

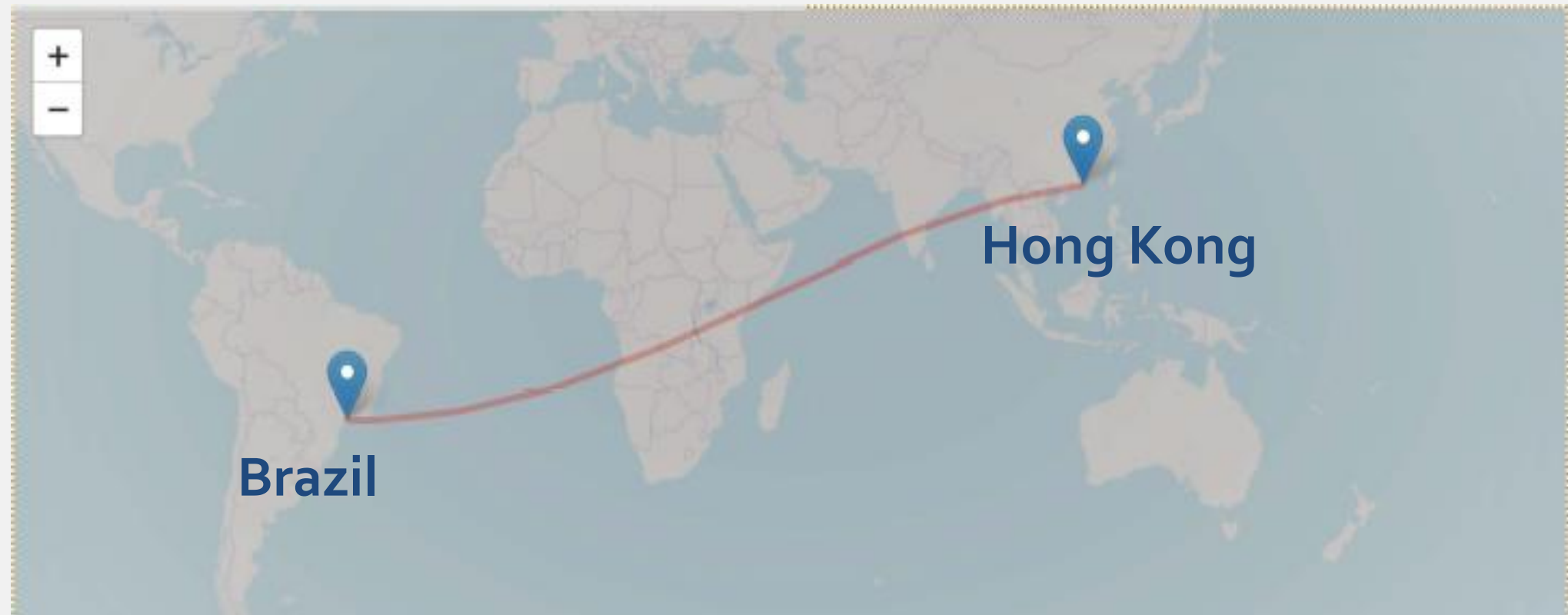
PROACTIVE: a task-shared, collaborative care psychosocial intervention for depression among older adults in Brazil

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Symposium: Digital psychosocial interventions for older adults in Brazil and Hong Kong

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ISR11 11th Scientific Meeting
September 2022, Pittsburgh



The University of Hong Kong
Hong Kong, Hong Kong

Older population: Brazil & Hong Kong

Population ~215 M

60+ 31.1 M **(14.4%)**



Population ~7.4 M

65+ 1.4 M **(29.8%)**



Older population: Brazil & Hong Kong

215 M

7.4 M

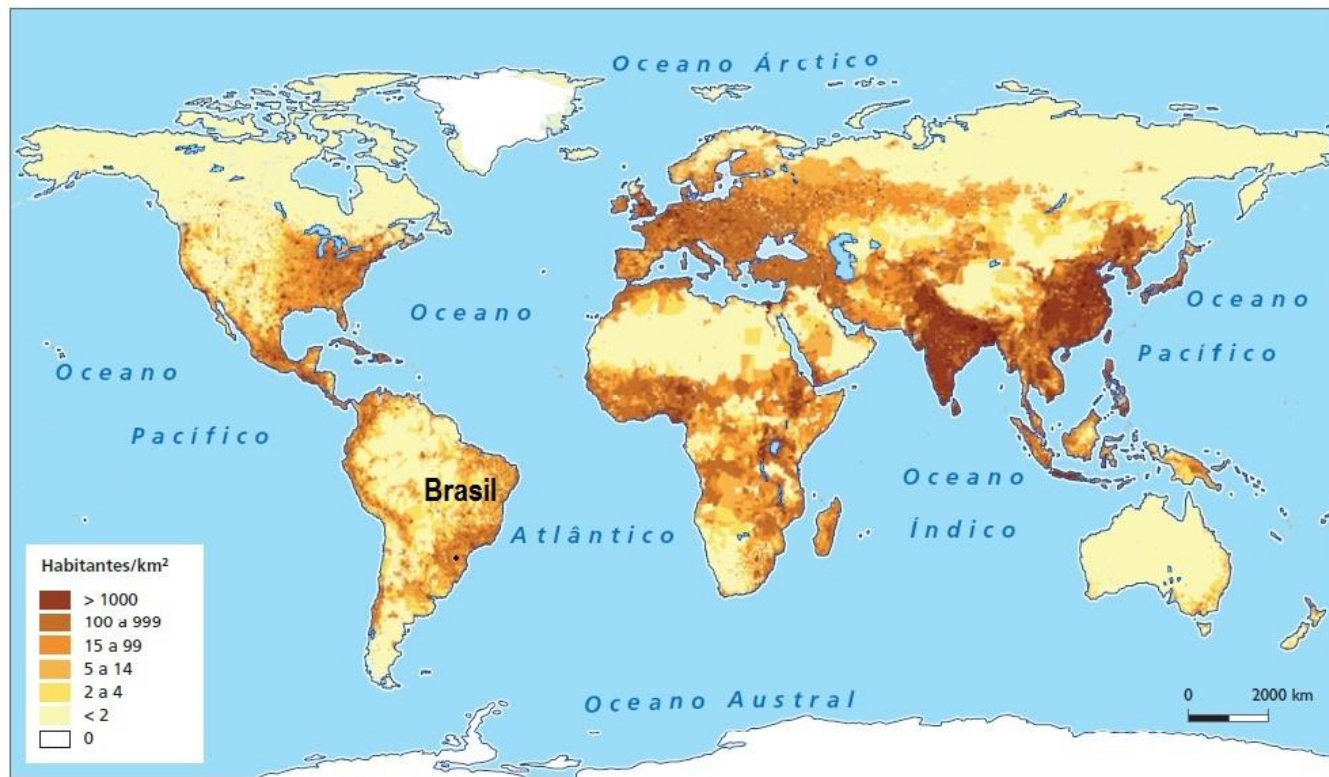
60+ 31.1 M (14.4%)

