Australian Bureau of Statistics

October 1996

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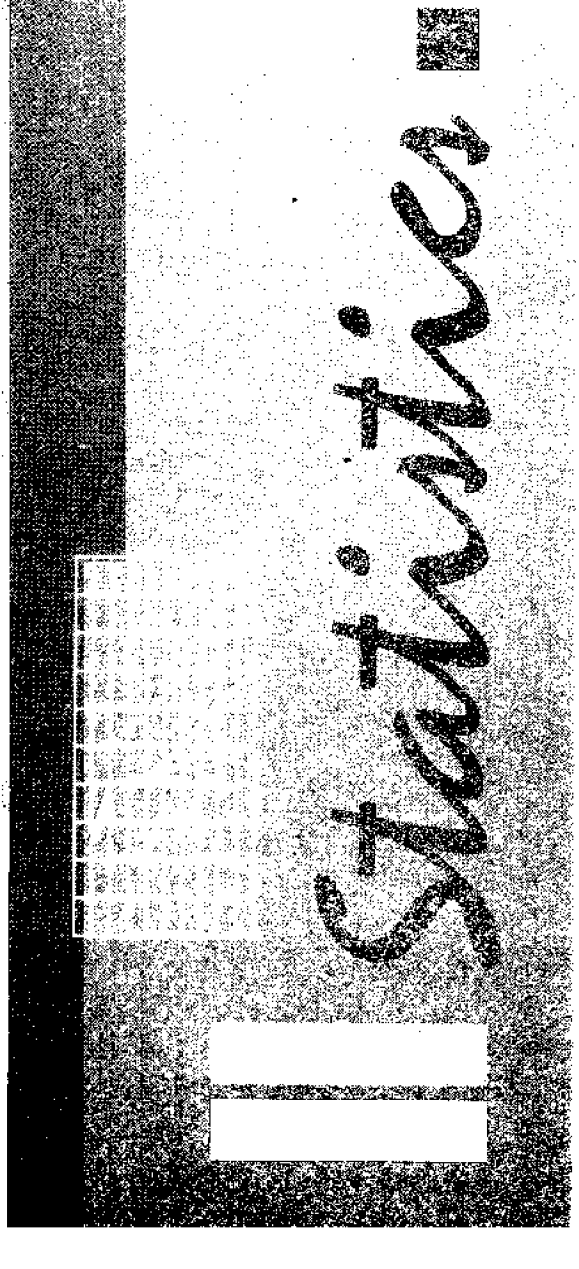
Home Safety Devices

Western Australia



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NOTES

ABOUT THIS PUBLICATION

This publication presents the results of the 1996 State Supplementary Survey 'Household Safety Devices' which was conducted in October 1996. This survey obtained information about the presence and use of safety devices in private dwellings in Western Australia (WA).

Information was collected from over 3,500 households spread throughout WA by either face-to-face or telephone interview. All data relate to households and where an opinion was sought the answer is regarded as the opinion of the household. The specific Household Safety Devices of interest were:

- smoke detectors
- child resistant or lockable cupboards — medicines
- child resistant or lockable cupboards — household chemicals
- support rails
- hot water system thermostats
- electrical safety switches

SYMBOLS AND OTHER USAGES

np	not available for publication but included in totals where applicable
. .	not applicable
—	nil or rounded to zero
*	estimate is subject to a relative standard error between 25% and 50%
**	estimate is subject to a relative standard error over 50%
WA	Western Australia

INQUIRIES

For information about other ABS statistics and services, please refer to the back of this publication.

For further information about these statistics, contact Garth Cruden on Perth (09) 360 5234.

P.C. Kelly
Regional Director for
Western Australia

CONTENTS

SUMMARY OF FINDINGS

KEY FIGURES

HOUSEHOLDS WITH/WITHOUT SAFETY DEVICES

	WITH.....		WITHOUT.....		DON'T KNOW...		TOTAL.....	
	Number	*Proportion*	*Number*	*Proportion*	*Number*	*Proportion*	*Number*	*Proportion*
	'000	%	'000	%	'000	%	'000	%
Smoke detectors	181.1	27.1	483.5	72.4	3.0	0.4	667.5	100.0
Child resistant or lockable cupboards								
Storage of Medicines	116.4	17.4	549.8	82.4	1.3	0.2	667.5	100.0
Storage of Household chemicals	123.7	18.5	541.7	81.1	2.1	0.3	667.5	100.0
Support rails	92.8	13.9	574.7	86.1	--	—	667.5	100.0
Hot water system adjustable thermostat	345.9	51.8	164.8	24.7	156.8	23.5	667.5	100.0
Electric safety switches	260.1	39.0	392.0	58.7	15.4	2.3	667.5	100.0

SAFETY DEVICES

SMOKE DETECTORS

Over one quarter or 27.1% (181,100) of households had a smoke detector installed, with the majority (92.3% or 167,200) of these detectors being battery operated. Over one tenth (11.9% or 21,500) of these households had recently installed their smoke detectors. Only 5.4% (9,900) of smoke detectors were wired into the dwelling's electrical system.

