Country report of Argentina – April 2020

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I. Structure of health care and finances

The **Argentina** is a country located in the southern part of South America, with a mainland area of 2,780,400 km² (1,073,500 sq mi), Argentina is the eighth-largest country in the world, the fourth largest in the Americas, the second largest in South America after Brazil, and the largest Spanish-speaking nation. The state is divided into twenty-three provinces and one autonomous city: Buenos Aires, which is the Federal Capital of the nation. The provinces and the capital have their own constitutions, but the republic is under a federal system.

According to the National Population, Housing and Household Census of 2010 in Argentina there are 40,117,096 inhabitants. The population projections based on this census is estimated in 43,590,368 for the year 2016. The life expectancy at birth for 2014 was 76 years, being 80 years for women and 72 years for men. In the period from 1960 to 2014 it increased 11 years the life expectancy of the country, 10 years for men and 12 for women. It is remarkable that the difference in life expectancy between men and women also increased during this period, being 6 years at the beginning (1960) and 7.6 years in 2014. The difference between men and women decreased in 2015 reaching 6.6 years.

The Argentine health system is characterized by excessive fragmentation, mainly in three large sectors:

- Public
- Social security
- Private

Each one owns for:

- Different sources of financing
- Different coverages, co-insurance and co-payments applied
- Different regimes and supervisory and control systems.

Fragmentation continues within each of the sectors:

- The public sector, fragmented at the National, Provincial and Municipal levels is subject to regulations issued by the different jurisdictions. It is important to note that half of the population of the country has no social coverage and its attention depends exclusively on the public sector.

The social security sector involves four different universes:
1. National social workers (285 in total and, among them, one of special characteristics: the National Institute of Social Services for Retirees and Pensioners (usually known as PAMI, acronym for Comprehensive Medical Care Plan),
2. Provincial social works (one for each province and the Autonomous City of Buenos Aires),
4. Social works of national universities and of the Legislative and Judicial branches.

The private sector, which, in terms of voluntary insurance (prepaid medicine), is expressed in numerous entities, with a population covered by approximately two million eight hundred thousand people. (1)

According to data from the 2010 Census (the latest available), 36% of the population does not have any medical coverage, does not have social security (PAMI and union social works) nor does it have ability to pay for private care.

Reference:

(1) The Argentine Health System. Teaching area of the Argentine Society of Cardiology. Amanda Galli, Marisa Pagés y Sandra Swieszkowski. Year 2017
II. Risk factors

Cardiovascular Disease (CVD) Mortality

Like in most of the countries of the world, in Argentina the leading cause of death is cardiovascular disease, followed by tumors and respiratory system disease. (1)

**Table I:** Deaths, percentage and mortality per 100.000 inhabitants in Argentina.

<table>
<thead>
<tr>
<th>Total Mortality due to defined causes</th>
<th>Deaths</th>
<th>Percentage</th>
<th>Mortality per 100.000 inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVD Mortality</td>
<td>97.219</td>
<td>30,3%</td>
<td>220,7</td>
</tr>
<tr>
<td>Heart disease</td>
<td>70.300</td>
<td>21,9%</td>
<td>159,6</td>
</tr>
<tr>
<td>Stroke</td>
<td>19.922</td>
<td>6,2%</td>
<td>45,2</td>
</tr>
<tr>
<td>Other cardiovascular</td>
<td>6997</td>
<td>2,17%</td>
<td>15,9</td>
</tr>
</tbody>
</table>

PCI resources

In Argentina, there is no government information regarding the exact number of Percutaneous Coronary Intervention (PCI) capable centers. Data from scientific institutions and societies calculate a number of 335 PCI centers all around our country of more than 40 million inhabitants.

Main CVD risk factors

In Argentina, the National Health Ministry develops periodical surveys on Cardiovascular Risk Factors Assessment (in Spanish Encuesta Nacional de Factores de Riesgo – ENFR -). Its sample design was probabilistic and multistage, and allowed to obtain information representative at national and provincial level of the population of 18 years and over resident in urban locations of 5,000 and more inhabitants.
Most of the risk factors prevalence are increasing in our country, related with unhealthy habits and behaviors. Daily fruits or vegetables did not reflect statistically significant changes from the previous edition: only 6% of the population met the daily consumption recommendation. Body weight: In the self-report phase of the ENFR 2018, 6 out of 10 adults had weight excess (overweight plus obesity). A sustained increase was evidenced since the first edition of the survey in 2005 and a statistically significant increase compared to the ENFR 2013. The overweight indicator showed no significant statistically changes with respect to the 3rd ENFR. Obesity was recorded in a quarter of the population, indicator that increased 22% compared to the edition 2013 and 74% compared to the first edition (2005). The reported prevalence of high blood pressure among those who were ever controlled remained stable, as did the prevalence of high cholesterol by self-report (34.6% and 28.9%, respectively). The indicator of high blood glucose or diabetes self-reported evidenced an increase statistically significant with respect to the ENFR 2013 and reaches 12.7% of the population.

