Definition, Roles and Competencies

of

Public Health Dentistry

Findings of the Commission framed by

Indian Association of Public Health Dentistry

Content

Dental public health (DPH) is one of the nine recognized specialties of Dentistry. Dental Public Health is a professional educational program that transforms one's thinking from focusing on the individual patient to focus on the community. This program is designed to prepare health professionals who will, over time, improve the capacity of the health care system to address the health needs of population. The goals of the specialty are to identify and measure the oral health problems and oral health care needs of the community; to identify means by which these needs can be best met within the constraints of resources; to provide and manage services to meet these needs; and to evaluate the extent to which these needs have been met. Competencies should be developed that would also allow for individual learning. This flexibility would allow for operating in a global and complex community or educational setting.

A study conducted among postgraduates in this speciality in India, reported that the students are more competent in socioeconomic and cultural diagnosis of the community, and participate in epidemiological surveillance system. But less competent to adopt ethical principles in all aspects of community oral health activities and to take up initiatives in advocacy issues for health policy and using media effectively[1].

American Board of Dental Public Health's (ABDPH) published 10 new core competencies for the 21st century[2]. The professional profile of the Dental Public Health specialist is made up of a number of competencies like managing oral health programs, to design surveillance systems to measure oral health status and its determinants, to lead collaborations on oral and public health issue, to advocate for public health policy, legislation, and regulations to protect and promote the public's oral health, and overall Health, to conduct research to address oral and public health problems etc[3]. Evaluation of the students' performance in relation to the specified competencies is an important task for purposes of student evaluation and for assessing the curriculum and making necessary revisions. It is also useful for obtaining information required by accreditation standards[4,5].

In community based dental education, professionals are not only placed in community settings to treat individual patients, but also challenged to consider dental public health issues, including the administrative aspects of dental services.

In India, the role of the public health dentist is curtailed to that of case finding or aligns to teaching profession. In this process, focus is shifted away from the larger goal of advocacy for oral health. It is time to look beyond the concept of dental public health and promote a new league of public health dentists whom we would like to term as "public healthers"6. The speciality of Public Health Dentistry in India is currently in an identity crisis in terms of clarity on its roles in public service and what competencies are required to fulfil these roles. There is an urgent need to obtain clarity and outline the potential employability options for the future public health dentists in India in fields other than academics. The IAPHD commissioned committee for the objectives

1. To define the "Public Health Dentistry" discipline that is relevant to the Indian Context
2. To define the roles of specialist in Public Health Dentistry for practice in India
3. To frame the competencies that are essential for the practice of the public health dentistry in India.

Mandate

Executive Committee of IAPHD framed two expert committee to achieve these objectives. First committee was framed to work for 3rd objective in 2019 and other for first and second objective in 2021 March. (Annexure for Orders). Committee was mandated for consultative workshop for achieving these objectives.

Objective 1 and 2

Definition of **"Public Health Dentistry"** for Indian context

Roles of Specialist in Public Health Dentistry in India

An expert consultative committee was framed to achieve above objectives.

Dr. Pushpanjali K MDS PhD	**Dr. Chandrashekar J** PhD MDS MSc DNB
Dr. Manjunath Puranik PhD MDS	**Dr. Chandrashekar B R** MDS
Dr. Vamsi Krishna Reddy MDS	**Dr. Ravi Shirahatti** MDS
Dr. Jyotsna S MDS	

Objective 3:

Competencies that are essential for the practice of the public health dentistry in India

Committees

Dr. Pushpanjali K PhD, MDS, PGDHHM, FAIMER Fellow(Philadelphia), (MHPE, Keele University, UK)	**Dr. Vamsi Krishna Reddy** MDS
Dr. Rajesh MDS	**Dr. Chandrashekar B R** MDS
Dr. Ramprasad MDS	**Dr. Vikrant Mohanty** MDS
Dr. Ravi Shirahatti MDS	**Dr. Shourya Tandon** MDS
Dr. Prathiba MDS	**Dr. Shwetha K M** MDS
Rapporteur: Dr. Jyotsna S MDS	**Dr. Deepti Vadavi** MDS

Committee meetings: The members had twelve online weekly meeting from April to July 2021 on Saturdays between 1.30 to 3 pm.

Process: Committee used Document analysis.

Document analysis is a systematic procedure for reviewing or evaluating documents— both printed and electronic (computer-based and Internet-transmitted) material. Like other analytical methods in qualitative research, document analysis requires that data be examined and interpreted to elicit meaning, gain understanding, and develop empirical knowledge. So, we compiled all the available definitions of Public Health Dentistry/Community Dentistry/Dental Public Health by the different professional societies/organization around world.

Each member was assigned to explore the roles, job profiles specialists in each of continents around the world. Then this information was compiled into single document for analysis. Then Committee did consultative deliberations among members to draw upon multiple (at least two) sources of evidence; that is, to seek convergence and corroboration for the definition of the public health dentistry and the roles of specialist in public health dentistry in India

The committee explored the globally prevailing roles of public health dentists and identified appropriate roles for the Indian context. Subsequently, the definition of public health dentistry was arrived at keeping in consideration the definition, scope and roles identified by 18 international organisations. The descriptor for the definition was reviewed and agreed upon. The committee then looking into the internationally prevailing guiding principles and competency statements for public health dentists. These statements were debated upon and consensus was reached regarding which need to be considered for the Indian context

Synthesis

Committee member was consensus for the following definition "Public Health Dentistry" that is relevant to Indian Context.

"Public health dentistry deals with promotion of health in general and prevention and control of oral diseases in particular, through organised community efforts. It provides leadership and expertise in organization of health programs, disease surveillance, policy consultation and evidence-based practice at community and individual levels."

Descriptor 1: Why "promotion of health in general" in definition?

Public health dentistry is a part of the broader "health care" set up and a part of the broader 'Public Health' systems. Hence, dental public health's goal is towards improving health in general; achieved through concepts of health promotion. Oral health promotion efforts must be broad and have to be in sync with promotion of "all health". Efforts for 'oral health promotion' in narrow isolation and out of sync with general health can fail. Hence, "promotion of health in general" in general has been emphasized in this definition.