There were 309,900 smoke detectors located in 181,100 households, making a ratio of almost 2 (1.7) detectors per household. Of those households with a smoke detector, half (50.7% or 91,800) had only one detector, 34.6% (62,700) had two, 8.8% (15,900) had three and 5.9 % (10,600) had four or more detectors. Most households, 95.6% (173,200) had all their detectors working. None of the installed smoke detectors worked in 2.2% or 3,900 households.

There were 14.0% (25,300) of households who reported testing their smoke detectors at least once a week, while over one-quarter of households (26.4% or 47,900) reported testing their smoke detectors once a month. A further 13.4 % (24,300) reported testing every three months, while only 7.6% (13,700) of households reported that their smoke detectors had never been tested.

The most common location for smoke detectors was the corridor/hallway, with 42.6% (132,000) of all smoke detectors placed there. Other favoured locations were the family/loungeroom, 21.2% (65,800) and kitchen, 16.9% (52,200).

Of those households with a smoke detector, nearly half (47.1% or 85,300) reported that the main reason for having a smoke detector was 'to warn of fires'. A further 30.2% (54,800) for 'general safety' and 4.9% (8,900) 'because they had heard about them through the media'. For households without a smoke detector installed, the main

reasons reported for not having a smoke detector were 'have not got around to it' (33.7 % or 162,900), 'live in rental accommodation' (17.8% or 86,200), 'never thought about it' (11.4 % or 55,100), 'don't need them' (10.2% or 49,400) and 'have one but it is not installed' (6.5% or 31,700).

STORAGE OF MEDICINES

Only 13.6% (91,000) of households kept all their medicines in a child resistant or lockable cupboard, while 3.8% (25,400) stored only some of their medicines in that way.

Over three-quarters of households (77.2% or 515,400) did not keep any of their medicines in a childproof or lockable cupboard, with the main reasons given being 'there are no small children in the household', 47.2% (243,300), 'cupboard is up high', 34.8% (179,400) and 'children are responsible/can be trusted', 4.8% (24,600).

Of the 17.4% (116,400) of households which used a childproof or lockable cupboard to store some or all medicines, 21.6% (25,200) did not keep the cupboard childproof or locked at all times. The main reason given for this was 'there are no small children in the household', 47.9% (12,100), followed by 'cupboard is up high', 25.2% (6,300).

All medicines were stored on a high shelf (over 1.5 metres from the floor) in 44.8% (298,800) of households while 11.4% (76,300) kept only some of their medicines this way. A further 38.1% (254,500) of households stored their medicines in child resistant or lockable cupboards or in other locations.

STORAGE OF HOUSEHOLD CHEMICALS

A childproof or lockable cupboard was used by 12.5% (83,300) of households to store all of their household chemicals, and by 6.1% (40,400) of households to store some of their household chemicals. Of these, 77.1% (95,400) kept the cupboard child resistant or locked at all times.

Over four-fifths of households (81.1% or 541,700) did not keep any of their household chemicals in a childproof or lockable cupboard, with the main reasons given being 'there are no small children in the household', 54.0% (292,500), 'cupboard is up high', 17.6% (95,200) and 'existing cupboards do not have locks', 9.7% (52,400).

Of the 18.5% (123,700) of households which used a childproof or lockable cupboard to store household chemicals, 22.9% (28,300) did not keep the cupboard childproof or locked at all times. The main reason given for this was 'there are no small children in the household', 63.2% (17,900), followed by 'convenience/frequent use' 15.0% (4,200) and 'cupboard is up high', 11.5% (3,200).

Of the 35.5% (237,200) of households where household chemicals were stored on a high shelf, over half (59.5% or 141,100) stored all household chemicals on a high shelf, while the remaining 40.5% (96,100) of households stored only some of their chemicals in that way.

SUPPORT RAILS

There were 13.9% (92,800) of households with support rails installed. The main reason given for having them were 'already installed', 34.5% (32,000), ' elderly people who needed them' (30.9% or 28,700), 'to provide support/stability', 13.3% (12,300), 'sick/weak/injured people in the home', 9.8% (9,100) and 'disabled people who needed them', 7.9% (7,300).

Of the 86.1 % (574,700) of households without support rails installed, the main reason reported was 'they were not required or needed', 94.4% (542,700). Only 2.6% (14,800) of households gave 'live in a rental property' as a reason for not having support rails.

Of the 92,800 households with support rails installed, almost one-third (31.8% or 29,500) had received medical advice to install support rails.

HOT WATER SYSTEMS AND THERMOSTATS

Over half of all households (51.8% or 345,900) reported that they had a thermostat installed with their hot water system, while 24.7% (164,800) did not. A further 23.5% (156,800) of households did not know whether or not a thermostat was installed.

In those households with a thermostat installed and they thought they were a good idea, the main reasons for having it were 'part of new or existing system', 39.0% (129,000), 'water gets too hot', 31.1% (103,000) and to 'save money on power bills', 11.7% (38,600).

