

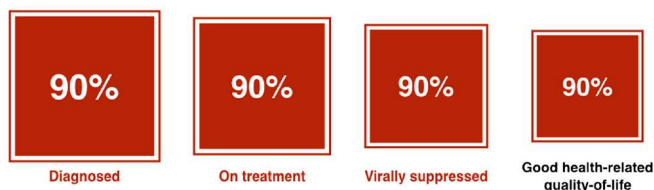
**Convegno
HIV E COVID:
QUALI NUOVE SFIDE?**

7-8 Giugno 2021

Il quarto 90. Come misurare la qualità della vita

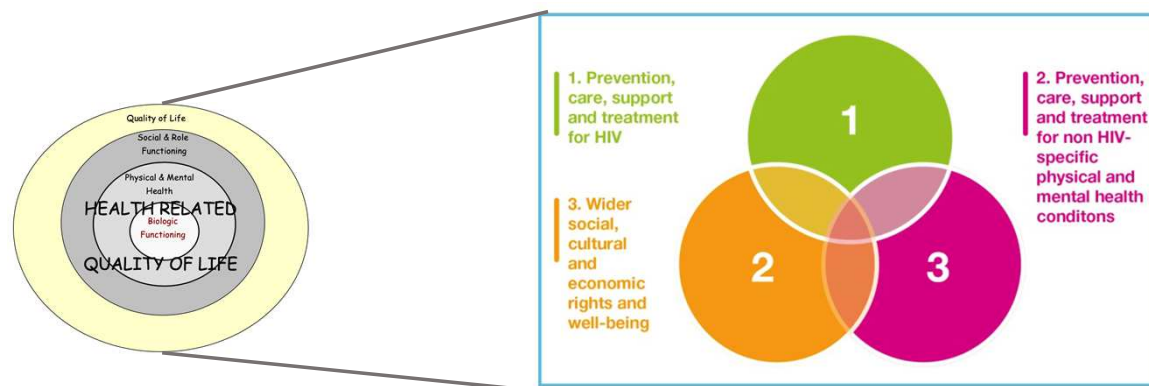
Antonella Cingolani,
Malattie Infettive
Fondazione Policlinica A. Gemelli, IRCCS
Univeristà Cattolica S. Cuore, Roma

Fourth 90. The issue of definition



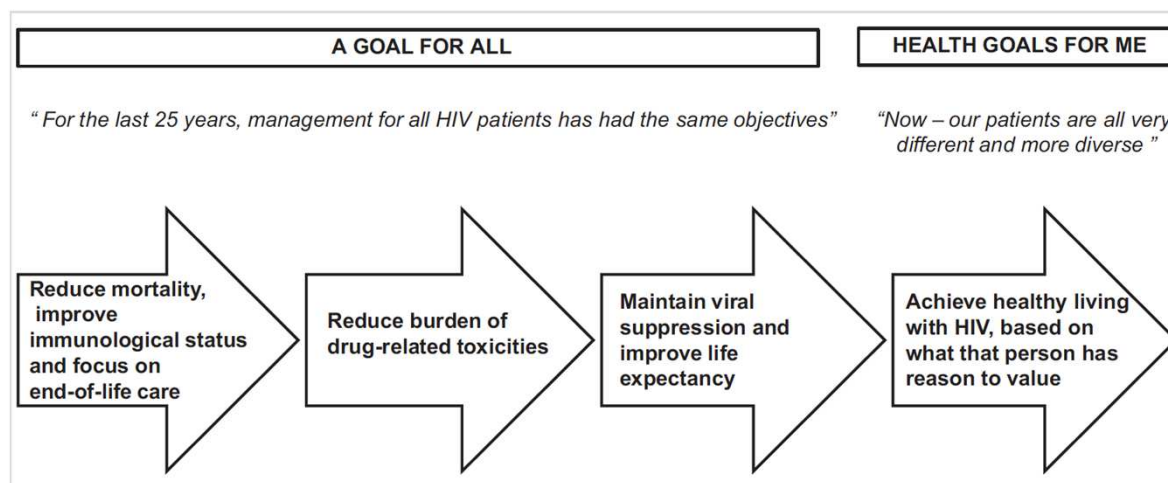
*Adapted from: UNAIDS. 90-90-90: an ambitious treatment target to help end the AIDS epidemic. 2014. Available at http://unaids.org/sites/default/files/media_asset/90-90-90_en_0.pdf. Accessed on 25 April 2016

Lazarus, BMC Med 2016



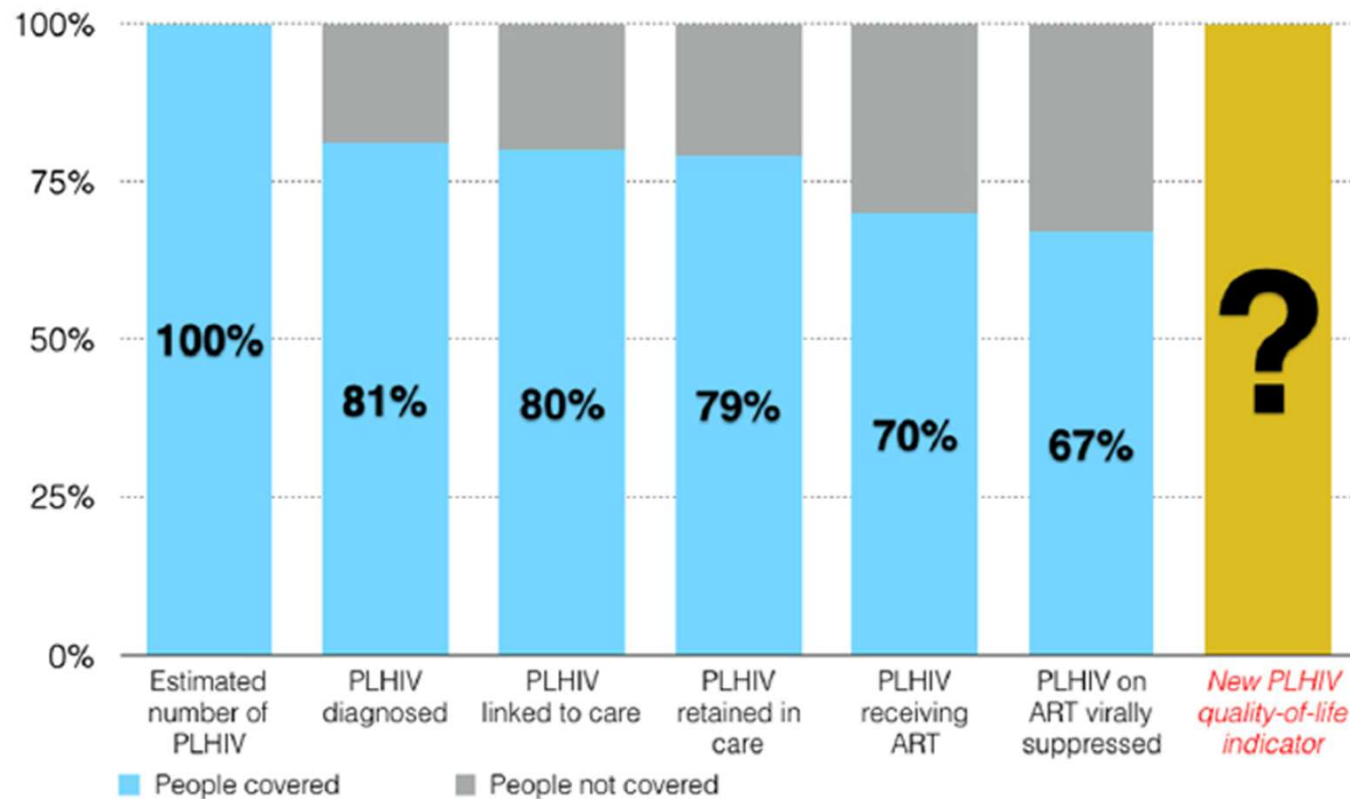
Ware, Cancer 1984

G. Guaraldi, AIDS Rev 2019



FRONTLINE AIDS

How to measure fourth 90?



