

# Evidence Review

## Recent literature regarding Falls in inpatient or community settings (Jan 20-June 21).

### Key messages

- In the past 18 months there has been a substantial amount of research published in the areas of fall risk and fall prevention. The majority of published research has focussed on older adults living in the community, although research concerning those in inpatient or residential settings is also represented.
- Risk of falls are higher in older adults with additional health needs often associated with aging including: chronic pain, diabetes, heart failure, urinary incontinence, frailty, sight loss and cognitive impairment.
- Adults with a fear of falls are also more likely to restrict movement and are subsequently at higher risk of falls.
- Research has shown positive results in mixed interventions including:
  - Exercise involving a balance component
  - E-health interventions including an exercise component
  - Community-based support including education in how to fall safely
  - Inclusive support for both the individual and family members
  - Environmental alterations such as non-slip floors, textured insoles, removal of hazards
  - The use of home safety monitoring aids and AI to predict falls risk
- A limited amount of research has been done concerning the impact of COVID-19 on falls although some research has reported that increased falls/risk of falls as a potential symptom of COVID-19 in elderly populations.



## You asked

if there's anything new relating to falls in inpatient areas, falls in people's homes or falls relating to COVID ?

## We found

*This review examined published literature concerned with falls risk, incidence and prevention in adults published from January 2020-June 2021. Owing the substantial amount of research published in this time period, the following review included only high-level evidence including Systematic Reviews, Meta Analyses, Population Studies/Analyses and research involving over 1000 participants.*

*There are a number of reasons affecting the risk of falls in older adults including balance and mobility (30), medication (5), sensory (12, 25), neuromuscular (1), fear of falling(19), other health conditions (14, 24, 26) and frailty. Patients accessing mental health services, particularly those with substance use disorder, delirium and dementia are at higher risk of falls than the general population (24). There is also evidence to suggest a correlation between depression and fear of falling (32).*

*The evidence supporting different types of exercise-based intervention is varied (2, 6, 11, 13,20) some interventions: including a combination of overground and treadmill walking in stroke patients (2), exercises with a balance component (9, 16, 20), interventions involving multiple types of exercise, those lasting more than three hours a week (9), dance-based interventions (17), can improve physical health and prevent falls in older adult populations, although there is a lack of evidence demonstrating effective exercise interventions for patients with dementia (11, 15)*

*Medication use and polypharmacy is often a risk factor in impairing balance of older people, however there is a lack of systematic assessment with regards to both use and reduction of medications (5, 22).*

*Environmental interventions show evidence in reducing falls/fear of falls including the use of textured insoles (7), changes to the home environment (12, 23) and technology-based interventions. There is evidence to suggest that telehealth and electronic-based interventions may be acceptable and have beneficial effects on reducing falls including telehealth interventions with an exercise/physical mobility component (21) and the use of technology to improve observations, monitoring and assistance (22, 27)*

*In residential and inpatient facilities, there is mixed evidence to support the use of bedrails as although they may provide some support for patients (for example, being able to move themselves in bed and prevent rolling out of bed), evidence suggests patients are increased risk of harm/injurious falls for example when trying to access the toilet in a hurry, trying to get out of bed*



*and also in discouraging increased efforts in mobility (8). Generally the use of bedrails is discouraged in favour of other safety factors such as bed alarms and other movement aids.*

*The role of healthcare workers and carers (18, 22, 23) is also not always assessed in relation to specific interventions. One study (3) of the role of healthcare staff in care home settings noted that many studies focus on instruments, risk control strategies and falls prevention/management policies which lack the nuanced nature of 'real life' interventions which rely upon a combination of assessments, interaction and social support with healthcare staff, individuals' needs and engagement and the engagement of other supporting factors such as family members (4, 31). Interventions featuring active components of exercise, education and environment modification working together with patients, healthcare staff and family/carers show evidence in reducing rates of falling and/or severity of falls (10,11).*

*With regards to the impact of COVID-19 on falls and fall safety there is limited research available although some evidence suggests a correlation between repeated falls as a symptom of COVID-19 infection in older adults (28, 29).*

## The Evidence

- 1. Jehu DA, Davis JC, Falck RS, Bennett KJ, Tai D, Souza MF, Cavalcante BR, Zhao M, Liu-Ambrose T. Risk factors for recurrent falls in older adults: A systematic review with meta-analysis. Maturitas. 2020.**

This systematic review examined research concerning the relative risk of recurrent falls for different types of falls risk factors in adults over 60 years. The review found that specific domains: balance and mobility, medication, psychological, and sensory and neuromuscular risk factors “were each associated with an increased risk of recurrent falls” each of which could be identified clinically as markers of frailty. The reviewers did not find an association between sex or low BMI and the risk of recurrent falls, in contrast with previous studies suggesting that females and older adults living alone were at greater risk of falls- although the authors suggest this might be that these factors may increase the risk of falls but not necessarily recurrent falls.