65+ 1.4 M (29.8%)

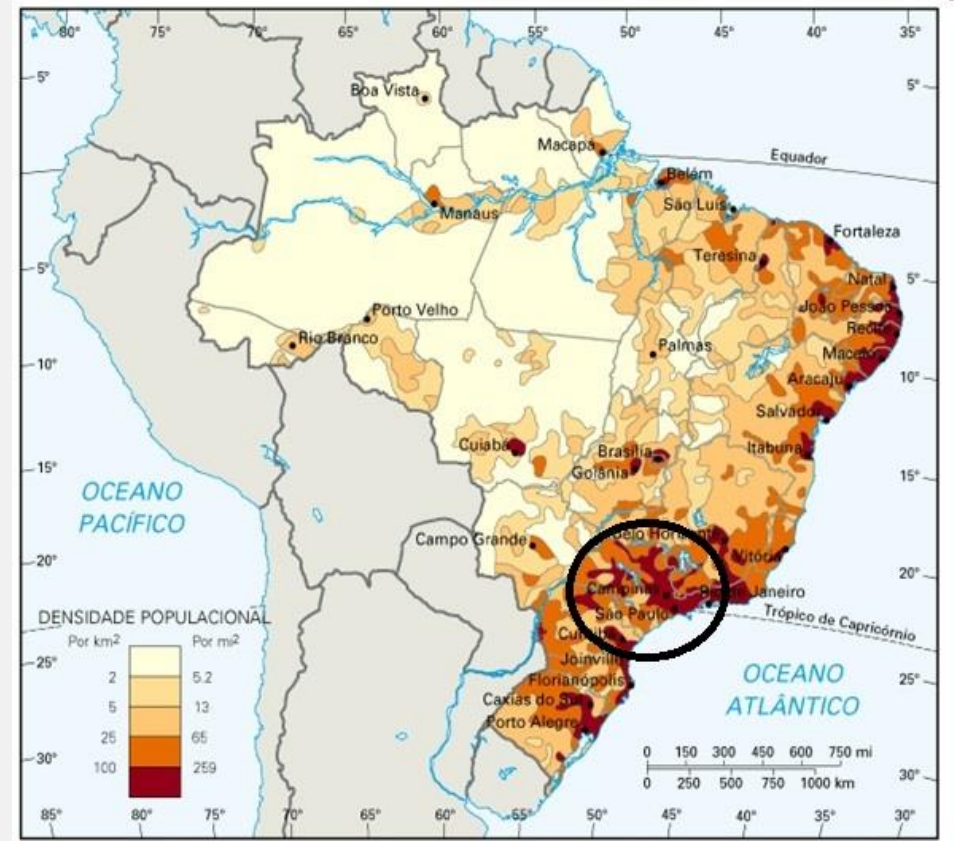
Low education, low IT literacy, high prevalence of depression



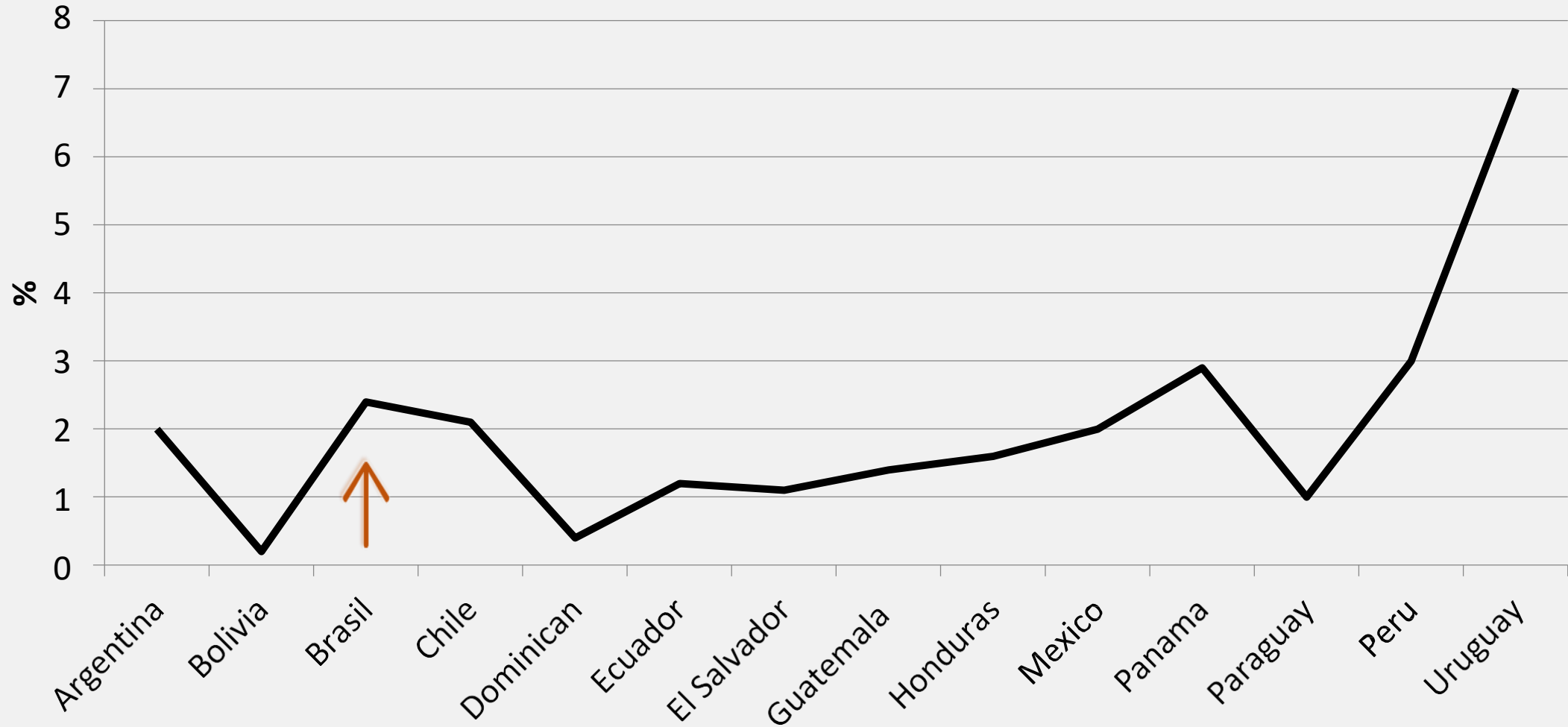
South America - Brazil



Fonte: Columbia University.

