



# WORKING ON AN INTEGRATED CARE COMMUNITY SPECIALIST TEAM FOR THE OLDER PERSON

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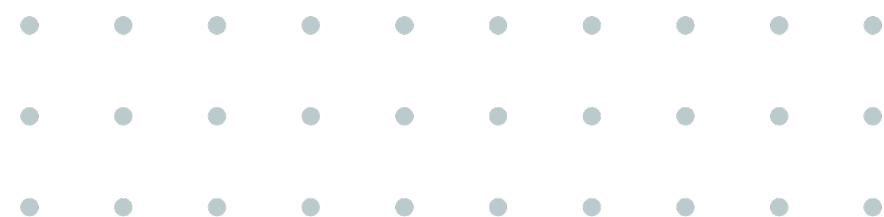
# OVERVIEW

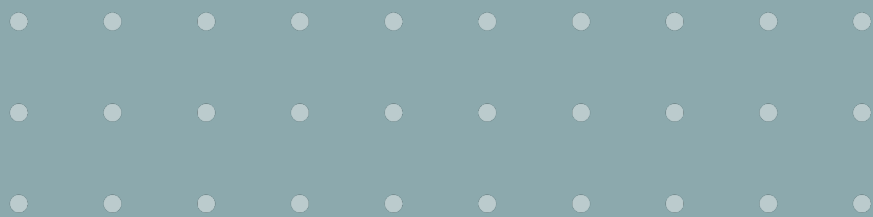


**01. FRAILTY AND POLYPHARMACY**

**02. MEDICATION REVIEW AND PHARMACY  
PRIORITISATION TOOLKIT**

**03. INTERDISCIPLINARY WORKING FROM A  
PHARMACIST'S PERSPECTIVE**





# FRAILTY AND POLYPHARMACY



# Polypharmacy

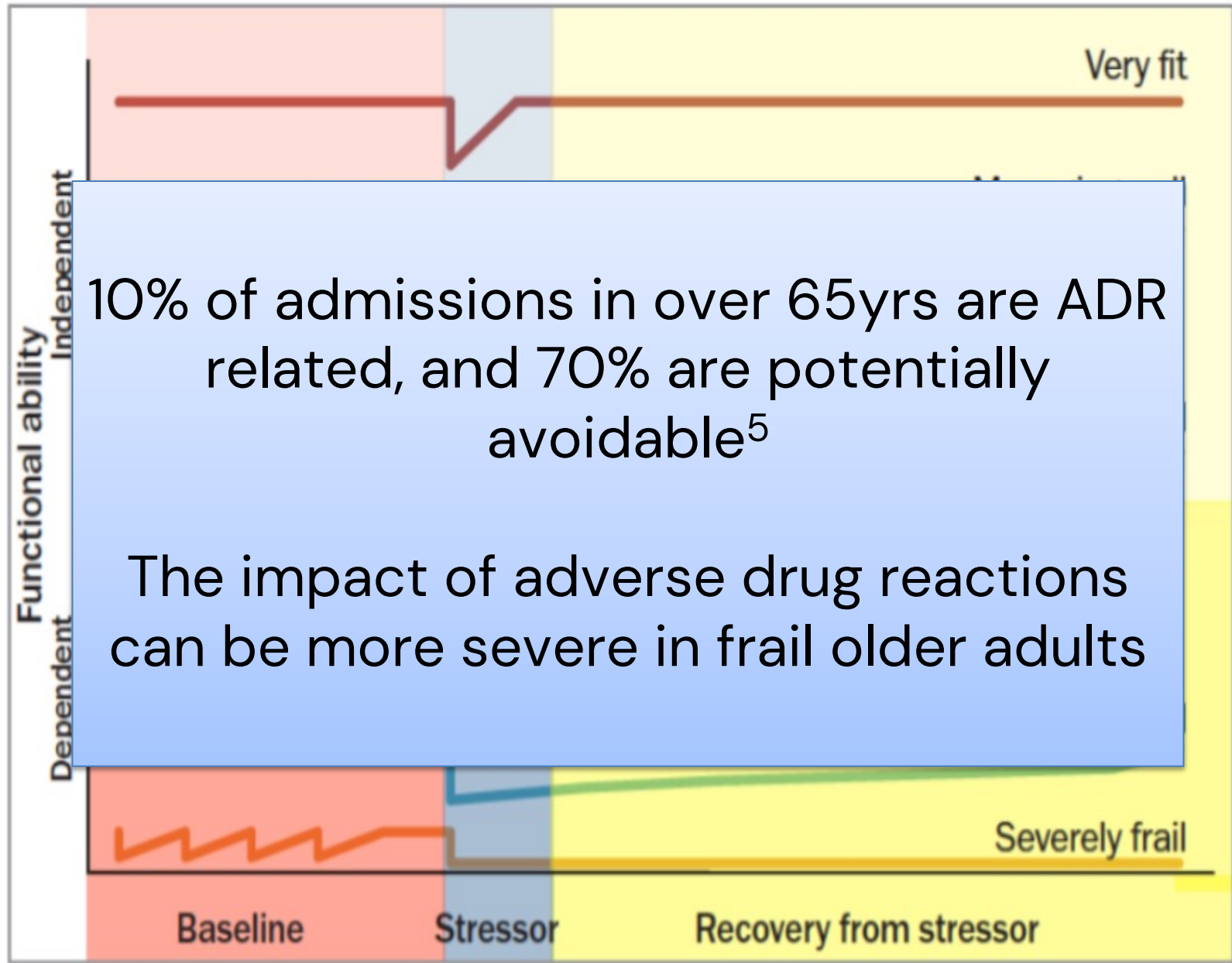
- Polypharmacy is defined as the routine use of five or more medications daily<sup>1</sup>
- Appropriate polypharmacy<sup>2</sup>
  - Achievable therapeutic objectives
  - ADR risk minimized
  - Agreed with patient and happy to take