In those households which did not have a thermostat installed but considered them a good idea, the main reasons for not having one installed was 'cannot be put onto existing system', 26.0% (22,800), 'live in a rental property', 23.7% (20,800) and 'never thought about it', 19.2% (16,800).

In those households where thermostats were not considered a good idea, (irrespective of whether they had a thermostat installed), the main reasons given for not having a thermostat were 'there is no good reason to install one', 51.0% (28,500), 'no small children in the household', 17.2% (9,600) and 'water does not get too hot', 16.9% (9,400).

ELECTRIC SAFETY SWITCH

Electric safety switches were installed in 39.0% (260,100) of all households while 58.7% (392,000) of households had no such device. A further 2.3% (15,400) of households did not know whether or not an electric safety switch was installed.

Where dwellings had a safety switch installed, 47.7% (124,100) had been installed prior to the present household moving in. Of those households, the main benefits reported were 'to prevent electrocution', 42.5% (52,800), for 'general safety', 38.4% (47,600), 'protection from faulty appliances', 10.3% (12,800) and because of 'small children in the household', 3.8% (4,700).

Where the present household had installed their own safety switch, (52.3% or 136,000), the most common reasons given were,'general safety', 51.5% (70,000) and to 'prevent electrocution', 20.6% (28,000). Other main reasons given were 'small children in the household', 7.2% (9,800), for 'protection from faulty appliances', 7.1% (9,600) and 'lots of electrical appliances', 4.4% (6,000).

For those households without a safety switch installed but thought they were a good idea, the main reasons given for not having one installed already were 'never got around to it', 28.9% (99,700), 'live in a rental property', 26.6% (91,600), 'too expensive to buy or install', 18.1% (62,400) and 'never thought about it', 13.5% (46,600).

Safety switches were considered a good idea by 88.0% (344,900) of those households which did not have a safety switch installed. The main reasons they might have one installed would be for 'general safety', 52.4% (180,700), to 'prevent electrocution', 26.4% (91,000), because 'there were small children in the home', 9.3% (32,100) and 'protection from faulty appliances', 6.9% (23,800).

Only 6.6% (26,100) of households who did not have a safety switch installed did not think safety switches were a good idea and a further 5.4% (21,100) of such households did not know whether they were a good idea or not.

1 SMOKE DETECTORS, NUMBER INSTALLED BY NUMBER WORKING

	HOUSEHOLDS									
	ONE SMOKE DETECTOR INSTALLED		TWO SMOKE DETECTORS INSTALLED		THREE SMOKE DETECTORS INSTALLED		FOUR OR MORE SMOKE DETECTORS INSTALLED		TOTAL	
	Number	*Proportion*	*Number*	*Proportion*	*Number*	*Proportion*	*Number*	*Proportion*	*Number*	*Proportion*
Number of working smoke detectors	'000	%	'000	%	'000	%	'000	%	'000	%
One working	87.5	48.3	*1.4	0.8	—	—	—	—	88.9	49.1
Two working	..	..	60.2	33.2	**0.2	0.1	—	—	60.4	33.3
Three working	..	..	..	..	15.5	8.6	—	—	15.5	8.6
Four or more	..	..	..	..	..	..	10.0	5.5	10.0	5.5
Some	..	..	..	..	—	—	**0.4	0.2	**0.4	0.2
None	*3.1	1.7	**0.6	0.3	**0.2	0.1	—	—	3.9	2.2
Don't know	*1.2	0.6	**0.6	0.3	—	—	**0.2	0.1	*2.0	1.1
Total	**91.8**	**50.7**	**62.7**	**34.6**	**15.9**	**8.8**	**10.6**	**5.9**	**181.1**	**100.0**

2 SMOKE DETECTORS, MAIN SOURCE OF POWER (a)

	HOUSEHOLDS	
	Number	*Proportion*
Power source	'000	%
Battery	167.2	92.3
Hardwired	9.9	5.4
Don't know	4.0	2.2
Total	**181.1**	**100.0**

(a) Where there are multiple sources of power the most prevalent source was reported

3 SMOKE DETECTORS, FREQUENCY OF TESTING

	HOUSEHOLDS	
	Number	*Proportion*
Frequency	'000	%
Daily	*2.6	1.4
Once a week	22.7	12.6
Once a month	47.9	26.4
Once every three months	24.3	13.4
Once every six months	11.5	6.3
Once a year	7.5	4.1
Self testing	4.7	2.6
Only recently installed	21.5	11.9
Never been tested	13.7	7.6
Other	6.5	3.6
Don't know	18.2	10.1
Total	**181.1**	**100.0**

4 NUMBER OF SMOKE DETECTORS, By Location in Dwelling

	SMOKE DETECTORS	
	Number	*Proportion*
Location	'000	%
Corridor/hallway	132.0	42.6
Family/lounge	65.8	21.2
Kitchen	52.2	16.9
Bedroom	44.9	14.5
Dining room	9.6	3.1
Other	5.4	1.7
Total	**309.9**	**100.0**