*Adapted from Philipp Kohler, Axel J. Schmidt, Matthias Cavassini, Hansjakob Furrer, Alexandra Calmy, Manuel Battegay, *et al.* The HIV care cascade in Switzerland: reaching the UNAIDS/WHO targets for patients diagnosed with HIV. *AIDS* 2015; 18: 2509-2515

Role of Patients reported outcomes measures (PROMs) in the management of HIV infection

In Adverse events detection:

- More sensitive tools to detect AE compared to the protocols for the collection of AE, based on physician's detection ¹.
- Symptoms reported by patients are more closely related with measures of QoL, physical health, hospitalization, adherence and survival compared to what was reported by the doctor²⁻³

In observational studies:

- To assess the HRQoL as a treatment outcome reflecting the patients' experiences of living with HIV⁴⁻⁶

In RCT:

- In comparative trials on different antiretroviral regimens ⁷⁻¹⁶.

1. Justice AC, J Acquired Immune Defic Syndr. 1999; 2. Edelman EJ, AIDS behav. 2011; 3. Kozak MS, Clin Infect Dis. 2012; 4. Stewart AL, JAMA. 1989; 5. Cingolani A, 17° EACS 2019 # PE 2/53; 6. Cingolani A, 17° EACS 2019, #PE 30/22; 7. Wilkins EL, AIDS Care. 2016; 8. Wagner GJ, Ann Behav Med. 9. Gay C, J Assoc Nurses AIDS Care; 10. Glass TR, J Acquir Immune Defic Syndr. 2006; 11. Llibre JM, Lancet. 2018; 12. Li J, Open Forum Infectious Diseases, 2019; 13. Cahn P, Lancet. 2019; 14. Mills A, Patient 2015; 15. Gallant J. Lancet. 2017; 16. Wohl, D., Patient 2018.

Survey Results: Aspects of Living With HIV

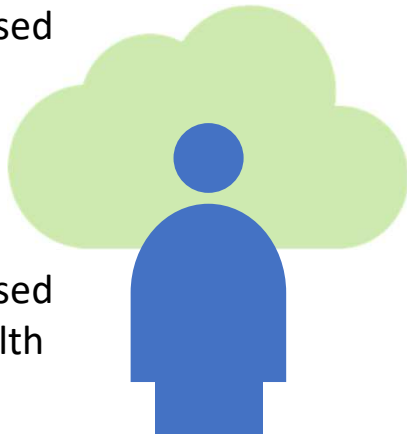
- Aging patients living with HIV have similar needs to the aging population without HIV

56%

have been diagnosed with depression

31%

have been diagnosed with a mental health issue, other than depression



27%

have been diagnosed with posttraumatic stress disorder

46%

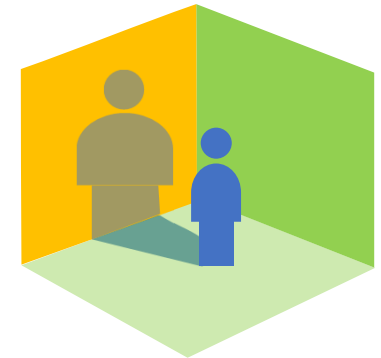
felt down or depressed

39%

felt lonely or isolated within 2 wks prior to taking the survey

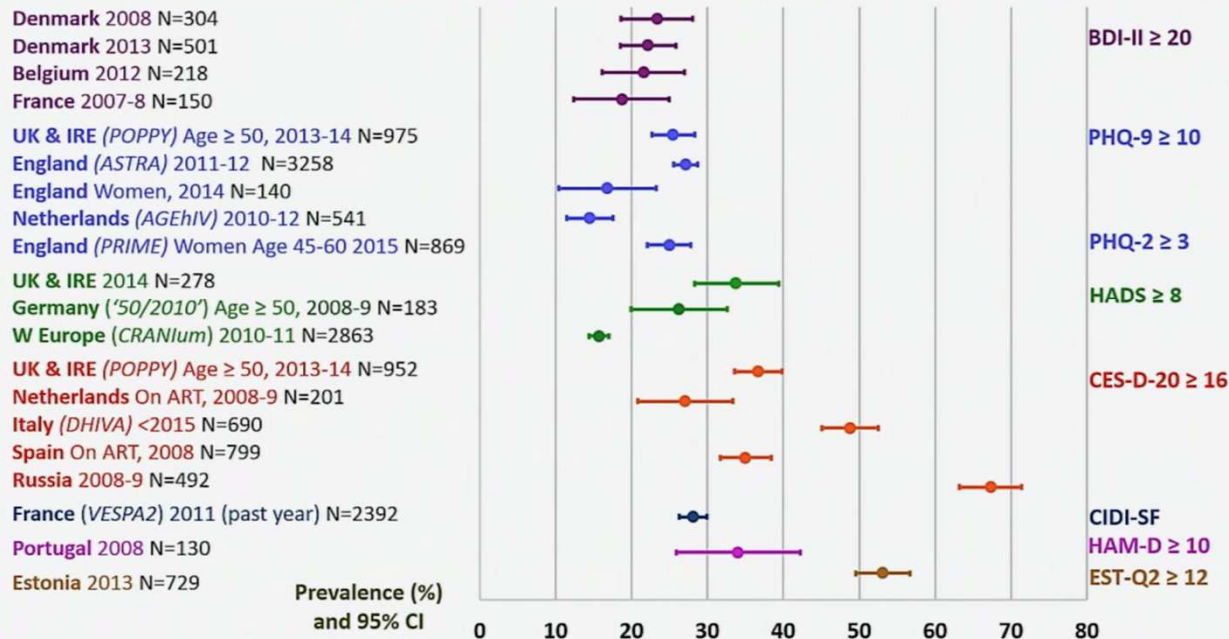
25%

went 24 hrs without interacting with another person



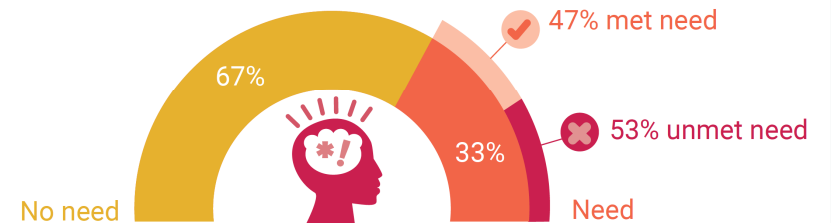
Mental health issues rates and PLHIV needs in Europe

Depression - symptom questionnaire, HIV-positive, Europe



F. Lampe, HIV Glasgow 2018

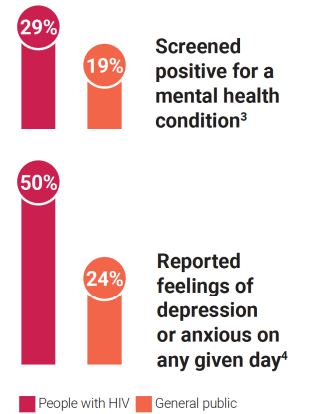
MENTAL HEALTH SUPPORT



Help managing stress

People living with HIV are around twice as likely to have mental health problems compared to the general public, depending on how it is measured.

The most common mental health conditions reported were depression (diagnosed in a third) and anxiety (diagnosed in a quarter). There was also significant experience of rarer conditions such as sleep disorders (15%), post-traumatic stress disorder (5%), psychosis/schizophrenia (2.4%) and bipolar disorder (1.7%). Significantly, the presence of mental health difficulties was the same across all ages, genders and ethnicities.

