

AGEING&HIV

CHAIN  **UKI**

CARE OF HIV AND AGEING
IMPLEMENTATION NETWORK

Multicomplexity:

Managing multimorbidity in people living with HIV

Chair:

Dr Ben Moshy

Speakers:

Prof Marta Boffito

Justine Mellor

ASK A QUESTION HERE



Managing multimorbidity in people living with HIV

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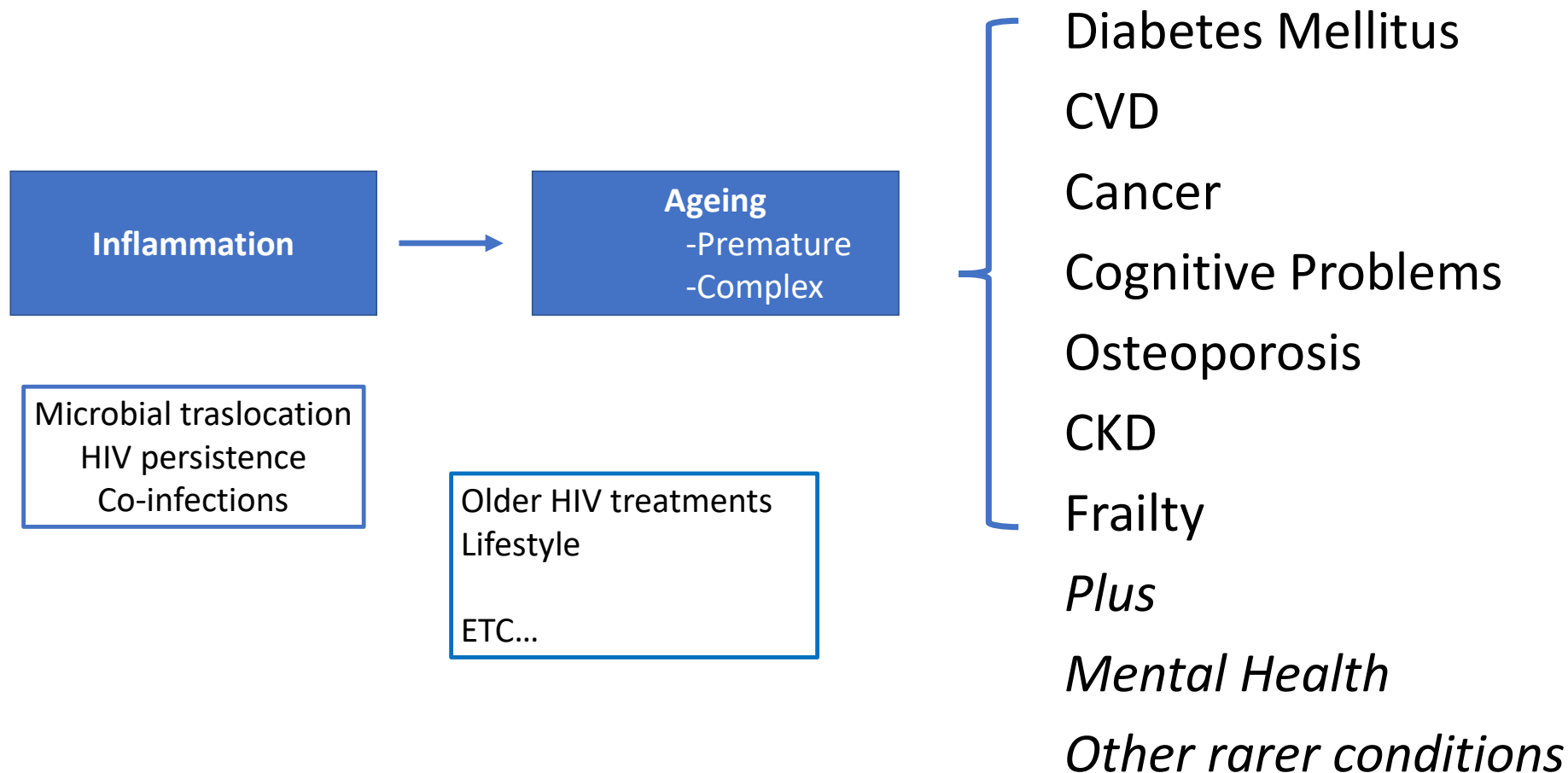
Imperial College London

London, UK

Conflicts of Interest

Marta Boffito has received travel and research grants from and has been advisor for Janssen, Roche, ViiV, Bristol-Myers Squibb, Merck Sharp & Dohme, Gilead, Mylan, Cipla, Teva.

Inflammation and Immune Dysfunction



Inflammation and Immune Dysfunction

Clinically, what does this mean?

Slowness

Weakness

Weight loss

Poor activity

Minor

Fatigue

Depression

Low quality of life

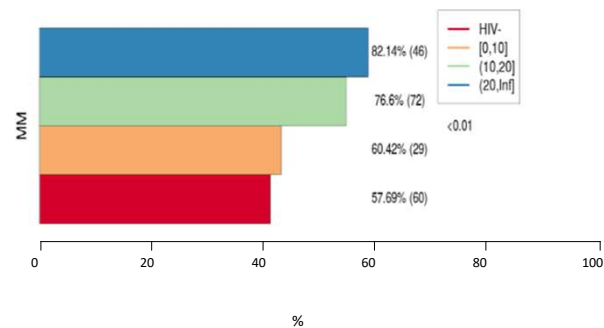
Other rarer conditions

Who?