5 MAIN REASON FOR HAVING/NOT HAVING SMOKE DETECTORS

Main Reason	HOUSEHOLDS Number '000	HOUSEHOLDS Proportion %
FOR HAVING SMOKE DETECTORS		
To warn of fires	85.3	47.1
General safety	54.8	30.2
Heard of them through media	8.9	4.9
Already installed	6.8	3.8
Part of security package	6.4	3.5
Small children in household	6.0	3.3
Open flame heater	5.3	2.9
Gift	*3.0	1.7
Other	4.2	2.3
Don't know	**0.5	0.3
Total	*181.1*	*100.0*
FOR NOT HAVING SMOKE DETECTORS		
Have not got around to it	162.9	33.7
Live in rental accomodation	86.2	17.8
Never thought about it	55.1	11.4
Don't need them/don't do any good	49.4	10.2
Have one but not installed yet	31.7	6.5
Too expensive	29.4	6.1
No smokers in the household	19.6	4.1
Recently moved	11.9	2.5
Other	25.1	5.2
Don't know	12.0	2.5
Total	*483.5*	*100.0*

6 STORAGE OF MEDICINES IN CHILD RESISTANT OR LOCKABLE CUPBOARDS

	HOUSEHOLDS Number '000	HOUSEHOLDS Proportion %
All of the medicines	91.0	13.6
Some of the medicines	25.4	3.8
None of the medicines	515.4	77.2
Don't know	*1.3	0.2
Don't have or use medicines	34.4	5.2
Total	**667.5**	**100.0**

7 STORAGE OF MEDICINES ON HIGH SHELVES

	HOUSEHOLDS	
	Number	*Proportion*
	'000	%
All of the medicines stored on high shelves	298.8	44.8
Some of the medicines stored on high shelves	76.3	11.4
All of the medicines stored in child resistant or lockable cupboard	91.0	13.6
Stored in other location	163.5	24.5
Don't know	3.5	0.5
Don't have or use medicines	34.4	5.2
Total	**667.5**	**100.0**

8 STORAGE OF HOUSEHOLD CHEMICALS IN CHILD RESISTANT OR LOCKABLE CUPBOARDS

	HOUSEHOLDS	
	Number	*Proportion*
	'000	%
All household chemicals	83.3	12.5
Some household chemicals	40.4	6.1
None of the household chemicals	541.7	81.1
Don't know	*2.1	0.3
Total	**667.5**	**100.0**

9 STORAGE OF HOUSEHOLD CHEMICALS ON HIGH SHELVES

	HOUSEHOLDS	
	Number	*Proportion*
	'000	%
All household chemicals	141.1	21.1
Some household chemicals	96.1	14.4
All household chemicals stored in child resistant or lockable cupboards	83.4	12.5
Stored in other location	344.6	51.6
Don't know	*2.4	0.4
Total	**667.5**	**100.0**

10 MAIN REASON CUPBOARD IS NOT CHILD RESISTANT OR LOCKED AT ALL TIMES

	HOUSEHOLDS			
	FOR STORING MEDICINES		FOR STORING HOUSEHOLD CHEMICALS	
	Number	*Proportion*	*Number*	*Proportion*
Main reason	'000	%	'000	%
There are no small children	12.1	47.9	17.9	63.2
Children are responsible/can be trusted	*1.5	6.1	1.6	5.8
Cupboard is up high	6.3	25.2	3.2	11.5
Convenience/frequent use	*2.8	11.2	4.2	15.0
Other	*1.8	7.0	*0.9	3.2
Don't know	**0.6	2.5	**0.4	1.3
Total	**25.2**	**100.0**	**28.3**	**100.0**

11 MAIN REASON FOR NOT USING A CHILD RESISTANT OR LOCKABLE CUPBOARD

	HOUSEHOLDS			
	FOR STORING MEDICINES		FOR STORING HOUSEHOLD CHEMICALS	
	Number	*Proportion*	*Number*	*Proportion*
Main reason	'000	%	'000	%
There are no small children	243.3	47.2	292.5	54.0
Cupboard is up high	179.4	34.8	95.2	17.6
Children are responsible/can be trusted	24.6	4.8	36.5	6.7
Convenience/frequent use	20.9	4.0	24.0	4.4
Existing cupboards do not have locks	17.1	3.3	52.4	9.7
Products are not hazardous or toxic	*1.1	0.2	12.2	2.2
Stored in other safe, secure location	8.6	1.7	10.4	1.9
Other	15.3	3.0	14.6	2.7
Don't know	5.0	1.0	3.9	0.7
Total	**515.4**	**100.0**	**541.7**	**100.0**

12 MAIN REASON FOR HAVING/NOT HAVING SUPPORT RAILS IN BATHROOM OR TOILET

	HOUSEHOLDS	
	Number	*Proportion*
Main reason	'000	%
FOR HAVING SUPPORT RAILS		
Already installed	32.0	34.5
Elderly people who needed them	28.7	30.9
To provide support/stability	12.3	13.3
Sick/weak/injured people in the home	9.1	9.8
Disabled people who needed them	7.3	7.9
Advice by a medical professional/occupational therapist	*1.6	1.8
Had a fall/accident	**0.2	0.2
Don't know	*1.5	1.7
Total	*92.8*	*100.0*
FOR NOT HAVING SUPPORT RAILS		
Not required/not needed	542.7	94.4
Live in a rental property	14.8	2.6
Never thought about it	6.4	1.1
Other	3.9	0.7
Too expensive to buy and/or install	*2.3	0.4
Don't know	4.6	0.8
Total	*574.7*	*100.0*

