

Community-based Men's Sheds: promoting male health, wellbeing and social inclusion in an international context

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SUMMARY

Males experience greater mortality and morbidity than females in most Western countries. The Australian and Irish National Male Health Policies aim to develop a framework to address this gendered health disparity. Men's Sheds have a distinct community development philosophy and are thus identified in both policies as an ideal location to address social isolation and positively impact the health and wellbeing of males who attend. The aim of this international cross-sectional survey was to gather information about Men's Sheds, the people who attend Men's Sheds, the activities at Men's Sheds, and the social and health dimensions of Men's Sheds. Results

demonstrate that Men's Sheds are contributing a dual health and social role for a range of male subgroups. In particular, Men's Sheds have an outward social focus, supporting the social and mental health needs of men; health promotion and health literacy are key features of Men's Sheds. Men's Sheds have an important role to play in addressing the gendered health disparity that males face. They serve as an exemplar to health promotion professionals of a community development context where the aims of male health policy can be actualized as one part of a wider suite of global initiatives to reduce the gendered health disparity.

Key words: men's health promotion; health literacy; preventative health care; masculinity; participation; social inclusion

INTRODUCTION

Males have worse health outcomes across all age groups than females in most Western and some non-Western countries (White, 2011; WHO, 2011). In Australia, the life expectancy of males was 78.7 years in 2005–2007 compared with 83.7 years for females (ABS, 2008). Across Europe, male mortality is 210% higher in the 15–64 age range (White, 2011). These greater mortality rates are largely due to non-communicable and preventable diseases, such as coronary arterial disease, lung cancer and heart diseases, that are exacerbated by poor health-promoting behaviours such as smoking,

excess alcohol consumption, physical inactivity and poor diet (AIHW, 2008a; WHO, 2011). In vast, or sparsely populated, countries such as Australia, New Zealand and Canada where access to health-care services and health promotion messages can be difficult, male mortality and morbidity also increases with remoteness (Ansari, 2007; Begg *et al.*, 2007; AIHW, 2008b). For example in 2004–2006, males in Australian major cities had a life expectancy of 80 years compared with 72 years for males in very remote areas (AIHW, 2010). Further, remoteness is another known variable that adds to the burden of socioeconomic disadvantage and is also directly associated with reduced life

expectancy, premature mortality, injury and disease incidence and prevalence (AIHW, 2008a). While these data are compelling, they do little to explain the causes or socio-behavioural context of the gendered disparity. A number of complex and interconnected factors have been posited for the gendered health inequality of different subgroups of males: (i) limited help-seeking behaviours in some male subgroups, (ii) poor health literacy, (iii) entrenched disadvantage contributing to poorer health outcomes and (iv) remoteness (Galdas *et al.*, 2005; ABS, 2006a; Smith, 2007; AIHW, 2010).

One of the reasons for the poorer health outcomes has been attributed to certain male subgroups displaying limited help-seeking behaviours (Smith, 2007). That is, male socialization, masculinity, social connectedness and work-life balance playing a complex interaction that significantly impacts on males accessing mainstream health services, particularly when they are ill (Galdas *et al.*, 2005). Further, an attitude of self-reliance, combined with barriers of access to preventive health care and public health education, contribute to the poorer health of rural men (Begg *et al.*, 2007; AIHW, 2008b). Age also impacts on delays in help seeking; males in the 15–54 year age group are significantly less likely to attend a doctor than females, leading to lower use of health services, lack of interest in preventing illness, and disengagement with traditional health service models (Connell, 1995; Macdonald, 2006).

Decreased health literacy is directly associated with poorer health status and limited preventive health behaviour (ABS, 2006a). In Australia only 35% of males aged 45 and over achieved the minimum level of health literacy. In addition, men living in regional and remote areas were up to 22% less likely than men in major cities to possess an adequate level of health and mental health literacy (ABS, 2006a; Griffiths *et al.*, 2009; AIHW, 2010).

Most Western countries also have other disadvantaged groups including First Nation (Aboriginal) males, males from culturally and linguistically diverse (CALD) backgrounds, and men with disabilities who, just like men from remote areas, are at an additional risk for poorer health outcomes (AIHW, 2007, 2012; O’Kane *et al.*, 2008). For instance, in Australia the gap in life expectancy between indigenous and non-indigenous Australian males is estimated to be 11.5 years (AHMAC, 2008). To address the gender health disparity, the Australian and Irish

Governments developed and implemented *National Male Health Policies* (NMHPs) (DHA, 2010a; DHC, 2008). These two policies focus on engaging males about their health, raising awareness about preventable health problems, improving the use of existing health resources by reducing access barriers and targeting males with poorer health outcomes. The policies encourage health service deliverers to ensure that new programmes and services are tailored to reduce the types of entrenched disadvantage noted by using health promotion messages in language that groups of males can readily relate to, and be delivered in settings which are frequented by males, such as the workplaces, rural shows, community centres and Men’s Sheds.