Why place it earlier to "prevention and control of oral diseases in particular"?

In the context of India, infectious diseases and other non-communicable diseases receive higher priority by the public and policy makers. Higher priority for health should not be viewed to conflict with the interests of achieving oral health. Achieving oral health in isolation is not practical in our context. Hence, there is a need for Common Risk Factor Approach involving health in general to achieve oral health. Placing health earlier than oral health reaffirms the view that we need to integrate "oral health" into the overall framework of health and 'oral health care team' be working as a part of the broader 'health care' team.

Descriptor 2: Why is the phrase "prevention and control" mentioned separately?

Prevention demarks the "Up-stream" approach and is close to the concepts of public health and close to community level of care. In contrast, the term 'control' encompasses a down-stream approach and is closer to "Individual level" of care. Public health dentistry in its purest form is practiced with higher emphasis on the up-stream prevention. However, public health dentistry also deals with "down- stream" control of diseases since disease control receives higher priority from the point of view of policy makers and community. However, 'control' should receive less emphasis than "prevention" in Public Health practice; the reason for which is explained further.

Why emphasize prevention first and then control?

Prevention (especially at primordial and primary levels) applied at community level is at the core of public health practice. This is an up-stream approach and can be better applied by Common Risk Factor Approach dealt at the level of public health policy and receive higher priority in our definition by placing prevention first and then control. Prevention at individual and practitioner levels (especially secondary and tertiary levels of prevention) constitutes a down-stream approach and is used along with curative services that are mentioned as "Control".

Why does the phrase "through organized community efforts" find a mention in the definition?

In the dental public health practice, both prevention and control are achieved through organized community efforts. This delineates Public Health Dentistry from other specialties of dentistry where the prevention and control are approached at individual practitioner's level. Mentioning this phrase in definition also retains the roots of the CEA Winslow's definition of Public Health and indicates the original source for the core concepts of dental public health.

Descriptor 3: Why have "leadership and expertise" separately?

Leadership predominantly involves attitudinal and communication skills. Expertise involves cognitive and procedural skills predominantly. Dental public health specialists should be able to provide both to effectively improve community oral health. One of these in isolation may not be able to effectively solve a public health problem.

Why place leadership earlier than expertise?

It has been noted that even when expertise in the form of "research evidence" exists, it takes a long time to reach actual evidence-based practice. Effective leadership can help hasten this process and help in effective use of expertise. Similarly, leadership

and expertise in coordination are also important for effective 'organization of health programs, disease surveillance and policy consultation'.

Descriptor 4: What encompasses "Organization of health programs"?

Organization (as verb) in its broadest sense is intended to encompass Systematic planning, managing, administering, arranging, associating individuals to form a group, implementing and evaluating the health programs. (See Merriam-Webster definition for "Organize" as verb)

Why is the phrase 'Organization of health programs' a core part of this definition?

Dental public health is practiced at 'group level' through "organized community efforts" and needs teamwork involving multiple health sectors and multiple stakeholders. Organizing a health program hence involves formation of "coherent unity or functioning whole" (See Merriam-Webster definition for "Organize" as verb) to be effective at community level. Principles of organization, hence, play a very important role in achieving effective public health. This was one of the essential roles that a dental public health specialist needs to play in Indian context. Hence this was included in the definition.

Descriptor 5: What encompasses "disease surveillance"?

Public health surveillance is "The ongoing, systematic collection, analysis, and interpretation of health-related data with the purpose of preventing or controlling disease or injury, or of identifying unusual events of public health importance, followed by the dissemination and use of information for public health action7.

Why is the phrase 'disease surveillance' a core part of this definition?

Dental public health is practiced through "organized community efforts" and hence monitoring at community level needs broader group approaches like "disease surveillance". This was one of the essential roles that a dental public health specialist needs to play in Indian context. Hence this was included in the definition.

Descriptor 6: What encompasses "policy consultation"?

As per Medical Subject heading (MesH term) Health policy is defined as "Decisions, usually developed by government policymakers, for determining present and future objectives pertaining to the health care system". Dental Public health practice involves providing all the stakeholders, especially the policy makers (at various levels of governance) with adequate consultation regarding aspects related to Health and Oral health.

Why is the phrase 'policy consultation' a core part of this definition?

Dental public health is practiced through "organized community efforts" and providing policy consultation is essential in achieving decisions involving a "group of people". This was one of the essential roles that a dental public health specialist needs to play in Indian context. Hence this was included in the definition.

Descriptor 7: What encompasses "evidence-based practice"?

As per Medical Subject heading (MesH term) evidence-based practice is defined as "A way of providing health care that is guided by a thoughtful integration of the best available scientific knowledge with clinical expertise. This approach allows the practitioner to critically assess research data, clinical guidelines, and other information resources to correctly identify the clinical problem, apply the most high-quality intervention, and re-evaluate the outcome for future improvement."

Why is the phrase 'evidence-based practice' a core part of this definition?

Dental public health is a part of the discipline of science. The spirit of scientific enquiry involves scientific questioning and critically testing hypotheses to form empirical evidence that can positively inform public health practice. This was one of the essential roles that a dental public health specialist needs to play in Indian context. Hence this was included in the definition.

Descriptor 8: Why have "Community and individual levels" separately?

Dental Public health in its purest form involves working at 'Community level'. Ideally, this is an up-stream work that addresses broader causes of ill-health at group level. However, Public health dentistry has dual roles in Indian context. Public health dentistry needs to provide "a dentist in the context of Public Health; and a Public Health person in the context of dentistry". Hence Public Health dentistry needs to work upstream at community level of disease prevention but also work down-stream at individual levels of disease control. Both in tandem have potential to create success stories for public health dentistry at individual as well as mass levels.

Why place 'Community' earlier than 'Individual'?

Dental public health specialists must use all the expertise and leadership to improve the health of the community at the 'group' level. Hence the focus of public health specialists has to be more on the community level of organization of efforts. Hence, we have placed 'community' earlier than 'Individual level' in our definition. Bringing changes at each individual level by equitable approach has the potential to aggregate into a better health in the community. Improvement in individual health is the smallest unit of measurement to evaluate success at community level. This is the reason why 'individual' level is also emphasized in this definition. Improving the quality of life by reaching every individual in an equitable manner is the aim of public health practice. Hence, our definition ends with mention of Individual level.