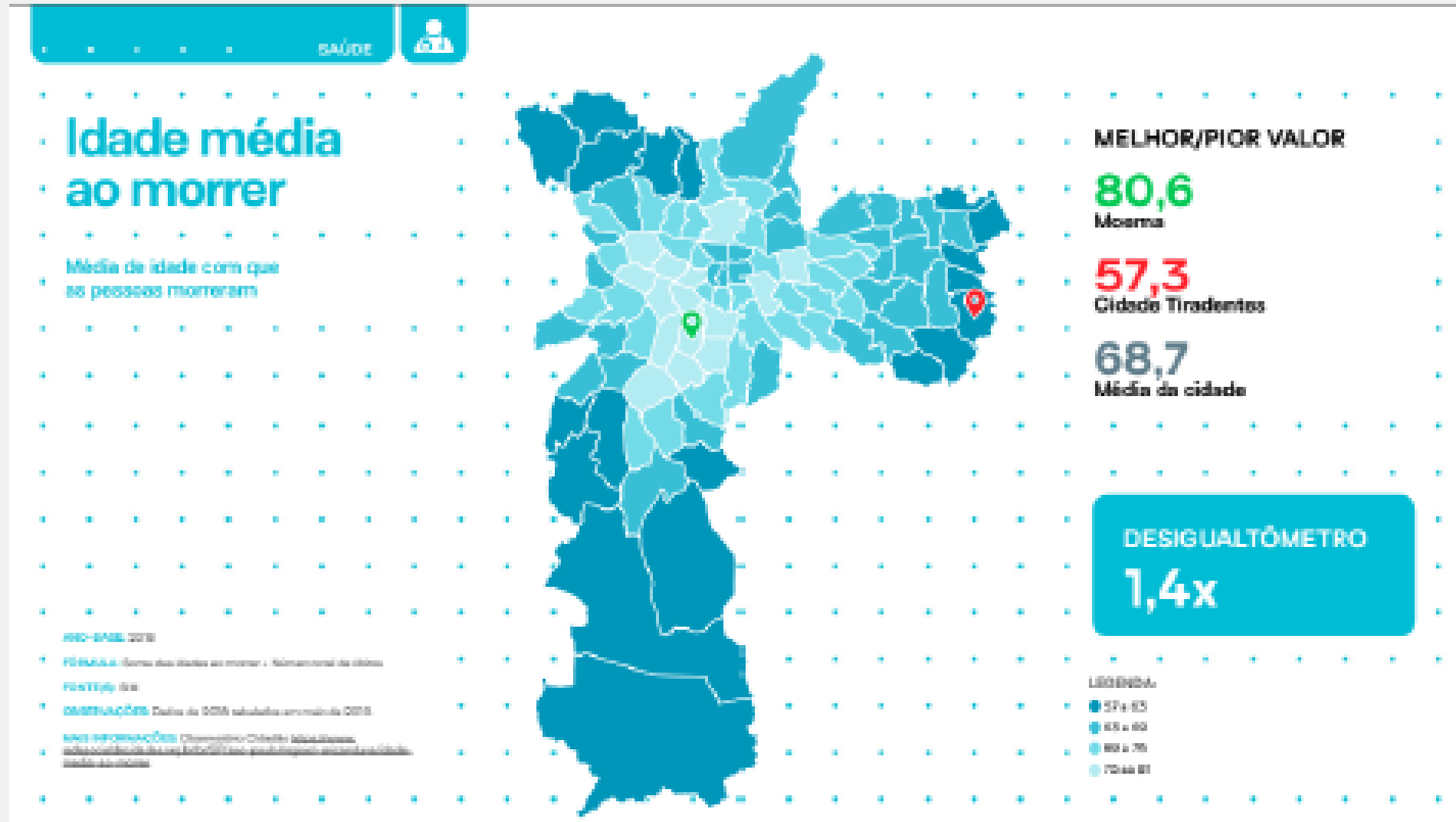


Brazil – Health Budget



Brazil: ~2% of the health budget for Mental Health

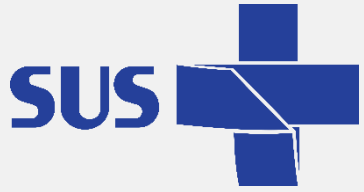
Map of inequality - Sao Paulo 2019 mean age at death



Brazilian Universal Health System (SUS)

- Primary care
 - Main entrance of the Brazilian Universal Health System (SUS)
 - $\frac{3}{4}$ of the population use SUS
 - The health system is not prepared for the demands of the older population
- WHO recommendation
 - Depression should be treated primarily in Primary Care
 - No specialists involved in the treatment





Primary care in Brazil



Saúde da Família

- Traditional model: covers ~36% of the population (catchment area/population not registered)
- Family Health Strategy: new/main model in Brazil, covers 64% of population
- Family Health Teams: a minimum of a family physician, a nurse, a nurse assistant, and around six community health workers to provide comprehensive care to up to 3,500 inhabitants of the catchment area (registered with the program)



Community health workers

Trained non-health professionals that live in the community and visit households regularly to identify health problems and monitor ongoing treatments



(<https://images.app.goo.gl/KaFdakYiBTF8vCBd7>; <https://images.app.goo.gl/5c1LjbAn3vvekU4L6>)

Proposed intervention: train and supervise community health workers to have a central role on depression treatment