Tobacco: The prevalence of the use of tobacco continues with its downward trend since 2005, evidencing a 25% reduction. It also decreased significantly regarding the 3rd edition of the ENFR reaching the 22.2% of the population. Only 1,1% of argentine population are using electronic cigarette. Surprisingly the physical inactivity descended to 44,2% changing the trend of the previous.

There are interesting gender related differences in the CVD risk factors in Argentina. Men showed a higher prevalence of obesity (26,6% vs 24,2%) and as tabacco consumers (26,1% vs 18,6%). Otherwise women perform less physical activity than men (46,6% vs 41,5%)

The content of this report reflects the personal opinion of the author/s and is not necessarily the official position of the European Society of Cardiology
References:

(1) National Health Ministry. Management of Health Statistics and Information. 

(2) Fourth National Risk Factors Survey (ENFR) 2018 final report, National Health Secretary. 
III. Main actors in prevention care in Argentina

In Argentina the main actors in cardiovascular prevention care on the population must be concentrated in the government health authorities (national, provinces and districts) and the national cardiologic scientific societies and foundations. In fact there is a dynamic interaction between those actors, for example, scientific societies are invited and participate in the writing of governmental health policies, in which consensus of the Argentine Society of Cardiology may be considered as well international task forces, mainly the ESC ones, which frequently fit with the real world barriers of our nation. Both cardiologic societies in Argentina have prevention and epidemiologic committees working in updates of the medical information. The Argentine Society of Cardiology, a non-profit scientific society, adheres to the 25 by 25 initiative of the World Heart Federation and the Women and Heart group is working with the American Heart Association. The Argentine Cardiology Foundation (the branch of the Argentine Society of Cardiology working for the community) has a big interacting work by internet with the population. This foundation has some business support and fundrising activities to spread the preventive campaigns.

It is important to keep in mind the federal system of the country, that determines that national policies have not a complete effect in all the provinces.

Both the social healthcare sector and the private insurance health care sector are financed through private funds. Only about half of the population has access to social/private sector care, almost 80% of Argentina’s health care expenditure is channelled through this sector. The other 50% depends on the public health system.

It has been demonstrated that patients with a CVD event who sought care from public health care hospitals are younger than patients with health care insurance, have fewer economic resources, are less educated, and present more difficulty in recovering. Patients who are treated in the public sector report longer average length of hospitalization.

Unfortunately, there is no quality control programmes neither policy in auditing processes on prevention care in Argentina.
IV. Prevention activities

The Argentinian Ministry of Health declares preventive strategies which focus on changes of lifestyle and promote nationwide rollout. Most of the interventions focus on nutrition and exercise and are specially designed for kids. There are also several nationwide projects that focus on prevention or aim at increasing physical activity and the private medicine companies promote medical screening programs with the main objective to treat risk factors and to detect cardiovascular diseases at an early stage. Screening programs have demonstrated to be one of the reasons for increased life expectancy.

The Argentine Society of Cardiology works in different projects to complement strategies to aware the population about the risk of hypertension, diabetes and obesity. The “25 by 25 Initiative Commission” is one of the most important areas that promotes the prevention in the Argentine Society of Cardiology, gathering different groups that work on this setting (Prevention Council, Athero-thrombosis Council, Hypertension Council). A Woman and Heart group is working in this item, also focused on the CVD of women all around the country. The Argentinian Journal of Cardiology, funded in 1937, represents the main scientific journal on cardiology (Indexed in SciELO, Scopus, Embase, LILACS among others).