The committee has recommended following roles of the specialist in Public Health Dentistry in India
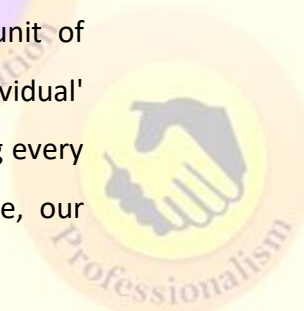
Roles of Public Health Dentists:

1. Health Program Manager: Public Health and Dental Public Health:
   a. Area of expertise - Community based Health promotion and prevention programs, Disaster management programs, Occupational health programs
2. Health Epidemiologist:
   a. Public health and Dental public health
3. Health informatician:
   a. Public health and Dental public health
4. Health policy analyst:
   a. Public Health and Dental Public health - Area of expertise – advocacy and activist
5. Health consultant –
   a. Designing of public health and dental public Health programs
6. Health Administrator:
   a. Public health and Dental public health
7. Academician:
   a. Public health and Dental Public Health Professional educator

The detailed description of the roles, refer to Annexure 1

Process:

The Core group had an introductory session on the objectives of the project and objectives set for the day. They were then randomly allocated into PG group and UG group to work on the competencies. UG and PG group comprised of 5 IAPHD members each who have had a minimum of 10 years' experience as faculty. Furthermore, each member has had a background training in Health professional education with an additional qualification (Diploma/ Fellowship/ Degree).

Session 1:

The sub working groups reviewed the literature and globally accepted competencies, identified the roles and job opportunities for the Indian dental graduate and public health dentist. Based on these two factors, they arrived at the competencies for UG and PG students. All the team members had done independent review of literature and were very forthcoming during the deliberations. Each team identified the competency, sub competency and descriptors for the competency. This was then shared with all the members of the core committee. After receiving inputs from all members, the draft was further finetuned.

Session 2:

Session 2 was dedicated to identifying how well the recommended competencies can be fulfilled within the ambit of the curricular framework given by DCI. The UG and PG sub working committees regrouped the topics suggested by DCI into themes / categories. They then identified the topics which come under these themes/ categories. The sub working groups further identified the competencies which will be focused upon during the teaching – learning – assessment process for each theme / category. Both the groups then presented their views, discussed, and ratified the presentation. There was consensus among all the members.

The committee has recommended the following the critical competences for specialist in public health dentistry for practice in India.

1. Critical Thinking

CT 1.1: Assess risk for communicable and non-communicable diseases and select appropriate, evidence-based preventive interventions and strategies to promote health and control oral diseases at the individual and population level.

CT 1.2: Evaluate systems of care that impact oral health

CT 1.3: Design surveillance systems to measure oral health status and its determinants

CT 1.4: Demonstrate the ability to access and describe the use of population-based health data for health promotion, patient care, and quality improvement.

CT 1.5: Critique, synthesize and apply information from scientific and lay sources to improve health and oral health of population.

2. Inter-professional Collaboration

IPC 2.1: Communicate and collaborate with groups and individuals for process and implementation of disease mitigation strategies

IPC 2.2: Demonstrate the ability to participate in interprofessional care across the lifespan of people from diverse communities and cultures.

3. Leadership & Advocacy

LA 3.1: Develop resources, implement and manage oral health programs for populations

LA 3.2: Advocate for, implement and evaluate public health policy, legislation, and regulations to protect and promote the public's oral health

LA 3.3: Demonstrate the ability to communicate and collaborate with relevant stakeholders to advocate for policies that impact oral and general health for individuals or populations.
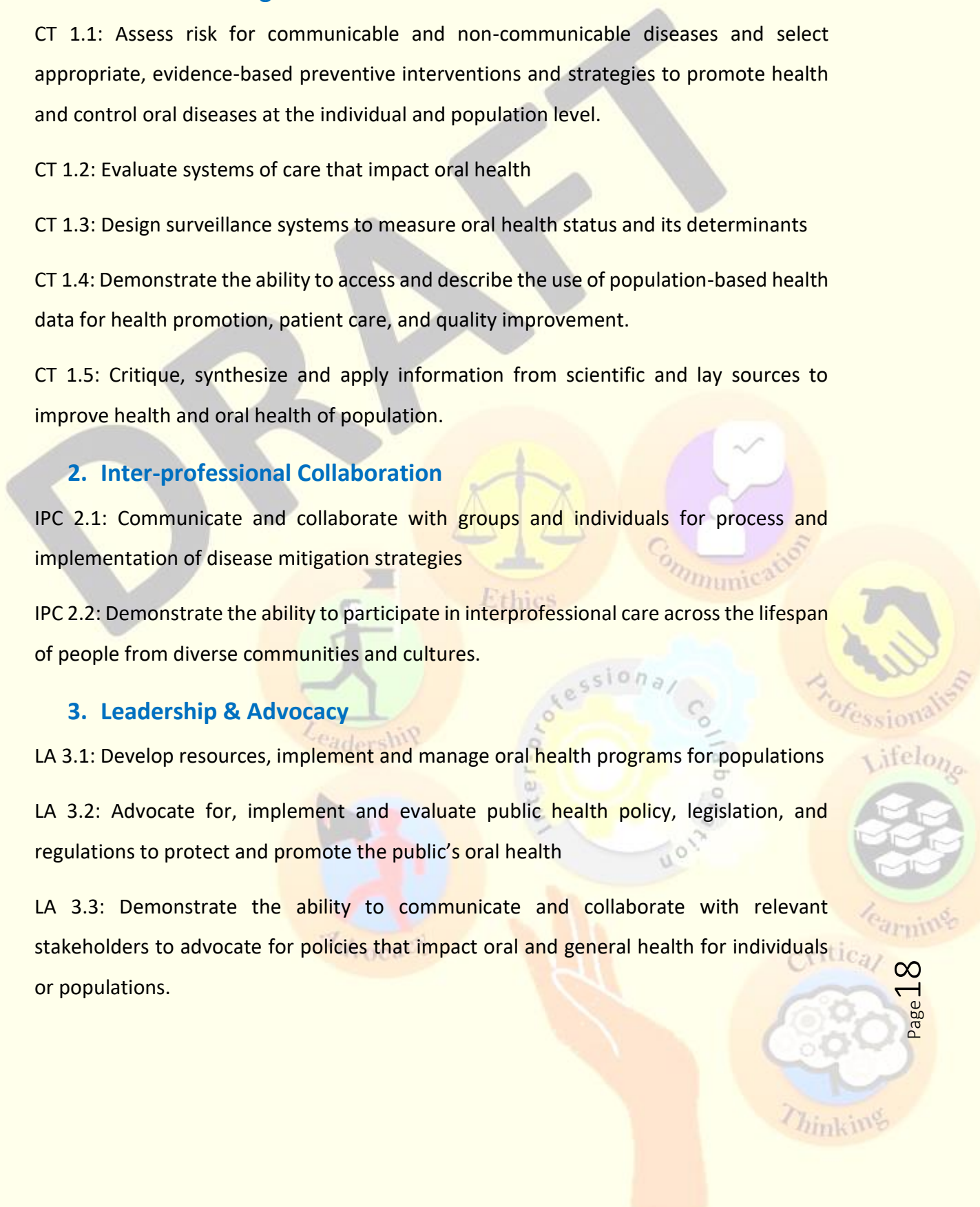
LA 3.4: Lead collaborations on oral and public health issues.