Both the Irish and Australian policies explicitly highlighted the importance of Men’s Sheds in alleviating social isolation, and also provide an important opportunity to raise awareness about health issues and serving as an important conduit for raising awareness of men’s health issues and services. In 2009, it was estimated that there were 40,000 individual users of Men’s Sheds throughout Australia (DHA, 2010b). In recognition of this potential, the Australian government invested \$3 million over 4 years to support the Australian Men’s Sheds Association (AMSA) (DHA, 2010a; DHC, 2008).

Men’s Sheds were not born as a result of the implementation of the NMHPs; they are an important existing community structure whose community development philosophy can potentially be tapped into as a vehicle for the delivery of preventative health services. The potential of Men’s Sheds as part of a wider suite of men’s health initiatives is aligned with the international focus on solving the gendered health inequities that become apparent when the social determinants of health are exposed (World Health Organization Commission on Social Determinants of Health, 2008). Furthermore, the NMHPs stipulate that there is a need to recognize successful community initiatives and build on them where possible with ongoing support. However, given the embodiment of Men’s Sheds into a funded health policy framework as a means to promote male health and well-being, the NMHPs urge the need to building a strong evidence base on male health and using it to inform policies development. A recent narrative review on Men’s Sheds highlight that there is a limited body of research about how Men’s Sheds can contribute to wider health and social policy (Wilson and Cordier, 2013). As a starting

point they suggest that methodologically rigorous studies be undertaken to uncover the characteristics and programme types that do promote better male health and wellbeing.

In a first step towards building the evidence-base, the purpose of this *International Men's Sheds Survey* was to gather information about Men's Sheds, the people who attend Men's Sheds, and the activities at Men's Sheds. This paper reports on the social and health dimensions of Men's Sheds. Specifically the study aims to determine whether Men's Sheds: (i) target vulnerable communities, including people of CALD backgrounds, (ii) have an outward social focus and (iii) engage with external health and social stakeholders. Further we aimed to determine whether Men's Sheds have a health focus as indicated by: (iv) visits by health workers, (v) participating in health literacy and preventative healthcare initiatives and (vi) engaging in activities aimed at promoting a healthy lifestyle.

METHODOLOGY

Ethical clearance for the study was obtained through the Human Research Ethics Committee, The University of Sydney. Survey development was directed by (i) identifying gaps in literature on Men's Sheds; (ii) consultation with AMSA; (iii) feedback from a New Zealand Men's Shed representative and (iv) consultations with four Australian Men's Shed coordinators. The feedback ensured face validity and informed the development of the survey which included four sections: (i) operational structures; (ii) information about the sheds; (iii) information about members and activities and (iv) health and social activities. The survey was piloted using SurveyMonkey® by an AMSA representative, three Australian Men's Shed coordinators and Men's Shed coordinators from New Zealand and Canada. The electronic survey was further modified to ensure clarity and appropriate use of international terms.

The study attempted to include all Men's Sheds both in Australia and internationally. As such, Australian sheds were sourced through AMSA (who emailed the electronic survey to all their sheds), and Irish sheds were sourced through listed email addresses on The Irish Men's Shed Association (IMSA) website. While New Zealand and the UK do not have an official association, they do have websites listing all

known sheds and their contact details. The survey was emailed directly to all the remaining known International sheds (Scotland and Canada), as they do not have official associations. All International Men's Sheds were followed up with phone calls to ensure all known sheds were identified both within their countries and to determine whether they know of the existence of Men's Sheds in other countries. Whilst great care was taken to include all known sheds in the sample, it is possible that sheds or similar initiatives may have been excluded. The shed coordinators or a suitable alternative were asked to complete the survey; completion was considered as consent to participate. Survey data were collected between April and August 2012.

Data analysis

Descriptive statistics were calculated and correlations between variables were explored using Pearson's correlation coefficients. Inferential statistics (Pearson χ^2 ; ANOVA; independent sample *t*-test) were used to explore significant differences between sheds with different Australian Standard Geographical Classification Remoteness Areas (ASGC RA) categories and Australian sheds versus International sheds. The ASGC RA classification system allocates one of five remoteness categories to areas—*major cities*, *inner regional*, *outer regional*, *remote* and *very remote*. Bonferroni adjustments were applied to reduce the risk of type I error. Answers to open-ended questions were summarized and categorized (Visser *et al.*, 2000).

