

# Adherence to Long-term Therapies: Policy for Action

Meeting Report  
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Noncommunicable Diseases and Mental Health  
World Health Organization

*...Committed to health care improvement*

## **WHO Adherence Project: Toward Policies for Action**

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# Adherence to Long-term Therapies

# Key Messages for Policy Makers:

⊕ **“Non-adherence to treatment across chronic diseases is a world wide problem of striking magnitude”**

Adherence to long-term therapy for chronic illnesses in developed countries averages 50%. In developing countries, the rates are even lower. It is undeniable, many patients experience difficulty following treatment recommendations.

⊕ **“The consequences of non-adherence to long-term therapies: poor health outcomes and increased health care costs”**

Poor adherence to long-term therapies severely compromises treatment effectiveness making it a critical issue in population health from both quality of life and health economic perspectives.

⊕ **“The impact of poor adherence grows as the burden of chronic diseases grows world wide”**

Noncommunicable diseases and mental disorders, HIV/AIDS and TB, all together represent 53% of the burden of all conditions worldwide for the year 2000 and will exceed 65% worldwide in the year 2020. The poor are disproportionately affected.

⊕ **“Adherence means more than just following physician instructions”**

Level of adherence depends ultimately on the adoption and maintenance of a range of therapeutic behaviours and may include self-management of biological, behavioural and social factors that influence health and illness. All health workers are involved in the process.

⊕ **“Adherence is an important indicator of health system effectiveness”**

Health outcomes cannot be accurately assessed if they are measured predominantly by resource utilization indicators and efficacy of interventions. We will not achieve the population-health outcomes predicted by treatment efficacy data unless adherence rates are used to inform planning and project evaluation.

Key Messages for Policy Makers

⊕ **“Four interacting factors cause non-adherence”**

Poor adherence is a multidimensional problem comprising the efforts of different health care actors. Achieving good adherence requires the commitment and participation of all stakeholders in the health care system. Effective policies will address these four factors: the health care team/system, the characteristics of the disease, disease therapies, and patient-related variables.

⊕ **Increasing the effectiveness of adherence interventions may have far greater impact on the health of the population than any improvement in specific medical treatments”**

Studies consistently find significant cost saving and increases in the effectiveness of health interventions that are attributable to low cost interventions for improving adherence. Without a system that addresses the determinants of adherence, advances in biomedical technology will fail to realize their potential to reduce the burden of chronic illness. Access to medications is necessary but insufficient.

⊕ **“Health systems must evolve to meet new challenges”**

In developed countries, the epidemiologic shift in disease burden from acute to chronic diseases occurring over the past 50 years has rendered acute care models of health service delivery inadequate to address the health needs of the population. In developing countries, this shift is occurring at a much faster rate.

⊕ **“Acute care models of health service delivery present barriers to adherence in chronic disease”**

Lessons learned from both developed and less developed countries illustrate that a chronic care model is required to deal effectively with chronic conditions, whether they be communicable or non-communicable in origin.

# Setting the scene

## ⊕ **Non-adherence to treatment across chronic diseases is a world wide problem of striking magnitude**

A rigorous review has found that, in developed countries, adherence among patients suffering chronic diseases averages only 50%<sup>1</sup>. The magnitude and impact of non-adherence in developing countries is assumed to be even greater given the paucity of health resources and inequities in access in those jurisdictions.

*In developed countries, adherence to long-term therapies in the general population is around 50%, and much lower in developing countries.*

For example, in the USA, hypertension affects 43-50 million adults. About 50% of those who have been diagnosed are treated, and only 51% of this treated population adhere to the prescribed treatment<sup>2-4</sup>. In Gambia, only 27% adhere to their anti-hypertensive medication regimen<sup>5</sup>. Data for depression reveal non-adherence of between 30% and 60% to antidepressant therapies<sup>6</sup>. In Australia, only 43% of the patients take asthma medication as prescribed all the time<sup>7</sup> and only 27.8% use prescribed preventive medication. In the treatment of HIV/AIDS, adherence to anti-retroviral agents varies between 37%-83% depending on the drug under study<sup>8,9</sup>, and demographic characteristics of patient populations<sup>10</sup>. This represents a tremendous challenge to population health efforts where success is primarily determined by adherence to long-term therapies.