4. Professionalism

P 4.1: Demonstrate the ability to incorporate ethical reasoning and actions that promote culturally competent health and oral health care to individuals and populations.

P 4.2: Displaying appropriate professional behavior towards all members of dental team

P 4.3: Promote equity in access to, and quality of, health services.

P 4.5: Practice cultural sensitivity.

5. Lifelong learning

LL 5.1: Participate in continuing education programs and keep abreast of global strategies and policy developments.

LL 5.2: Develop a capacity for lifelong learning and professional growth in order to provide leadership that utilizes principles of dental public health.

By redefining the speciality of Public Health Dentistry from the Indian context, we have outlined the potential roles and competencies and thereby given clarity for ingraining the "sense of identity". The roles have been

defined to be applicable across public health and dental public health profiles. The competency statements support the roles and thus give specific directions regarding what competencies are to be fulfilled to play the different roles. The committee values the task and feels that by adoption of the definition, roles and competencies by the larger body, the dental public health movement in India will get direction and impetus to take the speciality to higher levels. This will also encourage the younger generation to scale up their employability opportunities and contribute extensively to the society in reducing the oral disease burden at global and local levels. It also supports the transition towards a competency based dental education program, currently on the anvil in India.

It is imperative that the defined roles and competencies be ratified by the national body and advocated to the Ministry of health and family welfare as well as the ministry of higher education for incorporation into national policy framework. We need to prioritise the competency-based training of public health dental postgraduate students to be fit for practice along the defined roles and responsibilities.
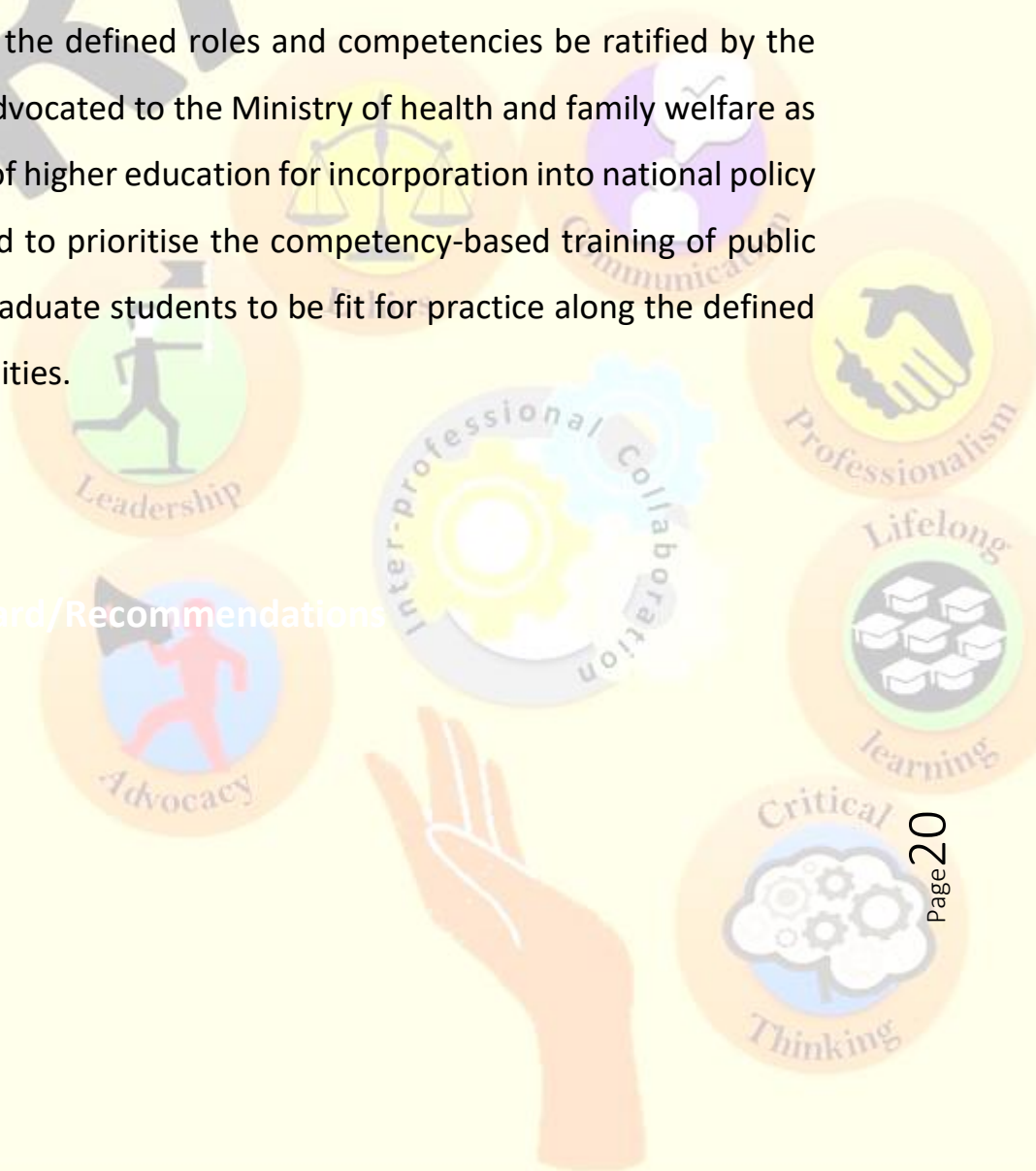
1. The findings of the commission to be placed before for the other IAPHD members for comments.