13 ADVICE ON SUPPORT RAILS FROM HEALTH WORKER OR MEDICAL PRACTITIONER

	RECEIVED ADVICE		DID NOT RECEIVE ADVICE		DON'T KNOW IF RECEIVED ADVICE		TOTAL	
	Number	*Proportion*	*Number*	*Proportion*	*Number*	*Proportion*	*Number*	*Proportion*
Households	'000	%	'000	%	'000	%	'000	%
Have support rails	29.5	4.4	62.9	9.4	**0.4	0.1	92.8	13.9
Do not have support rails	9.1	1.3	563.4	84.4	*2.2	0.3	574.7	86.1
Total	**38.6**	**5.8**	**626.3**	**93.8**	***2.6**	**0.4**	**667.5**	**100.0**

14 THERMOSTAT INSTALLED/NOT INSTALLED, by type of hot water system

	HOUSEHOLDS							
	THERMOSTAT INSTALLED		NO THERMOSTAT INSTALLED		DON'T KNOW		TOTAL	
	Number	*Proportion*	*Number*	*Proportion*	*Number*	*Proportion*	*Number*	*Proportion*
Type of hot water system	'000	%	'000	%	'000	%	'000	%
Gas instantaneous	110.1	16.5	25.1	3.8	36.0	5.4	171.2	25.6
Gas, storage tank	124.6	18.7	10.8	1.6	23.5	3.5	158.9	23.8
Solar with booster	43.1	6.4	59.2	8.9	40.6	6.1	142.9	21.4
Electric, storage tank	45.7	6.8	27.4	4.1	29.6	4.4	102.8	15.4
Electric instantaneous	16.6	2.5	22.5	3.4	18.6	2.8	57.7	8.6
Other type of hot water system	3.9	0.6	17.4	2.6	*0.9	0.1	22.3	3.3
Don't know	*1.9	0.3	*2.4	0.4	7.6	1.1	11.8	1.8
Total	**345.9**	**51.8**	**164.8**	**24.7**	**156.8**	**23.5**	**667.5**	**100.0**

15 HOUSEHOLDS WHO THINK THERMOSTATS ARE A GOOD IDEA and have a thermostat installed

	HOUSEHOLDS	
	Number	*Proportion*
Main reason for having a thermostat	'000	%
Part of new or existing system	129.0	39.0
Water gets too hot	103.0	31.1
Save money on power bills	38.6	11.7
Already installed	21.0	6.4
Small children in the household	16.3	4.9
Convenience of adjusting temperature to suit changing seasons	13.5	4.1
Safety — prevent scalding	3.7	1.1
Other	*1.2	0.4
Don't know	4.4	1.3
Total	**330.6**	**100.0**

16 HOUSEHOLDS WHO THINK THERMOSTATS ARE A GOOD IDEA, but do not have a thermostat installed

	HOUSEHOLDS	
	Number	*Proportion*
Main reason for not having a thermostat	'000	%
Cannot be put onto existing system	22.8	26.0
Live in a rental property	20.8	23.7
Never thought about it	16.8	19.2
Too expensive to buy or install	5.0	5.7
Not required/unnecessary	4.3	4.9
Never got around to it	4.1	4.7
No small children in the household	*2.9	3.3
Other	*3.2	3.6
Don't know	7.7	8.8
Total	**87.6**	**100.0**

17 HOUSEHOLDS WHO DO NOT THINK THERMOSTATS ARE A GOOD IDEA

	HOUSEHOLDS	
	Number	*Proportion*
Main reason why a thermostat is not a good idea	'000	%
There is no good reason to install one	28.5	51.0
No small children in the household	9.6	17.2
Water does not get too hot	9.4	16.9
Cannot be installed on present system	*2.5	4.4
Other	3.5	6.2
Don't know	*2.4	4.3
Total	**55.9**	**100.0**

18 HOUSEHOLDS WITH/WITHOUT A SAFETY SWITCH INSTALLED

	HOUSEHOLDS	
	Number	*Proportion*
	'000	%
Safety switch installed		
Installed by previous household	124.1	18.6
Installed by current household	136.0	20.4
Safety switch not installed	392.0	58.7
Don't know if safety switch installed or not	15.4	2.3
Total	**667.5**	**100.0**

19 SAFETY SWITCH INSTALLED BY PREVIOUS HOUSEHOLD

	HOUSEHOLDS	
	Number	*Proportion*
Main benefit from having safety switch	'000	%
Prevent electrocution	52.8	42.5
General safety	47.6	38.4
Protection from faulty appliances	12.8	10.3
Small children in household	4.7	3.8
Other	5.3	4.3
Don't know	*0.9	0.7
Total	**124.1**	**100.0**

