FACULDADE DE MEDICINA
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Diana Tomás Fonseca da Silva

ESTÁGIO DE GERIATRIA NO *NHS LOTHIAN*

VOLUME 1

Relatório de Estágio no âmbito do Mestrado em Geriatria orientado pelo Professor Doutor Manuel Teixeira Veríssimo e apresentada à Faculdade de Medicina da Universidade de Coimbra

Orientador de Estágio: Dr. Scott Ramsey

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Aprender é a única coisa de que a mente nunca se cansa, nunca tem medo e nunca se arrepende.

Leonardo da Vinci

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LISTA DE ABREVIATURAS E SIGLAS

ACE III – *Addenbrooke's Cognitive Examination* - III

ACR – *Assessment and Rehabilitation Centre*

AIT – Acidente Isquémico Transitório

AMU – *Acute Medical Unit*

4AT – *4 A's Test*

AVC – Acidente Vascular Cerebral

CPNE – *Community Psychiatric Nursing Team for the Elderly*

DNACPR – *Do Not Attempt Cardio-Pulmonary Resuscitation*

DPOC – Doença Pulmonar Obstrutiva Crónica

ECD – Exames Complementares de Diagnóstico

EAM – Enfarte Agudo de Miocárdio

ECAT – *Elderly Care Assessment Team*

ELSIE – *East Lothian Hospital at Home Service*

FA – Fibrilhação Auricular

FR – Frequência Relativa

ECG – Electrocardiograma

GDS – *Geriatric Depression Scale*

GP – *general practitioner*

HADS - *Hospital Anxiety and Depression Scale*

HBCCC – *Hospital Based Complex Clinical Care*

IADL – *Instrumental Activities of Daily Living*

IC – Insuficiência Cardíaca

IMC – Índice de Massa Corporal

INE – Instituto Nacional de Estatística

IOPS – *Integrated Older People's Service*

IRA – Insuficiência Renal Aguda

ITU – Infecção do Trato Urinário

LUCS – *Lothian Unscheduled Care Service*

MAPA – Medição Ambulatória da Pressão Arterial

MERRIT – *Midlothian Enhanced Rapid response and Intervention Team*

MoCA – *Montreal Cognitive Assessment*

MoE – *Medicine of the Elderly*

MUST – *Malnutrition Universal Screening Tool*

6MWT – *Six Minute Walk Test*

NEWS – *National Early Warning Score*

NHS – *National Health Service*

PAC – Pneumonia Adquirida na Comunidade

PC – *Primary Care*

POPS – *Proactive care of Older People undergoing Surgery*

5Q's – *5 Question's*

RAC – *Rapid Access Clinic*

REACH – *Rapid Elderly Assessment and Care in Hospital*

REACT – *Rapid Elderly Assessment and Care Team*

RIE – *Royal Infirmary of Edinburgh*

SJH – *Saint John's Hospital*

SMH – *Saint Michael's Hospital*

SNS – Serviço Nacional de Saúde

TC – Tomografia Computorizada

TEAM 65 – *Targeted Early Assessment and Management of the over 65's*

TUG – *Timed Up and Go Test*

TUSS – *Timed Unsupported Steady Standing*

TVP – Trombose Venosa Profunda

VAS – *Visual Analogue Scale*

WGH – *Western General Hospital*

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I. RESUMO

O envelhecimento populacional é um problema da actualidade com uma importância crescente. Esta evolução terá implicações cada vez mais importantes e para as quais todos os profissionais de saúde devem estar despertos e aptos a lidar à luz das boas práticas. Esta situação apresenta uma relevância particular para os médicos de família, que são a porta de entrada do doente no Serviço Nacional de Saúde (SNS).

A paixão pessoal pelo doente idoso e a necessidade de aplicação prática do conhecimento adquirido no Mestrado em Geriatria da Universidade de Coimbra motivaram a realização dum estágio de Geriatria. O Serviço *Medicine of the Elderly* (MoE) do *National Health Service* (NHS) *Lothian* no Reino Unido foi o escolhido pela sua vasta experiência neste campo.

O presente relatório pretende descrever o estágio de 400h realizado nos diversos serviços do NHS Lothian com actuação na área da Geriatria.

O principal objectivo do estágio foi aprofundar as capacidades pessoais de abordagem do doente idoso em todas as suas vertentes em situações agudas, crónicas e paliativas.

A oportunidade de trabalhar em serviços geriátricos experientes, com profissionais especializados em diversas áreas dentro da Geriatria e condições de excelência proporcionou um processo de crescimento e desenvolvimento pessoal aos mais variados níveis. Considero ter amadurecido e alargado horizontes, tendo hoje uma visão mais abrangente, multifacetada e holística do doente idoso. Apesar dos objectivos definidos terem sido globalmente atingidos, o espírito de humildade e de aprendizagem continuarão a ser as linhas orientadoras num caminho de superação pessoal constante.

Palavras-chave: Estágio prático; Geriatria; *Medicine of the Elderly*; Doente idoso; NHS *Lothian*.

II. ABSTRACT

Population aging is a growing problem nowadays. All health professionals ought to be preppared and able to deal with the major consequences of this demographic change.

Therefore, family doctors, the patient's gateway to the SNS, should be particularly aware of this situation.

My passion for the elderly patient and the need to apply the acquired knowledge in the Geriatrics Masters at Universidade de Coimbra led me to a Geriatrics internship. NHS Lothian MoE in the United Kingdom was chosen due to its extensive experience in this field.

This report aims to describe the activities developed during the 400h internship at the various departments carrying for the elderly patient in NHS Lothian.

The main purpose of the internship was to improve the elderly patient approach in acute, chronic and palliative situations in all its aspects.

Working in experienced geriatric departments, with specialized professionals in different fields and excellence services enabled significant personal growth and development. I believe I have broadened my horizons, having today a more comprehensive, multifaceted and holistic view of the elderly patient. All in all, the established goals have globally been achieved and I wish that humility and the willingness to learn will continue to be my guiding lines in a path of constant personal excelling.

Keywords: Practical internship; Geriatrics; Medicine of the Elderly; Elderly patient; NHS Lothian;

III. INTRODUÇÃO

O envelhecimento populacional é um problema da actualidade com uma importância crescente. De acordo com o Instituto Nacional de Estatística, estima-se que em 2080 o número de idosos atingirá os 2,8 milhões e o índice de envelhecimento mais do que duplicará, passando de 147 para 317 idosos por cada 100 jovens.[1] Esta evolução terá implicações cada vez mais importantes e para as quais todos os profissionais de saúde devem estar despertos e aptos a lidar à luz das boas práticas. Esta situação torna-se particularmente importante para os médicos de família que são a porta de entrada do doente no SNS. No desempenho do meu papel de Médica de Família, tenho-me deparado com várias questões científicas e éticas que, a par da minha paixão pessoal pelo doente idoso, motivaram a minha candidatura ao Mestrado em Geriatria da Universidade de Coimbra. A frequência do ano curricular do Mestrado permitiu colmatar várias destas questões, mas também adquirir novas ferramentas às quais se impunha a sua aplicação prática. Assim, com o desejo de aperfeiçoar a prestação de cuidados ao idoso, decidi realizar um estágio de Geriatria num local onde existisse uma vasta experiência clínica nesta área.

Tendo em conta que em Portugal os Serviços de Geriatria são recentes e ainda escassos, escolhi realizar o meu estágio no NHS no Reino Unido, um país com mais experiência, em que a origem da primeira unidade geriátrica hospitalar remonta a 1935,[2] e onde a língua não constituía um obstáculo. Por sua vez, optei por estagiar no Serviço de MoE do NHS *Lothian*, na Escócia, que abrange Edimburgo e toda a área circundante, por se tratar de um serviço de referência no Reino Unido, por abranger distintas áreas de intervenção, por ser muito activo cientificamente e reconhecido no ensino pré e pós-graduado.

O presente relatório foi elaborado no âmbito da conclusão do Mestrado em Geriatria da Universidade de Coimbra e pretende descrever o estágio de Geriatria realizado nos diversos serviços do NHS *Lothian* com actuação na área da Geriatria. Foi efectuado entre os dias 26 de Maio e 30 de Agosto e perfez um total de 400h.

IV. OBJECTIVOS

Os objectivos definidos para o estágio realizado foram os seguintes:

- praticar a abordagem do doente idoso em situações agudas, pós-agudas e crónicas;
- desenvolver maior sensibilidade para as especificidades diagnósticas e terapêuticas do idoso;
- treinar a abordagem global e multidimensional do doente idoso;
- praticar a avaliação global do doente idoso e treinar a aplicação de diferentes escalas geriátricas;
- alargar capacidades no âmbito da Psicogeriatria;
- aprofundar a abordagem de doentes com demência;
- treinar a abordagem de idosos com transtornos de equilíbrio e da marcha;
- praticar a avaliação e a intervenção terapêutica em idosos com sarcopenia e desnutrição;
- alargar a experiência em Ortogeriatria, em Cuidados Paliativos geriátricos e em problemas típicos do idoso, em especial das síndromes geriátricas;
- efectuar visitas domiciliárias a doentes geriátricos;
- ganhar contacto com variados planos de reabilitação funcional individualizados a diferentes idosos;
- conhecer o funcionamento do Serviço Social na Escócia, aprendendo nomeadamente como é feita a gestão dos recursos da comunidade existentes;
- alargar a experiência no manuseamento de situações que levantam questões éticas e de prevenção quaternária;
- adquirir conhecimento e ferramentas que auxiliem na tomada de decisões em situações difíceis.

De forma a atingir os objectivos, pretendia-se não só participar na observação de doentes internados e nos diferentes tipos de consulta, mas também de integrar outras actividades desenvolvidas relevantes na área da Geriatria.

V. CONTEXTUALIZAÇÃO

EDIMBURGO E OS *LOTHIANS*

A região do *Lothian* encontra-se localizada na zona este do cinturão central da Escócia, no coração do país, entre os rios *Tweed* e *Forth*. No decorrer da história foi dividida nas zonas Este, Média e Oeste, respectivamente *East Lothian*, *Midlothian* e *West Lothian*, o que deu origem ao termo *Lothians*. Alberga a capital do país, Edimburgo, que é parte integrante da região *City of* Edinburgh e que, actualmente, forma com as zonas anteriores as principais áreas do Lothian.

O NHS *Lothian* serve uma população de 907.580 pessoas, 16,4% das quais são idosas, e emprega cerca de 26.000 profissionais de saúde. As regiões mais populosas são *City of Edinburgh* e *West Lothian*, com uma população total de 524.930 e 183.100, respectivamente.[3] O NHS *Lothian* apresenta um serviço dedicado a idosos, o Serviço de MoE, que oferece cuidados de qualidade centrados na pessoa e avaliação geriátrica global a indivíduos idosos. Por sua vez, a Psicogeriatria pertence ao Departamento de *Old Age Psychiatry* e os Cuidados Paliativos integram-se nos *Specialist Palliative Care Services*.

MEDICINE OF THE ELDERLY NO NHS *LOTHIAN*

O Serviço de MoE pretende, através do trabalho em equipa multidisciplinar, dar apoio a idosos frágeis com o objectivo de os recuperar para um nível óptimo de saúde ou de maximizar o seu potencial de forma a que estes possam manter uma vida independente no domicílio. Esta equipa, é constituída, habitualmente, por geriatras, enfermeiros, fisioterapeutas, terapeutas ocupacionais, terapeutas da fala e assistente social.

A formação de um geriatra no Reino Unido, conhecido como *MoE consultant*, requer vários passos após a conclusão dos estudos universitários. Inclui dois anos de *Foundation Training*, três anos de *Internal Medicine Stage 1 training* e entre dois a quatro anos de *Geriatric Medicine Speciality and Internal Medicine Stage 2 training*. Concluída a especialidade, estes profissionais podem ainda subespecializar-se numa determinada área de interesse, sendo um processo que, normalmente, tem um ano de duração.

Na região do *Lothian*, o Serviço de MoE encontra-se distribuído por quatro hospitais principais: *Royal Infirmary of Edinburgh* (RIE), *Western General Hospital* (WGH), *Saint John's Hospital* (SJH) e *Liberton Hospital*. Todos estes apresentam não só serviços internos para avaliação de doentes agudos e para reabilitação geral, ortopédica e após Acidente Vascular Cerebral (AVC); mas também uma variedade de serviços externos incluindo hospital dia, hospitalização domiciliária e consulta externa de geriatria geral e de diferentes subespecialidades.

O WGH é responsável pelos cuidados à população idosa do lado norte de Edimburgo, sendo o lado sul assegurado pela RIE e pelo *Liberton Hospital*. Por sua vez, a zona Oeste, é servida pelo SJH e a região Este pelo *Roodlands Hospital*, um hospital mais pequeno, com apenas uma enfermaria geriátrica.

O Serviço de MoE proporciona ainda um serviço de cuidados complexos designado por *Hospital Based Complex Clinical Care* (HBCCC). Este destina-se à prestação de cuidados de saúde a indivíduos cujas necessidades de cuidados, pela sua complexidade, imprevisibilidade, intensidade e necessidade de especialização, não podem ser preenchidas por nenhum outro estabelecimento que não um hospital ou uma unidade especializada. Os HBCCC apresentam várias unidades que se distribuem pelas diferentes zonas do Lothian: *Ellens Glen House* e *Ferryfield House* na cidade de Edimburgo, *East Fortune House* em East Lothian, *Tippethill Hospital* e *Saint Michael's Hospital* (SMH) em West Lothian e *Midlothian Community Hospital* em Midlothian. Estas unidades são apoiadas, de acordo com a sua localização, por um dos hospitais acima referidos.

Segue-se uma breve descrição dos principais locais onde estagiei.

SAINT JOHN'S HOSPITAL

A MoE no SHJ de cerca de 630 doentes anualmente e está integrada na *General Medicine*, que possui 3 enfermarias com um total de 70 camas, cada uma com apoio de um geriatra dedicado. Proporciona ainda cuidados em três internamentos dedicados à reabilitação, nomeadamente geral, com 29 camas, ortopédica, com 22 camas e pós-AVC, com 22 camas. Apesar destes últimos apresentarem sobretudo doentes idosos, a admissão nestes serviços é feita com base nas necessidades, mais do que na idade, sendo que cada um destes internamentos apresenta igualmente pelo menos um geriatra dedicado.

O Serviço de *General Medicine* é apoiado por cerca de 47 internos em diferentes níveis de formação e 20 *consultants*, seis dos quais especialistas em Geriatria e que são responsáveis pelo acompanhamento dos doentes idosos. Além destes elementos apresenta uma equipa multidisciplinar constituída por enfermeiros, fisioterapeutas, terapeutas ocupacionais, terapeutas da fala, farmacêuticos, nutricionistas, assistentes sociais, auxiliares e administrativos.

Cerca de 70% das admissões no serviço de urgência, habitualmente conhecido como *Acute Medical Unit* (AMU), são de doentes com idade ≥65 anos. Todos estes são triados pela equipa *Rapid Elderly Assessment and Care in Hospital* (REACH) de forma a identificar a necessidade de avaliação geriátrica global e o melhor caminho para o doente através da referenciação atempada para os serviços necessários e da transferência para o local de cuidados mais apropriado.

Existem também consultas externas de Geriatria que oferecem avaliações globais, assim como de áreas de subespecialidade como Doença Cerebrovascular, Doenças do Movimento e

Osteoporose, conhecidas respectivamente como *Stroke Clinic*, *Movement Disorders Clinic* e *Osteoporosis Clinic*.

Por sua vez, alberga a *Rapid Elderly Assessment and Care Team* (REACT), uma equipa criada com o objectivo principal de prestar melhores cuidados aos doentes perto de casa e que possibilita a realização de uma avaliação geriátrica global e de intervenções atempadas, quer através da *Rapid Access Clinic* (RAC) no SJH, quer do Serviço *Hospital at Home* para hospitalização e reabilitação domicílio.

Western General Hospital

O Serviço de MoE deste hospital apresenta 194 camas que se distribuem pelos edifícios *Royal Victoria* (130 camas) e *Anne Ferguson* (64 camas) que se encontram unidos por um corredor, sendo que este último inclui uma unidade de AVC. O *Royal Victoria Building* foi construído propositadamente para a Geriatria com 100% de quartos individuais distribuídos por cinco internamentos com 26 camas, três de medicina do idoso, um de reabilitação ortopédica geriátrica e outro de medicina do idoso aguda.

Serviço de MoE no WGH, à semelhança do SJH, é constituído por uma equipa multidisciplinar, apresentando cerca de 16 médicos especialistas, oito dos quais *MoE consultants*, e cerca de 20 internos de todos os níveis de formação.

A equipa de MoE no WGH faz consultoria relativa a doentes geriátricos noutros serviços do hospital e apresenta uma equipa de enfermeiras especializadas que avaliam os idosos admitidos na AMU, a *Targeted Early Assessment and Management of the over 65's* (TEAM 65). Esta articula-se com um consultor de geriatria que gere os doentes identificados como frágeis na AMU. Oferece ainda um serviço de apoio aos serviços cirúrgicos na avaliação de doentes geriátricos, designado de *Proactive care of Older People undergoing Surgery* (POPS).

Além da consulta externa com diversas subespecialidades, possui dois hospitais dia, um localizado no WGH, o *Assessment and Rehabilitation Centre* (ACR), e outro na comunidade, conhecido como *Older People's Rehabilitation & Assessment Unit.*

Royal Infirmary of Edinburgh

A MoE na RIE apresenta 98 camas que se repartem por três enfermarias, apoiadas por uma equipa multiprofissional de médicos, enfermeiros, fisioterapeutas, terapeutas ocupacionais, terapeutas da fala, farmacêuticos, nutricionistas, assistentes sociais, auxiliares e administrativos. No que diz respeito aos médicos, apresenta um total de 17 *MoE consultants*, cada um com a sua área de interesse ou subespecialização, e cerca de 40 internos. Da mesma forma que os hospitais já descritos, a RIE também providencia uma avaliação dos idosos admitidos na AMU por uma equipa de enfermeiros, a *Elderly Care Assessment Team* (ECAT), que sinaliza os idosos frágeis para avaliação pela equipa médica de fragilidade (*Frailty Team*). Deste modo, assegura

que os indivíduos idosos admitidos na urgência recebem cuidados multidisciplinares atempados. Estende também os seus serviços à hospitalização domiciliária e à consulta externa de diversas subespecialidades.

A RIE dá apoio à reabilitação do *Midlothain Community Hospital* e aos cuidados complexos (HBCCC) no *Ellens Glen Hospital*.

Saint Michael's Hospital

O SMH encontra-se integrado na rede HBCCC, sendo uma das unidades responsáveis pela prestação de cuidados. É uma unidade com 22 camas que se encontra situada em *Linlithgow* e é apoiada por dois geriatras do SJH, nomeadamente a Dra. Maria Corretge e o Dr. Scott Ramsay, em articulação próxima com a equipa de Cuidados Paliativos. A restante equipa deste hospital é formada por enfermeiros, auxiliares e administrativos, sendo a prestação de outros cuidados necessários assegurada pela REACT.

Hospital At Home

A hospitalização domiciliária tem sido uma abordagem desenvolvida para realizar intervenções, tradicionalmente realizadas em ambiente hospitalar, no domicílio de forma a reduzir admissões hospitalares desnecessárias e cuidados não programados.

Na região do *Lothian* existem quatro equipas com este fim, de acordo com a zona: a *Integrated Older People's Service* (IOPS) para a cidade de Edimburgo, a *East Lothian Hospital at Home Service* (ELSIE) para *East Lothian*, a REACT para *West Lothian* e a *Midlothian Enhanced Rapid response and Intervention Team* (MERRIT) para *Midlothian*. O seu objectivo principal é prestar melhores cuidados aos doentes perto de casa, estabelecendo um ponto de contacto para os idosos frágeis durante um episódio de deterioração aguda.

Tratam-se de serviços constituídos por equipas de médicos especialistas em geriatria, internos da especialidade e dos anos gerais, enfermeiros, fisioterapeutas, terapeutas ocupacionais e administrativos que trabalham em parceria com farmacêuticos comunitários e assistentes sociais. Aceitam referenciações urgentes de idosos, quer dos *Primary Care* (PC), quer dos serviços hospitalares, incluindo a AMU, dando apoio em situações de alta de internamento e, quando há necessidade de intervenções no domicílio, terapêutica endovenosa ou fisioterapia.

Tive o privilégio de ter parte activa nas actividades da REACT, que tem lugar no SJH nos dias úteis das 8h00 às 18h00, e da MERRIT, que funciona no *Bonnyrigg Health Centre* todos os dias da semana das 8h00 às 20h00. A cobertura fora dos horários de funcionamento é efectuada pelo *Lothian Unscheduled Care Service* (LUCS) e pelo serviço de enfermagem dos PC, conhecido como *District Nursing*. A REACT disponibiliza ainda a possibilidade de avaliar os doentes de forma rápida em consulta na RAC no próprio hospital.

O *Hospital at Home* da REACT apresenta 12 camas virtuais e o da MERRIT 10 camas. Ambas as equipas são constituídas por enfermeiros, fisioterapeutas, terapeutas ocupacionais e administrativos, farmacêuticos comunitários e assistente social. A REACT é apoiada por dois *MoE consultants* e cerca de três internos do SJH e a MERRIT por uma *MoE consultant* e um a dois internos da RIE.

As intervenções destas equipas são realizadas em articulação com os serviços nucleares existentes como o *District Nursing* e as equipas de PC, sendo o seguimento feito de acordo com as necessidades até que o doente esteja preparado para ter alta para o seu *general practitioner* (GP).

Specialist Palliative Care Services

Na região do *Lothian* são disponibilizados cuidados paliativos especializados nos diferentes contextos do doente: domicílio, hospital e lar. A referenciação por ser feita para qualquer doente com doença avançada, progressiva ou incurável que precise de cuidados de fim de vida complexos ou que apresente dor não controlada ou outros sintomas físicos, psicológicos, espirituais ou familiares complexos cujas necessidades não possam ser preenchidas pela equipa de cuidados.

Os *Specialist Palliative Care Services* na região do *Lothian* oferecem conselhos por telefone, uma visita de avaliação inicial e/ou um período de cuidados especializados de acordo com as necessidades do doente. Os serviços de aconselhamento estão disponíveis para todos os hospitais da região e para a comunidade.

Existem três equipas hospitalares, cada uma sediada num dos hospitais principais – RIE e WGH em Edimburgo e SJH em *Livingston* – que fazem consultoria aos doentes internados em qualquer serviço do hospital respectivo.

Além disso, estão disponíveis duas unidades de internamento especializadas em Cuidados Paliativos: *Marie Curie Hospice*, com 20 camas, e *St Columba's Hospice*, com 30 camas, ambas em Edimburgo.

No que diz respeito à comunidade, existem quatro equipas de apoio: duas em Edimburgo, a do *Marie Curie Hospice* e a do *St Columba's Hospice*, uma em *East Lothian* e outra em *West Lothian*, que pertence ao SJH. Tanto as duas primeiras unidades como o SJH em *West Lothian*, através do *Macmillan Centre*, proporcionam unidades de dia paliativas.

A equipa hospitalar do SJH – *Saint John's Palliative Care Team* – é constituída por uma médica e duas enfermeiras especializadas em Cuidados Paliativos, um farmacêutico, uma terapeuta complementar, uma assistente social e uma secretária clínica. Por sua vez, a equipa comunitária da região correspondente a este hospital, a *West Lothian Palliative Care Team* é formada por uma *Palliative Care consultant*, cinco enfermeiras, quatro delas especialistas em Cuidados

Paliativos, uma assistente social e um gestor de equipa e outro de recursos na comunidade. Estas equipas articulam-se entre si e, quando necessário, com outros profissionais, nomeadamente, fisioterapeutas, terapeutas ocupacionais, padres/pastores e voluntários da comunidade.

Old Age Psychiatry

Existem diversos serviços de Psiquiatria distribuídos por diferentes hospitais da região do *Lothian*, alguns dos quais dedicados apenas ao idoso, sendo que eu apenas acompanhei o Serviço *Old Age Psychiatry* do SJH.

O Serviço *Old Age Psychiatry* do SJH é constituído por uma enfermaria com 12 camas no hospital, para avaliação de situações mistas orgânicas/funcionais, e outras duas sediadas na comunidade, cada uma com 25 camas de longa duração, para idosos com demência ou alterações do comportamento. Apresenta uma equipa de atendimento e suporte a doentes agudos composta por três enfermeiras que assegura até 12 visitas a um máximo de 12 doentes que estejam descompensados. O objectivo desta equipa é prevenir a admissão e facilitar as altas da enfermaria de avaliação atempadamente. Todos estes serviços são da responsabilidade de quatro *Old Age Psychiatry consultants*.

Existe uma equipa de sete enfermeiras que dá apoio aos idosos na comunidade designada por *Community Psychiatric Nursing Team for the Elderly* (CPNE). Neste grupo de enfermeiras existem duas que prestam suporte e avaliam utentes residentes em lares e outra que está especificamente dedicada a referenciações de doentes com o diagnóstico de Demência que foram novamente referenciados por alterações do comportamento.

O Serviço *Old Age Psychiatry* do SJH assegura um *Memory Treatment Service* através do qual é feita uma avaliação inicial dos doentes no domicílio por uma enfermeira, sendo estes posteriormente revistos em consulta médica. Depois da equipa médica ter feito o diagnóstico de Demência, a equipa do *Memory Treatment Service*, constituída por 2 enfermeiras, providencia suporte pós-diagnóstico, as continuações de prescrição e a monitorização do tratamento com inibidores da colinesterase nos primeiros 6 meses de tratamento.

O Serviço *Old Age Psychiatry* do SJH articula-se com outros recursos existentes, nomeadamente os *Clinical Psychology Services for Older People* e o Serviço MoE. Além destes, apresenta uma relação de proximidade com outros serviços sociais na comunidade, como grupos educacionais e de apoio aos cuidadores de doentes com demência através das terapeutas ocupacionais do SJH.

VI. ACTIVIDADES DESENVOLVIDAS

ORGANIZAÇÃO DO ESTÁGIO

As 400 horas de estágio foram distribuídas pelas mais variadas actividades em diferentes locais do NHS *Lothian* de acordo com as necessidades de aprendizagem e a disponibilidade dos serviços. Esta distribuição foi elaborada com a ajuda do meu orientador, o Dr. Scott Ramsey, e nunca foi estanque, mas constantemente adaptada ao longo do tempo de forma a ir de encontro aos objectivos estabelecidos.

Tabela 1 – Organização do Estágio.

Local	Principais responsáveis	Principais actividades	Duração (horas)
Hospital Western General	Dr. Conon McGuire	Internamento: *MoE* (*Ward 70*) Consultas: *Movement Disorders Clinic* POPS *Clinic* Serviço de Urgência: AMU Outros: ACR	40
Royal Infirmary of Edinburgh	Dr. Umar Saleem Dr. Wendy Morley	Internamentos: MoE (*Ward 202/Ward 203*) *Stroke* (*Ward 101*) Serviço de Urgência: AMU Consultas: *Stroke Clinic*	80
Saint John's Hospital	Dr. Scott Ramsey Dr. Maria Corretge	Internamentos: MoE (*Ward 8/ Ward 9*) *Stroke Unit* (*Ward 4*) *Orthopeadic Medicine* (*Ward 14*) *Old Age Psychiatry* (*Ward 17*) Serviço de Urgência: AMU – REACH *team* Consultas: MoE *Clinic* *Stroke Clinic* *Movement Disorders Clinic* REACT *Rapid Access Clinic* *Osteoporosis Clinic* *Old Age Psychiatry Clinic* Outros: Cuidados Paliativos (hospital e comunidade)	140
Hospital At Home	Dr. Maria Corretge Dr. Patricia Cantley	Hospitalização domiciliária (REACT e MERRIT)	80
Saint Michael's Hospital	Dr. Maria Corretge Dr. Scott Ramsey	Internamento de doentes complexos e paliativos (HBCCC)	40
Marie Curie Hospice		Internamento de doentes paliativos em fim de vida	10
Bonnyrigg Health Centre		*Dementia Team* *Midlothian District Nursing*	10

A Tabela 1 resume os diferentes serviços frequentados, principais responsáveis a quem estive alocada e as actividades realizadas em cada local.

Como se pode constatar, durante o meu estágio na Escócia, frequentei inúmeros serviços em diferentes hospitais e centros, muitos dentro da mesma área de actuação. Embora isto me tivesse dado a enorme vantagem de ter uma visão mais abrangente da Medicina do Idoso, fez-me reflectir sobre a melhor forma de proceder quanto à apresentação dos dados recolhidos neste relatório. Assim, a fim de sistematizar a informação de forma pragmática e coerente, ao invés de a apresentar dispersa pelos diversos locais onde estagiei, optei por agregar os dados dos doentes observados de acordo com o tipo de serviço ou de consulta.

A descrição das actividades foi organizada em: Registos Clínicos, *Medicine of the Elderly*, *Old Age Psychiatry*, *Specialist Palliative Care Services*, Reuniões Clínicas e Outras Actividades Desenvolvidas. Nas Outras Actividades Desenvolvidas abordo outras actividades em que foi possível participar, mas que não se enquadram em nenhum dos principais serviços frequentados.

REGISTOS CLÍNICOS

De uma forma transversal, os serviços frequentados utilizam a plataforma TrakCare® para registar a informação dos doentes de forma organizada. Esta permite armazenar não só o processo administrativo, a história pessoal e familiar do doente e os seus exames complementares e documentos relevantes, mas também as referenciações internas e externas, quer informáticas, quer em papel, os agendamentos de consultas e as listas de espera.

Além da plataforma informática, existe um processo físico com alguma informação essencial, limitado por questões relacionadas com a protecção de dados e que varia com o tipo de serviço. De um modo geral, nos serviços com internamento, apresenta apenas alguma informação essencial como:

- dados administrativos básicos;
- avaliação da deterioração clínica – *National Early Warning Score* (NEWS) (ANEXO I);
- alergias;
- terapêutica;
- notas de enfermagem relevantes;
- Directiva Antecipada de Vontade;
- Declaração *Do Not Attempt Cardio-Pulmonary Resuscitation* (DNACPR).

Nas consultas, existe uma ficha em papel na qual o médico coloca o resumo dos sintomas, do exame objectivo, das hipóteses de diagnóstico e do plano de cada consulta.

Devido à política de protecção de dados, pelo facto de eu não ser funcionária do NHS, não me foi cedida uma senha de acesso ao TrakCare®, pelo que o acesso a esta ficou limitado à sua

utilização na presença de um colega. Neste sentido, nem sempre me foi possível verificar o historial clínico dos doentes. Apesar de tudo, os períodos na AMU e no SMH permitiram-me aprender a usar esta plataforma, quer para efeitos de registo, quer para efeitos de pesquisa.

Todos os dados apresentados têm como fonte os meus registos pessoais, excepto quando referenciado. Estes abrangeram todos os indivíduos com idade ≥ 60 anos nos serviços em que não existia critério de idade para admissão ou referenciação, nomeadamente os internamentos e a AMU. Esta decisão prendeu-se com o facto de ter verificado que os utilizadores dos serviços frequentados geralmente tratavam-se de pessoas com multimorbilidade nas quais a idade cronológica não correspondia à biológica.

A mudança frequente de hospitais e de serviços ao longo do tempo impossibilitou o cálculo da demora média de internamento, não me tendo sido dado acesso às estatísticas específicas geriátricas.

MEDICINE OF THE ELDERLY

De seguida procedo à análise detalhada do trabalho efectuado nas diferentes vertentes da MoE, começando pelo resumo do processo de avaliação do doente idoso. Posteriormente, descrevo de forma agrupada os doentes observados na AMU; nos internamentos de Geriatria Geral, de Ortogeriatria e de Doenças Cerebrovasculares; no *Hospital at Home*; e nas consultas: MoE *Clinic*, *Stroke Clinic*, Movement *Disorders Clinic*, *Osteoporosis Clinic*, POPS *Clinic* e na REACT *Rapid Access Clinic*. Por último, abordo o ACR e a HBCCC.

AVALIAÇÃO CLÍNICA DO DOENTE IDOSO

Habitualmente todos os doentes com idade ≥65 anos que dão entrada na AMU em qualquer um dos hospitais no NHS *Lothian* são triados por uma das equipas de fragilidade de enfermagem e posteriormente encaminhados de forma direccionada para avaliação por outros profissionais de saúde, construindo um plano de cuidados à medida de cada doente. Deste modo, realiza-se uma avaliação geriátrica global a todos os idosos admitidos, quer para internamento, quer para fins de hospitalização no domicílio. As ferramentas são seleccionadas de acordo com as necessidades individuais, podendo os instrumentos estandardizados variar entre hospitais. Esta avaliação geriátrica global é constituída, de uma forma geral, pelas seguintes componentes e ferramentas:

- história clínica completa;
- exame objectivo;
- revisão da medicação;
- ambiente social e suporte familiar;
- capacidade funcional:

- registo de quaisquer modificações recentes nas actividades de vida diária;
- estado geral/ presença de deterioração clínica –NEWS (ANEXO I);
- triagem de fragilidade com a *Frailty Screening Tool* (ANEXO II) da *Health Improvement Scotland*, ou o *Rockwood Frailty Index* (ANEXO III);
- *Barthel Index* (ANEXO IV) e *Instrumental Activities of Daily Living* (IADL) *Scale* (ANEXO V);
- Marcha e auxiliares da marcha;
- cognitiva – *4 A's Test* (4AT) *Delirium assessment tool* (ANEXO VI);
- nutricional – *Malnutrition Universal Screening Tool* (MUST) (ANEXO VII);
- risco de queda – *5 Question's* (5Q's) (ANEXO VIII);
- continência de esfíncteres;
- integridade cutânea – *Waterlow Score* (Anexo IX).
- Directiva Antecipada de Vontade;
- Declaração DNACPR.

Quando aplicável também se procede ao registo do uso de próteses dentárias, oculares e/ou auditivas. No decorrer desta avaliação, consoante a situação, pode ter lugar a aplicação de outros instrumentos como: *Geriatric Depression Scale* (GDS) (ANEXO X), *Mini cog* (ANEXO XI), *Clock Test* (ANEXO XII), Addenbrooke's Cognitive Examination III (ACE III) (ANEXO XIII), *Montreal Cognitive Assessment* (MoCA) *Test* (ANEXO XIV), *Visual Analogue Scale* (VAS) (ANEXO XV), *Get Up and Go Test* (ANEXO XVI), *Timed Up and Go Test* (TUG) (ANEXO XVII), entre outros.

Sempre que possível procedi a uma revisão terapêutica rigorosa tendo como base os *Beers Criteria* (ANEXO XVIII) e os critérios *STOPP and START* (ANEXO XIX), em conjunto com o consultor de MoE. Reflecti sobre a indicação terapêutica de cada fármaco, a relação risco/benefício e sugeri a suspensão de medicamentos potencialmente inapropriados e a introdução de medicação adequada.

Durante a avaliação dos doentes procurei fazer uma abordagem integrada do idoso, usando como linha condutora os *Geriatric 5M's*: *Mind*, *Mobility*, *Medication*, *Multicomplexity* e *Matters most*.[4]

ACUTE MEDICAL UNIT

Durante o meu estágio no NHS *Lothian*, estive envolvida nas diferentes actividades da AMU nos três hospitais principais da região: SJH, RIE e WGH.

