

Title

Exploring the 'Grey Nomad' travelling population of Australia and their health: a literature review.

Authors***Margaret Yates**

RN, Diploma in Teaching (Nursing) FACN

Student

Faculty of Health, University of Technology, Sydney

Broadway, Ultimo NSW 2000 Australia

Margaret.M.Yates@student.uts.edu.au

Ph: +610405757025

Lin Perry

PhD, MSC. RN

South East Sydney Local Health District and Faculty of Health, University of Technology, Sydney

Broadway, Ultimo NSW 2000 Australia

Lin.Perry@uts.edu.au

Ph: 0061293824709

Jenny Onyx

PhD

Emeritus Professor of Community Management

Business School, University of Technology, Sydney

Broadway, Ultimo NSW 2000 Australia

Jennifer.Onyx@uts.edu.au

Ph: 0061295143979

Tracy Levett-Jones

RN, PhD, Med & Work, BN, Dip App Sci (Nursing)

Professor of Nursing Education, Nursing

Faculty of Health, University of Technology, Sydney

Broadway, Ultimo NSW 2000 Australia

Tracy.Levett-Jones@uts.edu.au

Ph: 0061295145228

*Corresponding Author

Competing Interests

The authors declare no competing interests

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2 **health: an integrative literature review.**

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4

5 **Abstract**

6 **Objective:** With increasing numbers of ‘baby boomers’ retiring and taking to the road in rural and
7 remote Australia, often for extended periods, this review aimed to identify the characteristics of
8 “grey nomads” travelling across Australia, their experiences in relation to their health and social
9 needs, and access to healthcare.

10 **Design:** An integrative literature review with narrative analysis.

11 **Participants:** Studies of Australian grey nomad travelers sourced from Ovid Emcare, Medline/
12 PreMedline, Embase, PsychINFO, Academic Search Complete and Google Scholar published from
13 1999 to January 2020.

14 **Findings:** Fourteen records based on 11 studies described grey nomads as predominantly older
15 heterosexual couples who defied the conventional view of ageing by seeking adventure and new
16 experiences. Many planned for their health needs while travelling, and their health was
17 overwhelmingly reported to improve with the nomadic lifestyle.

18 **Conclusion:** The review demonstrated the paucity of data about grey nomads. Information on
19 travelers’ healthcare needs and service usage is a significant gap undermining regional and rural
20 service planning and provision of healthcare services and represents considerable challenge for
21 healthcare providers such as GPs, pharmacies and emergency departments.

22

23 **Keywords:** grey nomad, health, systematic review, travellers, women.

24

25 **Introduction**

26 Growing numbers of Australians are reported to travel domestically for extended periods of time.
27 According to the Caravan Industry Association of Australia, the number of caravan and campervan
28 registrations grew by 30 and 20 per cent, respectively, between 2011-2016, totalling 615,301
29 combined registrations for the year to January 2016 (Williams, 2017). A significant number of people
30 owning these vehicles were likely 'grey nomads', a term commonly used to describe retired or semi-
31 retired individuals, 50 years of age or older, who tour within Australia in caravans, campervans,
32 motorhomes and the like for a minimum of three months (Onyx & Leonard, 2007) However, there is
33 no indication what proportion are long-term travelers versus short-term holidaymakers. More
34 recently, a growing number of women traveler groups can be seen on social media, such as the
35 Facebook groups *Women Caravanning Camping and Travelling Solo Australia* (8,100 members), *Solo*
36 *Women Campers* (4,100 members), *Chicks Camping Crew* (6,600 members) and *Wheels around Oz*
37 *women and children only* (343 members). These membership numbers, posted in October 2020,
38 reflect a more than doubling (225% increase) in the total numbers posted for these four groups in
39 the previous year. Whilst the situation with COVID-19 lockdowns may reflect greater than usual
40 vicarious travelling, a 48% increase was noted in the 5 months pre-COVID (Oct 2019-Feb 2020). This
41 suggests a reasonable number of internet-enabled women are travelling. The proportion of women
42 travelers that do not access the internet are not reflected in these numbers and is therefore
43 unknown. Other groups such as travelling families who home school are also growing but the
44 characteristics and travel patterns of the Australian domestic travelling population is largely
45 unknown.