**2. Yang F, Lees J, Simpkins C, Butler A. Interventions for preventing falls in people post-stroke: a meta-analysis of randomized controlled trials. Gait & Posture. 2021**

This review examined RCTs which included falls in people post-stroke as outcome measures, to examine effectiveness of interventions to prevent falls post-stroke. The review found that across all interventions none appeared significantly more effective in preventing falls compared to placebo, although one – a combined overground walking and treadmill intervention- showed significant improvement in mobility outcomes.



1-s2.0-S0966636221000023-main.pdf

**3. De La Cuesta-Benjumea C, Lidón-Cerezuela B, Abad-Corpa E, Meseguer-Liza C, Arredondo-González CP. Managing and keeping control: A qualitative synthesis of nursing and care staff strategies to prevent older people from falling. Journal of Advanced Nursing. 2021**

This review looked at qualitative primary studies around care providers in health care facilities with regards to falls prevention in older people (65+years). The review found that although falls and fall preventions are commonly researched there is limited information available about the specific roles played by nurses and health care staff. Falls prevention studies have generally focused on instruments, and ‘risk control’ strategies, but the reviewers found that falls prevention and management is more integrated and nuanced, “built in the interactions between formal care providers and the material and social world” as a combination of interventions, assessments and communication/interaction between individuals. The authors suggest that the dynamic nature of falls prevention is often overlooked and not taken into consideration in policy/strategic levels.



2020 Managing and keeping contro



**4. Mackenzie L, Beavis AM, Tan AC, Clemson L. Systematic review and meta-analysis of intervention studies with general practitioner involvement focused on falls prevention for community-dwelling older people. Journal of aging and health. 2020**

This review looked at RCTs involving interventions around fall prevention for older adults in the community in which GP services were involved. The review found overall the interventions were not effective in reducing multiple falls, but were effective in reducing “injurious falls”. The authors found that GPs can contribute to falls prevention interventions through education, risk screening and following up appropriately- such as referring to other services.



0898264320945168.  
pdf

**5. Gray SL, Elsis Z, Phelan EA, Hanlon JT. Interventions to reduce fall-risk-increasing drug use to prevent falls: a narrative review of randomized trials. Drugs & Aging. 2021**

This review provides summaries of Randomised Controlled Trials that focussed on interventions to reduce medication that increased risk of fall (FRID) and examined fall-related outcomes. Of the included trials, mixed results concerning the outcomes were recorded and reviewers found the methods to measure reductions varied greatly between trials. Most interventions did not reduce fall-risk increasing drug use overall and the authors highlight the need for further and more systematic analysis in this area.



2021 Interventions  
to reduce fall risk in



**6. Ponzano M, Rodrigues IB, Hosseini Z, Ashe MC, Butt DA, Chilibeck PD, Stapleton J, Thabane L, Wark JD, Giangregorio LM. Progressive resistance training for improving health-related outcomes in people at risk of fracture: a systematic review and meta-analysis of randomized controlled trials. Physical therapy. 2021**

This systematic review examined the evidence around the effects of progressive resistance training (PRT) on health-related outcomes in people at risk of fracture with low bone density/osteoporosis. The review found evidence to suggest that progressive resistance training improved physical functioning, quality of life and reduced pain, it may particularly have positive effects on femoral neck bone mineral density. There was less clear evidence concerning the relationship between PRT and risk of falling.



download (23).pdf

**7. Park JH, Jeon HS, Kim JH, Yoon HB, Lim OB, Jeon M. Immediate effect of insoles on balance in older adults. The Foot. 2021**

This review examined the evidence around the effect of insoles on balance (and therefore falls reduction) in older adults. The review analysed seven primary studies, finding that the overall effect size of insoles demonstrated medium benefit in improving balance, with evidence suggesting that “textured and vibration insoles were the most effective types” in enhancing postural control mechanisms.