No SJH, acompanhei a equipa de enfermagem REACH na avaliação da fragilidade dos idosos que recorreram à AMU. Ainda neste hospital, observei os idosos que deram entrada na AMU e discuti diversos casos clínicos com a Dra. Maria Corretge. Por sua vez, no WGH e na RIE integrei as equipas TEAM 65 e *Frailty* lideradas, respectivamente, pelo Dr. Conon Maguire e pela Dra. Patricia Cantley, tendo participado na observação dos doentes triados como frágeis.

Avaliação de Fragilidade com a Equipa REACH

No SJH, as enfermeiras especializadas da REACH efectuam uma triagem proactiva de fragilidade a todos os indivíduos com idade ≥65 anos admitidos na AMU num prazo de 24 horas desde a admissão. Utilizam uma ferramenta adaptada de triagem de fragilidade da *Health Improvement Scotland*: a *Frailty Screening Tool* (ANEXO II). Uma pontuação ≥1 determina uma revisão da história clínica completa, a aplicação do 4AT (ANEXO VI) e do TUG (ANEXO XVII), com rápida introdução da Fisioterapia e da Terapia Ocupacional.

Isto permite uma definição de metas centradas no doente, uma avaliação geriátrica global oportuna e um planeamento proactivo da alta.

Procedi, em conjunto com as enfermeiras desta equipa, à avaliação de 12 idosos que recorreram à AMU, 10 dos quais (83,3%) foram identificados como frágeis. A maioria era do sexo feminino (n=8; 66,7%) e a média de idades foi de 80,3 anos (mínimo 70; máximo 92).

Tabela 2 – Motivos mais frequentes de admissão dos doentes triados com equipa REACH.

Motivo	n	FR (%)
Queda	4	22,2
Diminuição da mobilidade	3	16,7
Delirium	3	16,7
Síncope	2	11,1
Subtotal	12	66,.7
Outros	6	33,3
Total	18	100

Legenda: FR - Frequência Relativa.

Foram encontrados 18 motivos de entrada na AMU. Os mais frequentes estão expostos na Tabela 2 espelhando a importância dos gigantes geriátricos.

A Tabela 3 exibe os diagnósticos/hipóteses de diagnóstico efectuados, onde sobressaem os problemas do foro cardiovascular, o que se coaduna com a literatura.[5] É de notar a complexidade dos quadros clínicos, onde a interacção de diferentes e variados factores acaba por se manifestar da forma mais simples e que invariavelmente remete para um gigante geriátrico, como a imobilidade ou a instabilidade. A título de exemplo, destaco o caso de um doente de 71 anos que deu entrada por fraqueza das pernas e queda com neuropatia diabética, provável Doença Arterial Periférica e edema periférico marcado devido a descompensação de Insuficiência Cardíaca (IC); e outro de uma doente com 81 anos diminuição da mobilidade que apresentava aumento da rigidez por Doença de Parkinson e queixas de lombalgia por alterações degenerativas da coluna lombo-sagrada com estenose lombar.

Tabela 3 – Diagnósticos de entrada dos doentes triados com equipa REACH.

Foro	n	FR (%)	Diagnóstico	n	FR(%)
Cardiovascular	7	38,9	Síncope (etiologia a esclarecer e associada ao esforço defecatório)	2	11,1
			Hipotensão postural	2	11,1
			Doença Arterial Periférica	1	5,6
			IC descompensada	1	5,6
			TVP secundária a colangiocarcinoma metastizado	1	5,6
Respiratório	3	16,7	Infecção respiratória em doente com DPOC	2	11,1
			Pneumonia Adquirida na Comunidade	1	5,6
Neurológica	4	22,2	Doença de Parkinson	2	11,1
			Doença de Charcot-Marie-Tooth	1	5,6
			Neuropatia diabética	1	5,6
Outro	4	22,2	Neoplasia do mediastino com metástases cerebrais	1	5,6
			Alterações degenerativas da coluna lombo-sagrada	1	5,6
			Celulite	1	5,6
			Iatrogenia medicamentosa	1	5,6
Total	18	100	-	18	100

Legenda: DPOC - Doença Pulmonar Obstrutiva Crónica; FR - Frequência Relativa; IC - Insuficiência Cardíaca; TVP - Trombose Venosa Profunda.

Foi estabelecido um plano de cuidados para todos os doentes que envolveu a articulação com diferentes profissionais de saúde, nomeadamente geriatras, internistas, fisioterapeutas, terapeutas ocupacionais e médicos e enfermeiros da equipa REACT para reavaliação no domicílio.

Em relação aos antecedentes pessoais encontrou-se um total de 80 comorbilidades, o que perfaz uma média de 6,7 problemas de saúde por doente, o que se coaduna com a elevada frequência fragilidade verificada.

Tabela 4 – Diagnósticos mais frequentes nos doentes triados com equipa REACH.

Diagnóstico	n	FR (%)
Doença coronária	5	6,3
Doença cerebrovascular (AVC/AIT)	3	3,8
Hipertensão Arterial	3	3,8
IC	3	3,8
FA	3	3,8
DPOC	4	5,0
Dor crónica	3	3,8
Subtotal	24	30,0
Outros	56	70,0
Total	80	100

Legenda: AIT - Acidente Isquémico Transitório; DPOC - Doença Pulmonar Obstrutiva Crónica; FA - Fibrilhação Auricular; FR - Frequência Relativa.

A Tabela 4 expõe os diagnósticos mais frequentes na história pessoal dos doentes triados com a equipa REACH onde sobressaem claramente os de origem cardiovascular, que perfizeram um total de 23 (28,8%). Seguiram-se os do foro musculoesquelético (n=13; 16,3%), respiratório (n=7; 8,8%), neurológico (n=6; 7,5%) e endócrino-metabólico (n=5; 6,3%).

Avaliação Médica de Doentes na *Acute Medical Unit*

A triagem de fragilidade efectuada pela equipa responsável de enfermagem em cada hospital determina as avaliações subsequentes. Quando não existem outros problemas de importância major cirúrgica ou outra que requeira a intervenção de outras especialidades segue-se o encaminhamento para a avaliação por um consultor de MoE.

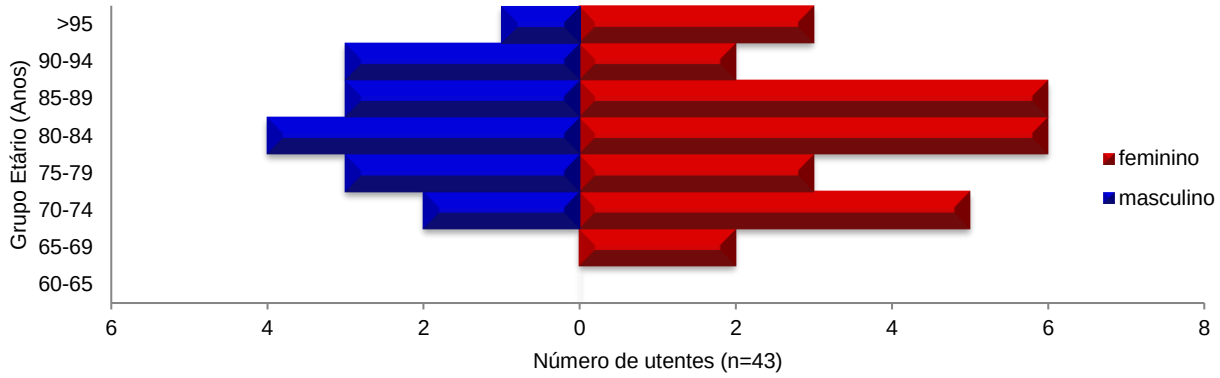

Figura 1 – Distribuição por sexo e por idade dos doentes observados na AMU.

Em conjunto com um dos colegas geriatras séniores observei um total de 43 doentes com idades compreendidas entre os 67 e os 98 anos, o que correspondeu a uma média de 82,4 anos (Figura 1). A maior parte era do género feminino (n=28; 65,1%).

Identificaram-se 79 motivos que levaram os idosos a recorrer à urgência, sendo que a maioria destes (n=26; 60,5%) apresentava mais do que um motivo, o que equivaleu a uma média de 1,8 motivos por doente. A associação mais frequente envolveu delirium e queda (n=8, 18,6%).

Tabela 5 – Motivos encontrados na AMU.

Motivo	n	FR (%)
Queda	17	21,5
Delirium	14	17,7
Dispneia	6	7,6
Tonturas	5	6,3
Diminuição da mobilidade	4	5,1
Subtotal	46	58,2
Outros	33	41,8
Total	79	100,0

Legenda: FR - Frequência Relativa.

A Tabela 5 exibe os motivos encontrados, onde se destacam nitidamente as quedas, que ocorreram em 39,5% dos doentes, e o Delirium, presente em 32,6%, um valor semelhante ao descrito noutros estudos.[6]

Durante o acompanhamento destes doentes foram efetuados 30 diagnósticos, sendo que os 13 restantes ficaram em investigação.

Tabela 6 – Principais diagnósticos encontrados na AMU.

Diagnóstico	n	FR (%)
ITU	10	33,3
Infecção respiratória	3	10,0
AVC	2	6,7
Celulite	2	6,7
Subtotal	17	56,7
Outros	13	43,3
TOTAL	30	100

Legenda: FR - Frequência Relativa; ITU - Infecção do Trato Urinário

A Tabela 6 expõe os diagnósticos principais, sobressaindo a patologia infecciosa, designadamente do trato urinário.

Durante o acompanhamento destes doentes foram efetuados 30 diagnósticos, sendo que os 13 restantes ficaram em investigação.

Verificou-se que a maior parte dos doentes (n=23; 53,5%) apresentava delirium (n=17; 39,5%), demência (n=10; 23,2%) ou depressão (n=5; 11,6%), que se coaduna com elevada prevalência de problemas de saúde mental identificada em idosos admitidos no hospital.[6-9]

Em termos de complicações, seis doentes (14,0%) apresentaram Insuficiência Renal Aguda (IRA) e um Sépsis de origem urinária (2,3%).

A experiência na AMU foi extremamente rica tendo-me possibilitado o aperfeiçoamento na capacidade de detecção de fragilidade, de investigação diagnóstica e de revisão terapêutica. Por outro lado, permitiu-me contactar com diversos profissionais e conhecer melhor os diferentes recursos existentes e a sua organização.

INTERNAMENTO DE GERIATRIA GERAL

A MoE na região do *Lothian* apresenta diferentes internamentos de geriatria geral, como descrito anteriormente, tendo-me sido possível acompanhar o trabalho de reabilitação e de medicina geral geriátrica nas enfermarias 8 e 9 do SJH, 70 do WGH e 202 e 203 da RIE.

Durante o estágio foi-me possível observar e discutir um total de 57 idosos internados nestes serviços, sendo que a maior parte eram mulheres (n=33; 57,9%). A média de idades foi 84,3 anos, tendo a idade mínima e a máxima sido 63 e 99 anos, respectivamente (Figura 2).

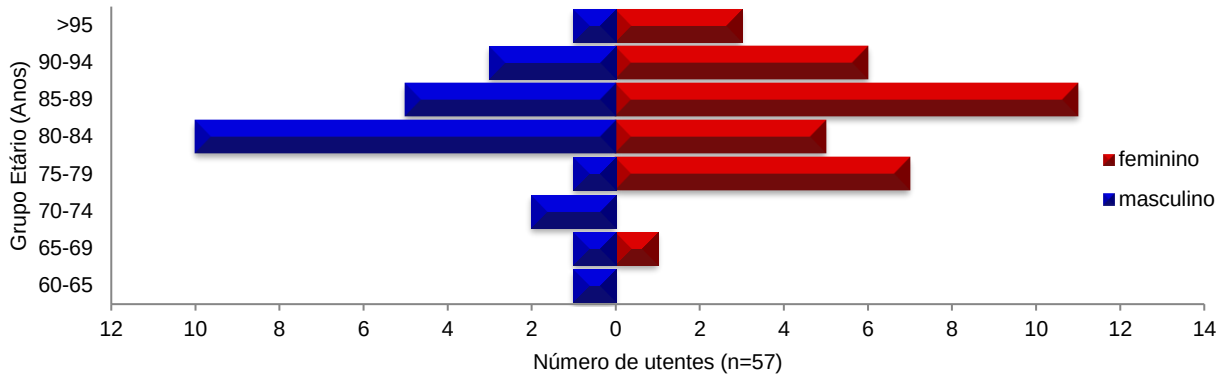

Figura 2 – Distribuição por sexo e por idade dos doentes vigiados no Internamento de Geriatria Geral.

Tabela 7 – Motivos de admissão no Internamento de Geriatria Geral.

Motivo	n	FR (%)
Delirium	29	30,9
Quedas	21	22,3
Redução da mobilidade	10	10,6
Dispneia	5	5,3
Dor osteoarticular	5	5,3
Incontinência Urinária	4	4,3
Síncope	3	3,2
Tonturas	3	3,2
Subtotal	80	85,1
Outros	14	14,9
Total	94	100

Legenda: FR - Frequência Relativa.

Foram identificados 94 motivos de admissão, uma vez que alguns doentes apresentavam dois ou mais motivos. Nos mais frequentes é notória a importância dos gigantes geriátricos (Tabela 7). Analisando a tabela é possível verificar que a maior parte dos internamentos esteve associada a situações de delirium, quedas, alterações da mobilidade, incontinência e dor, o que se coaduna com a literatura.[10]

A necessidade de controlo álgico foi uma situação bastante presente nos internamentos (n=11;19,3%), embora com um valor inferior ao encontrado noutros estudos[11-12]. Esteve relacionada sobretudo com patologia musculoesquelética de base (n=4; 36,4%) ou com a presença de metástases ósseas (n=4; 36,4%), tendo constituído o único motivo de admissão em dois destes doentes.

Na Tabela 8 apresentam-se as principais patologias responsáveis por cada admissão, diferindo dos resultados encontrados nos estudos pesquisados, onde a patologia cardiovascular e a respiratória são as mais frequentes.[5,13] Esta situação deve-se provavelmente ao facto desta

estatística não incluir os doentes internados por Doença Cerebrovascular, Enfarte Agudo de Miocárdio (EAM) ou Fractura, uma vez que são encaminhados para outras enfermarias.

Tabela 8 – Principais patologias responsáveis pela admissão no Internamento de Geriatria Geral.

Patologia	n	FR (%)	Descritivo
Outras	11	19,3	Hiponatrémia (3), Iatrogenia (1) Celulite (2), Intoxicação alcoólica (1), Angiopatia Amiloide (1), Sindrome vertiginoso (1), Depressão (1), Úlcera de pressão (1)
Trato urinário	10	17,5	Retenção urinária e ITU (2), ITU (8),
Respiratória	9	15,8	Infecção Respiratória (8); exacerbação de DPOC (1)
Complexa/em investigação	9	15,8	Multipatologia (6) Anemia/ Hematúria/Ataxia em investigação (3)
Osteoarticular	7	12,3	Inversão do pé (1), Colapso vertebral e estenose lombar (1), Osteomielite sagrada (1), Osteoartrose do joelho (1), Metástases ósseas (2), Fratura do pubis e sacro (1)
Cardiovascular	5	8,8	IC descompensada (1); FA rápida (1); AVC hemorrágico (1); TVP secundária a neoplasia prostática (1) Doença Coronária descompensada por anemia (1)
Gastrointestinal	4	7,0	Colangite (1); Colecistite (1), Pseudoobstrução intestinal (1), Colite isquémica (1)
Neurológica	2	3,5	Paralisia Supranuclear Progressiva (2)
Total	57	100	

Legenda: DPOC - Doença Pulmonar Obstrutiva Crónica; FA - Fibrilhação Auricular; FR - Frequência Relativa; ITU - Infecção do Trato Urinário; TVP - Trombose Venosa Profunda.

É de notar que a maioria dos doentes apresentava pluripatologia e, muitas vezes, mais do que um motivo de internamento, tendo-se optado por colocar o diagnóstico principal responsável pela admissão. No entanto, em alguns casos não foi possível atribuir um diagnóstico principal por se encontrar sob investigação ou devido à complexidade da situação clínica que associava múltiplos sistemas e situações sociais. A título de exemplo de complexidade saliento o caso de uma doente de 87 anos que foi admitida por diminuição da mobilidade associada a delirium e a perda de peso, que apresentava à entrada os diagnósticos de urosepsis, hidronefrose, hipertiroidismo, Fibrilhação Auricular (FA) com resposta ventricular rápida, magreza e a hipótese de diagnóstico de Doença Celíaca.

O diagnóstico de Demência estava presente à entrada em 15 (31,6%) dos doentes, o que é coincidente com o relatado.[14-15]

É também de referir que 10 dos doentes (17,5%) apresentavam uma neoplasia como doença de base que contribuiu para a descompensação e internamento.

A Tabela 9 expõe as principais complicações e/ou intercorrências identificadas no decorrer do seguimento dos utentes internados, sobressaindo a sepsis e situações do foro urinário, designadamente a IRA.

Tabela 9 – Complicações e Intercorrências encontradas no Internamento Geriatria Geral.

Foro	n	Complicações/Intercorrências	n	FR (%)
Urinário	11	IRA	7	23,3
		ITU	1	3,3
		Retenção Urinária	1	3,3
		Hidronefrose	1	3,3
		Hematúria	1	3,3
Sistémico	8	Sepsis (Urosepsis=4; Sepsis Biliar=2)	8	26,7
Dermatológico	5	Celulite	2	6,7
		Lesão cutânea traumática (escalpe/ laceração)	2	6,7
		Dermatite de contacto	1	3,3
Cardiovascular	3	IC descompensada	1	3,3
		FA	1	3,3
		TVP	1	3,3
Respiratório	2	Pneumonia	2	6,7
Gastrointestinal	1	Colite pseudomembranosa	1	3,3
Total	30		30	100

Legenda: FR - Frequência Relativa; ITU – Infecção do Trato Urinário; TVP – Trombose Venosa Profunda.

Além da observação de doentes, estive presente na visita médica bisemanal e na reunião multidisciplinar semanal. Nesta última todos os intervenientes nos cuidados aos idosos internados davam o seu parecer sobre a evolução destes. Normalmente, a reunião multidisciplinar neste serviço incluía geriatras, enfermeiros, fisioterapeutas, terapeuta ocupacional e assistente social.

A minha passagem pelos internamentos de Geriatria Geral, permitiu-me não só praticar a aplicação de diversos instrumentos de avaliação geriátrica, mas também compreender melhor a interacção das diferentes comorbilidades e treinar a elaboração de planos terapêuticos adaptados a cada doente.

INTERNAMENTO DE ORTOGERIATRIA

No que diz respeito ao internamento de ortogeriatria participei no dia-a-dia das enfermarias 14 no SJH e da 108 na RIE.

Acompanhei e/ou discuti um total de 43 doentes com uma média de 81,8 anos de idade (mínimo 66, máximo 100), 24 (55,8%) do género feminino (Figura 3).

A maioria dos internamentos (n=40; 93,0%) deveu-se a fracturas, sendo que nove destes doentes (22,5%) apresentavam fracturas em dois ou mais ossos, mais de metade dos casos a envolver a anca (n=5;55,6%). Dos restantes, dois corresponderam a situações de cirurgia electiva para colocação de prótese da anca e um a uma infecção pós-operatória de prótese do joelho.

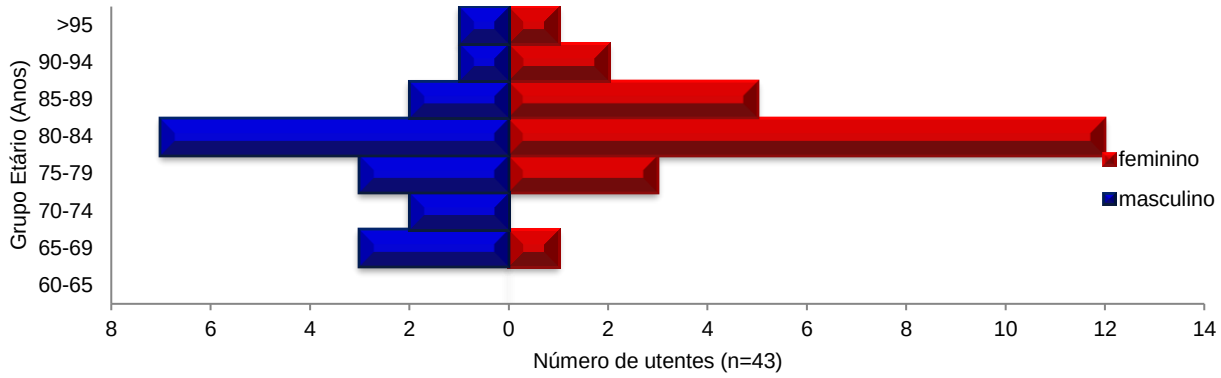

Figura 3 – Distribuição por sexo e por idade dos doentes vigiados no internamento de Ortogeriatria.

À entrada, oito dos doentes internados (18,6%) apresentaram-se com alterações do estado da consciência e apenas seis (14,0%) apresentavam o diagnóstico estabelecido de osteoporose.

Tabela 10 – Complicações e Intercorrências encontradas no Internamento de Ortogeriatria.

Foro	n	Complicações / Intercorrências	n	FR (%)
Outros	9	Queda de novo	2	7,1
		Toxicidade aos opióides	1	3,6
		Anemia pós-operatória	3	10,7
		Infecção pós-operatória	2	7,1
		Queratite herpética	1	3,6
Cardiovascular	7	EAM	2	7,1
		FA de novo	2	7,1
		Edema Agudo do Pulmão	1	3,6
		Hipotensão	1	3,6
		Edema dos membros inferiores	1	3,6
Urinário	5	ITU	4	14,3
		Retenção urinária	1	3,6
Respiratório	3	Infecção Respiratória	3	10,7
Sistémico	3	Sepsis	3	10,7
Gastrointestinal	2	Candidíase orofaríngea	1	3,6
		Colite pseudomembranosa	1	3,6
Total	29		29	100

Legenda: FR - Frequência Relativa; ITU - Infecção do Trato Urinário.

Além do trabalho clínico assistencial, participei na visita médica bisemanal e na reunião multidisciplinar semanal, onde todos os profissionais envolvidos nos cuidados aos idosos internados contribuíam para a construção e adaptação de um plano de cuidados individualizado. A reunião multidisciplinar neste serviço incluía geriatras, enfermeiros, fisioterapeutas, terapeuta ocupacional e assistente social.

O acompanhamento de doentes nestes internamentos alertou-me ainda mais para a problemática social que em grande parte dos casos atrasa a alta atempada. É fundamental a

articulação com a assistente social e os PC, de forma a evitar o prolongamento desnecessário do internamento, providenciando modificações do domicílio com o auxílio da Terapia Ocupacional, continuação imediata de fisioterapia e apoio de cuidadores ou a integração numa unidade que permita os cuidados adequados.

Internamento de Doenças Cerebrovasculares

No que concerne ao internamento de Doenças Cerebrovasculares, acompanhei doentes em duas enfermarias diferentes, a 101 da RIE com o Dr. Fergus Doubal e a 4 do SJH com o Dr. Scott Ramsey e a Dra. Amanda Barugh.

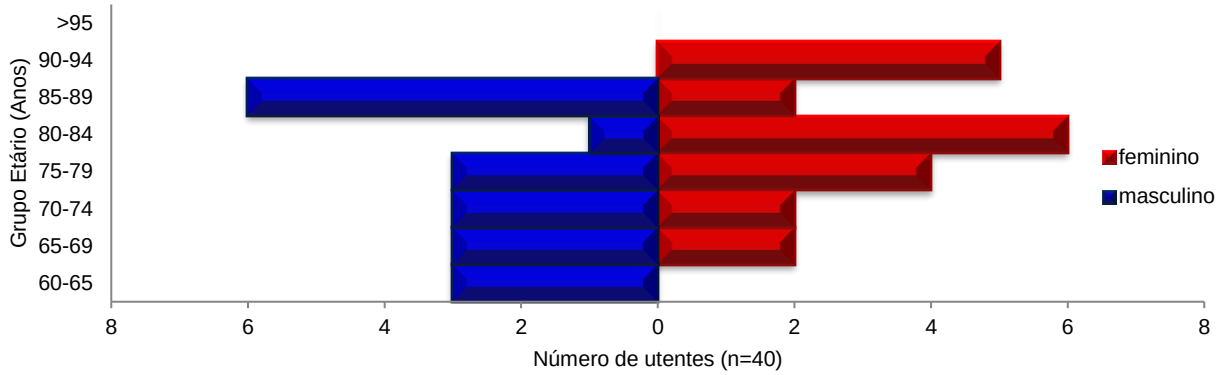

Figura 4 – Distribuição por sexo e por idade dos doentes vigiados no Internamento de Doenças Cerebrovasculares.

Observei um total de 40 doentes, 21 (52,5%) dos quais eram mulheres, com uma média de idades de 78,4 anos (mínimo 61, máximo 93). A sua distribuição por sexo e por idade pode ser observada na Figura 4.

Dos 35 doentes que apresentavam um diagnóstico definido, 33 (94,3%) tinham sido internados por AVC, um por Acidente Isquémico Transitório (AIT) e outro por um surto de Esclerose Múltipla. A maior parte (n=32; 91,4%) tinha factores de risco conhecidos para Doença Cerebrovascular e/ou antecedentes pessoais de Doença Cerebrovascular.

A Tabela 11 apresenta as intercorrências que surgiram durante o acompanhamento dos utentes internados por suspeita de Doença Cerebrovascular, sobressaindo as infecções respiratórias, sobretudo pneumonias de aspiração (n=3; 12,0%), e a depressão. Esta última esteve associada especialmente a situações de sequelas de AVC de maior gravidade e necessidade internamento prolongado, com grande impacto no estado geral e humor dos doentes em questão. Uma situação que me marcou especialmente foi a de um idoso com hemiplegia, disfagia e afasia de Wernicke em que esta última condicionou gravemente a comunicação, levando ao sentimento de frustração no doente e profissionais. A alteração do humor e a desmotivação do doente tornaram-se evidentes, interferindo na colaboração para os tratamentos e na sua reabilitação, levando à instituição de terapia farmacológica anti-depressiva.

Tabela 11 – Complicações e intercorrências encontradas no Internamento de Doenças Cerebrovasculares.

Foro	n	Complicações/Intercorrências	n	FR (%)
Outros	9	Depressão	3	12,0
		Delirium de novo	2	8,0
		Hiponatrémia iatrogénica	2	8,0
		Anemia	1	4,0
		Crise de gota	1	4,0
Cardiovascular	5	FA de novo	2	8,0
		Edema Agudo do Pulmão	1	4,0
		Hipertensão resistente	1	4,0
		AVC de novo	1	4,0
Respiratório	4	Infecção Respiratória	4	16,0
Gastrointestinal	3	Colite pseudomembranosa	1	4,0
		Obstipação	1	4,0
		Rectorragias	1	4,0
Sistémico	2	Sepsis biliar	1	4,0
		Febre e aumento dos marcadores inflamatórios em investigação	1	4,0
Urinário	2	ITU	2	8,0
Total	25		25	100

Legenda: FR - Frequência Relativa; ITU - Infecção do Trato Urinário.

Da mesma forma que nos restantes internamentos estive envolvida activamente na visita médica bisemanal e na reunião multidisciplinar semanal. A reunião multidisciplinar habitualmente abrangia, além dos profissionais habituais, um terapeuta da fala.

O caso acima relatado juntamente com outros que acompanhei levaram-me a aperfeiçoar a capacidade de análise de situações complexas, conduzindo a uma abordagem mais completa do idoso em todas as suas vertentes, pesando a interacção dos múltiplos factores intervenientes.

HOSPITAL AT HOME

A REACT e a MERRIT oferecem a possibilidade de avaliação geriátrica global e de intervenção atempada através da hospitalização domiciliária. Por sua vez, a REACT dispõe ainda da RAC para proporcionar o mesmo serviço aos doentes em regime de consulta urgente no próprio hospital com o objectivo de reforçar a prevenção de internamentos desnecessários, que se encontra descrita adiante (ver *Rapid Access Clinic*). De acordo com os dados disponibilizados, o tempo de resposta habitual da REACT é de 1-2h desde a referenciação e a duração média das intervenções é de 5 dias.[16] O seu trabalho foi reconhecido como de excelência através do prémio de equipa do ano no NHS *Lothian* em 2014.

Os critérios de referenciação resumem-se à necessidade de admissão por causa aguda, idade ≥ 65 anos e/ou presença de patologia complexa ou múltipla, residência na área de influência, existência de concordância por parte do doente e da família e possibilidade de cumprimento dos

requisitos terapêuticos no domicílio em segurança. As referenciações são triadas por um clínico de acordo com a acuidade, necessidade clínica e estado em ambulatório.

Com o objectivo de melhorar os cuidados prestados foi desenvolvido um único sistema de documentação, de saúde e assistência social, que se mantém na casa do doente. Este é constituído por diversas ferramentas e pelas metas definidas em conjunto com o doente. A linguagem utilizada neste dossier pessoal é simples de forma a garantir que todos os envolvidos, incluindo a família, entendam os seus papéis no processo de reabilitação e recuperação.

A avaliação dos doentes referenciados envolve, habitualmente, os mesmos aspectos que na admissão para internamento hospitalar, sendo as ferramentas utilizadas adaptadas a cada indivíduo.

Durante o tempo que dediquei a estas equipas do *Hospital at Home* pude acompanhar e discutir 32 doentes, 18 (56,3%) do sexo feminino. Estes apresentaram idades compreendidas entre os 61 e os 100 anos, o que perfez uma média de 86,0 anos.

Tabela 12 – Motivos de referenciação ao *Hospital at Home*.

Motivo	n	FR (%)
Dor	7	16,3
Quedas	4	9,3
Dispneia	4	9,3
Reavaliação pós-alta	4	9,3
Subtotal	19	44,2
Outros	24	55,8
Total	43	100

Legenda: FR - Frequência Relativa.

A Tabela 12 especifica os motivos de referenciação às equipas MERRIT e REACT, onde se destaca a dor. Na maioria dos casos (n=6; 85,7%), teve origem em patologia osteoarticular degenerativa, tendo a anca, o joelho e a lombar sido as regiões mais afectadas. Relativamente às quedas, as referenciações envolveram tanto a avaliação da etiologia da queda e da necessidade de cuidados, como de situações de risco aumentado e de quedas frequentes. No que toca à reavaliação pós-alta, esta incluiu a reavaliação clínica de infecções respiratórias e a reavaliação da mobilidade e funcionalidade após a alta de internamento hospitalar.

Foi possível efectuar 35 diagnósticos principais, sendo que cinco dos doentes ficaram sob investigação.

A dor crónica e os gigantes geriátricos assumem um papel de destaque nos diagnósticos principais, como se pode constatar na Tabela 13.

A maior parte dos doentes apresentava pluripatologia, que não foi possível discriminar por não ter tido acesso à informação clínica completa destes, e questões relacionadas com a mobilidade.

Tabela 13 – Diagnósticos principais dos doentes admitidos no *Hospital at Home*.

Diagnóstico Principal	n	FR (%)
Dor Crónica	6	17,1
Queda	4	11,4
Patologia Osteoarticular	4	11,4
Infecção Respiratória	3	8,6
Obstipação	2	5,7
Imobilidade	2	5,7
DPOC	2	5,7
Subtotal	24	68,6
Outros	11	31,4
Total	35	100

Legenda: FR - Frequência Relativa; DPOC - Doença Pulmonar Obstrutiva Crónica.

No total, efectuei 21 visitas domiciliárias, sete juntamente com um médico, seis com enfermeiro, quatro com fisioterapeuta e terapeuta ocupacional e quatro com fisioterapeuta. Nas visitas médicas, avaliaram-se principalmente situações agudas, através da colheita da história clínica e do exame objectivo, e procedeu-se à investigação diagnóstica e/ou à revisão terapêutica. As visitas de enfermagem foram sobretudo para reavaliação de situações agudas já tratadas e com plano estabelecido ou para a realização de tratamentos ou para avaliação inicial de primeiras referenciações de situações de doença crónica. As visitas conjuntas de fisioterapia e terapia ocupacional foram direccionadas para avaliação da funcionalidade dos doentes nas actividades de vida diária, das condições do domicílio e de eventuais necessidades de adaptação e da motivação para efectuar mudanças e para cumprir o plano terapêutico. Por sua vez, as visitas apenas de fisioterapia pretenderam avaliar os sintomas, efectuar exame físico dirigido, ensinar e treinar alguns exercícios e estabelecer um plano de exercícios em conjunto com o doente.

Em ambas as equipas participei activamente na reunião multidisciplinar diária na qual se discutiam todos os casos vigiados e as altas para o GP.

Verifiquei que existe alguma pressão para dar alta aos doentes devido ao elevado número de pedidos de consulta, necessidade de resposta atempada e ao número limitado de vagas e de recursos. Por outro lado, na REACT observa-se a necessidade de existir apoio de um especialista a tempo inteiro, uma vez que a maior parte dos domicílios médicos são efectuados por internos com discussão posterior dos casos em reunião multidisciplinar na presença de um dos geriatras responsáveis.

A participação no *Hospital at Home* remeteu-me para a minha prática clínica como médica de família, embora com todas as vantagens de ter uma equipa multidisciplinar e uma panóplia de recursos que evitam uma referenciação à urgência numa situação ambulatório-sensível. Permitiu-me constatar, na prática, as diferenças na qualidade de cuidados prestados e do

impacto destes nos doentes e na sua qualidade de vida quando existe capacidade de oferecer determinados serviços habitualmente hospitalares na comunidade.

MEDICINE OF THE ELDERLY CLINIC

Foi-me possível colaborar nas consultas de geriatria geral da Dra. Maria Corretge e do Dr. John Wilson no SJH.

Esta consulta recebe, geralmente, doentes idosos referenciados pelo GP para investigação de situações complexas ou para parecer diagnóstico.

Observei oito doentes, seis (75%) dos quais eram mulheres. A média de idades foi cerca de 76,9 anos (mínimo 67; máximo 86 anos).

Todas as consultas foram primeiras consultas com excepção de uma para vigilância de hipotiroidismo.

Tabela 14 – Resumo dos doentes observados na MoE *Clinic.*

Motivo de Consulta	Novos Diagnósticos/ Hipóteses de Diagnóstico
Perda de peso	Em investigação
Perda de peso + anorexia	Em investigação
Diminuição da mobilidade+ quedas recorrentes + sensação de desequilíbrio	Patologia lombar compressiva Dor crónica Ptofobia Isolamento social (viuvez) IC descompensada DPOC não controlada
Alterações da sensibilidade	Suspeita de Paralisia Supranuclear Progressiva Depressão
Diminuição da mobilidade	Depressão
Dispneia	Multifactorial por patologia pré-existente: FA, IC, Estenosa aórtica e Asma
Tonturas/Sensação de lipotímia	Bradicardia iatrogénica

Legenda: DPOC - Doença Pulmonar Obstrutiva Crónica.

