

**DENTISTRY IN HIGHER EDUCATION FROM TRADITIONAL TO NEW PARADIGM:
An Innovation of Oral and Dental Health Community Services Faculty Dentistry
Gadjah Mada University in Rural Areas**

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Abstract

Indonesia is one of The Association Southeast Asian Nation (ASEAN) members. The population are 202 millions inhabitants and isn't distributed evenly in 13.000 islands. There are only 11 faculties of dentistry, but 72% located in Java and Bali. Every year about 500 dentists passed from faculty of dentistry in Indonesia. According to that condition, it's very difficult to manage of oral and dental health (ODH) in rural areas. The problems is in less of oral dental health in rural population. The objective of the study is teaching on self-help of rural community in ODH, and giving dental student experience in rural areas.

The model of ODH community services (ODHCS) to develop in collaboration with an alumni networks, industrial groups and local government. The program contents to improved of ODH promotion and prevention, oral dental services, survey of oral disease, demand and participation of rural areas of ODH, and ODH management.

The result of the study shows, the ODHCS in many rural areas is very important to be helping both on student quality of teaching and learning in dental higher education and to improved of ODH of rural population. The conclusion is the collaboration activities of ODHCS in rural areas is matching in island country, and in less of ratio between dentist and population.

Key words: higher education, dental health promotion, networking, rural area.

Introduction

Gadjah Mada University (GMU) has 18 faculties, one of them is Faculty of Dentistry. GMU was declared at 29 December 1949 in Yogyakarta Special Province, Java Island. In Indonesia has 12 faculties of dentistry, 7 governments and 5 privates. Every years about 500 dentist passed, and later Indonesia has about 16.000 dentist. If number population of Indonesia is 202.000.000, therefore the ratio between dentist and population is about 1: 12.625. Furthermore, another supporting of ODH is dental nurse. The data of number of Dental Nurse was passed about 4.325 on 22 School of Dental Nurse in Indonesia. ^(1, 4, 11)

According to Yogyakarta Special Province, which is lies between 70° 33' - 8° 12' south latitude and 110° 00' - 110° 00' east longitude of GW. It has area 3.105.80 km² and it's only 0,7% part of Indonesia. Number of population is 3.000.000 and population density about 1.034.31; number of population growth is 1,39% per year. The biggest group of population is 10-20 years age. Population in urban area only 27,63%, remaining it, lies in rural area. ^(1, 4, 5)

Background

As we know that in Yogyakarta has many facilities of health services, 3 biggest hospitals, and many little hospitals, special hospital and Health Community Center (*Puskesmas*). Furthermore, is there three faculties of medicine, one faculty of Dentistry. According to data above, student of Faculty Dentistry Gadjah Mada University in less of patient to be supporting of curriculum, especially on psychomotor aspect. Furthermore, in rural areas in less of Dentist, because most Dentist works in big city. To solved that problem, Oral Dental Health Community

Services Program outside Java island, as in Sumatra, Borneo, Celebes, Bali, Lombok etc., to be develop an Oral Dental Health Community Services (ODHCS).^(5, 10)

Further consideration should be given to the fact that total population of Bali and Lombok island. In Bali, total population (urban and rural) is 2.895.649, whereas in rural 1.902.039 population. Beside that, total population in Lombok is 2.958.541 (rural); 687.172 (urban).^(2, 3)

So far, data of oral disease both in Yogyakarta and in Indonesia scope showed on table 1 and table 2.^(11, 13)

Table 1. Number of percentage five groups an oral disease in Yogyakarta of 0-70 years age group⁽¹³⁾

Numb.	Disease	%
01	Dental caries	11. 12
02	Pulp and periapical disease	39. 32
03	Gingivitis and periodontal disease	23. 46
04	Malnutrition	15. 97
05	Oral disease	10. 10

Widijanti (2000)

Table 2. Morbidity of Five Dental Diseases in Community Health Center (*Puskesmas*) in Indonesia⁽¹¹⁾

Numb.	Disease	%
01	Dental caries	16. 90
02	Pulp and periapical disease	33. 02
03	Gingivitis and periodontal disease	25. 85
04	Dental disturbance, and supporting tissue disease	12. 42
05	Oral and salivary glands disease, another diseases	11. 80

Ditjen.Binkesmas (1998)