What we know and we don't know

- **We know**
- Collaborative care programs for older people with depression are effective in primary care
- Several professionals collaborate with the same treatment plan
- Non mental health specialists are involved in these programs
- Few studies with elderly people in the world
 - IMPACT-EUA Unutzer et al., 2002; Casper Plus trial-UK Bosanquet et al. 2017
- **We don't know**
 - Whether collaborative care models are effective for older people with depression in the Brazilian primary care

PROACTIVE PROGRAM

Barriers to care	Intervention – Strategies	Likely result
Neglect of care for poor older people with depression	Case identification and planned intervention for older people (ESF/EqSF)	Cost-effective solution Reducing inequity in health
Poor care coordination	Collaborative care in steps	Providing the best possible care Older people with + needs receive + attention
No use of technology	Use of app (tablets) in appointments and supervisions	Support for CHWs, sharing information with staff and clinical supervisor, clinical management

PROACTIVE PROGRAM

Barriers to care	Intervenção - Estratégias	Possível resultado
Few mental health specialists	Task-shared Community health worker Training, supervision, use of technology	Better use of existing resources to implement cost-effective interventions
Mobility problems	Home care	Caring for disabled older people, improving adherence to treatment
Treatments not based on evidence	Psicoeducation, behaviour activation, relapse prevention, assessment-based care	Evidence based program

PROACTIVE PROGRAM

Aims of the PROACTIVE program

To provide care to older adults (60+) with depression living in underprivileged areas, registered with Family Health Clinics (Primary Care) in Guarulhos

To be aligned with the target population needs

Low levels of education, eye and hearing problems, mobility problems

Evidence-based public health policies for older adults with depression

Aims of the Pilot study

Acceptability and feasibility assessments of the PROACTIVE program

Future RCT for late life depression (n=1,440)

Pilot study in two Family Health Clinics (intervention/control)

Test of the case identification procedure

Test of collaborative and stepped care: Family Health Teams

Task-shifting: Do patients accept being treated by non-specialized health professionals?

Use of technological support during sessions: Is it acceptable?



PROACTIVE principles

Task-sharing

Non-health professionals
(community health workers)
play the main role

Collaborative care


Members of Family Health
Teams discuss cases

Stepped care

Low (8 sessions) or high intensity
(11 sessions) regimens based on
level of depressive
symptomatology

Digital

Dedicated application installed in
tablets to support community
health workers and record data



PROACTIVE program



17-week program
for depression
older adults (60+)



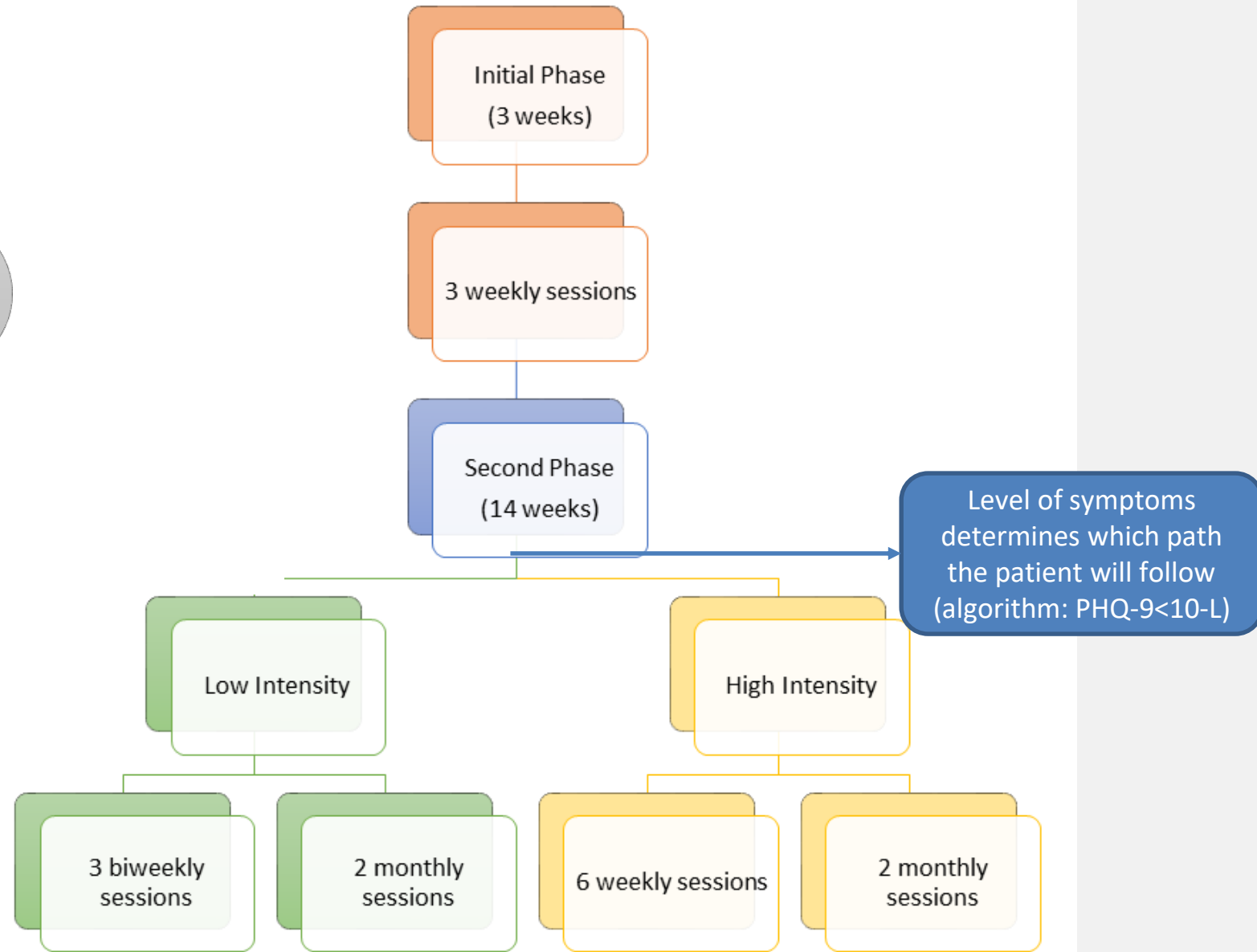
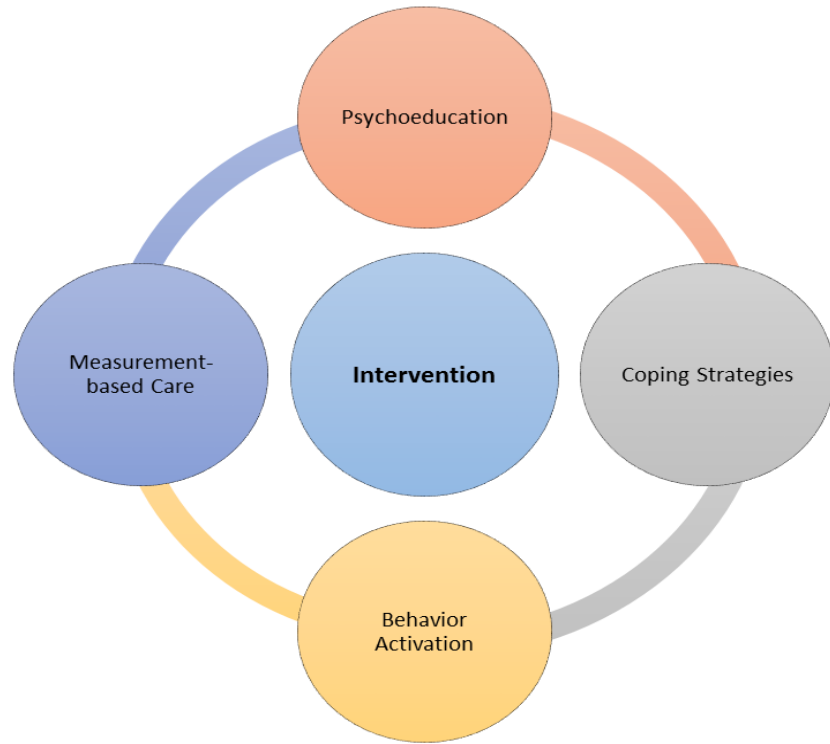
Home sessions
delivered by
community health
workers



