International Journal of Civil Engineering and Technology (IJCIET)
Volume 10, Issue 03, March 2019, pp. 2171–2179, Article ID: IJCIET_10_03_216
Available online at http://iaeme.com/Home/issue/IJCIET?Volume=10&Issue=3
ISSN Print: 0976-6308 and ISSN Online: 0976-6316

INVESTIGATION OF PREREQUISITES AND EXPECTATIONS OF NATIONAL REGISTRY OF OBESITY: PEST AND SWOT ANALYSIS OF CURRENT SITUATION IN KAZAKHSTAN

A. Khassenova, G. Tuleshova, M. Sholanova, S. Pshembayeva, A. Ismailov, A. Abduldayeva*, S. Tardjibayeva
JSC Astana Medical University,

A. Durmanova
Republican Diagnostic Center
*Corresponding Author

ABSTRACT

Background: *The growth of overweight and obesity remains public health concern and reflects the overall low ability to achieve and maintain a healthy body weight [1][2][3]. Being overweight and obese is associated with risk of numerous comorbidities which are leading causes of disability and death, such as cardiovascular disease, diabetes mellitus, and many types of cancer.*

Methods: *Study were based on legislative documents, economics and statistics reports.*

Results: *According to World Health Organization (WHO) obesity rate in Kazakhstan is about 21% of population. In 2012, Kazakh Academy of Nutrition promulgated the results of national research in overweight and obesity situation among adults and children. The prevalence of overweight and obesity among adults was 46.3 percent and 21.8 percent, respectively [4].Comparing with the similar research proceeded in 2002, the prevalence of pathology increased by 25 percent. However, these figures are questionable, as existing information systems are not adapted to proper registration patients with overweight and obesity so this figure can be increased even doubled.[5][6].*

Conclusion: *It is obvious that current situation requires effective activity for prevention and control of overweight and obesity among population. Establishing of national registry of obesity is an effective measure for provision obesity management covering all population, and timely interventions and intersectional cooperation are keys to curb the trend toward overweight and obesity in Kazakhstan.*

Key words: Natinal Registry, obesity, PEST analysis, SWOT analysis.

Cite this Article: Vlada Melnik, The Damascene Architecture of the Post-Ottoman Period and the Influence of European Culture (Baroque style) on the Damascene Traditional House (Post-nineteenth century - the Beginning of the Twentieth Century), *International Journal of Civil Engineering and Technology* 10(3), 2019, pp. 2171–2179.
http://iaeme.com/Home/issue/IJCIET?Volume=10&Issue=3

1. INTRODUCTION

Obesity is costly for all levels of health sector so primary care includes dynamic monitoring outpatient treatment of comorbid diseases, and secondary care has great number of hospitalization due to obesity comorbid complications such as hypertension and diabetes type 2 (D2T). The direct medical costs attributable to overweight and obesity amounted 65$ for primary care meanwhile outpatient and inpatient obesity comorbidities treatment requires 159$ and 1566$ respectively [7].

Health care need a tool that will allow to use a prospective approach to prevent increasing obesity and potential of cost saving to health system. One of fundamental of prevention of obesity comorbidities development is the timely management of weight loss. Effective weight loss programs lead to reducing costs, corresponding safety of quality of life.

National Register is one of the most efficient tool to keep data and collect information about new cases of obesity, and if exploded properly, it can yield predominant results.

2. METHODS

PEST analysis was examined to demonstrate background of political economic sociological and technological issues [8] that make foundation for obesity register as prerequisites for implement of National Registry of obesity. Study were based on legislative documents, economics and statistics reports.

SWOT analysis was employed for resources of primary care as difficulties to manage obesity prevalence are started on the stage of proper registration and connection between health and social services [9][10][11] A cross-sectional qualitative study aimed to reveal strengths, weaknesses, opportunities, and threats of primary care level that should be considered in obesity information system implementation. Overall, 96 general practitioners(GP) and 10 social workers(SW) units in 6 outpatient Astana hospitals were observed in 2018, during 6 months, with and perspectives on two main components: registration process of patients with overweight and obesity and content of weight loss recommendations given by specialists. Also 96 GPs were interviewed with self-structured questionnaire which comprised 10 questions about algorithm of guiding patients with overweight and obesity.