The Argentine Cardiology Foundation has a free website for the community of patients and families, with reliable medical information, organized and edited by all the Society specialist and experts, with media material and information about the main cardiovascular diseases, diagnostic tools and procedures. The name of this website is Wikicardio. (www.wikicardio.org.ar) [in Spanish]

The Argentine Cardiology Foundation is working hard in the diffusion of the preventive activities through social media. Some of the prevention activities are published in national or international societies web sites, like the World Heart Federation or the bulletin of the European Association of Preventive Cardiology. Argentina is one of the extra-european countries that plan to integrate in the international INTERASPIRE trial which will provide essential information to know our reality and compare it with other regions of the world.

International Heart Day, Diabetes Day, Hypertension Day, are excuses to review the slogans with the population, and take measurements, recognizing the implication of prevention efforts throughout different times of the year.

Medical professional education on prevention care is organized from the specialist course for fellows in training, both by on-site and distance courses, university students activities, and through a Program of Continuous Education with updated material for cardiologist, by internet (on line) platform, for distance education all around the nation practitioners. The cardiology societies are permanently making updates by statements and task forces to generate an agreement on medical behaviors for the management of primary and secondary prevention of cardiovascular risk factors.

• Argentine Cardiology Fundation (ACF)

More than **40** short videos developed by ACF members as “Two Minutes for your life” videos approaching different topics as Hypertension, Tobacco Risk, Healthy Diet, Physical Activities, Anti stress programmes – Mindfulness-, Basic Life Support, participation of ACF members in national TV programmes, etc


V. Cardiac Rehabilitation (CR)

Unfortunately up to date there are no data available of the exact number of cardiac rehabilitation centers in Argentina, referral rates, compliance/drop out data, patient characteristics, etc.

With the objective to know the active centers with cardiac rehabilitation programmes the Argentine Society of Cardiology has on going a National Survey of Rehabilitation Centers promoted by the Exercise Cardiology Council (1). The link is https://www.sac.org.ar/cardiologia-del-ejercicio-dr-jose-menna/ (in Spanish)

This survey will provide information on number, location, complexity, cardiology supervision, professional resources, etc. However, there are a number of rehabilitation centers working on secondary prevention, most of them in the private and social security.

The Exercise Cardiology Council also works on educational courses on this issue and recently published the Argentinian Consensus of Cardiovascular Rehabilitation.(2) In this statement it is mentionned that only 5 to 8 percent of the patients who requires this activity attend to rehabilitation programmes. We know that there are great difficulties in accessing cardiovascular rehabilitation in smaller towns and in rural areas and the most vulnerable socioeconomic groups rarely participate.

The Consensus recommend a 30 to 60 minutes sessions three times a week: 5-10 minutes of warm up exercises, 20 to 45 minutes of training, and 5 minutes back to the calm. The authors suggest at least 20 sessions to improve functional capacity. This recommendation should be adjusted to the individual patient. In patients who suffer heart failure the indication of physical activity is clear to improve the functional capacity, symptoms and hospitalizations. The most common work modality is the aerobic exercise continuous but some centres are introducing the interval mode exercise. Muscle strength exercises may be beneficial in patients with stable heart failure.

Finally, unfortunately there is yet no quality control or audit of cardiac rehabilitation centers and programmes in Argentina.

References:


VI. The Future

Needs

Argentina is a very large country with a heterogeneous health care system and the Federal Political system. Policies on prevention care from the National Ministry unfortunately could not impact all around the country. We need a strategy that includes both large cities and small and remote locations to add the entire population in our prevention plan.

Possibilities

The role of the Argentine Society of Cardiology as one of the most important actors on scientific and professional education, as well as the role of the Argentine Cardiology Foundation as our community branch, could become in the future the instrument for a National cardiac prevention care programme in association with other scientific associations like Argentinian Federation of Cardiology and the National Health Ministry.

One of the key weaknesses of the health-care system still lies in the prevention of illness. Spending on preventive medicine is significantly lower in the public system.

The scientific societies are essential in the healthy lifestyle promotion, and they are closely working to collaborate in the awareness of the principal modifiable risk factors.

Obstacles

The diversity of heath access, low funding on prevention care and the low numbers of rehabilitation centers, in addition to the lack of quality control remain the main obstacles in the next years. The broad territory and the social economic inequalities limit the execution of prevention plans that equal the possibilities of success in the entire population.