Behavioural
activation and
psychoeducation
approaches



The PROACTIVE Program: 17 weeks



The PROACTIVE APP: development – pilot study

- **To support the management of older adults with depression by**
 - facilitating decision making
 - improving care collaboration and coordination within teams
 - improving quality of care
 - improving adherence to program
- **To support the delivery of the home psychosocial intervention by**
 - providing structured and simple materials to be used by CHW
 - monitoring mood, suicide risk, activity levels, and co-morbid status (rating scales)



PRO CTIVE

Versão: 1.64 (45)

Seleção do Paciente



	Resumo do paciente	Data do consentimento	Número de encontros completos	Data do primeiro encontro	Data do último encontro	Data do próximo encontro	Resultado do último PHQ-9
JOE		01/02/16	0				
CARLOS		01/02/16	4	07/02/2016	10/02/2016		20
PAULO		01/02/16	5	07/02/2016	10/02/2016		17
DOLMIO		01/02/16	6	07/02/2016	10/02/2016		14
LORENZO		01/02/16	7	07/02/2016	10/02/2016		9
GABRIEL		01/02/16	8	07/02/2016	10/02/2016		8
STEFANO		01/02/16	9	07/02/2016	10/02/2016		8
ANA		01/02/16	10	07/02/2016	10/02/2016		7

Rastrear Encontro

Iniciar Encontro

Sincronizar

Video 1

How the treatment is presented to patients
(first session)

Measurement-based Care: depression and mood

Patients watch a video before starting the activities with the CHW

The screenshot shows a mobile application interface for a video instruction. The top status bar displays 'TestID1: Encontro 101', a play button, a folder icon, an information icon, a list icon, a flag icon, a timer showing '00:40', a filmstrip icon, and a microphone icon. The battery level is 15% and the time is 11:36. The main content area is a video player with a light blue background. The text on the screen reads: 'Durante a ÚLTIMA SEMANA, com que frequência você se sentiu INCOMODADO por: Ter pouco interesse ou pouco prazer em fazer as coisas?'. Below the text are four response buttons: '0-1 dia (Nenhuma vez)', '2-3 dias (Vários dias)', '4-5 dias (Mais da metade dos dias)', and '6-7 dias (Quase todos os dias)'. On the left side, there is a list of items: 'Vídeo 2 Instrução PHQ-9', 'PHQ1', 'PHQ2', 'PHQ3', 'PHQ4', 'PHQ5', 'PHQ6', 'PHQ7', 'PHQ8', 'PHQ9', 'PHQ10', 'Avaliação do humor', 'Questionário Médico', and 'Limitações Físicas'.

TestID1: Encontro 101 00:40

Vídeo 2 Instrução PHQ-9

PHQ1

PHQ2

PHQ3

PHQ4

PHQ5

PHQ6

PHQ7

PHQ8

PHQ9

PHQ10

Avaliação do humor

Questionário Médico

Limitações Físicas

Durante a ÚLTIMA SEMANA, com que frequência você se sentiu INCOMODADO por:

Ter pouco interesse ou pouco prazer em fazer as coisas?

0-1 dia
(Nenhuma vez)

2-3 dias
(Vários dias)

4-5 dias
(Mais da metade dos dias)

6-7 dias
(Quase todos os dias)

Bothering Symptoms

Patients choose a problem to discuss - sessions 2 and 3

Video 2 – “Simple coping strategies to feel better”

TestID1: Encontro 101

Revisar PHQ

Instruções

Roda da Piora da Depressão

Instruções

Roda da Melhora da Depressão

Por favor, escolha um problema para a gente conversar hoje.