2. The definition, roles, and competencies of the public health dentistry for Indian context needs to be published in Journal of Public Health Dentistry for external validation, so the researchers and other can cite in their work.

3. IAPHD shall take forward with regulatory bodies like, DCI, MOH for implementation definition, roles, and competencies of the public health dentistry for Indian context.

4. IAPHD shall make promotion attempts, advocate the new definition, roles, and competencies of the public health dentistry for Indian context in other Public Health agencies, professional bodies.

1.   *Khanagar S, Naganandini S, Naik S, Rajanna V, Rao R, Reddy S. Self-perceived competency among postgraduate students of public health dentistry in India: A cross-sectional survey. J Indian Assoc Public Health Dent. 2014;12(2):106.*

2.   *Altman D, Mascarenhas AK. New competencies for the 21st century dental public health specialist. J Public Health Dent. 2016;76 Suppl 1:S18–28.*

3.   *Dental public health competencies. J Public Health Dent. 1998;58 Suppl 1:121–2.*

4.   *Greenwood LF, Lewis DW, Burgess RC. How competent do our graduates feel? J Dent Educ. 1998 Apr;62(4):307–*

5.   *Rafeek RN, Marchan SM, Naidu RS, Carrotte PV. Perceived competency at graduation among dental alumni of the University of the West Indies. J Dent Educ. 2004 Jan;68(1):81–8.*

6.   *Chandrashekar J, Vinita S, Joe J. Public healther: The true role of public health dentist. J Indian Assoc Public Health Dent. 2016;14(2):241–2.*

7.   *Lee LM, Thacker SB. Public health surveillance and knowing about health in the context of growing sources of health data. Am J Prev Med. 2011;41(6):636-40*

Key descriptor –

Public Health Dentistry

Promotion of health, Prevention and control of oral diseases,

Community efforts. Leadership and expertise in Organization of

health programs, Disease surveillance, Policy consultation

Roles of Public Health Dentists

1. Health Program Manager: Public Health and Dental Public Health: Area of expertise - Community based Health promotion and prevention programs, Disaster management programs, Occupational health programs
2. Health Epidemiologist: Public health and Dental public health
3. Health informatician: Public health and Dental public health
4. Health policy analyst: Public Health and Dental Public health - Area of expertise – advocacy and activist
5. Health consultant - Designing of public health and dental public Health programs
6. Health Administrator: Public health and Dental public health
7. Academician: Public health and Dental Public Health Professional educator

Critical Thinking

Interprofessional Collaboration

Leadership and Advocacy

Professionalism

Life-long Learning
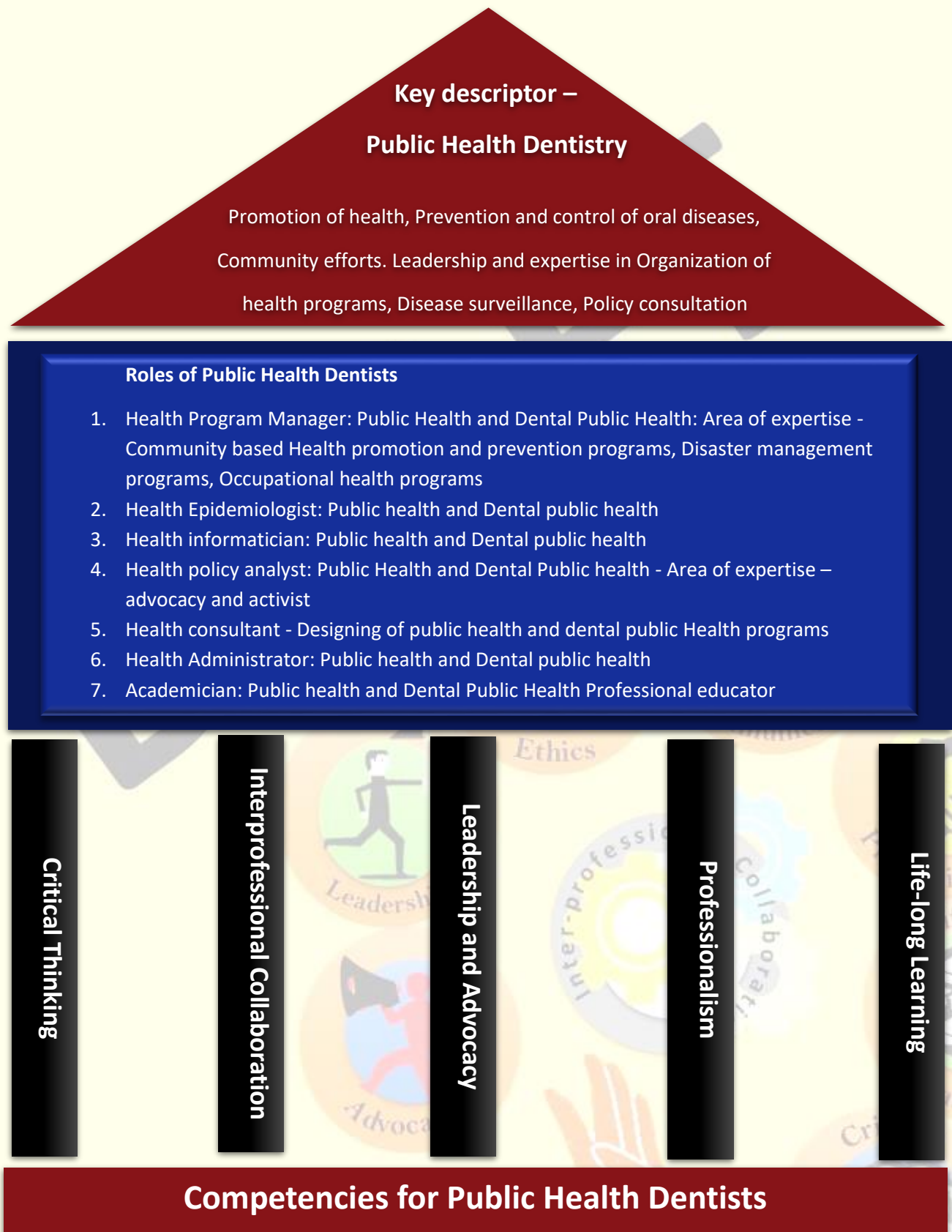
Competencies for Public Health Dentists