RESULTS

Response rates

The survey was sent to all known AMSA sheds ($n = 782$). Of those sheds, 25 responded by email that they were either in the development stage or were no longer operational. These sheds were removed leaving 757 operational sheds. Of these 324 (42.8%) completed the survey in full; 12 (1.6%) only completed the first 9 questions and were excluded. The response rate was also calculated for the ASGC RA geographical categories to monitor for a representative Australian sample. The categories remote and very remote were collapsed due to the relative small number of sheds within these areas ($n = 45$ and $n = 11$,

respectively; this geographical category is henceforward referred to as *remote Australia*). Of the 123 International sheds identified, 59 (48.0%) completed the survey in full, and 5 (4.1%) completed the first 9 questions and were excluded from the analysis. Table 1 provides a summary of the response rates.

Description of participating sheds

In physical size, most Australian sheds ($n = 141$; 43.5%) were $>100 \text{ m}^2$; however, sheds from remote Australia tended to be smaller in physical size ($65\text{--}100 \text{ m}^2$). Comparatively, International sheds were much smaller with most ($n = 16$; 27.1%) between 37 and 64 m^2 in size. The *total*

overall mean number of Australian shed members was 31.9. Major cities had significantly more shed members (mean = 43.7), compared with remote Australia (mean = 17.2; $F = 9.99$; $p < 0.001$). In comparison the total mean number of International shed members was significantly less at 18.2 shed members (within Australia: $F = 10.06$, $p < 0.001$; Australia versus International sheds: $t = 3.47$, $p = 0.001$).

Men's Sheds are a recent phenomenon with most only operating for between 3 and 5 years ($n = 111$; 34.3%). However, the establishment of Men's Sheds internationally is even more recent with 32.7% ($n = 36$) having only been established in the last year (Pearson $\chi^2 = 40.69$; $p < 0.001$). Importantly, both Australian and International

Table 1: Response rates of Australian and International Men's Sheds

Location	Complete ^a	Incomplete ^a	Not Complete ^a	Total
Australian sheds				
Major cities	40.2% (103)	3.5% (9)	56.3% (144)	256
ACT	55.6% (5)	11.1% (1)	33.3% (3)	9
NSW	38.9% (35)	1.1% (1)	60.0% (54)	90
QLD	35.6% (16)	4.4% (2)	60.0% (27)	45
SA	41.7% (10)	8.3% (2)	50.0% (12)	24
VIC	41.5% (27)	1.5% (1)	57.0% (37)	65
WA	43.5% (10)	8.7% (2)	47.8% (11)	23
Inner regional	39.9% (107)	0.7% (2)	59.3% (159)	268
NSW	41.0% (41)	0% (0)	59.0% (59)	100
QLD	45.5% (15)	0% (0)	54.5% (18)	33
SA	71.4% (10)	0% (0)	28.6% (4)	14
TAS	33.3% (5)	6.7% (1)	60.0% (9)	15
VIC	30.4% (28)	1.1% (1)	68.5% (63)	92
WA	57.1% (8)	0% (0)	42.9% (6)	14
Outer Regional	47.5% (84)	0% (0)	52.5% (93)	177
NSW	34.5% (20)	0% (0)	65.5% (38)	58
NT	100% (1)	0% (0)	0% (0)	1
QLD	45.8% (11)	0% (0)	54.2% (13)	24
SA	75.0% (12)	0% (0)	25.0% (4)	16
TAS	52.4% (11)	0% (0)	47.6% (10)	21
VIC	41.0% (16)	0% (0)	59.0% (23)	39
WA	72.2% (13)	0% (0)	27.8% (5)	18
Remote and very remote	62.9% (30)	0.7% (1)	36.4% (25)	56
NSW	40.0% (4)	0% (0)	60.0% (6)	10
NT	66.7% (2)	0% (0)	33.3% (1)	3
QLD	63.6% (7)	0% (0)	36.4% (4)	11
SA	80.0% (4)	0% (0)	20.0% (1)	5
TAS	100% (3)	0% (0)	0% (0)	3
VIC	50.0% (2)	0% (0)	50.0% (2)	4
WA	40.0% (8)	5% (1)	55.0% (11)	20
Total	42.8% (324)	1.6% (12)	55.6% (421)	757
International sheds				
Canada	100.0% (1)	0.0% (0)	0.0% (0)	1
New Zealand	53.1% (17)	3.1% (1)	43.8% (14)	32
Ireland	43.1% (31)	5.6% (4)	51.3% (37)	72
UK	55.6% (10)	0.0% (0)	44.4% (8)	18
Total	48.0% (59)	4.1% (5)	48.0% (59)	123

^aValues denoted as percentage and (n).

sheds describe their primary philosophy to be providing social opportunities ($n = 106$; 32.7% and $n = 25$; 42%, respectively). Furthermore, 15.7% ($n = 51$) of Australian sheds and 11.9% ($n = 7$) of International sheds described their primary philosophy as providing health support to members. When asked what their secondary philosophy was, this figure increases to 25.9% ($n = 84$) for Australian sheds and 13.4% ($n = 8$) for International sheds.