Although extremely worrisome, these indicators are incomplete. To ascertain the true extent of non-adherence; data concerning developing countries and important sub-groups, such as adolescents, children and marginal populations are urgently required. A full picture of the magnitude of the problem is critical to developing effective policy support for efforts aimed at improving adherence.

⊕ **The consequences of non-adherence to long-term therapies: poor health outcomes and increased health care costs**

Adherence is a primary determinant of treatment effectiveness, thus poor adherence attenuates optimum clinical benefit<sup>11</sup>. Patients do not obtain the full benefits of treatment mainly because of inadequate adherence<sup>12;13</sup>.

For example, low adherence has been identified as the primary cause of unsatisfactory blood pressure control<sup>4</sup>. In the US, only 30% of those treated achieved the expected blood pressure<sup>4</sup>. In Venezuela only 4.5% of the treated patients had a good control<sup>15</sup>.

Level of adherence has been positively correlated with treatment outcomes in depression, independently of the anti-depressive drugs used<sup>16</sup>. In communicable chronic conditions such as HIV, viral suppression has been linked to higher rates of adherence to anti-retroviral therapies<sup>9;17-23</sup>.

In addition to their positive impact on the health status of patients with chronic illnesses, higher rates of adherence confer economic benefits. Examples of these mechanisms include direct savings generated by less use of sophisticated and expensive health services caused by disease exacerbation, crisis or relapses of patients. Indirect savings may be attributable to enhancement to or preservation of quality of life and patient's social and vocational roles.

There is strong evidence suggesting that self-management program offered to patients with chronic diseases improve health status and reduce utilization and costs. When self-management and adherence programs are combined with regular treatment and disease-specific education, significant improvements in health-promoting behaviours, cognitive symptom management, communication and disability management have been observed. In addition, such programs appear to result in fewer hospital days, and fewer outpatient visits and hospitalisations. The data suggest a cost to savings ratio of approx. 1:10 in some cases and these results persist over three years<sup>24</sup>. Other studies have found similarly positive results when evaluating the same or different interventions<sup>18;25-38</sup>.

The development of resistance to therapies is another serious public health issue related to poor adherence. Beyond years of life lost due to premature mortality and health care costs attributable to preventable morbidity, the economic consequences of non-adherence include stimulating the need for ongoing investment in R&D on new compounds to fight new resistant variants of disease.

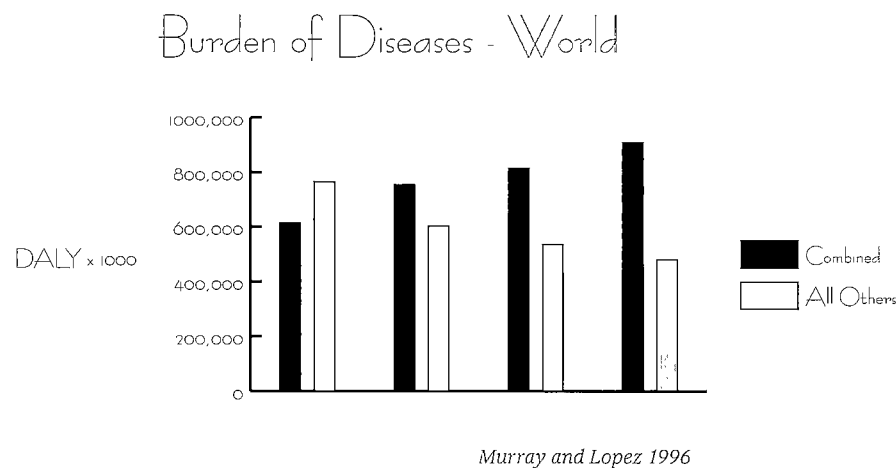
This "chronic" investment in R&D could be avoided with higher adherence rates and these resources could be better used in the development of more effective and safer drugs, or directed to neglected conditions.

In HIV/AIDS, the resistance to anti-retroviral agents have been linked to lower levels of adherence<sup>20;39</sup>. Some publications suggest that when adherence rates fall between 50% -85% drug resistance is more likely to develop<sup>23;39</sup>. Unfortunately, an important proportion of treated patients fall within this category<sup>8</sup>. The same happens with anti-tuberculosis drug therapy in which poor adherence is recognized as a major cause of treatment failure, relapse<sup>40</sup>, and drug resistance<sup>41;42</sup>.

