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The 'Farmers Have Hearts' Study: Can a workplace cardiovascular health check followed by health promotion texts and/or health coaching by phone improve behaviours affecting heart and circulatory system health in livestock farmers?

Submission date
06/12/2018

Recruitment status
No longer recruiting

Registration date
11/04/2019

Overall study status
Completed

Last Edited
17/01/2023

Condition category
Circulatory System

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Death rates have been falling in Ireland generally, but farmers show the slowest reduction of any socio-economic group. Irish farmers are are at high risk for cardiovascular disease (CVD, diseases of the heart and blood circulation system), the leading cause of death worldwide. Most CVD is caused by unhealthy lifestyle behaviours (including factors relating to work and the workplace) and are therefore preventable. CVD can reduce a person's ability to do physical activity and work, which can then undermine the profitability, competitiveness and sustainability of farming.
Farmers remain a 'hard to reach' group in terms of engaging with health promotion initiatives. Whilst farmers respond positively to healthcare screening in places where the go as part of their farming activities, they are not as likely to commit to long-lasting sustainable health behaviour change. There is a gap in existing research in relation to what prompts farmers to adopt behaviour change to improve their health.
This study will investigate whether a tailored intervention is effective in prompting Irish farmers to adopt sustainable behaviour change to improve their health. Specifically, the study will investigate whether the programme results in effective follow-up use of GP services, sustainable cardiovascular health behaviour change, and reduced CVD risk.
Additionally, this study will compare and contrast two sub-groups of Irish farmers who will be recruited from two different settings (marts (livestock markets) and dairy co-ops). 'Mart farmers' tend to be largely involved in beef/cattle farming, to have smaller farm holdings and to be sole traders. 'Co-op farmers' tend to be largely engaged in dairy farming and are suppliers to agricultural processing companies. In this study the agricultural processor is Glanbia Ireland, a maker of cheese, butter and other dairy products. The recruitment of the farmers will take place in marts and Glanbia Ireland co-ops in the South-East, Midland, Mid-East and South-West regions

of Ireland. The farmers take part in the health checks based on self-referral, meaning it is completely up to them whether they take up the offer of the health check.
This research has been awarded a Teagasc Walsh Fellowship. It will be carried out in partnership between the National Centre for Men's Health at IT Carlow, Teagasc, the HSE, the Irish Heart Foundation (IHF) and Glanbia. The findings from this study will provide insight into the cardiovascular health status of Irish farmers and a better understanding of ways to encourage this group to improve their cardiovascular health by making changes to their lifestyle and health behaviours. The learnings will also inform decision-making on health behaviour change support systems for farmers using different approaches such as Teagasc knowledge transfer and extension workers, mart workers and Glanbia advisors.

Who can participate?
Male farmers aged over 18 years.

What does the study involve?
All participants will get a cardiovascular health check at baseline and at 52 weeks in a workplace (livestock marts or dairy co-ops). These cardiovascular health checks are carried out by a qualified nurse from the Irish Heart Foundation who will measure cholesterol and other lipids (fats) in blood, blood glucose, blood pressure, carbon monoxide in breath (for smokers), weight, height and waist measurement. The nurse will also collect information on medical history and health and lifestyle behaviours, including family history of diabetes, heart disease and/or stroke, last GP visit (including last cardiovascular health check), use of current medication for heart disease/diabetes (which medication and whether it is taken as prescribed), smoking (yes/no, how many), use of alcohol (yes/no, how many standard units a week, binge drinking), levels of physical activity (work-related, leisure), experienced stress. The cardiovascular health check also includes lifestyle counselling to suggest behaviour changes to improve health.
After the first health check, the participants are asked to take part in a face-to-face questionnaire and are offered a choice of three behaviour change support interventions to improve their cardiovascular health status:
1. M-health. This consists of general cardiovascular health-promoting text messages (three text messages per week for 4 months). Participants are asked to reply to a text message twice per month. M-health uses mobile and wireless technologies to support health objectives. While health promotion interventions based on text messaging are relatively new, evidence suggests that they are effective in relation to health behaviour change. M-health, and specifically text messaging, has been found to be an effective health intervention tool: it is fast, cheap and has a far reach within all socio-economic groups. Although farmers lag behind in their use of internet technology compared to the general Irish population, the majority of farmers, regardless of age, regularly use a mobile phone for talking and messaging.
2. Health coaching by phone. The health coach is an interactive intervention based on reflective listening and motivational interviewing that aims to encourage and support the participant with making and sustaining lifestyle changes to improve their cardiovascular health. This intervention is based on the theory of the Stages of Change. Health coaching supports people to gain personal insight, knowledge and confidence to engage in changing a behaviour by focusing on goal setting, personal empowerment and increased self-efficacy.
3. Health coaching in combination with M-health. This intervention group receives both interventions at the same time.
Participants may also choose to be part of a control group. Participants in this group take the cardiovascular health checks at baseline and 52 weeks also take part in a follow-up questionnaire by phone at 26 weeks after the health check. They do not receive any health behaviour change intervention.