The social dimension of men's sheds

Specifically targeted communities

Overall, 86.4% ($n = 51$) of all International sheds combined and 81.2% ($n = 263$) of Australian sheds target vulnerable communities. Of those sheds, an overwhelming majority of sheds both internationally (88.2%; $n = 45$) and within Australia (89.4%; $n = 235$) focus on supporting the social inclusion of the elderly, followed by people with mental health problems (International: 52.9%; $n = 27$; Australia: 53.6%; $n = 141$). Both Australia and New Zealand sheds supported a number of vulnerable communities, with less diversity in other countries. Interestingly, there was greater emphasis in International sheds supporting people who were unemployed (Pearson $\chi^2 = 17.32$; $p < 0.001$). Upon closer inspection, this was particularly true for Irish sheds, with significantly more Irish sheds targeting people who were unemployed (17.9%; Pearson $\chi^2 = 27.63$; $p < 0.001$).

While the social inclusion of the elderly was the main emphasis of all Australian regions, there was considerable variance between regions (Pearson $\chi^2 = 11.97$; $p = 0.007$), with significantly less emphasis on the social inclusion of the elderly in remote Australia (73.1%; $n = 19$), compared with major cities (85.9%; $n = 67$), inner regional areas (92.0%; $n = 81$), and outer regional areas (95.8%; $n = 68$). Targeting people of Aboriginal descent increased with remoteness: major cities (12.8%; $n = 10$), inner regional (13.6%; $n = 12$), outer regional (28.2%; $n = 20$), and remote Australia (50.0%; $n = 13$). This difference was statistically significant (Pearson $\chi^2 = 21.45$; $p < 0.001$).

CALD shed members

For the purpose of the survey, cultural and linguistic diversity was defined as the differences that exist between people, such as language, dress,

traditions, food, societal structures, art and religion (DIMA, 2001). A similar proportion of International sheds combined (35.6%; $n = 21$) and Australian sheds (35.2%; $n = 114$) included members of CALD backgrounds. The distribution within Australia was fairly even with 43.7% ($n = 45$) of sheds in major cities, 32.1% ($n = 27$) of sheds in outer regional areas, 30.8% ($n = 33$) of sheds in inner regional areas and 30.0% ($n = 9$) of sheds in remote Australia including CALD populations.

The sheds that include people from CALD backgrounds were asked which specific CALD populations they have included. People of European descent were the most common CALD community in both Australian and International sheds. As with specifically targeted vulnerable communities, Australia and New Zealand were the most diverse in including a variety of CALD communities in their sheds. People of European descent was most commonly targeted at major city sheds (60.0%; $n = 27$), inner regional sheds (51.5%; $n = 17$) and outer regional sheds (55.6%; $n = 15$). However, people of Aboriginal and Torres Strait Islander descent was the most common CALD community in sheds from remote Australia (77.8%; $n = 7$). This difference was significant (Pearson $\chi^2 = 24.36$; $p < 0.001$). Including people of Asian descent in sheds decreased significantly with remoteness (major cities: 37.8%; $n = 17$; inner regional: 9.1%; $n = 3$ and outer regional: 7.4%; $n = 2$; remote Australia: 0.0%; $n = 0$; Pearson $\chi^2 = 16.69$; $p = 0.001$), and even though not significant, a similar trend was observed for people of African descent. Overall, sheds in major cities supported a number of CALD communities, with less diversity with increased remoteness.

An outward social focus for Men's Sheds

To determine whether some Men's Sheds have an outward community focus, they were asked if their shed actively engage with other community groups by doing volunteer work/tasks (e.g. removing graffiti). Overall 80.2% ($n = 260$) of Australian sheds engage in community volunteering, compared with 69.5% ($n = 41$) of International sheds combined. This outward focus was particularly evident in inner regional sheds (86.0%; $n = 92$), followed by outer regional sheds (82.1%; $n = 69$), sheds from remote Australia (80.0%; $n = 24$) and major cities (72.8%; $n = 75$).