46 The sole review of grey nomad literature undertaken to date found only a small number of
47 predominantly qualitative studies (Raven, 2016) which cannot represent the characteristics or needs
48 of the Australian travelling population. Whilst a wider literature discusses the North American
49 equivalent travelling population, often referred to as 'snowbirds' and 'sunseekers', a comparison of
50 the characteristics and activities found this population was "quite different...despite superficial
51 similarities" (Onyx & Leonard, 2005). These authors identified that the North Americans have
52 distinctly different travel and lifestyle characteristics to Australian grey nomads, tending to travel to
53 and stay at a single destination, contrasting the 'nomadic' Australians.

54 The relatively limited health infrastructure of regional, rural and remote Australia is well known.
55 Increasing numbers of grey nomads, including women, may place a burden on already thinly-spread
56 healthcare services but relatively little is known about travelers' healthcare needs and healthcare
57 seeking practices or whether these may differ for women travelers. Given the size and growth of this
58 whole itinerant population, it is clearly important to understand their characteristics, the reasons
59 they travel and what it means to them, their activities, health status, healthcare needs and health
60 service seeking behaviours. This review therefore sought to identify and appraise the available
61 literature about this contemporary topic.

62 **Literature Review Design**

63 An integrative literature review was undertaken (Whittemore & Knapfl, 2005). This form of review
64 was chosen as it can accommodate different types of data derived from different research designs
65 and methods

66 **Research Aim**

67 The aim of this review was to identify the characteristics reported of 'grey nomads' travelling across
68 Australia, and their experiences in relation to their health and social needs, and access to healthcare
69 when travelling.

70 **Research Questions**

71 The questions that guided the review were:

- 72 1. What are the characteristics of 'grey nomads', people who travel Australia for weeks,
73 months or years, including their motivation for travel, distances travelled, duration of their
74 trips and the chosen destinations?
- 75 2. Prior to travelling, what planning is carried out by travelers in relation to their social and
76 healthcare needs, such as for medications and self-management of chronic disease?
- 77 3. What are travelers' experiences in relation to their health and healthcare provision during
78 their travels?

79 **Literature Search and Review Methods**

80 In creating the search strategy, terms were organised in relation to 'Population' and 'Situation'
81 (DiCenso, 2005).

82 **Population:** For the purpose of this review, 'grey nomads' were defined as older people who choose
83 to travel across Australia with self-contained mobile accommodation for prolonged periods of time.
84 A population of similar domestic travelers in North America are referred to as 'snowbirds' and
85 'sunseekers'. Onyx and Leonard (2005) identified that these North Americans have distinctly
86 different travel and lifestyle characteristics to Australian grey nomads. However, one earlier paper
87 referred to Australians using these terms (Mings, 1997), which were therefore included in the search
88 strategy.

89 **Situation:** The descriptive characteristics of this population, and all aspects of their health,
90 healthcare needs and services accessed.

91 **Inclusion criteria:** Grey nomads or travelers, adult populations, males and females, data collected in
92 Australia, health and wellbeing topics. No set age criteria were set, other than that the majority or
93 the mean age should be >45 years or described as retired (chosen to exclude the younger population
94 of backpackers and holiday makers); English language publications, published during the previous 20
95 years (1999-January 2020).

96 **Exclusion criteria:** Literature related to religious pilgrims, and short-term holiday makers or
97 vacationers was excluded. No travel duration criteria were set other than, where this was reported,
98 it should represent, on average, a duration of months. Publications other than primary research
99 were excluded e.g. conference abstracts, discussions, commentaries, editorials, literature reviews,
100 but their reference lists were searched.

