

Saskatchewan Farm Injury Cohort Study

W Pickett,^{1,2} L Hagel,² L Day,³ B Marlenga,⁴ R Brison,¹
T Crowe,² P Pahwa,² N Koehncke,² P Snodgrass,²
L LaBrash,² K Ulmer,² M Purcell,⁵ and J Dosman²

¹ Queen's University

² University of Saskatchewan

³ Monash University, Australia

⁴ Marshfield Medical Research Foundation, USA

⁵ Saskatchewan Association of Rural Municipalities

Outline of Talk

- Background about cohort study
- Progress Report:
 - Pilots
 - Baseline Survey
 - Follow-up
- Research Products

Background



- Farm injuries important
 - High risks, Recurrent patterns
- Causes of injury
 - Understand acute events
 - Little “deep” understanding
 - underlying etiology
 - Few longitudinal studies

Canadian Centre

*Canadian Centre for Health and
Safety in Agriculture - est. 2004*



Organized Canadian researchers:

- 4 themes (air, water, work, living)
- new collaborations

Our Cohort Study

Using a sample of Saskatchewan farms, we will examine:

1. Times in workplace as risk factors for injury
2. Whether associations between workplace exposures and injury are modified in protective settings
3. Test *population health theory* in farm settings

Other Research Opportunities

- Characterize farm hazards:
 - Physical, economic, social
- Profile farm people and their health

Basic Design

Study population

Recruitment

Exposures, covariates

Baseline Survey

Outcomes

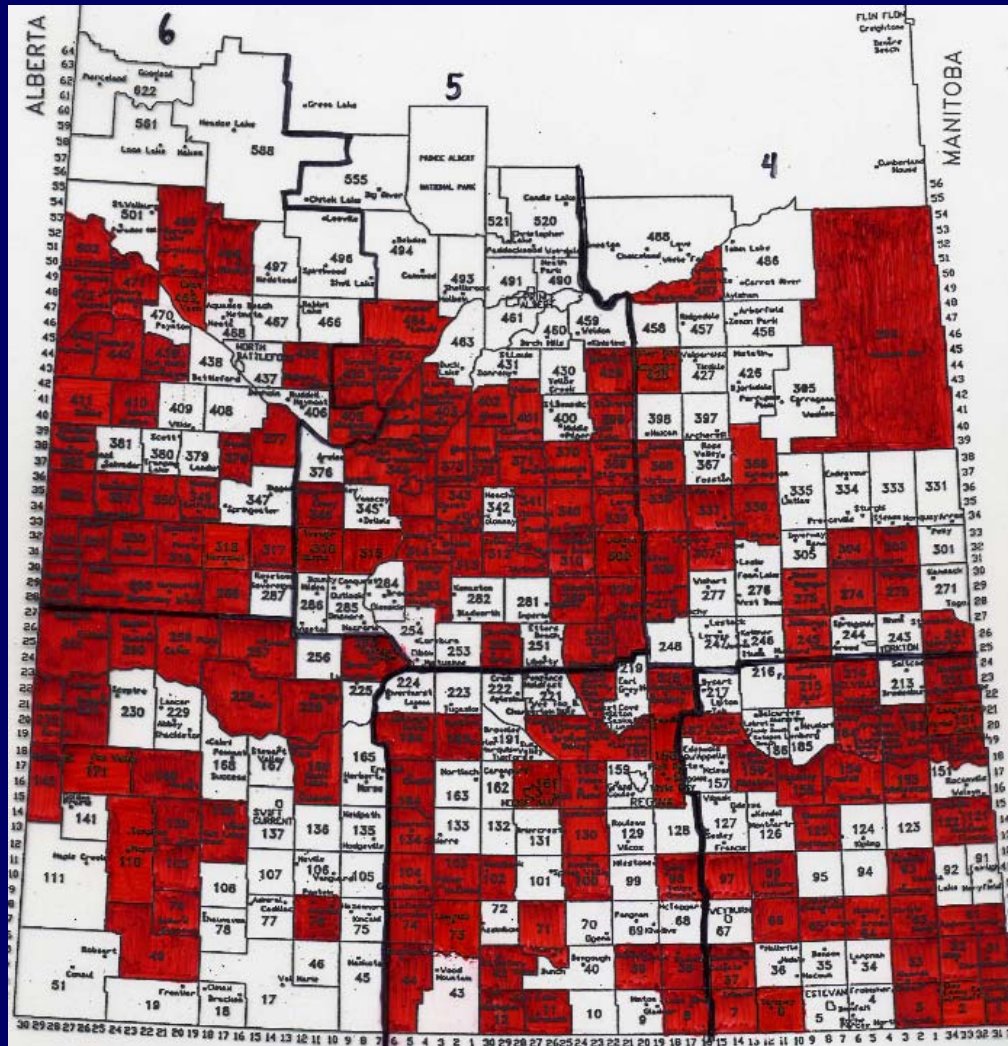
Follow-up (injury)