Guest speakers visiting sheds

To determine whether Men's Sheds engage in formal community groups external to Men's Sheds they were asked if they had guest speakers visiting sheds and what topics they covered. Overall, 64.8% ($n = 210$) of Australian sheds had guest speakers visiting their sheds covering a range of topics, compared with 55.9% ($n = 33$) of International sheds combined. The spread of guest speakers across Australian regions was fairly even with guest speakers visiting 56.7% ($n = 17$) of sheds in remote Australia, 63.1% ($n = 53$) in outer regional areas, 64.5% ($n = 69$) in inner regional areas, and 68.9% ($n = 71$) in major cities.

Those sheds that had guest speakers in the last 12 months were asked what topics were covered. Even though health was the most common topic covered both internationally (51.5%; $n = 17$) as well as in Australia (78.1%; $n = 164$), Australian sheds had a significantly greater focus on health topics compared with International sheds combined (Pearson $\chi^2 = 10.60$; $p = 0.001$). Importantly health was covered as a topic in 94.1% of sheds in remote Australia. Table 2 provides an overview of the topics covered by guest speakers.

The health dimension of men's sheds

Visit by health workers

To determine whether Men's Sheds have activities geared towards promoting health literacy they were asked if they were visited by health workers (i.e. GPs, nurses or other health workers), and if so, what topics they covered. Overall, significantly more health workers visited Australian sheds (42.6%; $n = 138$) in the past 12 months, compared with only 10.2% ($n = 6$) of International sheds combined (Pearson $\chi^2 = 22.36$; $p < 0.001$). Half of the sheds in remote Australia ($n = 15$) and outer regional areas ($n = 42$) were visited by a health worker, followed by 44.9% of sheds in inner regional areas ($n = 48$), and 32.0% of sheds in major cities ($n = 33$). As expected, there was a positive association between sheds having had a guest speaker and sheds covering health as a topic ($r = 0.360$; $p < 0.001$).

Staying physically active was the most common health topic covered by health workers both internationally (66.7%; $n = 4$) as well as in Australia (55.8%; $n = 77$). The spread of topics

Table 2: Topics covered by guest speakers

Topics	Australia					International				
	MC ^a (71)	IR ^a (69)	OR ^a (53)	RVR ^a (17)	AUST ^a (210)	INT ^a (33)	Ireland ^a (22)	NZ ^a (7)	UK ^a (3)	Canada ^a (1)
Health	74.6% (53)	79.7% (55)	75.5% (40)	94.1% (16)	78.1% (164)	51.5% (17)	50.0% (11)	85.7% (6)	0.0% (0)	0.0% (0)
First aid	36.6% (26)	27.5% (19)	34.0% (18)	35.3% (6)	32.9% (69)	12.1% (4)	13.6% (3)	14.3% (1)	0.0% (0)	0.0% (0)
Social aid	29.6% (21)	17.4% (12)	18.9% (10)	17.7% (3)	21.9% (46)	18.2% (6)	22.7% (5)	14.3% (1)	0.0% (0)	0.0% (0)
Trade trainers	25.4% (18)	15.9% (11)	13.2% (7)	11.8% (2)	18.1% (38)	21.2% (7)	22.7% (5)	14.3% (1)	33.3% (1)	0.0% (0)
Legal advice	16.9% (12)	7.2% (5)	11.3% (6)	11.8% (2)	11.9% (25)	15.2% (5)	13.6% (3)	28.6% (2)	0.0% (0)	0.0% (0)
Spirituality	5.6% (4)	1.5% (1)	5.7% (3)	5.9% (1)	4.3% (9)	3.0% (1)	4.6% (1)	0.0% (0)	0.0% (0)	0.0% (0)
OH&S	5.6% (4)	4.4% (3)	3.8% (2)	0.0% (0)	4.3% (9)	0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Juvenile justice system	1.4% (1)	1.5% (1)	3.8% (2)	11.8% (2)	2.9% (6)	0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)

^aValues denoted as percentage and (n).

MC, major city; IR, inner regional; OR, outer regional; RVR, remote and very remote; AUST, Australia; INT, international; NZ, New Zealand; UK, United Kingdom; OH&S, Occupational Health & Safety.

covered by health workers across Australia was fairly even. There was a positive association between sheds that covered prostate cancer as a topic and heart/BP as a topic ($r = 0.507$; $p < 0.001$), as well as staying physically active and Nutrition as topics ($r = 0.439$; $p < 0.001$). Table 3 provides a summary of health topics covered across Australian geographical areas.

Health checks

To determine whether Men's Sheds engage in preventative healthcare activities, the sheds that had a health worker visit in the past 12 months (Australia: $n = 138$; International: $n = 6$) were asked if any health checks or screening occurred. Of the International sheds, only Ireland conducted health checks, whereas no health checks were conducted in the UK, New Zealand and Canada. Conversely for the Australian sheds, of those sheds visited by a health worker, 53.6% ($n = 74$) also conducted a health check. There was a positive association between sheds that conducted checks for BP and BSL ($r = 0.637$; $p < 0.001$) and checks for BP and height and weight ($r = 0.639$; $p < 0.001$).

