

We Need Universal Health Coverage... but, at the Same Time, Primary Health Care Services for Everyone

Necesitamos una "Cobertura universal"... pero al mismo tiempo una atención primaria de "Salud paratodos"

*"You don't write because you want to say something,
You write because you have something to say."*

FRANCIS SCOTT FITZGERALD

INTRODUCTION

There is global consensus on the goals of "universal health coverage", which has been defined by the World Health Organization (WHO) as "*all people receiving quality health services that meet their needs without exposing them to financial hardship paying for them.*" (1)

The concern is so massive that a Nobel Prize in Economic Sciences, Kenneth Arrow, says that "health is an ethical and economic value", and joins over 300 fellow economists from almost 50 countries "*to urge leaders to prioritize investments to achieve universal health coverage*" (*), as he recently wrote in the newspaper with the largest circulation in Argentina. (2)

He continues: "*Providing everyone with high quality essential health services without the threat of financial ruin is the right thing to do*" (*). *Health and survival are basic values. And they should be provided with a deliberate social policy.*"

And, as an economist, he states: "**Universal health coverage is also smart.**" (*) *When people are healthy and financially stable, economies are stronger and more prosperous.*" (*)

The initial definition and the proposals of the economist seem simple and clear, but sound naive if they are not transferred to provide services in the much more complicated real world, actually reaching those who need them most, and to express it more clearly, to those who hardly reach them nowadays. Because, as our economist definitely concludes: "*The success of the world's development goals depends on our ability to reach the poorest and most marginalized populations, who continue to bear the brunt of death and disability worldwide.*" (2)

Without this drastic shift in focus, the resources will be wasted, and the number of preventable deaths and treatable diseases will continue to increase.

The most poor or marginal persons in low- and middle-income countries are scarcely visible.

An important part of the poor workers from middle-income countries as ours are employed informally. For example, in the Villa 31, a slum area in the city of Buenos Aires, although 80% were working during the week before a survey was conducted, (3) only 16% were formal employees with retirement plans; 3 out of every 4 workers had a salary below \$ 4400 and 45% were employed irregularly or casually (odd jobs). As a result, these workers are fiscally invisible, with hundreds and thousands living in slums – precarious settlements without official addresses. "To address the problem of reach requires methods that actively connect the provision of health services to people who would otherwise be invisible and thus unreachable." (1)

Although the reduction of financial barriers –such as the removal of user fees for any type of adequate care– is the first important step to achieve universal health coverage, it only addresses one obstacle.

The global health community should focus on breaking additional barriers to health care, such as geographical distance, cultural differences, gender regulations, citizenship and fundamental social determinants, among many others. Innovative methods are needed so that health services reach beyond and around these barriers.

As the WHO states: "Extending reach, therefore, is not just a technical problem to be solved but also a political problem of resource redistribution."

Goal 3 of the Sustainable Development Goals is "to ensure healthy lives and promote well-being for all at all ages."... The endorsement of universal health coverage as a Sustainable Development Goal demonstrates a commitment to equity, aiming to ensure that everyone who needs health services is able to get them without undue financial hardship." (4)

Yet, 38 years after the Alma-Ata Declaration "health for all", disillusionment persists among health care professionals due to failure to integrate the perspective of personal health care and public health. Probably, instead of aligning a public-health approach with personal health services, the balance since Alma-Ata (1978) has tilted towards vertical disease-oriented programs and personal health care at the expense of the population health.

“Community-oriented primary care integrates individual and population-based care, blending clinical skills of practitioners with epidemiology, preventive medicine, and health promotion. To do so, the separation between public health and individual health care should be minimized.”

“It is time to integrate personal health care and public health, and organize primary care on the principle of care for individuals in the context of an identified population over time.” (5)

THE HEALTH GAP DUE TO INEQUITY OF SOCIAL DETERMINANTS

Michael Marmot cites Aldous Huxley's dystopia of a new world where there were five castes, the Alphas, Betas, Gammas, Deltas, and Epsilons, with a descending gradient in physical and intellectual development..., but induced by chemicals surreptitiously introduced to arrest the development of the 3 lower orders. Only Alphas and Betas developed normally. (6)

In our current world, once aware of this terrifying situation, there would be a widespread clamor and immediate actions to remove the pollutant substance and allow all our children to flourish, not only the Alphas and Betas. We would all claim to stop such injustice.