2021 Immediate  
effect of insoles on



**8. Huynh D, Lee ON, An PM, Ens TA, Mannion CA. Bedrails and falls in nursing homes: A systematic review. Clinical nursing research. 2021**

This review sought to examine the evidence around the use of bedrails in nursing home settings as a fall-prevention strategy. The reviewers found that there was a lack of systematic study and the evidence around whether bed-rails reduce fall-risk is inconclusive. The review found that evidence suggests that the use of bedrails can increase the severity of the fall, particularly as papers highlighted that peak times for falls correspond to patients' urgency/ambulatory needs, however studies also suggested bed rails may be useful for some patients in providing assistance with repositioning and prevent rolling out of bed. Overall however the reviewers recommend that bedrails are not appropriate as a falls prevention strategy and are associated with higher risk of injury and reduced walking capabilities or continence, highlighting that "alternative fall prevention strategies or restraint reduction measures are as effective or better in reducing the frequencies of falls than relying on bedrails".



1054773820907805.  
pdf

**9. Sherrington C, Fairhall N, Kwok W, Wallbank G, Tiedemann A, Michaleff ZA, Ng CA, Bauman A. Evidence on physical activity and falls prevention for people aged 65+ years: systematic review to inform the WHO guidelines on physical activity and sedentary behaviour. International journal of behavioral nutrition and physical activity. 2020**

This update of a 2019 Cochrane Review was undertaken to inform the World Health Organization guidelines on physical activity and sedentary behaviour. The review found that balance and functional exercises can reduce the rate of falls by 24% and by 28% in interventions involving multiple types of exercises such as combining balance and functional exercises. Interventions that lasted 3 hours or more per week were noted that included balance and functional exercise showed evidence of being particularly effective.



evidence on  
physical activity and



**10.Lee SH, Yu S. Effectiveness of multifactorial interventions in preventing falls among older adults in the community: a systematic review and meta-analysis. International journal of nursing studies. 2020**

This review discusses the effectiveness of multifactorial interventions for preventing falls in the community. The review found that interventions featuring active components including exercise, education and environment modification showed significantly reduced fall rates compared to usual care.



Effectiveness of multifactorial interve

**11.Gulka HJ, Patel V, Arora T, McArthur C, Iaboni A. Efficacy and generalizability of falls prevention interventions in nursing homes: a systematic review and meta-analysis. Journal of the American Medical Directors Association. 2020**

This systematic review looked at interventions to reduce falls in Nursing Home settings, the review found that single exercise interventions demonstrated effectiveness in reducing the number of people falling and recurrent falls. Other effective interventions included ones that involved staff education and multi-factorial interventions. The review also highlighted that more research is needed particularly with regards to identifying effective exercise interventions in people with cognitive impairments.



Efficacy and generalisability of fã





**12. Jian-Yu E, Li T, McNally L, Thomson K, Shahani U, Gray L, Howe TE, Skelton DA. Environmental and behavioural interventions for reducing physical activity limitation and preventing falls in older people with visual impairment. Cochrane Database of Systematic Reviews. 2020**

This Cochrane Systematic Review examined environmental and behavioural interventions designed at overcoming the barriers to physical activity that people with sight loss have, with a view to improving activity as a means of falls prevention. The review summarises the available data, but concluded that a lack of quality research and reporting made it not possible to identify effective strategies, though changes to a home environment to improve safety did show some slight correlation in initial reduction of falls risk. More robust research and reporting is needed.



E\_et\_al-2020-Cochrane\_Database\_of\_Sy

**13. Wang Q, Jiang X, Shen Y, Yao P, Chen J, Zhou Y, Gu Y, Qian Z, Cao X. Effectiveness of exercise intervention on fall-related fractures in older adults: a systematic review and meta-analysis of randomized controlled trials. BMC geriatrics. 2020**

This review examined and analysed the results of RCTs to assess “the effectiveness of exercise intervention on fall-related fractures in older adults”. Overall the review found exercise intervention was associated with a reduced fall-related fracture risk in older adults and recommended that regular exercise interventions played an important preventative part in falls, however further large scale research is needed to identify the effectiveness of different types of exercise programmes.