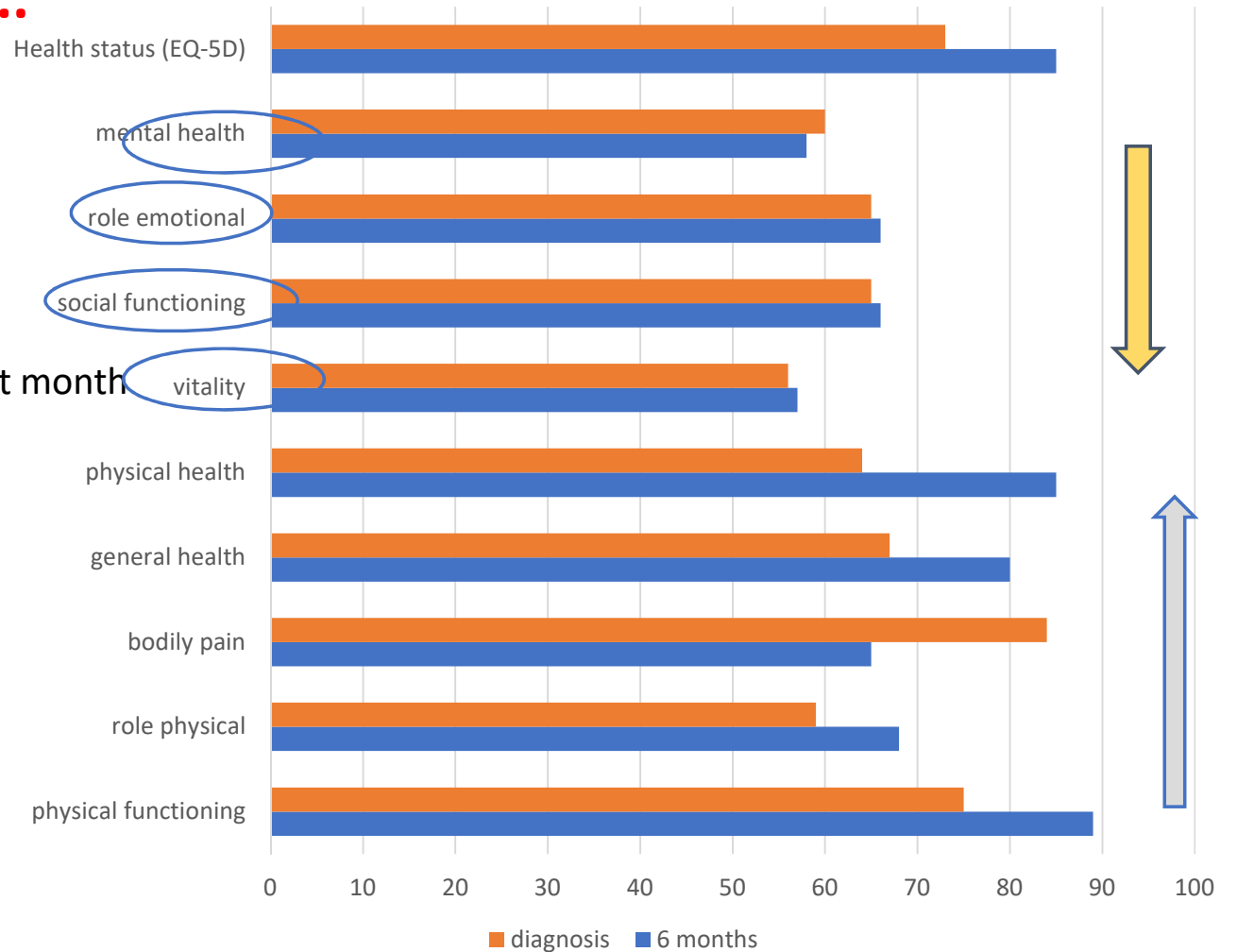


Clinical case, PHI

6 months after ART starting ..

- CD4 cell count: 470/mm³
- Plasma HIV-RNA <50 c/ml
- Good tolerability to cART
- Self reported reduced adherence in the last month
- Asks for reduced pill burden
- No stable partner
- Condomless chemsex
- Not employed

6-months QoL assessment by SF-36

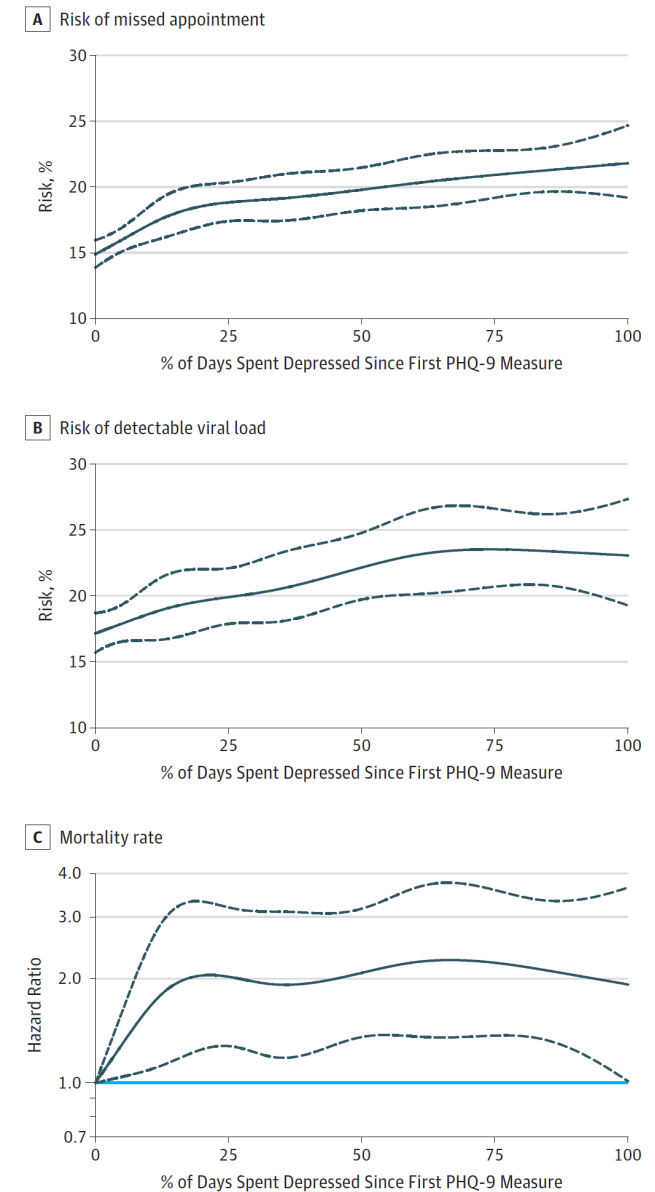


Greater chronicity of depression increased the likelihood of failure at multiple points along the HIV care continuum

- Observational clinical cohort of 5927 patients (10 767 person-years of follow-up)
- receiving HIV primary care at 6 geographically dispersed US academic medical centers from September 22, 2005, to August 6, 2015.
- 2 or more assessments of depressive severity (PHQ-9)

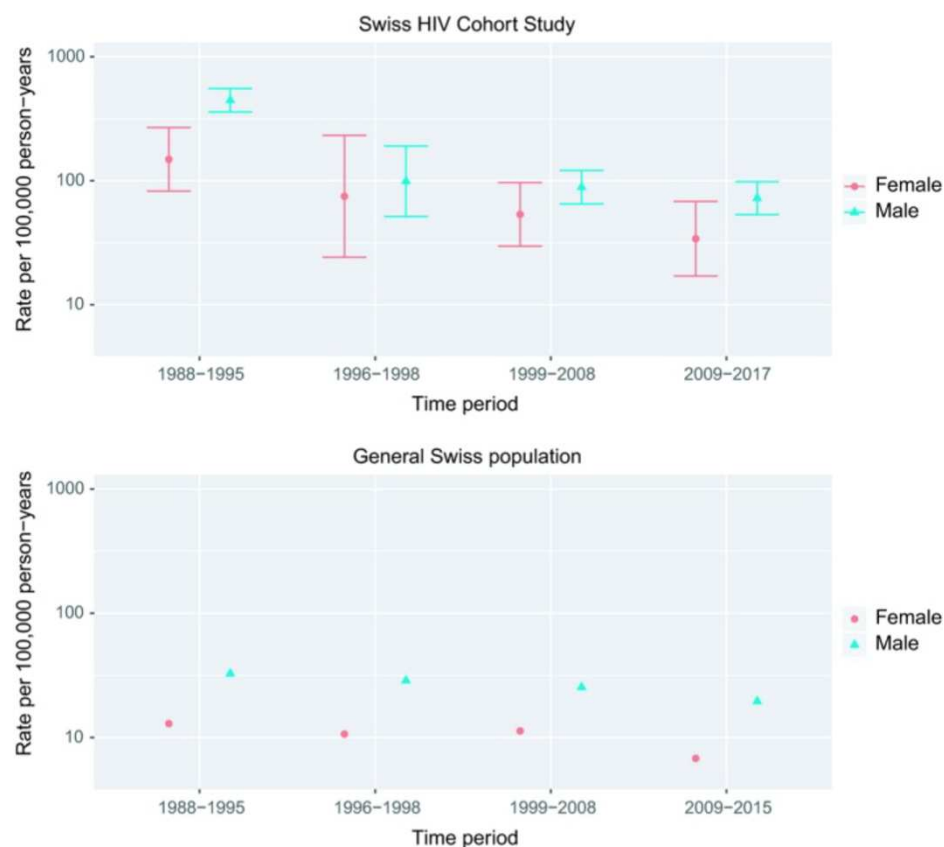
Outcome ^a	Effect Estimate (95% CI)	
	Per 25% Increase in % of Days With Depression	Comparing Those Always Depressed With Those Never Depressed
All-cause mortality, hazard ratio ^b	1.19 (1.05-1.36)	2.02 (1.20-3.42)
Risk of missing a scheduled appointment, risk ratio ^c	1.08 (1.05-1.11)	1.37 (1.22-1.53)
Risk of having an unsuppressed viral load, risk ratio ^c	1.05 (1.01-1.09)	1.23 (1.06-1.43)