The growing evidence suggest that because the alarmingly high rates of non-adherence, increasing the effectiveness of adherence interventions may have far greater impact on the health of the population than any improvement in specific medical treatments.<sup>1</sup>

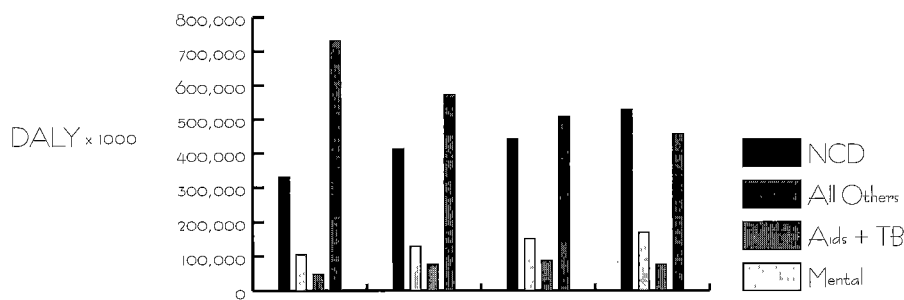
⊕ **The impact of poor adherence grows as the burden of chronic diseases grow world wide**

Non-communicable diseases, mental health disorders, HIV/AIDS and TB, combined represented 53% of the burden of all illness world wide and will exceed 65% of the global burden of disease in the year 2020 (see graphic “Burden of Disease - World”).



Contrary to popular belief, non-communicable diseases and mental health problems are highly prevalent in developing countries, representing as much as 42% of the total burden of diseases for the year 2000, and 56% by the year 2020. (see graphic “Burden of Disease - Developing Countries”).

## Burden of Diseases - Developing Countries



*Murray and Lopez 1996*

### ⊕ **The poor are disproportionately affected**

There is a two-way interdependent relationship between economic poverty and chronic diseases. Many of the world's poor, despite regional differences in geography, culture and commerce, experience the same discouraging cycle: being healthy requires money for food, sanitation and medical care, but to earn money, one must be healthy. The lack of an adequate care for chronic conditions force poor families to face a particularly heavy burden of caring for their love ones undermining the development of their most basic roles. Women are specially "taxed" by the lack of a health care system which effectively deals with chronic conditions<sup>43;44</sup>. Competing needs in populations suffering of "chronic poverty" undermine their efforts in addressing their long term care needs including adhering to medications and therapies.

Non-adherence compounds the challenges of improving health in poor populations, and results in waste and under utilization of already limited treatment resources.

# D

# efining the problem...

## ⊕ **What is adherence?**

Although most research has focused on adherence to medication, adherence encompasses numerous health-related behaviours extending beyond taking prescribed pharmaceuticals. The meeting participants (WHO, June 2001) believe that defining adherence as “the extent to which the patient follows medical instructions” was a helpful starting point. However, the term “medical” was felt to be insufficient in describing the range of interventions used to treat chronic diseases. Furthermore, the term “instructions, implies that the patient is a passive, acquiescent recipient of expert advice as opposed to an active collaborator in the treatment process.

In particular, the meeting participants recognised that adherence to any regimen reflects behaviour of one type or another. Seeking medical attention, filling prescriptions, taking medication appropriately, obtaining immunisation, attending follow-up appointments, and following behavioural interventions which address personal hygiene, self-management of asthma or diabetes, smoking, contraception, risky sexual behaviours, unhealthy diet and insufficient levels of physical activity and exercise are all examples of therapeutic behaviours.

Also, meeting participants noted that the relationship between the patient and the health care provider (be it physician, nurse or other health practitioner) must be a partnership that draws on the competencies of each. The literature identifies the quality of the treatment relationship to be an important determinant of adherence. Effective treatment relationships are characterised by an atmosphere in which alternative therapeutic means are discussed, the regimen negotiated, adherence discussed, and follow-up planned.