Citing Marmot's lucid text: “Yet, unwittingly perhaps, we do tolerate such an unjust state of affairs with seemingly little clamor for change. The pollutant is called social disadvantage, which has profound effects on brain development and limits children's intellectual and social improvement.

There is a clear social gradient in intellectual, social, and emotional development -the higher the social position of families, the more the children flourish and the better they score on all development measurements. This stratification in early child development, from Alpha to Epsilon, arises from unequal social circumstances...

This social gradient, in its turn, has a profound effect on children's subsequent life chances. We see a social gradient in school performance and adolescent health; a gradient in the likelihood of not having an employment, education, or training at the age of 20 years; a gradient in stressful working conditions that damage mental and physical health; a gradient in the quality of communities where people live and work; in the social conditions that affect older people; and, central to my concern, a social gradient in adult health. A causal thread runs through these stages of life from early childhood, through adulthood to older age and to inequalities in health...

And he continues: “...social injustice is killing on a grand scale... But for every child who dies, there are perhaps 25 who do not fulfill their potential development...”

“...In countries of low, middle, and high income the mind is the major gateway through which social circumstances lead to health inequalities. The mind?

Conventional wisdom would focus on more tangible causes of ill health: poor lifestyle choices or lack of access to health care. Lack of access to health care is, by and large, not the cause of ill health; it might be the cause of a great deal of unnecessary suffering as a consequence of ill health.

Unhealthy lifestyle, smoking, alcohol, diet, and obesity are of course implicated in non-communicable diseases, along with a stressful pathway, but we have to ask why these unhealthy lifestyles follow an increasing social gradient. We have to address the causes of the causes -the social conditions acting through the life course that both affect exposures and people's behavior.” (6)

Let us consider a typical young porteño living in the neighborhood of Lugano or worse in the Villa 31, with a life expectancy below 55 years, subject to physical and sexual abuse from the successive partners of his mother; moving from house to house in repeated occasions; entering school with behavioral problems, which then led on to delinquency, violence, and spells in prison. Probably, psychiatrists will label him as having personality disorder, anxiety, depression, and antisocial tendencies.

Although “it is true that tobacco, alcohol, drugs, and an appalling diet, along with liberal indulgence in violence are major contributors to his ill health, the cause of the causes is his tragic life history. Arguing that this young man is responsible for his own poor health is to ignore the imprint on him of his life circumstances.”

“... It also changes the moral question. Our rush to blame the poor for their irresponsibility in indulging in risky behaviors that are bad for their health would be tempered by knowing that social disadvantage in childhood might have had an enduring influence on adult behavior.” (6)

Amartya Sen stated that the relative disadvantage of income translates into absolute disadvantages in the power and control of their own lives. We can accept that it is not what the person has that is important for health, but what that person can do with what he or she has. (7)

Regarding hard data, in a meta-analysis of 9 cohort studies and 19 cross-sectional studies, the relationship between the “relative risk” (RR) for mortality and income inequality, measured by the Gini coefficient, showed a direct linear relation; per 0.05-unit increase in the Gini coefficient, the RR for mortality increased 1.08 (95% CI 1.06–1.10) and the OR 1.04 (95% CI 1.02–1.06), respectively.

The meta-regression showed strong associations between income inequality and relative mortality above a Gini threshold of 0.30, with a constant increase nearing RR of 2.0 with a Gini value of 0.65. The meta-regression also showed this effect with data from studies conducted after 1990, evidencing the greatest inequality in the last 3 decades and with longer follow-up duration (>7 years). Thus, it demon-

strates the need of incorporating time lags between income inequality and mortality. (8)

After this initial approach, we shall try to immerse in the meaning of primary health care.

MAKING PRIMARY HEALTH CARE REAL

Considering the fragmentation and inequity of health systems, there is broad agreement that primary care is central for an effective and planned health system. It should be “person-centered with a population-based approach. Primary care, including multidisciplinary team-based models of family practice, can serve as the regular entry point into healthcare systems and meet most healthcare needs, including disease prevention and health promotion. Primary care helps to establish and maintain healthy populations in fair and efficient ways, and is essential to achieve universal health coverage.” (9)

It should ensure the elements of a first contact accessible and equitable.

Accessible means without delay to deliver care and without delay to obtain care. Because, as the JAMA's editors state: “When a patient is made to wait a long time to receive care from a physician or other health care professional, the implicit message is clear: the patient's time is less important than the clinician's...., if a patient must wait a long time every time he or she sees the doctor, there is a problem in the system.”