101 The search strategy was set up (Table 1) and run, with some minor modifications, on five databases
102 (Ovid Emcare, Medline and PreMedline, Embase, PsychINFO and Academic Search Complete) and
103 the search engine Google Scholar. Search output was filtered to include the years 1999 - 2020.

104 The final search output of each database was exported to Endnote X9 (see Figure 1) and duplicates
105 were identified and deleted. Records were then screened for eligibility, checking title, abstract and
106 keywords. Records not meeting inclusion criteria or meeting exclusion criteria were removed. All
107 remaining full text publications were read and discussed by two researchers to reach consensus and
108 to assess relevance to the research questions; reference lists of relevant publications were hand-
109 searched for additional studies. Papers that referred to 'snowbirds' or 'sunseekers' in North America
110 were excluded. Fourteen articles were retained.

111 **Data Extraction and Analysis**

112 A data extraction table was created with headings identifying the main characteristics of each article
113 (Table 3). Data were extracted in relation to the research questions (Table 4).

114 Conventional content analysis was applied, as this approach is suitable where there is little theory or
115 prior literature (Hsieh & Shannon, 2005). Included papers were repeatedly read and initial categories
116 in relation to the research questions emerged from the data. Data were coded in relation to these
117 categories. Coded data were then reviewed to identify patterns and any discrepant data, collated
118 and summarised.

119 **Rigor**

120 Qualitative papers were critically appraised using the appropriate Critical Appraisal Skills Program
121 checklist (Critical Appraisal Skills Programme (CASP), 2020) (see Table 2) and for survey studies a
122 modified version of this tool was used. Two authors worked separately and compared findings in
123 relation to screening and data extraction. A 20% sample of included publications were
124 independently appraised by the second author. Throughout the process of data extraction and
125 content analysis coding and analyses were discussed and consensus agreement reached among
126 authors.

127 **Findings**

128 Fourteen records based on 11 studies were included in the review. Two were doctoral theses, one
129 using face to face interviews (Holloway, 2009), and the other a paper-based survey and face to face
130 interviews (Cridland, 2008). Five publications took an ethnographic approach (Holloway, 2009; Onyx
131 & Leonard, 2005, 2007; Patterson, 2011; White & White, 2004), one used grounded theory (Hillman,
132 2013) and two others described a qualitative approach (Calma, Halcomb, & Stephens, 2018;
133 Stephens, Halcomb, & Dewing, 2018). Six publications used surveys (Brayley & Obst, 2010; Cridland,
134 2008; Halcomb, Stephens, Smyth, Meedya, & Tillott, 2017; Obst, Brayley, & King, 2008; Prideaux &
135 McClymont, 2006; Tate, Mein, Freeman, & Maguire, 2006). Several combined approaches, such as
136 participant observation, semi-structured or ethnographic interviews and telephone surveys (Table
137 3).

138 A variety of sampling methods were used. One study used face to face interviews and relied on
139 participants 'snowballing' from one couple to another (Hillman, 2013). Two studies used paper-
140 based surveys distributed by caravan park managers (Prideaux & McClymont, 2006) or at a caravan
141 show (Obst et al., 2008). An online survey (Halcomb et al., 2017) was also used to recruit participants
142 to two further telephone interview studies (Calma et al., 2018; Stephens et al., 2018) (Table 3). None
143 of these papers made any claim to be representative of this population; sampling strategies

144 achieved, at best, a snapshot from one or more locations and time. Overall, study quality was mixed
145 (Table 2).