What are the possible benefits and risks of participating?
The Farmers Have Hearts Programme reaches out to those who can be hard-to-reach and tend not to participate in preventive health, such as health checks. All farmers attending the livestock mart can get a free cardiovascular health check and brief lifestyle counselling, carried out by a qualified nurse from the Irish Heart Foundation. Results are provided during the health check and participants receive tailored hands-on practical advice on how to improve their cardiovascular health. In case of detected risk factors for CVD, participants are referred to their GP for further examination and (if needed) treatment. The cardiovascular health checks takes place in the workplace, the livestock mart, which is a space in which farmers feel safe and respected.
All participants receive an invitation for the free repeat cardiovascular health check, 52 weeks after the first health check. As part of the study, all participants are offered follow-up support by phone and/or text messaging offering personal tailored advice to encourage simple lifestyle changes to improve cardiovascular health. All members of the Farmers Have Hearts research team are Garda vetted and trained to look out for emotional and/or medical needs and advise participants to contact relevant support services. All communication as part of the study is strength-based, supportive and non-judgmental and in line with the Irish NALA (literacy) guidelines. All participants will receive information about national and local support services as well as the free Irish Heart Help number. All participants will receive for cardiovascular health booklets relevant to them and a copy of the health booklet 'Staying fit for farming' which contains health information tailored to the needs of farmers and includes useful addresses of support organisations.
We are mindful that participants in this study are largely from a lower socio-economic status group, have lower educational attainment and are middle-aged or older. The language used to explain the study, informed consent and questionnaires will need to be accessible, clear and understandable. All interventions are based on motivational interviewing. We also acknowledge that some participants might be nervous about the health check and that the results might cause worry. The health checks will be carried out by fully qualified Irish Heart Foundation nurses. Those with risk factors for CVD will be referred, as appropriate, to their GP by the nurse in line with standard Irish Heart Foundation operational procedures. Additionally, the nurse will flag up any identified need for emotional support identified during the health check and/or lifestyle counselling.
The principal researcher's contact details will also be made available on the information sheet. Participants can make contact with the researcher if they feel the need to do so in relation to the study, their study participation and/or their health.

Where is the study run from?
Institute of Technology Carlow (Ireland)

When is the study starting and how long is it expected to run for?
May 2018 to December 2021 (updated 15/06/2021, previously: December 2019)

Who is funding the study?
Teagasc - The Agriculture and Food Development Authority (Ireland)

Who is the main contact?
1. Ms Diana van Doorn (public contact), diana.vandoorn@itcarlow.ie
2. Dr Noel Richardson (scientific contact, noel.richardson@itcarlow.ie

Contact information

Type(s)
Scientific

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Type(s)
Public

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Additional identifiers

Study information

Scientific Title
Assessing the effectiveness of a gendered approach to a health behaviour change programme designed to improve the health status of Irish livestock farmers.