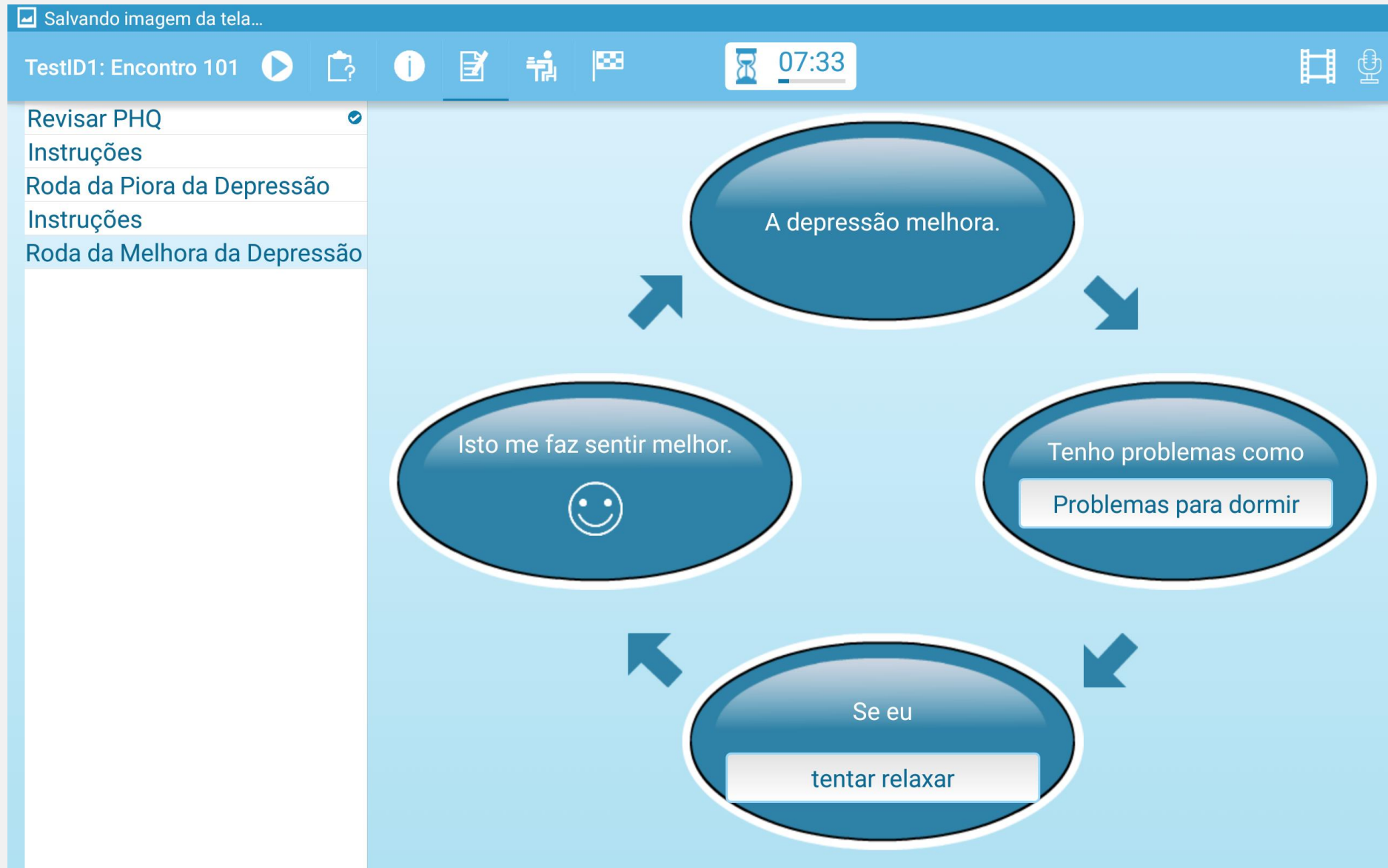
- Pouco interesse e prazer
- Me sentir para baixo, deprimido
- Problemas para dormir
- Me sentir cansado, sem energia
- Falta de apetite ou comer muito
- Me sentir lento ou agitado
- Pensamentos de morte ou de se ferir

Vicious Cycle of Depression

Patients interact with the app – “worsening and the improvement wheel”
What is likely to happen to their mood if they do/don’t do activities



Virtuous Cycle of Depression - Improvement Wheel



Second Phase of Treatment

- Contents: 4th to last session
 - Behaviour activation – list of pleasant activities
 - Introduced in a stepped way, in different sessions
 - Easy (pleasant activities I do)
 - Medium (pleasant activities I would like to do)
 - Hard (behaviours I would like to change) give examples of activities.
- Relapse prevention (last session)
- Video 3: pleasant activities and mood

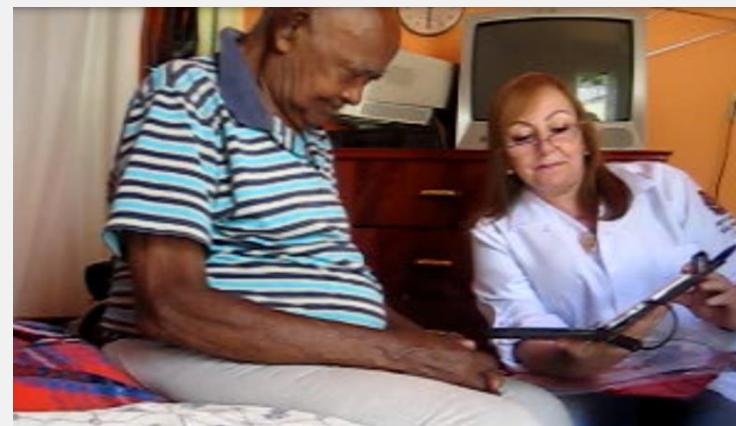
PROACTIVE PROGRAM



Development of the app (videos and animations)