Analysis

Multi-level
Longitudinal



Study Base: Rural Municipalities of Saskatchewan



Outline of Talk

- Background
- Progress Report:
 - Pilots
 - Baseline Survey
 - Follow-up
- Research Products

Pilot 1: Baseline Questionnaire (Summer 2005)

- 20 farms
- Assessed time to completion
- Item-by-item review
 - Problem questions
 - Minimize qualitative items
- Helped to refine study instrument

TO FARMERS AND THEIR FAMILIES:

The University of Saskatchewan is conducting this project to learn more about the causes and consequences of farm injuries. Farm families from across Saskatchewan are participating.

This baseline questionnaire is our first contact with your farm. We ask that one responsible person complete the questionnaire on behalf of everyone on the farm. Please try to answer all of the questions, but remember you don't have to answer any questions if you choose not to. When you have finished, place the questionnaire in the business reply envelope and mail it back to us at the university.

We will contact you four times over the next two years to see if anyone has been injured. This contact will be made by mail and the questions will take approximately 5 minutes to respond to on each occasion. We wish to respect your time and privacy and make it easy to participate in this study.

Instructions

1. In Section B of this questionnaire we have asked questions about each member of your farm family. We have included enough space in this booklet for 2 persons. **If you have more than 2 persons in your farm family PLEASE COMPLETE THE ADDITIONAL PAGES IN THE GREEN BOOKLET called "Additional Pages for Section B".**
2. Please read each question carefully.
3. Answer each question by placing a check mark in the box provided. For some questions you will write in the space provided. Thank you for taking part in this important study.
4. **Please be sure to complete the last page.**

PART A YOUR FARM OR RANCH

A-1 From the list below, please check each commodity that is produced for sale on your farm or ranch (check all that apply).

Commodity

1. Grain crops
(eg., cereal, pulse, oil seeds, forage crops)
2. Cattle (beef)
3. Cattle (dairy)
4. Pigs
5. Poultry
6. Vegetable/Fruit
7. Other animals

A-2 What is the area of land in your operation that you farmed or ranched last growing season? (exclude land rented to others)

1. Grain crops _____ acres
2. Forage crops _____ acres
3. Pasture _____ acres
4. Summerfallow _____ acres
5. Other _____ acres

A-3 How many of these types of livestock are typically raised on your farm?

1. No Livestock
2. Cattle (beef) _____ (number)
3. Cattle (dairy) _____ (number)
4. Swine _____ (number)
5. Poultry _____ (number)
6. Other _____ (number)

A-4 What is the operating arrangement of your farm?

- Individual family farm
- Partnership (with or without a written agreement)
- Family corporation
- Other type

Some of the following questions refer to your "farm family". This includes family members who live on your farm, as well as other family members who work on the farm on a full or part-time basis. However, please do not include family members that primarily work on their own farm operation.

A-5 What is the total number of people in your farm family? _____ (number)

A-6 What is the total number of other (non-family) people who worked on your farm during 2006? _____ (number)

A-7 Of all the workers in A-6, how many were hired (work for salary) workers?

1. Full-time _____ (number)

2. Part-time _____ (number)

3. Seasonal _____ (number)

4. Custom _____ (number)

A-8 Is the farm your family's main place of residence?

Yes, all family members on the farm

Yes, some family members on the farm

No family members live on the farm

Complete PART B for each member of your farm family. This includes family members who live on your farm, as well as other family members who work on the farm on a full or part-time basis. However, please do not include family members that primarily work on their own farm operation. This booklet has space for 2 family members. The green booklet has space for 6 more family members.

If you have more than 8 family members, fill in the pages for 8 people and check the box below.

Baseline Questionnaire

PART A. The farm operation

PART B. People on your farm

PART C. Vulnerable groups

PART D. The farm environment

PART E. Contact information

Pilot 2: Recruitment Method (Spring 2006)

- Pre-notice letter
- Initial Questionnaire package
- Reminder postcard
- 1st Replacement package
- 2nd Replacement package

Pilot Response Rate

MAILING	DATE	RETURNED N = 242
Questionnaire 1	March 31	8%
Reminder Card	April 13	21%
Questionnaire 2	May 5	17%
Questionnaire 3	May 26	6%
TOTAL		51%

Pilot 3: Follow-up technology (Spring 2006)

To evaluate 3 different methods of contacting farm families in order to facilitate longitudinal data collection.

