




## Exploring diabetes care in regional public residential care

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## Background

- Diabetes is increasingly common in older people
- No specific guidelines for diabetes management in residential aged care settings
- Staff knowledge of diabetes care in aged care settings unknown
- Diverse skill mix of staff in residential care increases complexity of chronic illness management

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## Aim

- to identify staffing and organisational factors influencing the quality of diabetes care in two regional public sector residential aged care services.


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## Specific Objectives

- Identify the specific diabetes-related care staff provide for people with diabetes
- Determine the diabetes-related knowledge of staff caring for people with in high and low level care facilities
- Identify the barriers to & facilitators of caring for people with diabetes in aged care facilities.

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## Methods

Data triangulation strategy:

- Survey of staff knowledge
- Staff interviews and
- Case file audit


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## Assessing staff knowledge

- ADKnowl: The audit of diabetes knowledge
- Tool for assessing patient knowledge of diabetes and its treatment (Bradley 2003)
- Adopted to assess knowledge among the diverse staff skill mix in residential aged care settings.
- Added vignettes on specific aspects of aged care




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### Staff Interviews & case audits

- 2 focus groups - 1 in each geographic setting
- Audio recorded and transcribed
- Thematic analysis
- 10 resident records reviewed in each setting – total 20
- Attempted to track diabetes care of residents since admission




### Data Analysis

- SPSS 12.0 and statistical procedures t-test, Mann-Whitney-U-Test and Chi-Square-test
- Case file audit evaluated against Dunning’s framework (2005)


### Distribution of survey

- 540 distributed to clinical areas
- Return by post paid or in local collection boxes
- 68 returned, response rate = 12.5%
- Most did not indicate their location




### Results







### Survey Sample characteristics

- 27% Registered Nurses
- 47% Enrolled Nurses, a third with medication endorsement
- 22% Personal Care Attendants (PCAs).
- majority of respondents aged over 40 years (82%).
- 96% were female



### Longevity in aged care

Position	n	mean years in aged care
Registered Nurse	18	14.9
Enrolled Nurse (medication endorsed)	11	15.27
Enrolled nurse (no endorsement)	21	18
Personal Care Assistant (PCA)	14	10.50



### Knowledge Score by position

Position	n	Mean Score (%)
RN	18	74.31
EN (medication endorsed)	11	67.32
EN (not endorsed)	21	58.28
PCA	15	54.88



### Impact of diabetes certificate

Certificate in Diabetes Education	n	Mean Score (%)
Yes	4	71.88
No	62	62.25



### Subscales

- diet & food – 63%
- foot care – 75%
- risk of complications – 94%
- hypoglycaemia – 71%
- physical activity – 54%






### Diet & Food

score out of 20	RN	EN (med)	EN	PCA
mean	14.78	13	11.71	11.13
SD	1.97	2.05	3.7	2.8






- *You should see the amount of medication some of them have too. It takes a long time.*
- *We think – it is no good because they start at half-past three giving out afternoon pills and they finished at six o'clock.*

### Footcare

score out of 25	RN	EN (med)	EN	PCA
Mean	20.56	18.91	18	18.27
SD	2.17	2.948	4.07	2.65

### Risk of complications

score out of 15	RN	EN (med)	EN	PCA
Mean	14.38	14.36	13.62	13.87
SD	0.38	0.89	3.07	1.25

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### Hypoglycaemia

score out of 19	RN	EN (Med)	EN	PCA
Mean	14.89	14.73	12.67	12.53
SD	2.24	1.9	2.56	3.75

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### Physical Activity

score out of 11	RN	EN (Med)	EN	PCA
Mean	7.39	6.45	5.76	4.33
SD	2.5	2.8	2.89	3.5

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### medication specific questions

75 yr old with type 2, takes OHAs, has vomited overnight. Would you...	True	False	Don't know or missing
Administer her OHA meds as prescribed	30.9% (correct)	26.5% (incorrect)	42.6%
Administer her OHA meds before breakfast	7.4% (correct)	42.6% (incorrect)	50%
Crush her OHAs to make them easier to swallow	45.6% (correct)	4.4% (incorrect)	38.2%

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### Specific medication questions


	True	False	Don't know	Missing
If you are ill and not eating, it is advisable to take less long-acting (background) insulin	20.6% (incorrect)	26.5% (correct)	35.3%	17.6%
If you are ill and not eating you may need additional quick-acting insulin	29.4% (correct)	23.5% (incorrect)	32.8%	14.3%

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### Specific medication questions




	Correct Response	Incorrect Response	Don't know or missing
A loaded pen injector can be left out of the refrigerator indefinitely without damaging the insulin.	41.2%	20.6%	38.2%
If a snack is within 1 hour of your next meal, you could wait until the meal before taking extra insulin.	26.5%	22.1%	52%

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### audit findings



- difficult to track care in mix of electronic and paper based records
- infrequent assessment of blood glucose and HbA<sub>1C</sub>
- GP interest varies

### interview & narrative text


issues include:

- RN resistance to change
- little support for up skilling
- challenging behaviours of some residents
- medication administration time consuming & often not given timely
- poor communication systems & continuity of care





### Discussion








### Diabetes Knowledge

- diabetes specific knowledge among respondents was less than adequate
- RNs showing greater understanding than other workers.
- areas of poorest knowledge related to diabetes and
  - diet and food
  - physical activity.








### Systems of care

- staff mix and skill sets vary by shift
- change management difficult
- no clear guidelines on minimum care for diabetes
- complicated and time consuming documentation systems
- limited opportunities for aged specific education



### Limitations




### limitations



- **sample size**
- **staff concerned about management identifying them**
- **ADKnowl not specific to staffing knowledge**



### Recommendations



- determine if knowledge of staff in metropolitan settings is comparable
- enhance staff knowledge about contemporary diabetes management
- development of specific minimum standards in care of people with diabetes in residential aged care settings



### References:

Bradley, C. (2003). The audit of diabetes knowledge (ADKnowl) user guidelines, 4<sup>th</sup> draft. Health Psychology Research, Royal Holloway University of London, Egham, Surrey, UK.