# Polypharmacy and Frailty

- Frailty associated with hospitalisation, premature nursing home admission, accessing GP care and out of hour GP services, increased morbidity and mortality
  - Prescribing of potentially inappropriate medication<sup>3</sup>
- People taking more than 10 medicines are twice as likely of becoming frail<sup>4</sup>

# FRAILITY



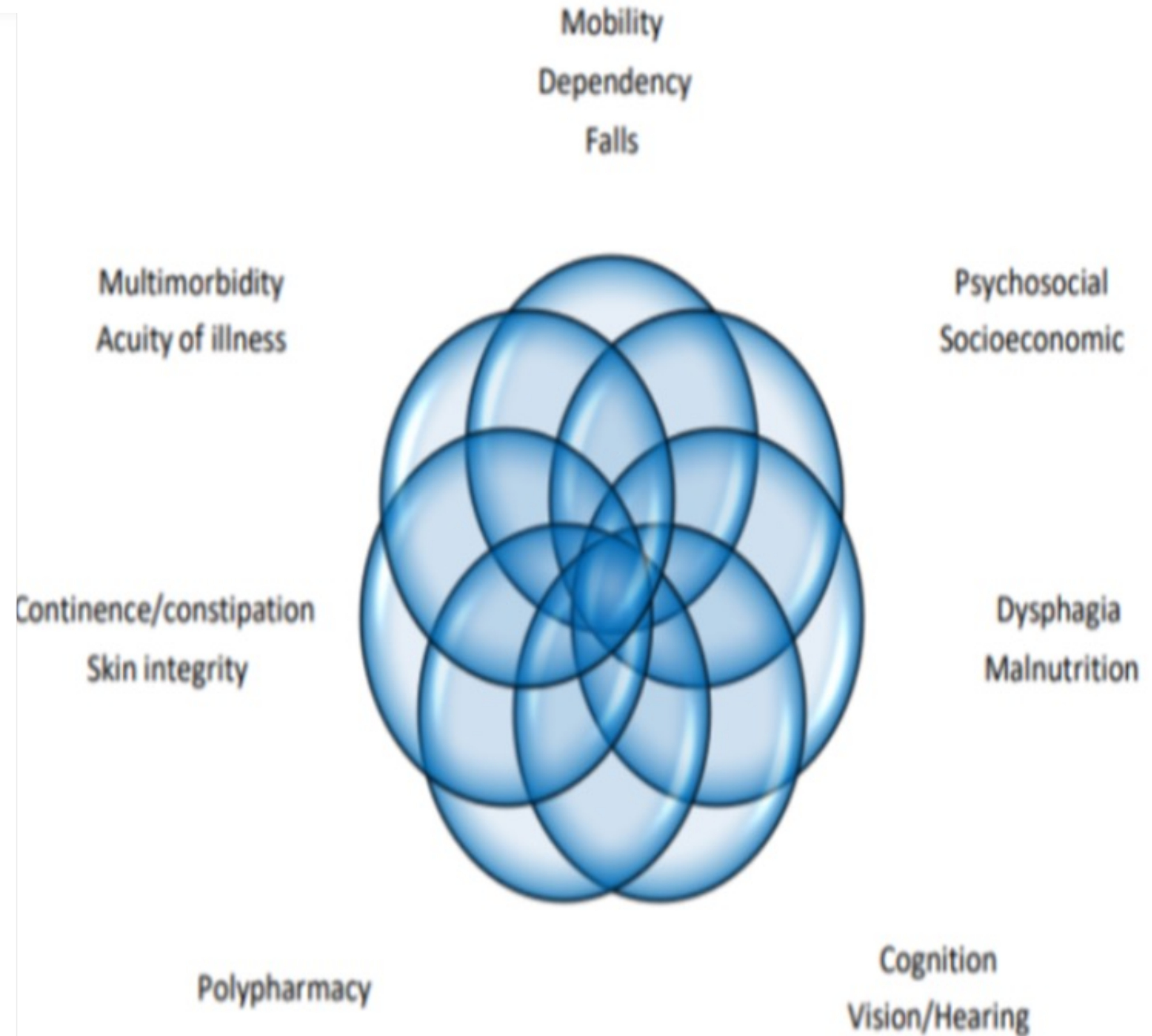
**Focus on frailty**  
Essential as the population ages  
ALGA TREDDY, M.D., SOLOMON TY, M.D., PH.D., MPP  
KENNETH ROSENBERG, M.D., MPH, MSP  
RENDRA VISWANATHAN, M.D., PH.D., MPH