Proportionately, the most health checks were conducted in sheds from remote Australia (60.0%; $n = 9$), followed by outer regional sheds (54.8%; $n = 23$), inner regional sheds (52.1%; $n = 25$), and major city sheds (51.5%; $n = 17$). Compared with other geographical areas, sheds from remote Australia had significantly more health checks for cholesterol (Pearson $\chi^2 = 11.48$; $p = 0.009$) and BSL (Pearson $\chi^2 = 9.46$; $p = 0.0024$). Table 3 provides a detailed breakdown of the health checks or screening conducted.

Healthy lifestyle

A third of all Australian sheds ($n = 107$; 33.0%) and 28.8% of International sheds combined ($n = 17$) organize activities primarily aimed at promoting physical activity. Of the individual countries, the single shed from Canada, 35.5% ($n = 11$) of Irish sheds, 30.0% ($n = 3$) of UK sheds and 11.8% ($n = 2$) of New Zealand sheds organize activities primarily aimed at promoting physical activity. In Australia, the spread of sheds that purposefully promote physical activity was fairly even across geographical areas: outer regional (38.1%; $n = 32$), remote Australia (36.7%; $n = 11$), major cities (35.0%; $n = 36$) and inner regional (26.2%; $n = 28$).

Significantly more Australian sheds (27.2%; $n = 88$) provided meals to shed members, compared with International sheds combined (10.2%; $n = 6$) (Pearson $\chi^2 = 7.78$; $p = 0.005$); of those sheds, 53.4% ($n = 47$) of Australian sheds and 83.3% ($n = 5$) of International sheds combined provided the meals as part of a healthy lifestyle initiative. Providing meals as part of a healthy lifestyle was proportionately more common in sheds from remote Australia (85.7%; $n = 6$), followed by outer regional sheds (60.9%; $n = 14$), major cities (50.0%; $n = 11$) and inner regional sheds (44.4%; $n = 16$). There was a positive association between sheds that undertake activities aimed at promoting physical activity and sheds that provided meals as part of a healthy lifestyle ($r = 0.345$; $p < 0.01$).

DISCUSSION

The findings from this study highlight four central points (i) that Men's Sheds are community focussed, (ii) Men's Sheds target a range of marginalized male subpopulations who are at risk of social isolation, (iii) Men's Sheds have health benefits and in some areas are providing preventative health service and (iv) the promotion of men's health and wellbeing is a core activity of many Men's Sheds. While the core activity and central appeal of men's sheds is participation in meaningful masculine activities, the capacity of Men's Sheds to augment men's health and social concerns, particularly for males affected by the social determinants of health, appears to be promising and aligns with their community development philosophy. Most importantly, the existence of NMHPs appears to be associated with more targeted health promotion activities at Men's Sheds, thus providing *process* evidence of male health policy translation into practice.

Social dimensions

The overwhelming majority of Men's Sheds, both in Australia and internationally, have an outward and community focus; in particular, they specifically cater to the social needs of elderly men experiencing social isolation and address the known social determinants of health for this group of men (Dave *et al.*, 2008). Healthy social networks mitigate the adverse effects of retirement and social isolation (Halford, 2000); improved male health will not only have a