Annexures

Role	Expertise	Public Health EPA	Dental Public Health EPA
Health Program Manager	Community based Health promotion and prevention programs, Disaster management programs, Occupational health programs	Demonstrate ability to coordinate effective implementation of various national health programs as nodal officer using a multidisciplinary team for promotion of health and quality of life. Demonstrate ability to coordinate activities related to disaster preparedness and disaster management in an emergency while working closely with public safety officials, elected officials, non-profit organizations, and government agencies. Demonstrate ability to analyse work environments and procedures while coordinating effective implementation of occupational health programs.	Demonstrate ability to coordinate effective implementation of comprehensive oral health programs using a multidisciplinary team for promotion of oral health and oral health related quality of life in various settings (such as rural and tribal areas, schools, orphanages, residential homes for specially abled children, old age homes, urban slums etc).

Health Epidemiologist	Epidemiology of communicable and non-communicable diseases Systems research	Demonstrate ability to criti que, synthesize and apply information from scientific and lay sources to improve health status of population

Demonstrate ability to describe social and health care systems and determinants of health and their impact on health of the individual and population. Assess risk for communicable and non-communicable diseases and select appropriate, evidence-based preventive interventions and strategies to promote health and control diseases at the individual and population level Demonstrate ability to design surveillance systems to measure | Demonstrate ability to critique, synthesize and apply information from scientific and lay sources to improve oral health status of population. Demonstrate ability to describe social and oral health care systems and determinants of oral health and their impact on health of the individual and population. Assess risk for oral diseases and select appropriate, evidence-based preventive interventions and strategies to |

		health status and its determinants Demonstrate ability to plan, implement and evaluate systems of care that impact health	promote oral health and control oral diseases at the individual and population level. Demonstrate ability to design surveillance systems to measure oral health status and its determinants. Demonstrate ability to plan, implement and evaluate systems of oral health care that impact health.
Health informatician	Research methodology – Qualitative, quantitative and mixed methods Evidence based medicine	Demonstrate the ability to access and describe the use of population-based health data for health promotion, patient care, and quality improvement.	Demonstrate ability to collect and analyze population-based oral health data to promote oral health, patient care, and oral health related quality of life.
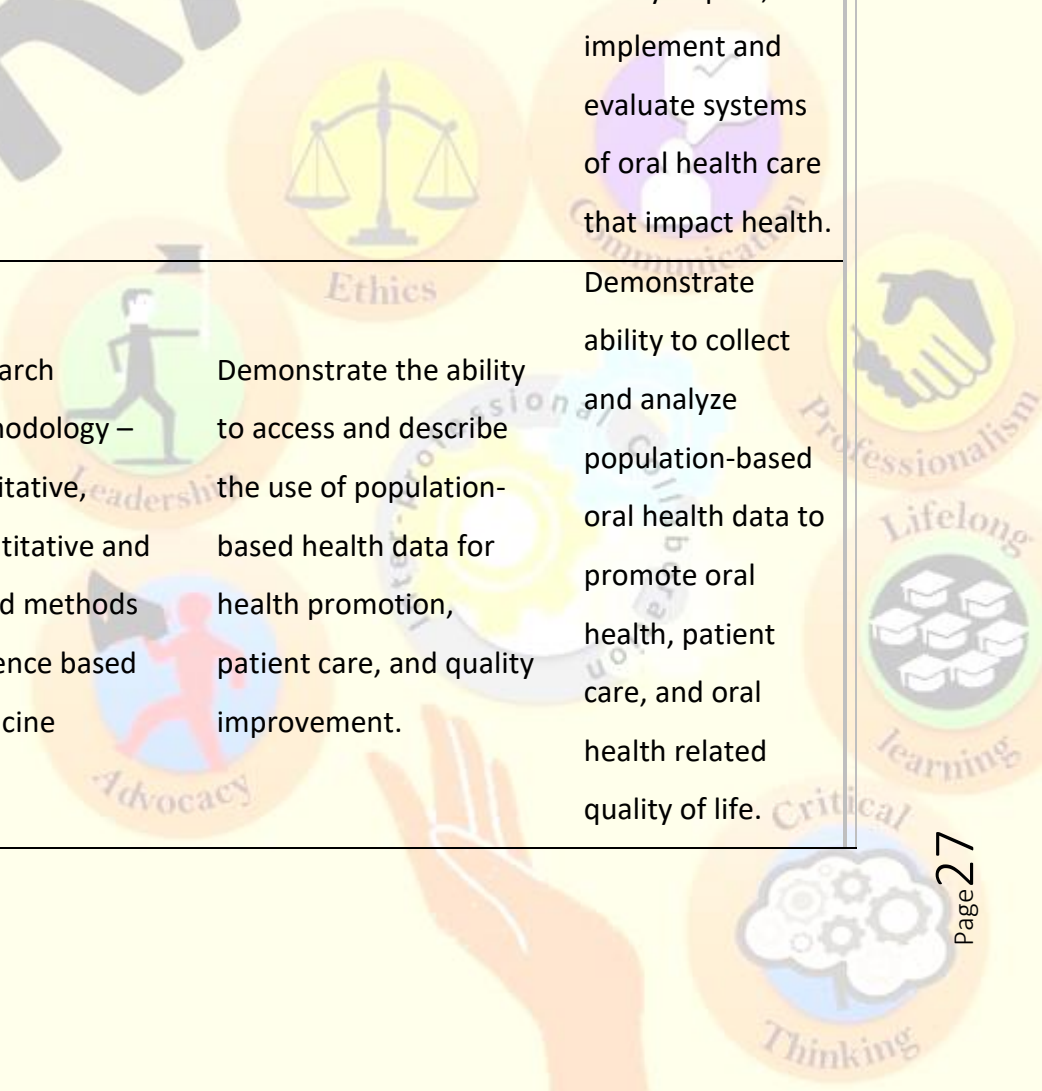
Health policy analyst	Health policy and advocacy	Demonstrate ability to communicate and collaborate with relevant stakeholders to advocate for policies that impact general health of individuals or populations	Demonstrate ability to communicate and collaborate with relevant stakeholders to advocate for oral health policies at different levels.
Health consultant	Health research Health Policy Designing health promotion programs	Demonstrate ability to conduct research to analyse health trends and review the existing health policies. Demonstrate ability to suggest modifications in the existing policies of government agencies, healthcare providers, and non-profit organizations to promote health of the population	Demonstrate ability to conduct research to analyse oral health trends and review the existing oral health policies around the world (globally). Demonstrate ability to share expertise in drafting oral health policies to government agencies, healthcare providers, and