A Tabela 14 exibe os motivos de referenciação e os novos diagnósticos/hipóteses de diagnóstico efectuados nesta consulta, onde se destaca a complexidade de alguns casos. Por outro lado, relembra um problema prevalente nos idosos com história de quedas: a ptofobia, que necessita de uma actuação atempada e multidisciplinar.[17]

Apesar de ter estado presente em cerca de cinco períodos de consulta, a baixa quantidade de doentes agendados e o elevado número de desmarcações condicionaram o tamanho da amostra de doentes observados.

Rapid Access Clinic

Foi-me possível acompanhar esta actividade da REACT, na maioria das vezes com a Dra. Maria Corretge, onde os critérios de referenciação são os mesmo do *Hospital at Home*.

Examinei sete doentes, na sua maioria mulheres (n=5; 71,4%). Estes tinham idades compreendidas entre os 70 e os 87 anos, o que equivaleu a uma média de 80,6 anos.

Tabela 15 – Resumo dos doentes observados na *Rapid Access Clinic.*

Motivo de Consulta	Novo Diagnósticos/ Hipótese de Diagnóstico
Quedas recorrentes	Diminuição da sensibilidade distal multifactorial Doença Arterial Periférica provável
Quedas recorrentes	em investigação
Diminuição da mobilidade	Depressão
Sensação de Lipotímia	Iatrogenia medicamentosa
Sensação de Lipotímia	Anemia ferropénica
Hipotensão postural e hiponatremia	Bradicardia a esclarecer Iatrogenia medicamentosa
Dispneia	em investigação

A Tabela 15 apresenta o resumo das consultas efectuadas na RAC, onde nos motivos sobressaem as quedas e a sensação de lipotímia e nos diagnósticos a iatrogenia medicamentosa. O plano de tratamento envolveu, habitualmente, a revisão da terapêutica e o encaminhamento para a terapia ocupacional e para a fisioterapia com o objectivo de melhorar a funcionalidade de cada doente.

Tabela 16 – Comorbilidades mais frequentes nos doentes observados na *Rapid Access Clinic*

Diagnóstico	n	FR (%)
Doença coronária	2	5,1
Doença cerebrovascular (AVC/AIT)	2	5,1
Diabetes tipo 2	2	5,1
Hipotiroidismo	2	5,1
DPOC	2	5,1
Défice cognitivo	2	5,1
Degeneração macular senil	2	5,1
Subtotal	14	35,9
Outros	25	64,1
Total	39	100

Legenda: FR - Frequência Relativa; DPOC - Doença Pulmonar Obstrutiva Crónica.

Relativamente aos restantes problemas de saúde, todos os doentes apresentavam múltiplas comorbilidades que perfizeram um total de 39. A média foi de 5,6 problemas por doente, estando os mais comuns expostos na Tabela 16.

Esta consulta constitui uma enorme mais valia, uma vez que permite que os doentes sejam avaliados poucas horas depois da referenciação do GP, com hipótese de realizarem Exames Complementares de Diagnóstico (ECD) e terapêutica endovenosa em tempo útil. Apresenta ainda a vantagem de acesso a uma equipa multidisciplinar no momento, evitando a exposição que existe na AMU.

Stroke Clinic

Foi-me possível assistir e colaborar nesta consulta com o meu orientador no SJH e o Dr. Fergus Doubal na RIE. Nesta consulta, realiza-se não só o seguimento de doentes com história suspeita ou confirmada de AVC ou Acidente Isquémico Transitório (AIT), mas também a avaliação dos doentes encaminhados directamente da AMU, de outros serviços do hospital ou pelo GP para parecer especializado no próprio dia. Quando indicado, há a possibilidade dos doentes efectuarem Tomografia Computorizada (TC) Crânio-encefálica, Ressonância Magnética Crânio-encefálica e/ou Doppler Carotídeo no próprio dia, sendo os exames de imagem levados a reunião multidisciplinar com um imagiologista e outros colegas geriatras dedicados às doenças cerebrovasculares, na qual eu pude participar.

Nesta consulta uma parte significativa dos doentes não eram geriátricos, tendo estes representado um total de 13 pessoas, oito (61,5%) dos quais eram mulheres. O doente mais novo tinha 60 anos e o mais velho 85, tendo a média sido de 69,6 anos.

Tabela 17 – Resumo dos doentes observados na *Stroke Clinic*.

Motivo de Consulta	n	Hipótese de Diagnóstivo	n
Alterações da sensibilidade	2	AVC n	1
		Infecção maxilar superior	1
Alterações da sensibilidade e da força	2	AVC	2
Amaurose fugaz	1	AIT	1
Tonturas	1	Labirintite	1
Sensação de lipotímia recorrente	1	sob investigação	1

Foram efectuadas sete primeiras consultas cujos motivos de referenciação e hipóteses de diagnóstico se encontram expostos na Tabela 17.

Nas consultas de seguimento efectuou-se o controlo dos factores de risco cardiovascular, avaliou-se o impacto das sequelas nas actividades de vida diária e na dinâmica familiar, designadamente de situações de hemiparesia e de incontinência fecal, e mobilizou-se os recursos necessários.

Em todas as consultas, sempre que necessário, foram efectuados ajustes no plano de tratamento, farmacológico e não farmacológico, e solicitados exames complementares para investigação.

Tabela 18 – Factores de risco de Doença Cardiovascular dos doentes observados na *Stroke Clinic*.

Factores de Risco	n	FR (%)
AVC/AIT	7	22,6
Hipertensão arterial	7	22,6
Doença coronária	3	9,7
Diabetes tipo 2	3	9,7
Dislipidemia	3	9,7
Obesidade	3	9,7
Tabagismo	2	6,5
Antecedentes familiares de Doença Cardiovascular	2	6,5
FA	1	3,2
Total	31	100

Legenda: FR - Frequência Relativa.

Com excepção de uma doente com o diagnóstico de Hemorragia Subaracnoideia, todos os doentes apresentavam pelo menos um ou mais factores de risco conhecidos de Doença Cardiovascular que se encontram discriminados na Tabela 18.

Nesta consulta pude desenvolver não só as minhas aptidões na realização do exame neurológico, mas também a minha capacidade diagnóstica e de interpretação de exames de imagem.

Movement Disorders Clinic

Acompanhei esta consulta tanto no WGH com o Dr. Conon Maguire, como no SJH com a Dra. Maria Corretge e o Dr. John Wilson.

Observei um total de 12 doentes, sete (58,3%) do sexo masculino, com uma média de idades de 77,1 anos (mínimo 70, máximo 86), sendo que a maioria das consultas (n=8; 66,7%) foram de seguimento.

Tabela 19 – Motivos de referenciação à *Movement Disorders Clinic*.

Motivo	n
Acompanhamento geriátrico	2
Alterações do equilíbrio	1
Aumento da secreção salivar	1
Total	4

A Tabela 19 apresenta os motivos de referenciação das primeiras consultas, sendo que dois dos doentes foram encaminhados apenas pela idade, pois tratavam-se de doentes com diagnóstico

de Doença de Parkinson estabelecido que tinham seguidos até à data em consulta de Neurologia.

No que diz respeito aos diagnósticos, a maior parte dos doentes (n=10; 75%) apresentava Doença de Parkinson como diagnóstico definitivo ou como principal hipótese de diagnóstico. Dos restantes, um sofria de tremor essencial e outro tinha sido referenciado por aumento da secreção salivar, não se tendo confirmado a existência de patologia.

Tabela 20 – Queixas abordadas na *Movement Disorders Clinic*.

Foro	Descritivo
Neurológico	Alterações da sensibilidade, do equilíbrio e da memória, rigidez, discinesia tardia, alucinações visuais, diplopia, insónia, sonolência diurna, dificuldade em urinar e incontinência
Outro	Diminuição da mobilidade, coxalgia, espasmos musculares, lombalgia, perda de peso e prurido

A Tabela 20 evidencia as queixas e/ou os problemas que foram abordados nestas consultas.

Esta consulta permitiu-me praticar o exame objectivo em indivíduos com Doença de Parkinson, melhorando a minha capacidade diagnóstica, e desenvolver uma maior familiaridade com a terapêutica desta patologia e o seu manuseamento. Além disso, deu-me a oportunidade de aprender a interpretar cintigrafias dos transportadores da dopamina (DaTSCAN®).

OSTEOPOROSIS CLINIC

Tive a oportunidade de acompanhar a Dra. Latana Munang nesta consulta no SJH que se destina ao acompanhamento de idosos com osteoporose grave, que necessitam de terapêutica de administração hospitalar e de um acompanhamento especializado.

Foram observadas cinco doentes, todas do sexo feminino, com uma média de 77,3 anos (mínimo 69; máximo 83). Relativamente à terapêutica, todas estavam medicadas com denosumab, com excepção de uma que fazia ácido zolendrónico.

Nestas consultas, além da avaliação das queixas dos doentes e das suas repercussões nas actividades diárias, discutiam-se medidas de estilo de vida, nomeadamente ao nível da alimentação, da actividade física e de consumos. Habitualmente, calculava-se a ingesta de cálcio semanal através da calculadora da *International Osteoporosis Foundation* de forma a ajustar a dieta ou a adicionar/aumentar os suplementos de cálcio. Solicitavam-se análises e osteodensitometria, quando adequado, e reavaliava-se o risco de fractura, normalmente através do instrumento *QFracture online*. De acordo com o doente, poderia haver lugar à aplicação de outros instrumentos. Além disso avaliava-se a adaptação dos doentes ao tratamento e elaborava-se um plano de cuidados em conjunto com o doente.

PROACTIVE CARE OF OLDER PEOPLE UNDERGOING SURGERY

Este serviço disponibilizado pelo WGH e conhecido como POPS destina-se a dar apoio a doentes idosos complexos ou frágeis com indicação para intervenção cirúrgica electiva ou urgente.

Pretende reduzir complicações pós-operatórias, como delirium, infecções, dor, imobilidade e problemas de continência, e optimizar a reabilitação com o apoio de fisioterapeutas e terapeutas ocupacionais das diferentes enfermarias, aumentando a probabilidade de retorno ao local de residência pré-operatório. Além de manter a continuidade de cuidados, tem ainda como objectivos auxiliar no planeamento de altas complexas e promover a ligação com a assistência social e os serviços comunitários quando apropriado.

É constituído por uma equipa multidisciplinar com três geriatras, dois anestesiologistas, três enfermeiras especialistas e uma secretária que se articulam com os cirurgiões dos diversos serviços e outros profissionais de saúde, quando necessário.

Todos os idosos propostos para intervenção cirúrgica que são considerados complexos ou que apresentam sinais de fragilidade, como défice cognitivo, alteração da mobilidade, quedas, necessidade de apoio de cuidador na comunidade ou outra situação que preocupe o cirurgião são sinalizados e encaminhados para este serviço para uma avaliação especializada. Esta avaliação determina a realização ou o adiamento/cancelamento da cirurgia.

Na POPS *Clinic*, os doentes são observados primeiro por uma das enfermeiras especialistas e depois por cada um dos médicos: geriatra e anestesiologista, podendo envolver ou não o cirurgião. Desta forma, é efectuada uma avaliação geriátrica global adaptada às necessidades individuais que abrange os seguintes campos: comorbilidades, medicação crónica, estado funcional, cognição, humor, estado nutricional, integridade cutânea, continência e situação e suporte social. De acordo com o doente, podem ser utilizadas diferentes ferramentas, designadamente: MoCA *Test (*Anexo XIV), 4AT (Anexo VI), HADS (Anexo XXIII), TUG (Anexo XVII), *Edmonton Frailty Scale* (Anexo XXIV), força de preensão, *Waterlow Score* (Anexo IX) e MUST (Anexo VII). Durante esta avaliação, explora-se a compreensão do doente em relação ao procedimento proposto e os seus desejos e expectativas em relação a este e aos respectivos resultados. Verifica-se ainda a existência de capacidade e de consentimento.

Após a avaliação na POPS *Clinic*, o resultado é discutido em reunião multidisciplinar, conduzida por um consultor de MoE. Nesta identificam-se as áreas específicas de preocupação ou de risco para cada doente e formula-se um plano individual que pode incluir áreas específicas a optimizar antes da cirurgia ou a serem monitoradas no período pré-operatório.

A avaliação e o plano são documentados numa carta padronizada para o GP, equipa cirúrgica e de enfermagem. No caso de existirem preocupações sobre a aptidão do doente para realizar a cirurgia ou deste não ter a certeza, é combinada uma discussão adicional com o respectivo cirurgião, a equipa POPS e o doente. Nesta utilizam-se princípios orientadores para uma melhor

tomada de decisão, sendo discutidos a relação risco/benefício, a existência de procedimentos alternativos e as consequências de não prosseguir com a cirurgia.

Tabela 21 – Resumo da POPS *Clinic*.

Sexo	Idade	Tipo de Intervenção	Motivo principal	Antecedentes Pessoais de Relevo	Plano
F	73	Ureteroscopia	Cálculo vesical	Mobilidade reduzida Quedas Obesidade Diabetes tipo 2 Hipertensão Arterial ITU recorrentes	Espera atenta
F	72	Ressecção de pólipo rectal	Pólipo rectal	DPOC com infecção respiratória intercorrente Défice cognitivo ligeiro Status pós-colocação de implante coclear Osteoporose Perturbação de ansiedade	Cirurgia após optimização do estado geral
F	91	Correcção de prolapso rectal	Prolapso rectal	Magreza Mobilidade reduzida IC FA Estenose e espondilose cervical	Reunião com a cirurgia
M	89	Excisão de nódulos vesicais	Recidiva de neoplasia vesical (2006)	Quedas Anorexia Status pós-AIT Hipertensão Arterial Estenose da artéria celíaca direita Espondilose cervical Lombociatalgia Cataratas	Reunião com a urologia

Legenda: DPOC - Doença Pulmonar Obstrutiva Crónica; ITU - Infecção do Trato Urinário.

Foi-me possível assistir a um período de consulta POPS e a uma reunião multidisciplinar com um colega de cirurgia geral. Os casos observados e discutidos estão resumidos na Tabela 21 que reflecte a sua complexidade.

A passagem por este departamento reforçou a importância da prevenção, da programação atempada de intervenções e da interajuda entre profissionais de diferentes áreas, que visa beneficiar o doente e que enriquece os próprios profissionais pela partilha envolvida.

Assessment and Rehabilitation Centre

ARC é uma unidade do WGH que proporciona atendimento em regime de hospital dia para a avaliação geriátrica global de idosos frágeis, sob a responsabilidade de três *MoE consultants* da RIE, com a colaboração de um interno da especialidade. O seu horário de funcionamento é das 9h00 às 16h00 todos os dias úteis.

Trata-se de um serviço externo que pode envolver uma ou várias visitas agendadas semanalmente, que duram a manhã ou até à tarde, sendo oferecido almoço. Os seus objectivos são:

- avaliar e tratar problemas médicos complexos;
- efectuar procedimentos médicos e de enfermagem especializados, como transfusões de sangue, infusões de zolendronato e tratamentos de Úlcera de Perna;
- intervir na crise de forma a prevenir o internamento hospitalar;
- orientar condições complexas de gestão a longo prazo como IC, Doença Pulmonar Obstrutiva Crónica (DPOC), Úlceras de Perna e Doença de Parkinson;
- realizar programas de avaliação e de prevenção de quedas;
- realizar programas de reabilitação;
- apoiar a alta de pacientes hospitalizados.

No que diz respeito aos recursos, dispõe de uma equipa médica e de enfermagem, fisioterapia, terapia ocupacional e da fala. Possibilita a realização de diversos ECD, designadamente: análises, radiografia, ecografia, TC, electrocardiograma (ECG), ecocardiograma, ECG e Medição Ambulatória da Pressão Arterial (MAPA) de 24 horas em ambulatório, espirometria e eco-doppler dos membros inferiores.

Tabela 22 – Critérios de referenciação para o ACR.

Critérios de Referenciação
Redução aguda da mobilidade ou função
Quedas frequentes (≥2 em 6 meses) ou inexplicáveis
Doentes cujo atendimento urgente em hospital dia pode evitar o internamento
Necessidade de avaliação médica e de enfermagem
Doença de Parkinson
AVC
Doença Osteoarticular
Problemas de mobilidade
Múltiplos problemas médicos.

A Tabela 22 detalha os critérios de referenciação para o ARC.

No ARC participei na primeira avaliação de doentes referenciados ao longo do seu circuito, o que habitualmente inclui a avaliação inicial de enfermagem e de fisioterapia, que normalmente ocupa a manhã ou o dia. Os doentes são discutidos em reunião de equipa multidisciplinar de forma a estabelecer um plano de cuidados apropriado com a contribuição de todos os elementos. A avaliação médica e das terapias ocupacional e da fala são efectuadas de acordo com cada situação.

A avaliação inicial de enfermagem inclui, normalmente, a colheita simplificada da história clínica adaptada ao doente com a avaliação do motivo de referenciação, as queixas do doente, os antecedentes pessoais e a medicação habitual, seguida de questões relacionadas com a condições do domicílio, apoio familiar e de cuidadores, apetite, alimentação, higiene, padrão intestinal, continência e componente cognitiva e de humor/ansiedade. São verificados sistematicamente o peso, a altura, o índice de massa corporal, a tensão arterial, a frequência cardíaca e respiratória e a saturação, sendo outras avaliações adaptadas. As escalas aplicadas são seleccionadas de acordo com as necessidades sentidas e a disponibilidade do doente, de forma a que a avaliação não seja demasiado cansativa, uma vez que poderá ser feita em diferentes tempos.

No que diz respeito à avaliação da fisioterapia, é verificada a presença de sintomas ou problemas que potencialmente possam interferir com a fisioterapia, nomeadamente patologia visual, auditiva ou cognitiva, tonturas, dor, quedas nos últimos 12 meses e apoios da marcha. Em seguida, de acordo com cada doente, procede-se ao exame físico: calçado, postura, alterações da coluna vertebral, membros (força, reflexos, coordenação, propriocepção e sensação), transferências, equilíbrio sentado e de pé (Romberg, pés juntos com olhos abertos e fechados, pés em tandem e semi-tandem), marcha e subida de escadas. Posteriormente, realizam-se diferentes testes, nomeadamente: *Functional Mobility Scale* (ANEXO XX), o TUG (Anexo XVII), o *Timed Unsupported Steady Standing* (TUSS) (ANEXO XXI), o *Turn180º Test*, o *Six Minute Walk Test* (6MWT) (ANEXO XXII) e o alcance funcional.

Contribuí para a primeira avaliação completa de duas doentes, uma por queixas de sensação de desequilíbrio e labilidade emocional e outra por patologia osteoarticular. Nestas colaborei com a enfermeira na sua avaliação e na aplicação da HADS (Anexo XXIII) e do ACE-III (Anexo XIII) e assisti à consulta de fisioterapia, tendo ambas as doentes ficado com consulta médica agendada. Estive ainda presente nas actividades do ginásio onde os doentes em seguimento executam os exercícios do seu plano com apoio da fisioterapia. Por último, assisti à reunião semanal da equipa na qual se discutiram os doentes referenciados e em vigilância e se reviu o plano de cuidados de cada doente.

Foi uma experiência extremamente produtiva, no que diz respeito a conhecer e a compreender a abordagem sistemática e metódica destes doentes em circuito, que permite efectuar uma reavaliação objectiva e pragmática dos resultados das intervenções ao longo do tempo.

HOSPITAL BASED COMPLEX CLINICAL CARE – SAINT MICHAEL'S HOSPITAL

Assumi uma parte activa na observação de doentes complexos no SMH, com uma frequência semanal ou bissemanal, juntamente com a Dra. Maria Corretge ou o Dr. Scott Ramsey.

A admissão de doentes é feita mediante a avaliação por um geriatra, com o suporte de uma equipa multidisciplinar. Os critérios de elegibilidade são reavaliados a cada 3 meses, podendo

ser determinada a transferência dos utentes para outro tipo de estabelecimento ou para o domicílio, de acordo com as circunstâncias. Funciona também como uma unidade intermédia para doentes medicamente estáveis em transição para o domicílio.

Acompanhei um total de 25 doentes, com idades compreendidas entre 71 e 97 anos, a grande maioria mulheres (n=17; 68%). Neste hospital a média de idades foi de 83,4 anos, significativamente superior à encontrada nos restantes internamentos geriátricos e que reflecte o facto deste estar destinado à prestação de cuidados a doentes complexos, sublinhando a relação entre o envelhecimento e a carga de doença.[18-23]

Registei um total de 191 problemas de saúde, o que corresponde a uma média de 7,6 problemas de saúde por doente, o que espelha a complexidade dos idosos admitidos neste hospital.

Tabela 23 – Diagnósticos mais frequentes dos doentes vigiados no SMH.

Diagnóstico	n	FR (%)
Incontinência urinária	22	11,5
Hipertensão Arterial	9	4,7
Demência	9	4,7
Quedas	7	3,7
AVC	7	3,7
FA	7	3,7
Doença coronária	7	3,7
Neoplasia	6	3,1
Insuficiência Renal Crónica	6	3,1
IC	5	2,6
Diabetes tipo 2	5	2,6
Subtotal	90	47,1
Outros	101	52,9
TOTAL	191	100,0

Legenda: FR - Frequência Relativa.

A Tabela 23 apresenta os diagnósticos mais frequentes, onde se destaca a incontinência urinária, presente em quase todos os doentes (88%). Por sua vez, metade destes estavam cateterizados, cinco com cateter de curta duração e os restantes com cateter de duração intermédia (n=3) ou longa (n=3). A análise da desta, permite encontrar os principais diagnósticos responsáveis pela necessidade de cuidados especializados, nomeadamente a Demência avançada associada a outras patologias, o AVC com consequente disfagia (n=2), hemiparesia (n=5) e/ou coma (n=1) e as Neoplasias, quatro (66,7%) delas em fase terminal.

No que concerne às complicações/intercorrências, foram identificadas 13, que estão expostas na Tabela 24.

Tabela 24 – Complicações/Intercorrências encontradas nos doentes vigiados no SMH.

Intercorrências/Complicações	n	FR (%)
Delirium	4	30,8
Retenção urinária	2	15,4
ITU	2	15,4
Úlcera de pressão	1	7,7
Reacção urticariforme	1	7,7
Omalgia	1	7,7
Conjuntivite bacteriana	1	7,7
Colite pseudomembranosa	1	7,7
TOTAL	13	100,0

Legenda: FR - Frequência Relativa; ITU - Infecção do Trato Urinário.

Apesar da maior parte dos doentes terem cumprido os critérios clínicos para usufruir da possibilidade de cuidados neste estabelecimento, verifiquei que, algumas vezes, funcionou como local de transição para doentes estáveis com indicação para institucionalização ou que poderiam ter tido alta para o domicílio com apoio de cuidadores e a vigilância apropriada da equipa do *Hospital at Home*. Esta situação prendeu-se com questões burocráticas relacionadas com a agilização de vaga em lar, ou em residência independente com apoio 24h ou a atribuição de cuidadores para apoio ao domicílio.

A prática clínica no SMH permitiu-me praticar os *Geriatric 5M's*, com enfoque nos itens *Multicomplexity* e *Matters Most*, ajudando aclarar ideias na priorização de cuidados.

SPECIALIST PALLIATIVE CARE SERVICES

Foi-me possível acompanhar as actividades deste serviço nos seus diferentes contextos durante cerca de uma semana e meia, sob orientação da *Palliative Care consultant* Dra. Kate Henriksen. Deste modo, integrei a *Saint John's Hospital Palliative Care Team* na consultoria aos doentes internados neste hospital e a *West Lothian Community Palliative Care Team* no apoio de doentes na comunidade e na unidade de dia no *Macmillan Centre*.

Participei nas reuniões diárias da equipa hospitalar e também numa reunião multidisciplinar para discussão dos casos acompanhados pela equipa comunitária. Nesta última, participaram médicos e enfermeiros especializados em cuidados paliativos, uma psiquiatra, duas psicólogas, uma assistente social e uma terapeuta ocupacional.

Tive ainda a oportunidade de colaborar nas actividades do internamento especializado de cuidados paliativos no *Marie Curie Hospice*.

Saint John's Hospital Palliative Care Team

Observei um total de sete doentes idosos internados nos diferentes serviços do SJH que necessitaram de acompanhamento pela equipa de cuidados paliativos. Estes apresentaram uma média de idades de 79,6 anos.

Tabela 25 – Resumo dos doentes vigiados pela *Saint John's Hospital Palliative Care Team*.

Sexo	Idade	Motivo	Novos diagnósticos	Diagnósticos Principal
M	81	náuseas, lombalgia e desidratação	Imobilidade Celulite	Doença linfoproliferativa de células B
				Artrite psoriática
F	76	Dor	Herpes zoster	Tumor supraglótico
M	74	Omalgia	-	Neoplasia do pulmão metastizada
M	94	Cervicalgia	-	Neoplasia da próstata
				Fractura odontoideia
M	80	Delirium	Toxicidade aos opióides	Neoplasia colorectal metastizada
				Demência
M	70	Dor	-	Neoplasia do pulmão metastizada
M	82	Agonia	-	Paralisia Progressiva Supranuclear

A Tabela 25 expõe o resumo dos doentes observados em conjunto com a equipa hospitalar de cuidados paliativos, tendo prevalecido as questões relacionadas com o controlo álgico como motivo de pedido de consultoria.

West Lothian Community Palliative Care Team

Acompanhei durante uma manhã as actividades do *Macmillan Centre* que abrangeram 12 doentes. Estas são dinamizadas pelas enfermeiras da equipa comunitária com a ajuda de voluntários da comunidade. São adaptadas à funcionalidade e às preferências da população alvo, podendo incluir, música, dança, filmes, jogos, jardinagem, entre outras.

Efectuei dois domicílios em conjunto com uma das enfermeiras desta equipa, destacando um deles a uma utente de 81 anos com neoplasia do pâncreas metastizada. Neste, ajustou-se a terapêutica analgésica e anti-emética e trabalhou-se na preparação da família para a morte, uma acção de grande importância que requer capacidades de escuta activa e de empatia, um conhecimento sobre a pessoa e a sua dinâmica familiar, além de tempo e dedicação.

Marie Curie Hospice

Neste hospital, estive presente na visita médica e participei na observação dos doentes internados e na admissão de dois doentes.

À entrada, além do motivo de admissão, diagnóstico, antecedentes pessoais e medicação habitual, todos os doentes são avaliados sistematicamente em relação a: controlo de sintomas, estado funcional e continência, pele e mucosas, estado de nutrição, psicológico e emocional e cognitivo, valores, espiritualidade e religião, prioridades pessoais (*what matters to me*), situação social, necessidades de cuidados e desejos e planos. Estas questões são reavaliadas diariamente, sendo sempre estabelecido um plano diário de acções médicas (*today's actions*), além do plano de cuidados a médio/longo prazo. As decisões são sempre discutidas em equipa, respeitando as preferências do doente e da família.

No momento do estágio, estavam internados oito doentes, seis (75%) dos quais eram do género feminino. As idades variaram entre 66 e 81 anos, o que correspondeu a uma média de 74,0 anos.

Tabela 26 – Motivos de admissão no *Marie Curie Hospice*.

Motivo	n	FR (%)
Controlo de sintomas	6	50
Medidas de fim de vida	5	41,7
Burnout do cuidador	1	8,3
TOTAL	12	100

Legenda: FR - Frequência Relativa.

Os motivos de admissão estão apresentados na Tabela 26, destacando-se o controlo de sintomas e as medidas de fim de vida, na maioria das vezes presentes em simultâneo.

Tabela 27 – Diagnóstico principal dos doentes vigiados no *Marie Curie Hospice*.

Diagnóstico Principal	n	FR (%)
Neoplasia do pulmão metastizada	1	12,5
Neoplasia da bexiga	1	12,5
Neoplasia da mama metastizada	1	12,5
Linfoma	1	12,5
Neoplasia da glândula paratiroideia metastizada	1	12,5
Neoplasia do pâncreas metastizada	1	12,5
Neoplasia do colon metastizada	1	12,5
TOTAL	8	100

Legenda: FR - Frequência Relativa.

Todos os doentes foram internados devido a neoplasia, na maior parte das vezes metastizada (Tabela 27).

No que concerne aos sintomas, foram abordados 43 sintomas, realçando a natureza muito sintomática dos doentes admitidos nesta unidade, com uma média de 5,4 sintomas por doente.

Tabela 28 – Sintomas mais comuns dos doentes vigiados no *Marie Curie Hospice*.

Sintomas	n	FR (%)
Dor	7	16,3
Fadiga	6	14,0
Ansiedade	5	11,6
Dispneia	4	9,3
Náuseas	3	7,0
Anorexia	2	4,7
Secura da mucosa oral	2	4,7
Diminuição da mobilidade	2	4,7
Delirium	2	4,7
Subtotal	33	76,7
Outros	10	23,3
TOTAL	43	100,0

Legenda: FR - Frequência Relativa.

Por último, estive presente em três reuniões familiares juntamente com a médica responsável, nas quais se discutiu o plano de cuidados, tendo em conta os desejos e prioridades do doente e da família, e noutra reunião de preparação para a morte com a família da doente. Foram situações de grande impacto emocional, que reforçaram a importância da empatia, da escuta activa e de conhecer cada doente e as suas dinâmicas familiares.

OLD AGE PSYCHIATRY

Neste Serviço acompanhei, durante uma semana, a Dra. Amy Lindsay quer na avaliação dos doentes internados ou de doentes agudos sinalizados pela equipa de enfermagem na enfermaria, quer na consulta de psicogeriatria.

Estive envolvida com a CPNE nas actividades de apoio aos idosos na comunidade do *Memory Treatment Service* através da participação na avaliação inicial de doentes no domicílio. Cada uma destas avaliações dura cerca de 3h e envolve a colheita da história clínica do idoso e dos cuidadores, incluindo a avaliação das actividades e interesses do doente e da rede de suporte social, e a aplicação do teste ACE-III.

Tive ainda a possibilidade de participar na reunião clínica multidisciplinar semanal, que envolve psiquiatras do idoso e internos de psiquiatria, psicólogos, enfermeiras e uma assistente social, na qual se discutem os doentes internados e casos de outros doentes da consulta ou encaminhados de outros serviços pertinentes para discussão em equipa. Por último, pude assistir a tratamentos de electroconvulsivoterapia e compreender o seu funcionamento e indicação clínica.

Old Age Psychiatry Ward

Acompanhei os sete doentes que se encontravam internados, quatro (57,1%) dos quais eram mulheres. Estes apresentavam idades compreendidas entre os 70 e os 89 anos, o que perfez uma média de 79,3 anos.

Tabela 29 – Motivo de admissão no *Old Age Psychiatry Ward*.

Motivo de Internamento	n
Delirium	4
Surto psicótico	2
Ideação suicida	1
Total	7

A Tabela 29 apresenta os motivos de internamento, onde se destaca o Delirium, sendo que dois destes casos tiveram origem em infecções urinárias que destabilizaram a doença de base.

Tabela 30 – Diagnósticos principais dos doentes vigiados no *Old Age Psychiatry Ward*.

Diagnósticos	N
Depressão	3
Demência de Alzheimer	2
Esquizofrenia	1
Psicose esquizoafectiva descompensada	1
Total	7

Os diagnósticos principais dos doentes internados estão expostos na Tabela 30.

Old Age Psychiatry Clinic

Devido à ausência de vários médicos no serviço, infelizmente, apenas tive a oportunidade de assistir a um período de consulta. Aqui foram observadas cinco mulheres entre os 68 e 79 anos, o que correspondeu a uma média de 72,3 anos.

Todas as consultas foram de seguimento, a maioria para vigilância de depressão grave. Habitualmente, o diagnóstico principal estava associado a outros problemas, sobretudo do foro social ou a dor crónica (Tabela 31).

Tabela 31 – Problemas/diagnósticos encontrados na *Old Age Psychiatry Clinic*.

Problemas/Diagnósticos	n
Depressão	4
Demência	1
Distimia	1
Perturbação de ansiedade	1
Problemas sociais	3
Dor crónica	2
Diminuição súbita da mobilidade	1
Total	13

REUNIÕES CLÍNICAS

Todas as semanas no SJH haviam reuniões clínicas que envolviam todos os geriatras da MoE e os internos alocados a esse serviço. Nestas, eram apresentados e discutidos casos clínicos, revisões de temas pertinentes e casuísticas de serviço onde todos os participantes podiam intervir. Destaco o caso de um doente internado por AVC em que a existência de múltiplos enfartes esplénicos e renais levou ao diagnóstico de FA e outro de uma lesão cutânea numa idosa com dor crónica que se tratava de um eritema ab igne.

Além destas reuniões, mensal ou bimensalmente, organizavam-se reuniões que envolviam colegas de outros serviços onde se partilhavam casos ou temas de articulação comum e também se apresentavam exames de imagem para discussão.

A possibilidade de participar nestas reuniões permitiu-me compreender melhor o funcionamento e a organização dos cuidados de saúde no NHS *Lothian*. Por sua vez, a discussão de exames de imagem e de casos clínicos invulgares onde os colegas seniores partilharam a sua experiência pessoal fizeram-me expandir o meu conhecimento, tendo constituído uma mais valia formativa.

OUTRAS ACTIVIDADES DESENVOLVIDAS

Tive a oportunidade de acompanhar o trabalho desenvolvido pelas *District Nurses*, que são equipas de enfermagem sediadas nos PC que prestam cuidados domiciliários a doentes com necessidade de tratamentos ou de monitorização. Efectuei três domicílios com uma das enfermeiras do *Bonnyrig Health Center*, que pertence à região de *MidLothian*. Destes, destaco um domicílio a uma idosa acamada com história de retenção urinária na qual se tinha retirado o cateter recentemente, em que se foi verificar o resíduo miccional com um aparelho ecográfico portátil.

Além disso, pude conhecer o funcionamento da *Demencia Team* do *Bonnyrig Health Center*, uma equipa dedicada a pessoas com demência, cuidadores e familiares, desde o momento do diagnóstico. Este serviço é composto por uma equipa de psiquiatras, CPNE, assistentes sociais, terapeuta ocupacional, psicólogo, voluntários e trabalhadores de ligação com a organização *Alzheimer Scotland* que, quando necessário, se podem articular com profissionais de outras áreas. Tem como objectivos auxiliar na saúde mental dos doentes, cuidadores e familiares, nos sintomas comportamentais e psicológicos de demência, nos cuidados individuais e necessidades de apoio, nas necessidades dos cuidadores e na gestão de risco. Providencia diversos apoios no domicílio, com recursos humanos e materiais, nomeadamente o fornecimento de um sistema de alarme no domicílio.

Reuni-me com todos os profissionais da *Dementia Team* para aprender mais sobre o seu funcionamento e o papel de cada um destes na equipa. Assisti ainda a duas reuniões de equipa durante as quais se discutiram diversos casos de doentes acompanhados pela equipa e o seu plano de cuidados.

A passagem por estes serviços permitiu-me conhecer melhor a organização da panóplia de recursos que o NHS *Lothian* oferece para apoio aos idosos e suas famílias.

VII. CONCLUSÃO

Diz-me e eu esqueço, ensina-me e eu lembro-me, envolve-me e eu aprendo.