Table 3: Health topics covered and health checks conducted at Men's Sheds

Health topics/checks	Australia					International				
	MC ^a (33)	IR ^a (48)	OR ^a (42)	RVR ^a (15)	AUST ^a (138)	INT ^a (6)	Ireland ^a (3)	NZ ^a (2)	UK ^a (0)	Canada ^a (0)
Health topics										
Prostate cancer	57.6% (19)	58.3% (28)	45.2% (19)	46.7% (7)	52.9% (73)	50.0% (3)	33.3% (1)	100.0% (2)	0.0% (0)	0.0% (0)
Testicular cancer	18.2% (6)	20.8% (10)	23.8% (10)	33.3% (5)	22.5% (31)	33.3% (2)	33.3% (1)	50.0% (1)	0.0% (0)	0.0% (0)
Staying physically active	57.6% (19)	47.9% (23)	64.3% (27)	53.3% (8)	55.8% (77)	66.7% (4)	100.0% (3)	50.0% (1)	0.0% (0)	0.0% (0)
Nutrition	48.5% (16)	39.6% (19)	33.3% (14)	46.7% (7)	40.6% (56)	33.3% (2)	66.7% (2)	0.0% (0)	0.0% (0)	0.0% (0)
Diabetes	57.6% (19)	43.8% (21)	47.6% (20)	53.3% (8)	49.3% (68)	33.3% (2)	66.7% (2)	0.0% (0)	0.0% (0)	0.0% (0)
Falls prevention	24.2% (8)	12.5% (6)	19.0% (8)	6.7% (1)	16.7% (23)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Depression/anxiety	60.6% (20)	56.2% (27)	47.6% (20)	40.0% (6)	52.9% (73)	33.3% (2)	66.7% (2)	0.0% (0)	0.0% (0)	0.0% (0)
Heart/blood pressure (BP)	51.5% (17)	50.0% (24)	47.6% (20)	66.7% (10)	51.4% (71)	66.7% (4)	100.0% (3)	50.0% (1)	0.0% (0)	0.0% (0)
Health checks										
Cholesterol	6.1% (2)	4.2% (2)	11.9% (5)	33.3% (5)	10.1% (14)	33.3% (2)	66.7% (2)	0.0% (0)	0.0% (0)	0.0% (0)
Blood pressure (BP)	36.4% (12)	41.7% (20)	40.5% (17)	60.0% (9)	42.0% (58)	16.7% (1)	33.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)
Height/weight (BMI)	24.2% (8)	25.0% (12)	31.0% (13)	40.0% (6)	28.3% (39)	16.7% (1)	33.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)
Blood sugar level (BSL)	12.1% (4)	25.0% (12)	23.8% (10)	53.3% (8)	24.6% (34)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Eyesight	15.2% (5)	14.6% (7)	4.8% (2)	13.3% (2)	11.6% (16)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Hearing	33.3% (11)	33.3% (16)	14.3% (6)	20.0% (3)	26.1% (36)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Depression/anxiety	24.2% (8)	16.7% (8)	19.0% (8)	20.0% (3)	19.6% (27)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
No checks conducted	48.5% (16)	47.9% (23)	45.2% (19)	40.0% (6)	46.4% (64)	66.7% (4)	33.3% (1)	100.0% (2)	100.0% (1)	100.0% (1)

^aValues denoted as percentage and (*n*)

MC, major city; IR, inner regional; OR, outer regional; RVR, remote and very remote; AUST, Australia; INT, International; NZ, New Zealand; UK, United Kingdom.

positive impact on individual lives, but also impact improvements in the cultural and social life of communities, and reductions in the need for high-cost health services (Flood, 2005). Men's Sheds appear to be an important mechanism to deal with the adverse effects of retirement and social isolation.

However, as a social construct Men's sheds are embracing a much wider cohort, including unemployed men. Of the 10,334 active Australian Men's Shed members surveyed, 27.5% ($n = 2839$) are below the typical retirement age of 60 years. For Irish sheds, the proportion of active shed members below the typical retirement age of 60 years is much higher 65.1% ($n = 392$). The unemployment rate in Ireland rose from 4.8% in 2008 to 14.8% in 2012 (CSO, 2012). Not surprisingly, Ireland was the country with the greatest emphasis on sheds supporting unemployed men who are also at great risk of poorer health outcomes associated with the social determinants of health (World Health Organization Commission on Social Determinants of Health, 2008).

Moreover, Men's Sheds appear to be deliberate in their attempt to be inclusive and address the social needs of people within their immediate community. A third of all sheds surveyed, deliberately attempted to include people of CALD backgrounds. For instance, a significant proportion of people of Aboriginal and Torres Strait Islander descent were deliberately targeted by sheds in remote Australia, and similarly people of Asian and African descent are targeted in major cities. Population and immigration figures show that the vast majority of Aboriginal and Torres Strait Islander people live in remote communities and both Asian and African migrants resettle in Australian major cities (ABS, 2006b). The findings from this survey, therefore, suggest that Men's Sheds are attuned to the socio-cultural needs of the people living in their communities.

Health dimensions

Australian sheds have a much greater health focus, compared with International sheds. The pronounced health focus of sheds could in part be explained by the implementation of the NMHP and deliberate investment of health promotion funds channelled towards Australian sheds. Geographically, sheds from remote Australia have a greater health focus than regional and major city sheds. In fact, the

geographical trend demonstrates an increased health focus with increased remoteness, suggesting that men's sheds in remote Australia are filling a gap in health service delivery. Hospitalization rates for people living in rural and remote areas are higher for some conditions, including conditions that could have been prevented through the provision of non-hospital services and care (AIHW, 2008a,b). Higher hospitalization rates may partly be due to lower levels of access to primary care, and later presentation for treatment may result in poorer outcomes (Leahy *et al.*, 2009).