Because in the United States, “..., on average, Americans spend 80 minutes at a clinic to receive care, during which approximately only 20 minutes are spent face-to-face with the physician.” (10) It would be interesting to know what happens in our country, which must be much worse.

Primary care is neither **equitable** in the United States, because “...however, more worrying was their other major finding: marked disparities in the time spent waiting to receive care. Time at the clinic was longer for racial and ethnic minorities, the unemployed, and those with less education...disparities in timeliness to obtaining care exist for more vulnerable patient populations. Because the study found that these patients also spent longer times traveling to receive care, and hence, their overall burden to obtain care is even greater.” (10) The same, and more grossly, occurs in Argentina with our fragmented health system.

Lifelong **continuity** of a comprehensive care, with specialist **coordination**, family and community **orientated**, and with the **participation** of persons, family and community, make primary care services successful.

National, provincial and community governments should have the ambition to measure progress, if they do have it, to provide primary health care, the focus of Sustainable Development Goals.

“As the interface between community, the health system and other sectors, the primary care workforce

is reasonably the backbone of the entire health system. The density, distribution, and performance of this workforce, which includes community health workers, nurses, midwives, family doctors, and allied health professionals, should be analyzed.

... Measuring progress towards the implementation of primary health care is no easy task, yet it is the clasp linchpin to achieve universal health coverage and is pivotal across the Sustainable Development Goals.” (11)

To achieve greater investment in primary health care than at present, measures of primary care expenditure as a proportion of total health expenditure are needed. (9)

Implementation of primary health care would advance health equity in all countries, both rich and poor and, as a result, promote human and national development and strengthen the integration of the community. (12)

The demand of the current health care system has no precedents and will be greater in the future due to greater life expectancy that has increased degenerative diseases, as dementia and frailty and to advances in medicine which allow patients to live longer but with multiple and severe chronic diseases.

We shall present the difficulties industrialized countries currently face to implement primary health care of quality and satisfactory for patients, that could help us avoid them in a hypothetical future universal development of primary health care in Argentina.

We shall use the recent findings of the “Commonwealth Fund International Health Policy. Survey of Primary Health Physicians”, reporting the results of a survey conducted in 2015 which interviewed nationally representative random samples of primary care physicians (between 503 and 2905 physicians per country) in 10 industrialized countries (Australia, Canada, Germany, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States). (13) It would be very important to compare these results with those of an eventually similar survey in our country.

Practice preparedness to manage complex patients: For patients with dementia, those in need of palliative care, and those in need of long-term home care services, the percentages reporting that their practices were well prepared for this service were typically less than 70% and, in many countries, less than 50%. For severe mental health impairment or substance use-related problems, less than half of primary care doctors reported their practice to be well prepared; and it was worse in Sweden and the United States, where only one in six doctors could provide this care.

It is necessary to adapt the structure of the system and to educate physicians for a better care of chronic patients with multiple and severe diseases.

Access to care: A majority of primary care doctors in all countries (except Germany) use personnel

such as nurses or case managers to help monitor and manage care of patients with serious chronic conditions. Most Dutch and English doctors report frequent home visits, in contrast to only 6% of US doctors. Two-thirds or more of primary care physicians in all countries, except in the United States and Canada, have after-hour care arrangements to avoid emergency hospital visits.

Obviously, “community health workers” trained and paid by the population are necessary to provide health prevention and promotion at home.

Systematic revisions have analyzed the use of “community health workers” providing preventive interventions for maternal and child health in low- and middle-income countries with some evidence of effective strategies, yet still insufficient to draw definite conclusions for most interventions. Further investigations are necessary to reach conclusive evidence. (14)

A cluster-randomized controlled trial for postpartum depression was performed in rural Pakistan. Four hundred and sixty-three mothers undergoing cognitive behavior therapy-based intervention provided by “community health workers”, who were trained during 3 days and received intensive group supervision each month, were compared with a control group of 443 mothers who received an equal number of visits from untrained “community health workers”. The result was impressive: at 6 months, 23% and 53% of the mothers in the intervention and control groups, respectively, met the criteria for major depression (adjusted odds ratio (OR) 0.22, 95% CI 0.14 to 0.36, $p < 0.0001$). These effects were sustained at 12 months. (15) Babies of mothers who received the intervention had better outcomes for many indicators (increased vaccination coverage, fewer episodes of diarrhea, and good participation in play activities by both parents) than those who did not. (16)

Communication and care coordination: refers to timely exchange of pertinent patient information with a written report to the primary care physician. For the case of specialists, it ranges from only 37% in Sweden to 78% in Switzerland. The percentage of primary care physicians notified with their patients’ discharge report from the hospital, implying greater risk, or the emergency department, ranges from 68% in the Netherlands to 8% in Sweden. There is insufficient communication with home health care systems and important changes in the health of patients at home are even less reported.