Pence, JAMA Psychiatry 2018



Higher mortality from suicide among PLWH compared to general population: SWISS HIV Cohort (1988-2017)

- Data from the Swiss HIV Cohort Study from the pre-cART (1988-1995), earlier cART (1996-2008) and later cART (2009-2017) eras
- 20,136 PLHIV,(1.0%) died by suicide



Factors associated with death due to suicide:

- **gender F vs M** (AHR 0.58 (95% CI 0.38-0.87))
- **Swiss nationality** (1.95 (95% CI 1.3-2.83))
- **CDC clinical stage A** (0.33 (95% CI 0.24-0.46))
- **PWID** (2.64 (95% CI 1.71-4.09) f
- **MSM** (2.10 (95% CI 1.36-3.24))
- **mental health** (2.32 (95% CI 1.71-3.14))

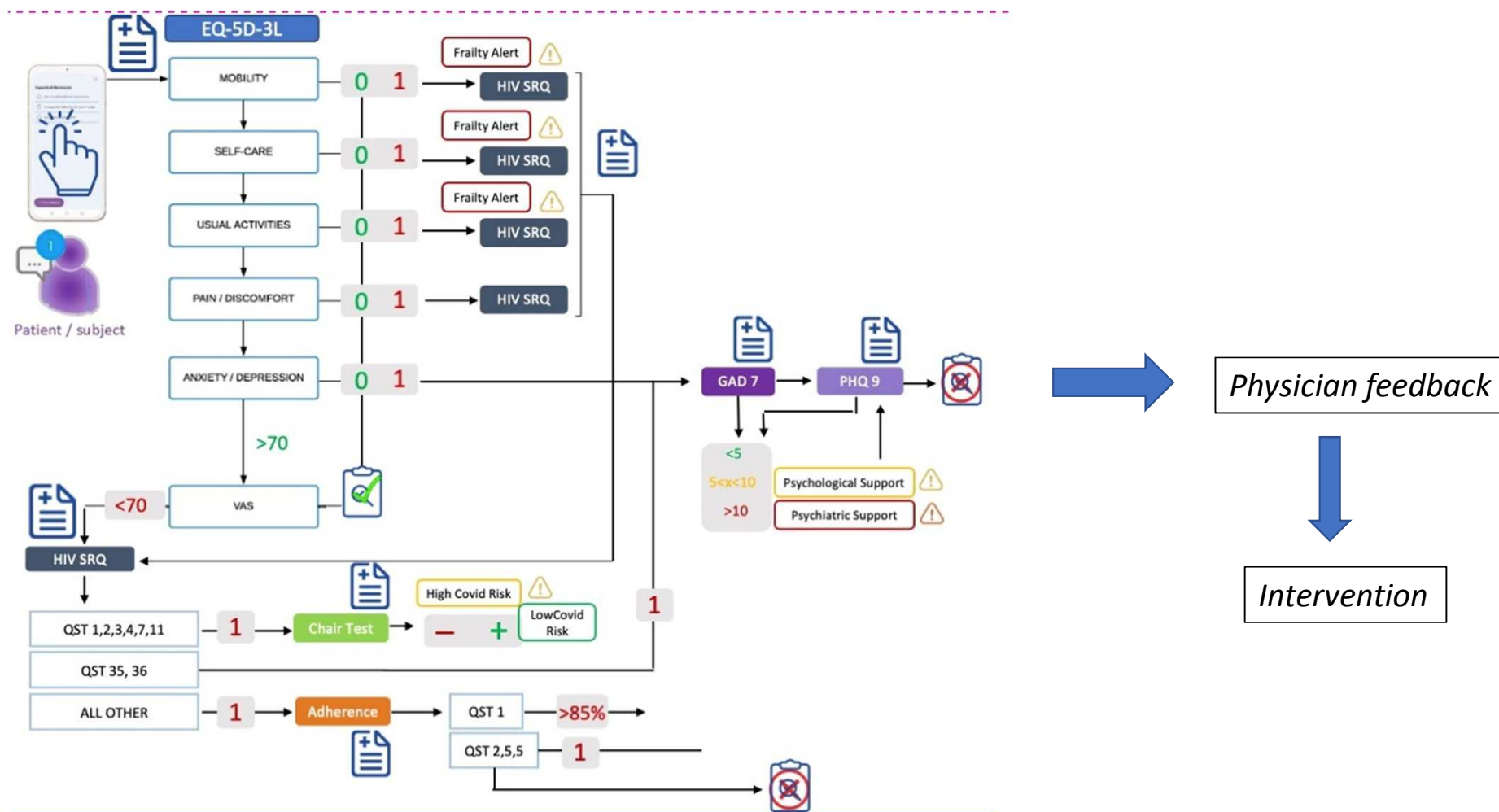
Ruffieux, J Int AIDS Soc 2019

Unmet need of standardization of screening tools for mental health disorders

- Many of the best performing tools were developed or adapted for specific populations
- Among those, the authors broadly recommend:
SRQ-20 for general CMDs,
GHQ-12 for CMDs in people with physical illness,
HADS-D for depressive disorders,
PHQ-9 for depressive disorders in populations with good literacy levels,
EPDS for perinatal depressive disorders,
HADS-A for anxiety disorders

Common Mental Disorders	Any common mental disorder
(61 validations)	
	Dysthemia
	Any depressive disorder
Depressive Disorders	Major depressive disorder
(175 validations)	Antenatal depression
	Postnatal depression
	Postnatal major depressive disorder
	Any anxiety disorder
Anxiety Disorders	Generalised anxiety disorder
(24 validations)	Social anxiety disorder
	Panic disorder
Post-traumatic stress disorder	Post-traumatic stress disorder
(13 validations)	

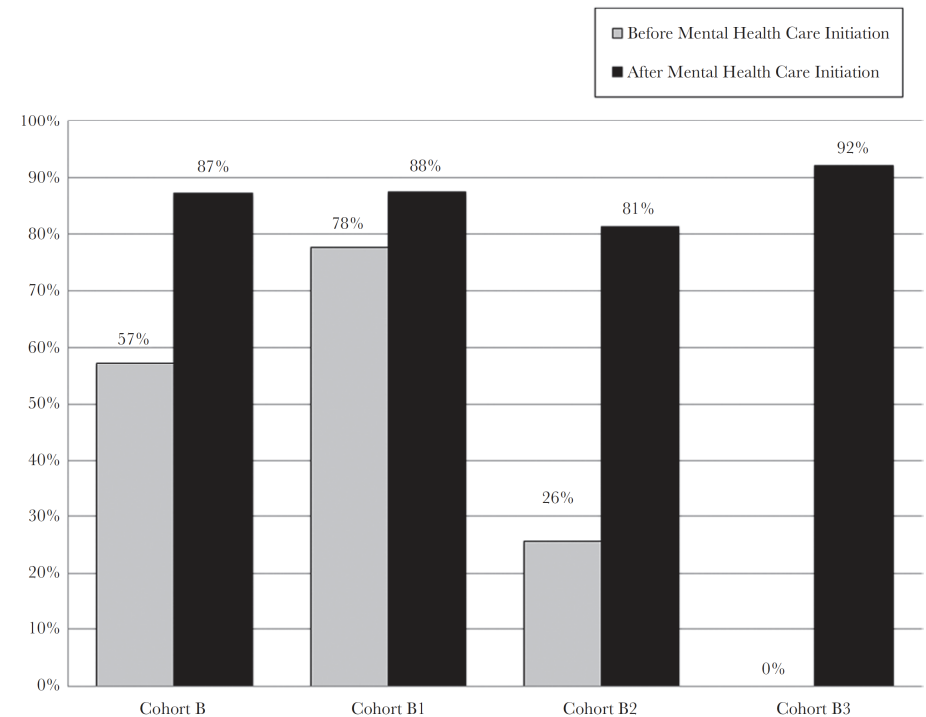
Tailored measurement of PROs according to patients needs