10% of admissions in over 65yrs are ADR related, and 70% are potentially avoidable<sup>5</sup>

The impact of adverse drug reactions can be more severe in frail older adults

Figure 1. Effect of level of frailty on experience of a stressor (e.g. a fall) and recovery in five people of the same age and social environment.

# GERIATRIC SYNDROMES<sup>6</sup>

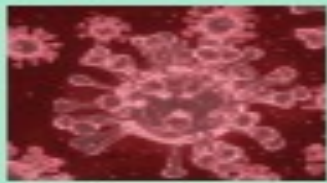


# PINCH ME

Assessing for Potential Causes of  
Delirium



**P**ain



**I** **N**fection



**C**onstipation



**H**ydration  
&



Nutrition



**M**edications



**E**nvironment

# PINCH ME



## MEDICATION

ASSESSING IT AS A POTENTIAL CAUSE OF DELIRIUM



OMISSION OF  
REGULAR  
MEDICATIONS

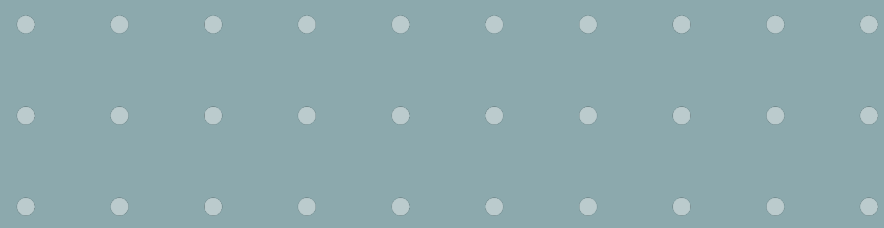
ADDITION OF  
NEW  
MEDICATIONS

COMMON MEDICATIONS ASSOCIATED WITH DELIRIUM

BENZODIAZEPINES  
ANTIPSYCHOTICS  
ANTIDEPRESSANTS  
ANTICHOLINERGICS

CARDIAC AGENTS  
STERIODS  
OPIOIDS





# PHARMACY MEDICATION REVIEW AND THE PRIORITISATION TOOLKIT





# Prioritisation Toolkit

- Dec 2018 Pharmacist joined the STEP team



- STEP Registrar – medication reviews using the STOPP START criteria
  - Patient prescribed >5 medicines – acute inpatients
- Referral process – VIP (variable indicative of placement) screening tool
- Identify patients with the highest risk of medication-related safety issues who would benefit most from a pharmacy medication review in a resource limited setting