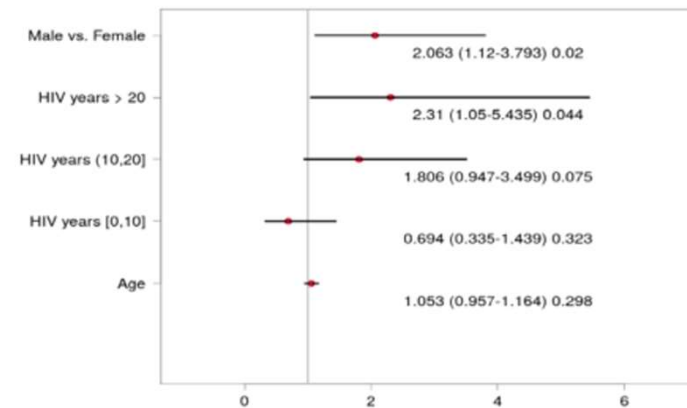
GEPP0 cohort (GEriatricPatients living with HIV/AIDS)

HIV duration of 20 years in 75 year old pts doubles multimorbidities & polypharmacy

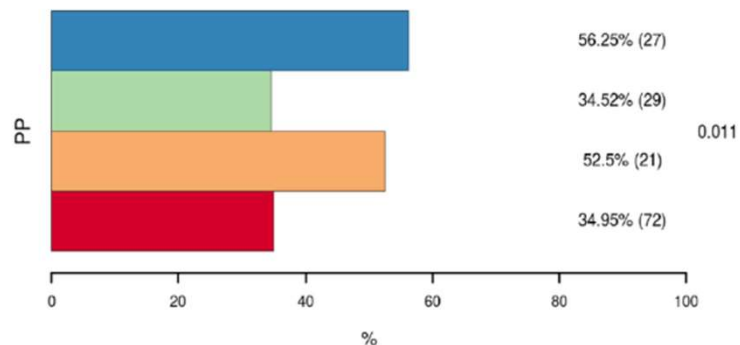
Prevalence of MM in HIV- and HIV+ pts, stratified by duration of HIV infection



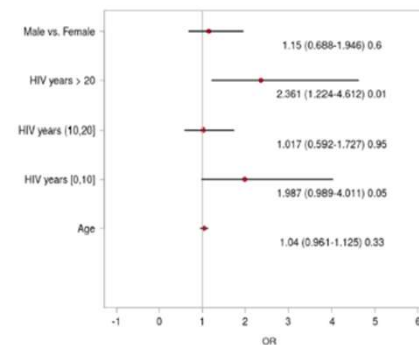
Predictors of MM: multivariable logistic regression



Prevalence of PP in HIV- and HIV+ pts, stratified by duration of HIV infection



Predictors of PP: multivariable logistic regression



Prevention and early treatment of comorbidities is essential and achievable

Screening tests

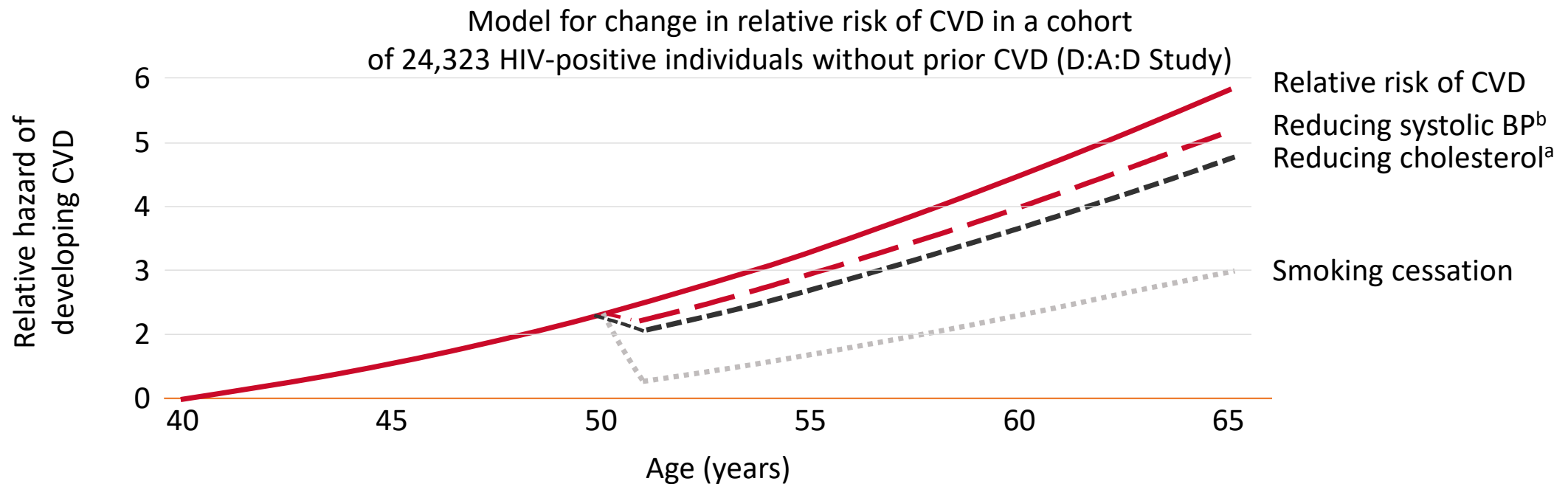
Behavioural factors contribute to comorbid conditions and can be modified

Early treatment is important (e.g., cardiovascular disease, fracture)

Preventing complications

Reducing traditional CVD risk factors can decrease risk of CVD in older people with HIV

Effective treatment of modifiable risk factors can significantly reduce an individual's CVD risk

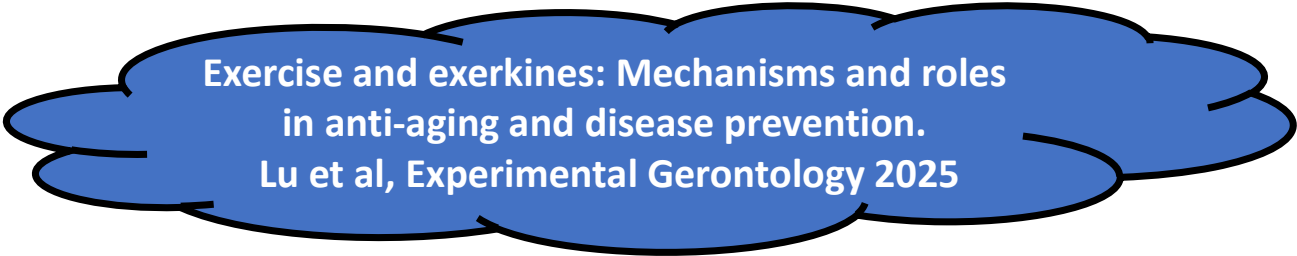


^aReduced by 1 mmol/L; ^bReduced by 10 mmHg
BP, blood pressure; CVD, cardiovascular disease