Effectiveness of exercise interventior



**14. Hirase T, Okubo Y, Sturnieks DL, Lord SR. Pain is associated with poor balance in community-dwelling older adults: a systematic review and meta-analysis. Journal of the American Medical Directors Association. 2020 May 1;21(5):597-603.**

This review looked at studies that compared balance interventions between older adults (60+) with and without pain. The review found that pain is associated with poor balance in community-dwelling older adult, particularly in the neck, lower back, hip, knee and foot- all of which is more pronounced for those with chronic pain. The authors found that pain and balance assessments for pain may help to assess instability and increased fall risk.



hirase2020.pdf

**15. Peek K, Bryant J, Carey M, Dodd N, Freund M, Lawson S, Meyer C. Reducing falls among people living with dementia: A systematic review. Dementia. 2020**

This review examined studies involving fall reduction interventions and strategies for people with dementia across settings (community, hospital and residential care). The review identified only one 2014 study a “high risk interrupted time series study examined the impact of an exercise-based intervention in a residential care setting which demonstrated a significant reduction in falls for participants following long-term physical restraint.” However other studies involving exercise intervention showed no effect. The review highlighted that research remains limited as to what interventions may be effective in falls risk reduction.



Reducing falls  
among people living



**16. Schoberer D, Breimaier HE. Meta-analysis and GRADE profiles of exercise interventions for falls prevention in long-term care facilities. Journal of advanced nursing. 2020**

This review found that exercise interventions with a balance component and those “carried out with technical devices” had a beneficial effect in falls prevention. Exercises performed for longer than six months were found to be more effective than short term interventions. In frail residents however the number of fall incidents increased as a result of exercise interventions. The review found that in patients with cognitive impairment there was no substantial change in falls risk/rate for exercise interventions.



jan.14238.pdf

**17. Mattle M, Chocano-Bedoya PO, Fischbacher M, Meyer U, Abderhalden LA, Lang W, Mansky R, Kressig RW, Steurer J, Orav EJ, Bischoff-Ferrari HA. Association of dance-based mind-motor activities with falls and physical function among healthy older adults: a systematic review and meta-analysis. JAMA network open. 2020**

This systematic review included 29 RCTs evaluating a dance based mind-motor activity in relation to fall risk. The studies focussed on participants who were healthy older adults without comorbidities/identified as at high risk. The review found that dance based intervention were associated with a reduced 27% risk of falling, and significantly associated with improved physical function including balance, mobility and lower body strength.



Sys Rev dance  
based mind motor a



**18. Zhou Y, Strayer AT, Phelan EA, Sadak T, Hooyman NR. A mixed methods systematic review of informal caregivers' experiences of fall risk among community-dwelling elders with dementia. Health & Social Care in the Community. 2020.**

This systematic review focussed on research into informal caregivers' roles and experiences in fall prevention for community-dwelling older adults with dementia. The review identified several themes arising from the research including caregivers': fear of the health consequences of falls, limited understanding into the factors contributing to falls and varying understandings of managing risk, struggling with responsibilities, multi-level efforts, inaction and withdrawal.



A mixed methods  
systematic review of i

**19. Yoshikawa A, Ramirez G, Smith ML, Lee S, Ory MG. Systematic review and meta-analysis of fear of falling and fall-related efficacy in a widely disseminated community-based fall prevention program. Archives of Gerontology and Geriatrics. 2020**

This review examined the evidence around “the program effects of A Matter of Balance Volunteer Lay Leader (AMOB/VLL) model, designed to improve fall-related efficacy and promote daily activities among community-dwelling older adults.” This comprised of 17 studies for review of over 3500 participants in total. The study demonstrated findings suggesting that this intervention programme had positive effects in reducing fear of falling and improving fall-related efficacy in community dwelling older adults, however more consistent measurements are needed in future research to establish more precisely how effective these interventions are.



Systematic review  
and meta analysis o



**20. Senderovich H, Tsai PM. Do exercises prevent falls among older adults: Where are we now? A systematic review. Journal of the American Medical Directors Association. 2020**

This systematic review sought to examine different interventions – single, multifactorial, multiple component including vitamin D supplementation have an impact in preventing falls and fall risk among older adults both in the community or in long-term care facilities. Although there were several methodological limitations in the review process, overall the review found that although results varied, various interventions involving exercise as the key component may reduce the rate of falls, particularly those tailored to the individual persons' risk factors and capabilities.