3. RESULTS

The root of rising obesity rate lays in complex spanning institutional, economic, psychological, and health factors. *Political determinant* of obesity management consists of legislative documents issued by Government and regulated by Ministry of Health. Although noncommunicable disease prevention-related policies is always present in National Governmental Health programs [12][13] there are still small number of obesity control programs have been implemented. In 2016, based on the recommendations of WHO experts, work began on the development of a public health service that, in accordance with international experience, will combine the functions of managing infectious and noncommunicable diseases, promoting healthy lifestyles, nutrition, and sanitary and

epidemiological well-being of the population. [14] However, no effective measures to control obesity prevention and treatment process were proposed.

Main issue of Kazakh healthcare is domination of inpatient treatment with vast consumption of funding. Unequal finance distribution causes hospital-based obesity management, annually increasing demand in care in hospital setting. According to statistics data in 2017, the number of inpatient and outpatient hospitals is 273 and 580, respectively. Moreover, the number of provided medical services were 43 and 57 percent respectively that demonstrates overloading of primary care. [15] Along with this, general medical practice in primary health care and health-saving technologies in preventive work with the population are developing poorly [16] Primary care faces the problems of insufficient preventive orientation of primary health care, including work on family planning, increasing public awareness about the formation of a healthy lifestyle. [17][18]

Patients with obesity and metabolic syndrome manifestations require constant monitoring from primary care responsible for coordinating treatment, and sustaining gained results. Current situation reveals overload of primary care organizations, general practitioners suffer shortage of time, do not have the opportunity to conduct patients with obesity properly, limited only by recommendations. [19] The healthy lifestyle service also has no intensities to monitor the implementation of medical recommendations.[20] The diagnosis of obesity is recorded in information systems as a secondary or tertiary with the domination of another disease, and the state of overweight is not recorded at all [21] That makes official obesity data questionable, as population studies indicate that substantially more patients have overweight and obesity, but not identified due to no complains.[22] It is also necessary to mention low availability of obesity related specialists, when endocrinologists' waiting list is one-two months, due to established limitation of staff positions. Mass media has few agitations for physical activity, while there are no taxes for media advertisement of junk food [23]

*Economics*goes close with policy so funding of Health Care system set for only 2,5 % from Gross Domestic Product (GDP – 162 887,4mln $).[24] As the vast majority of health expenses is going to inpatient treatment, so primary care suffers from lack of finances. In comparison with average nominal cash income per capita (254.8$) in Kazakhstan GPs get one of the least salary (151.4$). At the same time, the responsibilities and functions of GP are incomparable with bank officers, for instance, who get one of the highest salaries. Outpatients' clinics use extra incomes from diagnostic services but it is still not enough for financial motivation.

Besides, in the past two decades economic transformation caused massive decrease in daily physical activity and calories expended. [25][26] The energy value of the food ration of the population of Kazakhstan increased due to improved access to food, and for 10 years (2005-2015) one person average daily consumption became 3140 kcal, which is 29.7 percent higher than the 2005 figure (2420 kcal).[27] Current economic trends enforce people to migrate from rural places to big cities and rising urbanization leads to obesogenic behavior such as low physical activity and cheap junk food consumption [28]. Food availability is discussable point. Local healthy food is expensive even for middle-income citizens as Kazakhstan has vast import of food from Russia and China with low quality and high-energy –density. The result is steady increase in body fat over time.

Overviewing *sociological* determinant, the main barrier to keep good fit is traditional belief that fatness is a sign of happiness and abundance [29][30]. Furthermore, national food culture presents low index of proteins and vitamins and preference to carbohydrates. Changing food habbits replaced home food by fastfood which is broadly defined by a high intake of refined carbohydrates, added sugars, fats, and animal-source foods [31].In 2018,

new sanitary rules and regulations on school catering entered into force where selling carbonated sugary drinks and fast food banned in schools but out-of-school junk food consumption continues to take place. Annually the sale of sugar-sweetened beverages increases on 16,8-17,8 per cents and about 13,8 per cent of young people daily take them [32].

