PHC assessment: methodology of the baseline study

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Brazil - Location of the country of study
PELOTAS, RS (Southernmost state), BRAZIL
Objective

• To present the methodology of the baseline study on PHC assessment carried out in 2005, addressing the following questions:

  – What is the performance of PHC?

  – What are the differences between the Family Health Program and the traditional services?

www.epidemio-ufpel.org.br/proesf/index.htm
See the home page at the Internet
Why is this subject important?

– Family Health Program (FHP, or PSF in Portuguese)
  - It is the new strategy for PHC, launched in Brazil in 1994, in poor urban & rural areas through multidisciplinary teams (family doctors, nurses and home visitor, or community health workers)
  - It has defined population & coverage area with an approach on health promotion, preventive and curative care, caring for the people in the health center & at home

– Traditional PHC
  - It was started in 1980 and is centered in medical doctors, with basic specialties (clinicians, pediatricians, G-O), without defined population & coverage area
  - It is restricted to preventive & curative care in the health center
The PHC assessment baseline study

• Purpose:
  – to address the Ministry of Health request on evidences to support the extension of FHP (Family Health Program) at the medium and big size cities in Brazil

• Study questions:
  – The FHP is an adequate PHC strategy to the medium and big size cities, in the South and in the Northeast?
  – Which are the most important problems of the PHC and the FHP in these cities?
  – Which priorities need to be addressed firstly?
Research and network challenges

• Integrated Project – Research and Training
  – Research stimulated the network between research staff, administrative staff, and PHC workers
  – Research-action
    • Training is essential to research and to PHC practice
    • Participants – research staff; officers, coordinators and PHC workers
    • To support the institutionalization of PHC assessment
      – PHC workers participate in all activities of the research without responsibilities to conduct them

• Workshop → training → field work → research → workshop
  – Teaching model – training focused on research needs
  – To train the research staff and the PHC workers to perform operational research – to promote the PHC assessment by workers
  – PHC workers presentations during the meetings
Network Objectives

1. To increase the dissemination of research evidence
   1. keep the PHC workers and managers informed of research findings
   2. disseminate information using the network’s web site to post documents and alert the community about new projects or results

2. To facilitate mutual learning and support interaction
   1. through linkage and exchange activities during meetings, conferences, workshops, etc.;

3. To provide a collaborative and open forum for debate and discussion regarding agendas for research and primary healthcare assessment

4. To build capacity for evidence-based decision-making in PHC and for epidemiologic research on its assessment
Methodology
The baseline study - design

PROESF

Time 1
TRADITIONAL PHC centers → FHP centers → Baseline study

Time 2
TRADITIONAL PHC centers → FHP centers → Follow-up study

Performance Coverage

Effectiveness

Baseline study
Follow-up study
The baseline study - representativeness
(municipalities over 100,000 inhabitants)

Our study: 25%
Other institutions: 75%
Brazil regions and states participants

South region

Northeast region
Baseline Study: states & municipalities – South region
(number of municipalities over 100,000 inhabitants)

• Rio Grande do Sul (17)
  – Alvorada
  – Cachoeirinha
  – Caxias
  – Novo Hamburgo
  – Pelotas
  – Rio Grande
  – Santa Maria
  – Sapucaia do Sul
  – Viamão
  – Bagé
  – Canoas
  – Gravataí
  – Passo Fundo
  – Porto Alegre
  – S. Cruz do Sul
  – São Leopoldo
  – Uruguaiana

• Santa Catarina (4)
  – Florianópolis
  – Criciúma
  – Lages
  – Chapecó
Baseline Study: states & municipalities – Northeast region (municipalities over 100,000 inhabitants)

Field work pathway
Baseline Study: states & municipalities – Northeast region (number of municipalities over 100,000 inhabitants)

- **Alagoas (2)**
  - Maceió
  - Arapiraca

- **Paraíba (3)**
  - João Pessoa
  - Campina Grande
  - Santa Rita

- **Piauí (2)**
  - Teresina
  - Parnaíba

- **Rio Grande do Norte (3)**
  - Natal
  - Mossoró
  - Parnamirim

- **Pernambuco (10)**
  - Recife
  - Cabo de Santo Agostinho
  - Camaragibe
  - Caruaru
  - Garanhuns
  - Jaboatão dos Guararapes
  - Olinda
  - Paulista
  - Petrolina
  - Vitória de Santo Antão
Source of data & forms

• Primary source: 11 structured & standardized questionnaires
  – 3 for the management context – municipal health officer & PHC coordination
  – 1 for the municipal health council
  – 1 for the structure of PHC centers
  – 1 for the PHC workers
  – 1 for the PHC users
  – 4 for the population (children, mothers, adults & elderly)

• Secondary source: 2 main forms with data on
  – State and municipal levels: epidemiological and socio-demographic profile, health care financing and utilization from national databases provided by the Brazilian Ministry of Health

• All the forms are available at the Internet and are of free access:
  www.epidemio-ufpel.org.br/proesf/index.htm
Data gathering – primary source: Strategies