20 SAFETY SWITCH INSTALLED BY CURRENT HOUSEHOLD

	HOUSEHOLDS	
	Number	*Proportion*
Main reason for installing a safety switch	'000	%
General safety	70.0	51.5
Prevent electrocution	28.0	20.6
Small children in the household	9.8	7.2
Protection from faulty appliances	9.6	7.1
Lots of electrical appliances	6.0	4.4
Advised by friends/relatives	*2.5	1.8
Had a previous electrical accident	*2.0	1.4
Other	7.2	5.3
Don't know	*0.9	0.7
Total	**136.0**	**100.0**

21 HOUSEHOLDS WITHOUT A SAFETY SWITCH INSTALLED

	HOUSEHOLDS	
	Number	*Proportion*
Whether they think safety switches are a good idea or not	'000	%
Think safety switches are a good idea	344.9	88.0
Don't think safety switches are a good idea	26.1	6.6
Don't know whether safety switches are a good idea or not	21.1	5.4
Total	**392.0**	**100.0**

22 HOUSEHOLDS WHO THINK THAT SAFETY SWITCHES ARE A GOOD IDEA and don't have a safety switch installed

	HOUSEHOLDS	
	Number	*Proportion*
Main reason for not having a safety switch installed	'000	%
Never got around to it	99.7	28.9
Live in a rental property	91.6	26.6
Too expensive to buy or install	62.4	18.1
Never thought about it	46.6	13.5
No young children in the household	11.3	3.3
Not required	9.8	2.8
Will be installing one soon	4.6	1.3
Moving house	4.3	1.2
Other	8.9	2.6
Don't know	5.7	1.6
Total	**344.9**	**100.0**

23 HOUSEHOLDS WHO DON'T THINK SAFETY SWITCHES ARE A GOOD IDEA and don't have a safety switch installed

	HOUSEHOLDS	
	Number	*Proportion*
Main reason for not having a safety switch installed	'000	%
Not required/unnecessary	12.9	49.6
No young children in the household	3.7	14.0
Live in a rental property	*1.9	7.4
Too expensive to buy or install	*1.6	6.0
Never thought about it	*1.5	5.8
Other	3.9	14.9
Don't know	**0.6	2.3
Total	**26.1**	**100.0**

24 HOUSEHOLDS CURRENTLY WITHOUT A SAFETY SWITCH AND WHO MIGHT HAVE ONE INSTALLED

	HOUSEHOLDS	
	Number	*Proportion*
Main reason they might install a safety switch	'000	%
General safety	180.7	52.4
Prevent electrocution	91.0	26.4
Small children in the household	32.1	9.3
Protection from faulty appliances	23.8	6.9
Protection from old, unsafe wiring	5.3	1.6
Other	6.1	1.8
Don't know	6.0	1.7
Total	**344.9**	**100.0**

EXPLANATORY NOTES

INTRODUCTION

1 This publication contains results from the Household Safety Devices Survey which was conducted throughout WA in October 1996 as a supplement to the ABS Monthly Population Survey (MPS). The survey was conducted at the request of the Health Department of WA Injury Control Unit.

2 Information was collected from private households about the type of safety devices installed in the home, reasons for having or not having a particular device. Information on specific visitor types to the home was also sought.

SCOPE AND COVERAGE

3 Information was sought from approximately 3,600 households throughout Western Australia, of which approximately 3,500 (97%) responded.

4 The survey was conducted using all the private dwellings included in the MPS, except private dwellings containing only visitors and those dwellings about to be rotated out from the MPS sample. The survey was conducted during the two weeks commencing Monday, 7 October 1996. One questionnaire was completed per household for selected dwellings. Information was obtained by face to face or telephone interview with any responsible adult who was a usual resident of the selected household, with the exception of:

- members of the permanent defence forces;
- certain diplomatic personnel of overseas governments, customarily excluded from censuses and surveys;
- overseas residents in Australia; and
- members of non-Australian defence forces (and their dependants) stationed in Australia.

5 Residents of other non-private dwellings such as hospitals, motels and gaols were excluded from the survey.

RESPONDENTS

6 It should be emphasised that the responses obtained in this survey are based on the respondent's perception of the devices installed in their dwelling. In some cases, devices could be present, such as hot water thermostats, which the respondent may not be aware of. As such, a negative response by a respondent may not mean that a safety device is not installed in the home. However, it does indicate the level of respondent knowledge on such devices.

RELATED PUBLICATIONS

7 The ABS produces a wide range of publications of social and demographic statistics. Other ABS publications which relate to this survey topic include:

- *Household Safety, Sydney 1992* (4387.1); and
- *Safety in the Home, Melbourne 1992* (4387.2).

8 Current publications produced by the ABS are listed in the *Catalogue of Publications and Products* (1101.0). The ABS also issues, twice weekly, a *Release Advice* (1105.0) which lists publications to be released in the next few days. The catalogue and release advice are available from ABS offices.