The NMHPs emphasize the need to improve men's health literacy. Sheds had an unmistakable focus on being a conduit for delivering health information and the incidence of a health worker visiting Australian men's sheds increased with increased remoteness. Indeed, the process of providing such information and support to local communities aligns with the community development philosophy of the men's shed movement (AMSA, 2013). The health topics most commonly covered include staying physically active, followed by prostate cancer, depression/anxiety (mental health), and heart and blood pressure. This is to be expected given that the majority of men attending men's sheds are post-retirement age. A high proportion of male deaths in this age group are from heart disease, respiratory disease and lung cancer. Prostate cancer is also significantly more prevalent in older men and suicide rates for men increase at this age (ABS, 2006a, 2008).

Health checks are part of the strategy suggested in the NMHPs towards preventative health care. Overall, nearly a quarter of all Men's Sheds in Australia conducted health checks, compared with only three international sheds that conducted health checks. Of note is the fact that the three sheds are in Ireland that also have an NMHP. Given that the most common types of health checks conducted were BP and BMI, the screenings appear to be geared towards preventative coronary heart diseases. This is to be expected, given that heart disease is the leading cause of death among Australian males 64 years and older (AIHW, 2008b).

Australian sheds had a much greater preventative health services focus, compared with International sheds, by engaging in activities aimed at promoting physical activities and providing meals as part of the healthy lifestyle initiative. This could in part be explained by the substantial Australian Government investment

in preventive health care to be rolled out at local community organizations, such as Men's Sheds, to support healthier lifestyles and reduce the incidence of non-communicable diseases (DHA, 2010a). The recent AMSA-published *Spanner in the Works* (AMSA, 2011) is an example of this policy in practice; using imagery of the automobile (e.g. blood pressure = oil pressure) to raise awareness of men's health issues. However, while seemingly embraced by policy makers, it should be acknowledged that such approaches have been critiqued in the men's health literature (e.g. Robinson and Robertson, 2010).

Global context

The largest growth in shed numbers has been in Australia and Ireland; the only two countries with a NMHP. Further, Men's Sheds are, at this time, situated in Western countries, where the functional role of the home, the car and the shed (or garage) are central facilitators of social needs (Earle *et al.*, 1995). For men, the shed as a social space is critical; the demise of the backyard shed due to variables such as urban consolidation and the generational loss of shed-specific skills has seen a gradual loss of male-only social spaces for men. Formally organized Men's Sheds appear to fill that gap for many males.

While Men's Sheds, or country-specific incarnations of them, appear to be an ideal way to spread male health promotion messages in Western countries, some novel examples of how this can be achieved in non-Western countries where the backyard shed or garage has never played a social role in men's lives are starting to be developed in these regions. Indeed the programme areas section of the Promundo website describes several male-specific examples related to male caregiving, reducing violence in post-conflict regions and improving the effectiveness of poverty reduction interventions in the developing world (Promundo, 2013). However, Men's Sheds provides a blueprint in 'how' this can be achieved by using the contextual culturally gendered places and rituals that 'capture' their men in male social spaces to spread such messages. This is particularly vital in non-Western countries where the rates of non-communicable diseases and poor male health behaviours, such as smoking, far exceed those in richer nations such as Australia and Ireland that have a NMHP (WHO, 2011).

Limitations

Even though great care was taken to get a representative sample of all sheds, both in Australia and internationally, there was limited information available on the non-responders. As such the possibility of a non-response bias must be considered. Measurement error may also have impacted on the results (e.g. variability in interpretations of the questions) (Visser *et al.*, 2000). Further, while every attempt was made to ensure all known sheds were included in the sample, it is possible for sheds to have been excluded.

CONCLUSIONS

Overall the findings demonstrate that Men's Sheds have both a social and health focus. This is important given the emerging prominence of the social determinants of health and that the two constructs are inextricable (Macdonald, 2006). Taking the key message of the social determinants of health into consideration—health inequalities result from social inequalities—Men's Sheds are uniquely positioned in local communities to provide a holistic context for addressing both.

Men's Sheds appear to fulfil an important social function by filling a social gap, particularly in addressing the social isolation of the elderly, addressing the mental health needs of men, and engaging with long-term unemployed men. Men's sheds appear to be an important community context for actualizing the policy framework of the NMHP, by initiating activities aimed at improving health literacy and for delivering preventative healthcare services. Researches have shown that men who are socially connected take better care of their own health, leading to healthier lifestyles and seeking help from health professionals (Holden *et al.*, 2006). Men's sheds demonstrate great promise in supporting social connectedness, enhancing community development and promoting healthy lifestyles for men; their gendered example should be embraced by health promotion professionals as one part of a wider suite of global initiatives to reduce the gendered health disparity that males experience.

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