Acronym
FHH-CHP

Study objectives

A workplace health check in combination with a follow-up support intervention specifically designed for farmers will be effective in prompting sustainable health behaviour change to improve farmers' cardiovascular health.
This study will adopt gender specific strategies to engage with a high-risk group (male farmers) and is underpinned by a national men's health policy mandate. Whilst the principal focus of the study is therefore on male farmers, the brief interventions (health check including lifestyle advice) will be made available to both male and female farmers. Non-farmers will not be eligible to take part in the study.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Ethics Committee of the Institute of Technology Carlow, 08/03/2018, ref: 205

Primary study design
Interventional

Study design
Interventional longitudinal prospective non-randomised study with a quasi-experimental design

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Cardiovascular health

Interventions
All participants partake in a workplace (livestock marts or dairy co-ops) cardiovascular health check at baseline and at 52 weeks. These cardiovascular health checks are carried out by a qualified nurse from the Irish Heart Foundation and objectively measure cholesterol (full lipid profile), blood glucose, blood pressure, carbon monoxide (if applicable), anthropometric measurements (BMI, waist measurements). Additionally, data pertaining to self-reported health and lifestyle behaviours are gathered during the heart check: family history of diabetes, heart disease and/or stroke, last GP visit (including last cardiovascular health check), use of current medication for heart disease/diabetes (which medication and adherence), smoking (yes/no, how many), use of alcohol (yes/no, how many standard units a week, binge drinking), levels of physical activity (work related, leisure), experienced stress. The cardiovascular health check also includes a lifestyle counselling component.

After the health check, the participants are asked to take part in a face-to-face baseline questionnaire and are offered a choice of three behaviour change support interventions to improve their cardiovascular health status:
1. M-health. This intervention consists of general cardiovascular health-promoting text messages (three text messages per week for 4 months). Participants are asked to reply to a text message twice per month.
2. Health coaching by phone. The health coach is an interactive intervention based on reflective listening and motivational interviewing which aims to encourage and support the participant with making and sustaining lifestyle changes to improve their cardiovascular health. This

intervention is based on the theory of the Stages of Change.
3. Health coaching in combination with M-health. This intervention group receives both interventions simultaneously.

Participants may also choose to be part of a control group. Participants in this group partake in the cardiovascular health checks at baseline and 52 weeks and also take part in a follow-up questionnaire by phone at 26 weeks after the health check. They do not receive any health behaviour change intervention.

Intervention Type
Behavioural

Primary outcome(s)
1. Use of GP services after referral. This will be measured by self-report during follow-up questionnaires at Week 26 (by phone) after the health check and Week 52 (face-to-face questionnaire).
2. Sustainable health behaviour change specifically in relation to weight reduction/weight management, physical activity, smoking, stress management and alcohol consumption. Lifestyle behaviour change will be measured by self-report during follow-up questionnaires at Week 26 (by phone) after the health check and Week 52 (face-to-face questionnaire). Additionally, lifestyle changes will be measured as part of the health coach intervention.
3. Cardiovascular health check at baseline and 52 weeks, including full lipid profile, blood glucose, blood pressure, anthropometric measurements (BMI and waist) and self-reported life style components such as alcohol consumption, smoking, stress, physical activity and sedentary behaviours.

Key secondary outcome(s)
1. Socio-cultural influences that support/inhibit farmers from engaging in health behaviour change. This will be assessed in a qualitative sub-study based on interviews.
2. Socio-cultural context that shapes the relationship between farming and cardiovascular health. This will be assessed in a qualitative sub-study based on interviews.
3. Engagement with a health behaviour change programme within two sub-groups of farmers (dairy and livestock farmers) assessed by self-report as part of the follow-up questionnaires at Week 26 (by phone) and Week 52 (face-to-face)

Completion date
12/12/2021

Eligibility

Key inclusion criteria
Male farmers aged ≥18 years

Participant type(s)
Mixed

Healthy volunteers allowed
No

Age group

Adult

Lower age limit
18 Years

Sex
Male

Total final enrolment
868

Key exclusion criteria
Does not meet inclusion criteria

Date of first enrolment
17/05/2018

Date of final enrolment
08/04/2019

Locations

Countries of recruitment
Ireland

Isle of Man

Study participating centre
Glanbia Countrylife
Shandon St
Abbeyside
Dungarvan
Co. Waterford
Waterford
Ireland
X35 KA99

Study participating centre
Glanbia Countrylife
Clonroche
Enniscorthy
Co. Wexford
Clonroche
Ireland
Y21 FW72

Study participating centre
Glanbia Co-op Killenaule
Kilenaule
Thurles
Co. Tipperary
Killenaule
Ireland
E41 HW27

Study participating centre
Glanbia Countrylife Kilmaedan
Adamstown
Kilmeaden
Co. Waterford
Kilmaedan
Ireland
R680