Petoumenos et al. HIV Med 2014;15:595–603

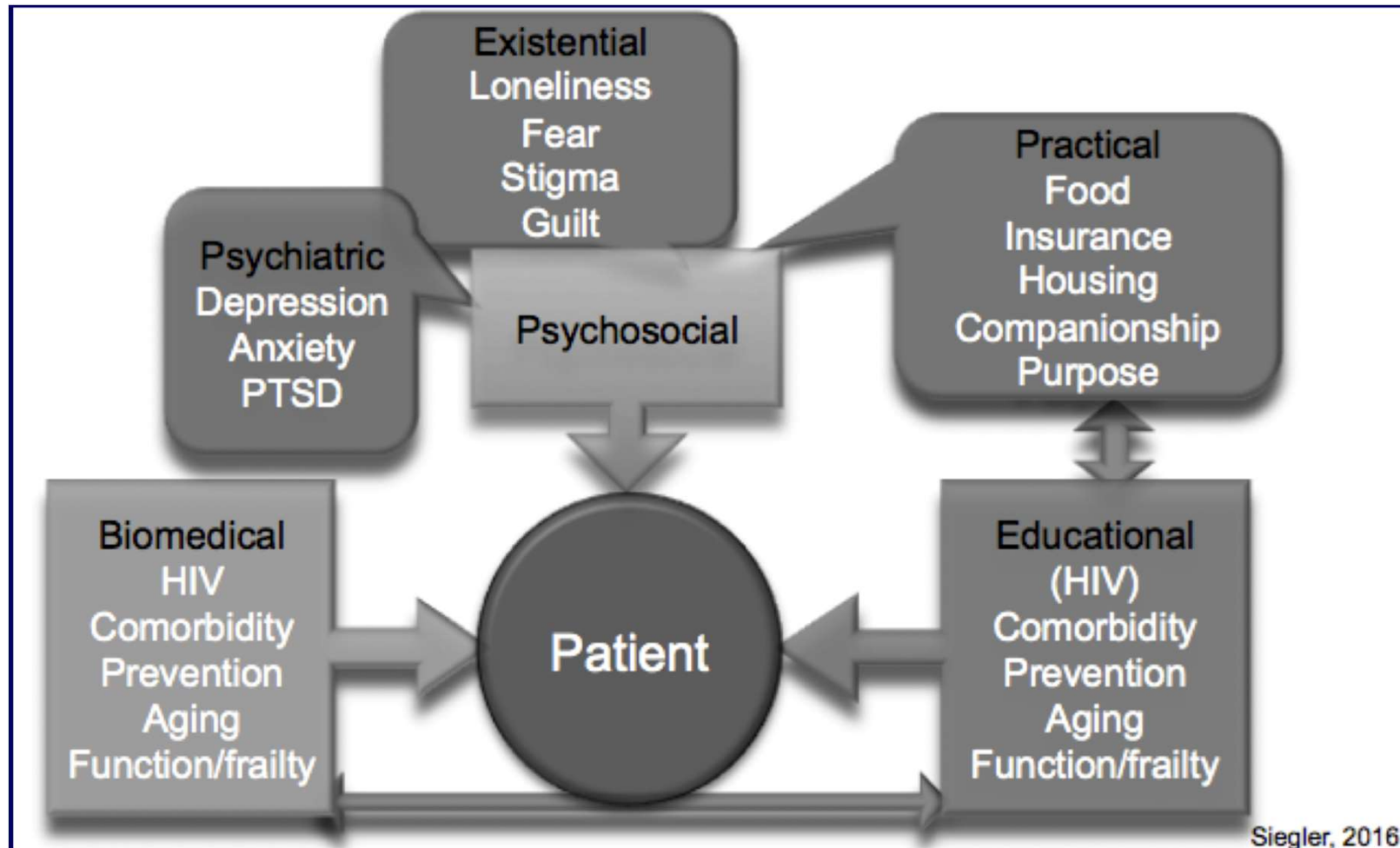
How to Beat Inflammation: A Patient's Guide

- Continue your HIV medications, VL<50 c/mL
- Stop smoking
- Maintain normal weight
- Healthy diet
- Cut down on alcohol, avoid drugs
- Get your hepatitis C cured
- Maintain dental health
- Exercise



Exercise and exerkines: Mechanisms and roles
in anti-aging and disease prevention.
Lu et al, Experimental Gerontology 2025

We are treating the whole person



What we do at CWH

A dedicated clinic for the over 50's at CWH – today a pathway for all PLWH > 50

> [Int J STD AIDS](#). 2012 Aug;23(8):546–52. doi: 10.1258/ijsa.2012.011412.

A dedicated clinic for HIV-positive individuals over 50 years of age: a multidisciplinary experience

L Waters ¹, B Patterson, A S. Bourfield, A Hughes, S de Silva, B Gazzard, S Barton, D Asboe, A Pozniak, M Boffito



> [AIDS Res Hum Retroviruses](#). 2021 Aug 13. doi: 10.1089/AID.2021.0083. Online ahead of print.

Evaluation of a Clinic Dedicated to People Aging with HIV at Chelsea and Westminster Hospital: Results of a 10-Year Experience

Branca Pereira ¹, Maria Mazzitelli ³, Ana Milinkovic ¹, Christina Casley ¹, Javier Rubio ¹, Rachel Channa ¹, Nicola Girometta ¹, David Asboe ¹, Anton Pozniak ¹, Marta Boffito ^{1, 2}



Data from the HIV over 50 clinic:

- Showed high rates of comorbidities and polypharmacy
- Lead to the implementation of clinical care pathways for all HIV care providers
- Led to the set up of new joint HIV/specialty clinics (cardiology, nephrology, neurology, metabolic, menopause, and geriatric)
- Helped improve prevention, diagnosis, and management of such comorbidities.

Geriatric/HIV clinic

- The best way to deliver geriatric care to people with HIV remains uncertain with different clinics and models being trialled
- In the UK both the Silver clinic in Brighton and the dedicated HIV/ geriatric clinic at Chelsea and Westminster Hospital use a multidisciplinary team (MDT) approach to perform CGA
- At Chelsea and Westminster Hospital, we established consultations with HIV-specialist pharmacists, geriatric consultants, and HIV consultants to assess and manage frailty, using the principles of CGA to advise on preventable or modifiable risk factors or conditions
- We here present data on the impact of a modified CGA in adults with HIV aged 80 years or older, as there is a paucity of data in this population.

Clinical Frailty Scale*



1 Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.



2 Well – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.



3 Managing Well – People whose **medical problems are well controlled**, but are **not regularly active** beyond routine walking.