A clear distinction between the concepts “Acute vs. Chronic” and “Communicable (infectious) vs. Non-communicable” diseases must be established in order to effectively understand the type of care each one needs. Chronic conditions may be infectious in origin, such as HIV/AIDS and TB, and will need the same kind of care that many other chronic noncommunicable diseases, such as hypertension, diabetes, and depression. The adherence project has adopted the following definition of chronic diseases:

Defining the problem...

*“Diseases which have one or more of the following characteristics: they are permanent, leave residual disability, are caused by nonreversible pathological alteration, require special training of the patient for rehabilitation, or may be expected to require a long period of supervision, observation, or care.”<sup>45</sup>*

⊕ **Adherence is an important indicator of health system effectiveness**

Health professionals, policymakers, and donors frequently measure the performance of their health programs and systems using resource utilization end-points and the efficacy of interventions. While such indicators are important, over-reliance on them can bias evaluation toward the process of health care provision, missing indicators of health care uptake with which more accurate estimates of health outcomes would be possible to be done.<sup>46</sup> We will not be able to achieve the population-health outcomes predicted by treatment efficacy data unless adherence rates are used to inform planning and project evaluation.

⊕ **Four interacting elements cause non-adherence**

Non-adherence is a multi-determined problem caused by the interplay of four factors. The factors have reciprocal influence on the process of care for chronic conditions. These include:

**1. Health care team and system-related factors**

Health care team and system-related factors represent the knowledge, attitudes and skills of health care providers within the health service system, and characteristics of the system itself. Relatively little research has been conducted in this area. The most important factors affecting adherence are the patient-provider relationship<sup>47</sup>, capacity of the system to educate patients, provide them with access to treatment resources, provide follow-up, establish community supports, train providers to implement chronic care protocols and interventions that support patient self-management.

**2. Condition-related factors**

Condition-related factors represent particular illness-related demands faced by the patient and the cultural meaning of the illness. Factors related to the symptoms experienced by the patient, level of disability (physical, psychological, social and vocational), severity of disease, rate of progress of the disease and the availability of effective treatments are strong determinants of adherence. Their impact comes from the manner in which they influence how the patient perceives risk, the importance of following treatment, and the priority placed on adherence. Also, some comorbidities, such as depression, are important modifiers of adherent behaviors.<sup>36</sup>

### 3. Characteristics of therapies

There are many therapy-related factors affecting adherence. Important ones are those related to the access to medications, the complexity of the therapy, the immediacy of beneficial effects, side-effects and the availability of medical support to deal with them, and the visibility of the regimen vis a vis diseases that carry a degree of stigma.

There was consensus among meeting participants that unique characteristics of diseases and/or therapies do not outweigh the common factors affecting adherence but rather modify their influence. Thus, adherence interventions should be tailored to patient's needs in order to achieve maximum impact.

### 4. Patient-related factors

Patient-related factors represent the resources, knowledge, attitudes, beliefs, perceptions and expectancies of the patient. Patient knowledge and beliefs about their illness, motivation to manage it, confidence (self-efficacy) concerning their ability to engage in illness-management behaviours, and expectancies regarding the outcome of treatment and the consequences of non-adherence interact in ways not yet fully understood to influence adherence behaviours. Although socio-economic status has not received much support as an independent predictor of adherence, in developing countries low socio-economic status may well leave patients in a position of having to choose among competing priorities. Such priorities frequently include demands to direct their limited available resources to the needs of other family members such as children or parents for whom they have a duty of care.

Adherence is a multidimensional issue where different health care actors' efforts meet

Addressing the problem of non-adherence involves targeting these four factors to the extent that they compromise efficient, effective service provision, and the adoption and maintenance of therapeutic behaviours. To accomplish this requires a shift from an acute care model of treatment that has traditionally overemphasised the role of the patient-related factors as a determinant of adherence.

How to Increase Adherence

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# How to increase Adherence

## ⊕ **Achieving optimal health outcomes requires interventions with broader impact**

Adherence interventions must be multi-focal addressing systemic, disease related, treatment-related and patient determinants in an integrated manner. Elements that have demonstrated effectiveness are education in self-management<sup>19;29;48-55</sup>, pharmacy management programs<sup>25;56</sup>, nurse, pharmacist and other non-medical health professional intervention protocols<sup>30;57-62</sup>, counselling<sup>38;63</sup>, behavioural interventions<sup>64;65</sup>, follow-up<sup>66;67</sup> and reminders.<sup>34;68-71</sup>

Increasing the effectiveness of adherence interventions may have far greater impact on the health of the population than any improvement in specific medical treatments.