Study participating centre
Glanbia Countrylife Campile
Main St
Ballyvelig
Campile
Co. Wexford
Campile
Ireland
Y34 H521

Study participating centre
Glanbia Co-op Goresbridge
Barrow Mount Dr
Barrowmount
Goresbridge
Co. Kilkenny
Goresbridge
Isle of Man
R95 C563

Study participating centre
Glanbia Countrylife Donaghmore
Donaghmore
Portlaoise

Co. Laois
Donaghmore
Ireland
R32 XY61

Study participating centre
Glanbia countrylife Monasterevin
Cowpasture
Barraderra
Monasterevin
Co. Kildare
Monasterevin
Ireland
W34 PF50

Study participating centre
Glanbia Co-op Inch
Inch
Gorey
Co. Wexford
Inch
Ireland
Y25 W894

Study participating centre
Glanbia Co-op Castlelyons
Castlelyons
Bridebridge
Fermoy
Co. Cork
Castlelyons
Ireland
P61 K156

Study participating centre
Glanbia Countrylife Tullamore
Spollanstown Industrial Estate
Tullamore
Co. Offaly
Tullamore
Ireland
R35 K820

Study participating centre
Glanbia Agribusiness Ballitore
Ballitore
Athy
Co. Kildare,
Ballitore
Ireland
R14 CH05

Study participating centre
Glanbia Agribusiness Bennettsbridge
Kilkenny Rd
Bennettsbridge
Co. Kilkenny,
Bennettsbridge
Ireland
R95 E02D

Study participating centre
Glanbia Agribusiness Piltown
Banagher
Piltown
Co. Kilkenny
Piltown
Ireland
E32 WD21

Study participating centre
Glanbia Agribusiness Athboy
Mullaghstones
Clifton
Athboy, Co. Meath
Athboy
Ireland
C15 HE33

Study participating centre
Carnew Mart
Lower Main Street
Carnew
Co. Wicklow

Carnew
Ireland
Y14 NN72

Study participating centre
Roscrea Mart
Townparks
Roscrea
Co. Tipperary
Roscrea
Ireland
Y14 NN72

Study participating centre
Tullamore Cattle Mart
GVM Mart,
Arden Rd
Tullamore
Co. Offaly
Tullamore
Ireland
R35 XK35

Study participating centre
Roscrea Cattle Mart
Parkmore Industrial Estate
Roscrea
Co. Tipperary
Roscrea
Ireland
E53 F223

Study participating centre
KANTURK CO-OP MARTS LTD.
Percival St
Kanturk
Co. Cork
Kanturk
Ireland
P51 HR29

Study participating centre
Cahir Mart
Camus Road
Cashel
Co Tipperary
Cahir
Ireland
E25 XP66

Study participating centre
Blessington Mart
20 Main Street
Blessington
Co. Wicklow
Blessington
Ireland
W91XH60

Study participating centre
Tullow Mart
Barrack St
Tullowphelim
Tullow
Co. Carlow
Tullow, Co. Carlow
Ireland
N/A

Study participating centre
Fermoy Mart
Rath-Healy
Fermoy
Co.Cork
Fermoy
Ireland
N/A

Study participating centre
Carnacross Mart
Kells Business Park
Cavan Rd
Meenlagh
Kells

Co. Meath
Kells
Ireland
N/A

Study participating centre
Baltinglass Mart
East Baltinglass
Co Wicklow
Baltinglass
Ireland
N/A

Study participating centre
Enniscorthy Mart
Old Dublin Rd
Blackstoops
Enniscorthy
Co. Wexford
Enniscorthy
Ireland
Y21 72D0

Sponsor information

Organisation
Institute of Technology Carlow

Funder(s)

Funder type
Government

Funder Name
Teagasc

Alternative Name(s)
Teagasc – the Agriculture and Food Development Authority

Funding Body Type

Government organisation

Funding Body Subtype
National government

Location
Ireland

Funder Name
Health Service Executive

Funder Name
Glanbia

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are not expected to be made available.

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article		17/10/2022	09/11/2022	Yes	No
Basic results			17/01/2023	No	No
Other publications	baseline characteristics in funders' report	18/06/2020		Yes	No