Despite people realize all circumstances of obesity and its comorbidities, major number of patients continue to ignore GPs recommendations in diet, active exercises, healthy leisure management [33]. Obesity is not blamed by society, even oppositely is considered a symbol of success status. Sports achievements are not widely declared and popularized so people do not try themselves in sports. Growth of incomes have also influenced on peoples demands when most prefer less energy-intensive sectors, such as service and manufacturing [34]. Quantity of automobiles tripled in 15 years that means three times more people drive cars more than walk on foot [35].Technological achievements have reduced work-related energy expenditures both on working places and housework. Traditional physical activity related occupations such as cleaners, chef cooking, agriculture workers had been supplied with machines that allows to reduce both labor intensity and labor time. Electronic gadgets had almost replaced children's outside games that had also contributed negative impact on children's physical activity levels. Popularity of gadgets makes adolescents spend their time at home instead of gymnastic exercises and sports, and school and extracurricular physical activities are almost nonexistent [36].

Regarding to *technological* aspect the main problem is not complete registration of overweight and obese people due to particular features in healthcare information system. The database can identify only the primary diagnosis, which is usually one of obesity comorbidities. Therefore, hypertension and diabetes mellitus present the main diagnosis and even downloaded obese status does not go to official calculation and does not highlight in system. That makes statistical data of obesity not correct, and as for patients with overweight their data are not downloaded at all. In addition, there is no E-connection between hospitals and social service centers so patients after getting weight loss recommendations are easily lost.

SWOT analysis provided reveals real healthcare resources for fighting with obesity and its complications and define expectations to realize what exactly obesity register is able to improve in existing situation.

To identify the key SWOTs that are relevant for the primary care of patients with overweight and obesity the observational study were developed. A total of 3106 patients with overweight and obesity were identified on GP and social workers admission (28.2% and 71.8% respectively). Of these, without complains on health state and with health problems (37.8% and 62.2% respectively). After all only 57.9% were included in the information base, where obesity recorded as secondary diagnosis. Table 1 shows the results of the observational study.

Table 1. Distribution of patients with overweight and obesity on GP admission.

	Overweight	**Obesity**	**Total**
Patients	875(28,2%)	2231(71,8%)	3106
BMI, mean	28,01±0,92	39,32±4,78	
Comorbidity (-)	474	212	686
Comorbidity (+)	401	2019	2420
Medicalcheck-up	663	511	1174
Health-service seeking	212	1720	1932
Admissionduration	9'40"	13'20"	
Registed in outpatient information system	0	1799(80,6%)	1799(57,9%)

Weight loss recommendation (diet, physical activity)	51(5,8%)	2231(100%)	2282
Weight loss recommendation(drug prescription)	0	2089(93,6%)	2089
Weight loss recommendation (bariatric surgery consultation)	0	3(0,13%)	3

Based on admission reason, admission duration, recommendation strategy and outpatient database registration the strengths, weakness, opportunities and threatens were classified in table 2.

Table 2. SWOT analysis of current approaches to obesity issue.

Strengths	**Weakness**
Free medical services for patients with noncommunicable diseases; Implement of social services in primary care since 2011.	Insufficient duration of GP admission due to overloaded primary care units; Low GPs' awareness in modern approach to obesity treatment (0,13% of bariatric surgery consultation); Low facilities and motivation to control and monitor recommendation performance by patients; Low patient's responsibility for saving their own health; Underestimation of overweight and obesity identification in information base
Opportunities Patients included in National Registry could be easily managed with the primary focus of weight loss; Weight management strategy prevents obesity comorbidities development and leads to decreasing of their manifestations; Easy option to evaluate medical specialists efficiency in conducting overweight and obese patients; Enforcing interaction between in- and outpatient hospitals; Easy option for sharing new achievements in obesity treatment.	Threatens Underestimated overweight and obesity status leads to growing incidence of noncommunicable diseases; Patients with obesity comorbidities have highly demand of medical services especially in primary care.

Weight loss recommendations is a part of conventional practice of GPs with the assistance of social services but usually there is absence of feedback about outcomes due to routine work of medical professionals [37]. Usually early features of comorbidities stay invisible for patients for long time and GPs face occurred complications of obesity and undesirable outcomes after self-treatment. The benefits of monitoring patients with overweight and obesity lie in the intention to control the performance of weight loss recommendations by patients, identify patients with comorbidity forming, and indicate the efficiency of prescribed treatment.

Perception of obesity is still critically low as there is a lack of crucial perception of health state by medical specialists and obese patients. Registry will allow to visualize number of patients, dynamic of weight gaining and loss. Weight profiles can be used to evaluate the term of obese state, efficiency of treatment and encourage patients to follow weight loss program.