4 Vulnerable – While **not dependent** on others for daily help, often **symptoms limit activities**. A common complaint is being “slowed up”, and/or being tired during the day.



5 Mildly Frail – These people often have **more evident slowing**, and need help in **high order IADLs** (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.



6 Moderately Frail – People need help with **all outside activities** and with **keeping house**. Inside, they often have problems with stairs and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.



7 Severely Frail – **Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).



8 Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.



9. Terminally Ill - Approaching the end of life. This category applies to people with a **life expectancy <6 months**, who are **not otherwise evidently frail**.

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia**, they cannot do personal care without help.

* 1. Canadian Study on Health & Aging, Revised 2008.

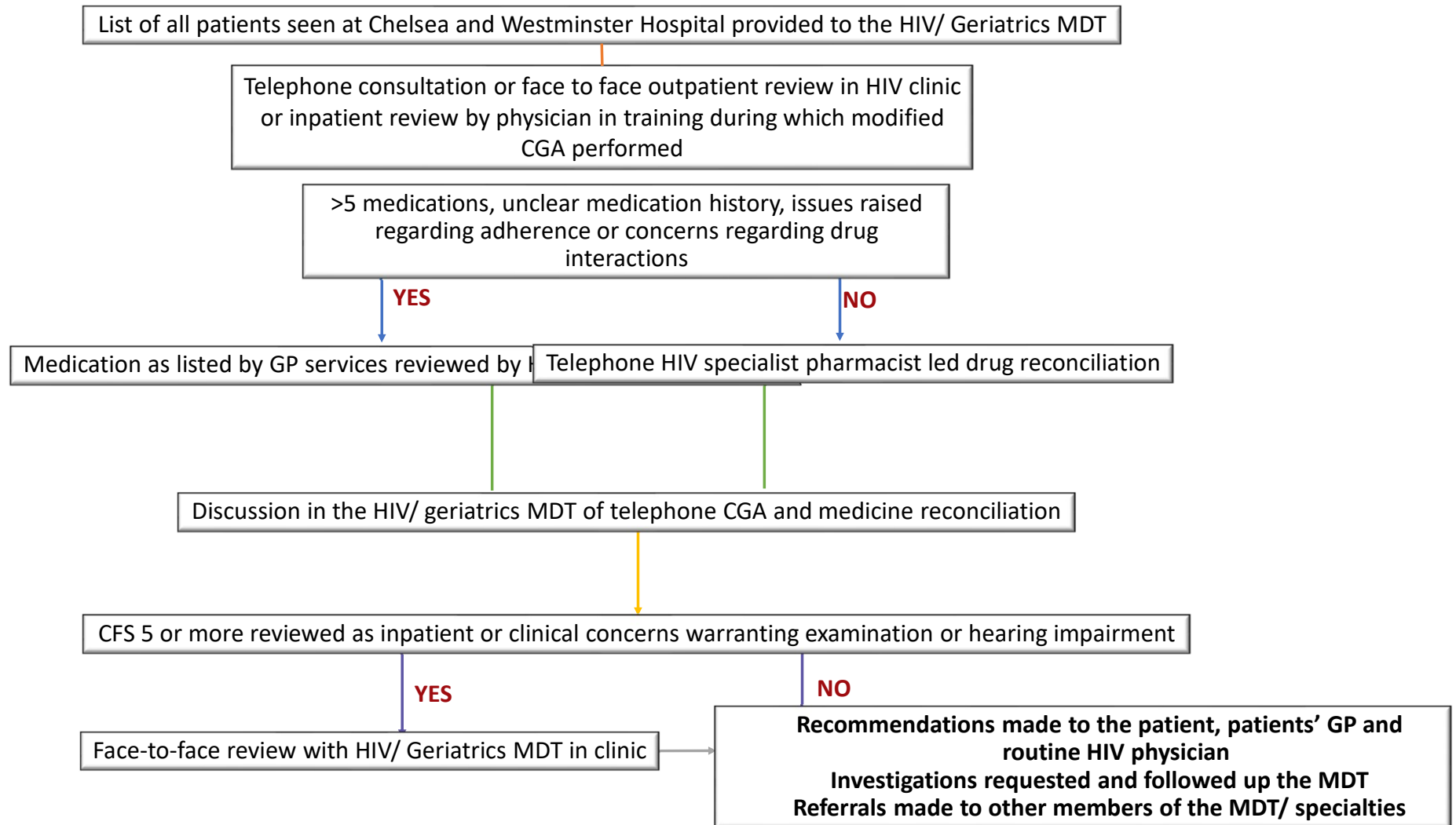
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

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Methods

Flowchart to show the clinic process



Results

63 service users with HIV aged over 80 years - 73% by phone, 19% in-person and 8% virtually; median age of the patients was 82 years (IQR 80-86), 88% male, 4 had detectable viral load (all below 200 copies/mL)

Overall **median time from HIV diagnosis was 20.5 years** (IQR 16.5–29.0), with 14% diagnosed in the last 15 years

Median social deprivation decile was 5, whilst the median health deprivation decile was 7

Most patients remained **independent** with a median CFS of 2 (IQR 2-5) and only 2 (6%) were housebound; 11 required a package of care to help with activities of daily living; 22 required walking aid but only 14 reported at least one fall in the last year

Median number of **co-morbidities was 5** (IQR 4-7), with the most common being hypertension and cardiovascular disease

Polypharmacy in 55 (85%) individuals, with 20 (41%) on more than 10 medications daily not including ART

Total **ACB** scores were calculated, and 11 individuals (17%) had a score greater than 3

Different domains of patients' wellbeing were reviewed, including concerns regarding cognition and performance during the 4AT: 7 individuals (11%) had a previous diagnosis of neurocognitive impairment. Among those who did not, 16 (31%) raised concerns regarding their memory but on objective screening, the median 4AT was zero

16 (25%) reported **nutritional** concerns and were referred to dieticians

19 (30%) reported concerns regarding their **mood** and sleep

37 (59%) highlighted **pain** driving down their quality of life

48 (76%) underwent **advance care plan** (ACP) discussions – GP involvement

47 (75%) reviewed in clinic had modifiable risk factors recommended:

Blood tests and radiological investigations were requested for 32 patients (51%: blood tests to assess patient's nutritional status including haematinics and vitamin D were frequently requested, scans including coronary calcium score scans and bone density scans and other radiological investigations (e.g., CT/MRI if concerns highlighted during their consultations)