• A constant team of 15 trained interviewers for the whole study
  – Continuous supervision during the field work
  – Online and phone follow-up and support – weekly meetings by the Internet (msn)
  – Groups of 5 interviewers by each PHC center and neighborhood or coverage area (household interview)

• Beginning after the workshops with health managers and PHC workers from the 41 municipalities and 240 PHC centers
The team ready to work
Field Work:
Data Gathering
Coleta de dados: Lote NE 2
Coleta de dados: Lote NE 2
PROJETO DE MONITORAMENTO E AVALIAÇÃO DO PROESF-EXPANSÃO DO SAÚDE DA FAMÍLIA

PARCERIA entre o MINISTÉRIO DA SAÚDE e SECRETARIA MUNICIPAL DE SAÚDE

PARTICIPE da pesquisa em AVALIAÇÃO DE SAÚDE,
aproveite a oportunidade e DÊ A SUA OPINIÃO.

Acontecerá na 2ª quinzena de Abril,
da Unidade de Saúde e/ou nas residências dos moradores selecionados.

Você poderá receber a visita de 02 entrevistadores
devidamente identificados.

Maiores informações no Posto de Saúde de seu bairro.

NICE E JANAIÑA
SEJAM BEM-VINDAS AO NOSSO CENTRO DE SAÚDE!!!
Data processing & editing
Analysis – hierarchic model

Region
South x Northeast

PHC model
Family Program x Traditional

Structure
Workers
Process

Performance of PHC services

Users
Population
Results
The sample studied & the network

- 2 Regions
- 7 States
- 41 Municipalities
  - 41 presidents of the Municipal Health Council
  - 29 officers of the Municipal Health Dept.
  - 32 directors of PHC & Family Health Program

- 240 PHC centers
  - Around 500 members participate in the workshops
    - 4.749 health workers
    - 26,000 users
- 4,079 children
- 3,945 mothers
- 4,060 adults
- 4,006 elderly
Discussion
Study effectiveness

• The whole field work was performed in less than 6 months (134 days)
  – 65 days in the South region
  – 69 days in the Northeast region

• The data completeness and the short period of field work suggest that this type of survey is adequate to be carried out in Brazilian municipalities over 100,000 inhabitants to evaluate PHC policies and services
Study results

• PHC profile in two Brazilian regions
  – Structural problems of the PHC centers
  – PHC workers present a significant turn-over, precarious work, and are less trained to their complex functions

• Evidence on the extension of the Family Health Program (FHP) in medium and big size cities at the Brazilian South and Northeast regions

• Better performance of the FHP in comparison with the traditional PHC centers
  – For children, mothers, adults and elderly in the South as well as in the Northeast
Study results

• The FHP presents a better performance, but the coverage is still low

• How to extend the coverage, if the PHC team is overloaded?
  • Include firstly who do not receive any PHC care
  • Plan fewer follow-up consultations and increase its quality: focus on prevention and health promotion, increasing clinical quality

• Example: Prenatal care
  – High follow-up (96.5% of pregnant women) → 3.5% without any follow-up
  – Low coverage in the PHC centers (30% in South & 40% in Northeast)
  – For each 10 women followed in the PHC center, one don't participate of prenatal care in the PHC center or elsewhere → its profile:
    • Older, black, poorer, illiterate, with multiple pregnancies and deliveries
How this research is being used?

• To advance the scientific knowledge and subsidize
  – The professional education in the university and in the health services
  – The planning and assessment of the PHC policy addressing
    • The coverage of primary health care services
    • The performance of FHP in two contrasting regions
      – Northeast – poorer
      – South – richer
How this research is being used?

• Contribute to the Brazilian Ministry of Health emphasis on translation the research into practice
  
  – establishing a primary care practice-based research network as a major step of the baseline study of the PROESF (Project of Extension and Consolidation of the Family Health Program)
How this research is being used?

- To address common problems and benefits
  - Which problem? Primary health care assessment
    - How to perform research relevant to everyday practice, subsidizing a more effective work practices?
    - How to train PHC staff in research and deliver useful results on PHC performance?

- Which benefits? Knowledge on PHC assessment contributing to translate research into practice, answering relevant questions to primary care staff and their patients
  - Exchanging experiences, difficulties, and examples in PHC assessment

- Who care for it? A scientific staff with a long-time experience supported by PHC managers and workers
How this research is being used?