*Haynes 2001*

Adherence interventions must become a central component of efforts to improve population health globally. Interventions that promote adherence can help to close the gap between the clinical efficacy of interventions and their effectiveness when used in the field. As mentioned before, studies consistently find significant cost saving and increases in the effectiveness of health interventions attributable to low cost interventions for improving adherence. In many cases, investments done in improving adherence are fully paid with savings in health care utilization<sup>24</sup>, in others the increase in the benefit to patients fully support the investment.

The adherence project is committed to develop practical policies to enhance adherence in high, medium and low resources settings.

## ⊕ **Health systems must evolve to meet new challenges**

In developed countries, the epidemiologic shift in disease burden from acute to chronic diseases occurring over the past 50 years has rendered acute care models of health service delivery inadequate to address the health needs of the population.

Ongoing reliance on acute models has delayed reforms necessary to address longer-term interventions for chronic conditions.

In developing countries, this shift is occurring at a much faster rate, and at a time when the battle against communicable diseases is still being fought. In such jurisdictions, policymakers' attention may remain more focused on communicable diseases, for example HIV/AIDS and TB. However, these conditions would not be effectively addressed by an acute care model even with full and unrestricted access to drugs, because the acute care model does not address the complex issues of adherence.

**A**ccess to drugs alone is not sufficient to control chronic conditions

Access to medications is not enough to reduce the burden of chronic disease.

⊕ **Acute care models of health service delivery present barriers to adherence in chronic disease**

Acute care models tend to support interventions that are symptom-focused and therefore discrete in their impact. Without a system that includes a focus on the determinants of health-related behaviours technological advances in biomedicine will continue to fail to live up to their potential. Table 1 describes the most important elements which characterize acute and chronic care.

How to increase Adherence

	<b>Acute care</b>	<b>Chronic care</b>
<b>Main goal of care</b>	Cure	Control the progression of the condition; Increase survival; Enhance quality of life.
<b>Duration</b>	Limited	Long term, Indefinite or Life long.
<b>Knowledge</b>	Concentrated on health professionals	Health professionals, patients and families share complementary knowledge
<b>Disease management</b>	Focused on acute & single medical treatment	Relevant multi-drug & self-management strategy with appropriate health system, community and family support. Comorbidities are usually present
<b>Providers of care</b>	Usually clinicians and clinical institutions	Broad spectrum of health care organizations, community services and family care
<b>Quality of care</b>	Mostly self-contained approaches within institutions	Relevance of systemic quality approaches

Table 1: Comparison of acute versus chronic care models

Innovative care models for chronic conditions are being formulated and implemented in selected settings within certain developed countries. Results to date are promising, showing improved adherence rates and clinical outcomes when the following strategies are applied comprehensively:

- ✓ Providing care that is respectful of patient preferences, and ensuring that patient values guide all treatment decision-making
- ✓ Educating and supporting patients to self manage their conditions to the extent possible.
- ✓ Linking to resources in the broader community.
- ✓ Developing and supporting health care providers to make and implement evidence-based treatment plans.
- ✓ Reorganizing health systems to enhance the free flow of knowledge and information.
- ✓ Coordinating care across patient conditions, health care providers, and settings over time.
- ✓ Monitoring the evaluating the quality of services and outcomes.
- ✓ Reorganizing health care financing so that evidence-based care for chronic conditions is possible and supported, and coverage of drugs is fully supported.

For outcomes to be improved, health policy and health system changes are essential. Effective treatment for chronic conditions requires a transformation of health care, away from a system that is focused on episodic care in response to acute illness, towards a system that is proactive and emphasizes health across a lifetime.