18 underwent **ART** switches: ART pill burden was reduced from a mean of 2 tablets to 1 by switching patients to single tablet combinations where possible

Changes to **comedications** were advised using the STOPP/START framework with 62% of patients receiving such advice/Dossett boxes

Almost a quarter of patients were **referred to other members** of the MDT, including physiotherapy and dieticians

Weight change unexplained by an underlying medical issue, **swallowing difficulties**, osteopenia seen on bone density scans and **nutritional** deficiencies seen on blood tests were the reasons for referral to the dietetic service

11 individuals (17%) were referred to other specialties including geriatrics for ongoing review, oncology, and dermatology

Within six months of review in the HIV/geriatrics clinic, four patients died (6%, age range 81- 93 years), 2 patients who died both had a CFS of 7 and were dependent for all their personal care and 2 had malignancies

Deprescribing in PLWH – patient centered intervention

Deprescribing cART

- VL undetectable
- ARV history & archived resistance testing results support alternative options
- Lower DDI and toxicity
- Maintain undetectable VL

Deprescribing non cART

- Withdrawal of an inappropriate meds
- Supervised by a health care professional
- Goal = managing polypharmacy/reduce risks & improving outcomes
- Evidence that is feasible and safe

Overview of 3 Human Immunodeficiency Virus and Geriatric Care Models

Model Type	Overall Description	Institution Name	Location
Model 1: Outpatient referral/consultation	Referral to a geriatrician for recommendations to enhance a patient's care plan; HIV provider remains as primary provider	Positive Aging Consultation, University of Colorado	Aurora, Colorado
Model 2: Combined HIV/geriatric multidisciplinary clinic	A multidisciplinary team is incorporated into existing HIV/infectious disease clinics to provide a comprehensive assessment and evaluation of each patient; primary care providers are provided with full evaluation and recommendations from the multidisciplinary team	The THRIVE Program	Baltimore, Maryland
		Comprehensive HIV and Aging Initiative of the Chronic Viral Illness Service, McGill University Hospital Center	Montreal, Quebec, Canada
		Chelsea and Westminster Hospital [11]	London, United Kingdom
		Silver Clinic [12]	Brighton, United Kingdom
		Golden Compass Program, University of California; San Francisco/Zuckerberg San Francisco General Hospital [14, 16]	San Francisco, California
Model 3: Dually trained providers	An HIV provider with an invested interest in geriatric care performs assessments and provides recommendations	Center for Special Studies, New York Presbyterian/Weill Cornell Medical Center [13, 15]	New York City, New York
	Dually boarded provider: a single provider with both geriatric and HIV expertise in 1 clinical home	Age Positively Program, Massachusetts General Hospital	Boston, Massachusetts
		Penn Community Practice and Penn Geriatrics, University of Pennsylvania Medical Center	Philadelphia, Pennsylvania

Abbreviation: HIV, human immunodeficiency virus.

Conclusions

- Our findings demonstrate that people ageing with HIV at and over the age of 80 years may remain independent as evidenced by their ability to complete activities of daily living, mobility and symptoms maintain an active lifestyle despite multiple comorbidities and polypharmacy
- They may benefit from an MDT approach focussed on integrating frailty screening and geriatric care within the HIV medicine specialty, as early identification of frailty and referral to a specialist clinic may help reverse or slow down the progression of frailty and improve the quality of life of those ageing with HIV
- This in combination with routine HIV care provided by their specialist with whom patients often have a long term relationship will help with continuity of care

Clinical case

Paul

- / MSM, 64 years old
- / retired

Medical history

- / Diagnosed with HIV 13 years ago
- / Started ART in 2013 with TDF/FTC + DTG
 - / Switched to ABC/3TC/DTG soon after due to TDF tubulopathy
 - / Switched to 3TC/DTG due to increased CV risk
- / Clade B, wildtype virus at baseline
- / No prior history of VF
- / BMI: 32 kg/m²
- / Comorbidities: Ischaemic heart disease, hyperlipidaemia, mild CKD
- / Comedications: Amlodipine, atorvastatin, bisoprolol, irbesartan, omeprazole, aspirin
- / His husband, who was also HIV positive, has recently died; following which, he has been struggling with low mood
- / He tells you that some days he forgets to take his tablets, especially on days when he is feeling lower

Abbreviations: ART, antiretroviral; ABC, abacavir; CV, cardiovascular; CKD, chronic kidney disease; DTG, dolutegravir; FTC, emtricitabine; HIV, Human immunodeficiency virus; MSM, men who have sex with men; TDF, tenofovir disoproxil; VF, virological failure; 3TC, lamivudine

This is a patient case study based on physician's clinical experience. Treatment presented in case study are based on international clinical guidelines/recommendation.

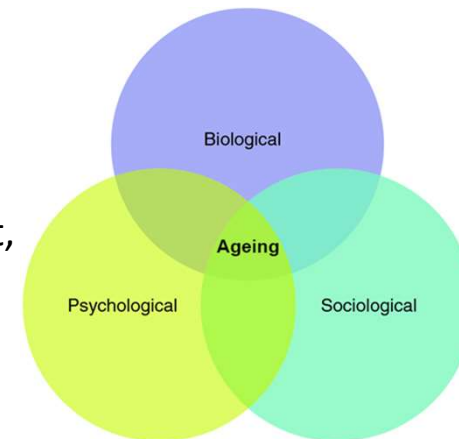
What do you need to consider when reviewing Paul's case?