The gap in care coordination with social services (housing, meals and transportation) is significant, and 70% of physicians from Australia and the United Kingdom believe this is a difficult burden to solve.

Still the value of communication and care coordination of the primary care physician during acute hospital events and chronic situations, with the help of social services, leaves much to be desired in western and industrialized countries, and is practically inexistent in our country.

Health information technology capacity: the use of electronic health records is developing rapidly but heterogeneously. In some countries, as Australia, the Netherlands, New Zealand, Norway, Sweden and the United Kingdom, the use of electronic health records is almost universal, while in others, such as Canada and the United States, it is lower but has progressed in the last years to 73% and 84%, respectively.

The use of electronic advances is even more unequal; as an example, less than 1 out of 4 physicians send reminders for preventive care or interventions, versus 3 out of 4 in the United Kingdom. In Canada, Australia, Germany and the United States, less than 50% of physicians are able to exchange patient medical records electronically.

Three out of every 4 physicians reported being satisfied with the electronic clinical history in the Netherlands, Germany, Australia and the United Kingdom, 1 out of 2 in the United States and 1 out of 3 in Sweden.

Satisfaction and views of the health care system: physicians’ view of the health care system is not optimistic, as only 20% reported satisfaction and suggested minor changes in the United States, United Kingdom, Germany and Sweden. The highest satisfaction, 67%, was reported by physicians in Norway. On the contrary, in the United Kingdom, satisfaction with the health care system decreased from 50% in 2012 to 22% in 2015.

Most physicians from the different countries think that their health care system has not changed within the past 3 years, but 1 out of 3 physicians in the United Kingdom, Sweden, the Netherlands, the United States and Germany think that the health care system is worse.

Few primary care physicians are not satisfied with the way they practice medicine in 6 countries, but Germany, the United Kingdom, the United States and Sweden have the highest level of dissatisfaction, reaching 1 out of 3 doctors, particularly with the limited time available to dedicate to patients and the increased administrative burdens related to insurance or payment claims, which are perceived as frustrating.

In these industrialized countries, a very small number of primary care physicians were dissatisfied with their income, which is similar to that of specialists.

We may conclude that a significant number of primary care physicians from these 10 industrialized countries are far less than well prepared to manage patients with complex health needs. Their patients also feel the presence of different gaps and need access to an efficient coordination of medical care, including not only health, but also home care and social services.

Also, physicians are worried about the quality of care and dissatisfied with different aspects of their practice, showing ambivalent adherence with their health care systems. (13)

Next, we shall discuss how primary care interventions in two typical phases of life, before birth and during adult life, can produce favorable health changes in the control of chronic diseases.

HOW TO CHANGE THE EPIGENETIC MARK THAT CONDITIONS POOR HEALTH BEFORE BIRTH TO ADULT LIFE

The Adverse Childhood Experiences study found that living in a poor environment in combination with other risk factors affects physical and psychosocial health from childhood to adulthood. This low socioeconomic level affects the child before birth, as the unborn child is at risk due to an abnormal pregnancy as a consequence of a poor parental health status.

But what is even more striking is that the future generation or generations experience the same consequences of their parents, even if the conditions are different. They all seem to be trapped in a circle they cannot get out of. (17)

How are these features transmitted, if we know that the gene sequence of DNA cannot be modified by the environment? In contrast to the DNA sequence, the epigenome is susceptible to modification by the environment as well as stochastic perturbations over time, adding to phenotypic diversity in the population.

The interaction between genes, environment, epigenetics and diseases is complicated and still poorly understood. Yet, it is well recognized in animal models and human studies that several types of changes in the environment modify the epigenetic marks due, for example, to DNA methylation, which regulates gene expression and consequently how and when the genetic code translates into biologic action.