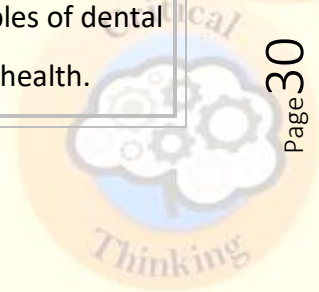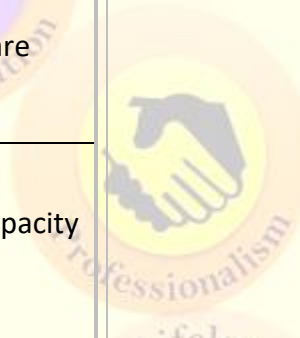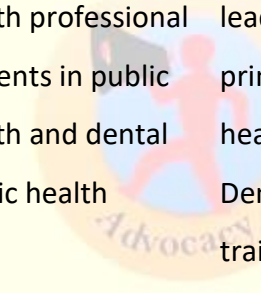|			
			non-profit organizations using evidence based strategies adopted in different countries.
Health Administrator	Human resource management Team based and interprofessional collaboration expertise	Demonstrate ability to communicate and collaborate with groups and individuals for process and implementation of disease mitigation strategies. Demonstrate ability to develop resources, implement and manage health programs for populations. Demonstrate the ability to participate in interprofessional care across the lifespan of people from diverse communities and cultures. Incorporate ethical standards in health programs and activities/	Demonstrate ability to communicate and collaborate with groups and individuals for process and implementation of oral disease mitigation strategies. Demonstrate ability to develop resources, implement and manage oral health programs for populations. Demonstrate the ability to participate in interprofessional oral health care across the lifespan

		Demonstrate ethical decision-making in the practice of public health. Display appropriate professional behaviour towards all members of health care team	of people from diverse communities and cultures. Incorporate ethical standards in oral health programs and activities/ Demonstrate ethical decision-making in the practice of dental public health. Display appropriate professional behaviour towards all members of health oral care team
Academician:	Professional educator for health professional students in public health and dental public health	Develop a capacity for lifelong learning and professional growth in order to provide leadership that utilizes principles of public health. Demonstrate ability to train undergraduate and postgraduate students in	Develop a capacity for lifelong learning and professional growth in order to provide leadership that utilizes principles of dental public health.

	basic concepts and application of principles of public health in regular academic programs. Participate in CDE programs and keep abreast of global strategies and policy developments.	Demonstrate ability to train undergraduate and postgraduate students in basic concepts and application of principles of dental public health in regular academic programs. Participate in CDE programs and keep abreast of global strategies and oral health policy developments.

Core Competencies	Sub-competencies	Descriptors
Critical Thinking	Critical Thinking, Problem Solving, Evidence Base Practice	Apply critical thinking and problem-solving skills to identify and address community oral health issues using evidence based practice.
Inter-professional Collaboration	Communication, Cultural Competency, Teamwork	Collaborate and communicate effectively with multiple stakeholders from diverse cultural background to enhance dental public health outcomes.

Leadership & Advocacy	Teamwork, Decision Making, Entrepreneurship	Ability to assume leadership position/roles and advocate policy changes related to Dental Public Health.
Professionalism	Professionalism, Ethical reasoning, Legal/Jurisprudence	Demonstrate professionalism and apply principles of ethics to address legal issues while addressing Dental Public Health needs.
Lifelong learning		Recognize the need for keeping oneself abreast with recent advances by adopting practice of lifelong learning.

Themes/Categories	Topics
Applied Basic Sciences	Applied Anatomy and Histology
	Applied Physiology and Biochemistry
	Applied Pathology
	Microbiology
	Oral Pathology
	Anthropology
	Applied Pharmacology
Principles and practice of Public Health/dental public health	Principles and practice of Public Health/Dental Public Health
	Inequalities in Oral health
	Social and Behavioural change
	Environment and Health
	Principles of Social Research
	Nutrition
Epidemiology	Principles and Methods of Oral Epidemiology
	Measurement and distribution of oral diseases and conditions – Dental caries, Periodontal diseases, Oral Cancer, Dental Trauma, Enamel Defects, Dentofacial irregularities, Tooth wear
	Trends in Oral Diseases
	Disease Surveillance
	Analysis of community oral health status
Research Methods & Biostatistics	Research Principles
	Research Designs
	Reviewing literature
	Evidence based dentistry
	Basic and Advanced biostatistics
	Health Informatics
	Advanced operational research