Plans

- Make known the prevention objectives and the relevance of acquiring healthy habits through social networks and mass media.
- Incorporate in our campaigns and preventive programs the different levels of education, public and non-governmental organizations, with talks and other tools to create awareness in the population.
- Interaction of public system, private organizations and scientific societies sharing objectives, slogans and activities and advise local and national government on legislation related to health prevention such as smoking and the labeling of food products.
Addendum

Publications from members of the Epidemiology and Cardiac Prevention Care Council. Argentine Society of Cardiology (some in Spanish only):

Impact of the 2019 European Guidelines on Diabetes in Clinical Practice: Real and Simulated Analyses of Lipid Goals.
Walter Masson, Melina Huerín, Lorenzo Martín Lobo, Gerardo Masson, Graciela Molinero, Mariano Nemec, Mariela Boccadoro, Cinthia Romero, Gabriel Micali and Daniel Siniawski.

Aspirina en la prevención primaria. Metaanálisis estratificado.
Arch Cardiol Mex. EN PRENSA (in press).

Metas lipídicas en pacientes diabéticos. Implicaciones clínicas luego de aplicar una nueva fórmula para el cálculo del colesterol-LDL.
Rev Argen Cardiol EN PRENSA (in press).

Walter Masson, Martín Lobo, Daniel Siniawski, Graciela Molinero, Melina Huerín, Juan Patricio Nogueira.

Association between non-HDL-C/HDL-C ratio and carotid atherosclerosis in postmenopausal middle-aged women.
Climacteric, 22:5, 518-522

Should all patients with psoriasis receive statins? Analysis according to different strategies.
Walter Masson, Martín Lobo, Graciela Molinero, Emiliano Rossi.

Inhibidores de la proproteína convertasa plasmática subtilisina kexina tipo 9 y riesgo de cataratas: revisión sistemática y metaanálisis.
Archivos de la Sociedad Española de Oftalmología Volume 94, Issue 2, February 2019, Pages 75-80

**Discordancia lipídica y ateromatosis subclínica carotídea en pacientes con síndrome metabólico.**
Dr. Walter Masson, Dr. Teo Epstein, Dra. Melina Huerín, Dr. Martín Lobo, Dra. Graciela Molinero, Dra. Adriana Angel, Dr. Gerardo Masson, Dra. Diana Millán, Dr. Salvador De Francesca, Dra. Laura Vitagliano, Dr. Alberto Cafferata.

**The new guidelines of high blood pressure substantially increase prevalence of hypertension in Argentina.**
Walter Masson, Melina Huerín, Martín Lobo, Graciela Molinero.

**Prevención cardiovascular en pacientes octononagenarios.** (pdf)
Walter Masson, Gustavo Calderón, Salvador De Francesca, Diana Millán, Ignacio Dávolos, Adriana Ángel.
Rev Argent Cardiol 2018;86:121-125.

**Therapy with cholesteryl ester transfer protein (CETP) inhibitors and 4 diabetes risk.**

**Discordancia lipídica y placa carotídea en pacientes obesos en prevención primaria.**
Walter Masson, Daniel Siniawski, Martín Lobo y Graciela Molinero.

**Cardiovascular Risk Stratification in Patients with Metabolic Syndrome Without Diabetes or Cardiovascular Disease: Usefulness of Metabolic Syndrome Severity Score.**

**Discordant Lipid Pattern and Carotid Atherosclerotic Plaque. Importance of Remnant Cholesterol.**
Walter Masson, Martín Lobo, Graciela Molinero, Daniel Siniawski.

Horacio M. Zylbersztejn, Lorenzo M. Lobo, Walter Masson, Graciela Molinero, Adriana Angel, Andrés mulassi, Mariano A. Giorgi, Mauro García Aurelio.
Rev Argent Cardiol 2017;85:21-27.
Estimation of cardiovascular risk and detection of subclinical carotid atheromatosis in patients with diabetes without a history of cardiovascular disease.

Walter Masson, Salvador De Francesca, Micaela Molinero, Daniel Siniawski, Andrés Mulassi, Frank Espinoza Morales, Melina Huerín, Martín Lobo, Graciela Molinero.

Association between triglyceride/HDL cholesterol ratio and carotid atherosclerosis in postmenopausal middle-aged women.

Walter Masson, Daniel Siniawski, Martín Lobo, Graciela Molinero, Melina Huerín.

Association between triglyceride/HDL cholesterol ratio and carotid atherosclerosis in postmenopausal middle-aged women.

Walter Masson, Daniel Siniawski, Martín Lobo, Graciela Molinero, Melina Huerín.

Psychosocial risk factors and personality disorders in outpatient cardiology setting.