UNPUBLISHED STATISTICS

9 As well as the statistics included in this and related publications, the ABS may have other relevant unpublished data available. Inquiries should be made to Garth Cruden, Perth (09) 360 5234 or to any ABS office.

TECHNICAL NOTES

ESTIMATION PROCEDURE

1 The home safety devices survey was run as a supplement to the October 1996 Labour Force Survey (LFS) in WA. Approximately 85% of the LFS sample (around 3,600 households) was selected for this survey. Weights for this survey were based on the weights calculated for selections in the LFS (see *Labour Force, Australia* (6203.0)). Whilst the LFS collects data for individual persons, the home safety devices survey collected data at the household level. The following procedures were used to adjust the LFS based weights, to produce the weights for this survey:

- within each LFS post-stratum, the person level weights were increased proportionately to reflect the slightly lower sample size for this survey;
- a weight for the household was derived by taking the harmonic mean of the person weights, for each person in the household; and
- the household weights were scaled so that estimates of total number of dwellings matched known benchmarks.

2 Estimates in this publication show the weighted number of dwellings falling into the relevant categories.

RELIABILITY OF ESTIMATES

3 Estimates in this publication are subject to non-sampling and sampling errors.

NON-SAMPLING ERRORS

4 Non-sampling errors may arise as a result of errors in the reporting, recording or processing of the data and can occur even if there is a complete enumeration of the population. Non-sampling errors can be introduced through inadequacies in the questionnaire, non-response, inaccurate reporting by respondents, errors in the application of survey procedures, incorrect recording of answers, and errors in data entry and processing.

5 It is difficult to measure the size of the non-sampling errors and the extent of these errors could vary considerably in significance from survey to survey and from question to question. However, every effort is made in the design of the survey and development of survey procedures to minimise the effect of these errors.

SAMPLING ERRORS

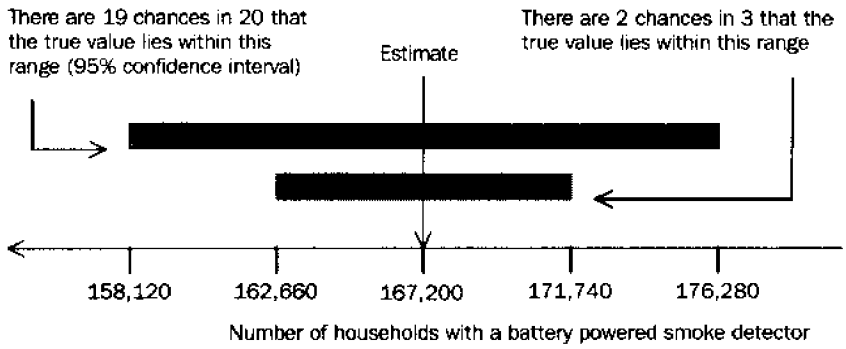
6 As estimates from this survey are based on information obtained from the occupants of a sample of dwellings, they are subject to sampling variability. That is, they may differ from the figures that would have been produced if all in-scope dwellings had been included in the collection. This variability, which is known as *sampling error*, can be estimated from the sample data. One measure of the sampling error is given by the standard error, which indicates the degree to which an estimate may vary from a full enumeration (the 'true' population figure). There are about two chances in three that a sample estimate differs from the true population value by less than one standard error, and about 19 chances in 20 that the differences will be less than two standard errors.

7 Table A shows standard errors for estimates of total number of households falling into any of the categories in the tables in this publication. These standard errors have been estimated from a standard error model. First of all, standard errors were explicitly calculated for selected key variables using the method of random groups (see chapter 2 of Wolter K.L. (1985) *Introduction to Variance Estimation*, Springer Series in Statistics, Springer-Verlag, New York). The key

variables chosen were reasons for having/not having smoke detectors, and reasons for having/not having electrical safety switches. To improve the stability of these standard error estimates, a model was fitted linking the size of the estimates with the size of the standard error. The model fitted was a quadratic regression of relative standard error against estimate size, on a logarithmic scale.

USE OF THE STANDARD ERROR

8 The standard errors shown in table A can be used to produce confidence intervals for the estimates shown in this publication. Linear interpolation and rounding should be used to calculate the standard error of estimates falling between the sizes of estimates listed in the table. For example, the estimated number of households which have a battery powered smoke detector was 167,200 (from table 2). From table A, a standard error of 4,540 is obtained (after applying linear interpolation and rounding). There are two chances in three that the figure that would have been produced from a full enumeration lies between 162,660 and 171,740 (i.e. 167,200 +/– 4,540). There are about 19 chances in 20 that the true value is in the range 158,120 and 176,280.



RELATIVE STANDARD ERROR

10 The standard error can also be expressed as a percentage of the estimate and this is known as the ***relative standard error*** (RSE). The RSE is calculated by dividing the standard error of an estimate SE(x) by the estimate x and expressing it as a percentage. That is:

$$RSE(x) = \frac{100SE(x)}{x}\%$$

(where x is the estimate). For example, the RSE for the number of households which had a battery powered smoke detector is:

(4,536 / 167,200) x 100% = 2.7%

The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling.