Benjamin Franklin

O meu interesse pela Geriatria começou pouco depois de entrar na especialidade de MGF, em 2010. Aí percebi que a avaliação de idosos no domicílio e a optimização terapêutica me cativavam de uma forma especial. Os caminhos foram apontando nessa direcção e, em 2011, iniciei funções na Casa de Repouso Mordomias para Velhinhos.

A sede de conhecimento e a paixão pela Geriatria levaram-me ao Mestrado em Geriatria da Universidade de Coimbra. Posteriormente, a vontade de crescer na prática e de observar realidades e recursos diferentes conduziu-me ao estágio em Geriatria no NHS Lothian. Não foi fácil percorrer este caminho onde surgiram vários obstáculos. Estes envolveram uma situação de doença imprevisível, a distância da zona de trabalho e residência em Lisboa, dificuldades na obtenção de licença do trabalho para realização de estágio e uma pandemia que parou o mundo. Foi necessário muito trabalho, esforço, dedicação e, acima de tudo, muita perseverança e amor – amor pela Geriatria e pelo saber, a fim de ser uma melhor médica e pessoa para os meus doentes e a comunidade.

Terminado o estágio, considero que teve um balanço muito positivo. Saliento, em particular, a enorme mais valia de trabalhar em serviços exclusivamente geriátricos com profissionais altamente especializados e condições de excelência. Este privilégio permitiu-me alargar horizontes e ver as possibilidades de crescimento que Portugal tem nesta área. Tive a oportunidade de aprender e trabalhar com diferentes profissionais das mais variadas áreas dentro da Geriatria, de participar em reuniões multidisciplinares nas quais absorvi os vários ângulos de visão destes profissionais e de contactar com doentes de diferentes culturas. Estes factos fizeram-me crescer e ter uma visão mais abrangente, multifacetada e holística.

Como aspectos positivos, realço também o aperfeiçoamento do exame objectivo, sobretudo neurológico, através da *Stroke Clinic* e da *Movement Disorders Clinic*, e a experiência na

aplicação de diversas ferramentas como o ACE-III, o HADS, o GDS, entre outras. A experiência na REACH e na AMU ajudaram-me a reconhecer precocemente a presença de fragilidade e a identificar atempadamente os recursos a activar. Por sua vez, o tempo dedicado ao *Hospital at Home* e aos cuidados complexos da HBCCC no SMH levaram-me a treinar e a desenvolver as minhas aptidões de revisão da medicação. Nos Cuidados Paliativos, pude crescer nas capacidades de gestão de prioridades, de comunicação, em especial de transmissão de más notícias, e de lidar com o sofrimento e a proximidade da morte.

No que toca aos aspectos negativos, gostava de ter dedicado mais tempo ao ARC de forma a acompanhar a evolução destes doentes desde a referenciação até à alta e observar os resultados das intervenções realizadas. No entanto, tendo em conta a duração do estágio, isto não seria exequível e implicaria que abdicasse de outras actividades.

De uma forma global, julgo que os objectivos foram atingidos e alguns até ultrapassados. No final desta etapa, constato que evoluí aos mais variados níveis. Não só alarguei horizontes, mas também reflecti sobre a minha prática e amadureci. No entanto, tenho consciência que existe um mundo por descobrir, um mundo de coisas para aprender e de desafios no qual tenciono manter um espírito de humildade e de aprendizagem e continuar a superar-me diariamente.

Estou mais preparada para enfrentar o futuro que me espera e para poder dar o meu contributo para o desenvolvimento da Geriatria em Portugal, com os conhecimentos e ensinamentos absorvidos e o entusiasmo e o empenho que mantenho dentro de mim. A criação de uma consulta de Geriatria e o desenvolvimento de um projecto multidisciplinar de reabilitação de idosos na comunidade são parte dos sonhos que ambiciono ver concretizados. Já dizia Sebastião da Gama, *Pelo sonho é que vamos*, e tem sido o sonho que me tem guiado e iluminado ao longo do meu percurso.

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FACULDADE DE MEDICINA
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COIMBRA

Diana Tomás Fonseca da Silva

ESTÁGIO DE GERIATRIA NO *NHS LOTHIAN*

VOLUME 2

Relatório de Estágio no âmbito do Mestrado em Geriatria orientado pelo Professor Doutor Manuel Teixeira Veríssimo e apresentada à Faculdade de Medicina da Universidade de Coimbra

Orientador de Estágio: Dr. Scott Ramsey

Outubro de 2020

ÍNDICE DE ANEXOS

Anexo I. *NATIONAL EARLY WARNING SCORE* – NEWS

Chart 1: The NEWS scoring system

Physiological parameter	Score 3	2	1	0	1	2	3
Respiration rate (per minute)	≤8		9–11	12–20		21–24	≥25
SpO_2 Scale 1 (%)	≤91	92–93	94–95	≥96			
SpO_2 Scale 2 (%)	≤83	84–85	86–87	88–92 ≥93 on air	93–94 on oxygen	95–96 on oxygen	≥97 on oxygen
Air or oxygen?		Oxygen		Air			
Systolic blood pressure (mmHg)	≤90	91–100	101–110	111–219			≥220
Pulse (per minute)	≤40		41–50	51–90	91–110	111–130	≥131
Consciousness				Alert			CVPU
Temperature (°C)	≤35.0		35.1–36.0	36.1–38.0	38.1–39.0	≥39.1	

Chart 2: NEWS thresholds and triggers

NEW score	Clinical risk	Response
Aggregate score 0–4	Low	Ward-based response
Red score Score of 3 in any individual parameter	Low–medium	Urgent ward-based response*
Aggregate score 5–6	Medium	Key threshold for urgent response*
Aggregate score 7 or more	High	Urgent or emergency response**

* Response by a clinician or team with competence in the assessment and treatment of acutely ill patients and in recognising when the escalation of care to a critical care team is appropriate.

**The response team must also include staff with critical care skills, including airway management.

NEWS key 0 1 2 3

FULL NAME

DATE OF BIRTH | **DATE OF ADMISSION**

	DATE		DATE
	TIME		TIME
A+B Respirations Breaths/min	≥25	3	≥25
	21–24	2	21–24
	18–20		18–20
	15–17		15–17
	12–14		12–14
	9–11	1	9–11
	≤8	3	≤8
A+B SpO_2 Scale 1 Oxygen saturation (%)	≥96		≥96
	94–95	1	94–95
	92–93	2	92–93
	≤91	3	≤91
SpO_2 Scale 2† Oxygen saturation (%) Use Scale 2 if target range is 88–92%, eg in hypercapnic respiratory failure †ONLY use Scale 2 under the direction of a qualified clinician	≥97 on O_2	3	≥97 on O_2
	95–96 on O_2	2	95–96 on O_2
	93–94 on O_2	1	93–94 on O_2
	≥93 on air		≥93 on air
	88–92		88–92
	86–87	1	86–87
	84–85	2	84–85
	≤83%	3	≤83%
Air or oxygen?	A=Air		A=Air
	O_2 L/min	2	O_2 L/min
	Device		Device
C Blood pressure mmHg Score uses systolic BP only	≥220	3	≥220
	201–219		201–219
	181–200		181–200
	161–180		161–180
	141–160		141–160
	121–140		121–140
	111–120		111–120
	101–110	1	101–110
	91–100	2	91–100
	81–90	3	81–90
	71–80		71–80
	61–70		61–70
	51–60		51–60
	≤50		≤50
C Pulse Beats/min	≥131	3	≥131
	121–130	2	121–130
	111–120		111–120
	101–110	1	101–110
	91–100		91–100
	81–90		81–90
	71–80		71–80
	61–70		61–70
	51–60		51–60
	41–50	1	41–50
	31–40	3	31–40
	≤30		≤30
D Consciousness Score for NEW onset of confusion (no score if chronic)	Alert		Alert
	Confusion	3	Confusion
	V		V
	P		P
	U		U
E Temperature °C	≥39.1°	2	≥39.1°
	38.1–39.0°	1	38.1–39.0°
	37.1–38.0°		37.1–38.0°
	36.1–37.0°		36.1–37.0°
	35.1–36.0°	1	35.1–36.0°
	≤35.0°	3	≤35.0°
NEWS TOTAL			**TOTAL**
Monitoring frequency			Monitoring
Escalation of care Y/N			Escalation
Initials			Initials

Chart 4: Clinical response to the NEWS trigger thresholds

NEW score	Frequency of monitoring	Clinical response
0	Minimum 12 hourly	• Continue routine NEWS monitoring
Total 1–4	Minimum 4–6 hourly	• Inform registered nurse, who must assess the patient • Registered nurse decides whether increased frequency of monitoring and/or escalation of care is required
3 in single parameter	Minimum 1 hourly	• Registered nurse to inform medical team caring for the patient, who will review and decide whether escalation of care is necessary
Total 5 or more Urgent response threshold	Minimum 1 hourly	• Registered nurse to immediately inform the medical team caring for the patient • Registered nurse to request urgent assessment by a clinician or team with core competencies in the care of acutely ill patients • Provide clinical care in an environment with monitoring facilities
Total 7 or more Emergency response threshold	Continuous monitoring of vital signs	• Registered nurse to immediately inform the medical team caring for the patient – this should be at least at specialist registrar level • Emergency assessment by a team with critical care competencies, including practitioner(s) with advanced airway management skills • Consider transfer of care to a level 2 or 3 clinical care facility, ie higher-dependency unit or ICU • Clinical care in an environment with monitoring facilities

Anexo II. *FRAILTY SCREENING TOOL*

Frailty Assessment Tool

Date: _____

Time: ____:____

Name:

Date of birth:

CHI Number:

This tool supports screening for frailty as an adjunct to clinical judgment.
It can be used to screen all people over 75 and people resident in care home over 65.
For younger people, local guidelines should be consulted.

Practitioner Name:_____ **Signature:**_____

Step 1 Would this person benefit from Comprehensive Geriatric Assessment (CGA)?

		YES	NO
F	**F**unctional impairment (New or worsening) eg difficulty with self care		
R	**R**esident in a care home		
A	**A**ltered mental state such as delirium or dementia (use the 4AT)		
I	**I**mmobility/instability. New decline in mobility, difficulty mobilising without help or fall leading up to presentation		
L	**L**iving at home with support on a daily basis (homecare, one visit or more per day)		

Has the agreed criteria been met? If YES to _____ *or more* of the above move to step 2

Step 2 Would this person be better managed by another specialty team at present?

	YES	NO
Clear need for other specialty input eg exacerbation of known long term condition such as COPD		
Need for HDU/ITU (including non-invasive ventilation)		
Suspected new stroke or TIA, consider thrombolysis and care in stroke unit		
Head injury with loss of consciousness		
Acute abdominal pain/ surgical presentation		
Upper GI Bleed		
Chest pain with suspected acute coronary syndrome		
Trauma with suspected fracture		

Are any of the above criteria met?

If **YES** to any criteria in step 2:

- Prioritise move to non geriatric service as appropriate. If necessary consider geriatric advice on parent ward

If **No** to the list in Step 2:

- Prioritise transfer of care to specialist geriatric assessment service in line with local guidance.

Anexo III. *ROCKWOOD FRAILTY INDEX*

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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Anexo IV. *BARTHEL INDEX*

THE BARTHEL INDEX

Patient Name: _____
Rater Name: _____
Date: _____

Activity	Score
FEEDING 0 = unable 5 = needs help cutting, spreading butter, etc., or requires modified diet 10 = independent	_____
BATHING 0 = dependent 5 = independent (or in shower)	_____
GROOMING 0 = needs to help with personal care 5 = independent face/hair/teeth/shaving (implements provided)	_____
DRESSING 0 = dependent 5 = needs help but can do about half unaided 10 = independent (including buttons, zips, laces, etc.)	_____
BOWELS 0 = incontinent (or needs to be given enemas) 5 = occasional accident 10 = continent	_____
BLADDER 0 = incontinent, or catheterized and unable to manage alone 5 = occasional accident 10 = continent	_____
TOILET USE 0 = dependent 5 = needs some help, but can do something alone 10 = independent (on and off, dressing, wiping)	_____
TRANSFERS (BED TO CHAIR AND BACK) 0 = unable, no sitting balance 5 = major help (one or two people, physical), can sit 10 = minor help (verbal or physical) 15 = independent	_____
MOBILITY (ON LEVEL SURFACES) 0 = immobile or < 50 yards 5 = wheelchair independent, including corners, > 50 yards 10 = walks with help of one person (verbal or physical) > 50 yards 15 = independent (but may use any aid; for example, stick) > 50 yards	_____
STAIRS 0 = unable 5 = needs help (verbal, physical, carrying aid) 10 = independent	_____

TOTAL (0–100): _____

The Barthel ADL Index: Guidelines

1. The index should be used as a record of what a patient does, not as a record of what a patient could do.
2. The main aim is to establish degree of independence from any help, physical or verbal, however minor and for whatever reason.
3. The need for supervision renders the patient not independent.
4. A patient's performance should be established using the best available evidence. Asking the patient, friends/relatives and nurses are the usual sources, but direct observation and common sense are also important. However direct testing is not needed.
5. Usually the patient's performance over the preceding 24-48 hours is important, but occasionally longer periods will be relevant.
6. Middle categories imply that the patient supplies over 50 per cent of the effort.
7. Use of aids to be independent is allowed.

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Anexo V. *INSTRUMENTAL ACTIVITIES OF DAILY LIVING (IADL) SCALE*

Patient Name:_____ Date:_____
Patient ID #_____

LAWTON - BRODY
INSTRUMENTAL ACTIVITIES OF DAILY LIVING SCALE (I.A.D.L.)

Scoring: For each category, circle the item description that most closely resembles the client's highest functional level (either 0 or 1).

A. Ability to Use Telephone		**E. Laundry**	
1. Operates telephone on own initiative-looks up and dials numbers, etc.	1	1. Does personal laundry completely	1
		2. Launders small items-rinses stockings, etc.	1
2. Dials a few well-known numbers	1	3. All laundry must be done by others	0
3. Answers telephone but does not dial	1		
4. Does not use telephone at all	0		
B. Shopping		**F. Mode of Transportation**	
1. Takes care of all shopping needs independently	1	1. Travels independently on public transportation or drives own car	1
2. Shops independently for small purchases	0	2. Arranges own travel via taxi, but does not otherwise use public transportation	1
3. Needs to be accompanied on any shopping trip	0	3. Travels on public transportation when accompanied by another	1
4. Completely unable to shop	0	4. Travel limited to taxi or automobile with assistance of another	0
		5. Does not travel at all	0
C. Food Preparation		**G. Responsibility for Own Medications**	
1. Plans, prepares and serves adequate meals independently	1	1. Is responsible for taking medication in correct dosages at correct time	1
2. Prepares adequate meals if supplied with ingredients	0	2. Takes responsibility if medication is prepared in advance in separate dosage	0
3. Heats, serves and prepares meals, or prepares meals, or prepares meals but does not maintain adequate diet	0	3. Is not capable of dispensing own medication	0
4. Needs to have meals prepared and served	0		
D. Housekeeping		**H. Ability to Handle Finances**	
1. Maintains house alone or with occasional assistance (e.g. "heavy work domestic help")	1	1. Manages financial matters independently (budgets, writes checks, pays rent, bills, goes to bank), collects and keeps track of income	1
2. Performs light daily tasks such as dish washing, bed making	1	2. Manages day-to-day purchases, but needs help with banking, major purchases, etc.	1
3. Performs light daily tasks but cannot maintain acceptable level of cleanliness	1	3. Incapable of handling money	0
4. Needs help with all home maintenance tasks	1		
5. Does not participate in any housekeeping tasks	0		
Score		**Score**	
		Total score_____	

A summary score ranges from 0 (low function, dependent) to 8 (high function, independent) for women and 0 through 5 for men to avoid potential gender bias.

Source: *try this:* Best Practices in Nursing Care to Older Adults, The Hartford Institute for Geriatric Nursing, New York University, College of Nursing, www.hartfordign.org.

Anexo VI. 4 A'S *TEST* – 4AT

4AT

(label)

Patient name:

Date of birth:

Patient number:

Assessment test for delirium & cognitive impairment

Date: **Time:**

Tester:

CIRCLE

[1] ALERTNESS

This includes patients who may be markedly drowsy (eg. difficult to rouse and/or obviously sleepy during assessment) or agitated/hyperactive. Observe the patient. If asleep, attempt to wake with speech or gentle touch on shoulder. Ask the patient to state their name and address to assist rating.

Normal (fully alert, but not agitated, throughout assessment)	**0**
Mild sleepiness for <10 seconds after waking, then normal	**0**
Clearly abnormal	**4**

[2] AMT4

Age, date of birth, place (name of the hospital or building), current year.

No mistakes	**0**
1 mistake	**1**
2 or more mistakes/untestable	**2**

[3] ATTENTION

Ask the patient: "Please tell me the months of the year in backwards order, starting at December." To assist initial understanding one prompt of "what is the month before December?" is permitted.

Months of the year backwards	Achieves 7 months or more correctly	**0**
	Starts but scores <7 months / refuses to start	**1**
	Untestable (cannot start because unwell, drowsy, inattentive)	**2**

[4] ACUTE CHANGE OR FLUCTUATING COURSE

Evidence of significant change or fluctuation in: alertness, cognition, other mental function (eg. paranoia, hallucinations) arising over the last 2 weeks and still evident in last 24hrs

No	**0**
Yes	**4**

---

4 or above: possible delirium +/- cognitive impairment
1-3: possible cognitive impairment
0: delirium or severe cognitive impairment unlikely (but delirium still possible if [4] information incomplete)

4AT SCORE ☐

GUIDANCE NOTES Version 1.2. Information and download: **www.the4AT.com**

The 4AT is a screening instrument designed for rapid initial assessment of delirium and cognitive impairment. A score of 4 or more *suggests* delirium but is not diagnostic: more detailed assessment of mental status may be required to reach a diagnosis. A score of 1-3 suggests cognitive impairment and more detailed cognitive testing and informant history-taking are required. A score of 0 does not definitively exclude delirium or cognitive impairment: more detailed testing may be required depending on the clinical context. Items 1-3 are rated *solely on observation of the patient at the time of assessment.* Item 4 requires information from one or more source(s), eg. your own knowledge of the patient, other staff who know the patient (eg. ward nurses), GP letter, case notes, carers. The tester should take account of communication difficulties (hearing impairment, dysphasia, lack of common language) when carrying out the test and interpreting the score.

Alertness: Altered level of alertness is very likely to be delirium in general hospital settings. If the patient shows significant altered alertness during the bedside assessment, score 4 for this item. **AMT4 (Abbreviated Mental Test - 4):** This score can be extracted from items in the AMT10 if the latter is done immediately before. **Acute Change or Fluctuating Course:** Fluctuation can occur without delirium in some cases of dementia, but marked fluctuation usually indicates delirium. To help elicit any hallucinations and/or paranoid thoughts ask the patient questions such as, "Are you concerned about anything going on here?"; "Do you feel frightened by anything or anyone?"; "Have you been seeing or hearing anything unusual?"

Anexo VII. *MALNUTRITION UNIVERSAL SCREENING TOOL* – MUST

‘Malnutrition Universal Screening Tool’

BAPEN is registered charity number 1023927 www.bapen.org.uk

‘MUST’

‘MUST’ is a five-step screening tool to identify **adults,** who are malnourished, at risk of malnutrition (undernutrition), or obese. It also includes management guidelines which can be used to develop a care plan.

It is for use in hospitals, community and other care settings and can be used by all care workers.

This guide contains:

- A flow chart showing the 5 steps to use for screening and management
- BMI chart
- Weight loss tables
- Alternative measurements when BMI cannot be obtained by measuring weight and height.

The 5 ‘MUST’ Steps

Step 1

Measure height and weight to get a BMI score using chart provided. *If unable to obtain height and weight, use the alternative procedures shown in this guide.*

Step 2

Note percentage unplanned weight loss and score using tables provided.

Step 3

Establish acute disease effect and score.

Step 4

Add scores from steps 1, 2 and 3 together to obtain overall risk of malnutrition.

Step 5

Use management guidelines and/or local policy to develop care plan.

Please refer to *The ‘MUST’ Explanatory Booklet* for more information when weight and height cannot be measured, and when screening patient groups in which extra care in interpretation is needed (e.g. those with fluid disturbances, plaster casts, amputations, critical illness and pregnant or lactating women). The booklet can also be used for training. See *The ‘MUST’ Report* for supporting evidence. Please note that ‘MUST’ has not been designed to detect deficiencies or excessive intakes of vitamins and minerals and is of **use only in adults.**

Step 1 – BMI score (& BMI)

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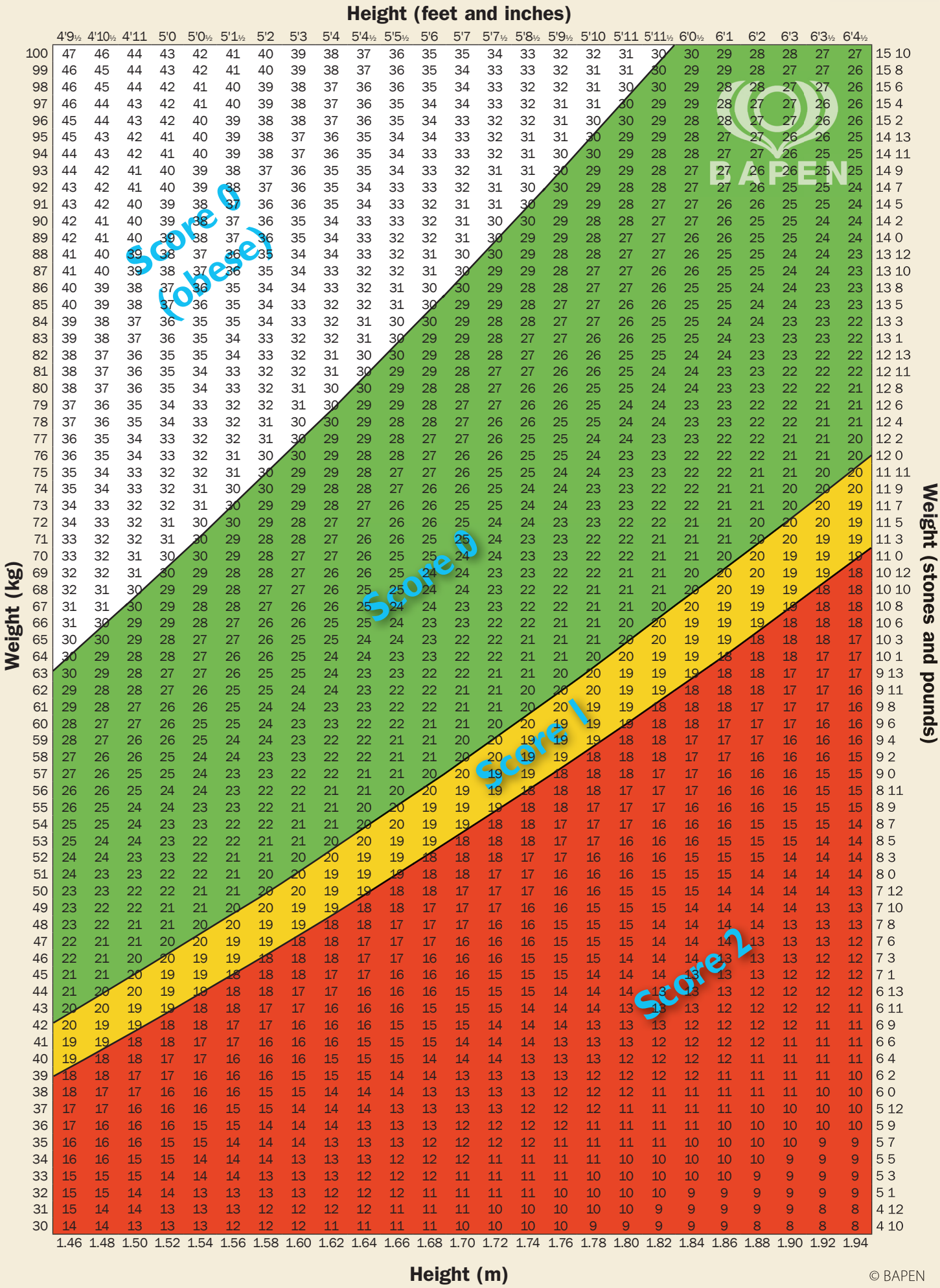

Note : The black lines denote the exact cut off points (30,20 and 18.5 kg/m²), figures on the chart have been rounded to the nearest whole number.

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Step 1 + Step 2 + Step 3

Step 1 — BMI score

BMI kg/m²	Score
>20 (>30 Obese)	= 0
18.5-20	= 1
<18.5	= 2

Step 2 — Weight loss score

Unplanned weight loss in past 3-6 months

%	Score
<5	= 0
5-10	= 1
>10	= 2

Step 3 — Acute disease effect score

If patient is acutely ill **and** there has been or is likely to be no nutritional intake for >5 days
Score 2

If unable to obtain height and weight, see reverse for alternative measurements and use of subjective criteria

Acute disease effect is unlikely to apply outside hospital. See 'MUST' Explanatory Booklet for further information

Step 4

Overall risk of malnutrition

Add Scores together to calculate overall risk of malnutrition
Score 0 Low Risk Score 1 Medium Risk Score 2 or more High Risk

Step 5

Management guidelines

0 Low Risk
Routine clinical care

- Repeat screening
  Hospital – weekly
  Care Homes – monthly
  Community – annually
  for special groups
  e.g. those >75 yrs

1 Medium Risk
Observe

- Document dietary intake for 3 days
- If adequate – little concern and repeat screening
  - Hospital – weekly
  - Care Home – at least monthly
  - Community – at least every 2-3 months
- If inadequate – clinical concern – follow local policy, set goals, improve and increase overall nutritional intake, monitor and review care plan regularly

2 or more High Risk
Treat*

- Refer to dietitian, Nutritional Support Team or implement local policy
- Set goals, improve and increase overall nutritional intake
- Monitor and review care plan
  Hospital – weekly
  Care Home – monthly Community – monthly

* Unless detrimental or no benefit is expected from nutritional support e.g. imminent death.

All risk categories:

- Treat underlying condition and provide help and advice on food choices, eating and drinking when necessary.
- Record malnutrition risk category.
- Record need for special diets and follow local policy.

Obesity:

- Record presence of obesity. For those with underlying conditions, these are generally controlled before the treatment of obesity.

Re-assess subjects identified at risk as they move through care settings

See *The 'MUST' Explanatory Booklet* for further details and *The 'MUST' Report* for supporting evidence.

Step 2 – Weight loss score

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Current weight

kg	Score 0 Wt loss < 5% — Weight loss in last 3 to 6 months: Less than (kg)	Score 1 Wt loss 5 - 10% — Weight loss in last 3 to 6 months: Between (kg)	Score 2 Wt loss > 10% — Weight loss in last 3 to 6 months: More than (kg)
30	1.6	1.6 - 3.3	3.3
31	1.6	1.6 - 3.4	3.4
32	1.7	1.7 - 3.6	3.6
33	1.7	1.7 - 3.7	3.7
34	1.8	1.8 - 3.8	3.8
35	1.8	1.8 - 3.9	3.9
36	1.9	1.9 - 4.0	4.0
37	1.9	1.9 - 4.1	4.1
38	2.0	2.0 - 4.2	4.2
39	2.1	2.1 - 4.3	4.3
40	2.1	2.1 - 4.4	4.4
41	2.2	2.2 - 4.6	4.6
42	2.2	2.2 - 4.7	4.7
43	2.3	2.3 - 4.8	4.8
44	2.3	2.3 - 4.9	4.9
45	2.4	2.4 - 5.0	5.0
46	2.4	2.4 - 5.1	5.1
47	2.5	2.5 - 5.2	5.2
48	2.5	2.5 - 5.3	5.3
49	2.6	2.6 - 5.4	5.4
50	2.6	2.6 - 5.6	5.6
51	2.7	2.7 - 5.7	5.7
52	2.7	2.7 - 5.8	5.8
53	2.8	2.8 - 5.9	5.9
54	2.8	2.8 - 6.0	6.0
55	2.9	2.9 - 6.1	6.1
56	2.9	2.9 - 6.2	6.2
57	3.0	3.0 - 6.3	6.3
58	3.1	3.1 - 6.4	6.4
59	3.1	3.1 - 6.6	6.6
60	3.2	3.2 - 6.7	6.7
61	3.2	3.2 - 6.8	6.8
62	3.3	3.3 - 6.9	6.9
63	3.3	3.3 - 7.0	7.0
64	3.4	3.4 - 7.1	7.1

kg	Score 0 Wt loss < 5% — Weight loss in last 3 to 6 months: Less than (kg)	Score 1 Wt loss 5 - 10% — Weight loss in last 3 to 6 months: Between (kg)	Score 2 Wt loss > 10% — Weight loss in last 3 to 6 months: More than (kg)
65	3.4	3.4 - 7.2	7.2
66	3.5	3.5 - 7.3	7.3
67	3.5	3.5 - 7.4	7.4
68	3.6	3.6 - 7.6	7.6
69	3.6	3.6 - 7.7	7.7
70	3.7	3.7 - 7.8	7.8
71	3.7	3.7 - 7.9	7.9
72	3.8	3.8 - 8.0	8.0
73	3.8	3.8 - 8.1	8.1
74	3.9	3.9 - 8.2	8.2
75	3.9	3.9 - 8.3	8.3
76	4.0	4.0 - 8.4	8.4
77	4.1	4.1 - 8.6	8.6
78	4.1	4.1 - 8.6	8.7
79	4.2	4.2 - 8.7	8.8
80	4.2	4.2 - 8.9	8.9
81	4.3	4.3 - 9.0	9.0
82	4.3	4.3 - 9.1	9.1
83	4.4	4.4 - 9.2	9.2
84	4.4	4.4 - 9.3	9.3
85	4.5	4.5 - 9.4	9.4
86	4.5	4.5 - 9.6	9.6
87	4.6	4.6 - 9.7	9.7
88	4.6	4.6 - 9.8	9.8
89	4.7	4.7 - 9.9	9.9
90	4.7	4.7 - 10.0	10.0
91	4.8	4.8 - 10.1	10.1
92	4.8	4.8 - 10.2	10.2
93	4.9	4.9 - 10.3	10.3
94	4.9	4.9 - 10.4	10.4
95	5.0	5.0 - 10.6	10.6
96	5.1	5.1 - 10.7	10.7
97	5.1	5.1 - 10.8	10.8
98	5.2	5.2 - 10.9	10.9
99	5.2	5.2 - 11.0	11.0

Alternative measurements and considerations

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Step 1: BMI (body mass index)

If height cannot be measured

- Use recently documented or self-reported height (if reliable and realistic).
- If the subject does not know or is unable to report their height, use one of the alternative measurements to estimate height (ulna, knee height or demispan).

Step 2: Recent unplanned weight loss

If recent weight loss cannot be calculated, use self-reported weight loss (if reliable and realistic).

Subjective criteria

If height, weight or BMI cannot be obtained, the following criteria which relate to them can assist your professional judgement of the subject's nutritional risk category. Please note, these criteria should be used collectively not separately as alternatives to steps 1 and 2 of 'MUST' and are not designed to assign a score. Mid upper arm circumference (MUAC) may be used to estimate BMI category in order to support your overall impression of the subject's nutritional risk.

1. BMI

- Clinical impression – thin, acceptable weight, overweight. Obvious wasting (very thin) and obesity (very overweight) can also be noted.

2. Unplanned weight loss

- Clothes and/or jewellery have become loose fitting (weight loss).
- History of decreased food intake, reduced appetite or swallowing problems over 3-6 months and underlying disease or psycho-social/physical disabilities likely to cause weight loss.

3. Acute disease effect

- Acutely ill and no nutritional intake or likelihood of no intake for more than 5 days.

Further details on taking alternative measurements, special circumstances and subjective criteria can be found in *The 'MUST' Explanatory Booklet*. A copy can be downloaded at www.bapen.org.uk or purchased from the BAPEN office. The full evidence-base for 'MUST' is contained in *The 'MUST' Report* and is also available for purchase from the BAPEN office.

BAPEN Office, Secure Hold Business Centre, Studley Road, Redditch, Worcs, B98 7LG. Tel: 01527 457 850. Fax: 01527 458 718. bapen@sovereignconference.co.uk BAPEN is registered charity number 1023927. www.bapen.org.uk

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THE BRITISH DIETETIC ASSOCIATION

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Alternative measurements: instructions and tables

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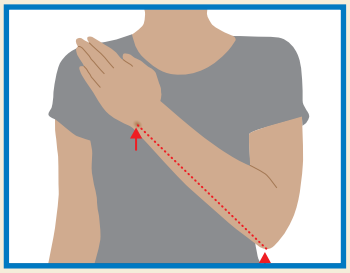
If height cannot be obtained, use length of forearm (ulna) to calculate height using tables below.
(See The 'MUST' Explanatory Booklet for details of other alternative measurements (knee height and demispan) that can also be used to estimate height).

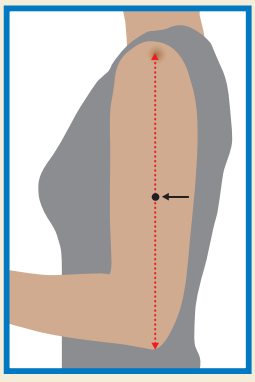
Estimating height from ulna length



Measure between the point of the elbow (olecranon process) and the midpoint of the prominent bone of the wrist (styloid process) (left side if possible).

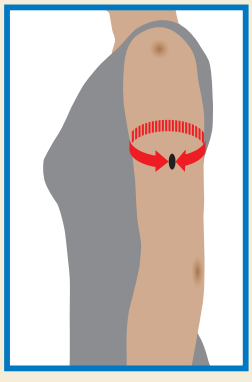
Height (m)	men (<65 years)	1.94	1.93	1.91	1.89	1.87	1.85	1.84	1.82	1.80	1.78	1.76	1.75	1.73	1.71
	men (≥65 years)	1.87	1.86	1.84	1.82	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.67
	Ulna length (cm)	32.0	31.5	31.0	30.5	30.0	29.5	29.0	28.5	28.0	27.5	27.0	26.5	26.0	25.5
Height (m)	Women (<65 years)	1.84	1.83	1.81	1.80	1.79	1.77	1.76	1.75	1.73	1.72	1.70	1.69	1.68	1.66
	Women (≥65 years)	1.84	1.83	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.66	1.65	1.63
Height (m)	men (<65 years)	1.69	1.67	1.66	1.64	1.62	1.60	1.58	1.57	1.55	1.53	1.51	1.49	1.48	1.46
	men (≥65 years)	1.65	1.63	1.62	1.60	1.59	1.57	1.56	1.54	1.52	1.51	1.49	1.48	1.46	1.45
	Ulna length (cm)	25.0	24.5	24.0	23.5	23.0	22.5	22.0	21.5	21.0	20.5	20.0	19.5	19.0	18.5
Height (m)	Women (<65 years)	1.65	1.63	1.62	1.61	1.59	1.58	1.56	1.55	1.54	1.52	1.51	1.50	1.48	1.47
	Women (≥65 years)	1.61	1.60	1.58	1.56	1.55	1.53	1.52	1.50	1.48	1.47	1.45	1.44	1.42	1.40

Estimating BMI category from mid upper arm circumference (MUAC)



The subject's left arm should be bent at the elbow at a 90 degree angle, with the upper arm held parallel to the side of the body. Measure the distance between the bony protrusion on the shoulder (acromion) and the point of the elbow (olecranon process). Mark the mid-point.