# Prioritisation Toolkit



- Research prioritisation tools



- National guidelines
- APINCH high risk medication list used locally in hospital



- Analysis of incident reports locally



- Feedback from team members and expert opinion



- Expert opinion from Pharmacists



- A patients perspective

# A patient perspective

- **High Risk Medicines** – ensuring that they are appropriately prescribed and if held that a plan is in place to restart/ review
- **Procedures/ systems in place to avoid errors** eg. Annotating the Kardex with reason for holding and documenting plan – include information on discharge letter
- **Regular medication review**, medication reconciliation on admission and discharge with regular review during admission period
- **Reason for admission** potentially related to medication and if admitted with **falls**

# Prioritisation Toolkit

- Education to STEP team
- 2019 Introduction of Prioritisation Toolkit as part of CGA following Pilot study
- 2022 Introduced into 21 bed rehabilitation unit, nurses identifying patients for pharmacy review using prioritisation toolkit
  - Education to nursing staff
- 2023 Geriatrician introduced it to the FIT team CUH ED
- Modified with changing practice

# Prioritisation Toolkit

- Referral process:
  - CGA predominantly
  - Memory clinic
  - Consultant/GP
- Triage Folder
- Referral rate
  - 2022 Analysis of VIP referrals through outpatient clinics – referral rate 83%
  - 2022 Rehab unit referral rate – 85%

The variable indicative of Placement in acute hospital outpatient clinics identifies older adults who benefit from specialist geriatric assessment. J Maher, M McKenna-Barry, C Donnellan, I Pillay. IGS 2022.

Implementing a frailty specific pharmacy prioritisation toolkit in an older persons' rehabilitation unit. A O'Reilly, M McKenna-Barry, N Kennedy, S Ryan, A O'Reilly, C Donnellan, I Pillay. IGS 2022

# Prioritisation Toolkit

<b>Prioritisation Toolkit for Pharmacy Referrals (Tick which one applies) (See appendix one for full toolkit)</b>	
<b>1)</b> Regular use of greater than 10 medications (excluding PRN medications)	<input type="checkbox"/>
<b>2)</b> High risk medications (see list)	<input type="checkbox"/>
<b>3)</b> Anti-Cholinergic Drugs (see list)	<input type="checkbox"/>
<b>4)</b> Specific Pharmaceutical concerns (e.g. Crushing meds, patients desire to reduce medication burden)	<input type="checkbox"/>
<b>5)</b> Renal Impairment	<input type="checkbox"/>
<b>6)</b> Falls review of medication	<input type="checkbox"/>

First steps towards tailoring frailty specific clinical pharmacy referrals. A O'Reilly et al. Irish Gerontological Society Scientific meeting 2019

## Analgesia/Strong Opioids

- NSAIDs (Diclofenac, Ibuprofen, Naproxen, Celecoxib, Meloxicam)
- IV Paracetamol
- Fentanyl (Durogesic)
- Oxycodone (Oxynorm/Oxycontin)
- Morphine (Oramorph)
- Tapentadol (Palexia)
- Buprenorphine (Butrans)

## Parkinsons Meds

- Apomorphine
- Madopar (L/Benserazide)
- Pramipexole (Miapexin)
- Ropinirole (Requip)
- Rotigotine (Neupro)
- Sinemet (Levodopa/Carbidopa)
- Stalevo (Levodopa/Carbidopa/Entacapone)

## Insulin and Sulphonureas

- Novorapid
- Novomix
- Humilin
- Humalog
- Degludec (Tresiba)
- Glargine (Lantus/Toujeo)
- Detemir (Levemir)
  
- Gliclazide
- Glimepiride

## Anticoagulants

- Apixaban (Apixaban)
- Dabigatran (Pradaxa)
- Edoxaban (Lixiana)
- Rivaroxaban (Xarelto)
- Warfarin

## Narrow Therapeutic Index Medications

- Digoxin (Lanoxin)
- Lithium (Priadel)
- Theophylline (Uniphyllin)

## Immunosuppressants

- Adalimumab (Humira)
- Azathioprine (Imuran)
- Etanercept (Embrel)
- Infliximab (Remicade/Remsima)
- Methotrexate
  