It will demonstrate the rates of efficiency and reveal advantages and disadvantages, identify which patients will respond to this methods. PEST/SWOT analysis around the management of obesity in public health and clinical medicine reveals the outcomes of existing barriers impending the process of regulation situation with obesity (Table 3).

Table 3.

PEST/ SWOT	Strength (S)	Weaknesses (W)	Opportunities (O)	Threats (T)
Political aspect (P)	Guaranteed medical services for patients with noncommunicable diseases.	Lack of definite obesity-oriented regulations	Declaring responsibility for health saving	Low life expectancy
Economic aspect (E)	High number of inpatient hospitals for obesity comorbidities treatment; High level of secondary and tertiary health care in each district centers (cardiosurgery, oncology, rehabilitation)	Unequal fund distribution between in and outpatient hospitals.	Effective weight loss programs reduce health costs. Planning of drug provision in accordance with real numbers of obesity Financial motivation for medical specialists and patients	Low productivity due to obesity related noncommunicable diseases
Social aspect (S)	Implement of social services and disease management program	Low attitude to obesity;	Reducing obesity-related disability	Low quality of life.
Technological aspect (T)	Implement of bariatricportal	Improper download obesity data	Visualize obesity rate and prevent comorbidities development	Real number of obesity could be higher

The health care system in Kazakhstan is almost universal and generally free of charge, covering all citizens. National Registry of Obesity should be based on existing administrative records in Kazakhstan health care organizations and should include all patients with overweight and obesity who were diagnosed, monitored, or treated for the disease anywhere.

Difficulties to manage obesity prevalence are started on the stage of proper registration and connection between health and social services. A key issue of National Registry of obesity calls for all health care services to pay attention to weight control and accept an important role in obesity prevention. In this time health care system has enough structures to curb the trend toward overweight and obesity. Information database allows mobilizing health care resources and coordinating effective antiobesity policy. National registry will unify outpatient units for obesity identification, inpatient units for registration obesity complications, health and social units for sustaining rehabilitation measures.

Building on previous experience of diabetes registry, the focus of Obesity registry is on perfuming a national obesity prevention and control action plan. Increased attention to overweight and obese patients can reduce comorbidity development and costs regarded to them.

The benefits of monitoring patients with overweight and obesity lie in the intention to control the performance of weight loss recommendations by patients, identify patients with comorbidity forming, and indicate the efficiency of prescribed treatment.

Perception of obesity is critically low as there is a lack of crucial perception of health state by medical specialists and obese patients. Registry will allow visualizing number of patients, dynamic of weight gaining and loss.

As obesity is a product of numerous factors, there is no single solution to cope with it. Obesity register called to combine in one process government and local authorities, health care providers, and patients themselves for long-term positive outcomes.

REFERENCES

[1] Tai HC, Tzeng IS, Liang YC, Liao HH, Su CH, Kung WM, Interventional Effects of Weight-Loss Policy in a Healthy City among Participants with Metabolic Syndrome, Int J Environ Res Public Health.2019 Jan 24;16(3);

[2] Matarese LE, Pories WJ, Adult weight loss diets: metabolic effects and outcomes, NutrClinPract. 2014 Dec;29(6):759-67;

[3] WHO. Obesity and overweight. 2016, *https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight*;

[4] T. Sharmanov, Sh. Tazhibayev, Sh. Balgimbekov, Kazakh Academy of Nutrition Guideline for overweight prevention for medical specialists, local authority, employers, 2012, https://www.zdrav.kz/novosti/rukovodstva-po-profilaktike-izbytochnoy-massy-tela-dlya-medikov-mestnyh-ispolnitelnyh;

[5] Roza SHAKIYEVA ,Aigul ABDULDAYEVA , Kamshat AKHMETOVA, The Structure of a Daily Food Ration of the InhabitantsOver 40 Years Old in the Republic of Kazakhstan, Iran J Public Health, Vol. 47, No.8, Aug2018, pp.1215-1217.

