## MEDICAL-EXPO 2008 in APLAR's World

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#### **Global Rheumatology Summit 2008**

#### Prevalence of Rheumatic Diseases in Latin American Populations

**Community Based Studies Using the COPCORD Model Approach** 

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# The COPCORD Approach Stage I

Phase 1: Screening (Questionnaire: cross-cultural adapted)\*

#### **Phase 2:** Pre-evaluation

- Pain/Tenderness in bones/joints/muscles in the last 7 days
- Physical disability
- Absence of any trauma at that locations

# Phase 3: Evaluation by a Rheumatologist (blinded to the information provided by the questionnaires) Design: Cross Sectional Home Survey

Bennett K, Cardiel MH, Bosi-Ferraz MB, Riedemann P, Goldsmith CH, Tugwell P: Community screening for rheumatic disorders : cross-cultural adaptation and screening characteristics of the COPCORD questionnaire in Brazil, Chile and Mexico. The PANLAR –COPCORD Working Group. Pan American League of Associations for Rheumatology Community Oriented Program for the Control of Rheumatic Disease. *J Rheumatol 1997;24:160-68* 



## **Data Available in Latin America**

- Mexico: Cardiel MH et al. Community based study to estimate prevalence, burden of illness and help seeking behavior in rheumatic disease in Mexico City. A COOPCORD study. (Pedro Martir) Clin Exp Rheumatol 2002;20:617-24
- Brazil: Rodrígues Senna EP, Bosi Ferraz M et al. Prevalence of Rheumatic Diseases in Brazil. A Study using the COPCOORD approach. (Montes Claros, Minas Gerais) J Rheumatology 2004;31:594-7
- Cuba: Reyes Llerena GA. Prevalence of Rheumatic Diseases in Cuba. A community based study using the COPCOORD questionnaire. (Lawton) Personal communication. June 01, 2005

## **Data Available in Latin America**

Peru: Gamboa R et al. Prevalence of Rheumatic Diseases and Disability in an Urban Marginal Latin American Population: A Community Based Study Using the COPCORD Model Approach (Lima, PERU C.S. Tambo Viejo). Arthritis Rheum 2007;56 (9):S344

 Guatemala: Obregón-Ponce A, García-Kutzbach A. et al. Prevalence of the Rheumatic Diseases (2007) in San Juan Sacatepeque County, Department of Guatemala and Zone 5 of Guatemala City: WHO-ILAR COPCORD Study. Journal of Clinical Rheumatology 2008 August Suppl;14:S1 (abstract on-line) + personal communication

## **COPCORD Model**

#### Examples of the Communities and Interviewers Latin America



Lawton: a rural community in Cuba Population: 22,901 in 1920 houses Familial Doctors: 48 Rheumatologists: 3 (Phase 3)



*Tambo Viejo:*a suburban community in Lima, Peru *Population:* 11,000 *Rheumatologists and Residents:* 8

## **COPCORD Model**

#### Examples of the Communities and Interviewers Latin America



San Juan Sacatepéquez: a rural community in Guatemala Population > 15 years old: 125,539 Rheumatologists: 5



Zona 5 Guatemala: an urban community in Guatemala Population > 15 years old: 45,758 Rheumatologists: 5

## Community Based Studies Using the COPCORD Model Approach in Latin America Method: General Information

		Community	Sample Size/ Population (%)	Age (years)	Pain Intensity (VAS 0-10)	Rheuma- tologists (n)
Mexico	2002	Suburban	2,500/ 30,000 (8.3)	<u>&gt;</u> 18	<u>≥</u> 4	1
Cuba	2005	Rural	3,155/ 22,901 (13.8)	<u>&gt;</u> 18	<u>&gt;</u> 1	3
Brazil	2004	Suburban	3,038/ ?	<u>&gt;</u> 16	<u>&gt;</u> 1	1
Peru	2007	Suburban	1,965/ 11,000 (17.9)	N. D.	<u>&gt;</u> 1	8
Guatema	ala 2007	Urban and Rural	7, <mark>811/171,297 (4.6)</mark>	<u>&gt;</u> 15	Ordinal scale	5

In Mexico, Cuba and Peru the sample was at random, stratified by age and sex In Brazil and Guatemala the sample unit was the domicile



## Results

## Community Based Studies Using the COPCORD Model Approach in Latin America Demographic and Socio-economical Data

	Age Mn ( <u>+</u> SD)	Female / Male	Working Status (%)	Formal Education > 6 years (%)
Mexico 2002	35 <u>+</u> 14	53 / 47 *	96	87
Cuba 2005	<b>N.</b> D.	54 / 46 *	<b>N.</b> D.	N. D.
Brazil 2004	36 <u>+</u> 10	63 / 37	66	N. D.
Peru 2007	40 <u>+</u> 16	51 / 49 *	63.8	N. D.
Guatemala 2007	37 <u>+</u> 13	62 / 38	<b>N. D.</b>	N. D. **