Ask the subject to let arm hang loose and measure around the upper arm at the mid-point, making sure that the tape measure is snug but not tight.



If MUAC is <23.5 cm, BMI is likely to be <20 kg/m^2.
If MUAC is >32.0 cm, BMI is likely to be >30 kg/m^2.

The use of MUAC provides a general indication of BMI and is not designed to generate an actual score for use with 'MUST'. For further information on use of MUAC please refer to *The 'MUST' Explanatory Booklet.*

Anexo VIII.5 *QUESTION'S* – 5Q'S

;

- Complete and document the screen for more vulnerable patients (5Qs) ***(If answers 'yes' to any of the five questions below, the patient is identified as 'more vulnerable'***.
  1. *Has the patient fallen in the last 6 months – including during this admission?*
  2. *Does that patient have cognitive impairment (for example AMT<8 or 4AT>1) or possible delirium (for example 4AT or above)?*
  3. *Does the patient attempt to walk alone although unsteady or unsafe?*
  4. *Does the patient or their relative/s have fear or anxiety regarding falling?*
  5. *Based on your clinical judgement, is this patient at high risk of falling?*

  On admission immediate documented assessment of mobility.

Anexo IX. *WATERLOW SCORE*

Water Low Risk Assessment

Patients Name:				**DOB:**		**NHS Number:**		
BUILD / WEIGHT FOR HEIGHT		**RISK AREAS VISUAL SKIN TYPE**		**SEX/AGE**		**Malnutrition Screening Tool (MST)** **Nutrition Vol 15, No. 6 1999 - Australia**		
Average BMI = 20 – 24.9 Above average BMI = 25-29.9 Obese BMI > 30 Below average BMI < 20 BMI= Wt (Kg) / Ht (m)2	0 1 2 3	Healthy Tissue Paper Dry Oedematous Clammy, Pyrexia Discoloured Grade 1 Broken / Spot Grade 2-4	0 1 1 1 1 2 3	MALE FEMALE 14 – 49 50 – 64 65 – 74 75 - 80 81+	1 2 1 2 3 4 5	A Has patient lost weight recently? Yes - Go to B No - Go to C Unsure - Go to C and Score 2 C Patient eating poorly or lack of appetite 'NO' = 0 'YES' = 1	B	Weight loss score 0.5 – 5kg = 1 5 – 10kg = 2 10 – 15kg = 3 > 15kg = 4 unsure = 2 Nutrition Score If > 2 refer for nutrition assessment / intervention
CONTINENCE		**MOBILITY**		**SPECIAL RISKS**				
Complete / Catheterised Urinary Incontinence Faecal Incontinence Urinary and Faecal Incontinence	0 1 2 3	Fully Restless / Fidgety Apathetic Restricted Bedbound E.g. Traction Chair bound E.g. Wheelchair	0 1 2 3 4 5	**TISSUE MALNUTRITION**		**NEUROLOGICAL DEFICIT**		
				Terminal Cachexia Multiple Organ Failure Single Organ Failure (Resp, Renal, Cardiac) Peripheral Vascular Disease Anaemia (Hb < 8) Smoking	8 8 5 5 2 1	Diabetes, MS, CVA Motor / Sensory Paraplegia (Max of 6)	4 – 6 4 – 6 4 - 6	
						MAJOR SURGERY OR TRAUMA		
						Orthopaedic / Spinal On table > 2 hrs * On table > 6 hrs *	5 5 8	
SCORE				**MEDICATION – CYTOTOXICS, LONG TERM HIGH DOSE STEROIDS, ANTI-INFLAMMATORY MAX OF 4**				
10 + AT RISK								
15+ HIGH RISK								
20+ VERY HIGH RISK								

*** Scores can be discounted after 48 hours provided patient is recovering normally.**

Anexo X. *GERIATRIC DEPRESSION SCALE* – GDS

Geriatric Depression Scale: Short Form

Choose the best answer for how you have felt over the past week:

1. Are you basically satisfied with your life? YES / **NO**
2. Have you dropped many of your activities and interests? **YES** / NO
3. Do you feel that your life is empty? **YES** / NO
4. Do you often get bored? **YES** / NO
5. Are you in good spirits most of the time? YES / **NO**
6. Are you afraid that something bad is going to happen to you? **YES** / NO
7. Do you feel happy most of the time? YES / **NO**
8. Do you often feel helpless? **YES** / NO
9. Do you prefer to stay at home, rather than going out and doing new things? **YES** / NO
10. Do you feel you have more problems with memory than most? **YES** / NO
11. Do you think it is wonderful to be alive now? YES / **NO**
12. Do you feel pretty worthless the way you are now? **YES** / NO
13. Do you feel full of energy? YES / **NO**
14. Do you feel that your situation is hopeless? **YES** / NO
15. Do you think that most people are better off than you are? **YES** / NO

Answers in **bold** indicate depression. Score 1 point for each bolded answer.

A score > 5 points is suggestive of depression.
A score ≥ 10 points is almost always indicative of depression.
A score > 5 points should warrant a follow-up comprehensive assessment.

Source: http://www.stanford.edu/~yesavage/GDS.html

Anexo XI. *MINI COG*

Mini-Cog™

Instructions for Administration & Scoring

ID: _____ Date: _____

Step 1: Three Word Registration

Look directly at person and say, "Please listen carefully. I am going to say three words that I want you to repeat back to me now and try to remember. The words are [select a list of words from the versions below]. Please say them for me now." If the person is unable to repeat the words after three attempts, move on to Step 2 (clock drawing).

The following and other word lists have been used in one or more clinical studies.[1-3] For repeated administrations, use of an alternative word list is recommended.

Version 1	**Version 2**	**Version 3**	**Version 4**	**Version 5**	**Version 6**
Banana	Leader	Village	River	Captain	Daughter
Sunrise	Season	Kitchen	Nation	Garden	Heaven
Chair	Table	Baby	Finger	Picture	Mountain

Step 2: Clock Drawing

Say: "Next, I want you to draw a clock for me. First, put in all of the numbers where they go." When that is completed, say: "Now, set the hands to 10 past 11."

Use preprinted circle (see next page) for this exercise. Repeat instructions as needed as this is not a memory test. Move to Step 3 if the clock is not complete within three minutes.

Step 3: Three Word Recall

Ask the person to recall the three words you stated in Step 1. Say: "What were the three words I asked you to remember?" Record the word list version number and the person's answers below.

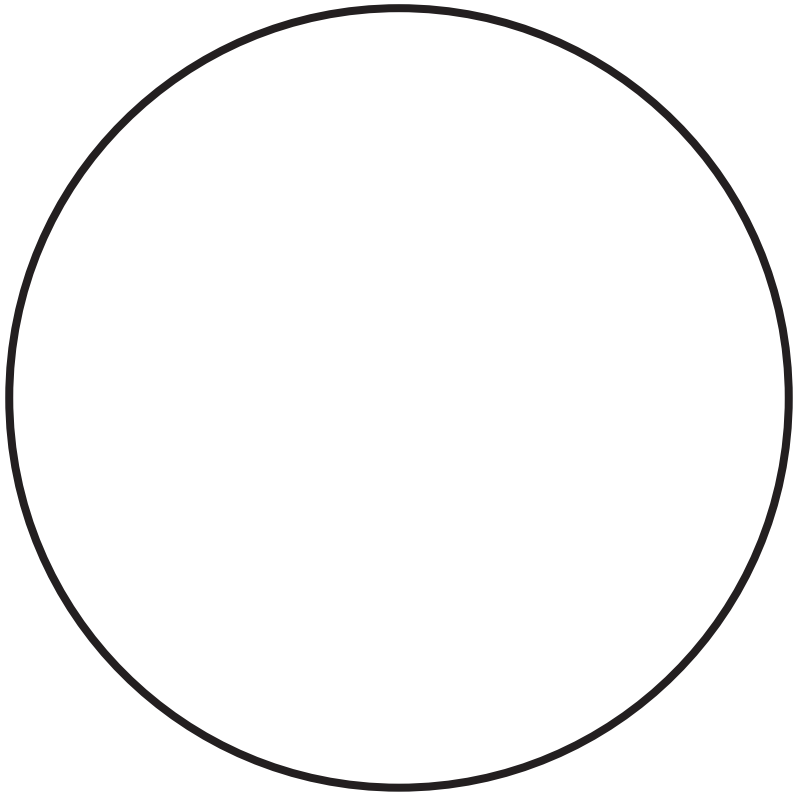
Word List Version: _____ Person's Answers: _____ _____ _____

Scoring

Word Recall: _____ (0-3 points)	1 point for each word spontaneously recalled without cueing.
Clock Draw: _____ (0 or 2 points)	Normal clock = 2 points. A normal clock has all numbers placed in the correct sequence and approximately correct position (e.g., 12, 3, 6 and 9 are in anchor positions) with no missing or duplicate numbers. Hands are pointing to the 11 and 2 (11:10). Hand length is not scored. Inability or refusal to draw a clock (abnormal) = 0 points.
Total Score: _____ (0-5 points)	Total score = Word Recall score + Clock Draw score. A cut point of <3 on the Mini-Cog™ has been validated for dementia screening, but many individuals with clinically meaningful cognitive impairment will score higher. When greater sensitivity is desired, a cut point of <4 is recommended as it may indicate a need for further evaluation of cognitive status.

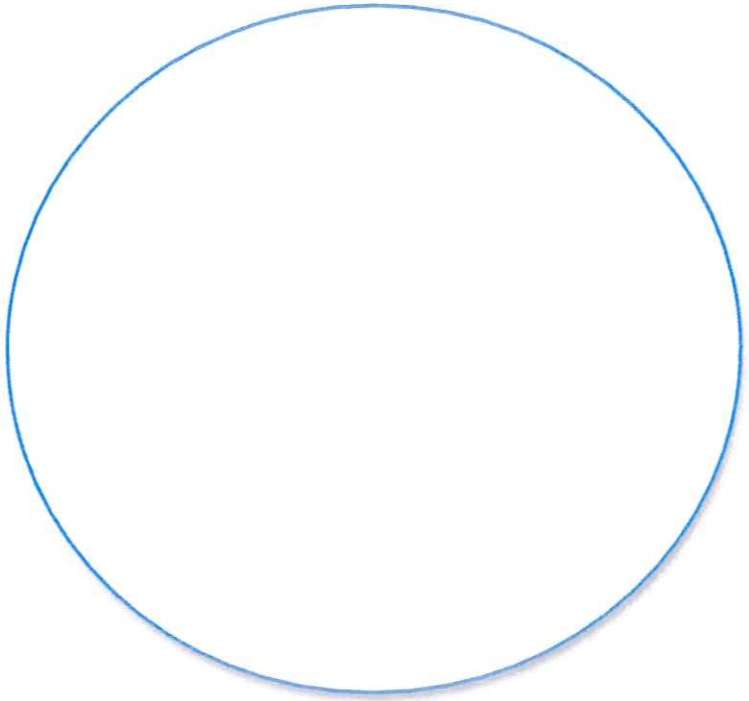
Clock Drawing

ID: _____ Date: _____



Anexo XII. *CLOCK TEST*

Please imagine that this pre-drawn circle is a clock. I would like you to place the numbers in the correct positions and then place the hands to indicate a time of 'ten past eleven'



CONSULTANT SURGEON SCORE **NOT F** **MOD F** **SEV F**

Reported Edmonton frailty score Hilmer et al Aust J Ageing 2009 28:182

EMacD 06/12

Anexo XIII. *ADDENBROOKE'S COGNITIVE EXAMINATION*-III – ACE-III

ADDENBROOKE'S COGNITIVE EXAMINATION – ACE-III
English Version A (2012)

Name: Date of Birth: Hospital No. or Address:	Date of testing: ___/___/___ Tester's name:_____ Age at leaving full-time education:_____ Occupation: _____ Handedness: _____

ATTENTION

➢ Ask: What is the	Day _____	Date _____	Month _____	Year _____	Season _____	**Attention** [Score 0-5] ☐
➢ Ask: Which	No./Floor _____	Street/Hospital _____	Town _____	County _____	Country _____	**Attention** [Score 0-5] ☐

ATTENTION

➢ Tell: "I'm going to give you three words and I'd like you to repeat them after me: lemon, key and ball." After subject repeats, say "Try to remember them because I'm going to ask you later". ➢ Score *only* the first trial (repeat 3 times if necessary). ➢ Register number of trials: _____	**Attention** [Score 0-3] ☐

ATTENTION

➢ Ask the subject: "Could you take 7 away from 100? I'd like you to keep taking 7 away from each new number until I tell you to stop." ➢ If subject makes a mistake, do not stop them. Let the subject carry on and check subsequent answers (e.g., 93, 84, 77, 70, 63 – score 4). ➢ Stop after five subtractions (93, 86, 79, 72, 65): ____ ____ ____ ____ ____	**Attention** [Score 0-5] ☐

MEMORY

➢ Ask: 'Which 3 words did I ask you to repeat and remember?' _____ _____ _____	**Memory** [Score 0-3] ☐

FLUENCY

➢ **Letters** Say: "I'm going to give you a letter of the alphabet and I'd like you to generate as many words as you can beginning with that letter, but not names of people or places. For example, if I give you the letter "C", you could give me words like "cat, cry, clock" and so on. But, you can't give me words like Catherine or Canada. Do you understand? Are you ready? You have one minute. The letter I want you to use is the letter "P".	**Fluency** [Score 0 – 7] ☐

				≥ 18	7
				14-17	6
				11-13	5
				8-10	4
				6-7	3
				4-5	2
				2-3	1
				0-1	0
				total	correct

➢ **Animals** Say: "Now can you name as many animals as possible. It can begin with any letter."	**Fluency** [Score 0 – 7] ☐

				≥ 22	7
				17-21	6
				14-16	5
				11-13	4
				9-10	3
				7-8	2
				5-6	1
				<5	0
				total	correct

M E M O R Y

- Tell: "I'm going to give you a name and address and I'd like you to repeat the name and address after me. So you have a chance to learn, we'll be doing that 3 times. I'll ask you the name and address later."

Score only the third trial.

Memory
[Score 0 – 7]

	1st Trial	*2nd Trial*	*3rd Trial*
Harry Barnes 73 Orchard Close Kingsbridge Devon	_____ _____ ____ _____ _____ _____ _____	_____ _____ ____ _____ _____ _____ _____	_____ _____ ____ _____ _____ _____ _____

M E M O R Y

- Name of the current Prime Minister.....
- Name of the woman who was Prime Minister .....
- Name of the USA president.....
- Name of the USA president who was assassinated in the 1960s.....

Memory
[Score 0 – 4]

L A N G U A G E

- Place a pencil and a piece of paper in front of the subject. As a practice trial, ask the subject to "**Pick up the pencil and then the paper**." If incorrect, score 0 and do not continue further.

- If the subject is correct on the practice trial, continue with the following three commands below.
  - Ask the subject to "**Place the paper on top of the pencil**"
  - Ask the subject to "**Pick up the pencil but not the paper**"
  - Ask the subject to "**Pass me the pencil after touching the paper**"

  Note: Place the pencil and paper in front of the subject before each command.

Language
[Score 0-3]

L A N G U A G E

- Ask the subject to write two (or more) complete sentences about his/her last holiday/weekend/Christmas. Write in complete sentences and do not use abbreviations.
  Give 1 point if there are two (or more) complete sentences about the one topic; and give another 1 point if grammar and spelling are correct.

Language
[Score 0-2]

L A N G U A G E

- Ask the subject to repeat: **'caterpillar'; 'eccentricity; 'unintelligible'; 'statistician'**

Score 2 if all are correct; score 1 if 3 are correct; and score 0 if 2 or less are correct.

Language
[Score 0-2]

L A N G U A G E

➢ Ask the subject to repeat: **'All that glitters is not gold'**

Language
[Score 0-1]

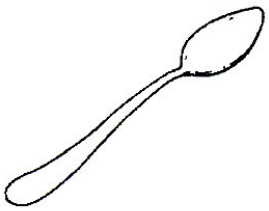
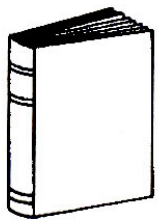
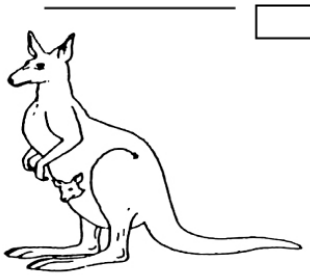
➢ Ask the subject to repeat: **'A stitch in time saves nine'**

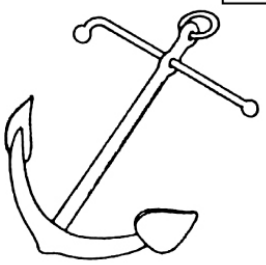
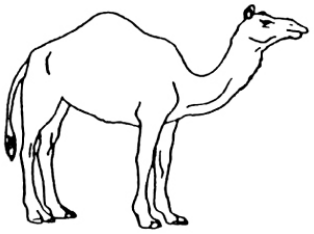
Language
[Score 0-1]

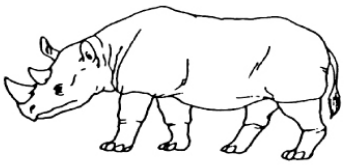
L A N G U A G E

➢ Ask the subject to name the following pictures:

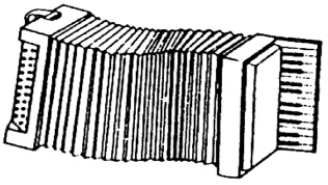
Language
[Score 0-12]







L A N G U A G E

➢ Using the pictures above, ask the subject to:

Language
[Score 0-4]

- Point to the one which is associated with the monarchy ……..
- Point to the one which is a marsupial ……..
- Point to the one which is found in the Antarctic ……
- Point to the one which has a nautical connection ……

LANGUAGE

- Ask the subject to read the following words: (Score 1 only if all correct)

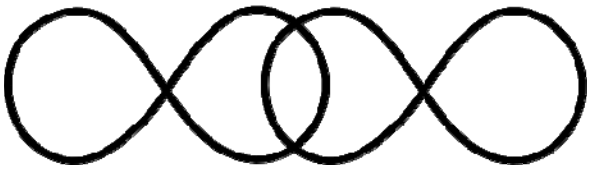
Language
[Score 0-1]

sew
pint
soot
dough
height

VISUOSPATIAL ABILITIES

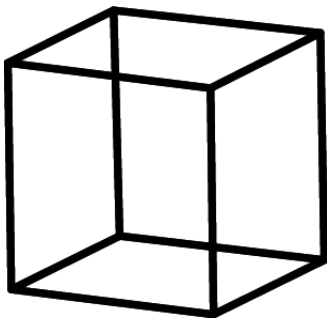
- Infinity Diagram: Ask the subject to copy this diagram

Visuospatial
[Score 0-1]



- Wire cube: Ask the subject to copy this drawing (for scoring, see instructions guide).

Visuospatial
[Score 0-2]



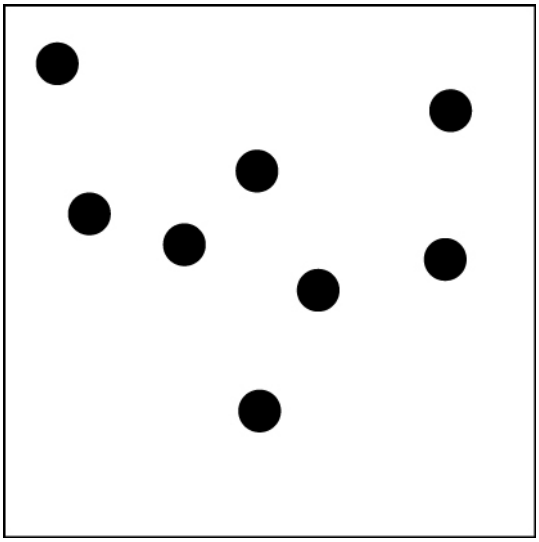
- Clock: Ask the subject to draw a clock face with numbers and the hands at ten past five. (For scoring see instruction guide: circle = 1, numbers = 2, hands = 2 if all correct).

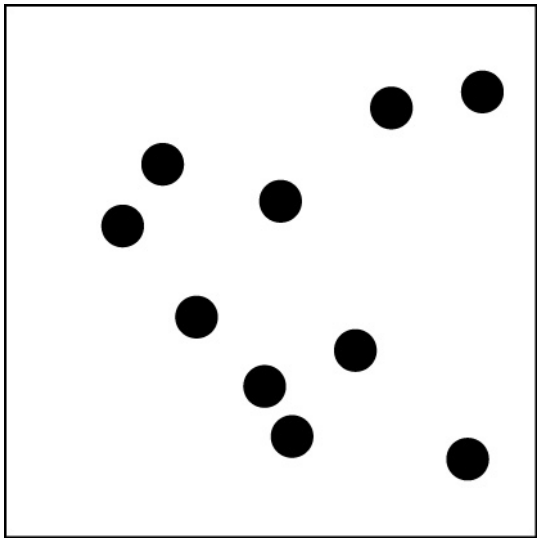
Visuospatial
[Score 0-5]

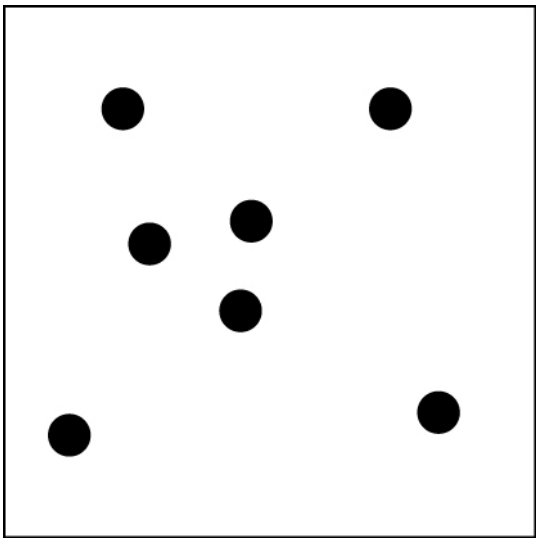
VISUOSPATIAL ABILITIES

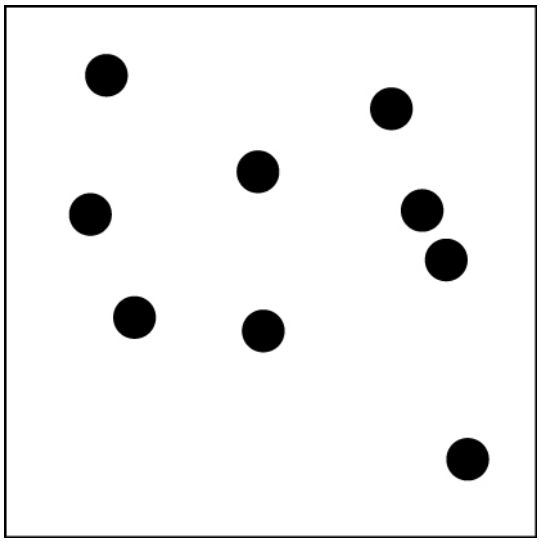
- Ask the subject to count the dots without pointing to them

Visuospatial
[Score 0-4]





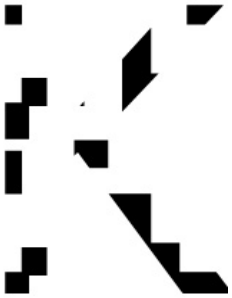


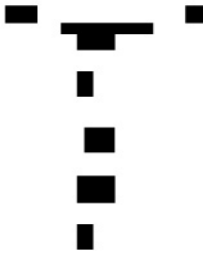


VISUOSPATIAL ABILITIES

➢ Ask the subject to identify the letters

Visuospatial [Score 0-4] ☐





MEMORY

➢ Ask "Now tell me what you remember about that name and address we were repeating at the beginning"

Harry Barnes 73 Orchard Close Kingsbridge Devon	……. …… …… …… …… …… ……	**Memory** [Score 0-7] ☐

MEMORY

➢ This test should be done if the subject failed to recall one or more items above. It all items were recalled, skip the test and score 5. If only part was recalled start by ticking items recalled in the shadowed column on the right hand side; and then test not recalled items by telling the subject "ok, I'll give you some hints: was the name X, Y or Z?" and so on. Each recognised item scores one point, which is added to the point gained by recalling.

Memory [Score 0-5] ☐

Jerry Barnes	☐	Harry Barnes	☐	Harry Bradford	☐	recalled	☐
37	☐	73	☐	76	☐	recalled	☐
Orchard Place	☐	Oak Close	☐	Orchard Close	☐	recalled	☐
Oakhampton	☐	Kingsbridge	☐	Dartington	☐	recalled	☐
Devon	☐	Dorset	☐	Somerset	☐	recalled	☐

SCORES

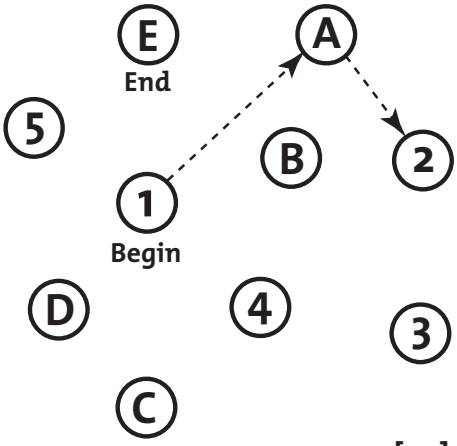
TOTAL ACE-III SCORE	/100
Attention	/18
Memory	/26
Fluency	/14
Language	/26
Visuospatial	/16

Anexo XIV. *MONTREAL COGNITIVE ASSESSMENT* (MOCA) *TEST*

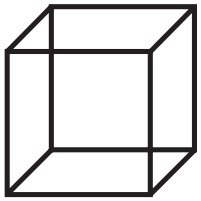
MONTREAL COGNITIVE ASSESSMENT (MOCA)

NAME :
Education : Date of birth :
Sex : DATE :

VISUOSPATIAL / EXECUTIVE



Copy cube



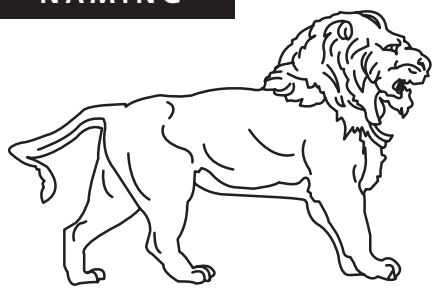
[ ] [ ]

Draw CLOCK (Ten past eleven)
(3 points)

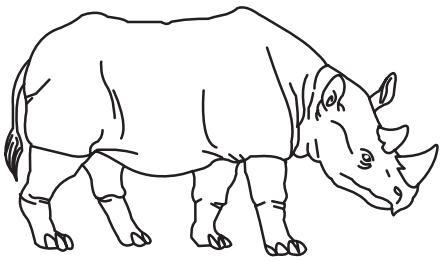
[ ] Contour [ ] Numbers [ ] Hands

POINTS ___/5

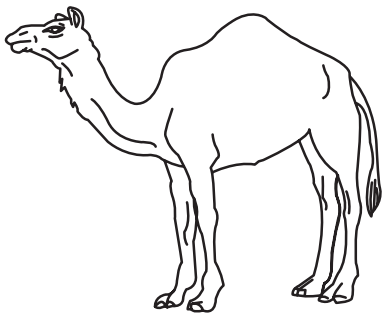
NAMING



[ ]



[ ]



[ ]

___/3

MEMORY

Read list of words, subject must repeat them. Do 2 trials. Do a recall after 5 minutes.

	FACE	VELVET	CHURCH	DAISY	RED
1st trial					
2nd trial					

No points

ATTENTION

Read list of digits (1 digit/ sec.). Subject has to repeat them in the forward order [ ] 2 1 8 5 4

Subject has to repeat them in the backward order [ ] 7 4 2

___/2

Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors

[ ] F B A C M N A A J K L B A F A K D E A A A J A M O F A A B

___/1

Serial 7 subtraction starting at 100 [ ] 93 [ ] 86 [ ] 79 [ ] 72 [ ] 65

4 or 5 correct subtractions: **3 pts**, 2 or 3 correct: **2 pts**, 1 correct: **1 pt**, 0 correct: **0 pt**

___/3

LANGUAGE

Repeat : I only know that John is the one to help today. [ ]

The cat always hid under the couch when dogs were in the room. [ ]

___/2

Fluency / Name maximum number of words in one minute that begin with the letter F [ ] _____ (N ≥ 11 words)

___/1

ABSTRACTION

Similarity between e.g. banana - orange = fruit [ ] train – bicycle [ ] watch - ruler

___/2

DELAYED RECALL

		FACE	VELVET	CHURCH	DAISY	RED	
	Has to recall words WITH NO CUE	[ ]	[ ]	[ ]	[ ]	[ ]	Points for UNCUED recall only
Optional	Category cue						
	Multiple choice cue						

___/5

ORIENTATION

[ ] Date [ ] Month [ ] Year [ ] Day [ ] Place [ ] City

___/6

 Version November 7, 2004

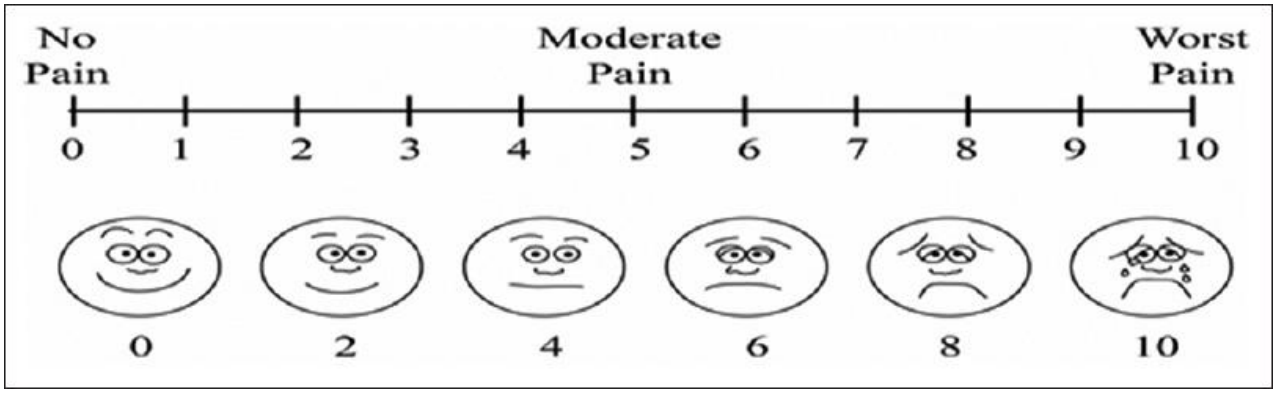
www.mocatest.org

Normal ≥ 26 / 30

TOTAL ___/30

Add 1 point if ≤ 12 yr edu

Anexo XV. *VISUAL ANALOGUE SCALE* – VAS


No Pain
Moderate Pain
Worst Pain
0 1 2 3 4 5 6 7 8 9 10
0
2
4
6
8
10

Anexo XVI. *GET UP AND GO TEST*

WESTERN GENERAL HOSPITAL

SURGICAL FRAILTY PREADMISSION CLINIC

THE 'GET UP AND GO' TEST

An assessment of falls risk

INSTRUCTIONS

The person may wear their usual footwear and can use any walking aid they normally use.

- Have the person sit in the chair with their back to the chair
- Ask the person to stand up from a standard chair - without use of arm rest if possible - and walk a distance of 10 ft (3m).
- Have the person turn around, walk back to the chair and sit down again.

OBSERVE THE FOLLOWING

- Transfers from sitting to standing
- Pace and stability of walking
- Ability to turn without staggering

SCORING (QUALITATIVE)

1 Well-coordinated movements, without walking aid = No fall risk
2 Controlled but adjusted movements = Low fall risk
3 Uncoordinated movements = Some fall risk
4 Supervision necessary = High fall risk
5 Physical support needed to stand = Very high fall risk

Anexo XVII. *TIMED UP AND GO TEST* – TUG

WESTERN GENERAL HOSPITAL
SURGICAL FRAILTY PREADMISSION CLINIC

TIMED UP AND GO TEST

An assessment of mobility and falls risk

INSTRUCTIONS

The person may wear their usual footwear and can use any walking aid they normally use.

- Have the person sit in the chair with their back to the chair
- Ask the person to stand up from a standard chair and walk a distance of 10 ft (3m).
- Have the person turn around, walk back to the chair and sit down again.

Timing begins when the person starts to rise from the chair and ends when he or she returns to the chair and sits down.

SCORING

<10 'Normal'
10-19 some impairment
>20 Impaired mobility

Podsiadlo, D., Richardson, S. The timed 'Up and Go' Test: a Test of Basic Functional Mobility for Frail Elderly Persons. Journal of American Geriatric Society. 1991; 39:142

Anexo XVIII. *BEERS CRITERIA*

CLINICAL INVESTIGATION

American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults

*By the 2019 American Geriatrics Society Beers Criteria® Update Expert Panel**

The American Geriatrics Society (AGS) Beers Criteria® (AGS Beers Criteria®) for Potentially Inappropriate Medication (PIM) Use in Older Adults are widely used by clinicians, educators, researchers, healthcare administrators, and regulators. Since 2011, the AGS has been the steward of the criteria and has produced updates on a 3-year cycle. The AGS Beers Criteria® is an explicit list of PIMs that are typically best avoided by older adults in most circumstances or under specific situations, such as in certain diseases or conditions. For the 2019 update, an interdisciplinary expert panel reviewed the evidence published since the last update (2015) to determine if new criteria should be added or if existing criteria should be removed or undergo changes to their recommendation, rationale, level of evidence, or strength of recommendation. **J Am Geriatr Soc 00:1–21, 2019.**

Key words: medications; drugs; older adults; Beers list; Beers Criteria

The American Geriatrics Society (AGS) Beers Criteria® (AGS Beers Criteria®) for Potentially Inappropriate Medication (PIM) Use in Older Adults are widely used by clinicians, educators, researchers, healthcare administrators, and regulators. Since 2011, the AGS has been the steward of the criteria and has produced updates on a 3-year cycle that began in 2012.[1,2] The AGS Beers Criteria® are an explicit list of PIMs that are typically best avoided by older adults in most circumstances or under specific situations, such as in certain diseases or conditions.

From the *American Geriatrics Society, New York, New York.

Address correspondence to Mary Jordan Samuel, American Geriatrics Society, 40 Fulton St, 18th Floor, New York, NY 10038. E-mail: mjsamuel@americangeriatrics.org

See related editorial by Michael Steinman et al.

DOI: 10.1111/jgs.15767

For the 2019 update, an interdisciplinary expert panel reviewed the evidence published since the last update (2015) to determine if new criteria should be added or if existing criteria should be removed or undergo changes to their recommendation, rationale, level of evidence, or strength of recommendation. Each of the five types of criteria in the 2015 update were retained in this 2019 update: medications that are potentially inappropriate in most older adults, those that should typically be avoided in older adults with certain conditions, drugs to use with caution, drug-drug interactions, and drug dose adjustment based on kidney function.