[6] Andersen MS, Johnsen SP, Sørensen JN, Jepsen SB, Hansen JB, Christensen EF. Implementing a nationwide criteria-based emergency medical dispatch system: a register-based follow-up study. Scand J Trauma ResuscEmerg Med. 2013;21(1):53. doi:10.1186/1757-724121-53;

[7] Erika Frischknecht Christensen, Peter Anthony Berlac, Henrik Nielsen, Christian Fynbo Christiansen, The Danish quality database for prehospital emergency medical services, Clinical Epidemiology 2016:8 667–671;

[8] Order of Minister of Health Republic of Kazakhstan №ҚРДСМ-10, 05.08.2018. Establishment of tariffs for medical services provided in the framework of the guaranteed volume of free medical care and in the system of compulsory social medical insurance*adilet.zan.kz/rus/docs/V1800017353*;

[9] Abhishek Gupta, Environment & PEST Analysis: An Approach to External Business Environment, International Journal of Modern Social Sciences, 2013, 2(1):34-43;

[10] Perceptions of childcare staff for preventing overweight in Mexican preschool children: A SWOT analysis, saludpública de méxico / vol. 60, no. 2, marzo-abril de 2018;

[11] Mohamed Abdel-Basset, Mai Mohamed, FlorentinSmarandache, An Extension of Neutrosophic AHP–SWOT Analysis for Strategic Planning and Decision-Making, *Symmetry*2018, *10*(4), 116;

[12] BoonyaratPhadermrod, Richard M.Crowder, Gary B.Wills, Importance-Performance Analysis based SWOT analysis, International Journal of Information Management, Volume 44, February 2019, Pages 194-203;

[13] State Health Development Program for the Republic of Kazakhstan for 2011–2015 Salamatty Kazakhstan, https://strategy2050.kz/en/page/gosprog1/;

[14] Government RK/News/ Government reviews the progress of the 2016-2019 Densaulyk State Program, 20 March 2018, www.government.kz/.../1013928-government-reviews-the-progress-of the 2016-2019 Densaulyk State Program;

[15] Strategic plan of Ministry of Health Of Republic of Kazakhstan, www.mz.gov.kz/.../strategicheskiy-plan-ministerstva-zdravoohraneniya-respubliki-kazahstana;

[16] http://stat.gov.kz/faces/wcnav_externalId/homeNumbersHealthCare;

[17] Nugmanova D, Sokolova L, Feshchenko Y, Iashyna L, Gyrina O, Malynovska K, Mustafayev I, Aliyeva G, Makarova J, Vasylyev A, Tariq L., The prevalence, burden and risk factors associated with bronchial asthma in commonwealth of independent states countries (Ukraine, Kazakhstan and Azerbaijan): results of the CORE study., BMC Pulm Med. 2018 Jul 5;18(1):110. doi: 10.1186/s12890-018-0676-7;

[18] Sadykova A, Shalkharova ZS, Shalkharova ZN, Sadykova K, Madenbay K, Zhunissova M, Nuskabayeva G, Askarova S, Grjibovski AM, Metabolic syndrome and its components in southern Kazakhstan: a cross-sectional study, Int Health. 2018 Jul 1;10(4):268-276. doi: 10.1093/inthealth/ihy027;

[19] Turgunova L, Laryushina E, Amirkhanova D, Alina A, Bayesheva T., Prevalence of modifiable risk factors of chronic non infection diseases among urban and rural residents of Karaganda region, Georgian Med News. 2016 Mar;(252):32-6. Russian;

[20] M. Kulzhanov, B Rechel -Kazakhstan: Health system review. Health systems in transition, 2007 - popline.org;

[21] B Rechel, M Ahmedov, B Akkazieva Lessons from two decades of health reform in Central Asia, *Health Policy and Planning*, Volume 27, Issue 4, 1 July 2012, Pages 281–287;

[22] Aimukhametova G, Ukybasova T, Hamidullina Z, Zhubanysheva K, Harun-Or-Rashid M, Yoshida Y, Kasuya H, Sakamoto J., The impact of maternal obesity on mother and neonatal health: study in a tertiary hospital of Astana, Kazakhstan, Nagoya J Med Sci. 2012 Feb;74(1-2):83-92;

[23] [23.] Sikhayeva N, Talzhanov Y, Iskakova A, Dzharmukhanov J, Nugmanova R, Zholdybaeva E, Ramanculov E, Type 2 diabetes mellitus: distribution of genetic markers in Kazakh population, ClinInterv Aging. 2018 Mar 5;13:377-388. doi: 10.2147/CIA.S156044. eCollection 2018;