Mariana Suárez-Bagnasco, María Laura Brandani, Martín Lobo, Walter Masson, Bruno Peressotti, Nadia Jorge, Juan Gagliardi, Claudio Higa, Horacio Zylbersztejn.

Cómo usan los pacientes Internet para la prevención cardiovascular. (pdf)

Walter Masson, Martín Lobo, Graciela Molinero, Gustavo Calderón, Damián Dell Oglio, Teo Epstein, Cecilia Zeballos, Hernán Provera, Augusto Lavalle Cobo, Melina Huerín.

Tabaquismo en médicos de la República Argentina II. Estudio TAMARA II (pdf).

Horacio M. Zylbersztejn, Walter M. Masso, Lorenzo M. Lobo, Diego G. Manente, Mauro J. García Aurelio, Adriana A. Angel, Andrés H. Mulassi, Mariano A. Giorgi, María G. Rostan.
Rev Argent Cardiol 2015;83:222-231

Riesgo cardiovascular a lo largo de la vida en pacientes con bajo riesgo en el corto plazo. Asociación con la ateromatosis carotídea.

W. Massona, M. Huerín, M. Lobo, y D. Siniawski.

Association between LDL-C, Non HDL-C, and Apolipoprotein B Levels with Coronary Plaque Regression.

Walter Masson, Daniel Siniawski, Martín Lobo, Graciela Molinero, Mariano Giorgi, Melina Huerín.

Características y actitudes del tabaquismo en médicos de la Argentina en relación a la especialidad (video).

Impacto de un programa de meditación sobre la velocidad de la onda de pulso, la proteína C reactiva y la calidad de vida. (pdf)
Melina Huerin, Walter Masson, Martín Lobo, Julieta Rodríguez, Noemí lago, María Rostan, Alvaro Sosa Liprandi.
Rev Argent Cardiol 2015;83:194-200.

Estratificación del riesgo cardiovascular en pacientes con sobrepecho u obesidad en prevención primaria. Implicaciones en la utilización de estatinas.
Walter Masson, Martin Lobo, Melina Huerin, Graciela Molinero, Diego Manente, Mario Pángaro, Laura Vitagliano y Horacio Zylbersztejn.

Adaptación para la Argentina y evaluación de las propiedades psicométricas del Cuestionario sobre la Dieta Restrictiva de Sodio en pacientes con insuficiencia cardiaca. (pdf)
Walter Masson, Gustavo Calderón, Cecilia Zeballos, Martín Lobo, Salvador De Francesca, María Rostan, Jorge Curotto Grasiosi, Mariano Giorgi.
Rev Argent Cardiol 2015;83:21-27.

Estratificación del riesgo cardiovascular con diferentes puntajes de riesgo en prevención primaria y sus implicaciones en la indicación de estatinas.
Walter Masson, Martín Lobo, Melina Huerin, Graciela Molinero, Diego Manente, Mario Pángaro, Laura Vitagliano, Horacio Zylbersztejn.
Rev Argent Cardiol 2014;82:480-486.

Impacto del ejercicio supervisado en la rigidez arterial.
Melina S. Huerín, Walter M. Masson Juárez, Jessica Goldring, Lorenzo Martín Lobo, Sergio V. Perrone, Álvaro Sosa Liprandi.
Insuf Card 2014; (Vol 9) 1:8-15.

Respuesta a las estatinas en prevención cardiovascular: evaluación de los hiporrespondedores (pdf).
Walter Masson, Martín Lobo, Diego Manente, Laura Vitagliano, María Rostán, Daniel Siniawski, Melina Huerin, Mariano Giorgi.
Rev Argent Cardiol 2014;82:34-41.

Ejercicio en médicos argentinos: encuesta sobre hábitos y actitudes frente a la actividad física (pdf).
Martín Lobo, Gustavo Calderón, Walter Masson, Melina Huerin, Diego Manente, Adriana Ángel, Mario Pángaro, Laura Vitagliano, María Rostan, Andrés Mulassi, Mariano Giorgi.
Rev Argent Cardiol 2014;82:26-33

Estimación del riesgo cardiovascular y detección de ateromatosis carotídea subclínica en mujeres posmenopáusicas de mediana edad. (pdf)
Walter Masson, Melina Huerin, Laura Vitagliano, Cecilia Zeballos, Martín Lobo, María Rostan, Alberto Cafferata, Diego Manente.