Development of a frailty pathway to manage complex multimorbidity in people living with HIV

Justine Mellor
Advanced clinical practitioner
Northern HIV and sexual health service
Manchester Royal Infirmary
12/9/2025

The complexity of ageing – a person centred approach

- Premature onset of age-related co-morbidities
 - Polypharmacy
 - Frailty
 - Functional decline and loss of independence
 - Social isolation
 - Loneliness
 - Poor mental health
 - Premature cognitive decline
 - Stigma
 - Ageism
 - Deprivation
-
- Person centred biopsychosocial model of integrated care ¹
 - Geriatrician, HIV physician, HIV nurses, social worker, pharmacist, physiotherapist, psychologist, occupational therapist, dietician, HIV peer support and community workers – alongside GP



1. Lazarus et al (2021) Consensus statement on the role of health systems in advancing the long-term well-being of people living with HIV. Nature communications, 12(1)

National Guidance



BHIVA 2016 guidance⁴ on
over 50's



EACS 2019 guidance⁵
includes screening and CGA's



Absence of specialized
models of HIV geriatric care
CGA's not done⁶



Recommendations rarely
implemented due to a lack of
feasibility⁷

Current models of care⁸

Collaboration, integration and organization of care

Geriatrician referral model – HIV services refer into

Joint clinic model – HIV and Geriatrician physician in single consultation

HIV physician led model – HIV physician and HIV CNS

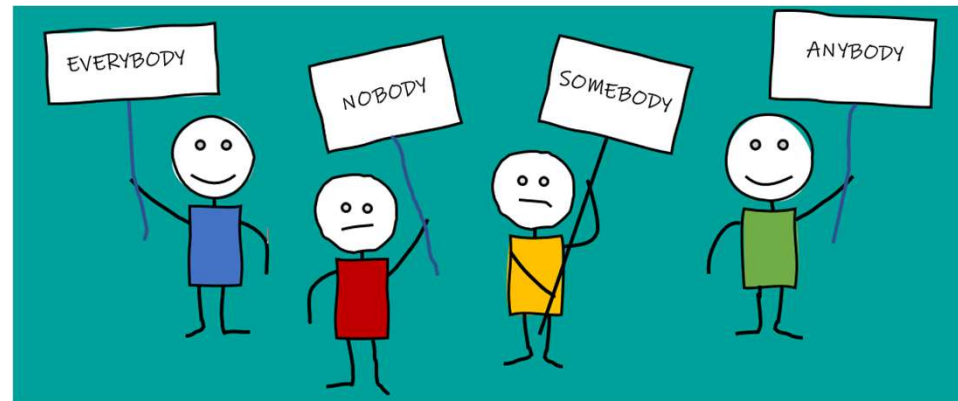
Dual trained both HIV/geriatrician provider

Nurse led model

8. Kokorelias, K.M., Grosse, A., Zhabokritsky, A. et al. Understanding geriatric models of care for older adults living with HIV: a scoping review and qualitative analysis. BMC Geriatr 23, 417 (2023). <https://doi.org/10.1186/s12877-023-04114-7>

Challenges of managing complex multi -morbidities in people living with HIV Whose role is it anyway ?

- Geriatricians – experts in managing co-morbidities, some hesitancy in taking prominent role in care of older people with HIV ²
- HIV clinicians – experts in managing HIV
- GP - less understanding of complexities of geriatric syndromes than geriatricians³ and HIV than HIV specialist services
- Challenges of funding
- Time constraints
- Large cohorts
- Specialist support staff



2. Siegler EL, Burchett CO, Glesby MJ. Older people with HIV are an essential part of the continuum of HIV care. Journal of the International AIDS Society 2018;21(10):e25188-n/a. doi: <https://doi.org/10.1002/jia2.25188>

3. Jones HT, Barber TJ. How do geriatricians feel about managing older people living with HIV? A scoping review European geriatric medicine. 2022;13(4):987–97. <https://doi.org/10.1007/s41999-022-00642-4>.

HIV Cohort – Hathersage Centre

Current model in 2021

30-minute routine
follow up appointment



Number of patients = 2095 (2021)	Number of patients = 2103 (2024)
>50 years n = 678 (32.3%)	>50 years n= 807 (38.3%)
>60 years n= 163 (7.8%)	> 60 years n= 362 (17.2%)
>70 years n= 30 (1.4%)	> 70 years n= 58 (2.7%)
>80 years n = 4 (0.2%)	>80 years n= 8 (0.3%)

What did we do next?

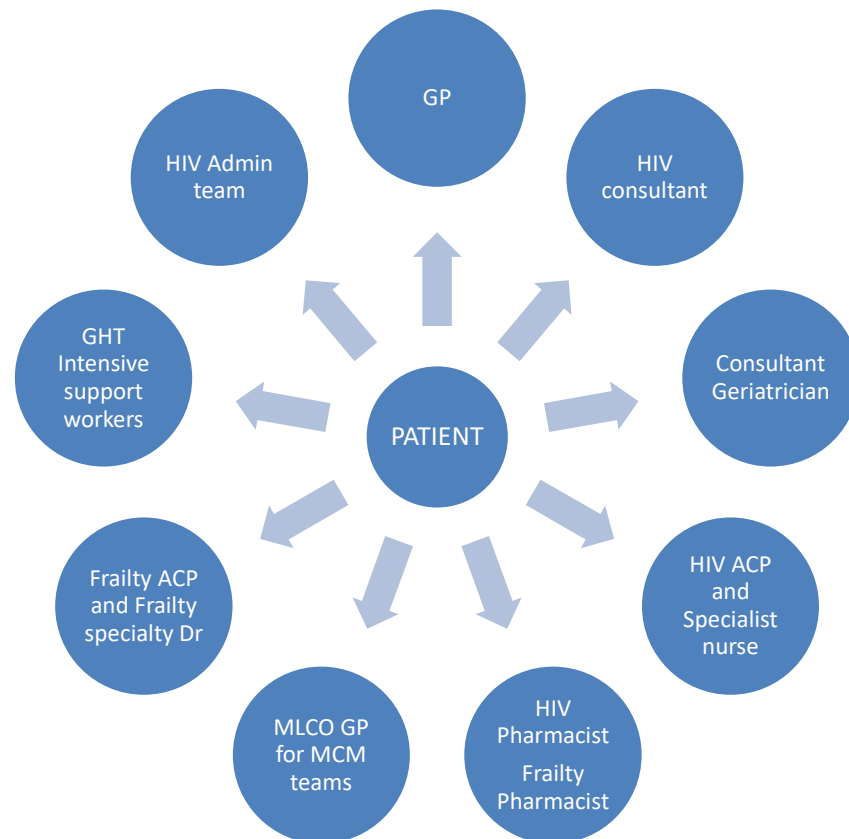
- Discussions: Consultants, speciality Dr, ACP, specialist pharmacists form both HIV and frailty teams
- Virtual Meetings: Understand each others' roles
- Liaison with other stake holders-community teams (LCO/VSO)
- Shadowing each other
- Training – Frailty Teaching to HIV team
- Draft new model, pathways and developed CGA based on their needs
- Proposed virtual MDT approach to discuss case/recommendations
- Monthly MDT on teams