Available “technologies”



- Regular mail

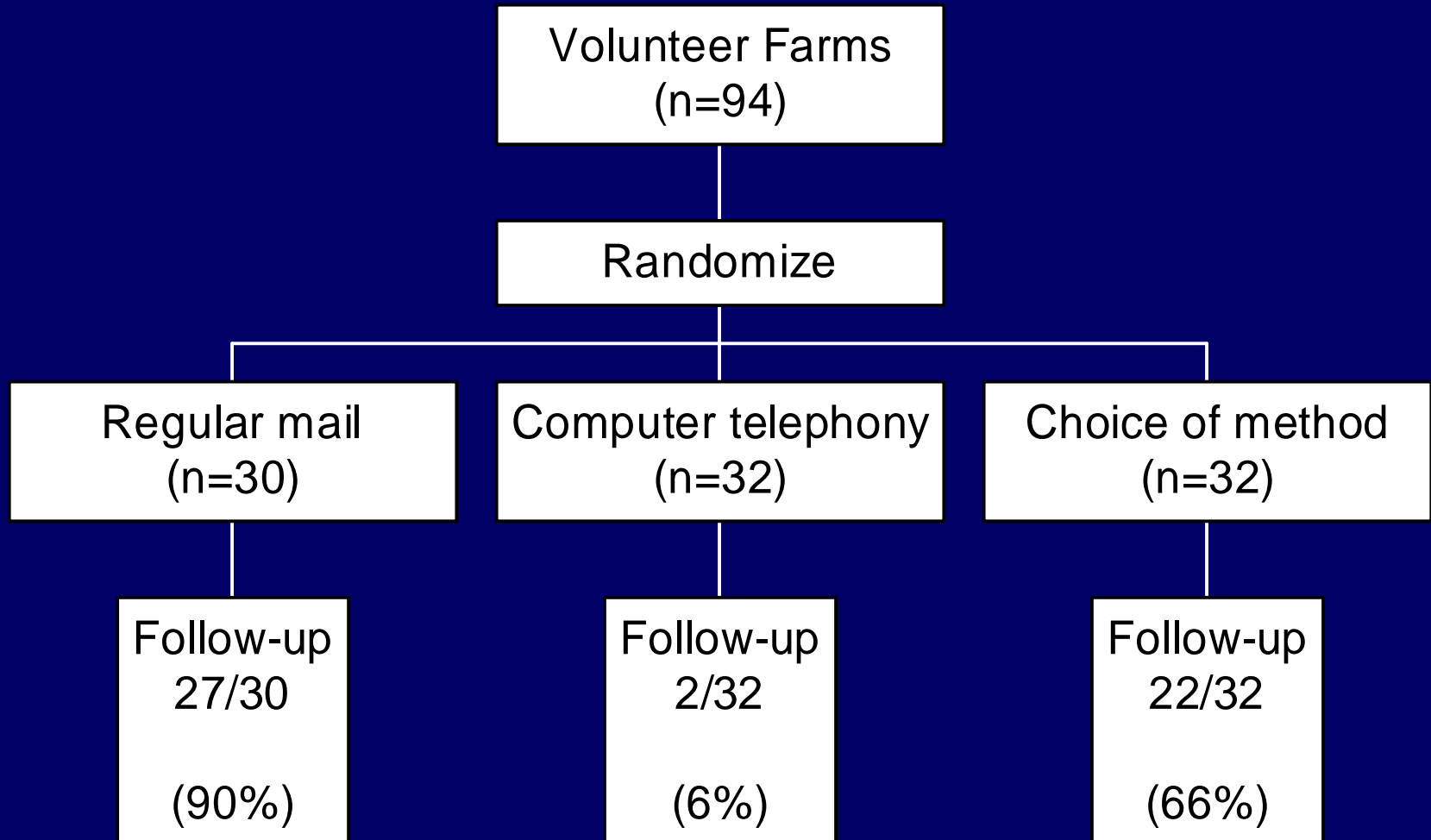


- E-mail



- Computer telephony

Regular mail worked best



Pilot 4: Follow-up Mailings (Summer 2007)

	No.	%
Farms:		
Approached by mail	50	
Responded to 1 mailing	41	82%
Injuries	1	2%

Outline of Talk

- Background
- Progress Report:
 - Pilots
 - Baseline Survey
 - Follow-up
- Research Products

Response Rate

	No.	%
<hr/>		
Rural municipalities:		
Approached	53	
Participated	50	95%
<hr/>		
Farms:		
Approached	8169	
Ineligible	923	
Returned questionnaire	4234	52%
Participated	2422	34%
<hr/>		

Participating farms

	No.	
Total number	2422	100%
<hr/>		
By size – <i>median acres</i>		
Grain crops	2012	800 ac
Forage crops	1222	180 ac
Pasture	1055	260 ac
By animals - %		
Beef cattle	1259	52%
Dairy cattle	12	2%

Farms

	No.	%
By operating arrangement:		
Individual family farm	1558	67%
Partnerships	451	19%
Family corporation	301	13%
Family lives on farm:		
all	1602	66%
some	420	17%
none	363	15%