The classic epidemiological example of Överkalix in Norway, showed lower life expectancy for boys whose grandfathers had experienced famine before puberty, because those grandparents who were exposed in utero to famine during their first trimester showed DNA methylation changes in genes associated with birth weight and low-density lipoprotein cholesterol. (18)

A genome-scale analysis of differential DNA methylation in whole blood after periconceptional exposure to famine during the Dutch Hunger Winter showed that prenatal differential DNA methylation preferentially occurs in regions regulating genes involved in growth and metabolism, associated with birth weight and LDL-cholesterol.

Epigenetic modulation by prenatal malnutrition may promote an adverse metabolic phenotype in later life. (19)

Exercise is strongly related with changes in DNA methylation. These findings suggest that the epigenome is extremely dynamic and relevant in the risk of producing cardiovascular disease.

Can these initial conditions be changed? In the United States, David Olds developed an evidence-based program focused on high-risk families which he called Nurse Family Partnership. Up to now, this

is one of the few evidence-based interventions for the prevention of disruptive behavior disorders and child abuse.

In the Netherlands, the randomized controlled VoorZorg trial for primary prevention of child abuse recruited pregnant women at high social risk, <26 years of age, during their first pregnancy. Other goals were to improve the mother's health during pregnancy (rapid treatment, reduce cigarette smoking), to advance the child's health and development by helping the parents provide more competent care to their children, and to enhance the mother's own personal development.

The women in the control group (n=223) received the usual care. The women in the intervention group (n=237) received the usual care plus the VoorZorg program, which consisted of approximately 10 home visits (lasting 1 to 1.5 hours) during pregnancy, 20 during the first year of the child, and 20 during the second year by trained and experienced nurses. (20)

The study demonstrates that at 3 years of age, the endpoint of child maltreatment reported to the child protection service was 19% in the control group versus 11% in the intervention group, with a significant reduction of child abuse (RR 0.58, p = 0.04). The home environment score and the internalization of child behavior (by unconscious identification) also improved.

The same group reported that active VoorZorg intervention, compared with the usual care, is effective in reducing intimate partner violence during pregnancy, with more than 2 among 4 forms of violence measured (psychological, physical or sexual violence, and injuries): 31% in the control group versus 19% in the intervention group (OR 0.49; 95% CI 0.20-0.58) and at 2 years after birth (36% versus 23%, respectively). (21)

Evidently, frequent and prolonged home visits made by trained nurses helping parents to change behaviors, giving health counseling, answering mother's questions, ameliorating anxieties and fears, increasing mother's self-sufficiency and committing a social network of support produce favorable outcomes in these unprotected families.

TACKLING NON-COMMUNICABLE DISEASES WITH COMMUNITY-BASED PRIMARY HEALTH CARE

People, and also many physicians, still see primary health care as an opportunity for case finding (for disease-oriented programs), but disregard it as a source of comprehensive care that integrates and coordinates care for all health problems and engages individuals, families, and the community in their own care. It is here that primary care secures the real added value for health care and the people's health.

"Integrated primary care is essential for tackling non-communicable diseases (NCD). Chronic conditions, much more than infectious diseases, are influenced by patients' perceptions and behavior.

Effective management of NCD will require a shift

from problem-oriented to goal-oriented care. The long-term management of chronic conditions requires more than “access to affordable essential drugs in primary health care”. It requires the empowerment of patients, the reduction of barriers to healthy lifestyles and care that reflects the values of patients as individuals. There is consistent evidence on the effectiveness of primary care in reducing hospital admissions related to NCD; multi-morbidity among those with NCD has been shown to be better tackled in primary health care.” (22)

Which would be the best answer to the challenge of the increase in NCD? Undoubtedly, promoting a people-centered and integrated health service approach, including an important number of highly trained health professionals.

As Walley et al. state: “Experience has shown the need for a shift from health education (provision of information) to health promotion (transformation of attitudes and behavior) to empower people to have a more active role in their health.” (12)

Cost-effective interventions in primary health care for the most prevalent conditions and chronic diseases include: (24)

Tobacco control policy in primary health care to ensure that all adult patients are briefly questioned about tobacco habits, all tobacco users are advised to quit, and appropriate follow-up cessation services (by telephone calls, internet or group counseling, among others), and wider access to nicotine replacement therapy are offered.

Health promotion: there is evidence that advice and counseling to reduce dietary fat, increase exercise, and stop smoking may be useful.