[24] Supiyev A, Kossumov A, Kassenova A, Nurgozhin T, Zhumadilov Z, Peasey A, Bobak M, Diabetes prevalence, awareness and treatment and their correlates in older persons in urban and rural population in the Astana region, Kazakhstan., Diabetes Res ClinPract. 2016 Feb;112:6-12. doi: 10.1016/j.diabres.2015.11.011. Epub 2015 Dec 12;

[25] http://stat.gov.kz/faces/wcnav_externalId/publicationsSocialDevelopment;

[26] Yan WL, Li XS, Wang Q, Huang YD, Zhang WG, Zhai XH, Wang CC, Lee JH., Overweight, high blood pressure and impaired fasting glucose in Uyghur, Han, and Kazakh Chinese children and adolescents.,,Ethn Health. 2015;20(4):365-375. doi: 10.1080/13557858.2014.921894. Epub 2014 Jun 6;

[27] Sadykova K, Shalkharova Z, Nuskabayeva G, Zhunissova M, Madenbay K. Relationships between adherence to mediterranean diet and components of the metabolic syndrome in the Kazakhstani population, Georgian Med News. 2018 Jan;(274):97-102. Russian;

[28] Lashkareva O.V., Kozhakhmetova G.A. Sovremennoyesostoyaniyeprodovol'stvennoybezopasnosti v Respublike Kazakhstan. Uspekhisovremennogoestestvoznaniya – Advances in Current Natural Sciences, 2015, no. 1(5), pp. 831–838. Available at: http://www.rae.ru/use/pdf/2015/15/34953.pdf (accessed 17 November 2015);

[29] Watson K, Roberts B, Chow C, Goryakin Y, Rotman D, Gasparishvili A, Haerpfer C, McKee M, Micro- and meso-level influences on obesity in the former Soviet Union: a multi-level analysis.,Eur J Public Health. 2013 Apr;23(2):291-8. doi: 10.1093/eurpub/cks054. Epub 2012 May 29;

[30] A. Supiyev, T. Nurgozhin, Zh. Zhumadilov, A. Sharman, M.Marmot and M. Bobak, Levels and distribution of self-rated health in the Kazakh population: results from the Kazakhstan household health survey 2012, BMC Public Health201414:768;

[31] William CCockerham, Brian PHinote, PamelaAbbott, ChristianHaerpfer, Health lifestyles in central Asia: the case of Kazakhstan and Kyrgyzstan, Social sciences and Medicine, Volume 59, Issue 7, October 2004, Pages 1409-1421;

[32] R Thompson, N Miller, S Witter, Health-seeking behaviour and rural/urban variation in Kazakhstan- Health economics, 2003 - Wiley Online Library;

[33] Zh. Battakova, S. Mukasheva, S. Slazhnyeva, National report. Epidemiology monitoring of children obesity. Medicine,2016, No9 (171), pp.48-55, https://hls.kz/uploads/scientific-facts/rus/ cosi-nac-otchet-detskoe-ojirenie.pdf;

[34] Aringazina A. The New Public Health in the Republic of Kazakhstan. Ohio State University; Columbus, Ohio: 2011. The New Public Health in the Republic of Kazakhstan;

[35] Daphne P Guh, Wei Zhang, Nick Bansback, ZubinAmarsi, C Laird Birmingham, Aslam H Anis, The incidenceof co-morbidities related to obesity and overweight: A systematic review and meta-analysis, BMC Public Health. 2009; 9: 88;

[36] K. Payimbekov, A. Kussainov, Road Accidents in Kazakhstan, 2014, cyberleninka.ru, https://cyberleninka.ru/article/n/analiz-podverzhennosti-respubliki-kazahstan-dorozhno-transportnym-proisshestviyam.pdf;

[37] Ospanova A, Kerimkulova A, Markabaeva A, Rymbaeva T., The differences of changes in body weight on the hypertension in adolescents 12-13 years, Georgian Med News. 2017 Oct;(271):33-38. Russian;

[38] Kluge H, Kelley E, Barkley S, Theodorakis PN, Yamamoto N, Tsoy A, Aiypkhanova A, Ganesh V, Hipgrave DB, Peterson SS, Valderas JM, Mossialos E., How primary health care can make universal health coverage a reality, ensure healthy lives, and promote wellbeing for all, Lancet. 2018 Oct 20;392(10156):1372-1374. doi: 10.1016/S0140-6736(18)32482-6;