Stratified by age and sex

N. D. = Not Data

\*\* 90% Iliterate in Guatemala San Juan de Sacatepéquez

## Prevalence of Musculoskeletal Complaints Latin American Communities



## **Prevalence of Disability** Latin American Communities



#### Prevalence of Disability for Musculoskeletal Latin American Communities



## Prevalence of Rheumatic Diseases Latin American Communities Definitive Diagnosis n (%)

	México	Cuba	Brazil	Perú	Guatemala**
Osteoarthritis	58 (2.3)	644 (20.4)	126 ( 4.1)	283 (14.4)	2.85
Low back pain	158 (6.3)	368 (11.7)	N. D.	65 ( 3.3)	0.5
Soft tissue rheumatism				412 (21.0)*	1.46
Fibromyalgia	37 (1.4)	<b>N.</b> D.	76 (2.5)	N. D.	N. D.
Gout	10 (0.4)	20 (0.68)	N. D.	N. D.	1
Rheumatoid Arthritis	8 (0.3)	39 (1.24)	14 (0.46)	10 ( 0.5)	0.52
SAMPLE SIZE	2,500	3,155	3,038	1,965	7,811

(\*and Myofascial pain syndrome)

N. D. = Not Data

## Prevalence of Rheumatic Diseases Latin American Communities Definitive Diagnosis (absolute numbers)

	México	Cuba	Brazil	Perú	Guatemala**
Osteoarthritis	58	644	126	283	223
Low back pain	158	368		65	39
Soft tissue rheumatism*				412	114
Fibromyalgia	37		76		0
Gout	10	20			1
Rheumatoid Arthritis	8	39	14	10 ( 0.5)	41
SAMPLE SIZE Physical Exam	2,500 275 (F.D.)	3,155 3,155 (F.D.)	3,038 810 (R)	1,965 723 (R)	7,811 419 (R)

(\*and Myofascial pain syndrome)

N. D. = Not Data

#### Prevalence of Rheumatic Diseases Latin American Communities



#### Care Health Providers (%) for Rheumatic Patients in Some Latin American Communities

Providers	México	Brasil	Cuba*	Perú
Rheumatologists	1.74	13	<b>2</b> nd	5.4
General Practitioner	31.70	10	4 01	29.9
Others	4.56	39.4	1 50	
Had not yet visited a physician	62.00	37.4		64.7

\* Not percentages reported

Not data for Guatemala

#### Prevalence of Rheumatic Diseases in Latin American Populations

**Community Based Studies Using the COPCORD Model Approach** 

#### Conclusions

- 1. Comparisons of the burden of rheumatic complains and prevalence of specific rheumatic diseases are difficult because differences in:
  - Sample selection (stratified by age and sex or not)
  - Training of the interviewers (nurses, familial doctors, residents, rheumatologists)
  - Level of pain elected to qualify the "POSITIVE RESPONDERS"
  - Ratio: Physical exam/Positive Responders
  - Methodology to evaluate disability (PADL or HAQ)
  - Data informed

#### Prevalence of Rheumatic Diseases in Latin American Populations

**Community Based Studies Using the COPCORD Model Approach** 

#### **Conclusions**

- 2. Osteoarthritis and Low back pain were the most prevalent rheumatic diseases in the majority of studies. It is of note the few data about soft tissue rheumatism and fibromyalgia
- 3. Rheumatoid arthritis, gout, spondyloarthropaties and Systemic Lupus Erythematosus were less prevalent than in the caucasian populations

#### Prevalence of Rheumatic Diseases in Latin American Populations

**Community Based Studies Using the COPCORD Model Approach** 

#### Conclusions

4. Wide differences were reported

In the prevalence:

Musculoskeletal complaints:from 12.15 to 46.5Disability:from 6.5 to 55.6

In the prevalence of the most common diseases:
 Osteoarthritis: from 2.3 to 20.4%
 Low back pain: from 0.5 to 11.7%

## **COPCORD Studies in Latin America** Recommendation: Standards are needed

#### Sample selection

- Minimun Age (15,16 or 18?)
- Sample Unit: The domicile or stratified by age and sex
- Intensity of pain to qualify as "Positive" (VAS ≥ 1 or ≥ 4, Ordinal Scale?)
- Last 7 days and ever
- Individuals who must be examined: all positive responders
- Physical exam: Rheumatologists
- Reports
  - Age: Means and class intervals (same intervals)
  - Socio demographic descriptors
    - Education level: Years of formal education
    - Working status: kind of work
    - Annual Income?



## Thanks