Pharmacological interventions for people at high risk of cardiovascular disease with a multidrug regimen (statins, antihypertensive agents) or combined in one pill would be cost-effective in low-income and middle-income countries. (24)

Individuals suitable for preventive use of drugs could be easily identified through risk factors present in primary health care screening, such as a brief history of alcohol and tobacco consumption, weight (body-mass index) and waist circumference, blood pressure, and a clinical history of cardiovascular disease in the family without the need of measuring cholesterol plasma levels.

Prevention of diabetes: prevention of impaired glucose tolerance with interventions, exercise and treatment with metformin is highly effective, with 7 needed to treat patients with either intervention to prevent one case of diabetes.

Treatment of mental disorders: there is robust international evidence on the efficacy and cost-effectiveness of pharmacological and psychological treatments (notably cognitive-behavioral therapy and interpersonal therapy) for common mental disorders and for the management of alcohol misuse in primary healthcare settings, with brief psychological interven-

tions and motivational interviews delivered by physicians or nurses.

The treatment gap is so large that the help of trained community health workers could be useful for referrals and support for specific treatments.

Prevention and treatment of chronic diseases in primary health care

Advantages are manifold: the relative proximity of providers to the patients’ homes reduces travel time and costs; knowledge of individual patients, families, and local communities by primary care workers allows the cooperation to design measures for health promotion; the possibility of caring for defined populations makes coverage, follow-up and control easier to assess and monitor, with a better continuity of care, including that for comorbid diseases.

Disadvantages: to achieve these advantages, the workforce should be sufficient in number, well trained and with permanent service supervision, and their income should be similar to or even greater than that of a specialist, together with high moral principles to provide service. Of course, complementary tests should be available and fundamentally, free supply of drugs to the patients.

Drug supply: currently, up to 90% of low-income populations purchase medicines through out-of-pocket payments (which account for 20–60% of health spending) making medicines the largest household expenditure item after food. In Argentina, the Remediar Program has ameliorated this issue. (25)

The study published by Rasha Khatib et al. (26) is part of the PURE study, a prospective epidemiological survey performed in 18 countries from 5 continents. The PURE study demonstrates that secondary prevention of cardiovascular diseases is not available or affordable in many communities worldwide, as the 4 cardiovascular medicines indicated for secondary prevention (aspirin, beta blockers, ACEI and statins) are not affordable in less than 1% of households in high-income countries, 33% of households in middle-income countries and 60% of households in low-income countries.

These findings suggest the importance of policies focused on universal coverage of health to stop the epidemic of cardiovascular diseases without costs for the population, shifting the resources of the state to a primary health care workforce with community-based orientation, and providing effective medicines to the populations with low and middle income.

CONCLUSIONS

Non-communicable chronic diseases are becoming the leading causes of death and disability around the world. However, many low and middle-income underdeveloped countries and the low-income sectors in industrialized countries still face a high burden of infections, and maternal, newborn and child health and family planning are still priorities.

Moreover, these countries and sectors have an increasing need of managing chronic non-communicable diseases; thus, health coverage should reach the rural and urban populations which lack health services, as the real proof of social justice and equal opportunities.

Management of chronic diseases in primary health care is completely different from acute care. It needs an organization supporting continuity of care, sufficient well-trained and well-paid staff, wide availability of drugs and an ethical behavior in which the development and improvement of the other also implies the self-improvement and self-development of the health care agent.

Effective primary health care should be complemented by public policies confronting marketing strategies of the multinational companies, with capacity to extinguish the use of tobacco, the unhealthy diet producing obesity, diabetes and cardiovascular disease and excessive salt consumption

And, finally, make a world with health for all a reality, applying Artiga's saying during the first land reform in America: "*the most unhappy will be the most privileged*".