Initiation of mental health support is associated with higher rates of viral suppression but not with a higher retention in care

The cohort included PLWH who received clinic-based MH services from 2012 to 2014. Cohorts A and B initiated MH before or during 2012 and during 2013–2014, respectively

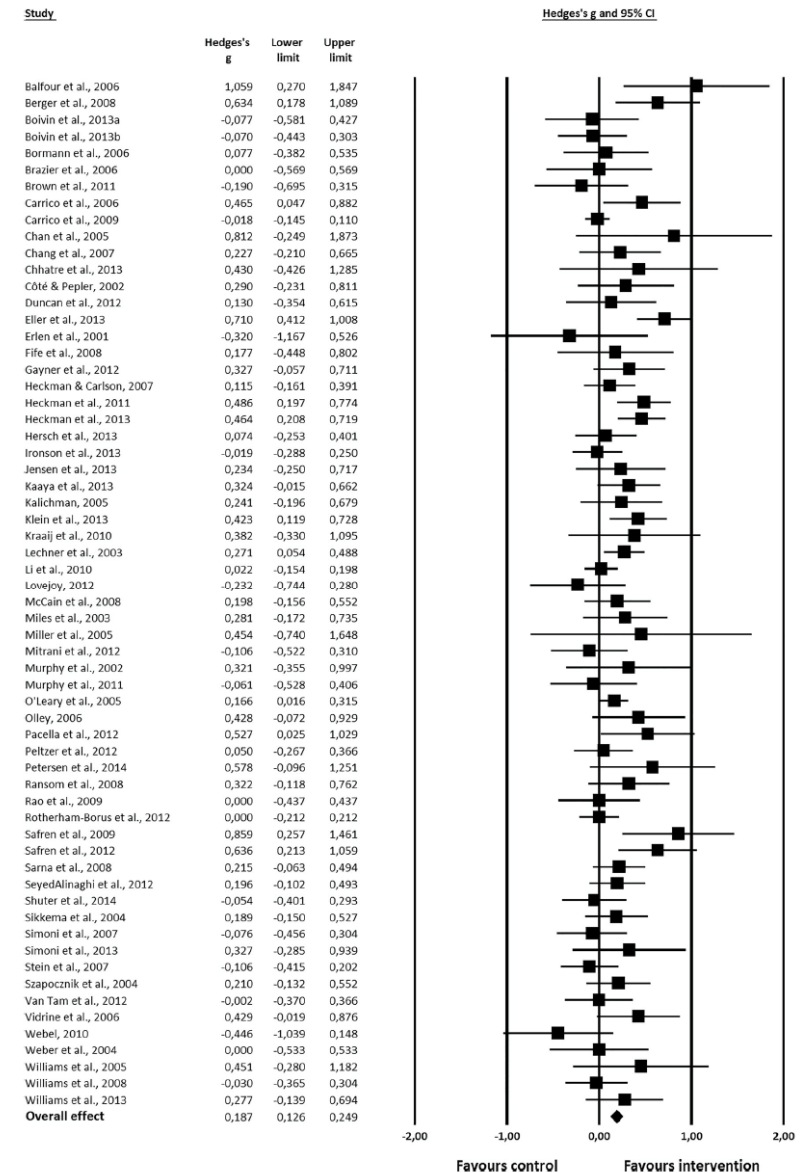
- Cohort B (n = 181) had 3 times the participants with CD4 counts <200 (P = .02).
- One-third of Cohort B had detectable viral loads compared with <20% of Cohort A (P = .01).
- Cohort B received more substance use diagnoses (P = .005).
- Pre/post–MH initiation, engagement in care did not change.
- For Cohort B, MH initiation was associated with increased rates of viral suppression



Psychosocial interventions for mental health in people living with HIV

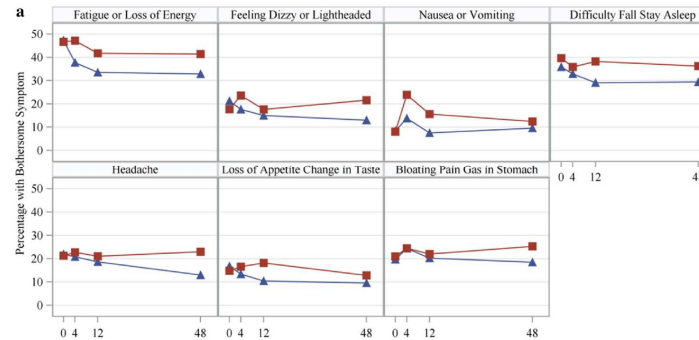
- Systematic review and meta-analysis on 62 RCTs
- Overall, psychosocial interventions may have a small positive effect on the mental health of PLWH.
- No differences in effect were found between : 1. symptom-oriented interventions, 2. supportive interventions, 3. meditation
- A larger improvement in depression may be obtained when only participants with depressive symptoms are included in the study; when interventions are provided by psychologists; when treatment duration is 12–18 h; and when the intervention is focused on improving mental health

Van Luenen, AIDS & Behav 2018



Quality of life and treatment satisfaction measurement as new outcome in anti HIV drug evaluation

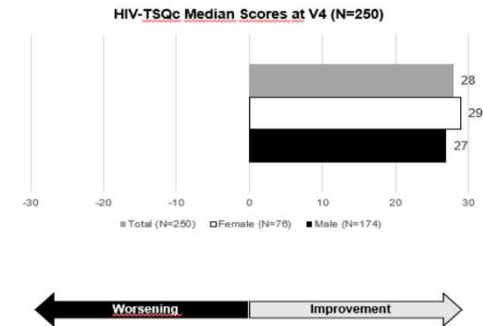
- B/F/TAF is associated with lower prevalence of bothersome symptoms than ABC/DTG/3TC in both treatment naïve and virologically suppressed adults¹



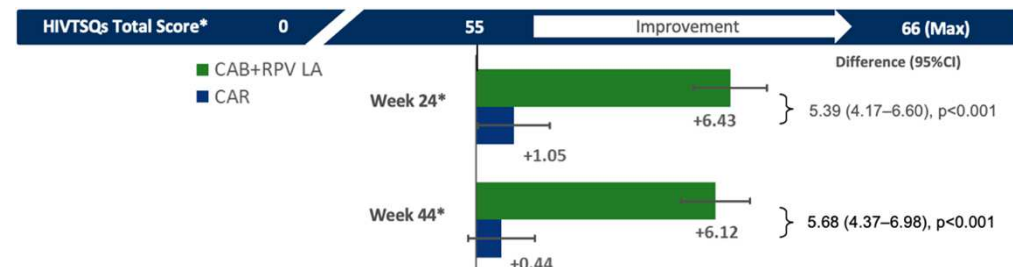
1. Wohl D., Patient 2018

- Switching to a DRV/c-based therapy led to an increase of patient satisfaction and reduction of symptoms burden (S.T.O.R.E. study)²

2. Antinori, Patient 2020



- CAB+RPV LA demonstrated significantly greater improvement from baseline in treatment satisfaction vs CAR at w24 and 44 (above threshold of MCID)



3. Murray M, IAS 2019

Role of social support and loneliness are crucial at different steps of continuum of HIV care

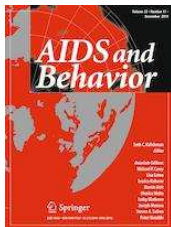


Internalised HIV-stigma, loneliness, depressive symptoms and sleep quality in people living with HIV

Erin M. Fekete^{a*}, Stacey L. Williams^b and Matthew D. Skinta^c

^a*School of Psychological Sciences, University of Indianapolis, Indianapolis, IN, USA;*

^b*Department of Psychology, East Tennessee State University, Johnson City, TN, USA;* ^c*Pacific Graduate School of Psychology, Palo Alto University, Palo Alto, CA, USA*

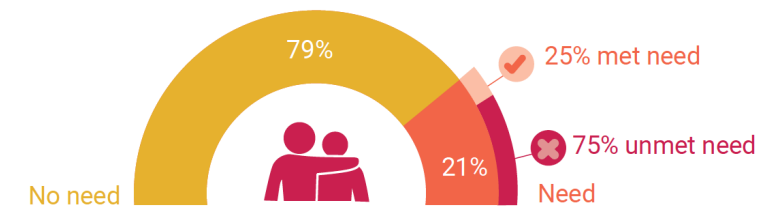


Loneliness in Older Adults Living with HIV

Meredith Greene¹, Nancy A. Hessel^{2,3}, Carla Perissinotto¹, Roland Zept³, Amanda Hutton Parrott³, Cameron Foreman⁴, Robert Whirry⁵, Monica Gandhi⁶, Malcolm John³

¹*Division of Geriatrics, Department of Medicine, University of California San Francisco, 3333 California St. Suite 380, San Francisco, CA 94143-1260, USA*

PEER SUPPORT AND CONTACT WITH OTHER PEOPLE WITH HIV



Help addressing loneliness and isolation

Supportive relationships, social networks and social interaction with other people who have HIV are all important for our well-being and quality of life. Talking about HIV and how it affects us can be pivotal to overcoming challenges.