- Prednisolone (regular, not acute)

## Benzodiazepines

- Alprazolam (Xanax)
- Diazepam (Valium)
- Flurazepam (Dalmane)
- Lorazepam (Ativan)
- Nitrazepam (Mogadon)
- Temazepam (Normison)
- Triazolam (Halcion)
- Bromazepam (Lexotan)

## Anti-epileptics

- Carbamazepine (Tegretol)
- Lamotrigine (Lamictal)
- Levetiracetam (Keppra)
- Phenytoin (Epanutin)
- Sodium Valproate (Epilim)

## Antipsychotics

- Clozapine (Clozaril/Denzapine)
- Lithium (Priadel)
- Olanzapine (Zyprexa)

## Long Term Antimicrobials

## Falls Risk Increasing Drugs not included in any lists above

- Doxazosin
- Tamsulosin

## Medication with Anticholinergic Burden

- Amitriptyline
- Baclofen (Lioresal)
- Carbamazepine (Tegretol)
- Cetirizine (Zirtec)
- Chlorphenamine (Piriton)
- Clozapine (Clazaryl/ Denzapine)
- Cyclizine (Valoid)
- Desloratadine (Neoclarityn)
- Fesoterodine (Tovias)
- Fexofenadine (Telfast)
- Hyoscine (Buscopan)
- Levomepromazine (Nozinan)
- Loperamide (Immodium)
- Loratadine (Clarityn)
- Olanzapine (Zyprexa)
- Oxybutynin (Ditropan, Lyrinel)
- Prochlorperazine (Stemetil)
- Solifenacin (Vesicare)
- Tizanidine (Zanaflex)
- Tolterodine (Detrusitol)

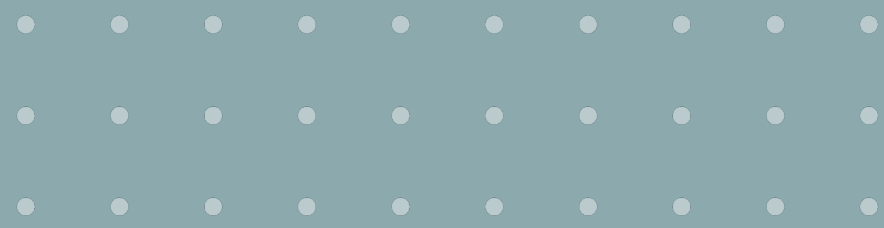


<b>Reason for assessment:</b>	<b>Community Pharmacy:</b>  Blister Pack:    Yes    No
<b>Past Medical History:</b>	
<b>Medications:</b> <b>Allergies/Intolerances:</b>	
<b>Anticholinergic Burden from medication</b>  Medicines with anticholinergic effects are associated with an increased risk of adverse reactions in older people. Effects include cognitive impairment, dizziness and blurred vision, increased risk of falls in older patients.	
<b>Falls review of medication &amp; Bone Health</b> Medications listed above with an anticholinergic burden all increase the risk of falls. In addition to these the following medication increase the risk of falls:  <b>FRAX</b>	
<b><u>QTc</u> <u>xxxx</u> on ECG on <u>date</u><u>xxxx</u></b> Medications that can prolong the QT interval include:	
<b>Bloods</b>	
<b>Interactions</b>	

# De-prescribing clinic

- Follow up patients post recommendation to reduce/wean a medication
- Monitor for withdrawal symptoms
- Virtual or in person if required
- Family members
- Liaise with GP if dose change not tolerated