Dr. Hernán C. Doval^{MTSAC}

Director of the Argentine Journal of Cardiology

REFERENCES

1. Wong J. Achieving universal coverage. Bull World Health Organ 2015;93:663-4. <http://doi.org/bb3n>
2. Kenneth Arrow "La salud es una valor ético y económico". Clarín, 3 de enero de 2016.
3. Datos propios preliminares no publicados de una encuesta de salud en la Villa 31.
4. Hosseinpoor AR, Bergen N, Magar V. Monitoring inequality: an emerging priority for health post-2015. Bull World Health Organ 2015;93:591-591A. <http://doi.org/bb3p>
5. Van Weel C, De Maeseneer J, Roberts R. Integration of personal and community health care. Lancet 2008;372:871-2. <http://doi.org/dd8fg7>
6. Marmot M. The health gap: the challenge of an unequal world. Lancet 2015;386:2442-4. <http://doi.org/bb3q>
7. Sen A. Inequality reexamined. Oxford University Press, 1992.
8. Kondo N. Socioeconomic disparities and health: Impacts and pathways. J Epidemiol 2012;22:2-6. <http://doi.org/brkm62>
9. Kidd MR, Anderson MIP, Obazee EM, Prasad PN, Pettigrew LM. The need for global primary care development indicators. Lancet 2015;386:737. <http://doi.org/f3jbbz>
10. Ross JS., Katz MH. Editor's note. No time to wait. JAMA Intern Med 2015;175:1986. <http://doi.org/bb3r>
11. Pettigrew LM, De Maeseneer J, Anderson MIP, Essuman A, Kidd MR, Haines A. Primary health care and sustainable development goals. Lancet 2015;386:2119-20. <http://doi.org/bb3s>
12. Walley J, Lawn JE, Tinker A, de Francisco A, Chopra M, Rudan I. Primary health care: making Alma-Ata a reality. Lancet 2008;372:1001-7. <http://doi.org/dzt43s>
13. Osborn R, Moulds D, Schneider EC, Doty MM, Squires D, Sarnak DO. Primary care physicians in ten countries report challenges caring for patients with complex health needs. Health Affairs 2015;12:2104-112. <http://doi.org/bb3t>
14. Gilmore B, McAuliffe E. Effectiveness of community health workers delivering preventive interventions for maternal and child health in low- and middle-income countries: a systematic review. BMC Public Health 2013;13:847. <http://doi.org/bb3v>
15. Rahman A, Malik A, Sikander S, Roberts C y Creed F. Cognitive behaviour therapy-based intervention by community health workers for mothers with depression and their infants in rural Pakistan: a cluster-randomised controlled trial. Lancet 2008;372:902-9. <http://doi.org/fsjx85>
16. Patel V y Kirkwood B. Perinatal depression treated by community health workers. Lancet 2008;372:868-9. <http://doi.org/dvhzq9>
17. Felli VJ, Anda RF, Nordenberg D, Williamson PF, Spitz AM, Edwards V, et al. Relationship of childhood abuse and household dysfunction in many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. American J Prev Med 1998;14:245-8. <http://doi.org/btqcfc>
18. Feinberg AP, Falling MD. Epigenetics at the crossroads of genes and environment. JAMA 2015;314:1129-30. <http://doi.org/bb3x>
19. Tobi EW, Goeman JJ, Monajemi R, Gu H, Putter H, Zhang Y, et al. DNA methylation signatures link prenatal famine exposure to growth and metabolism. Nature Communications 2014. <http://doi.org/bb3z>
20. Mejdoubi J, van den Heijkant S, van Leerdam FJM, Heymans MN, Crijnen A, Hirasing RA. The effect of VoorZorg, the Dutch Nurse-Family Partnership; in child maltreatment and development: a randomized controlled trial. PLOS ONE 2015;10(4):e120182. <http://doi.org/bb32>
21. Mejdoubi J, van den Heijkant S, van Leerdam FJM, Heymans MN, Crijnen A, Hirasing RA. Effect of nurse home visits vs. usual care on reducing intimate partner violence in young high-risk pregnant women: a randomized controlled trial. PLOS ONE 2013;8:10:e78186.
22. De Maeseneer J, Roberts RG, Demarzo M, Heath I, Sewankambo N, Kidd MR, et al. Tackling NCDs: a different approach is needed. Lancet 2012;379:1860-1. <http://doi.org/fqm9kk>
23. Beaglehole R, Epping-Jordan JA, Patel V, Chopra M, Ebrahim S, Ebrahim S, et al. Improving the prevention and management of chronic disease in low-income and middle-income countries: a priority for primary health care. Lancet 2008;372:940-9. <http://doi.org/c4c4vg>
24. Gaziano TA, Opie LH, Weinstein MC. Cardiovascular disease prevention with a multidrug regimen in the developing world: a cost-effectiveness analysis. Lancet 2006;368:679-86. <http://doi.org/ft87vf>
25. Niessen LW, Khan JAM. Universal access to medicines. Lancet 2016;387:9-11. <http://doi.org/bb34>
26. Khatib R, McKee M, Shannon H y col. Availability and affordability of cardiovascular disease medicines and their effect on use in high-income, middle-income, and low-income countries: an analysis of the PURE study data. Lancet 2015.