Evaluation of Effectiveness of Vitamin D Supplementation prescription processes in Taranaki Age-Care Residential Facilities

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Table of Contents

Executive Summary

The purpose of this evaluation was to assess the effectiveness of methods put in place three years ago by the Taranaki District Health Board to prescribe vitamin D supplements to all age-care facility residents. The evaluation used face to face interviews of a variety of Taranaki health personnel involved in Age-Care Residential Facilities (ARCF) resident care. The findings for this report are based on the following:

- 10 interviews of ARCF personnel
- 12 interviews of Taranaki Base Hospital personnel involved in elderly health care.
- 9 interviews of primary health care providers involved in ARCF residents care.

Interviews were conducted in November 2014 – January 2015.

Existing level of knowledge of vitamin D

The findings from the interviews show that there are varying levels of knowledge about vitamin D among the personnel involved in ARCF residents.

The interviews of the ARCF personnel indicated that there is a gap in the knowledge about the benefits, adverse effects and the administration of vitamin D supplements. The staff of the ARCFs were confused on various issues such as whether vitamin D should be given to immobile residents and if the tablets can be crushed up. It is recommended that education should be delivered to the ARCF sector to clear up some of the misunderstandings.

The staff of the Taranaki Base Hospital (TBH) had a moderate level of knowledge about vitamin D. There is however a lack of the more in-depth knowledge. A common misconception was how Vitamin D actually worked. The majority of respondents knew that vitamin D reduced the number of falls and fractures but they were unsure how this worked.

The general practitioners have a high level of knowledge of vitamin D and what it does. The GPs were almost offended by being asked how they would like to receive more education on vitamin D. It seems that education of the GPs is not the issue, but the lack of processes in place to aid in the prescription of vitamin D.

Current ways vitamin D is prescribed

The process, implemented three years ago by the Taranaki DHB, which allowed the ARCF to initiate a vitamin D prescription to the community pharmacy has not been used by any of the facilities interviewed. The respondents do not believe they have the confidence to start a prescription and were also a bit confused as to why they are asked to be involved in the prescribing process when they are usually not. The respondents are happy to prompt the GPs but would rather do it when the GPs visit the ARCF to evaluate the residents.

Vitamin D prescription is currently done by both the TDHB staff and the GPs looking after the ARCF residents. The systems put in place three years ago appeared to be very logical but have not worked practically. The TDHB doctors were asked to prescribe vitamin D to all patients discharged to an ARCF. These doctors, who technically should be doing this, reported often forgetting to do it as they receive no prompt. Another valid point was that the hospital staff only sees about 10% of the ARCF residents so are unable to prescribe vitamin D to them all. Sometimes there is no indication where the patient is living when they see them.

The GPs varied in their vitamin D prescription rates for their ARCF patients. There were some very proactive GPs who have no issues reviewing their patient's vitamin D prescriptions and ensuring all ARCF residents are on it. There were also some GPs who supported the supplementation of vitamin D but did not have high levels of prescription. The main reasons the GPs stated for this was vitamin D levels not being an acute issue so is often forgotten. Processes need to be developed so the assessment of the need for vitamin D supplementation becomes day to day practice.

Barriers/issues to prescribing vitamin D

The findings from the interviews show a number of barriers to increasing vitamin D prescription levels in Taranaki's ARCF.

In the ARCFs the lack of knowledge about vitamin D supplementation and its administration meant that respondents were not 100% supportive of increasing vitamin D prescription to their residents. ARCF residents who have difficulty swallowing tablets are missing out on vitamin D as the ARCF staff were unsure if the tablet was allowed to be crushed up. This is an example of one small misunderstanding which affects the level of vitamin D prescription. There is a willingness to learn more about vitamin D but the information needs to be distributed regularly to ensure it reaches the right people. ARCF workers are the people who are interacting most often with the residents and their families. Therefore educating the ARCF personnel would also aid in the education of the patients.

There was also an obvious need for a system to be put in place to allow the ARCF workers to remind the GPs to look at the vitamin D prescription for the residents. This could come in the form of the ARCF doing an audit every six months and sending the results to the GPs. Or

the ARCF having a sticker to place on the residents medication chart to remind the GP to review the patient's vitamin D. What ever process is put in place it needs to be clear and the same across all ARCF in Taranaki. Another barrier identified with ARCF respondents was the high turnover of staff at the ARCFs. Having a uniform process and also distributing regular education to the facilities would help to keep the majority the staff informed about vitamin D.

At Taranaki Base Hospital the main barrier to improving prescription rates is forgetting to look at vitamin D levels. As vitamin D is not commonly the acute issue presented to the personnel at the hospital it is often forgotten. Adding to this, staff are confused as to who is meant to be doing the prescribing of vitamin D supplements. Education on who, how and what TDHB employees are meant to be doing for vitamin D supplementation needs to be clearly outlined and regularly distributed to avoid this confusion. It should be done in a variety of forums and media. The information distributed also needs to have relevant supporting documents such as literature reviews.