Screening and care delivery

- Incorporated into annual review- Rockwood/Edmonton
- CFS=>4
- Edmonton =>6 booked into 1 hour complex slot for CGA
- Prior to appointment
 - Polypharmacy review (HIV pharmacist)
 - case note review of GP and hospital records
- Post appt – CGA forwarded to Frailty team prior to discussion at Frailty MDT (max 4 patients)
- MDT – review of CGA History/problem list/bloods/imaging/recommendations to GP forwarded

Frailty MDT



Challenges

- Increase on demand on the service
- Increasing age of cohort
- Frailty clinicians not commissioned
- Learning journey:
Adaptation of the model and assessments

Hathersage Cohort

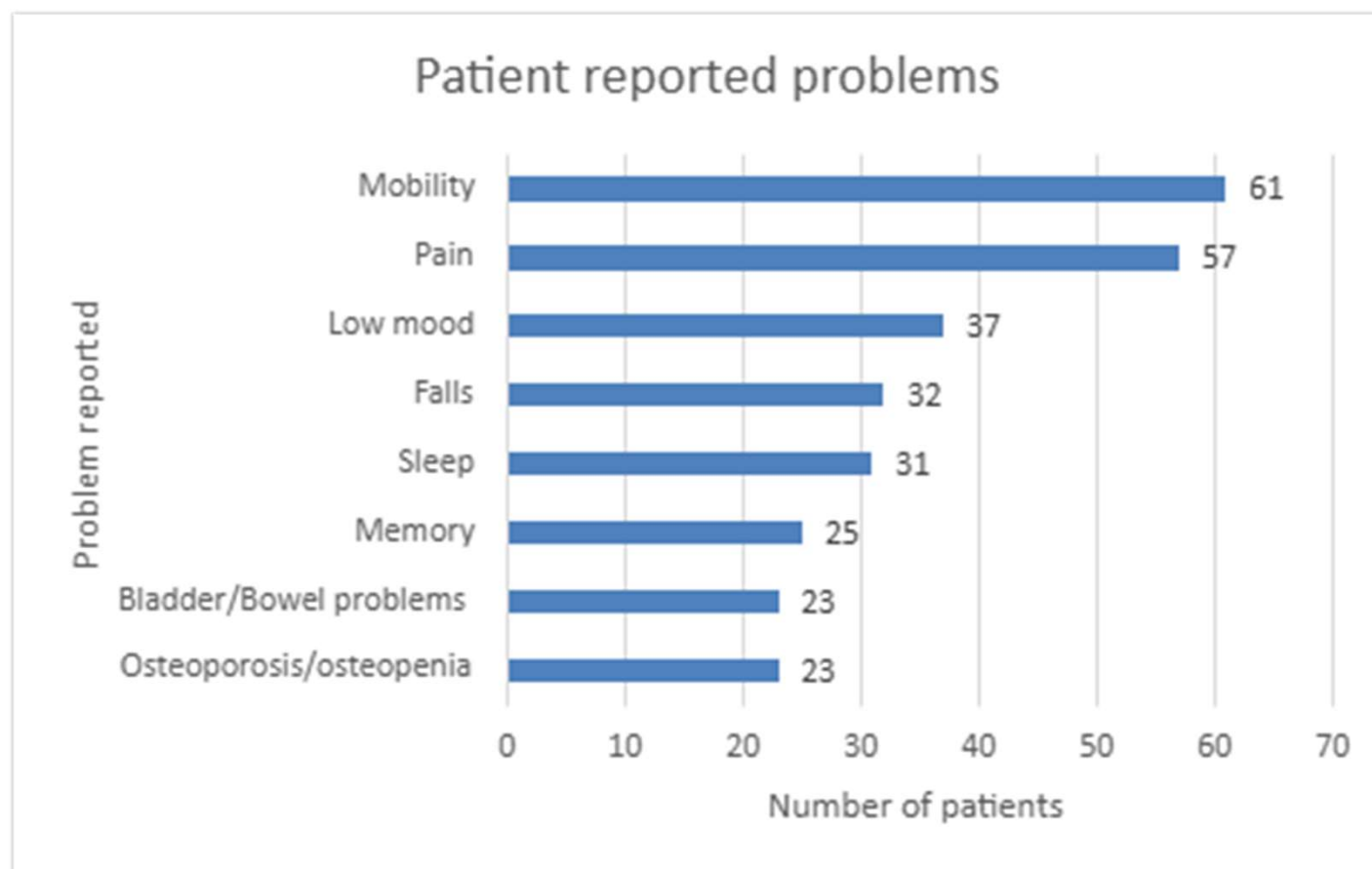
Age	Total number of patients	Total number screened	Number of screened patients had CGA completed	Rockwood CFS Scores	RIP
>80 years	10	10 (100%)	9 (90%)	5 (Range 3-7)	2
70-79 years	50	50 (100%)	29 (58.0%)	4 (Range 2-7)	5
61-69 years	178	113 (63.5%)	28 (24.7%)	3 (Range 1-7)	11
TOTAL	238	173 (72.6%)	66 (38.1%)		18