OBJECTIVES

The specific aim was to update the 2015 AGS Beers Criteria® using a comprehensive, systematic review and grading of the evidence on drug-related problems and adverse events in older adults. The strategies to achieve this aim were to:

- Incorporate new evidence on PIMs included in the 2015 AGS Beers Criteria® and evidence regarding new criteria or modifications of existing criteria being considered for the 2019 update.
- Grade the strength and quality of each PIM statement based on the level of evidence and strength of recommendation.
- Convene an interdisciplinary panel of 13 experts in geriatric care and pharmacotherapy who would apply a modified Delphi method, informed by the systematic review and grading, to reach consensus on the 2019 update.
- Incorporate exceptions in the AGS Beers Criteria® that the panel deemed clinically appropriate. These exceptions would be designed to make the criteria more individualized to clinical practice and be more relevant across settings of care.

INTENT OF CRITERIA

The primary target audience for the AGS Beers Criteria® is practicing clinicians. The criteria are intended for use in adults 65 years and older in all ambulatory, acute, and institutionalized settings of care, except for the hospice and palliative care settings. Consumers, researchers, pharmacy benefits managers, regulators, and policymakers also widely use the AGS Beers Criteria®. The intention of the AGS Beers Criteria® is to improve medication selection;

0002-8614/18/$15.00

educate clinicians and patients; reduce adverse drug events; and serve as a tool for evaluating quality of care, cost, and patterns of drug use of older adults.

As with previously published AGS Beers Criteria®, the goal of the 2019 update continues to be improving the care of older adults by reducing their exposure to PIMs that have an unfavorable balance of benefits and harms compared with alternative treatment options. This is accomplished by using the AGS Beers Criteria® as both an educational tool and a quality measure—two uses that are not always in agreement—and the panel considered and vigorously deliberated both. The AGS Beers Criteria® are not meant to be applied in a punitive manner. Prescribing decisions are not always clear-cut, and clinicians must consider multiple factors, including discontinuation of medications no longer indicated. Quality measures must be clearly defined, easily applied, and measured with limited information and, thus, although useful, cannot perfectly distinguish appropriate from inappropriate care. The panel's review of evidence at times identified subgroups of individuals who should be exempt from a given criterion or to whom a specific criterion should apply. Such a criterion may not be easily applied as a quality measure, particularly when such subgroups cannot be easily identified through structured and readily accessible electronic health data. As an example, the panel thought that a criterion should not be expanded to include all adults 65 years and older when only certain subgroups have an adverse balance of benefits vs harms for the medication, or conversely when a sizable subgroup of older adults may be appropriate candidates for a medication that is otherwise problematic.

Despite past and current efforts to translate the criteria into practice, some controversy and myths about their use in practice and policy continue to prevail. The panel addressed these concerns and myths by writing a companion article to the 2015 update of the AGS Beers Criteria® and an updated 2019 short piece, which remains the best way to advise patients, providers, and health systems on how to use (and not use) the 2019 AGS Beers Criteria®.[3]

METHODS

Methods used for the 2019 update of the AGS Beers Criteria® were similar to those used in the 2015 update, with additional emphasis on extending the rigor of the evidence review and synthesis process.[2] These methods were based on the Grading of Recommendations Assessment, Development and Evaluation (GRADE) guidelines for clinical practice guideline development and are consistent with recommendations from the National Academy of Medicine.[4,5]

Panel Composition

The AGS Beers Criteria® expert update panel comprised 13 clinicians and included physicians, pharmacists, and nurses, each of whom had participated in the 2015 update. Panelists had experience in different practice settings, including ambulatory care, home care, acute hospital care, skilled-nursing facility, and long-term care. In addition, the panel included ex-officio representatives from the Centers for Medicare and Medicaid Services, the National Committee for Quality Assurance, and the Pharmacy Quality Alliance. Potential conflicts of interest were disclosed at the beginning of the process and before each full panel call and are listed in the disclosures section of this article. Panelists were recused from discussion in areas in which they had a potential conflict of interest.

Literature Review

Literature searches were conducted in PubMed and the Cochrane Library from January 1, 2015, to September 30, 2017. Search terms for each criterion included individual drugs, drug classes, specific conditions, and combinations thereof, each with a focus on "adverse drug events" and "adverse drug reactions." Medications believed to have low utilizations (eg, meprobamate and central α-agonist antihypertensives other than clonidine) or no longer available in the United States were excluded from the literature search. Searches targeted controlled clinical trials, observational studies, and systematic reviews and meta-analyses, with filters for human participants, 65 years and older, and English language. Clinical reviews and guidelines were also included to provide context. Case reports, case series, letters to the editor, and editorials were excluded.

Searches identified 17,627 references; 5403 abstracts were sent to panelists for review, of which 1422 references were selected for full-text review. Among these, 377 articles were abstracted into evidence tables, including 67 systematic reviews and/or meta-analyses, 29 controlled clinical trials, and 281 observational studies.

Development Process

Between February 2016 and May 2018, the full panel convened for a series of conference calls and 1 full-day, in-person meeting. In addition, the panel divided into four work groups, each assigned a subset of the criteria. Each work group led the review and synthesis of evidence for its subset of the criteria, convening via conference calls and electronically via e-mail.

The development process began by soliciting ideas from the panelists about criteria that should be explored for addition, modification, or removal. Suggestions from others were also welcomed. To guide the evidence selection, review, and synthesis process, each work group then undertook an exercise to identify a priori which clinical outcomes, indications, and comparison groups were most relevant when considering evidence for each criterion (ie, the "desired evidence" for reviewing each criterion). These discussions were not considered binding but provided guidance for keeping the evidence review and synthesis focused on what was most clinically relevant.

Each work group reviewed abstracts from the literature searches for the criteria in its purview and collectively selected a subset for full-text review. This selection process considered the methodologic quality of each study, its relevance to older adults, and its concordance with the desired evidence noted above. After reviewing the full text of each selected article, the work group then decided by consensus which articles represented the best available evidence, based on a balance of these same three key criteria (methodologic quality, relevance to older adults, and concordance with

desired evidence). Special emphasis was placed on selecting systematic reviews and meta-analyses when available, because resource constraints precluded the panel from conducting these types of comprehensive analyses. In general, a study was considered relevant to older adults if the mean or median age of participants was older than 65 years, and especially relevant if most or all participants were older than this age threshold.

Articles comprising the best available evidence were abstracted by AGS staff into evidence tables. These tables summarized the design, population, and findings of each study, and identified markers of methodologic quality highlighted by the GRADE criteria for clinical trials and observational studies and by A MeaSurement Tool to Assess Systematic Reviews (AMSTAR).[6–8] Each work group then synthesized evidence for each criterion from the 2015 to 2017 literature reviews based on GRADE guidelines and the American College of Physicians' evidence grading framework (Table 1).[6,9]

Using evidence from the 2015 to 2017 literature review, evidence findings from previous updates in 2012 and 2015, and clinical judgment, each work group presented to the full panel its findings and suggestions for changes (or no change) to the criteria, with ensuing discussion. For most criteria, a consensus emerged, to leave an existing criterion from the 2015 update unchanged, to modify it, to remove it entirely, or to add a new criterion. Potential modifications included the drug(s) included in the criterion, the recommendation, the rationale, the quality of evidence, and the strength of recommendation. As noted in the GRADE guidelines, strength of recommendation ratings incorporate a variety of considerations, including expert opinion and clinical judgment and context, and thus do not always align with quality of evidence ratings.

After discussion of proposed changes, an anonymous Delphi process was used to ascertain panel consensus, using a five-point Likert scale with anchors of "strongly disagree" and "strongly agree." As a general rule, criteria receiving "agree" or strongly agree ratings from more than 90% of panelists were included. The remainder were brought back for group discussion, with final decisions resolved through consensus.

In addition to changes made on the basis of evidence, the panel decided on several modifications to improve clarity and usability of the AGS Beers Criteria®. These included removing a number of medications that are used only rarely. These removals should not be interpreted as condoning use of these medications but rather are intended to "declutter" the AGS Beers Criteria® and not distract from information on more commonly used medications. In selected cases, the panel changed the wording of certain criteria, recommendations, and rationale statements to improve clarity and avoid potential misinterpretations.

The final set of criteria was reviewed by the AGS Executive Committee and Clinical Practice and Models of Care Committee and subsequently released for public comment. Comments were solicited from the general public and sent to 39 organizations. Comments were accepted over a 3-week period from August 13, 2018, until September 4, 2018. A total of 244 comments were received from 47 individuals (79 comments), 6 pharmaceutical companies (10 comments), and 22 peer organizations (155 comments). All comments were reviewed and discussed by the panel cochairs. All comments along with proposed changes to the criteria were shared with the entire panel for final approval.

RESULTS

Noteworthy Changes to PIMs for Older Adults

Tables 2 through 6 show the 2019 criteria. Table 7 lists those drugs with strong anticholinergic properties that are sometimes referenced in Tables 2 through 6. Compared with the 2015 criteria, several drugs were removed from Table 2 (medications that are potentially inappropriate in most older adults), Table 3 (medications that are potentially inappropriate in older adults with certain conditions), and Table 4 (medications that should be used with caution). These removals are summarized in Table 8 and include removal of drugs no longer available in the United States (ticlopidine, oral pentazocine). In other cases, the recommendation was removed entirely because the panel decided the drug-related problem was not sufficiently unique to older adults (eg, using stimulating medications in patients with insomnia or avoiding medications that can lower the seizure threshold in patients with a seizure disorder). These removals do not imply that these medications are now considered safe for older adults; rather, they were made to help keep the AGS Beers Criteria® streamlined and focused on medications particularly problematic for older adults.

The H2-receptor antagonists were removed from the "avoid" list in patients with dementia or cognitive impairment. This is because evidence for adverse cognitive effects in these conditions is weak, and because the panel expressed concern that the intersection of this criterion with another criterion that discourages chronic use of proton-pump inhibitors in the absence of strong indications would overly restrict therapeutic options for older adults with dementia who have gastroesophageal reflux or similar issues. However, H2-receptor antagonists remain on the criteria as "avoid" in patients with delirium. In addition, wording of this criterion was modified to affirm that nonbenzodiazepine, benzodiazepine receptor agonist hypnotics (ie, the "Z drugs": zolpidem, eszopiclone, and zaleplon) should be avoided in older adults with delirium.

Two drugs with strong anticholinergic properties, pyrilamine and methscopolamine, were added to the list of anticholinergic drugs to avoid. Changes to criteria on cardiovascular drugs include minor updates to the rationale and a minor change to clarify the recommendation for avoiding digoxin as first-line therapy for atrial fibrillation and heart failure (Table 2). The rationale to avoid sliding-scale insulin has been revised to clarify its meaning and intent (Table 2). Glimepiride has been added to the list of sulfonylureas with a greater risk of severe prolonged hypoglycemia (Table 2). The duration of use of metoclopramide has been added to be consistent with US Food and Drug Administration labeling (Table 2).

The serotonin-norepinephrine reuptake inhibitors (SNRIs) have been added to the list of drugs to avoid in patients with a history of falls or fractures (Table 3). Following a principle that applies to all criteria, the panel recognizes there may be situations when SNRIs, other antidepressants, and other medications listed in this criterion may be appropriate for people with a history of falls

Table 1. Designations of Quality of Evidence and Strength of Recommendations[a]

Quality of Evidence		
Quality of evidence ratings for each criterion are based on synthetic assessment of two complementary approaches to evaluating the quality of evidence.		
	ACP-based approach[9]	GRADE-based approach[4]
High-quality evidence	"Evidence…obtained from 1 or more well-designed and well-executed randomized, controlled trials (RCTs) that yield consistent and directly applicable results. This also means that further research is very unlikely to change our confidence in the estimate of effect."	Consider the following five factors for the studies that comprise the best-available evidence for a given criterion: 1. *Risk of bias:* Severity of threats to studies' internal validity (eg, randomized vs observational design, potential for confounding, bias in measurement) 2. *Inconsistency:* Do different studies provide similar or different estimates of effect size 3. *Indirectness:* How relevant are the studies to the clinical question at hand (eg, nature of study of population, comparison group, type of outcomes measured) 4. *Imprecision:* Precision of estimates of effect 5. *Publication bias:* Risk of bias due to selective publication of results
Moderate-quality evidence	"Evidence…obtained from RCTs with important limitations…. In addition, evidence from well-designed controlled trials without randomization, well-designed cohort or case-control analytic studies, and multiple time series with or without intervention are in this category. Moderate-quality evidence also means that further research will probably have an important effect on our confidence in the estimate of effect and may change the estimate."	
Low-quality evidence	"Evidence obtained from observational studies would typically be rated as low quality because of the risk for bias. Low-quality evidence means that further research is very likely to have an important effect on our confidence in the estimate of effect and will probably change the estimate. However, the quality of evidence may be rated as moderate or even high, depending on circumstances under which evidence is obtained from observational studies."	
↓↓↓↓↓		
Overall quality of evidence that supports a given criterion: high, moderate, low		
Strength of Evidence		
Strength of evidence ratings for each criterion are based on synthetic integration of the quality of evidence, the frequency and severity of potential adverse events and relationship to potential benefits, and clinical judgment.		
Strong	Harms, adverse events, and risks clearly outweigh benefits.	
Weak	Harms, adverse events, and risks may not outweigh benefits.	

Abbreviations: ACP, American College of Physicians; GRADE, Grading of Recommendations Assessment, Development and Evaluation.

[a]Adapted from: Qaseem A, Snow V, Owens DK, et al. The development of clinical practice guidelines and guidance statements of the American College of Physicians: summary of methods. Ann Intern Med. 2010;153:194-–199. Guyatt G, Oxman AD, Sultan S, et al. GRADE guidelines,: 11.: making an overall rating of confidence in effect estimates for a single outcome and for all outcomes. J Clin Epidemiol. 2013;66(2):151-–157. Andrews JC, Schünemann HJ, Oxman AD, et al. GRADE guidelines,: 15.: going from evidence to recommendation-determinants of a recommendation's direction and strength. J Clin Epidemiol. 2013;66(7):726–735.

or fractures, based on potential benefits and the lack of availability of safer alternatives. After reviewing and discussing the evidence on antipsychotics to treat psychosis in patients with Parkinson disease, the panel decided to remove aripiprazole as preferred and add pimavanserin. Thus, the 2019 AGS Beers Criteria® recognize quetiapine, clozapine, and pimavanserin as exceptions to the general recommendation to avoid all antipsychotics in older adults with Parkinson disease (Table 3). However, none of these three excepted drugs is close to ideal in either efficacy or safety, each having its own limitations and concerns.

The criteria on drugs to avoid in older adults with heart failure were reorganized to add clinical nuance based on evidence, other guideline recommendations, and clinical considerations. The updated recommendations are that nondihydropyridine calcium channel blockers should be avoided in older adults who have heart failure with reduced ejection fraction; that nonsteroidal anti-inflammatory drug (NSAIDs), cyclooxygenase-2 inhibitors, thiazolidinediones ("glitazones"), and dronedarone should be used *with caution* in older adults with heart failure who are asymptomatic (ie, excellent control of heart failure signs and symptoms, with or without use of medications) and *avoided* in older adults who are symptomatic; and that cilostazol should continue to be avoided in older adults with heart failure of any type.

Drugs To Be Used With Caution

Table 4 contains drugs to be used with caution in older adults. The purpose of this table is to identify drugs for which there is some cause for concern, but for which the evidence and/or clinical context is as of yet insufficient to merit inclusion in the main tables. Compared with the previous update, the following changes and additions were made:

- The age threshold beyond which extra caution is advised for using aspirin for primary prevention of cardiovascular disease

Table 2. 2019 American Geriatrics Society Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults[a]

Organ System, Therapeutic Category, Drug(s)	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Anticholinergics[b]				
First-generation antihistamines Brompheniramine Carbinoxamine Chlorpheniramine Clemastine Cyproheptadine Dexbrompheniramine Dexchlorpheniramine Dimenhydrinate Diphenhydramine (oral) Doxylamine Hydroxyzine Meclizine Promethazine Pyrilamine Triprolidine	Highly anticholinergic; clearance reduced with advanced age, and tolerance develops when used as hypnotic; risk of confusion, dry mouth, constipation, and other anticholinergic effects or toxicity Use of diphenhydramine in situations such as acute treatment of severe allergic reaction may be appropriate.	Avoid	Moderate	Strong
Antiparkinsonian agents Benztropine (oral) Trihexyphenidyl	Not recommended for prevention or treatment of extrapyramidal symptoms with antipsychotics; more effective agents available for treatment of Parkinson disease	Avoid	Moderate	Strong
Antispasmodics Atropine (excludes ophthalmic) Belladonna alkaloids Clidinium-chlordiazepoxide Dicyclomine Homatropine (excludes opthalmic) Hyoscyamine Methscopolamine Propantheline Scopolamine	Highly anticholinergic, uncertain effectiveness	Avoid	Moderate	Strong
Antithrombotics				
Dipyridamole, oral short acting (does not apply to the extended-release combination with aspirin)	May cause orthostatic hypotension; more effective alternatives available; IV form acceptable for use in cardiac stress testing	Avoid	Moderate	Strong
Anti-infective				
Nitrofurantoin	Potential for pulmonary toxicity, hepatoxicity, and peripheral neuropathy, especially with long-term use; safer alternatives available	Avoid in individuals with creatinine clearance <30 mL/min or for long-term suppression	Low	Strong
Cardiovascular				
Peripheral alpha-1 blockers for treatment of hypertension Doxazosin Prazosin Terazosin	High risk of orthostatic hypotension and associated harms, especially in older adults; not recommended as routine treatment for hypertension; alternative agents have superior risk/benefit profile	Avoid use as an antihypertensive	Moderate	Strong

(Continued)

Table 2 (Contd.)

Organ System, Therapeutic Category, Drug(s)	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Central alpha-agonists Clonidine for first-line treatment of hypertension Other CNS alpha-agonists Guanabenz Guanfacine Methyldopa Reserpine (>0.1 mg/day)	High risk of adverse CNS effects; may cause bradycardia and orthostatic hypotension; not recommended as routine treatment for hypertension	Avoid as first-line antihypertensive Avoid other CNS alpha-agonists as listed	Low Low	Strong Strong
Disopyramide	May induce heart failure in older adults because of potent negative inotropic action; strongly anticholinergic; other antiarrhythmic drugs preferred	Avoid	Low	Strong
Dronedarone	Worse outcomes have been reported in patients taking dronedarone who have permanent atrial fibrillation or severe or recently decompensated heart failure.	Avoid in individuals with permanent atrial fibrillation or severe or recently decompensated heart failure	High	Strong
Digoxin for first-line treatment of atrial fibrillation or of heart failure	Use in atrial fibrillation: should not be used as a first-line agent in atrial fibrillation, because there are safer and more effective alternatives for rate control supported by high-quality evidence. Use in heart failure: evidence for benefits and harms of digoxin is conflicting and of lower quality; most but not all of the evidence concerns use in HFrEF. There is strong evidence for other agents as first-line therapy to reduce hospitalizations and mortality in adults with HFrEF. In heart failure, higher dosages are not associated with additional benefit and may increase risk of toxicity. Decreased renal clearance of digoxin may lead to increased risk of toxic effects; further dose reduction may be necessary in those with stage 4 or 5 chronic kidney disease.	Avoid this rate control agent as first-line therapy for atrial fibrillation Avoid as first-line therapy for heart failure If used for atrial fibrillation or heart failure, avoid dosages >0.125 mg/day	Atrial fibrillation: low Heart failure: low Dosage >0.125 mg/day: moderate	Atrial fibrillation: strong Heart failure: strong Dosage >0.125 mg/day: strong
Nifedipine, immediate release	Potential for hypotension; risk of precipitating myocardial ischemia	Avoid	High	Strong
Amiodarone	Effective for maintaining sinus rhythm but has greater toxicities than other antiarrhythmics used in atrial fibrillation; may be reasonable first-line therapy in patients with concomitant heart failure or substantial left ventricular hypertrophy if rhythm control is preferred over rate control	Avoid as first-line therapy for atrial fibrillation unless patient has heart failure or substantial left ventricular hypertrophy	High	Strong
Central nervous system				
Antidepressants, alone or in combination Amitriptyline Amoxapine Clomipramine Desipramine Doxepin >6 mg/day Imipramine	Highly anticholinergic, sedating, and cause orthostatic hypotension; safety profile of low-dose doxepin (≤6 mg/day) comparable to that of placebo	Avoid	High	Strong

Table 2 (Contd.)

Organ System, Therapeutic Category, Drug(s)	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Nortriptyline Paroxetine Protriptyline Trimipramine				
Antipsychotics, first (conventional) and second (atypical) generation	Increased risk of cerebrovascular accident (stroke) and greater rate of cognitive decline and mortality in persons with dementia Avoid antipsychotics for behavioral problems of dementia or delirium unless nonpharmacological options (eg, behavioral interventions) have failed or are not possible *and* the older adult is threatening substantial harm to self or others	Avoid, except in schizophrenia or bipolar disorder, or for short-term use as antiemetic during chemotherapy	Moderate	Strong
Barbiturates Amobarbital Butabarbital Butalbital Mephobarbital Pentobarbital Phenobarbital Secobarbital	High rate of physical dependence, tolerance to sleep benefits, greater risk of overdose at low dosages	Avoid	High	Strong
Benzodiazepines *Short and intermediate acting:* Alprazolam Estazolam Lorazepam Oxazepam Temazepam Triazolam *Long acting:* Chlordiazepoxide (alone or in combination with amitriptyline or clidinium) Clonazepam Clorazepate Diazepam Flurazepam Quazepam	Older adults have increased sensitivity to benzodiazepines and decreased metabolism of long-acting agents; in general, all benzodiazepines increase risk of cognitive impairment, delirium, falls, fractures, and motor vehicle crashes in older adults May be appropriate for seizure disorders, rapid eye movement sleep behavior disorder, benzodiazepine withdrawal, ethanol withdrawal, severe generalized anxiety disorder, and periprocedural anesthesia	Avoid	Moderate	Strong
Meprobamate	High rate of physical dependence; sedating	Avoid	Moderate	Strong
Nonbenzodiazepine, benzodiazepine receptor agonist hypnotics (ie, “Z-drugs”) Eszopiclone Zaleplon Zolpidem	Nonbenzodiazepine benzodiazepine receptor agonist hypnotics (ie, Z drugs) have adverse events similar to those of benzodiazepines in older adults (eg, delirium, falls, fractures); increased emergency room visits/hospitalizations; motor vehicle crashes; minimal improvement in sleep latency and duration	Avoid	Moderate	Strong
Ergoloid mesylates (dehydrogenated ergot alkaloids) Isoxsuprine	Lack of efficacy	Avoid	High	Strong

(Continued)

Table 2 (Contd.)

Organ System, Therapeutic Category, Drug(s)	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Endocrine				
Androgens Methyltestosterone Testosterone	Potential for cardiac problems; contraindicated in men with prostate cancer	Avoid unless indicated for confirmed hypogonadism with clinical symptoms	Moderate	Weak
Desiccated thyroid	Concerns about cardiac effects; safer alternatives available	Avoid	Low	Strong
Estrogens with or without progestins	Evidence of carcinogenic potential (breast and endometrium); lack of cardioprotective effect and cognitive protection in older women	Avoid systemic estrogen (eg, oral and topical patch)	Oral and patch: high	Oral and patch: strong
	Evidence indicates that vaginal estrogens for the treatment of vaginal dryness are safe and effective; women with a history of breast cancer who do not respond to nonhormonal therapies are advised to discuss the risks and benefits of low-dose vaginal estrogen (dosages of estradiol <25 μg twice weekly) with their healthcare provider	Vaginal cream or vaginal tablets: acceptable to use low-dose intravaginal estrogen for management of dyspareunia, recurrent lower urinary tract infections, and other vaginal symptoms	Vaginal cream or vaginal tablets: moderate	Topical vaginal cream or tablets: weak
Growth hormone	Impact on body composition is small and associated with edema, arthralgia, carpal tunnel syndrome, gynecomastia, impaired fasting glucose	Avoid, except for patients rigorously diagnosed by evidence-based criteria with growth hormone deficiency due to an established etiology	High	Strong
Insulin, sliding scale (insulin regimens containing only short- or rapid-acting insulin dosed according to current blood glucose levels without concurrent use of basal or long-acting insulin)	Higher risk of hypoglycemia without improvement in hyperglycemia management regardless of care setting. Avoid insulin regimens that include only short- or rapid-acting insulin dosed according to current blood glucose levels without concurrent use of basal or long-acting insulin. This recommendation does not apply to regimens that contain basal insulin or long-acting insulin.	Avoid	Moderate	Strong
Megestrol	Minimal effect on weight; increases risk of thrombotic events and possibly death in older adults	Avoid	Moderate	Strong
Sulfonylureas, long acting Chlorpropamide Glimepiride Glyburide (also known as glibenclamide)	Chlorpropamide: prolonged half-life in older adults; can cause prolonged hypoglycemia; causes SIADH Glimepiride and glyburide: higher risk of severe prolonged hypoglycemia in older adults	Avoid	High	Strong
Gastrointestinal				
Metoclopramide	Can cause extrapyramidal effects, including tardive dyskinesia; risk may be greater in frail older adults and with prolonged exposure	Avoid, unless for gastroparesis with duration of use not to exceed 12 weeks except in rare cases	Moderate	Strong
Mineral oil, given orally	Potential for aspiration and adverse effects; safer alternatives available	Avoid	Moderate	Strong
Proton-pump inhibitors	Risk of *Clostridium difficile* infection and bone loss and fractures	Avoid scheduled use for >8 weeks unless for high-risk patients (eg, oral corticosteroids or chronic NSAID use), erosive esophagitis, Barrett esophagitis, pathological hypersecretory condition, or demonstrated need for maintenance treatment (eg, because of failure of drug discontinuation trial or H2-receptor antagonists)	High	Strong

Table 2 (Contd.)

Organ System, Therapeutic Category, Drug(s)	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Pain medications				
Meperidine	Oral analgesic not effective in dosages commonly used; may have higher risk of neurotoxicity, including delirium, than other opioids; safer alternatives available	Avoid	Moderate	Strong
Non–cyclooxygenase-selective NSAIDs, oral: Aspirin >325 mg/day Diclofenac Diflunisal Etodolac Fenoprofen Ibuprofen Ketoprofen Meclofenamate Mefenamic acid Meloxicam Nabumetone Naproxen Oxaprozin Piroxicam Sulindac Tolmetin	Increased risk of gastrointestinal bleeding or peptic ulcer disease in high-risk groups, including those >75 years or taking oral or parenteral corticosteroids, anticoagulants, or antiplatelet agents; use of proton-pump inhibitor or misoprostol reduces but does not eliminate risk. Upper gastrointestinal ulcers, gross bleeding, or perforation caused by NSAIDs occur in ~1% of patients treated for 3-6 months and in ~2%-4% of patients treated for 1 year; these trends continue with longer duration of use. Also can increase blood pressure and induce kidney injury. Risks are dose related.	Avoid chronic use, unless other alternatives are not effective and patient can take gastroprotective agent (proton-pump inhibitor or misoprostol)	Moderate	Strong
Indomethacin Ketorolac, includes parenteral	Increased risk of gastrointestinal bleeding/peptic ulcer disease and acute kidney injury in older adults Indomethacin is more likely than other NSAIDs to have adverse CNS effects. Of all the NSAIDs, indomethacin has the most adverse effects.	Avoid	Moderate	Strong
Skeletal muscle relaxants Carisoprodol Chlorzoxazone Cyclobenzaprine Metaxalone Methocarbamol Orphenadrine	Most muscle relaxants poorly tolerated by older adults because some have anticholinergic adverse effects, sedation, increased risk of fractures; effectiveness at dosages tolerated by older adults questionable	Avoid	Moderate	Strong
Genitourinary				
Desmopressin	High risk of hyponatremia; safer alternative treatments	Avoid for treatment of nocturia or nocturnal polyuria	Moderate	Strong

Abbreviations: CNS, central nervous system; HFrEF, heart failure with reduced ejection fraction; NSAID, nonsteroidal anti-inflammatory drug; SIADH, syndrome of inappropriate antidiuretic hormone secretion.

[a]The primary target audience is the practicing clinician. The intentions of the criteria include (1) improving the selection of prescription drugs by clinicians and patients; (2) evaluating patterns of drug use within populations; (3) educating clinicians and patients on proper drug usage; and (4) evaluating health-outcome, quality-of-care, cost, and utilization data.

[b]See also criterion on highly anticholinergic antidepressants.

Table 3. 2019 American Geriatrics Society Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults Due to Drug-Disease or Drug-Syndrome Interactions That May Exacerbate the Disease or Syndrome[a]

Disease or Syndrome	Drug(s)	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Cardiovascular					
Heart failure	Avoid: Cilostazol Avoid in heart failure with reduced ejection fraction: Nondihydropyridine CCBs (diltiazem, verapamil) Use with caution in patients with heart failure who are asymptomatic; avoid in patients with symptomatic heart failure: NSAIDs and COX-2 inhibitors Thiazolidinediones (pioglitazone, rosiglitazone) Dronedarone	Potential to promote fluid retention and/or exacerbate heart failure (NSAIDs and COX-2 inhibitors, nondihydropyridine CCBs, thiazolidinediones); potential to increase mortality in older adults with heart failure (cilostazol and dronedarone)	As noted, avoid or use with caution	Cilostazol: low Nondihydropyridine CCBs: moderate NSAIDs: moderate COX-2 inhibitors: low Thiazolidinediones: high Dronedarone: high	Cilostazol: strong Nondihydropyridine CCBs: strong NSAIDs: strong COX-2 inhibitors: strong Thiazolidinediones: strong Dronedarone: strong
Syncope	AChEIs Nonselective peripheral alpha-1 blockers (ie, doxazosin, prazosin, terazosin) Tertiary TCAs Antipsychotics: Chlorpromazine Thioridazine Olanzapine	AChEIs cause bradycardia and should be avoided in older adults whose syncope may be due to bradycardia. Nonselective peripheral alpha-1 blockers cause orthostatic blood pressure changes and should be avoided in older adults whose syncope may be due to orthostatic hypotension. Tertiary TCAs and the antipsychotics listed increase the risk of orthostatic hypotension or bradycardia.	Avoid	AChEIs, TCAs, and antipsychotics: high Nonselective peripheral alpha-1 blockers: high	AChEIs and TCAs: strong Nonselective peripheral alpha-1 blockers and antipsychotics: weak
Central nervous system					
Delirium	Anticholinergics (see Table 7 and full criteria available on www.geriatricscareonline.org.) Antipsychotics[b] Benzodiazepines Corticosteroids (oral and parenteral)[c] H2-receptor antagonists Cimetidine Famotidine Nizatidine Ranitidine Meperidine Nonbenzodiazepine, benzodiazepine receptor agonist hypnotics: eszopiclone, zaleplon, zolpidem	Avoid in older adults with or at high risk of delirium because of potential of inducing or worsening delirium Avoid antipsychotics for behavioral problems of dementia and/or delirium unless nonpharmacological options (eg, behavioral interventions) have failed or are not possible *and* the older adult is threatening substantial harm to self or others. Antipsychotics are associated with greater risk of cerebrovascular accident (stroke) and mortality in persons with dementia.	Avoid	H2-receptor antagonists: low All others: moderate	Strong
Dementia or cognitive impairment	Anticholinergics (see Table 7 and full criteria available on www.geriatricscareonline.org) Benzodiazepines Nonbenzodiazepine, benzodiazepine receptor agonist hypnotics Eszopiclone	Avoid because of adverse CNS effects Avoid antipsychotics for behavioral problems of dementia and/or delirium unless nonpharmacological options (eg, behavioral interventions) have failed or are not possible *and* the older adult is threatening substantial harm to self or	Avoid	Moderate	Strong

Table 3 (Contd.)

Disease or Syndrome	Drug(s)	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
	Zaleplon Zolpidem Antipsychotics, chronic and as-needed use[b]	others. Antipsychotics are associated with greater risk of cerebrovascular accident (stroke) and mortality in persons with dementia.			
History of falls or fractures	Antiepileptics Antipsychotics[b] Benzodiazepines Nonbenzodiazepine, benzodiazepine receptor agonist hypnotics Eszopiclone Zaleplon Zolpidem Antidepressants TCAs SSRIs SNRIs Opioids	May cause ataxia, impaired psychomotor function, syncope, additional falls; shorter-acting benzodiazepines are not safer than long-acting ones. If one of the drugs must be used, consider reducing use of other CNS-active medications that increase risk of falls and fractures (ie, antiepileptics, opioid-receptor agonists, antipsychotics, antidepressants, nonbenzodiazepine and benzodiazepine receptor agonist hypnotics, other sedatives/hypnotics) and implement other strategies to reduce fall risk. Data for antidepressants are mixed but no compelling evidence that certain antidepressants confer less fall risk than others.	Avoid unless safer alternatives are not available; avoid antiepileptics except for seizure and mood disorders Opioids: avoid except for pain management in the setting of severe acute pain (eg, recent fractures or joint replacement)	Opioids: moderate All others: high	Strong
Parkinson disease	Antiemetics Metoclopramide Prochlorperazine Promethazine All antipsychotics (except quetiapine, clozapine, pimavanserin)	Dopamine-receptor antagonists with potential to worsen parkinsonian symptoms Exceptions: Pimavanserin and clozapine appear to be less likely to precipitate worsening of Parkinson disease. Quetiapine has only been studied in low-quality clinical trials with efficacy comparable to that of placebo in five trials and to that of clozapine in two others.	Avoid	Moderate	Strong
Gastrointestinal					
History of gastric or duodenal ulcers	Aspirin >325 mg/day Non–COX-2–selective NSAIDs	May exacerbate existing ulcers or cause new/additional ulcers	Avoid unless other alternatives are not effective and patient can take gastroprotective agent (ie, proton-pump inhibitor or misoprostol)	Moderate	Strong
Kidney/urinary tract					
Chronic kidney disease stage 4 or higher (creatinine clearance <30 mL/min)	NSAIDs (non-COX and COX selective, oral and parenteral, nonacetylated salicylates)	May increase risk of acute kidney injury and further decline of renal function	Avoid	Moderate	Strong

(Continued)

Table 3 (Contd.)

Disease or Syndrome	Drug(s)	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Urinary incontinence (all types) in women	Estrogen oral and transdermal (excludes intravaginal estrogen) Peripheral alpha-1 blockers Doxazosin Prazosin Terazosin	Lack of efficacy (oral estrogen) and aggravation of incontinence (alpha-1 blockers)	Avoid in women	Estrogen: high Peripheral alpha-1 blockers: moderate	Estrogen: strong Peripheral alpha-1 blockers: strong
Lower urinary tract symptoms, benign prostatic hyperplasia	Strongly anticholinergic drugs, except antimuscarinics for urinary incontinence (see Table 7 and full criteria available on www.geriatricscareonline.org)	May decrease urinary flow and cause urinary retention	Avoid in men	Moderate	Strong

Abbreviations: AChEI, acetylcholinesterase inhibitor; CCB, calcium channel blocker; CNS, central nervous system; COX, cyclooxygenase; NSAID, nonsteroidal anti-inflammatory drug; SNRI, serotonin-norepinephrine reuptake inhibitor; SSRI, selective serotonin reuptake inhibitor; TCA, tricyclic antidepressant.

