo: Brasiliense; 1985.

8. Buehler JW. Surveillance. In: Rothman KJ, Greenland S, editors. Modern epidemiology. 2.ed. Philadelphia: Lippincott-Raven Publishers; 1998. p.435-58.

9. Campos CEA. O desafio da integralidade segundo as perspectivas da vigilância da saúde e da saúde da família. *Cienc Saude Coletiva*. 2003;8(2):569-84. DOI:10.1590/S1413-81232003000200018

10. Cargo M, Mercer SL. The value and challenges of participatory research: strengthening its practice. *Annu Rev Public Health*. 2008;29:325-50. DOI:10.1146/annurev.publhealth.29.091307.083824

11. Cooper HM. The integrative research review: a systematic approach. Thousand Oaks: Sage Publications; 1984.

12. Czeresnia D, Freitas CM, editores. Promoção da saúde: conceitos, reflexões, tendências. Rio de Janeiro: Editora Fiocruz; 2003.

13. Goes PSA, Fernandes LMA, Lucena LBS. Validação de instrumentos de coleta de dados. In: Antunes JLF, Peres MA, editores. Fundamentos de odontologia: epidemiologia da saúde bucal. Rio de Janeiro: Guanabara Koogan; 2006. p.390-7.

14. Goes PSA. Vigilância da saúde bucal para o nível local: uma abordagem integrada para as equipes de saúde bucal da Estratégia Saúde da Família. In: Moysés ST, Kriger L, Moysés SJ, editores. Saúde bucal das famílias: trabalhando com evidências. São Paulo: Artes Médicas; 2008. p.258-67.

15. Goes PSA, Moysés SJ, organizadores. Planejamento, gestão e avaliação em saúde bucal. São Paulo: Artes Médicas; 2012.

16. Langmuir AD. Evolution of the concept of surveillance in the United States. *Proc R Soc Med*. 1971;64(6):681-4.

17. Lee LM, Thacker SB. The cornerstone of public health practice: public health surveillance, 1961-2011. *MMWR Surveill Summ*. 2011;60(Suppl 4):15-21.

18. Malvitz DM, Barker LK, Phipps KR. Development and status of the National Oral Health Surveillance System. *Prev Chronic Dis*. 2009;6(2):A66.

19. Mendes EV. As redes de atenção à saúde. *Cienc Saude Coletiva*. 2010;15(5):2297-305. DOI:10.1590/S1413-81232010000500005

20. Monken M, Barcellos C. Vigilância em saúde e território utilizado: possibilidades teóricas e metodológicas. *Cad Saude Publica*. 2005;21(3):898-906. DOI:10.1590/S0102-311X2005000300024

21. Monken M, Batistella C. Vigilância em saúde. In: Pereira IB, Lima JCF, organizadores. Dicionário da educação profissional em saúde. Rio de Janeiro: Fundação Oswaldo Cruz, Escola Politécnica de Saúde Joaquim Venâncio; 2008. p.471-8.

22. Muñoz F, López-Acuña D, Halverson P, Macedo CG, Hanna W, Larrieu M, et al. Las funciones esenciales de la salud pública: un tema emergente en las reformas del sector de la salud. *Rev Panam Salud Publica*. 2000;8(1-2):126-34. DOI:10.1590/S1020-49892000000700017

23. Organización Panamericana de la Salud. La salud pública en las Américas: nuevos conceptos, análisis del desempeño y bases para la acción. Washington (DC); 2002. (Publicación Científica y Técnica, 589).

24. Organización Panamericana de la Salud, Programa Regional de Salud Oral. Estrategia para el mejoramiento de la salud general en las Américas a través de avances críticos en la salud oral: el camino hacia delante: 2005-2015. Washington (DC); 2005.

25. Paim JS, Almeida Filho N. A crise da saúde pública e a utopia da saúde coletiva. Salvador: Casa da Qualidade Editora; 2000.

26. Paim JS. Epidemiologia e planejamento: a recomposição das práticas epidemiológicas na gestão do SUS. *Cienc Saude Coletiva*. 2003;8(2):557-67. DOI:10.1590/S1413-81232003000200017

27. Pucca Jr GA. A política nacional de saúde bucal como demanda social. *Cienc Saude Coletiva*. 2006;11(1):243-6. DOI:10.1590/S1413-81232006000100033

28. Raska K. The Epidemiological Surveillance Programme. *J Hyg Epidemiol Microbiol Immunol*. 1964;8:137-68.

29. Roncalli AG. Epidemiologia e saúde bucal coletiva: um caminhar compartilhado. *Cienc Saude Coletiva*. 2006;11(1):105-14. DOI:10.1590/S1413-81232006000100018

30. Roncalli AG. Levantamentos epidemiológicos em saúde bucal no Brasil. In: Antunes J, Peres M, Crivello Júnior O, editores. Epidemiologia da saúde bucal. Rio de Janeiro: Guanabara-Koogan; 2006. p.32-48.

31. Roncalli AG. Projeto SB Brasil 2010: elemento

estratégico na construção de um modelo
de vigilância em saúde bucal [editorial].
Cad Saude Publica. 2010;26(3):428-9.
DOI:10.1590/S0102-311X2010000300001

32. Roncalli AG. Projeto SB Brasil 2010 - pesquisa
    nacional de saúde bucal revela importante
    redução da cárie dentária no país [editorial].
    Cad Saude Publica. 2011;27(1):4-5.
    DOI:10.1590/S0102-311X2011000100001

33. Sheiham A, Alexander D, Cohen L, Marinho V, Moysés
    S, Petersen PE, et al. Global oral health inequalities:
    task group--implementation and delivery of oral
    health strategies. *Adv Dent Res*. 2011;23(2):259-67.
    DOI:10.1177/0022034511402084

34. Thacker SB, Berkelman RL. Public health surveillance in
    the United States. *Epidemiol Rev*. 1988;10:164-90.

35. Thacker SB, Stroup DF, Parrish RG, Anderson
    HA. Surveillance in environmental public health:
    issues, systems, and sources. *Am J Public Health*.
    1996;86(5):633-8.

36. Watt RG, Sheiham A. Integrating the common risk
    factor approach into a social determinants framework.
    Community Dent Oral Epidemiol. 2012;40(4):289-96.
    DOI:10.1111/j.1600-0528.2012.00680.x

37. World Health Organization. Everybody's business:
    strengthening health systems to improve health
    outcomes: WHO´s framework for action. Geneva; 2007.