But feelings of isolation and loneliness were commonly reported by 1 in 5 (20%) people with HIV. Of all the services examined, this had the greatest area of unmet need – 75% of people who needed help dealing with loneliness and isolation did not receive it. Feelings of loneliness and isolation were equally common across all ages, ethnicities, genders and areas of residence and similarly this need was mostly unmet for everyone.



1 in 5 people living with HIV reported feelings of isolation and loneliness

The complex relationship between loneliness, depression and HRQoL in older HIV-infected patients

“Silver Project”, UCSF-affiliated HIV clinics, survey on 356 PLWH>50 y (2012-2014)
58% reported at least some symptoms of loneliness (mild 24%, moderate 22%, severe 12%)

Association of loneliness symptoms and poor or fair Health Related Quality of Life (HRQoL)

	N with poor/fair health	Unadjusted PR (95% CI)	Adjusted ^a PR (95% CI)
Loneliness ^b (per 5 point increase)		1.36 (1.13–1.63)	1.06 (0.85–1.33)
Age ^c		0.98 (0.94–1.01)	
Male sex at birth ^c	91	0.95 (0.55–1.63)	
Non-white race ^c	52	1.34 (0.92–1.97)	
Latino ethnicity	17	1.67 (0.99–2.81)	
Annual income			
< \$10,000	41	2.58 (1.50–4.45)	1.85 (1.05–3.28)
\$10,000–20,000	39	1.98 (1.15–3.43)	1.60 (0.90–2.84)
≥ \$20,001 (reference)	19	1.0	1.0
VACS index ^d		1.07 (0.96–1.19)	1.03 (0.92–1.16)
Length of time with HIV (years) ^e		1.07 (0.94–1.23)	
Depressive symptoms by PHQ-9 ^f			
None (reference)	19	1.0	1.0
Mild	30	2.57 (1.45–4.56)	2.19 (1.17–4.12)
Mod	31	5.15 (2.91–9.12)	4.18 (2.14–8.16)
Severe	24	4.84 (2.65–8.84)	4.34 (2.13–8.85)
Education			
< High school	15	2.06 (0.97–4.41)	
High school	21	2.14 (1.05–4.35)	
Some college/college degree	58	1.87 (1.0–3.47)	
Some graduate/graduate degree (reference)	12	1.0	
Cognitive impairment ^g	41	1.23 (0.83–1.81)	
At risk alcohol and/or drug use ^h	38	1.30 (0.87–1.94)	
Low physical social support ⁱ (0–12)	64	1.54 (1.04–2.27)	

Social support and community engagement are positively associated with resilience and mastery in older HIV gay man

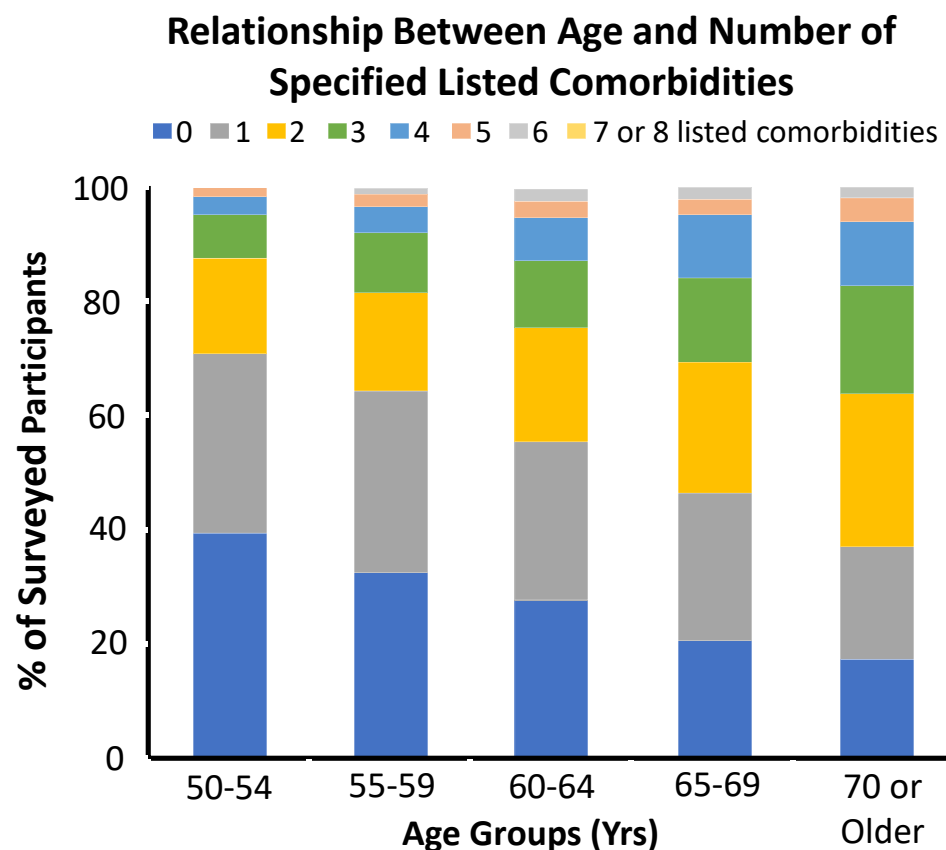
Survey on 2014 patients from Aging with Pride: National Health Aging, and Sexuality/Gender Study
Hierarchical multivariable regression analysis

	Resilience		Mastery	
	<i>b</i> (95% CI)	<i>b</i> (95% CI)	<i>b</i> (95% CI)	<i>b</i> (95% CI)
Demographic characteristics				
Age	0.00 (−0.02, 0.02)	0.01 (−0.01, 0.03)	−0.02 (−0.04, 0.00)	−0.01 (−0.03, 0.01)
Bisexual (vs Gay)	−0.08 (−0.48, 0.33)	−0.26 (−0.74, 0.22)	0.26 (−0.14, 0.66)	0.14 (−0.26, 0.55)
Racial/ethnic minority	−0.23 (−0.72, 0.13)	−0.28 (−0.70, 0.13)	−0.03 (−0.37, 0.31)	0.03 (−0.30, 0.35)
≤High school (vs > HS)	−0.49* (−0.90, −0.08)	−0.46* (−0.85, −0.06)	−0.29† (−0.61, 0.03)	−0.24 (−0.54, 0.06)
≤200 FPL (vs > 200% FPL)	−0.16 (−0.23, 0.55)	0.02 (−0.35, 0.39)	0.03 (−0.35, 0.29)	−0.18 (−0.51, 0.15)
HIV-related factors				
Years with HIV	0.03* (0.00, 0.05)	0.01 (−0.01, 0.03)	0.04** (0.02, 0.05)	0.02** (0.01, 0.04)
Progression to AIDS	−0.24 (−0.59, 0.11)	−0.19 (−0.53, 0.15)	−0.20 (−0.47, 0.07)	−0.17 (−0.41, 0.08)
Adverse experiences				
Depression ever (vs never)	−0.72** (−1.07, −0.38)	−0.60** (−0.94, −0.26)	0.04 (−0.25, 0.32)	0.14 (−0.13, 0.41)
Lifetime discrimination	0.00 (−0.06, 0.07)	0.01 (−0.04, 0.07)	−0.03 (−0.11, 0.04)	−0.03 (−0.09, 0.03)
Lifetime victimization	−0.01 (−0.04, 0.02)	−0.02 (−0.04, 0.01)	−0.02† (−0.05, 0.00)	−0.02* (−0.05, −0.00)
Psychosocial characteristics				
Internalized stigma		0.01 (−0.14, 0.17)		−0.08 (−0.22, 0.07)
Spirituality		0.03 (−0.07, 0.14)		0.06 (−0.02, 0.15)
Social support		0.22** (0.05, 0.38)		0.18* (0.03, 0.33)
Community engagement		0.19** (0.05, 0.34)		0.17** (0.04, 0.30)