Health/oral health promotion and Prevention	Principles of Oral Health Promotion
	Oral health Education
	Practical aspects of Oral health Promotion
	Fluorides
	Prevention of oral Diseases
	Tobacco cessation
	Diet Counselling
	Social determinants
	The management of Change
Health Systems	Principles of organization and models of Health care systems
	Access to health care systems
	The primary health care approach
	Health Workforce
	Financing dental care
	School oral health programs
	Principles and Practice of Health economics
	Healthy Dental Practice – infection control & biomedical waste management
	Role of Non-Governmental Organizations in health care
	Hospital Administration
	Public Health practice & Administrative systems in India
	Practice management
	Financial management & budgeting
	Effective advocacy and communication in Public health/dental public Health
Health programme, Policy and Planning & Evaluation	Oral health needs assessment
	Programme Planning
	Evaluation of Public Health programmes
	Understanding Health policy, process and planning

	Translating Research into policy and health advocacy
	Current issues in Health Policy – National & International
	Public Health leadership
	Evaluation of Programmes
Law and ethics	Principles of Bioethics
	Ethics and responsibility in dental care
	Public Health laws
	Public Health Ethics
Comprehensive Oral health Care	Comprehensive risk assessment
	Comprehensive oral health care

Competency and sub competency and descriptors

COMPETENCY	SUB-COMPETENCY	DESCRIPTORS
Patient centred care	Practice management Comprehensive oral health care	Establishing and managing dental practice as per the requirements mandated by law Will be able to evaluate and apply the principles of an evidence based approach to clinical care and decision making necessary for patient care to provide preventive, promotive, curative, rehabilitative, palliative, and holistic oral health care with compassion
Professionalism and ethics	Professionalism Lifelong learner Ethics Humanities	Professional who is committed to excellence, ethical, responsive and accountable to patients and profession and is a self -directed lifelong learner
Communication skills interpersonal and Leadership	Communication skills Interpersonal skills Leadership	Enhance all soft skills, in particular communication and inter personal skills with all stakeholders. To focus on being a team worker and developing leadership skills
Interprofessional collaboration and social responsibility	Social responsibility Interprofessional collaboration Advocacy Administrative skills	Will be able to have patient service and research activities towards addressing the felt oral health needs and priority oral health concerns of the community through inter professional collaboration

Critical thinking and research	Evidence based dentistry Health research and informatics Critical thinking	Will be able to practice evidence-based dentistry and demonstrate critical thinking skills like reasoning and objective analysis for problem solving through reflective practice

Themes/ categories	Sub themes	Topics
Introduction to Dental Public Health		Introduction to public health and dental public health General overview of dentistry Introduction to public health What is Dental Public health? Functions of dental public health Tools of dental public health Difference between Clinical dentistry & dental public health Behavioural sciences in dental public health – sociology, psychology and anthropology Health and disease
Research Methodology	Research Designs	Introduction to epidemiology What is epidemiology Tools of epidemiology – rate, ratio, proportion Measurements in epidemiology – incidence, prevalence, Odd's ratio, relative risk What is sampling and sampling methods Research designs with application of ethics, Evidence Base & biostatistics Computer literacy Overview of biostatistics Investigation of epidemic

	Survey, Planning & evaluation	Survey
		Oral health survey
		Screening & surveillance – iceberg of disease, risk groups, signs & symptoms, detection methods including sensitivity & specificity
		Oral health survey assessment form
		Planning, program planning, problem solving
		Evaluation
Health promotion	Health Promotion	Approaches to health promotion
		Levels of prevention
		Health education
		School health promotion incorporating incremental dental care & comprehensive dental care
	Tobacco cessation Counselling	Tobacco cessation Counselling
Epidemiology of oral diseases	Epidemiology of Dental Caries	Epidemiology of dental caries
		What is public health problem?
		Prevalence of dental caries
		World, India & state statistics
		Gender distribution of disease
		Age wise distribution of disease
		Trends in dental caries
		Etiological factors – epidemiological triad, diet & dental caries, nutrition and oral health
		Clinical signs
		Measurement of dental caries

		Levels of prevention for dental caries – Health Education, Oral Health Promotion, Diet Counselling, Recall
		Primary level of prevention of dental caries
		Fluorides – mechanism of action, systemic [milk & salt] and topical fluorides
		Pit and fissure sealants
		Caries vaccine
		Caries detection tests
		Secondary level of prevention of dental caries
		Preventive resin restoration
		Atraumatic restorative technique
	Epidemiology of other oral Diseases	Epidemiology of periodontal diseases
		Prevalence of periodontal disease
		World, India & state statistics
		Gender distribution of disease
		Age wise distribution of disease
		Trends in periodontal disease
		Etiological factors – epidemiological triad
		Clinical signs
		Measurement of periodontal disease
		Levels of prevention for periodontal disease including plaque control at appropriate levels
		Epidemiology of Oral Cancer
		Prevalence of oral cancer
		World, India & state statistics
		Gender distribution of disease

		Age wise distribution of disease
		Trends in periodontal disease
		Etiological factors – epidemiological triad, forms of tobacco
		Clinical signs, precancerous lesions[prevalence, rate of malignancy] &Oral cancer detection methods
		Levels of prevention for oral cancer
		Epidemiology of Fluorosis
		History of fluorosis
		Water Fluoridation and defluoridation
		Indices to record fluorosis
5. Health Care Delivery System	Mechanisms of health care delivery system	System of health care delivery including international health agencies and dental practice management
		Manpower issues in health care delivery
		Finance in health care delivery system
	Health care delivery across the world	Health care systems in various countries across the world – US, UK, Scandinavian countries, China
	Health care delivery in India	Organizational hierarchy of the health care delivery system in India
		Primary health care

		Indian scenario of the dental care delivery system– system, manpower & finance IDA, DCI, State Dental Council
6. Dental Practice Management	Dental Practice Management	Establishing and managing dental office Clinical ethics Medical jurisprudence Occupational hazards COPRA Finance and auxiliaries – Indian scenario Regulatory mechanism for dental practice Patient management systems
7. Environment & Health	Environment & Health	Water Noise & air pollution, Disinfection & sterilization methods Waste disposal – general & biomedical waste disposal