[a]The primary target audience is the practicing clinician. The intentions of the criteria include (1) improving the selection of prescription drugs by clinicians and patients; (2) evaluating patterns of drug use within populations; (3) educating clinicians and patients on proper drug usage; and (4) evaluating health-outcome, quality-of-care, cost, and utilization data.

[b]May be required to treat concurrent schizophrenia, bipolar disorder, and other selected mental health conditions but should be prescribed in the lowest effective dose and shortest possible duration.

[c]Excludes inhaled and topical forms. Oral and parenteral corticosteroids may be required for conditions such as exacerbation of chronic obstructive pulmonary disease but should be prescribed in the lowest effective dose and for the shortest possible duration.

was lowered to 70 years or older from 80 years or older. This criterion was also expanded to cover use of aspirin as primary prevention of colorectal cancer. Note that this criterion does not apply to use of aspirin for secondary prevention of either disease.

- In addition to the existing caution about dabigatran, the updated criteria highlight caution about use of rivaroxaban for treatment of venous thromboembolism or atrial fibrillation in adults 75 years or older.
- Tramadol was added to the list of drugs associated with hyponatremia or syndrome of inappropriate antidiuretic hormone secretion. The chemotherapeutic agents carboplatin, cyclophosphamide, cisplatin, and vincristine were removed from this list because the panel thought the prescribing of these highly specialized drugs fell outside the scope of the criteria.
- Vasodilators were removed, because syncope is not unique to older adults.
- The combination dextromethorphan/quinidine was added to the "use with caution" table on the basis of limited efficacy in patients with behavioral symptoms of dementia without pseudobulbar affect while potentially increasing the risk of falls and drug-drug interactions.
- The combination trimethoprim-sulfamethoxazole (TMP-SMX) should be used with caution by patients with reduced kidney function and taking an angiotensin-converting enzyme inhibitor (ACEI) or angiotensin receptor blocker (ARB) because of an increased risk of hyperkalemia.

Drug-Drug Interactions

Table 5 contains potentially clinically important drug-drug interactions to be avoided in older adults. New recommendations include avoiding use of opioids concurrently with benzodiazepines and avoiding use of opioids concurrently with gabapentinoids (except when transitioning from the former to the latter). Other additions to the table are interactions involving TMP-SMX, macrolide antibiotics, and ciprofloxacin. TMP-SMX in combination with phenytoin or warfarin increases the risk of phenytoin toxicity and bleeding, respectively. Macrolides, excluding azithromycin, or ciprofloxacin in combination with warfarin increases bleeding risk. Ciprofloxacin in combination with theophylline increases risk of theophylline toxicity. The concurrent use of a combination of three or more central nervous system (CNS) agents (antidepressants, antipsychotics, benzodiazepines, nonbenzodiazepine benzodiazepine receptor agonist hypnotics, antiepileptics, and opioids) and increased fall risk have been collapsed into one recommendation instead of separate recommendations for each drug class. The recommendation on avoiding concurrent use of medications that increase serum potassium has been expanded to encompass a broader range of these medications.

PIMs Based on Kidney Function

Table 6 contains a list of medications that should be avoided or have their dosage reduced based on kidney function. Two antibiotics have been added, ciprofloxacin and TMP-SMX, over concerns of increased CNS effects and tendon rupture, and worsening renal function and hyperkalemia, respectively. Dofetilide was also added because of concerns of corrected QT interval prolongation and torsade de pointes. The creatinine clearance lower limit at which to avoid edoxaban has been reduced to less than 15 mL/min.

Table 4. 2019 American Geriatrics Society Beers Criteria® for Potentially Inappropriate Medications: Drugs To Be Used With Caution in Older Adults[a]

Drug(s)	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Aspirin for primary prevention of cardiovascular disease and colorectal cancer	Risk of major bleeding from aspirin increases markedly in older age. Several studies suggest lack of net benefit when used for primary prevention in older adult with cardiovascular risk factors, but evidence is not conclusive. Aspirin is generally indicated for secondary prevention in older adults with established cardiovascular disease.	Use with caution in adults ≥70 years	Moderate	Strong
Dabigatran Rivaroxaban	Increased risk of gastrointestinal bleeding compared with warfarin and reported rates with other direct oral anticoagulants when used for long-term treatment of VTE or atrial fibrillation in adults ≥75 years.	Use with caution for treatment of VTE or atrial fibrillation in adults ≥75 years	Moderate	Strong
Prasugrel	Increased risk of bleeding in older adults; benefit in highest-risk older adults (eg, those with prior myocardial infarction or diabetes mellitus) may offset risk when used for its approved indication of acute coronary syndrome to be managed with percutaneous coronary intervention.	Use with caution in adults ≥75 years	Moderate	Weak
Antipsychotics Carbamazepine Diuretics Mirtazapine Oxcarbazepine SNRIs SSRIs TCAs Tramadol	May exacerbate or cause SIADH or hyponatremia; monitor sodium level closely when starting or changing dosages in older adults	Use with caution	Moderate	Strong
Dextromethorphan/ quinidine	Limited efficacy in patients with behavioral symptoms of dementia (does not apply to treatment of PBA). May increase risk of falls and concerns with clinically significant drug interactions. Does not apply to treatment of pseudobulbar affect.	Use with caution	Moderate	Strong
Trimethoprim-sulfamethoxazole	Increased risk of hyperkalemia when used concurrently with an ACEI or ARB in presence of decreased creatinine clearance	Use with caution in patients on ACEI or ARB and decreased creatinine clearance	Low	Strong

Abbreviations: ACEI, angiotensin-converting enzyme inhibitor; ARB, angiotensin receptor blocker; PBA, pseudobulbar affect; SIADH, syndrome of inappropriate antidiuretic hormone secretion; SNRI, serotonin-norepinephrine reuptake inhibitor; SSRI, selective serotonin reuptake inhibitor; TCA, tricyclic antidepressant; VTE, venous thromboembolism.

[a]The primary target audience is the practicing clinician. The intentions of the criteria include (1) improving the selection of prescription drugs by clinicians and patients; (2) evaluating patterns of drug use within populations; (3) educating clinicians and patients on proper drug usage; and (4) evaluating health-outcome, quality-of-care, cost, and utilization data.

DISCUSSION

The 2019 AGS Beers Criteria® update contributes to the critically important evidence base and discussion of medications to avoid in older adults and the need to improve medication use in older adults. The 2019 AGS Beers Criteria® include 30 individual criteria of medications or medication classes to be avoided in older adults (Table 2) and 16 criteria specific to more than 40 medications or medication classes that should be used with caution or avoided in certain diseases or conditions (Tables 3 and 4). As in past updates, there were several changes to the 2019 AGS Beers Criteria®, including criteria that were modified or dropped, a few new criteria, and some changes in the level of evidence grading and clarifications in language and rationale (Tables 8–10).

The 2019 AGS Beers Criteria® is the third such update by the AGS and the fifth update of the AGS Beers Criteria® since their original release.[1,2,10–12] The criteria was first published almost 30 years ago in 1991, making them the longest running criteria for PIMs in older adults.

Table 5. 2019 American Geriatrics Society Beers Criteria® for Potentially Clinically Important Drug-Drug Interactions That Should Be Avoided in Older Adults

Object Drug and Class	Interacting Drug and Class	Risk Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
RAS inhibitor (ACEIs, ARBs, aliskiren) or potassium-sparing diuretics (amiloride, triamterene)	Another RAS inhibitor (ACEIs, ARBs, aliskiren)	Increased risk of hyperkalemia	Avoid routine use in those with chronic kidney disease stage 3a or higher	Moderate	Strong
Opioids	Benzodiazepines	Increased risk of overdose	Avoid	Moderate	Strong
Opioids	Gabapentin, pregabalin	Increased risk of severe sedation-related adverse events, including respiratory depression and death	Avoid; exceptions are when transitioning from opioid therapy to gabapentin or pregabalin, or when using gabapentinoids to reduce opioid dose, although caution should be used in all circumstances.	Moderate	Strong
Anticholinergic	Anticholinergic	Increased risk of cognitive decline	Avoid; minimize number of anticholinergic drugs (Table 7)	Moderate	Strong
Antidepressants (TCAs, SSRIs, and SNRIs) Antipsychotics Antiepileptics Benzodiazepines and nonbenzodiazepine, benzodiazepine receptor agonist hypnotics (ie, "Z-drugs") Opioids	Any combination of three or more of these CNS-active drugs[a]	Increased risk of falls (all) and of fracture (benzodiazepines and nonbenzodiazepine, benzodiazepine receptor agonist hypnotics)	Avoid total of three or more CNS-active drugs[a]; minimize number of CNS-active drugs	Combinations including benzodiazepines and nonbenzodiazepine, benzodiazepine receptor agonist hypnotics *or* opioids: high All other combinations: moderate	Strong
Corticosteroids, oral or parenteral	NSAIDs	Increased risk of peptic ulcer disease or gastrointestinal bleeding	Avoid; if not possible, provide gastrointestinal protection	Moderate	Strong
Lithium	ACEIs	Increased risk of lithium toxicity	Avoid; monitor lithium concentrations	Moderate	Strong
Lithium	Loop diuretics	Increased risk of lithium toxicity	Avoid; monitor lithium concentrations	Moderate	Strong
Peripheral α-1 blockers	Loop diuretics	Increased risk of urinary incontinence in older women	Avoid in older women, unless conditions warrant both drugs	Moderate	Strong
Phenytoin	Trimethoprim-sulfamethoxazole	Increased risk of phenytoin toxicity	Avoid	Moderate	Strong
Theophylline	Cimetidine	Increased risk of theophylline toxicity	Avoid	Moderate	Strong
Theophylline	Ciprofloxacin	Increased risk of theophylline toxicity	Avoid	Moderate	Strong
Warfarin	Amiodarone	Increased risk of bleeding	Avoid when possible; if used together, monitor INR closely	Moderate	Strong
Warfarin	Ciprofloxacin	Increased risk of bleeding	Avoid when possible; if used together, monitor INR closely	Moderate	Strong
Warfarin	Macrolides (excluding azithromycin)	Increased risk of bleeding	Avoid when possible; if used together, monitor INR closely	Moderate	Strong

Table 5 (Contd.)

Object Drug and Class	Interacting Drug and Class	Risk Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Warfarin	Trimethoprim-sulfamethoxazole	Increased risk of bleeding	Avoid when possible; if used together, monitor INR closely	Moderate	Strong
Warfarin	NSAIDs	Increased risk of bleeding	Avoid when possible; if used together, monitor closely for bleeding	High	Strong

Abbreviations: ACEI, angiotensin-converting enzyme inhibitor; ARB, angiotensin receptor blocker; CNS, central nervous system; INR, international normalized ratio; NSAID, nonsteroidal anti-inflammatory drug; RAS, renin-angiotensin system; SNRI, serotonin- norepinephrine reuptake inhibitor; SSRI, selective serotonin reuptake inhibitor; TCA, tricyclic antidepressant.

[a]CNS-active drugs: antiepileptics; antipsychotics; benzodiazepines; nonbenzodiazepine, benzodiazepine receptor agonist hypnotics; TCAs; SSRIs; SNRIs; and opioids.

The 2019 update has a similar number of changes to the 2015 update but fewer changes than the 2012 update. This is likely because, with the support of the AGS and the expert panel, the criteria have been regularly updated about every 3 years since 2012. In 2019, 25 medications or medication classes to be avoided outright or in a disease condition were dropped from the AGS Beers Criteria® (Table 8). A few were also moved to a new table category or modified (Table 10). For medications to be removed from the AGS Beers Criteria®, the panel had to have new evidence or a strong rationale, for reasons such as the literature showed a change in evidence that cast new doubt on their "avoid" status. Finally, some drugs or drug-disease combinations were omitted because they are not disproportionately relevant to the older adult population; this included the criteria on drugs to avoid in adults with chronic seizures or epilepsy and in adults with insomnia.

Four new medications or medication classes were added to the list of drugs to be used with caution (Table 4; additions are also summarized in Table 9). Dextromethorphan/quinidine was added because of its limited efficacy, concerns for clinically significant drug interactions, and potentially increased risk of falls in older adults. TMP-SMX was placed in the "use with caution table" because of increased risk of hyperkalemia when used concurrently with an ACEI or ARB in the presence of decreased creatinine clearance.[13,14] Rivaroxaban was also added to the use with caution table for adults 75 years or older. Other important changes in the use with caution table included lowering the age threshold in the aspirin for primary prevention recommendation from 80 years or younger to 70 years or younger on the basis of emerging evidence of a major increase in the risk of bleeding at a lower age.[15] The Aspirin in Reducing Events in the Elderly (ASPREE) trial, which was published outside the window of our literature search, found that low-dose aspirin used for primary prevention in older adults did not confer a reduction in mortality, disability-free survival, or cardiovascular events.[16,17] In a few instances, the level of evidence was revised based on new literature and the improved modified grading method. For instance, H2-receptor antagonists were removed from the list of drugs to avoid in dementia, and the evidence level for H2-receptor antagonists was decreased to low (from moderate in 2015) for drugs to avoid in delirium.[18] Again in 2019, the panel clarified the language for sliding-scale insulin because this continued to be an area of confusion for clinicians.

Importantly, several drugs were added to the drug-disease and drug-drug interactions tables (Tables 3 and 5). Notably, SNRIs were added to the list of antidepressant drug classes to avoid in persons with a history of falls or fractures.[19,20] For this criterion, the level of evidence for opioids was changed to "moderate"; all other drugs remain at high. Two new drug-drug interactions involving opioids were added, reflecting evidence of substantial harms that can occur when opioids are used concurrently with benzodiazepines or gabapentinoids. Though these drug interactions involving opioids are problematic in all persons, they are growing increasingly common and may lead to greater harm in vulnerable older adults. These concerns need to be balanced with the need to treat chronic pain. A recent review of deaths from opioids concluded that the burden of opioid overdose in older adults requires special attention, noting the largest

Table 6. 2019 American Geriatrics Society Beers Criteria® for Medications That Should Be Avoided or Have Their Dosage Reduced With Varying Levels of Kidney Function in Older Adults

Medication Class and Medication	Creatinine Clearance at Which Action Required, mL/min	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Anti-infective					
Ciprofloxacin	<30	Increased risk of CNS effects (eg, seizures, confusion) and tendon rupture	Doses used to treat common infections typically require reduction when CrCl <30 mL/min	Moderate	Strong
Trimethoprim-sulfamethoxazole	<30	Increased risk of worsening of renal function and hyperkalemia	Reduce dose if CrCl 15-29 mL/min Avoid if CrCl <15 mL/min	Moderate	Strong
Cardiovascular or hemostasis					
Amiloride	<30	Increased potassium and decreased sodium	Avoid	Moderate	Strong
Apixaban	<25	Lack of evidence for efficacy and safety in patients with a CrCl <25 mL/min	Avoid	Moderate	Strong
Dabigatran	<30	Lack of evidence for efficacy and safety in individuals with a CrCl <30 mL/min. Label dose for patients with a CrCl 15-30 mL/min based on pharmacokinetic data.	Avoid; dose adjustment advised when CrCl >30 mL/min in the presence of drug-drug interactions	Moderate	Strong
Dofetilide	<60	QTc prolongation and torsade de pointes	Reduce dose if CrCl 20-59 mL/min Avoid if CrCl <20 mL/min	Moderate	Strong
Edoxaban	15-50 <15 or >95	Lack of evidence of efficacy or safety in patients with a CrCl <30 mL/min	Reduce dose if CrCl 15-50 mL/min Avoid if CrCl <15 or >95 mL/min	Moderate	Strong
Enoxaparin	<30	Increased risk of bleeding	Reduce dose	Moderate	Strong
Fondaparinux	<30	Increased risk of bleeding	Avoid	Moderate	Strong
Rivaroxaban	<50	Lack of efficacy or safety evidence in patients with a CrCl <30 mL/min	Nonvalvular atrial fibrillation: reduce dose if CrCl 15-50 mL/min; avoid if CrCl <15 mL/min Venous thromboembolism treatment and for VTE prophylaxis with hip or knee replacement: avoid if CrCl <30 mL/min	Moderate	Strong
Spironolactone	<30	Increased potassium	Avoid	Moderate	Strong
Triamterene	<30	Increased potassium and decreased sodium	Avoid	Moderate	Strong
Central nervous system and analgesics					
Duloxetine	<30	Increased gastrointestinal adverse effects (nausea, diarrhea)	Avoid	Moderate	Weak
Gabapentin	<60	CNS adverse effects	Reduce dose	Moderate	Strong
Levetiracetam	≤80	CNS adverse effects	Reduce dose	Moderate	Strong
Pregabalin	<60	CNS adverse effects	Reduce dose	Moderate	Strong
Tramadol	<30	CNS adverse effects	Immediate release: reduce dose Extended release: avoid	Low	Weak
Gastrointestinal					
Cimetidine	<50	Mental status changes	Reduce dose	Moderate	Strong
Famotidine	<50	Mental status changes	Reduce dose	Moderate	Strong
Nizatidine	<50	Mental status changes	Reduce dose	Moderate	Strong
Ranitidine	<50	Mental status changes	Reduce dose	Moderate	Strong

Table 6 (Contd.)

Medication Class and Medication	Creatinine Clearance at Which Action Required, mL/min	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Hyperuricemia					
Colchicine	<30	Gastrointestinal, neuromuscular, bone marrow toxicity	Reduce dose; monitor for adverse effects	Moderate	Strong
Probenecid	<30	Loss of effectiveness	Avoid	Moderate	Strong

Abbreviations: CNS, central nervous system; CrCl, creatinine clearance; QTc, corrected QT interval; VTE, venous thromboembolism.

Table 7. Drugs With Strong Anticholinergic Properties

Antiarrhythmic	Promethazine
Disopyramide	Pyrilamine
	Triprolidine
Antidepressants	
Amitriptyline	
Amoxapine	
Clomipramine	Antimuscarinics
Desipramine	(urinary incontinence)
Doxepin (>6 mg)	Darifenacin
Imipramine	Fesoterodine
Nortriptyline	Flavoxate
Paroxetine	Oxybutynin
Protriptyline	Solifenacin
Trimipramine	Tolterodine
	Trospium
Antiemetics	
Prochlorperazine	Antiparkinsonian agents
Promethazine	Benztropine
	Trihexyphenidyl
Antihistamines (first generation)	
Brompheniramine	Antipsychotics
Carbinoxamine	Chlorpromazine
Chlorpheniramine	Clozapine
Clemastine	Loxapine
Cyproheptadine	Olanzapine
Dexbrompheniramine	Perphenazine
Dexchlorpheniramine	Thioridazine
Dimenhydrinate	Trifluoperazine
Diphenhydramine (oral)	
Doxylamine	Antispasmodics
Hydroxyzine	Atropine (excludes ophthalmic)
Meclizine	Belladonna alkaloids
Clidinium-chlordiazepoxide	Scopolamine (excludes ophthalmic)
Dicyclomine	
Homatropine (excludes ophthalmic)	Skeletal muscle relaxants
Hyoscyamine	Cyclobenzaprine
Methscopolamine	Orphenadrine
Propantheline	

relative increase in opioids occurred in persons 55 to 64 (754% increase from 0.2% to 1.7%) and 65 years and older and the absolute number of deaths in this group is moderate.[21,22]

Several drug-drug interactions involving antimicrobial agents were also added to Table 5, and the recommendation to avoid concurrent use of three or more CNS-active medications was reformatted to clarify and bring further attention to the increased risk of falls and other harms that can occur when multiple CNS-active medications are combined.[23]

PIM use continues to be a serious problem in older adults and especially in vulnerable older adults with multiple chronic conditions. Thus, the AGS Beers Criteria® continue to be useful and necessary as a clinical tool, as an educational tool at the bedside, and as a public health tool to improve medication safety in older adults. The AGS Beers Criteria® can increase awareness of polypharmacy and aid decision making when choosing drugs to avoid in older adults. In a 2017 study using medical expenditure data (n = 16,588) in adults 65 years and older, poor health status was associated with increased PIM use. In another study, the use of PIMs, as measured by the 2015 criteria, in persons with dementia was 11% higher after diagnosis than in the year of diagnosis.[24,25] Benzodiazepine use remains common in older adults, especially in older women, despite the fact that older adults are highly vulnerable to harms associated with use of these drugs.[26] The challenge of decreasing PIM use and improving the overall quality of medication prescribing in older adults remains, and the AGS Beers Criteria® are one part of the solution.

The AGS Beers Criteria® are an essential evidence-based tool that should be used as a guide for drugs to avoid in older adults. However, they are not meant to supplant clinical judgment or an individual patient's preferences, values, care goals, and needs, nor should they be used punitively or to excessively restrict access to medications. These criteria were developed to be used in conjunction with a person-centered team approach (physicians, nurses, pharmacists, other clinicians, the older adult, family, and others) to prescribing and monitoring adverse effects.[27] A companion article published to the 2015 updated AGS Beers Criteria®, entitled "How to Use the Beers Criteria: A Guide for Patients, Clinicians, Health Systems, and Payors," remains an important guide for using the AGS Beers Criteria®. It reminds clinicians that medications listed in the Criteria are potentially inappropriate, rather than definitely inappropriate for all older adults, and encourages users to read the rationale and recommendation statements for each medication to avoid because these statements provide important guidance.[3] Moreover, the criteria should not be interpreted as giving license to steer patients away from PIMs to even worse choices. For example, the recommendation to avoid chronic, regular use of NSAIDs should not be

Table 8. Medications/Criteria Removed Since 2015 American Geriatrics Society Beers Criteria®

Medication/Criterion	Reason for Removal
Independent of Diagnosis or Condition (Table 2)	
Ticlopidine	No longer on US market; low use
Pentazocine	Oral no longer on US market
Considering Disease and Syndrome Interactions (Table 3)	
Chronic seizures or epilepsy Bupropion Chlorpromazine Clozapine Maprotiline Olanzapine Thioridazine Thiothixene Tramadol	Not unique to older adults
Dementia H2-receptor antagonists	Weak evidence and to avoid overly restricting therapeutic options for older adults with dementia who have gastroesophageal reflux or similar issues (given a coexisting criterion advising against chronic use of PPIs except in specific circumstances)
Insomnia *Oral decongestants* Phenylephrine Pseudoephedrine *Stimulants* Amphetamine Armodafinil Methylphenidate Modafinil *Theobromines* Theophylline Caffeine	Not unique to older adults
Parkinson disease Aripiprazole	Removed as a preferred antipsychotic in older adults with Parkinson disease because of safety and efficacy concerns
Use With Caution (Table 4)	
SIADH/hyponatremia Carboplatin Cyclophosphamide Cisplatin Vincristine	Highly specialized drugs that fell outside the scope of the criteria
Syncope Vasodilators	Not unique to older adults

Abbreviations: PPI, proton-pump inhibitor; SIADH, syndrome of inappropriate antidiuretic hormone secretion.

Table 9. Medications/Criteria Added Since 2015 American Geriatrics Society Beers Criteria®

Medication/Criterion	Reason for Addition
Independent of Diagnosis or Condition (Table 2)	
Glimepiride	Severe, prolonged hypoglycemia in older adults
Methscopolamine Pyrilamine	Strong anticholinergic
Considering Disease and Syndrome Interactions (Table 3)	
History of falls or fractures SNRI	Associated with increased risk in older adults
Parkinson disease Pimavanserin	Unlike most other antipsychotics, the revised criteria consider pimavanserin acceptable for treatment of psychosis in Parkinson disease
Use With Caution (Table 4)	
Rivaroxaban	Emerging evidence of increased risk of serious bleeding compared with other anticoagulant options
Tramadol	Risk of SIADH/hyponatremia
Dextromethorphan/quinidine	Limited efficacy in treating patients with dementia symptoms disorder in absence of pseudobulbar affect while potentially increasing risk of falls and drug-drug interactions
TMP-SMX	Increased risk of hyperkalemia in combination with ACEIs and ARBs in patients with reduced kidney function
Clinically Important Drug-Drug Interactions (Table 5)	
Opioids + benzodiazepines	Increased risk of overdose
Opioids + gabapentin/pregabalin	Increased risk of overdose
Phenytoin + TMP-SMX	Increased risk of phenytoin toxicity
Theophylline + ciprofloxacin	Increased risk of theophylline toxicity
Warfarin + ciprofloxacin	Increased risk of bleeding
Warfarin + macrolides (excluding azithromycin)	Increased risk of bleeding
Warfarin + TMP-SMX	Increased risk of bleeding
Medications That Should Be Avoided or Have Their Dosage Reduced With Decreased Kidney Function (Table 6)	
Ciprofloxacin	Increased risk of CNS effects
TMP-SMX	Increased risk of worsening of renal function and hyperkalemia

Abbreviations: ACEI, angiotensin-converting enzyme inhibitor; ARB, angiotensin receptor blocker; CNS, central nervous system; SIADH, syndrome of inappropriate antidiuretic hormone secretion; SNRI, serotonin-norepinephrine reuptake inhibitor; TMP-SMX, trimethoprim-sulfamethoxazole.

interpreted as an invitation to prescribe opioids in their place. For further reference, a 2012 article provides a case example on how nurses can use the criteria to improve medication use in older adults.[28]

As in previous years, the panel recognizes the need to offer older adults and their clinicians pharmacological and nonpharmacological alternatives to medications included in the AGS Beers Criteria®. Alternatives to some of the most commonly implicated medications listed in the 2015 update were published in a companion article that accompanied that update. Readers are encouraged to review these suggestions, although we acknowledge that further work needs to be done to keep pace with updates to the criteria and the changing landscape of drug and nondrug therapies. We also encourage readers to research the safety and effectiveness of potential alternatives to drugs included in this document. Deprescribing is a concept to eliminate unsafe or unnecessary drugs from a patient's regimen. One source for online

Table 10. Medications/Criterion Modified Since 2015 American Geriatrics Society Beers Criteria®

Medication/Criterion	Modification
Independent of Diagnosis or Condition (Table 2)	
Peripheral α-1 blockers	For treatment of hypertension
Digoxin for atrial fibrillation and heart failure	Added wording to Drug column; modified rationale; QE for atrial fibrillation changed to Low
Estrogen with or without progestin	Added "recurrent" urinary tract infections
Sliding-scale insulin	Clarified definition of sliding-scale insulin
Metoclopramide	Added duration of use to recommendation
Meperidine	Removed caveat from recommendation
Considering Disease and Syndrome Interactions (Table 3)	
Heart failure	Reorganized recommendations; separated COX-2 inhibitors from other NSAIDs; added QE and SR for COX-2 inhibitors; changed recommendation for NSAIDs, COX-2 inhibitors, and thiazolidinediones to use with caution in asymptomatic heart failure and to avoid in symptomatic heart failure; modified rationale
Syncope	Specified "nonselective peripheral α-1 blockers"; separated rationales, QE, and SR for AChEIs and nonselective peripheral alpha-1 blockers; modified QE for ACHEIs and antipsychotics
Delirium	Changed "Sedative/hypnotics" to Nonbenzodiazepine, benzodiazepine receptor agonist hypnotics; changed QE of H2-receptor antagonists to low
History of fractures and falls	Changed SR of opioids to strong
Parkinson disease	Added rationale for quetiapine, clozapine, and pimavanserin
Chronic kidney disease and NSAIDs	Changed wording (minor) of criterion title
Use With Caution (Table 4)	
Aspirin as primary prevention	Modified age, indication, rationale, and QE
Dabigatran	Modified rationale and recommendation
Prasugrel	Modified rationale
Clinically Important Drug-Drug Interactions (Table 5)	
The table title	Dropped "Non–anti-infective"
ACEIs/ARBs and hyperkalemia	Changed to renin-angiotensin system inhibitors
Combination of three or more CNS agents (antidepressants, antiepileptics, antipsychotics, benzodiazepines, and opioids)	Replaced individual criteria with a single criterion
Medications That Should Be Avoided or Have Their Dosage Reduced With Decreased Kidney Function (Table 6)	
Apixaban, dabigatran, edoxaban, and rivaroxaban	Revised CrCl at which action is required, rationale and recommendations to reflect current labeling, and CrCl exclusion parameters in clinical trials

Abbreviations: ACEI, angiotensin-converting enzyme inhibitor; AChEI, acetylcholinesterase inhibitor; ARB, angiotensin receptor blocker; CNS, central nervous system; COX, cyclooxygenase; CrCl, creatinine clearance; NSAID, nonsteroidal anti-inflammatory drug; QE, quality of evidence; SR, strength of recommendation.

deprescribing resources for many medications included in the 2019 AGS Beers Criteria® is https://deprescribing.org.

Of particular note is the potential role for nonpharmacological approaches to manage common conditions in older adults. The evidence base for specific nonpharmacological approaches with a person-centered approach to care is small but growing.[29–32] One example of the growing evidence for nondrug alternatives is in the area of care for persons with dementia and delirium. Scales and colleagues published a 2019 comprehensive review of evidence-based nonpharmacological approaches for behavioral and psychological symptoms of dementia. They evaluated 197 articles that included sensory practices (eg, massage, light therapy), psychosocial practices (eg, music, pet therapy, reminiscence), and structured care protocols (eg, mouth care, bathing). Though they had recommendations for improving the evidence base, they concluded most practices were acceptable to patients, had no harmful effects, and required minimal to moderate investment.[33] Online resources for some of these approaches can be found at www.nursinghometoolkit.com and www.hospitalelderlifeprogram.org.

While the AGS Beers Criteria® can be a valuable tool, it should be viewed within the larger context of tools and strategies for improving pharmacological care for older adults. Specifically, the AGS Beers Criteria® is one component of what should be a comprehensive approach to medication use in older adults, and it should be used in conjunction with other tools and management strategies for improving medication safety and effectiveness. Moreover, other explicit criteria for evaluating PIMs in older adults, including the screening tool of older people's prescriptions and screening tool to alert to right treatment criteria (STOPP/START criteria) can also be valuable resources for improving medication therapy.[34]

Finally, the 2019 AGS Beers Criteria® have several limitations. Evidence for the benefits and harms of medications in older adults is often limited, particularly from randomized

clinical trials, and so decisions on the composition of the criteria were often made in context of best-available, rather than definitive, evidence. Moreover, evidence assessment frameworks are not perfectly tuned to drug safety evaluation, particularly for observational studies from which much of the relevant evidence derives.[35,36] The criteria are unable to account for the complexity of all individuals and patient subpopulations, and thus should be taken as guidance to support clinical decision making and not as "the final word" as to whether a specific drug is appropriate or inappropriate for an individual patient. In addition, the criteria are not meant to apply to patients at the end of life or receiving palliative care, when risk-benefit considerations of drug therapy can be different. Medications considered for inclusion in the criteria were generally those available in the United States, and the panel did not seek to include agents available in other countries that may be equally problematic. Finally, the updated literature search was comprehensive but may have missed certain sources of evidence, such as articles written in languages other than English, white papers, technical reports, and other evidence published in the "gray literature."

Notwithstanding these limitations, the guideline update process had a number of important strengths. The expert panel included members from multiple clinical disciplines, backgrounds, and types of clinical experience. The inclusion of ex-officio members from the Centers for Medicare and Medicaid Services, the Pharmacy Quality Alliance, and the National Committee for Quality Assurance provided a welcome level of expertise when the panel was considering the opportunities and pitfalls of translating recommendations into quality measures. In addition, the panel used a rigorous process for identifying, reviewing, and synthesizing the available evidence to inform the guideline update process, and benefited from the close support of the AGS.

In conclusion, the 2019 update has several important revisions. Important additions among the nearly 70 modifications to the 2015 AGS Beer Criteria® were new medications, clarifications of criteria language and rationale, and the addition of selected drug-drug interactions.

We hope that the criteria will be used thoughtfully and widely. To facilitate this process, we encourage healthcare professionals, patients, payors, and health systems to access resources with information on the criteria, including patient-oriented information on the Health in Aging Foundation website (www.healthinaging.org/medications-older-adults/) and guidance for all on the proper use of the criteria.[3] Ongoing support from AGS will facilitate future evidence-based updates, keeping the AGS Beers Criteria® useful, relevant, and a valuable tool for improving the health and well-being of older adults.

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Panel Members and Affiliations

The following individuals were members of the American Geriatrics Society (AGS) Panel to update the 2019 AGS Beers Criteria®: Donna M. Fick, PhD, RN, FGSA, FAAN, College of Nursing and Medicine, The Pennsylvania State University, University Park, PA (cochair); Todd P. Semla, PharmD, MS, BCPG, FCCP, AGSF, US Department of Veterans Affairs National Pharmacy Benefits Management Services (retired) and Northwestern University Feinberg School of Medicine, Chicago, IL (cochair); Michael Steinman, MD, University of California San Francisco and San Francisco

Veterans Affairs Medical Center, San Francisco, CA (cochair); Judith Beizer, PharmD, BCGP, FASCP, AGSF, St Johns University, Queens, NY; Nicole Brandt, PharmD, MBA, BCPP, BCGP, FASCP, University of Maryland, Baltimore, MD; Robert Dombrowski, PharmD, Centers for Medicare and Medicaid Services, Baltimore, MD (nonvoting member); Catherine E. DuBeau, MD, Dartmouth-Hitchcock Medical Center, Lebanon, NH; Lynn Pezzullo, RPh, CPEHR, Pharmacy Quality Alliance, Alexandria, VA (nonvoting member); Jerome J. Epplin, MD, AGSF, Litchfield Family Practice Center, Litchfield, IL; Nina Flanagan, PhD, GNP-BC, APHM-BC, Decker School of Nursing, Binghamton University, Dunmore, PA; Emily Morden, MSW, National Committee for Quality Assurance, Washington, DC (nonvoting member); Joseph Hanlon, PharmD, MS, BCPS, FASHP, FASCP, FGSA, AGSF, Department of Medicine (Geriatric Medicine) School of Medicine, University of Pittsburgh and Geriatric Research, Education and Clinical Center, Veterans Affairs Healthcare System, Pittsburgh, PA; Peter Hollmann, MD, AGSF, Brown Medicine, Providence, RI; Rosemary Laird, MD, MHSA, AGSF, Geriatric Medical Leader for Florida Hospital, Winter Park, FL; Sunny Linnebur, PharmD, FCCP, BCPS, BCGP, FASCP, Skaggs School of Pharmacy and Pharmaceutical Sciences, University of Colorado, Aurora, CO; Satinderpal Sandhu, MD, SUNY Upstate Medical University and Syracuse Veterans Affairs Medical Center, Syracuse, NY.