# INTERDISCIPLINARY WORKING FROM A PHARMACIST PERSPECTIVE



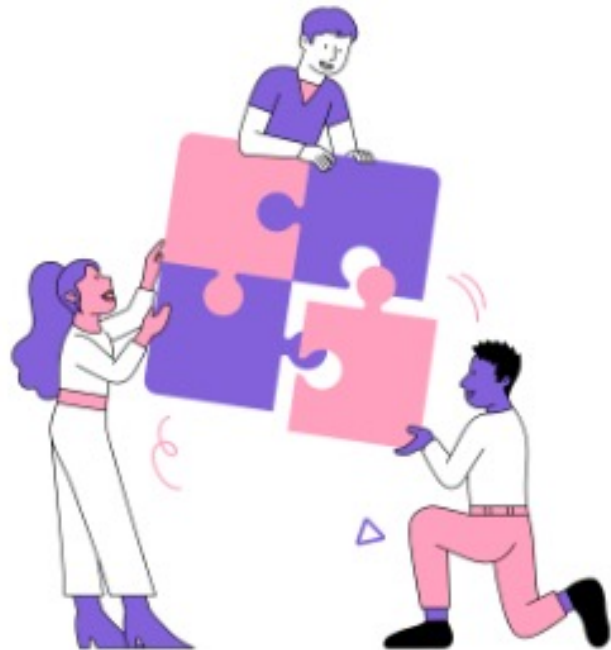


“Contributes their skill set in order to augment and support others”

“Retain specialised roles and functions whilst communicating actively with one another”

## Interdisciplinary Working from a Pharmacist Perspective

- Comprehensive Medication Review
- Picking up on deficits that may not have been evident at the time of CGA
  - Contributing to MDT
- Awareness of pitfalls and common errors
  - Medication safety incidents
- Valued member of the team, contributing to positive health outcomes for patients
  - Service Development

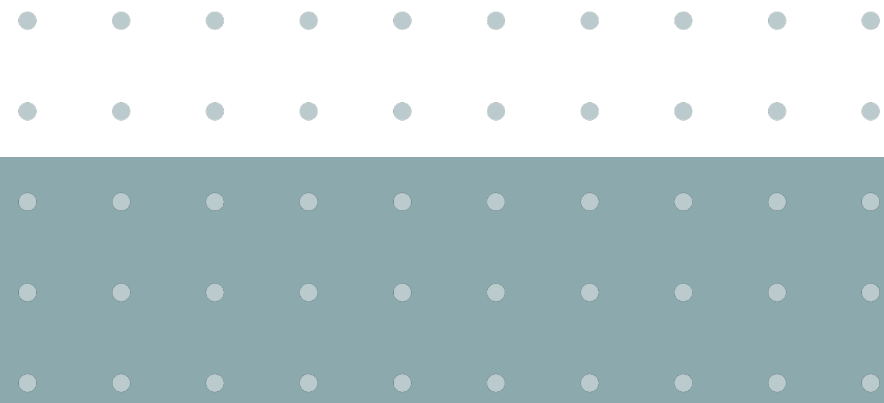


## Value of the MDT for Medication Review

- Contribution from other members of the team
  - Geriatrician support clinically
    - Empower patients
- Provide information leaflets, advice and signposting



- Niamh McMahon Chief II Pharmacist St James and Trinity College Dublin
  - Pharmacist representative on the National Integrated Care Programme for Older Persons (NICPOP)
  - Pharmacist representative on HSCP group within NICPOP
  - Advocating for Pharmacist inclusion on integrated care teams nationally
- National Frailty Education Programme delivered nationally
  - Polypharmacy module
  - Facilitator or guest speaker for Polypharmacy module



# THANK YOU

Any questions?



# REFERENCES

1. Masnoon N, Shakib S, Kalisch-Ellett L, Caughey GE. (2017) What is polypharmacy? A systematic review of definitions. *BMC Geriatrics*; 17(1): 230
2. Scottish Government Polypharmacy Model of Care Group. (2018a) *Polypharmacy Guidance, Realistic Prescribing*. 3rd edn. Edinburgh: Scottish Government
3. Cullinan S, O'Mahony D, O'Sullivan D, Byrne S. (2016) Use of a frailty index to identify potentially inappropriate prescribing and adverse drug reaction risks in older patients. *Age and Ageing*, 45(1): 115–120
4. Saum KU, Dieffenbach AK, Müller H, Holleczeck B, Hauer K, & Brenner H. (2014) Frailty prevalence and 10-year survival in community-dwelling older adults: results from the ESTHER cohort study. *European Journal of Epidemiology*; 29(3): 171–179
5. Cahir C, Curran C, Walsh C. (2023) Adverse drug reactions in an ageing Population (ADAPT) study: Prevalence and risk factors associated with adverse drug reaction-related hospital admissions in older patients. *Frontiers in Pharmacology*, 13:1029067.
6. O'Halloran AM, Hartley P, Moloney D, McGarrigle C, Kenny RA, Romero-Ortuno R. (2021) Informing patterns of health and social care utilisation in Irish older people according to the Clinical Frailty Scale.