Emlet, Gerontol 2017

Comorbidities Increasingly Common as PWH Age

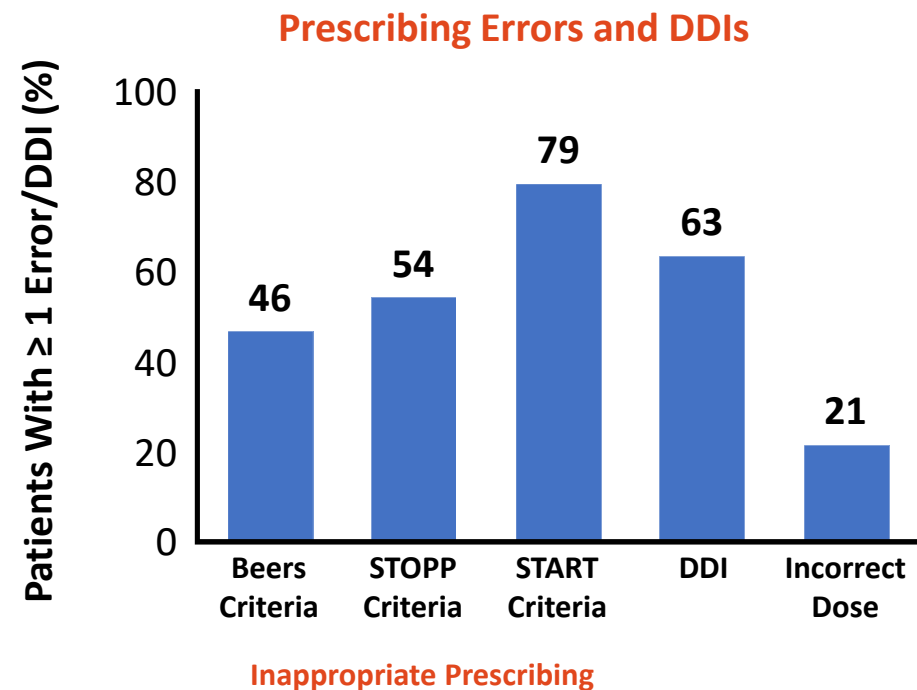
- National survey of PWH aged ≥ 50 yrs in UK (N = 4959)
- 97% on ART with viral load measured in last 9 mos
- Comorbidities: hypertension, 31%; hyperlipidemia, 31%; depression, 24%; renal impairment, 15%; CVD, 12%; obesity, 11%; type 2 diabetes, 11%; osteoporosis, 5%
- Multiple comorbidities common in older age groups— more than 50% had ≥ 1 comorbidity



Polypharmacy and Inappropriate Prescribing in Older PLWH

- US PWH ≥ 65 yrs of age from Jan 2015 – Aug 2018 (N = 112)
 - 87% with HIV-1 RNA < 20 copies/mL
- Polypharmacy: ≥ 5 medications
 - 95% considering all drugs; 84% considering only non-HIV drugs
- Average number of medications: 12.3, including 9.0 non-HIV medications
- Inappropriate prescribing defined by 2012 Beers, 2011 STOPP, and 2011 START criteria
- DDIs assessed using University of Liverpool HIV Drug Interactions database

- Risk of serious DDI correlated with polypharmacy ($P < .01$) and inappropriate prescribing ($P < .01$)



Polypharmacy and age more than HIV status have negative impact on QoL

Table 1.

Significative ($p < 0.05$) correlations between PROMs and sociodemographic and clinical characteristics, at multiple regression analysis°.

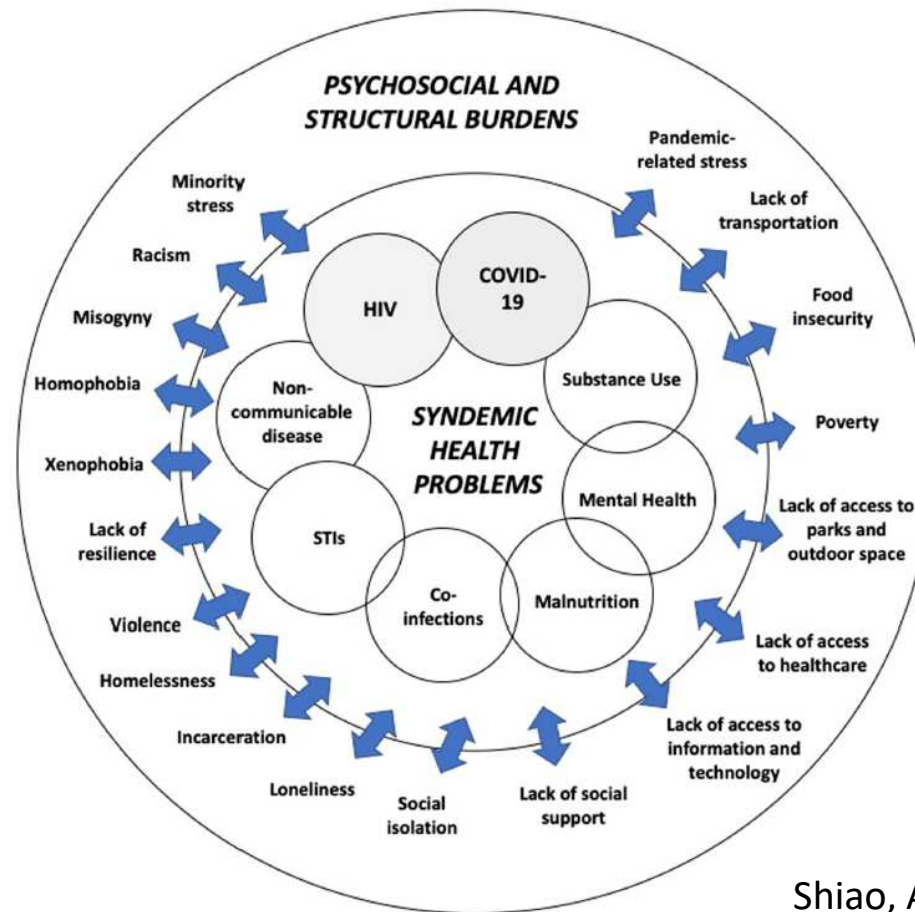
PROMs	variable	b	SE	p
SF-36				
<i>Physical health</i>	Age*	-0.38	0.14	0.008
	HIV**	-19.43	3.13	<0.001
<i>Mental health</i>	Polypharmacy#	-9.28	3.31	0.006
<i>Bodily pain</i>	HIV**	-18.8	3.06	<0.001
<i>General Health</i>	Polypharmacy#	-8.91	3.75	0.01
	HIV**	-20.78	3.47	0.001
<i>Physical role functioning</i>	Age*	-0.45	0.16	0.007
	HIV**	-12.9	3.7	0.001
<i>Vitality</i>	Polypharmacy#	-10.25	3.31	0.002
	HIV**	-10.77	3.24	0.001
<i>Social role functioning</i>	HIV**	-11.02	3.94	0.006
Work productivity	Age*	-0.01	0.00	<0.001
Health status (EQ-5D)	Polypharmacy#	-9.90	2.64	<0.001
	HIV**	-7.09	2.58	0.007

° other variables in the model: gender, ethnicity, time from chronic condition diagnosis, presence of complication related to chronic condition

*For each year older; **vs other condition; # any drug other than drugs for primary chronic condition