The GPs were confused as to who was meant to be the primary prescribers of vitamin D. Once again the respondents were unsure as to who had the responsibility of prescribing vitamin D to the ARCF residents. It was noted that when the promotion of vitamin D happened about three years ago the GPs thought the hospital staff were taking over as primary prescribers of vitamin D. This confusion is one of the major barriers identified in the interviews. The other issue for the GPs was that there are no clear guidelines for assessing ARCF residents. Therefore it is easy to forget to look at vitamin D supplementation when visiting a patient, especially as it is not generally an acute issue.

Palliative care was also a barrier raised by the majority of respondents. At this stage in a patient's life the medical staff try to reduce the number of tablets taken. Vitamin D is not seen as appropriate for these patients. It needs to be taken into account when looking at prescription rates of vitamin D for a facility.

Ways to increase vitamin D prescription

1. Give extra education to the personnel working at ARCFs and the TDHB. It is important that this education is clear and concise. It should also be distributed regularly. The GPs do not appear to need extra education but would appreciate prompts and reminders to prescribe vitamin D.

2. The ARCF could conduct an audit on the vitamin D prescription of their residents once every six months. The results of this audit can be sent to the relevant GP to follow up. Another option could be to produce a set of stickers that can be placed on

the residents medication chart indicating the results of the audit. This medication chart has to be reviewed legally every three months. Hopefully this sticker would prompt the GP to assess the resident for vitamin D.

3. The majority of the GPs would like to see the Primary Health Organisation (PHO) Midlands Health Network give its support to improving vitamin D prescription. The PHO is the organisation that the GPs trust the most. It was mentioned on a variety of occasions that the GPs only really bother reading information if it is sent from their PHO.

4. Make an evaluative checklist to be completed when a new resident is admitted in an ARCF that is consistent for all of Taranaki. It should include cardiovascular health, respiratory health, medications, supplements (e.g. vitamin D) and maybe more. This should ideally come from Midlands Health Network.

5. The prescription of vitamin D needs to primarily come from the GPs looking after the ARCF residents. These people are the primary health care providers who see their patients on a regular basis and are able to easily follow up issues. GPs need to be reminded that they are the primary prescribers and the hospital personnel will support them. The hospital staff need to be informed that the GPs do not mind having their patients put on vitamin D by the hospital staff.

6. It is important that the audit methodology of vitamin D prescription levels in ARCF in Taranaki is appropriate. The audit needs to exclude ARCF residents who are not recommended to take vitamin D supplementation, such as Villa residents who are still highly active outdoors. The evaluation should also exclude ARCF residents who are receiving end of life care.

Recommendations

Based on the findings of the evaluation the following recommendations are made to the Taranaki District Health Board Public Health team:

In general

- Hold a meeting with all parties involved (GPs, ARCF and Hospital Staff) to agree on the best approach to improve vitamin D prescription in Taranaki ARCFs
- Ensure the audit of prescription rates for vitamin D includes the break down of who the facility cares for ie. if they have lots of residents with palliative care the ARCF is likely to have lower levels of vitamin D prescription.
- Investigate the possibility of ARCFs doing an audit every six months that is sent to the GPs involved to follow up (possibly employ a student to do this to keep it consistent at all facilities)
- Investigate the possibility of the GPs/ARCFs getting an incentive to improve their vitamin D supplementation rate
- Have a dedicated person who provides education and guidelines for GPs, ARCF and the hospital staff.

For ARCFs

- Send information (pamphlets and booklets) with information to ARCF workers and families/residents of ARCFs.
- Look at the idea of making stickers to place on the hard copy of the medication chart held at the ARCF that legally has to be reviewed every 3 months.
- Evaluate whether the way the information is obtained is legal and accurate**.**

For the hospital

- Establish a clear procedure that can be followed by all staff members.
- Print out guidelines in clear way and distribute around hospital.

- Develop better information sheets which clear up the confusion e.g. who should prescribe, what it actually does, information on crushing tablets, how to administer, toxicity, doses and contraindications
- Make posters to be put up around hospital.
- Hold an awareness week.
- Hold journal club talks as well as talk about vitamin D on Grand rounds.
- Send out interesting articles/reviews related to vitamin D to the people involved in the recommendation and prescription of it.
- Target the consultants as staff turnover at the hospital is high.
- Inform hospital staff that the GPs do not feel offended if the hospital prescribes vitamin D for the patients.

<u>For general practitioners</u>

- Establish a clear procedure that can be followed by all general practitioners for the evaluation of ARCF.
- Make a checklist to be completed when a new resident is admitted in an ARCF. This will have to come from Midlands Health Network.
- Print out checklist/guidelines in a clear way and distribute around rest homes and GP practices.
- Distribute review and articles that support vitamin D prescription in the elderly through Midlands Health Network
- Distribute posters to educate patients that can be displayed in waiting rooms
- Evaluate the possibility of and audit becoming compulsory when a GP is doing their reaccreditation every 3 years