146 Seven research teams travelled themselves: five were peripatetic (Cridland, 2008; Holloway, 2009;
147 Onyx & Leonard, 2005; Patterson, 2011; White & White, 2004) and two stayed at single locations
148 (Hillman, 2013; Tate et al., 2006). The geographic settings of these studies ranged across much of
149 Australia. Four ethnographic studies were conducted in camping sites, caravan parks, free rest areas
150 and national parks in Western Australia, the Northern Territory and Queensland (Cridland, 2008;
151 Holloway, 2009; Onyx & Leonard, 2005; Patterson, 2011). One paper based survey was distributed at
152 recreational vehicle events and rallies and caravan parks in six states as well as being delivered as an
153 electronic survey of the membership of camping and caravan clubs (Brayley & Obst, 2010). Other
154 paper based surveys were distributed at a caravan show in Brisbane (Obst et al., 2008) and caravan
155 parks in Goondiwindi, on the New South Wales- Queensland border (Prideaux & McClymont, 2006).
156 Interviews were carried out in the Kimberley District of Western Australia (Tate et al., 2006) and in
157 multiple caravan parks and camping sites above the Tropic of Capricorn (Cridland, 2008). For the
158 online survey and subsequent telephone interviews, participants' locations were unknown (Calma et
159 al., 2018; Halcomb et al., 2017; Stephens et al., 2018).

160 Ten of the fourteen publications were published between 2004 and 2011, and primarily focused on
161 defining and describing grey nomads, their motivations, the logistics of a travelling lifestyle, the
162 meanings derived from the experiences; their sense of social identity and community, and their
163 experience of road safety (Brayley & Obst, 2010; Cridland, 2008; Holloway, 2009; Onyx & Leonard,
164 2005, 2007; Prideaux & McClymont, 2006; Tate et al., 2006). Health status was part of the
165 description of the participants. The more recent cluster of papers (Calma et al., 2018; Halcomb et al.,
166 2017; Hillman, 2013; Stephens et al., 2018) shifted the focus to people who travel with chronic
167 illness and how they manage their health on the road.

168

169 **Question 1: The characteristics of grey nomads**

170 The first question asked about the characteristics of older people who travel Australia for extended
171 periods. Responses in the 14 papers came from a total of 3,273 participants.

172 *Age and Gender:*

173 Eight studies set participant age as a recruitment criterion (Brayley & Obst, 2010; Calma et al., 2018;
174 Cridland, 2008; Holloway, 2009; Obst et al., 2008; Onyx & Leonard, 2005, 2007; Tate et al., 2006) and
175 subsequently identified grey nomads as people over 50 years. In one thesis the target population
176 was 55 years and older, collated in three categories: 'young' at 55-65 years, 'intermediate' at 65-70
177 years, and 'older' at 70+ years (Holloway, 2009). In the other thesis a minimum age of 50 years was
178 set; however, 15 females and two males were under this age (Cridland, 2008).

179 Other studies simply reported the ages of their participants. One study reported all participants as
180 56 years and older (Hillman, 2013). Prideaux and McClymont (2006) found that most participants
181 (89%) were in the 45 to 74-year age groups. More recently, included travelers who were younger or
182 travelling with a family in addition to 'grey nomads' and referred to the whole group as "domestic
183 self-drive travelers". These participants ranged from 26 to 89 years, with mean of 60.2 years and
184 59.8 years for their travel companions.

185 Onyx and Leonard (2005) recruited 215 male and 203 female participants; Prideaux and McClymont
186 (2006) identified 92 (62.2%) as male and 56 (37.8%) female. Halcomb et al. (2017) reported 52.8% of
187 participants were women. Brayley and Obst (2010) found that of their 631 participants, 440 were
188 males and 139 were female, with 52 not reporting their gender. No other study identified
189 participants by gender.

190 In total, of the 3,273 participants of these 14 papers/ 11 studies over 14 years, only two solo women
191 were identified (Holloway, 2009; Onyx & Leonard, 2005). None of the 14 publications identified or
192 outlined any specific information or findings on women whether travelling alone, with other women,
193 or without men.

194 *Relationship Profile and Social Identity:*

195 Darley (2017) found that, although most travelers aged 55 years and older travelled as couples,
196 whether any were same sex relationships was not stated. Cridland (2008) found most grey nomads
197 were heterosexual couples (95%), with 5% de facto couples; singles made up 3% of the sample and
198 same sex couples <2%. The majority of single men travelled independently while single women
199 travelled in small parties of two or more vehicles with other singles or couples. Onyx and Leonard
200 (2007) found that most participants travelled as couples. According to Brayley and Obst (2010) older
201 recreational road travelers considered "couple" as their primary social identifier, with other social
202 group identity, such as grey nomads, as secondary.