1-s2.0-S1525861020  
304126-main.pdf

**21. Chan JK, Yobas P, Yuchen CH, Gan JK, Gigi CH, Wu XV. The effectiveness of e-interventions on fall, neuromuscular functions and quality of life in community-dwelling older adults: a systematic review and meta-analysis. International journal of nursing studies. 2020**

This review looked at e-interventions including telehealth, exergames, cognitive games, socialized training, smart home systems and non-conventional balance training in relation to falls prevention. The review found that telehealth interventions combined with exercise programmes and smart home systems were able “to reduce falls significantly” in community-dwelling older adults. E-interventions also could improve balance and fall efficacy. However the studies did not show significant improvement in improving cognitive function, lower extremity strength or health related QoL. The authors recommend future research should focus on forecasting falls and the role of smart home technology and AI.



The effectiveness of  
e interventions ofn i



**22. Stockwell-Smith G, Adeleye A, Chaboyer W, Cooke M, Phelan M, Todd JA, Grealish L. Interventions to prevent in-hospital falls in older people with cognitive impairment for further research: A mixed studies review. Journal of Clinical Nursing. 2020**

This review found emerging research including quality improvement studies that suggest that effective falls prevention with this vulnerable population, with current themes emerging including improving engagement with families and carers, using technology to aid observations and the importance of medication reviews and staff education, but more and substantial research is needed for this group.



mixed studies  
review preventin ho

**23. Campani D, Caristia S, Amariglio A, Piscone S, Ferrara LI, Barisone M, Bortoluzzi S, Faggiano F, Dal Molin A, IPEST Working Group. Home and environmental hazards modification for fall prevention among the elderly. Public health nursing. 2020.**

This review aimed to “develop a user manual for the implementation of an effective, sustainable, and transferable home assessment and modification intervention, to prevent falls and fall-related injuries among community-dwelling older people” in order to create a transferrable implementation manual to be used by health workers in Italy in their everyday practice. The review findings highlight both environmental and health related risk factors that can impact the risk of falling and suggest alternative or mediating steps health care workers can take to reduce risk.



phn.12852.pdf



**24. Stubbs B, Perara G, Koyanagi A, Veronese N, Vancampfort D, Firth J, Sheehan K, De Hert M, Stewart R, Mueller C. Risk of hospitalized falls and hip fractures in 22,103 older adults receiving mental health care vs 161,603 controls: a large cohort study. Journal of the American Medical Directors Association. 2020**

This large study of medical records found that older people using mental health services had more than “double the incidence of falls and 4 times the incidence of hip fractures” compared to the general population. Fall rates were increased in all populations, with greatest increased risk in those with substance use disorder, delirium and dementia.



PIIS15258610203025  
04.pdf

**25. Lee K, Davis MA, Marcotte JE, Pressler SJ, Liang J, Gallagher NA, Titler MG. Falls in community-dwelling older adults with heart failure: A retrospective cohort study. Heart & Lung. 2020**

This retrospective cohort study found that heart failure patients were 14% more likely to experience falls than those without; patients with functional difficulties in mobility, large muscle difficulty, limitations in daily living, poor vision and urinary incontinence had an increased likelihood of falling.



lee2020.pdf



**26. Meyer C, Chapman A, Klattenhoff Reyes K, Joe A. Profiling the risk factors associated with falls in older people with diabetes receiving at-home nursing care: Retrospective analysis of an Australian aged care provider database. Health & Social Care in the Community. 2020**

This Australian retrospective analysis looked at the factors most strongly associated with falls in older people living with diabetes who receive at-home care support services. The analysis found associations between fall risk factors and people with diabetes with gait issues, cognitive dysfunction and to a lesser extent living alone, urinary incontinence and weight loss.



hsc.13194.pdf

**27. Nouredanesh M, Godfrey A, Howcroft J, Lemaire ED, Tung J. Fall risk assessment in the wild: A critical examination of wearable sensor use in free-living conditions. Gait & Posture. 2021**

This literature review looked at research papers investigating natural data collected by wearable sensors worn for a minimum duration of 24 hours in adults at risk of falls. Out of the available studies, inertial sensors were the only systems employed for falls risk assessment “in the wild”. Gait was the most investigated activity, but a variety of other data including sit-to-stand, turns and stumbles were also examined. There was a great deal of heterogeneity in research methods, parameters, language and concepts which led to inconsistent results and limited comparability, however the authors concluded that the use of such technology remains promising in analysing, predicting and preventing falls.