31/8/2025 - Total CGA completed = 82 Includes patients <60 years

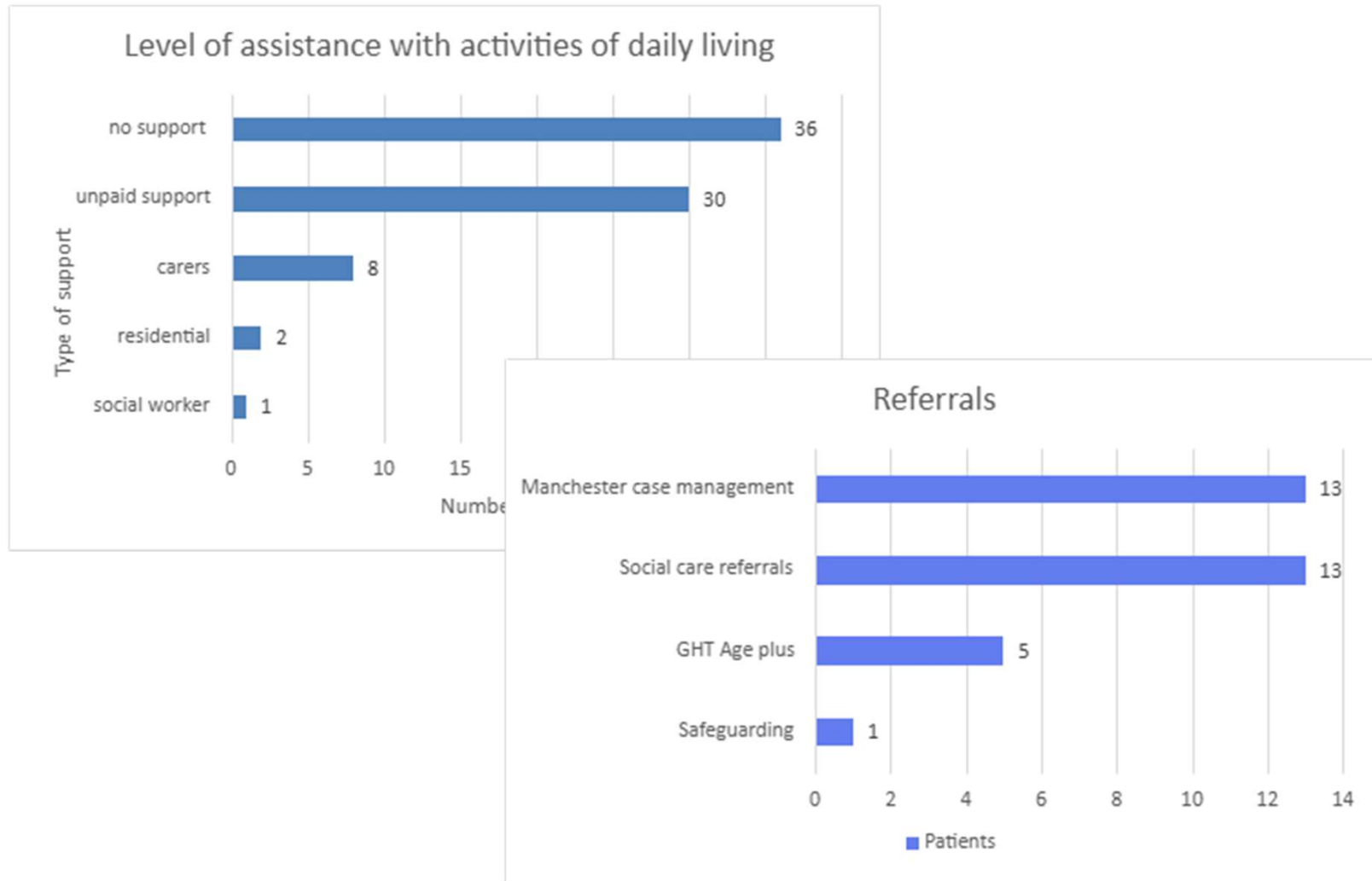
Number of patients discussed in frailty MDT = 77

Results

Sexual Identity	Male (including transmale) n= 56 (72.7%) Female (including transfemale) n= 21 (27.2%)
Age	Median age 68 years (range 50-85 years)
Rockwood clinical frailty score	Median CFS =5 (range 4-7)
Number of co-morbidities	Median n=3 (range 1-6)
Number of non - HIV medications	Median n=11 (range 3-24)



Results



Results



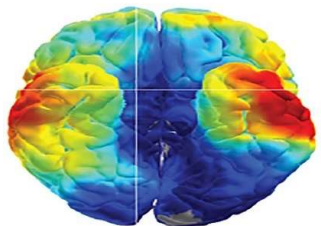
41 (53.2%) deprescribing recommendations were made
54 (70.1%) new medicine recommendations were made
Mainly around pain management, reduction in anticholinergic burden (ACB) meds



Antiretroviral therapy (ARV) simplification was discussed with 32 (41.5%) patients
22 (28.5%) patients switched ART to reduce pill burden (%) now on a single tablet regimen (STR) compared with (%) pre frailty assessment



9 (11.6%) osteoporosis. 14 (18.1% osteopenia)
11 patients still waiting for DEXA
Diet, vitamin D supplements, referral to bone clinic for bisphosphonates



17 (22%) recommended for further memory assessment
Direct referrals to gastro, respiratory, cardio, vascular clinic, COPD clinic, Geriatrician, falls clinics



Patient – low motivation

- Love of music
- Started drumming again with GHT

Issue – social isolation

- Used to love reading, unable to get to library due to poor mobility
- Links with older age GHT project
- Now writing a book



Issue – low mood, financial difficulties

Unpaid carer support

- GHT financial adviser
- Received large sum of money to cover for years of unpaid carer

Conclusion

- Many older patients living with HIV report a high number of co-morbidities, polypharmacy and factors affecting quality of life.
- New model enables a collaborative approach with frailty experts in primary and secondary care
- Nurse assessments and MDT discussion facilitates the formulation of action plans to address patients physical, psychological and social needs.
- Enquiries from other clinics nationally regarding incorporation of similar models into their service

Next steps

- Gaps in current model – patients not always having screening done at annual reviews
- Increasing demand from spoke services at Withington, Stockport and Tameside HIV services
- Pilot at Tameside – planning for nurse telephone screening appointments
- Services non-commissioned -this will need to be addressed to ensure equitable access

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- Harriet Baker – HIV specialist pharmacist
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- Dr Ekwe Uruakanwa – Consultant geriatrician
- Dr Sujatha Allu – Specialty Doctor in frailty
- Joanne Wong – Frailty ACP pharmacist
- Vincy Vinod – Frailty ACP
- Seema Simon – Frailty ACP
- Lisa Cottrell- Nurse Consultant Clinical Lead for Manchester Community Response, Central Locality
- Dr Fatma Amin – MLCO
- Eudios Asuelime – ACM
- Michelle Anderson -Active case management teams MLCO
- George house trust intensive support workers Jill Cooke, Lauren Rowe and GHT older age project (Anna)

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3. Siegler EL, Burchett CO, Glesby MJ. Older people with HIV are an essential part of the continuum of HIV care. *Journal of the International AIDS Society* 2018;21(10):e25188-n/a. doi: <https://doi.org/10.1002/jia2.25188>
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7. Bitas C, Jones S, Singh HK, et al. Adherence to Recommendations from Comprehensive Geriatric Assessment of Older Individuals with HIV. *Journal of the International Association of Providers of AIDS Care*. 2019;18:2325958218821656–56. <https://doi.org/10.1177/2325958218821656>.
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