Syndemic conceptualization of HIV and COVID-19 coinfection

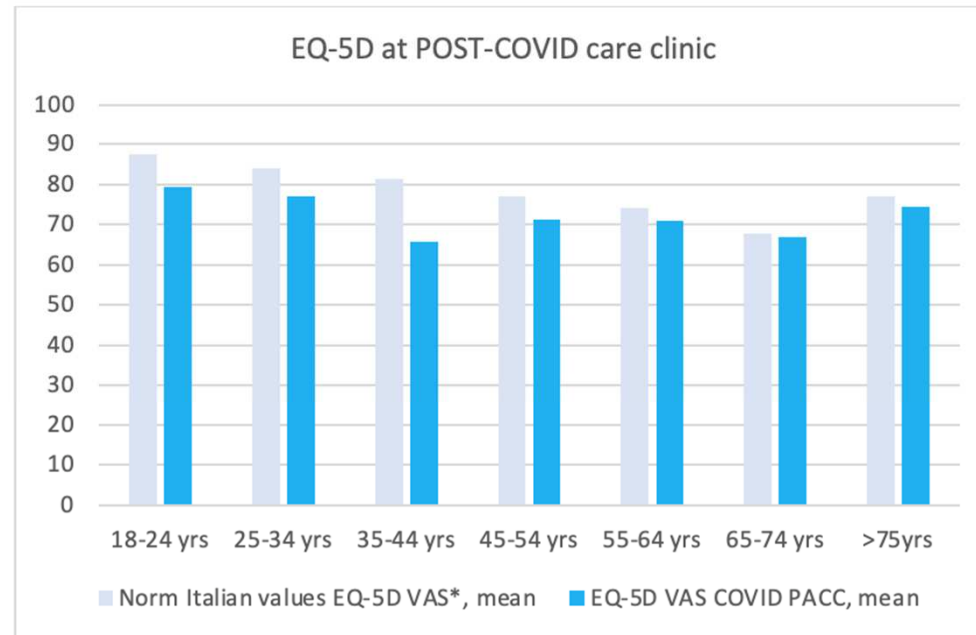
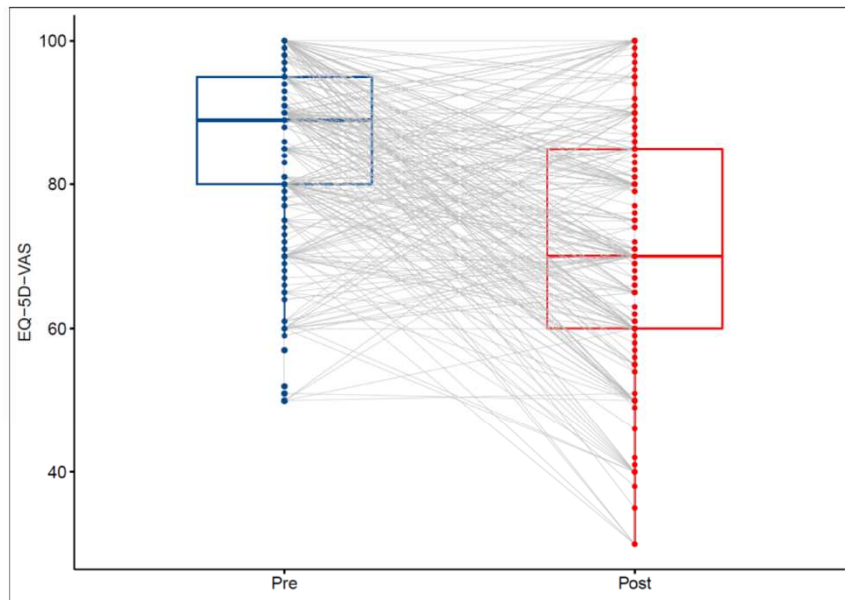
A syndemic is defined as two or more epidemics interacting synergically to produce an increased burden of disease in a population



Shiao, AIDS & Behaviour 2019

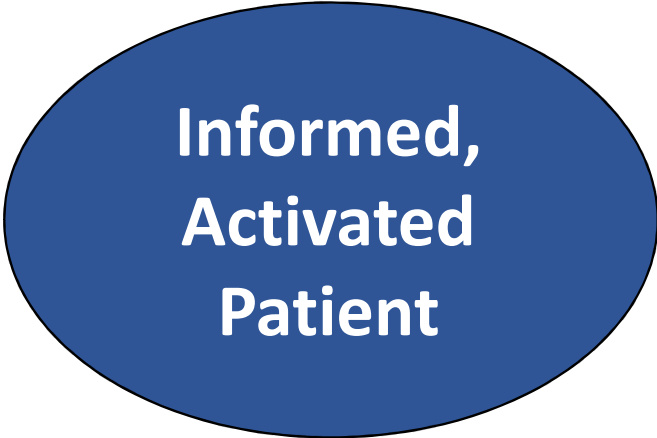
Persistent reduction of QoL after COVID19

Table 3 EQ-5D VAS ratings by age groups compared to Italian normative data (16)



Murri et al, submitted

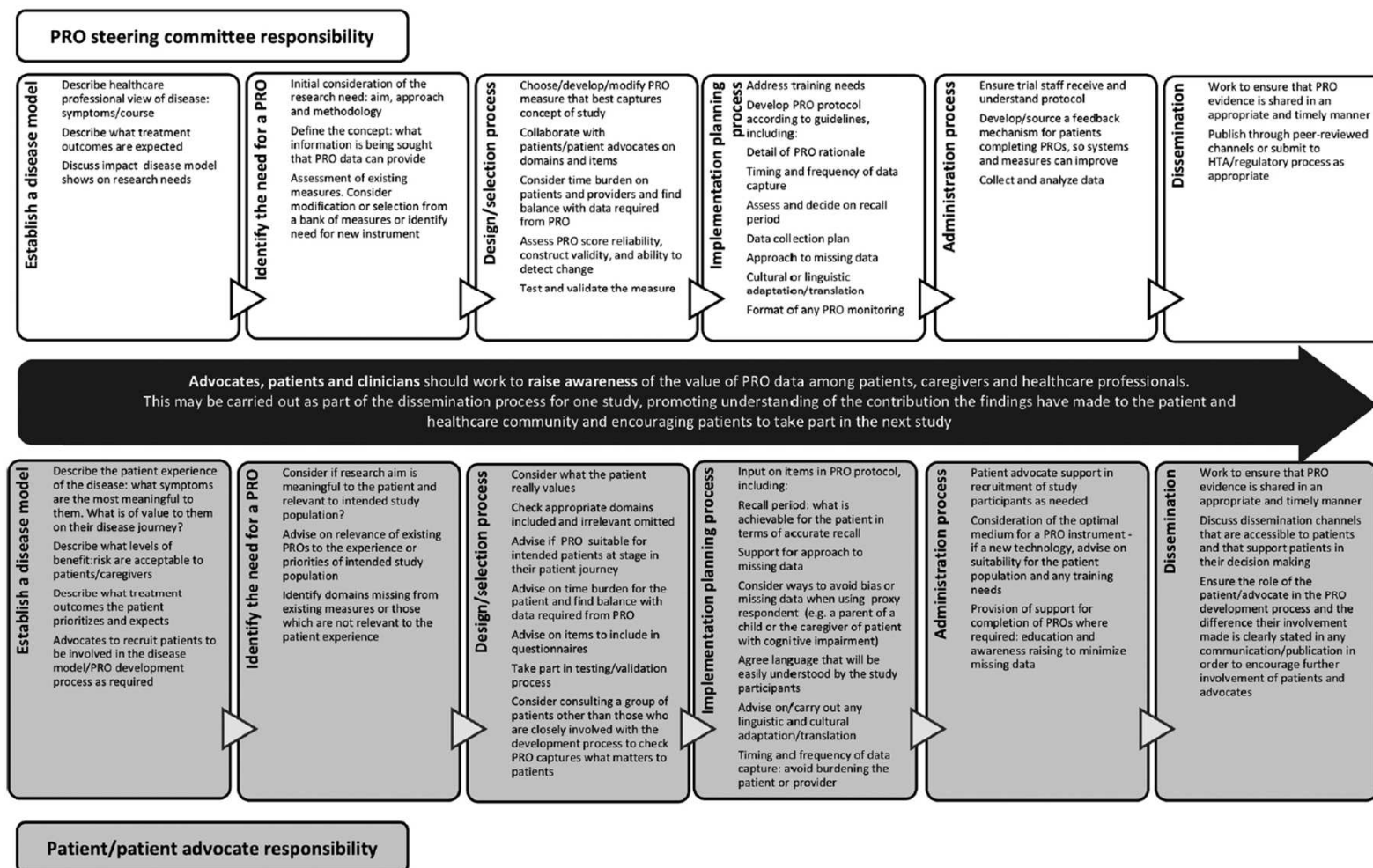
What characterizes an “informed,
activated patient”?



Informed,
Activated
Patient

**They have the motivation, information, skills,
and confidence necessary to
effectively make decisions about
their health and manage it.**

Multifaced voices for development and implementation of PRO instruments



Meeting key health system challenges for fourth 90 reaching