2020\_Nouredanesh  
\_G\_P\_.pdf





**28. Gawronska K, Lorkowski J. Falls as one of the atypical presentations of CoViD-19 in older population. Geriatric orthopaedic surgery & rehabilitation. 2021**

This review looked at emerging literature regarding COVID-19 from December 2019-June 2020 with regards to falls/fractures. The results suggested some association between falls and atypical presentations of COVID-19, although at much of the literature published during that time was emerging and bypassed traditional peer review process the review has some limitations and notes that more studies are needed to examine the potential relationship between COVID-19 and falls in older adults.



2021 Falls as one of  
the atypical presen:

**29. Karlsson LK, Jakobsen LH, Hollensberg L, Ryg J, Midttun M, Frederiksen H, Glenthøj A, Kodahl AR, Secher-Johnsen J, Nielsen LK, Bofill NG. Clinical presentation and mortality in hospitalized patients aged 80+ years with COVID-19—A retrospective cohort study. Archives of gerontology and geriatrics. 2021**

This Danish retrospective study of patients over 80 who tested positive and were admitted for SARS-CoV-2 from March-June 2020 notes that in addition to common COVID-19 symptoms, atypical symptoms including confusion (29) difficulty walking and falls were also present, and mortality was highest in those presenting with both COVID-19 and the additional geriatric frailty symptoms of confusion or falls.



1-s2.0-S0167494320  
303319-main.pdf



**30. Abell JG, Lassale C, Batty GD, Zaninotto P. Risk factors for hospital admission after a fall: a prospective cohort study of community-dwelling older people. *The Journals of Gerontology: Series A*. 2021**

This study examined data from over 3500 men and women over 6 from the English Longitudinal Study of Ageing (ELSA). The study aimed to examine a range of risk factors to identify those that could be used to screen older people at risk of admission to hospital after a fall. The review found that “being unable to complete the most difficult balance test (tandem), having a slow walking speed and reporting a severe fall in the previous 12 months were the strongest predictors”. The reviewers also found an association between gait speed and grip strength, urinary incontinence, osteoporosis or lower levels of physical activities were also “predictive of an admission to hospital after a fall”.



abell2020.pdf

**31. Dykes PC, Burns Z, Adelman J, Benneyan J, Bogaisky M, Carter E, Ergai A, Lindros ME, Lipsitz SR, Scanlan M, Shaykevich S. Evaluation of a patient-centered fall-prevention tool kit to reduce falls and injuries: a nonrandomized controlled trial. *JAMA network open*. 2020**

This study looked at the implementation of a nurse-led fall prevention toolkit to improve patient and family engagement in fall prevention. The study included over 30,000 patients and found that the fall prevention toolkit and the inclusion of a fall-prevention care team working in partnership with patients and their families, was linked with a reduction in falls and related injuries.



dykes\_2020\_oi\_2008  
51\_1605020862.7239

**32. Lee TH, Kim W. Is fear of falling and the associated restrictions in daily activity related to depressive symptoms in older adults?. *Psychogeriatrics*. 2021**

This study utilised data from 2006-2018 Korean study of ageing and found that there was a correlation between fear of falling and depressive symptoms in older adults with or without activity restrictions.



psyg.12664.pdf



## Indicative search strategy

trip OR trips OR tripped OR tripping OR stumbl\* OR slip OR slips OR Slipped OR slipping  
falls OR falling OR fallen OR fell

## Sources searched

PsycINFO, CINAHL, Cochrane, EMCARE, Medline,

A structured public domain search for unpublished research.  
January 2020-June 2021.

### Did this help?

We'd love to know if this information helped you.

Let us know at: [library@merseycare.nhs.uk](mailto:library@merseycare.nhs.uk)


This review is a summary of the best available evidence that has been selected using expert searching in order to answer a specific query. It may not be representative of the entire body of evidence available. No responsibility can be accepted for any action taken on the basis of the information presented herein.



[BMJ Best Practice](#)

Clinical decision making tool  
and app



You've got access to this 

Please log in with your MCFT OpenAthens account. If you don't have an account please request one at [library@merseycare.nhs.uk](mailto:library@merseycare.nhs.uk)

LOGIN

Brought to you by the Mersey Care Evidence Service - part of the Centre for Perfect Care.

Questions/request access - [library@merseycare.nhs.uk](mailto:library@merseycare.nhs.uk)

For quick access to full-text articles- use the Chrome browser on a MCFT device or download the [Library Access extension](#)