Public opinion or traditional paradigm in Oral and Dental Health

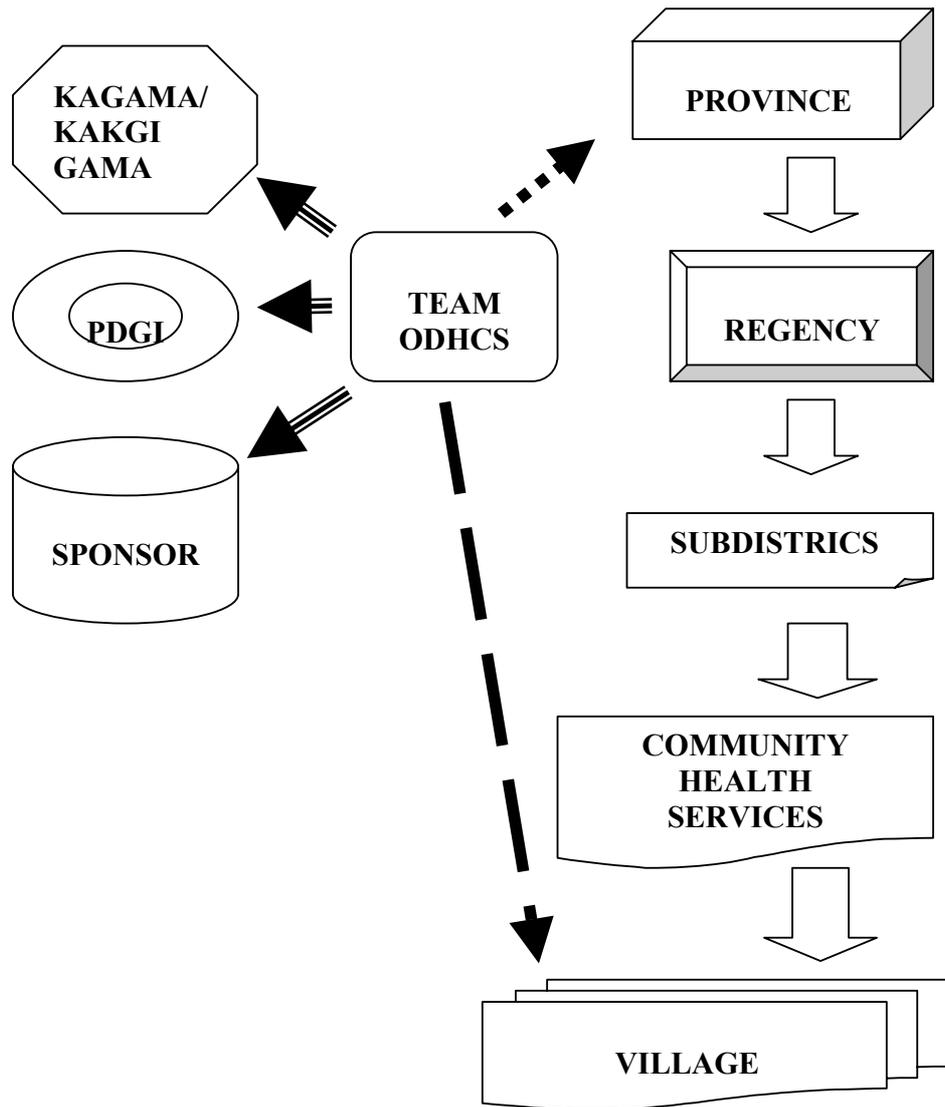
1. Oral and Dental health is not important
2. Oral and dental health is expensive
3. Public assume that oral and dental health did not cause die
4. Going to dentist, when she or he get sick
5. Extraction on upper teeth to become blind.

New paradigm in Higher Education of Faculty Dentistry GMU⁽⁸⁾

1. Be anticipation on science-technology and biomedical engineering
2. Autonomy and Quality Assurance
3. Networking and promotion
4. Collaboration with industrial groups should be sharing of education development

Like Asean country, inhabitants lives in the rural area more bigly than in urban. About 61,8% live in the rural area. In Thailand is 75-80% more bigger than Indonesia.⁽⁶⁾ The common structure of village (*desa*) in Indonesia is divided for many *Dusun*, *Rukun Warga*. (RW) and *Rukun Tetangga* (RT). The chief of village is *Lurah*.