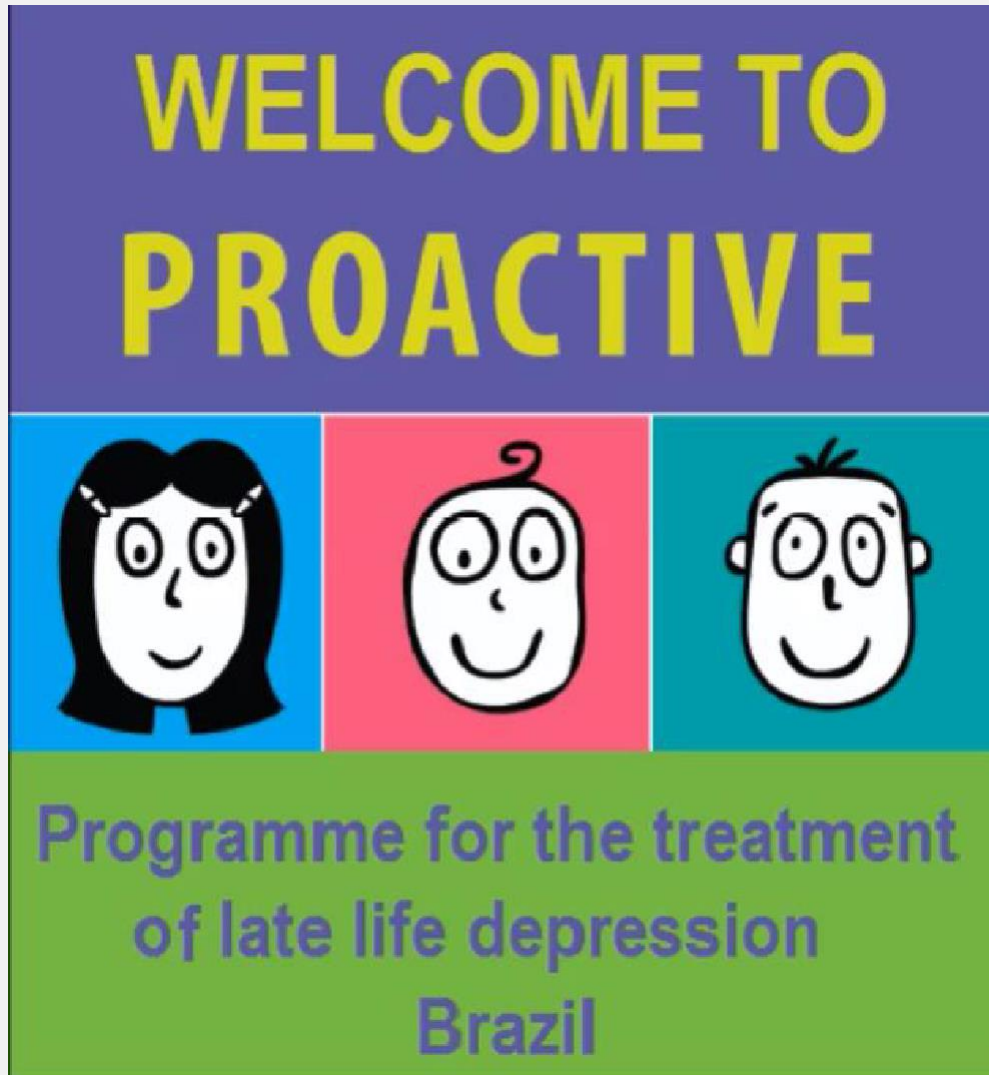


Training CHWs

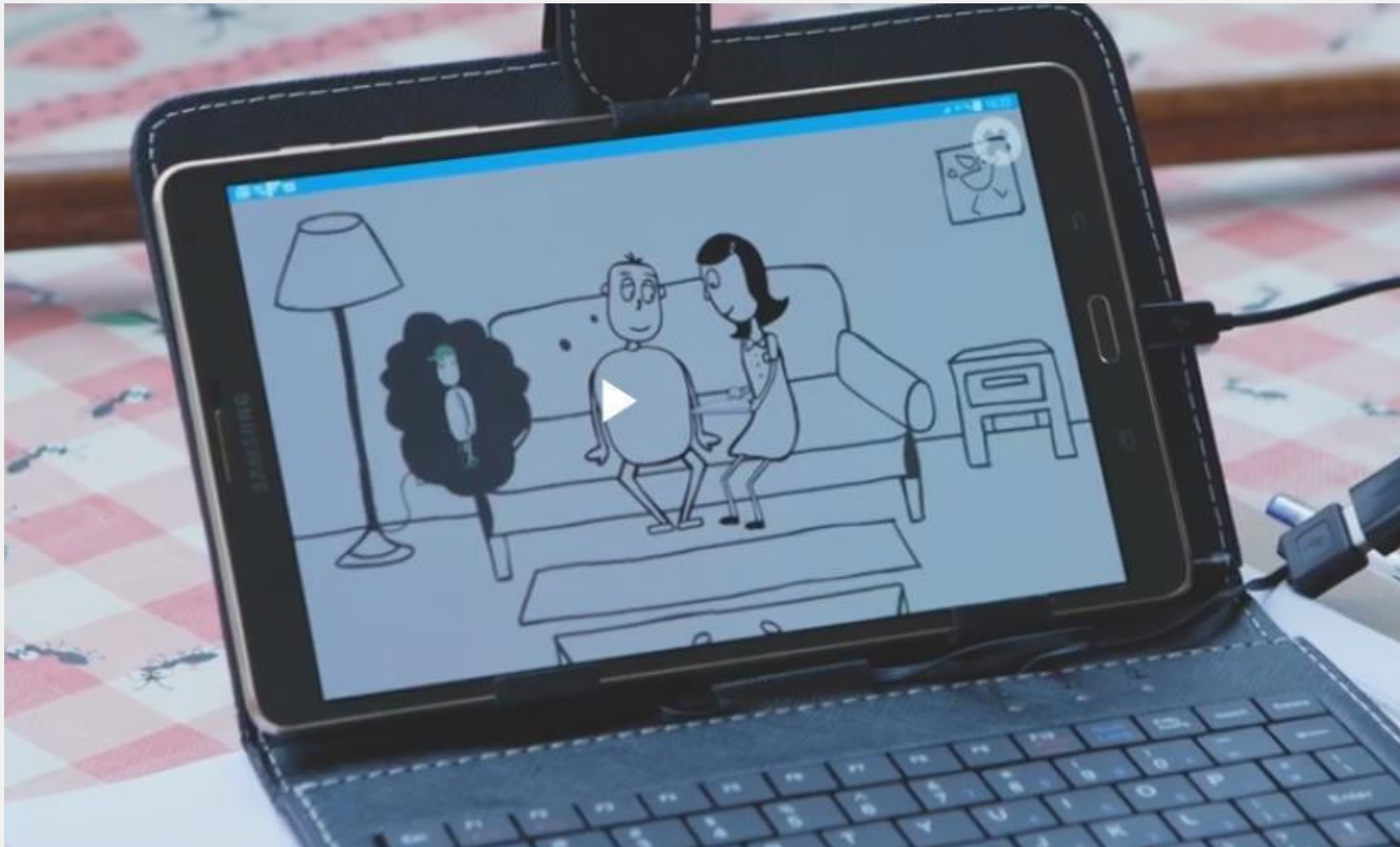


App use during the home visits

NÊ, SUM, SANI AND PRESENTER



APP – sessions - tablet - video



Home visit



Pilot Study - Feasibility

Mean PHQ-9 score at baseline and follow-up

- Follow-up assessment ~6-8 months after consent
- Possible to assess participants at follow-up: 92% assessed
- Results in the expected direction

	N (b/f-up)	Mean (SD) PHQ-9 Baseline	Mean (SD) PHQ-9 Follow-up
Control (92% f-up)	23/25	13.9 (3.7)	12.3 (3.7)
Intervention (94% f-up)	31/33	15.5 (3.5)	3.8 (3.9)

Pilot Acceptability: Task-shifting and Use of Technology

- Do patients accept being treated by non-specialized health professionals?