# What WHO is doing to advance the agenda...

## ⊕ **The Adherence Project: Toward Policies for Action ...**

The World Health Organization Department of Health Care for Chronic Diseases initiated an inter-cluster project entitled "Adherence to Long-term Therapies: Toward

Stakeholder team work ... key to the success of the Adherence project

Policies for Action", which includes 10 chronic conditions and risk factors: depression, epilepsy, asthma, diabetes, HIV/AIDS, TB, cancer, smoking, heroin dependence, and hypertension. The main goals, strategies and products are described below.

## ⊕ **The Adherence Meeting . . . setting a high standard of professional participation.**

An international meeting on Adherence to Long-term Therapies was held on June 4-5, 2001. A total of 17 participants worldwide and 24 WHO officers attended the meeting. They were a mix of a) policy-makers representing different clusters at WHO HQ, b) scientists who were well published in the area of adherence, representing each of the conditions under study and different regions, c) representatives of different associations (see Annex 1: List of participants). The meeting successfully achieved its goals:

- ✓ Built a motivated and committed group of scientists supporting the Adherence project (see Annex 2: Results of the Anonymous Meeting Evaluation);
- ✓ Received input on the structure and process for further development of the project;
- ✓ Received input on the content of the report.

## ⊕ **The Web Discussion Board on Adherence**

A web site was designed specifically for the project to allow different stakeholders to exchange ideas, as well as to share reports, and enable coordination of the entire project. Through this vehicle, information will be gathered, edited and used as primary material for the final report on Adherence. It is expected that this web site will secure broad participation from the most important stakeholders in the field of adherence.

In a huge effort to reach the most important stakeholders world wide, we have invited a diverse group of health care actors from 6 different regions. To this date we have representatives from more than 40 countries in the world including more than 120 scientists and 30 policy makers, as well as 40 medical associations, 6 nurses' associations, 2 pharmaceutical manufactures associations, and 10 patients' organizations.

A parallel service is provided through e-mail only, for people who have no access to the web. An additional communication channel is available though mail for those participants who have no access to the Internet.

## ⊕ **“Stakeholder team work” . . . key to the success of the Adherence project**

Timely coordination of the resources contributed by the different stakeholders will ensure feasibility of implementing the project in developing countries.

## ⊕ **Special Project on Innovative Care for Chronic Conditions**

Given the importance of chronic care models to increase the effectiveness of care, and to support high rates of adherence to long-term therapies, a priority project on Innovative Care for Chronic Conditions has been launched by WHO. This project will release a report of its main findings and recommendations in early 2002.

## ⊕ **Strategies and Plan of Action**

Our main goal is to improve adherence rates worldwide in therapies used for chronic conditions. The basic strategy is described in the following table.

*Additional information about WHO activities in this content area can be accessed at: [http://www.who.int/ncd/chronic\\_care/index.htm](http://www.who.int/ncd/chronic_care/index.htm)*

What WHO is doing to advance the agenda

# Adherence Project: Strategic Plan

## Objectives

- 1) To Increase awareness on poor adherence as a public health problem affecting quality of care.
- 2) To establish the appropriate network of stakeholders.
- 3) To expand our knowledge on adherence in developing countries.

## Strategies

- |   |   |  |
|---|---|--|
| <ol style="list-style-type: none"> <li>a) Develop a WHO report on adherence and evidence-based promotional material</li> <li>b) Organize meetings of experts</li> <li>c) Promote discussion on the web and include the topic in the Chronic Care observatory.</li> <li>d) Conduct bibliographic reviews.</li> </ol> | <ol style="list-style-type: none"> <li>a) Establish a network of scientists, health professionals, policymakers, the industry, and the government willing to contribute in developing a comprehensive report on adherence.</li> <li>b) Contact donors to promote the project and the need of including adherence in the evaluation of health care investment projects</li> <li>c) Invite them to web discussions and further activities.</li> </ol> | <ol style="list-style-type: none"> <li>a) Establish a network of researchers willing to implement field studies in developing countries.</li> <li>b) Develop standardized research protocols and use them in for implementing field studies.</li> <li>c) Promote and Support the implementation of field studies worldwide.</li> </ol> |
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## Products