**Implementation The Model of
Team Oral and Dental Health Community Services (ODHCS)
Faculty of Dentistry Gadjah Mada University**



Note:

- KAGAMA : Alumni of Gadjah Mada University Association
- KAKGIGAMA : Alumni of Dental Association of Gadjah Mada University
- PDGI : Indonesian Dental Association

Step by Step of Oral and Dental Community Services

A. Preparation

1. Make proposal, as the theme, mission, planning, goal, budgeting and organization.
2. Allocate finance and personal needed for operating program
3. Discussion and coordination with faculty and local government
4. Direct concern sponsor and networking to work according to the planning
5. Evaluate whether the goal have been achieved in order to formulate more efficient and effective.

B. Implementation

1. Coordination with Health Community Center (*Puskesmas*)
2. Dental and oral health promotion, education and discussion
3. Dental and oral health prevention
4. Dental and oral health survey
5. Dental and oral therapy

C. Report and Evaluation

An advantage of DHCS for Dental Student

1. Managerial aspect
2. Organization aspect
3. Entrepreneurship
4. Requirement of patient cases
5. Psychomotor aspect of education
6. Communication rural area with variation culture
7. Be known in original community
8. Be known an oral and dental disease in rural areas

Result and Discussion

There are many location for ODHCS for a long time in outside Java, one of them is the Team worked in Bali and Nusa Tenggara Barat Province especially in Lombok Tengah and Lombok Barat Regency in 2001.⁽¹⁰⁾

The participation of inhabitant is more enough both to followed that program (table 3), and support many cases for psychomotor aspect of the dental student education for example: examination, therapy, extraction and filling. Another program (table 4), many Oral Surgeon (specialist on oral surgery degree) should be done labioplasty for Cleft lip cases or palatoplasty for Cleft palate cases. Oral surgeon worked in Health Community Center or Hospital Regency/ Hospital Municipality.^(10,12)

In fact, the health complaints during the previous month according to ten type and rank of disease in Indonesia of rural areas in 1998 as follow: (1) common cold, (2) cough, (3) fever, (4) headache, (5) diarrhea & vomiting, **(6) toothache**, (7) shortwindedness, (8) asthma, (9) senility and (10) convulsion.⁽¹¹⁾

Table 3 Number of patient and cases of ODHCS in Lombok Tengah and Lombok Barat Regency , Nusa Tenggara Barat Province (NTBP) ⁽¹⁰⁾

Subdistrict	Elucidation		Examination	Therapy	Treatment	
	Activities (time)	Number of patient			Extraction	Filling
Kediri	7	3.300	422	422	100	-
Kuripan	6	400	438	438	115	-
Batukliang utara	3	779	632	632	98	10
Batukliang	6	1.000	200	200	30	-
Jonggat	5	2.050	292	292	240	-
Gonjak	4	551	702	702	114	-
Pringgarata	16	2.505	490	490	96	-
Kopang	10	761	98	98	41	-
Praya	14	2.120	210	210	262	-
Total	71	13.466	3.484	3.484	1.096	10

Laporan Pelaksanaan PMTS 2001 (Report of Im,plementation PMTS 2001)

There are many diseases in oral region as neoplastic disease (tumor, malignancies), viral infection (mumps), HIV, salivary glands disease (parotitis), disease of bone (fibrous dysplasia), tunica mucosa disease (papiloma, epulis), genetic disease (cleft lip), etc. ⁽¹²⁾

Table 4 Number of Cleft Lip (Labioschisis) and Cleft Palate (Palatoschisis) surgery in Lombok NTBP and Bali Province ⁽¹⁰⁾

Numb.	Place	Patient	Female	Male	< 5 years	>5 years
1	Jembrana (Negara)	11	4	4	5	3
2	Mataram	8	3	5	4	3
3	Praya (Loteng)	18	11	7	8	10
Total		37	18	16	17	16

Laporan Pelaksanaan PMTS 2001 (Report of Im,plementation PMTS 2001)

Conclusion

The result of the study shows, the program of Oral and Dental Health Community Services in rural areas is very important to be help both on student learning, experience of psychomotor aspect and encourage of oral and dental health education of inhabitants. Beside that, inhabitants will be self-help and be improving an oral and dental health condition.

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