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Anexo XIX. *STOPP AND START*

STOP medications (age ≥ 65 years)	Circumstances to review	Reason to review
α-blockers (i.e. alfuzosin, doxazosin, tamsulosin) and 5-alfa reductase inhibitors (i.e. finasteride, dutasteride)	Long-term urinary catheter in situ >2 months Males with frequent incontinence Hypotension/ Postural hypotension *Please note that some α- blockers e.g. doxazosin are also used to treat hypertension*	No longer indicated for the relief of benign prostatic hyperplasia (BPH) symptoms (i.e. urinary retention) Risk of urinary frequency and worsening of incontinence
Anti-anginal medication	Consider reducing, particularly if mobility has decreased with less need for medication Caution: Nitrates are potent coronary vasodilators Nicorandil and present ulceration	 Risk of unwanted effects such as flushing headache, hypotension, postural hypotension Nicorandil can cause serious skin, mucosal, and eye ulceration, including gastrointestinal ulcers which may progress to perforation, haemorrhage, fistula, or abscess. Stop nicorandil treatment if ulceration occurs—consider the need for alternative treatment or specialist advice if angina symptoms worsen https://www.gov.uk/drug-safety-update/nicorandil-ikorel-now-second-line-treatment-for-angina-risk-of-ulcer-complications
Antibiotics Review	Long term prophylactic antibiotics for UTI are not routinely recommended (including catheterised patients). C. difficile infection	Risk of adverse effects, including development of resistance. Antibiotic prescribing guidance available at: http://www.bnssgformulary.nhs.uk/includes/documents/Antimicrobial%20Rx%20Guidelines%20for%20BNSSG%202015%20version%203%20final..pdf To reduce recurrence first advise simple measures including hydration and cranberry products. Prophylactic antibiotics should be reviewed after 6 months and stopping should be considered. Patients should be reviewed at regular intervals to assess the risk/benefits in relation to C. difficile infection. Discontinue all antibiotics other than those prescribed for CDI Clostridium difficile in the Community Guideline available at: http://www.bnssgformulary.nhs.uk/includes/documents/Treatment%20of%20CDIv4.pdf
Anticholinergics **Minimise use wherever possible and review efficacy and tolerance regularly.** **(e.g. Hyoscine, Tolterodine Oxybutynin, Solifenacin, Trospium, Procyclidine, Trihexyphenidyl)**	To treat extra-pyramidal side-effects of antipsychotic medications Patients with dementia, chronic constipation, glaucoma or prostatic enlargement. To reduce muscarinic side effects of acetylcholinesterase inhibitors (AChEIs).	Elderly patients are more likely to experience adverse effects (including confusion, delirium, constipation, urinary retention, dry mouth/eyes, sedation, falls and cognitive impairment) Risk of worsening respective condition. Anticholinergic drugs directly oppose the action of AChEIs and adversely affects the course of dementia[6]. **Refer to Appendix1 for Anticholinergic Cognitive Burden Scale.** BNSSG joint formulary – Bladder and Urinary disorders http://www.bnssgformulary.nhs.uk/1-Bladder-and-urinary-disorders NICE CG171 Urinary Incontinence in Women https://www.nice.org.uk/guidance/cg171
Antidiarrhoeal drugs (co-phenotrope, loperamide or codeine phosphate)	For treatment of diarrhoea of unknown cause ***N.B. Please be aware of C. difficile in undiagnosed diarrhoea*** For the treatment of severe	Risk of delayed diagnosis, may exacerbate constipation with overflow diarrhoea, may precipitate toxic mega colon in inflammatory bowel disease, may delay recovery in unrecognised gastroenteritis Risk of colitis and toxic mega colon if Clostridium difficile

	infective gastroenteritis	Risk of exacerbation or protraction of infection
Antipsychotics ***NB. Reduce slowly monitoring effect***	>1 month use as long-term hypnotic (check notes for duration) >1 month use in parkinsonism If fallen in last 3 months >3 months treatment of behavioural and psychological symptoms of dementia patients (BPSD) and stable symptoms (review ongoing need)	Confusion, postural hypotension, extrapyramidal side effects, falls Risk of worsening extrapyramidal symptoms May cause gait dyspraxia, parkinsonism Risk of gait disturbances, dehydration, prolonged sedation, cognitive decline, falls, stroke and death. Priority groups for review: care home patients (more frail and BPSD more common than in general population) vascular dementia patients and dementia patients with a history of cardiovascular disease, cerebrovascular disease or vascular risk factors. Benefits are limited over longer periods (>12 weeks) Guidance from Alzheimer's society is available online at https://www.alzheimers.org.uk/site/scripts/services_info.php?serviceID=173 NICE guidelines: http://pathways.nice.org.uk/pathways/dementia
Antihistamines	First generation antihistamines (cyclizine, cholrphenamine, promethazine). If fallen in past 3 months Prolonged use	Risk of sedation and anti-cholinergic side effects
Aspirin	Dose >150mg / day, restart at 75mg if still indicated With a concurrent bleeding disorder Risk of gastrointestinal bleeding (e.g. peptic ulcer disease) without histamine H2 receptor antagonist or PPI Primary prevention of CVD If being used as monotherapy for stroke prevention in AF	Risk of bleeding; no evidence of increased efficacy High risk of bleeding Risk of bleeding Guidance for antiplatelet prescribing for primary and secondary prevention of CVD: http://cks.nice.org.uk/antiplatelet-treatment Guidance at: https://www.nice.org.uk/guidance/cg180
Benzodiazepines – *reduce slowly & monitor effect*	>1 month use of long-acting benzodiazepines, eg. chlordiazepoxide, oxazepam, diazepam, flurazepam, nitrazepam Regular and prolonged use If fallen in last 3 months	Risk of prolonged sedation, confusion, impaired balance, falls Benzodiazepines and Z drug withdrawal and insomnia guidelines available at: http://cks.nice.org.uk/insomnia In older people in particular, the magnitude of the beneficial effect of hypnotics may not justify the increased risk of adverse effects (such as cognitive impairment and increased risk of falls). The severity of withdrawal symptoms will depend on the degree of dependence. Abrupt discontinuation should be avoided. Reduce slowly and monitor effect.
Beta-blocker (Reduce gradually to avoid rebound effect)	In combination with verapamil In those with diabetes mellitus and frequent hypoglycaemic episodes	Risk of symptomatic heart block Risk of masking hypoglycaemic symptoms
Beta-blocker (non-	In patients with asthma	Risk of bronchospasm

cardioselective)		
Bisphosphonates (oral)	Unable to sit upright / patient experiencing swallowing difficulties / compliance issues Low risk of fractures A fracture occurred while on treatment After 5 years of treatment with oral medications or 3 years after parenteral (zoledronate)	Instruction for administration of medication if not followed causes increased risk of serious upper GI disorder For BNSSG osteoporosis drug holidays guidance: currently being updated Bisphosphonates accumulate in bone during treatment, and when stopped there is some residual protection against fractures. The length of this varies according to duration of therapy and which agent is being administered. Review recommended after 5years with alendronate, risendronate or ibandronate and after 3 years for zoledronate.
BP lowering drugs **Stop one at a time, maintaining the dose of the others without change. Restart them if BP increases[11]:** - ***Diastolic >90mm Hg*** - ***Systolic > 150mm Hg (160mm Hg if no organ damage)***	Consider need for and intensity of treatment in light of CVD risk, life expectancy and ADR risk If fallen in past 3 months and hypotension/postural hypotension present Postural Hypotension (abnormal decrease in blood pressure of at least 20 mm Hg systolic and 10 mm Hg diastolic within three minutes of standing upright) Withhold ACE inhibitors/ ARBs with severe risk of dehydration (e.g. vomiting/ diarroea)	Limited evidence supporting tight BP control in the older frail group *Seek specialist advice for patients with advanced heart failure as can decompensate rapidly off medication* Risk of syncope or falls Risk of falls Can be restarted when patient has improved (e.g. 24-48h of eating and drinking normally) https://www.thinkkidneys.nhs.uk/
Calcium Channel Blocker	If ankle oedema present Verapamil and diltiazem should usually be avoided in heart failure. Caution with Digoxin and Betablockers With chronic constipation Dihydropyridines- CAUTION: Avoid Nifedipine in CHD/CHF	This may be an adverse effect of the Calcium Channel Blocker see UKMI QA322 3_ankle oedema with CCBs (www.sps.nhs.uk) They may further depress cardiac function and cause clinically significant deterioration. Digoxin levels ↑↑ Enhanced hypotensive effect with Betablockers - Asystole, severe hypotension and heart failure with verapamile+betablockers – avoid - Possible severe hypotension and heart failure with nifedipine May exacerbate constipation Reflex tachycardia/ cardiopression
Carbocisteine	If no benefit after 4 weeks >1.5g/day Risk factors for peptic ulceration	Unnecessary if no benefit shown Over recommended maintenance dose May disrupt the gastric mucosa barrier (consider gastro-protection)
Clopidogrel	With concurrent bleeding disorder Aspirin/ Clopidogrel combination	High risk of bleeding Ensure reviewed as per cardiology advice (usually indicated for a max of 12 months after ACS only)

		BNSSG guidelines for co-prescribing anticoagulants and antiplatelets in primary care: www.bnssgformulary.nhs.uk/includes/documents/Combination%20doc%20271213.pdf BNSSG Guidelines for prescribing antiplatelets: www.bnssgformulary.nhs.uk/includes/documents/Guidelines%20for%20the%20Prescribing%20of%20Antiplatelets%20update%20Nov%202012%20081112SB.pdf
Corticosteroids **(Withdraw gradually if: use >3 weeks, >40mg prednisolone/day)**	Oral instead of inhaled corticosteroids for maintenance therapy in moderate-severe COPD Long term use (>3 weeks)	Unnecessary exposure to long-term side effects of systemic steroids. Risk of major systemic corticosteroids side effects Ensure use of steroids aligned with COPD GOLD guideline: www.bnssgformulary.nhs.uk/includes/documents/COPD%20guidelines%20-April%2016%20v6.pdf Guidance at http://cks.nice.org.uk/corticosteroids-oral
Digoxin	At doses >125 microgram per day with impaired renal function (eGFR <50ml/minute) With hypokalemia Pulse persistently below 60bpm	Risk of toxicity increased (e.g. nausea, diarrhoea, arrhythmias)
Dipyridamole	With concurrent bleeding disorder As monotherapy for cardiovascular secondary prevention	High risk of bleeding No evidence for efficacy except in ischaemic stroke. https://www.nice.org.uk/guidance/TA210/chapter/1-guidance Antiplatelet prescribing guidelines: http://cks.nice.org.uk/antiplatelet-treatment#!management
Diuretics	Dependent ankle oedema and no signs of heart failure As first line monotherapy for hypertension Thiazides with history of gout Advise patient to stop during intercurrent illness	No benefit; compression hosiery more appropriate. Consider medication causes, e.g. CCBs. Safer, more effective alternatives available Risk of exacerbating gout Restart when well (after 24-48h of eating and drinking normally) https://www.thinkkidneys.nhs.uk/
Domperidone	Indications except nausea/vomiting Long term Underlying Cardiac conditions, impaired cardiac conduction, co-prescribed other medications known to prolong QT interval or potent CYP3A4 inhibitors or with severe hepatic impairment	See MHRA warning issued https://www.gov.uk/drug-safety-update/domperidone-risks-of-cardiac-side-effects Duration of treatment: • The maximum treatment duration should not usually exceed one week • Patients currently receiving long-term treatment with domperidone should be reassessed at a routine appointment to advise on treatment continuation, dose change, or cessation
Ipratropium (nebulised)	Prescribing as required (prn) in addition to regular prescribing With glaucoma	Can lead to exceeding licensed dosage and therefore exacerbate side effects May exacerbate glaucoma
Laxatives – stimulant (e.g. bisacodyl, senna)	For patients with intestinal obstruction If >1 laxative: Do not stop abruptly. Reduce stimulant first and monitor effect	Risk of bowel perforation BNSSG joint formulary – Constipation and bowel cleansing http://www.bnssgformulary.nhs.uk/2-Constipation-and-bowel-cleansing
Metformin	Renal impairment: Review dose if eGFR <45 ml/min Avoid if eGFR<30ml/minute	Increased risk of lactic acidosis Guidance NG28, T2 diabetes in adults: management https://www.nice.org.uk/guidance/ng28

	Advise patient to stop during intercurrent illness	Restart when well (after 24-48h of eating and drinking normally) https://www.thinkkidneys.nhs.uk/
Metoclopramide	Long term use Parkinson's disease (domperidone more suitable but note contra-indications in cardiac disease and severe liver disease)	Licensed for a max of 5 days (does not apply to off label use in palliative care). https://www.gov.uk/drug-safety-update/metoclopramide-risk-of-neurological-adverse-effects The risks of neurological effects such as extrapyramidal disorders and tardive dyskinesia outweigh the benefits in long term or high dose treatment. Metoclopramide readily crosses the blood brain barrier, causing central effects such as sedation and dystonic reactions.
NSAID (oral)	Moderate severe hypertension (moderate 160/100mm Hg - 179/109mm Hg; severe: >180/110mm Hg CVD risk>20%, previous CVD events, heart failure. Age>65, on ACEI/ARBs and/or diuretics ("triple whammy"), CKD (GFR <60ml/min) or heart failure). GI ulcer, warfarin or new anticoagulants, steroids, SSRIs, high alcohol use On long-term NSAID and colchicine for chronic treatment of gout when there is no C/I to allopurinol Long-term NSAIDs as monotherapy (>3 month for arthritis) Cox-2 inhibitors and diclofenac in cardiovascular disease Ibuprofen (at total daily dose above 1200mg per day) in cardiovascular disease Advise patient to stop during intercurrent illness	Risk of exacerbation of hypertension Risk of exacerbation and cardiovascular ADRs Risk of deterioration in renal function and renal ADRs Gastro-intestinal ADRs (e.g. bleeding) If NSAIDs are essential: Consider gastro-protection with a PPI in those with GI risk factors Allopurinol first choice prophylactic in gout Simple analgesics preferable (paracetamol and topical NSAIDs should be considered ahead of systemic NSAIDs or COX-2 inhibitors) Increased risk of thrombotic events Increased risk of thrombotic events Restart when well (after 24-48h of eating and drinking normally) https://www.thinkkidneys.nhs.uk/
Oestrogen (systemic)	With history of breast cancer or venous thromboembolism Without progesterone in patients with intact uterus	Increased risk of reoccurrence Risk of endometrial cancer
Omega-3 fatty acids	Prescribed for secondary prevention of MI Primary or Secondary prevention of CVD For CVD prevention in patients with CKD and/or Diabetes (type 1 and 2)	Review as per -MI: cardiac rehabilitation and prevention of further CVD http://www.nice.org.uk/guidance/cg172/resources/guidance-mi-secondary-prevention-pdf -CVD:risk assessment and reduction, including lipid modification https://www.nice.org.uk/guidance/cg181 There is no evidence to support that omega‑3 fatty acid compounds help to prevent CVD
Opioids (all type)	Long-term use of powerful opiates (e.g. morphine, fentanyl) as first line therapy for mild-moderate pain Regular prescription >2 weeks in chronic constipation without concurrent use of laxatives	WHO analgesic ladder not observed Cognitive impairment and respiratory depression, dependency www.bnssgformulary.nhs.uk/LocalGuidelines/ChronicPainGuidelines Risk of severe constipation

	Long-term in dementia unless for palliative care or management of chronic pain Recurrent Falls	Exacerbation of cognitive impairment Risk of drowsiness, postural hypotension, vertigo
Pioglitazone (glitazones)	Heart failure and elderly patients	Increased risk of fracture, bladder cancer and heart failure
Phenothiazines (e.g. Prochlorperazine)	With Parkinsonism	Risk of exacerbating Parkinsonism.
Quinine	Long term use	https://www.gov.uk/drug-safety-update/quinine-not-to-be-used-routinely-for-nocturnal-leg-cramps
SSRIs	If sodium less than 130 in past 2 months Citalopram & escitalopram – risk of QT prolongation Citalopram >20mg/day Escitalopram >10mg/day High risk of gastrointestinal bleeding	SSRIs can cause/worsen hyponatraemia Don't use in patients with congenital long QT syndrome or known pre-existing QT interval prolongation In combination with other drugs known to prolong the QT intervals BNSSG guidance: http://www.bnssgformulary.nhs.uk/includes/documents/Citalopram%20dose%20reduction%20flow%20chart%20based%20on%20advice%20from%20the%20MHRA%20version5.pdf Can increase risk of bleeding
Statins	Indications of shortened life expectancy[10], unless there is an acute vascular syndrome In patients displaying symptoms of muscle weakness and pain Consider review in light of comorbidities, polypharmacy, general frailty, life expectancy, patient preference and ADR risk	In the absence of a recent acute coronary syndrome or cerebrovascular event, the discontinuation of a statin toward the end of life is reasonable www.medicinesresources.nhs.uk/GetDocument.aspx?pageId=797557 Risk of myopathy and rhabdomyolysis. Check creatinine kinase if patient presents with muscular symptoms. Risks may outweigh potential benefits NICE CG181: Cardiovascular disease https://www.nice.org.uk/guidance/CG181
Sulfonylureas (particularly Glibenclamide or Chlorpropamide)	With Type 2 diabetes	Risk of prolonged hypoglycaemia
Theophylline	Monotherapy for COPD	Safer, more effective alternatives, risk of adverse effects due to narrow therapeutic index http://www.bnssgformulary.nhs.uk/includes/documents/COPD%20guidelines%20-April%2016%20v6.pdf
Tricyclic antidepressants ***NB. Withdraw gradually over at least 4 weeks – monitor effect***	Dementia Glaucoma Cardiac conductive abnormalities Constipation Combination with opiate or calcium channel blocker Prostatism or history of urinary retention Patients taking dosulepin	Risk of worsening cognitive impairment May exacerbate glaucoma if untreated Pro-arrhythmic effects May worsen constipation Risk of severe constipation Risk of urinary retention Increased cardiac risk & toxicity in overdose
Ulcer healing drugs	PPI and H2RAs: dose for PUD > 8 weeks (withdraw gradually to prevent	Earlier discontinuation or dose reduction for maintenance/prophylactic treatment of PUD, oesophagitis or GORD indicated. Increased risk of C. *difficile* infection, pneumonia, bone fractures,

	rebound hypersecretion of gastric acid) clopidogrel+ [es]omeprazole	hyponatremia and hypomagnesemia www.sps.nhs.uk/articles/clostridium-difficile-infection-is-use-of-proton-pump-inhibitors-a-risk-factor-2/ GORD and dyspepsia in adults: investigation&management: www.nice.org.uk/guidance/CG184/ MHRA Drug Safety Update 2010 advises that concurrent use should be discouraged due to reduced antiplatelet effect, see www.gov.uk/drug-safety-update/clopidogrel-and-proton-pump-inhibitors-interaction-updated-advice
Vasodilator drugs (e.g. hydralazine, minoxidil)	With persistent postural hypotension i.e. recurrent > 20 mmHG drop in Sys BP	Risk of syncope and falls
Warfarin	For 1st uncomplicated DVT or PE for longer than 3months Bleeding disorders, peptic ulcer, severe hypertension, severe renal impairment Hepatic impairment with impaired clotting ability and raised INR	At 3 months, assess the risks and benefits of continuing treatment, taking into account the patient's risk of VTE recurrence and whether they are at increased risk of bleeding. (www.nice.org.uk/guidance/cg144) Frequently Asked Questions about anticoagulation with Warfarin for GPs: http://www.bnssgformulary.nhs.uk/includes/documents/BNSSG%20%20Anticoagulation%20question%20and%20answers%20v5%20July%202013.pdf Increased risk of bleeding as a result of impaired ability to produce clotting factors
Any regular duplicate drug class prescription	E.g. Two concurrent opiates, multiple NSAIDs, multiple diuretics. Two or more anticholinergics (antimuscarinics)	Optimisation of monotherapy within a single drug class prior to considering a new drug class Increased risk of side-effects including confusion falls and death

START medications (age ≥ 65 years)	Circumstances
ACE Inhibitor	Chronic heart failure Following acute myocardial infarction Diabetes with nephropathy (e.g.overt urinalysis proteinuria or microalbuminuria (>30mg / 24 hours) ± serum biochemical renal impairment)
Antidepressants	In presence of moderate to severe depressive symptoms lasting at least three months SSRIs are in general better tolerated in patients with dementia and depression
Antihypertensive	Systolic blood pressure consistently >160mm Hg
Antipsychotic medication	Patients with a co-morbid mental illness (e.g. schizophrenia, persistent delusional disorder, psychotic depression or bipolar affective disorder) should not have this medication reduced without specialist advice[11]
Aspirin	Documented history of atherosclerotic coronary, cerebral or peripheral vascular disease in patients with sinus rhythm Following an acute MI
Beta-blocker (oral)	With chronic stable angina
Beta-agonist (inhaled)	For BNSSG COPD guidance: http://www.bnssgformulary.nhs.uk/includes/documents/COPD%20guidelines%20April%2016%20v6.pdf Review patients with mild, moderate or severe COPD at least once a year, and very severe COPD at least twice a year as per NICE guidance - http://www.nice.org.uk/guidance/cg101
Bisphosphonates	In patients taking maintenance oral corticosteroid therapy with previous fragility fractures or incident fractures during glucocorticoid therapy. Ensure there are no absorption interactions e.g. Calcium. Counsel patient on the correct way to take a bisphosphonate.
Calcium and vitamin D	In patients with known osteoporosis (radiological evidence or previous fragility fracture) or acquired dorsal kyphosis BNSSG guidelines for treatment of vitamin D deficiency in adults in Primary Care: www.bnssgformulary.nhs.uk/includes/documents/BNSSG%20CCG%20Vitamin_D_Prescribing_Guidelines%20Jan16.pdf
Clopidogrel	For ischaemic stroke or PVD as per http://www.nice.org.uk/guidance/ta210
DMARD	With active moderate-severe rheumatoid disease lasting >12 weeks
Fibre supplement	For chronic symptomatic diverticular disease with constipation
Laxatives	In patients taking opioids - to prevent constipation
Ulcer healing drugs (PPI, H2RA) **(clopidogrel+[es]omeprazole should be avoided due to reduced antiplatelet effect)**	For severe reflux or peptic stricture requiring dilatation The risk of bleeding is increased when low-dose aspirin is combined with other drugs that can increase the risk of bleeding. If these drugs are used concurrently with low-dose aspirin, consider the need for gastro-protection with a proton pump inhibitor (such as omeprazole) or a histamine antagonist (such as ranitidine). More information available at http://cks.nice.org.uk/antiplatelettreatment#!prescribinginfosub Drugs that can increase the risk of bleeding include: - **Antiplatelet drugs** (such as clopidogrel, prasugrel, or ticagrelor). - Nonsteroidal anti-inflammatory drugs (**NSAIDs**) (for example ibuprofen). - **Oral and parenteral anticoagulants** (for example warfarin or heparin). Low dose aspirin and oral anticoagulants are usually co-prescribed on the advice of a specialist. Close monitoring is required. - **SSRIs** (such as fluoxetine), venlafaxine, or duloxetine. Consider alternatives that may be safer, such as trazodone, mianserin, mirtazapine, or reboxetine. - Other drugs known to increase gastrointestinal bleeding (for example **corticosteroids**).
Statins	NICE CG181 (https://www.nice.org.uk/guidance/CG181) For older people (≥85) statins may be of benefit in reducing the risk of non-fatal

	myocardial infarction. Be aware of factors that may make treatment inappropriate (comorbidities, polypharmacy, general frailty, life expectancy (evidence shows that benefits of statins are seen at the earliest after 2 years of therapy), patient preference and ADR risk) Primary prevention of CVD when 10% or greater 10-year risk of developing CVD. (Estimate the level of risk using the QRISK2 assessment tool) Adults with T1 diabetes who are older than 40 years **or** have had diabetes for more than 10 years **or** have established nephropathy **or** have other CVD risk factors CKD and Secondary prevention of CVD (documented history of coronary, cerebral or peripheral vascular disease)
Anticoagulation (warfarin or a NOAC)	Chronic atrial fibrillation as per http://www.nice.org.uk/guidance/cg180 Following diagnosis of DVT and PE if benefit outweighs the risk of treatment For BNSSG guidelines: http://www.bnssgformulary.nhs.uk/Local-Guidelines/

Anexo XX. *Elderly Mobility Scale*

Elderly Mobility Scale (EMS)

Summary:

Measures: Scale of assessment of mobility.

Description: The EMS is a 20 point validated assessment tool for the assessment of frail elderly subjects (Smith 1994). The EMS is measured on an ordinal scale.

Who's it for: Older people in a hospital setting either on a ward or in a day hospital.

Properties:	Reliability:	Inter-rater	YES
	Validity:	Predictive	YES
		Concurrent	YES
	Responsive to change:	Not established	
	Sensitivity:	Not established	
	Specificity:	Not established	

Training: Minimal

Equipment: Metre rule, stop watch, access to a bed and chair, and usual walking aid.

Space needed: Space for bed, chair, wall, space for 6m walk.

Time to complete: 15 minutes

Good things about it: Functional, clinically significant, minimal training needed, can be used as an assessment tool and an outcome measure.

Limitations: Difficult to use in community environments, ceiling effect for more able patients, not sensitive for patients with issues of poor confidence.

Version 2
Updated June 2012

Anexo XXI. *TIMED UNSUPPORTED STEADY STANDING* – TUSS

TUSS
(Timed Unsupported Steady Stand)

Aim

To be able to safely and effectively undertake the TUSS test[1] with service users.

Procedure

The service user is seated in a chair with a firm surface in front of them (e.g. chair/table or tester). They should wear their usual footwear.
The chair is high enough for them to stand with minimal effort, or else they are assisted into standing.

Preparation – before assuming the starting position the test is explained to the service user (and demonstrated if necessary).
'Soon you are going to stand up and hold onto to the chair/table or me. Once you are steady I shall say START, then you are going to put your hands by your sides and stand for as long as you feel safe and steady. If you feel unsteady, you must put your hands back onto the table or me. Are you clear about what you are going to do?'

Starting position
Service user is in standing holding onto table or RA with feet comfortably apart.

Timing
Start timing as you say 'START'. Stop timing as soon as the service user places her hand(s) on the table or until she has stood steadily for 60 seconds – which ever occurs first. Record the time in seconds.

Familiarisation Trial
Perform one un timed practice of this test to ensure the service user understands what is expected. Service user should be discouraged from trying to combat wobbling before steadying herself on the table. This is essential to ensure comparable end points to the test.

End Point

TUSS 60 secs
TUSS (1) 60 sec (holding with 1 hand) } Stop test if service user holds on (and note time)

TUSS (2) 3 minutes (holding with 2 hands)

Modification

TUSS (1) - if the person cannot stand unsupported then allow them to place one hand on the table and stop timing when they steady themselves by putting the other hand on the table

TUSS (2) – If they extremely unsteady help them to stand with 2 hands on the table for support. Start timing as soon as they are steady and stop when they wish to do so or when 3 minutes have been reached.

References

1. Simpson JM, Worsford C 1996 ‘Simple test of balance for frail old people’(abstract from proceedings of the Society for Research in Rehabilitation held at the Royal Hospital for Neurodisability, Putney, UK, Jan11 1996 (Clinical Rehabilitation 10 :354)

Anexo XXII. *SIX MINUTE WALK TEST* – 6MWT

Core Measure: Six Minute Walk Test (6MWT)

Overview	• The 6MWT is a sub-maximal exercise test used to assess walking endurance and aerobic capacity. Participants will walk around the perimeter of a set circuit for a total of six minutes.
Number of Test Items	• 1 item
Scoring	• The score of the test is the distance a patient walks in 6 minutes (measured in meters and can round to the nearest decimal point).
Equipment	• Stopwatch • Chair • Measuring instrument (meters) • At least a 12 meter long hallway or open area (e.g., quiet gym) with a smooth, consistent surface • Markings to indicate turnaround (e.g.: cones) • Mechanical lap counter or pencil and paper
Time (new clinician) **Time (experienced clinician)**	• Less than 10 minutes • Less than 10 minutes
Cost	• Free
Logistics-Setup	• A hallway or open area at least 12 meters long with a smooth, consistent surface • There should be a clear pathway on the sides and at either end. • A turnaround point approximately 49 in (124 cm) wide with clear markings should be set up at both ends • A chair should be placed at one end.
Logistics-Administration	• Prior to administering the measure, the patient should be sitting in a chair, rested, near the starting point of the test. • Please review any contraindications and take resting vital signs [e.g. heart rate, blood pressure, oxygen level, Borg Rate of Perceived Exertion[1], etc.] as indicated[2] • Instructions to the patient in sitting[3]: o *"The aim of this test is to walk as far as possible in six minutes. You will walk back and forth in the hallway. Six minutes is a long time to walk, so you will be exerting yourself. You may get out of breath or become tired. You are allowed to slow down, to stop, and to rest as necessary. You may stand and rest, but resume walking as soon as you are able. Are you ready to do that?"*

	○ *"Walk to the turnaround point at each end. I am going to use this counter to keep track of the laps you complete. Remember the aim is to walk as far as possible, but do not run or jog."* ○ *"Start now or when you are ready."* ○ Encouragement (eg, "You're doing a good job and you have 5 minutes left, or "Keep up the good work. You have 4 minutes to go.") is given after each minute of the test; no other communication should occur during the test. • The patient may take as many standing rests as they like, but the timer should keep going and record the number of rests taken and the total rest time. • Patients may use any assistive device or bracing that they are currently using. The type of device and/or bracing must be documented. • When administering the test, do not walk in front of or directly beside the patient, as this may "pace" the patient and influence the speed and distance they walk. Instead, walk at least a half step behind the patient. • If a patient requires assistance, only the minimum amount of assistance required for a patient to complete the task should be provided. The level of assistance documented, however, should reflect the greatest amount of assistance provided during the test. For example, if a patient required minimum assistance for the majority of the test but required moderate assistance for stability on one occasion, the patient should be rated as requiring moderate assistance. Assistance should be provided to prevent a fall or collapsing (i.e. knee buckling, trunk collapse, etc). Assistance should <u>not</u> be provided for limb swing, or any other manner in which the assistance is propelling the patient forward. ○ The level of physical assistance documented using an ordinal 7-point scale is described below. 1 = *total assistance* [patient performs 0%-24% of task]* 2 = *maximum assistance* [patient performs 25%-49% of task] 3 = *moderate assistance* [patient performs 50%-74% of task] 4 = *minimum assistance* [patient performs 75%-99% of task] 5 = *supervision* [patient requires stand-by or set-up assistance; no physical contact is provided] 6 = *modified independent* [patient requires use of assistive devices or bracing, needs extra time, mild safety issues] 7 = *independent* ***Note:** if your patient requires *total assistance*, a score of 0 should be documented
Logistics-Scoring	• Distance (in meters) covered in six minutes is calculated by multiplying the number of total laps by 12 meters and adding the distance of the partial lap completed at the time the test ended. • If the patient needs to stop and sit prior to the end of the six minutes, the test ends, and the distance ambulated is recorded. • <u>Document the distance in meters, the level of assistance, and type of assistive device and/or bracing used</u>.

	• If a patient requires *total assistance* or is unable to ambulate at all, a score of 0 meters should be documented.
Additional Recommendations	• Vital signs (e.g. heart rate, blood pressure, oxygen level, Borg Rate of Perceived Exertion,[1] etc.) should be assessed pre and post test, as indicated[2] • Patients should not talk during the test, as this depletes their respiratory reserves. Exceptions to this are if the patient requests to stop the test or needs to report any symptoms (e.g. pain, dizziness). • The person administering the test also should not talk, except to provide updates every minute (as described above). Talking during the test can distract the patient and affect their score on the test. • For patients who are unable to walk, but have a goal and the capacity to achieve walking, a baseline a score of 0 meters should be documented. • To track change, it is recommended that this measure is administered a minimum of two times (admission and discharge), and when feasible, between these periods, under the same test conditions for the patient. • Recommend review of this standardized procedure and, on an annual basis, establish consistency within and among raters using the tool.

Anexo XXIII. *Hansiety and Depression Scale* – HADS

Hospital Anxiety and Depression Scale (HADS)

Tick the box beside the reply that is closest to how you have been feeling in the past week.
Don't take too long over you replies: your immediate is best.

D	A		D	A	
		I feel tense or 'wound up':			**I feel as if I am slowed down:**
	3	Most of the time	3		Nearly all the time
	2	A lot of the time	2		Very often
	1	From time to time, occasionally	1		Sometimes
	0	Not at all	0		Not at all
		I still enjoy the things I used to enjoy:			**I get a sort of frightened feeling like 'butterflies' in the stomach:**
0		Definitely as much		0	Not at all
1		Not quite so much		1	Occasionally
2		Only a little		2	Quite Often
3		Hardly at all		3	Very Often
		I get a sort of frightened feeling as if something awful is about to happen:			**I have lost interest in my appearance:**
	3	Very definitely and quite badly	3		Definitely
	2	Yes, but not too badly	2		I don't take as much care as I should
	1	A little, but it doesn't worry me	1		I may not take quite as much care
	0	Not at all	0		I take just as much care as ever
		I can laugh and see the funny side of things:			**I feel restless as I have to be on the move:**
0		As much as I always could		3	Very much indeed
1		Not quite so much now		2	Quite a lot
2		Definitely not so much now		1	Not very much
3		Not at all		0	Not at all
		Worrying thoughts go through my mind:			**I look forward with enjoyment to things:**
	3	A great deal of the time	0		As much as I ever did
	2	A lot of the time	1		Rather less than I used to
	1	From time to time, but not too often	2		Definitely less than I used to
	0	Only occasionally	3		Hardly at all
		I feel cheerful:			**I get sudden feelings of panic:**
3		Not at all		3	Very often indeed
2		Not often		2	Quite often
1		Sometimes		1	Not very often
0		Most of the time		0	Not at all
		I can sit at ease and feel relaxed:			**I can enjoy a good book or radio or TV program:**
	0	Definitely	0		Often
	1	Usually	1		Sometimes
	2	Not Often	2		Not often
	3	Not at all	3		Very seldom

Please check you have answered all the questions

Scoring:

Total score: Depression (D) _____ Anxiety (A) _____

0-7 = Normal

8-10 = Borderline abnormal (borderline case)

11-21 = Abnormal (case)

Anexo XXIV. *EDMONTON FRAILTY SCALE*

Name

CHI

REPORTED EDMONTON FRAILTY SCORE

Date

Consultant

QUESTIONS			
In the past year, how many times have you been admitted to a hospital?	0	1–2	≥2
In general, how would you describe your health?	Excellent Very good Good	Fair	Poor
With how many of the following activities do you require help? (meal preparation, shopping, transportation, telephone, housekeeping, laundry, managing money, taking medications)	0–1	2–4	5–8
When you need help, can you count on someone who is willing and able to meet your needs?	Always	Sometimes	Never
Do you use five or more different prescription medications on a regular basis?	No	Yes	
At times, do you forget to take your prescription medications?	No	Yes	
Have you recently lost weight such that your clothing has become looser?	No	Yes	
Do you often feel sad or depressed?	No	Yes	
Do you have a problem with losing control of urine when you don't want to?	No	Yes	
Two weeks ago were you able to:			
1) Do heavy work around the house like washing windows, walls or floors without help?	Yes	No	
2) Walk up and down stairs to the second floor without help?	Yes	No	
(3) Walk 0.5 mile without help?	Yes	No	
PLEASE TURN OVER TO COMPLETE FINAL QUESTION			
SCORE			