

Vitamin D

project helps prevents

falls in older

people and

saves money



Vitamin D helps to maintain bone strength, balance and mobility, making older people less likely to fall.

OVERVIEW

To reduce the risk of falls and improve the quality of life for residents of age-related residential care (ARC) facilities, MidCentral District Health Board (DHB) worked with the Accident Compensation Corporation (ACC) to increase the uptake of vitamin D by ARC residents in the district.

Method

In May 2010, MidCentral DHB started working with ACC to promote the role of vitamin D in falls prevention to ARC facilities in the district. The first step was to tailor ACC's vitamin D promotional material to suit local conditions. The MidCentral DHB pharmacy advisor attended meetings and workshops of ARC staff and used the tailored material to promote the benefits of vitamin D in falls prevention. Presentations were also made to general practitioners (GPs) where possible. Facilities that had significantly improved or maintained a high level of vitamin D uptake for their residents were recognised with certificates produced by ACC.



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ACC provided MidCentral DHB with quarterly updates on vitamin D dispensing data for each ARC facility in the district. The DHB then provided each facility with its own data and an indication of how its dispensing rates ranked compared with others in the DHB, along with key messages about vitamin D's role in falls prevention and an overview of the project's progress. Similar information was also provided to local GPs.

To get the project going, ACC provided some initial funding and MidCentral DHB covered the costs of implementing the project locally, including the additional dispensing fees associated with the increased use of vitamin D.

Results

Between March 2010 and June 2012, the uptake of vitamin D by ARC residents in MidCentral DHB increased from 15 percent to 74 percent.

In the 18 months after the project started, the number of ARC residents presenting at Palmerston North Hospital emergency department with a fracture was 32 percent lower than in the 18 months before the project started. There was also a 41 percent reduction in the number of ARC residents admitted for fractures during this time.

Reductions in both emergency department presentations and hospital admissions were seen as early as three months after the project started.

These reductions are estimated to have saved MidCentral DHB more than \$540,000 over 18 months. Further savings are likely because of the reduced need for clinical support, hospital pharmacy services, and physiotherapy and rehabilitation services as a result of fractures. It's also likely that prescribing vitamin D to ARC residents has resulted in a reduction in fracture-associated deaths, which are common in elderly residents.

Lessons learnt/Top tips

The best way to get buy-in from ARC facilities and GPs is to provide:

- good quality, credible, easy-to-understand practice guidance – the ACC guidelines are developed by national experts; getting local input to make them more locally applicable is recommended
- good quality, easy-to-understand information and feedback on a regular basis, so people can see how they're tracking against target and against peers
- assurance that the DHB takes reducing the risk of falls seriously.

"We're extremely pleased with the buy-in we got from residential care facilities and from GPs, so that residents of facilities benefit from a reduced risk of falling and subsequent harm from falling," says MidCentral DHB Pharmacy Advisor Andrew Orange. "It was also extremely pleasing to see the impact from increased vitamin D use happen so quickly."

Evaluation

While the project does not prove causality between vitamin D uptake and reduced falls and fractures, international evidence suggests taking vitamin D significantly reduces older adults' risk of falling.

"We know older people are less likely to fall and injure themselves if they keep their muscles and bones in good condition. Vitamin D has been shown to increase the number and size of type two muscle fibres, which play an important role in balance and mobility. Vitamin D also helps maintain bone strength," says Mr Orange.

"While it is not possible to say the reduction in emergency department visits and hospitalisation was due to the increased vitamin D use, evidence suggests it is very likely."

Asked if it would be cheaper to simply wheel patients into the sun, Mr Orange says that while extra exposure to sunlight will assist, as the skin uses it to create vitamin D, “the last thing we need is older people with sunburn or skin cancers. Getting the balance right is important. Also, older people’s skin does not convert vitamin D as well as the skin of younger people.”

He is very happy with how the project has turned out. “It was a cost-effective intervention that looks, from data available, to have made a real impact on the health and wellbeing of our rest home older population, as well as the workload in the hospital and in rest homes.”

The latest data from ACC indicates that clinicians in the district are continuing to prescribe vitamin D for their ARC residents and it is anticipated that this will be standard practice now.

Next steps

MidCentral DHB plans to roll out this initiative to older people in the wider community, once a process has been developed to identify which individuals will benefit most from vitamin D supplementation.

CONTACT INFORMATION

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