Farm people: demographics

Total no.	5502	100%
By status:		
owner-operator	2457	45%
spouse	1733	32%
parent	123	2%
child	1002	18%
other	137	3%

Farm people: demographics

Total no.	5502	100%
Age – mean (range)	47	0 to 91
Males	3258	59%
By education:		
< high school	1549	28%
completed high school	1995	37%
completed post-secondary	1902	35%

Outline of Talk

- Background
- Progress Report:
 - Pilots
 - Baseline Survey
 - Follow-up
- Research Products

Follow-up

- Timing:
 - 4 times over 2 years
 - started fall 2007
 - ends spring 2009
- Method:
 - Mailed form, 1 follow-up
- Focus:
 - Farm injuries over 2 years

Outline of Talk

- Background
- Progress Report:
 - Pilots
 - Baseline Survey
 - Follow-up
- Research Products

Technology Paper



Focus

- Optimal methods to contact farms

Findings

- Farmers non-responsive to computerized telephone systems
 - Email not universal
 - Traditional mail works
-

Sleep and Economics Paper

Focus

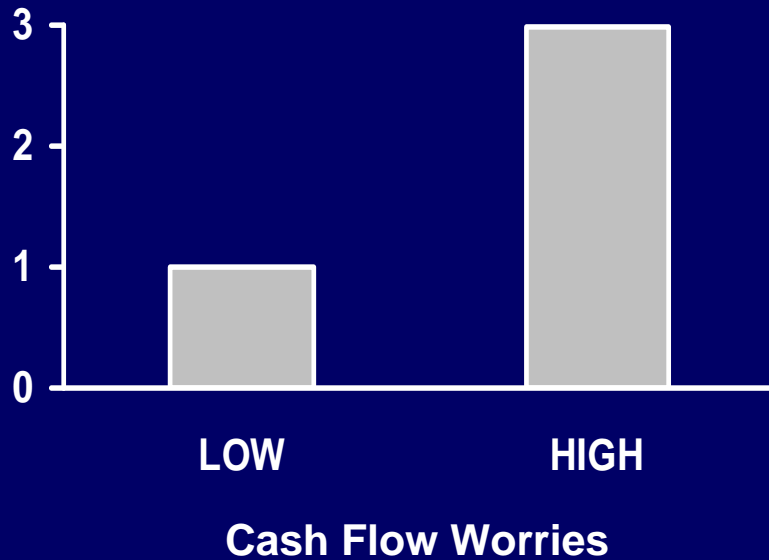
- Association between sleep loss and economic worry

Findings

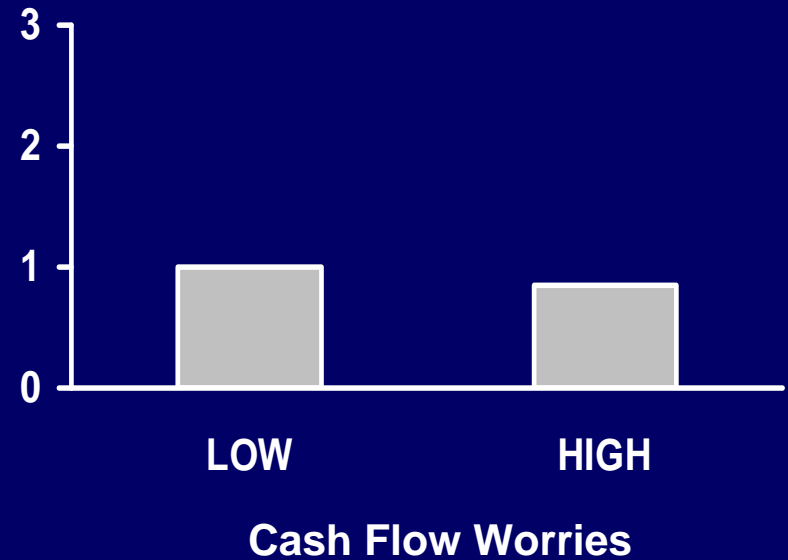
- Profiles sleep patterns
 - Profiles association
-

Impaired sleep was related to economic indicators

Odds of Impaired Sleep



SUMMER PATTERN



WINTER PATTERN

Methods Paper

Focus

- Describe our protocol
- Outline theoretical framework

Impact

- Inform research community
 - applying population health theory
-

Network Paper

- Focus
- Agricultural Health and Safety Network
 - Safety practices, hazards, injury
 - by years of network membership
- Impact
- Evaluate cumulative effects of *(mainly educational)* intervention
-

Acknowledgements



- CIHR (funding)
- CIHR - *IPALS* initiative



- Saskatchewan Association of Rural Municipalities



- Canadian Agricultural Safety Association

Saskatchewan Farm Injury Cohort Study

Summary of Talk