11 Proportions and percentages formed from the ratio of two estimates are also subject to sampling error. The size of the error depends on the accuracy of both the numerator and the denominator. The formula for the RSE of a proportion or percentage is:

$$RSE(x/y) = \sqrt{[RSE(x)]^2 - [RSE(y)]^2}$$

Note: This formulae only applies in those situations where x is a subset of y. This is the case for all percentages in this publication.

12 For example, the percentage of households with a battery powered smoke detector was 92.3% (from table 2). Here, interpolating from table A , the numerator (167,200) has a standard error of 4,536 (see previous example, paragraph 9). Similarly, the denominator (667,500) has a standard error of 6,850. Therefore, the RSE for the percentage would be:

In general, for the estimates in this publication, the RSE of estimates of

$$RSE(92.3\%) = \sqrt{[4,536/167,200]^2 - [6,850/667,500]^2} = 0.03\%$$

percentages are either equal to or slightly less than the RSE for the corresponding numerator estimates.

13 For all tables in this publication, only estimates with RSE of 25% or less, and percentages based on such estimates, are considered sufficiently reliable for most purposes. However, estimates and percentages with RSE between 25% and 50% have been included, preceded by the symbol * to indicate that they are subject to high standard errors and should be used with caution. Those users who require more detailed data and who are prepared to take the necessary precautions, can be provided with data with a higher standard error, upon request.

TABLE A STANDARD ERRORS OF ESTIMATES OF HOUSEHOLDS

Size of estimate	*Standard error*	*Relative standard error*
no. of households	no.	%
300	240	79.2
400	280	69.4
500	310	62.5
600	340	57.4
700	370	53.3
800	400	50.0
900	430	47.3
1 000	450	44.9
1 500	550	36.8
2 000	640	31.9
2 500	710	28.5
3 000	780	26.0
3 500	840	24.0
4 000	900	22.4
4 500	950	21.0
6 000	1 090	18.1
8 000	1 240	15.5
10 000	1 380	13.7
20 000	1 880	9.4
30 000	2 250	7.4
40 000	2 540	6.3
50 000	2 790	5.5
60 000	3 010	5.0
70 000	3 210	4.5
80 000	3 390	4.2
90 000	3 550	3.9
100 000	3 710	3.7
125 000	4 050	3.2
150 000	4 350	2.9
175 000	4 620	2.6
200 000	4 870	2.4
300 000	5 670	1.8
500 000	6 850	1.3

GLOSSARY

Child resistant or locked cupboards Cupboards which are designed to be child resistant or which have a lock are considered to be a safety device in that they prevent access to chemical substances which could be detrimental to a persons health if taken, inhaled or ingested without proper authority or supervision. The term childproof is not used as health authorities consider that there is no device which is 'child proof' and the term 'child resistant' is preferred.

High shelf A high shelf is any shelf which is at least 1.5 metres above the floor. This is considered a sufficient height to prevent accidental access by children to medicines or household chemicals.

Hot water system Any device or system for providing heated water to a dwelling.

Household chemicals Household chemicals are those chemicals which are found inside the house. This would include such items as oven cleaners, dish washing detergents, laundry detergents, bleaches, toilet cleaners, disinfectants, cleaners, cloudy ammonia and others. They are chemicals which could be generally found in the kitchen, laundry, bathroom or toilet Household chemicals do not include items which one could expect to find in a shed, garage or car port, such as paints, petroleum products, acetone, paint strippers, snail baits, rat poison, fertilizer, weed killer, herbicides, pool chlorine, etc. For the purposes of this survey, only household chemicals as defined above were considered. Chemicals found in a location other than inside the house were excluded from the survey.

Medicines The use of the term Medicine in this publication includes such items as prescription medicines, herbal medicines and over the counter medicines. Over the counter medicines include substances such as Aspirin, Disprin, Paracetamol, cough medicines, analgesics, antihistamines and so on. While there is a degree of disregard to the effects of some of these substances, particularly over the counter medicines, for the purpose of this survey they are all classified as Medicines.

Safety switches A device which will switch off the electrical power if a short circuit is detected. They are usually solid state electronic devices and can provide a greater level of protection from faulty electrical wiring or appliances than is afforded by a common fuse. Normal fuses, circuit breakers and surge protectors are not included.

Smoke detector A smoke detector is any device which is installed, usually in a fixed location, to detect the presence of smoke and which will provide some indication, either audible or visual, when smoke is detected.

Support rails Support rails are those rails installed for the purpose of providing support or stability, usually for situations where a person is moving from a lying or sitting position to a standing position and vice versa. For the purposes of the survey, only those support rails in a bathroom or toilet were considered.

Thermostat Any device which can be used to adjust or regulate the temperature of the water provided by the hot water system.

For more information . . .

The ABS publishes a wide range of statistics and other information on Australia's economic and social conditions. Details of what is available in various publications and other products can be found in the ABS Catalogue of Publications and Products available from all ABS Offices.

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