- |   |  |  |
|---|--|--|
| <ol style="list-style-type: none"> <li>a) WHO Adherence Meeting Report (Chronic Care Series)</li> <li>b) WHO Adherence to Long-term therapies Report</li> </ol> | <ol style="list-style-type: none"> <li>a) A global network of innovators on adherence (includes all actors)</li> <li>b) Web Discussion Board on Adherence</li> </ol> | <ol style="list-style-type: none"> <li>a) WHO Adherence Field Studies Report</li> <li>b) A global network of recognized field researchers on adherence issues in all WHO regions.</li> </ol> |
|---|--|--|

Country Support, in Coordination with Regional and Country Offices

# Annex I: List of participants Adherence Meeting

## External Participants

**Aro, Arja R.** Assistant Professor and Senior Researcher. National Public Health Institute Helsinki, Finland.

**Bunde-Birouste, Anne W.** Scientific & Technical Director - Director of Programmes - IUHPE - International Union for Health Promotion and Education. Paris, France

**Chaustre, Ismenia.** Professor. Servicio de Pneumología Pediátrica. Hospital de Niños "JM de los Ríos". Caracas, Venezuela.

**Chesney, Margaret.** Professor of Medicine. UCSF Prevention Sciences Group. San Francisco, USA.

**Dick, Judy.** Senior Researcher. Medical Research Council of South Africa. Tygerberg, South Africa.

**Ghebrehiwet, Tesfamicael.** Consultant, Nursing & Health Policy. International Council of Nurses. Geneva, Switzerland.

**Glasgow, Russell.** Senior Researcher. AMC Cancer Research Center. Denver, USA.

**Hotz, Stephen B.** University Research Fellow. School of Psychology and Department of Epidemiology & Community Medicine. University of Ottawa. Ottawa, Ontario. Canada.

**Karkashian, Christine,** Ph.D. Independent Consultant. San José, Costa Rica.

**Knobel, Hernando.** Servicio de Medicina Interna-Infeciosas, Hospital del Mar, Universidad Autonoma de Barcelona. Barcelona. Spain.

**Lam, Tai Hing.** Professor, Head of Department Community Medicine & Behavioural Sciences. The University of Hong-Kong. Hong Kong, China.

**Linden, Michael.** Professor. BfA-rehabilitation centre. Teltow, Germany.

**Nuño, Roberto.** Independent consultant. Spain.

**Pruitt, Sheri.** Director of Behavioral Medicine. The Permanente Medical Group. Roseville, USA.

**Reddy, K. Srinath.** Professor of Cardiology. Department of Cardiology. All India Institute of Medical Sciences. Ansari Nagar, New Delhi, INDIA.

**Sanchez Sosa, Juan José.** Research Director: Project on Quality of Life and Therapeutic Adherence in Chronic Diseases. National University of Mexico. Mexico City DF. Mexico.

**Sissel Brinchmann.** International Federation of Pharmaceutical Manufacturer Associations. Brussels. Belgium.

**Woods, Linda.** General Director. South African Depression and Anxiety Support Group. Benmore, South Africa.

## **WHO Secretariat:**

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**Puska, Pekka**. Director, Health Promotion/NCD Prevention and Surveillance (HPS), WHO. Geneva, Switzerland.

**Saraceno, Benedetto**. Director, Department of Mental Health and Substance Dependence, WHO. Geneva, Switzerland. (Represented by Dr Shekhar Saxena)

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List of participants - Adherence Meetings

# Annex 2: Results of the Anonymous Meeting Evaluation

Following are some of the comments about the Adherence meeting we have received from the participants.

*“Excellent framing of adherence issues, in particular re: communicable diseases and issues around them.”*

*“Very interesting. Showed other approach for health that has been almost unknown. This is an extremely important meeting. It gives the first message that there is a great problem which needs to be tackled globally (as well as locally).”*

*“I found the meeting fruitful and action oriented. The constant challenges to speak to policy makers was useful and brought reality into the group works.”*

*“A very dynamic workshop. Good networking. Excellent selection of candidates. Lots of attention on why we must put adherence on the agenda on health care, lots of work on determinants of adherence, but now we have to put our heads together on how to set up effective adherence enhancing strategies.”*

*“Good interaction in an informed setting. Would like to see a clear action plan developed quickly. Though some of the discussions in the 4 sessions overlapped, it emphasized the core concepts.”*

*“A very constructive approach consisting a philosophical, scientific and practical way of looking at an issue.”*

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