In general, patients felt very comfortable talking about their problems to the CHWs and appreciated their work.

*“I felt special, she is lovely, I love that girl”,
“As soon as she arrived, my hart was lifted”.*



Use of technological support during sessions?

CHWs: “the intervention was much easier to deliver with the help of the PROACTIVE app”.

Patients: “*Fantastic, the tablet explained everything*”.

“The conversation with the CHW was good, then we watched the videos, it helped my understanding”.



Cluster randomised controlled trial

- **Aims**

1. Effectiveness of PROACTIVE compared to enhanced usual care: recovery from depression (PHQ-9<10) at 8 and 12 months
2. Cost-effectiveness of PROACTIVE compared to enhanced usual care

- **RCT started in 2019:** aimed at including 1.440 participants - 20 primary care clinics of Guarulhos, Brazil (72 participants per clinic) – 120 CHWs
- **2020:** RCT interrupted (COVID-19 pandemic)

715 participants* - 60+ years with depressive symptomatology (PHQ-9≥10)

355 in control arm: enhanced usual care (identification of depression+inform the clinic)

360 in intervention arm: PROACTIVE programme + enhanced usual care

***Recruitment between May 2019 and February 2020, interrupted by COVID-19 pandemic.**

Primary and secondary outcomes at 8- and 12- month follow-up visits of recovery from depression

	PROACTIVE	Enhanced Usual Care		
	Number (%) ^a	Number (%) ^a	OR (95% CI) ^{b,c}	p value
Primary outcome: recovery from depression at 8 months	158/253 (62.5%)	125/284 (44.0%)	2.16 (1.47, 3.18)	<0.0001
Secondary outcome: recovery from depression at 12 months	115/193 (59.6%)	77/188 (41.0%)	2.33 (1.45, 3.71)	<0.0001

Abbreviations: CI: confidence interval; OR: odds ratio; PHQ-9: Patient Health Questionnaire-9

a The primary outcome of recovery from depression was defined as PHQ-9 scores less than 10

b Odds ratios and 95% CIs were calculated using random effects logistic regression models

c All estimates had missing data imputed by trial arm using MICE models that included baseline PHQ-9 scores, stratification (median of the proportion of adults aged 60 years or older with no formal education) and predictors of missingness

A task-shared, collaborative care psychosocial intervention for improving depressive symptomatology among older adults in a socioeconomically deprived area of Brazil (PROACTIVE): a pragmatic, two-arm, parallel-group, cluster-randomised controlled trial



Marcia Scazufca*, Carina A Nakamura*, Nadine Seward, Darío Moreno-Agostino, Pepijn van de Ven, William Hollingworth, Tim J Peters†, Ricardo Araya†



Summary

Background There is an urgent need to reduce the burden of depression among older adults in low-income and middle-income countries (LMICs). We aimed to evaluate the efficacy of a task-shared, collaborative care psychosocial intervention for improving recovery from depression in older adults in Brazil.

Methods PROACTIVE was a pragmatic, two-arm, parallel-group, cluster-randomised controlled trial conducted in Guarulhos, Brazil. Primary care clinics (clusters) were stratified by educational level and randomly allocated (1:1) to either enhanced usual care alone (control group) or to enhanced usual care plus the psychosocial intervention (intervention group), which involved a 17-week psychosocial programme based on psychoeducation and behavioural activation approaches. Individuals approached for the initial screening assessment were selected randomly from a list of individuals provided by the Health Secretariat of Guarulhos. Face-to-face baseline assessments were conducted among adults aged 60 years or older registered with one of the primary care clinics and identified with clinically significant depressive symptomatology (9-item Patient Health Questionnaire [PHQ-9] score ≥ 10). Community health workers delivered the programme through home sessions, supported by a dedicated tablet application. Masking of clinic staff and community health workers who delivered the intervention was not feasible; however, research assistants conducting recruitment and follow-up assessments were masked to trial allocation. The primary outcome was recovery from depression (PHQ-9 score < 10) at 8-month follow-up. All primary analyses were performed by intention to treat with imputed data. Adaptations to the protocol were made due to the COVID-19 pandemic; recruitment and intervention home sessions were stopped, and follow-up assessments were conducted by telephone. This trial is registered with the ISRCTN registry ISRCTN57805470.

Lancet Healthy Longev 2022; 3: e690–702

See [Comment](#) page e643

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Conclusion



(PROACTIVE team)

- PROACTIVE programme found to be **effective in improving recovery from depression.**
- A cost-effectiveness analysis is being conducted.
- Future research will focus on understanding how to scale-up the programme.

Publications

Scazufca M, Nakamura CA, Seward N, et al. Effect of a task-shared, collaborative care psychosocial intervention to improve depressive symptomatology among older adults in socioeconomically deprived areas of Brazil (PROACTIVE): cluster randomised controlled trial. *Lancet Healthy Longevity* 2022, 3: e690-720.

- Scazufca M, Nakamura CA, Peters TJ, et al. A collaborative care psychosocial intervention to improve late life depression in socioeconomically deprived areas of Guarulhos, Brazil: the PROACTIVE cluster randomised controlled trial protocol. *Trials*. 2020;21(1):914.
- Scazufca M, de Paula Couto MCP, Henrique MG, et al. Pilot study of a two-arm non-randomized controlled cluster trial of a psychosocial intervention to improve late life depression in socioeconomically deprived areas of São Paulo, Brazil (PROACTIVE): feasibility study of a psychosocial intervention for late life depression in São Paulo. *BMC Public Health*. 2019;19(1):1152.
- Van de Ven P, Araya R, P de Paula Couto MC, et al. Investigating Software Requirements for Systems Supporting Task-Shifted Interventions: Usability Study. *J Med Internet Res*. 2019;21(11):e11346.
- Henrique MG, de Paula Couto MCP, Araya R, et al. Acceptability and fidelity of a psychosocial intervention (PROACTIVE) for older adults with depression in a basic health unit in São Paulo, Brazil: a qualitative study. *BMC Public Health*. 2021;21(1):2278.



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VIDEOS AND ANIMATION

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Thank you for the attention!
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Last video please....