• The baseline study examined patient and PHC staff behaviors under a real context  
  – not in a controlled situation, as seen in studies performed in academic health centers

• It tried to connect the research team and the PHC workers, especially the community health workers, with the people at home to perform their tasks

• This strategy increases the external validity of the baseline study, delivering results more applicable to community based primary care
Coverage (%) of the FHP in municipalities over 100,000 inhabitants. Brazilian South & Northeast, 1999 a 2005. UFPel-PROESF baseline study, 2005.
Effectiveness in the elderly home care in the last three months – South & Northeast

<table>
<thead>
<tr>
<th>Indicator</th>
<th>South</th>
<th>Northeast</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FHP</td>
<td>Traditional</td>
</tr>
<tr>
<td>Needing regular home care</td>
<td>18%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>(197)</td>
<td>(82)*</td>
</tr>
<tr>
<td>Received regular home care</td>
<td>13%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>(148)</td>
<td>(21)*</td>
</tr>
</tbody>
</table>

*p < 0.001
Research products: 2005-2009

- **Study design**

  - Large epidemiological survey can be done in the Brazilian context with advantages in the assessment of public health interventions regarding to:
    - Clinical trial
    - Small case studies
  - Comparison groups
  - Multiple stage sample, with independent and stratified population groups
  - Standardized measures
  - Control of socio-demographic characteristics
  - Well defined criteria to evaluate the research findings
    - Reinforce the adequacy of epidemiological survey to examine the health service performance and people’s health conditions
Research products: 2005-2009

- Papers
  - Published (10)
  - Inline (04)
  - Submitted (05)
- Book chapters (03)
  - 2 in a Brazilian book on PHC assessment
  - 1 in a British book on telehealth applied to PHC services
- Final report on the baseline study
  - By region (02)
  - By municipality (41)
- Folder
- Presentations at seminars, meetings, congress, ...
- Newspaper – PROESF-Gestão
- Ph.D. Thesis (5)
- Master Thesis (2)
- Internet home page:
  - [www.epidemio-ufpel.org.br/proesf/index.htm](http://www.epidemio-ufpel.org.br/proesf/index.htm)
Research products: 2005-2009

• Ph.D. Thesis
  – Ma. Aparecida – equity in the elderly PHC
  
  – Fernando – physical activity in PHC workers, adult and elderly population
  
  – Vera – access and utilization of medicines in adult & elderly population
  
  – Fúlvio – PHC sensitive problems (CSAP) and PHC models at the state of Rio Grande do Sul
  
  – Leila – biologic injuries in PHC workers at Florianópolis
Research products: 2005-2009

- 4th Brazilian Congress of Social Sci. and Health - Salvador
  - Presentations (5)
    - The UFPel-PROESF baseline study: methodological issues
    - Performance of the Family Health Program at the Brazilian South and Northeast regions
    - Elderly common health needs
    - Equity in PHC service utilization by elderly
    - Access to medicines of continuous use by adults and elderly
  - Posters (5)
    - Strengthening the initiatives to monitoring and evaluating the PHC at the Piauí state
    - Effectiveness of prenatal care and well-baby care at PHC centers
    - Prevalence and risk factors of falls in elderly
    - Architectural barriers at the PHC centers
    - Physical activities in adults and elderly
  - Newspaper
Research products: 2005-2009

• 7th Brazilian Congress of Epidemiology – Porto Alegre
  • Presentations (5)
    – The UFPel-PROESF baseline study: methodological issues
    – Performance of the Family Health Program at the Brazilian South and Northeast regions
    – Elderly common health needs
    – Equity in PHC service utilization by elderly
    – Access to medicines of continuous use by adults and elderly
  • Posters (5)
    – Strengthening the initiatives to monitoring and evaluating the PHC at the Piauí state
    – Effectiveness of prenatal care and well-baby care at PHC centers
    – Prevalence and risk factors of falls in elderly
    – Architectural barriers at the PHC centers
    – Physical activities in adults and elderly
  • Newspaper & folder
Research products: 2005-2009

• 12th World Congress on Public Health
  – Presentations (3)
    • Architectonic barriers for elderly and physically disable people: an epidemiological study of the of PHC centers in seven Brazilian states
    • PHC assessment: methodology of the baseline study
    • Child labor in Pelotas: Occupational characteristics and contribution to the economy
  – Posters (12)
    • Physical activity in adults and elderly living in areas covered by primary health care units in municipalities of the south and northeast regions of Brazil
    • Prevalence of falls and associated factors in older adults
    • Population perception of risk factors for non-communicable chronic diseases
    • Epidemiological and socio-demographic profile of primary care workers in the south and northeast of Brazil
    • Effectiveness of antenatal and well-baby care in primary health services from Brazilian south and northeast regions
    • Epidemiology and primary health care network: Research strategy and support to local services
    • Antenatal care coverage in great urban centers in Brazil
    • Occupational injuries among workers from primary health care centers in Brazil
    • Measuring emotional overload in relatives of people with psychiatric suffering of Pelotas-RS, Brazil
    • Profile of the demand assisted in basic units in the south and northeast regions of Brazil: Differences by care model
    • Occupational health information system: Challenges and perspectives in the Brazilian unified health system (SUS)
    • Evaluation of the effectiveness of primary health care in south and northeast Brazil: Methodological contributions
Research network: 2005-2009

- Two junior members of the research staff selected as university teachers in Brazil

- Two junior member selected to Ph.D. program in epidemiology in Brazil

- Four junior members selected to Master program in Brazil

- Two Ph.D. student selected to international fellowships
  - One at the Universitàt Autònoma de Barcelona
  - One at the Harvard School of Public Health
Thank you!

www.epidemio-ufpel.org.br/proesf/index.htm

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