Feasibility and preliminary efficacy of a nurse led intervention to reduce cardiovascular disease risk factors in women treated for breast cancer.

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BACKGROUND

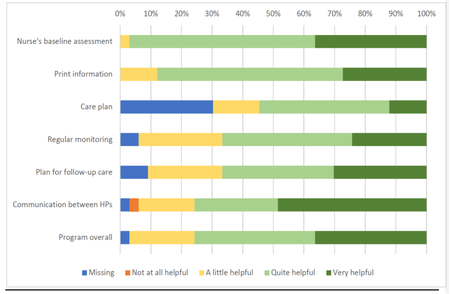
- Cardiovascular disease (CVD) is a leading competing cause of mortality after breast cancer.
- Managing preexisting risk factors for CVD is critical for preventing mortality and morbidity, but the optimal implementation is unclear.
- The aim of this study was to assess the feasibility of a nurse-led CVD risk assessment and care plan development.

METHODS

- A prospective single arm pre-post pilot implementation study.
- Adult patients diagnosed with breast cancer within 6 months.
- A nurse-led clinic for risk factor assessment and care plan with phone follow up.

RESULTS

- 42 (84%) women enrolled; median age 58.5 (33-81) years.
- 39 (93%) attended a follow-up clinic; 32 (82%) returned final research survey.
- All but one (98%) one or more modifiable CVD risk factor with the majority (n=26; 61.9%) having 3 or more.
- All but one (98%) received cardiotoxic treatment.
- Behavioural modification recommended for 39 (93%)



Gender N (%) Female	 42 (100%)
Median age (min, max)	58.5 (33, 81) years
Country of birth N (%) Australia Other Missing	 26 (61.9) 15 (35.7) 1 (2.4)
First language N (%) English Other	 37 (88.1) 4 (9.5)
Number of risk factors in total N (%) Total risk factors per individual from personal history, family history, BMI, SBP, DBP, cardiotoxic treatment (any), physical activity, diet, smoking, alcohol use, symptoms of depression, sleep apnoea). 2 risk factors 3 risk factors 4 risk factors 5 risk factors 6 risk factors 7 risk factors 8 risk factors Missing data (on at least 1 risk factor) Median number of total risk factors (min, max)	 4 (9.5) 6 (14.3) 8 (19.0) 6 (14.3) 8 (19.0) 6 (14.3) 2 (4.8) 2 (4.8) 5 (2, 8)
Number of *modifiable* risk factors N (%) (Total number of risk factors from BMI, SBP, DBP, PA, diet, smoking, exercise, symptoms of depression, sleep apnoea). 0 modifiable risk factors 1 modifiable risk factor 2 modifiable risk factors 3 modifiable risk factors 4 modifiable risk factors 5 modifiable risk factors 6 modifiable risk factors Missing data (on at least 1 modifiable risk factor) Median number of modifiable risk factors (min, max)	 1 (2.4) 6 (14.3) 12 (28.6) 7 (16.7) 8 (19.0) 6 (14.3) 1 (2.4) 1 (2.4) 3 (0, 6)

Modifiable lifestyle behaviour	**n participants for analysis** (provided pre-and post-intervention data)	**n at risk at baseline** (% sample for analysis)	**n at risk post-intervention** (% sample for analysis)	**Test outcome** (McNemar's test significance level)
Physical activity ('at risk' if PA < 150 mins/week)	37	24 (64.9%)	18 (48.6%)	$p = 0.5$
Diet ('at risk' if >1 diet item not meeting guidelines)	39	28 (71.8%)	25 (64.1)	***p = 0.045****
Smoking ('at risk' if current smoker/ quit within past 12 months)	39	7 (17.9%)	7 (17.9%)	*p=0.999*
Alcohol use ('at risk' if > 10 standard drinks per week)	39	1 (2.6%)	1 (2.6%)	*p-value not valid due to limited n cases at risk*

Variable	**n participants for analysis** (provided pre-and post-intervention data)	**Baseline** median (IQR)	**Post-intervention** median (IQR)	**Test outcome (Wilcoxon's signed rank test significance level)**
Patient activation	36	82.0 (74.5, 88.2)	91.0 (82.8, 94.0)	***p < 0.001****
Physical wellbeing	31	19.0 (14.5, 22.0)	22.0 (18.0, 25.0)	***p = 0.025****
Social wellbeing	31	25.0 (19.5, 26.8)	24.0 (18.0, 6.0)	*p = 0.7*
Emotional wellbeing	32	18.0 (14.8, 19.0)	19.0 (16.8, 21.0)	***p = 0.048****
Functional wellbeing	32	16.5 (11.0, 20.2)	20.0 (16.0, 25.0)	***p = 0.003****
Total wellbeing	31	71.0 (65.0, 87.8)	86.0 (70.5, 94.0)	***p = 0.020****

CONCLUSIONS

Nurse-led intervention to improve the management of CVD risk factors after breast cancer appears feasible and is associated with improvement in risk factors, self-management and quality of life making it a promising intervention for randomised studies.