203 Not all studies sought or reported detail of the participants' relationships, and referred only to
204 'participants' and 'travel companions' (Hillman, 2013; Stephens et al., 2018; Tate et al., 2006).
205 Several papers reported participants as 'couples' (Brayley & Obst, 2010; Cridland, 2008; Holloway,
206 2009; Onyx & Leonard, 2005; Patterson, 2011; Prideaux & McClymont, 2006). In other studies where
207 participants also primarily travelled in couples, almost all were heterosexual couples (Cridland, 2008;
208 Onyx & Leonard, 2005; Prideaux & McClymont, 2006), where the males were employed in trade or
209 management positions and the females as housewives or in clerical duties (Cridland, 2008).

210 *Socio-economic considerations and ethnicity*

211 Halcomb et al. (2017) reported travelers with widely ranging ages (at 26-89 years) but most (62.3%)
212 were retired; 28% received the aged pension and 11.4% the disability pension; 7.3% were employed
213 on paid leave. Distinctions were noted by Cridland (2008), with marked differences between
214 camping grey nomads and those staying in caravan parks. These were reflected in relation to trip
215 expenditure, retirement income, health, and length of retirement. Preferences were also expressed
216 for camping grounds or caravan parks based on type of vehicle driven, whether pet-friendly caravan
217 parks were needed / available, and the types of activities at the destinations.

218 Onyx and Leonard (2005) found 83% of participants were Anglo-Australian, 12% were Australians
219 born in the United Kingdom and 3% were from Northern Europe, with all having lived most of their
220 working lives in Australia. Few were of other ethnicity although Cridland (2008) identified a small
221 number from New Zealand. Obst et al. (2008) reported 80% of participants born in Australia, with 7%
222 born in the United Kingdom, 5% in New Zealand and the remainder from Africa, Europe and the USA.
223 The remaining papers did not mention ethnic origin; neither Aboriginal status nor country of birth
224 were recorded in any paper

225 *Mode and Motivation to Travel*

226 The definition of grey nomad included travel for prolonged periods of time, ranging from at least
227 months or longer. In the included papers participants were described as travelling with self-sufficient
228 accommodation such as caravans (74%), motorhomes (7%), camper trailers and campervans; 66%
229 had four wheel drive vehicles (Onyx & Leonard, 2007). Holloway (2009) described the caravan or
230 motorhome as an extension of the family home where grey nomads continued their everyday home
231 activities on a smaller scale. Cridland (2008) reported grey nomads travelling on average 126 days
232 (median 115 days); 14.8% travelled <60 days, 19% travelled for 61-89 days, <16% and 14.3%
233 travelled for between 131-179 days and >180 days, respectively. More than one third (36%) were
234 away from their usual place of residence for 90-130 days per trip. For participants of an online
235 survey (Halcomb et al., 2017) the average trip duration was 24.6 weeks; 19.9% had travelled for
236 more than 46 weeks in the preceding year, and 53.3% planned to travel 10 months or more,
237 including indefinitely.

238 According to Cridland (2008) over 42% of participants travelled to northern Australia during winter
239 to escape the cold; for many grey nomads this was described as a 'must do' (Hillman, 2013). Cridland
240 (2008) also said that 22% wanted to see Australia, its historical sites and landscapes; 10 % wanted
241 adventure and to get away, and others desired a sense of freedom. Patterson (2011) found that
242 many wanted to see more of Australia while young and healthy enough to enjoy travelling with
243 friends, exploring new places, and meeting new people. Onyx and Leonard (2005) found a consistent
244 pattern of motivation to travel for adventure: to discover places never seen before; to enjoy the
245 beauty and wonder of the scenery; to be independent; to have the freedom of time that is not duty-
246 bound; to have a less organised, more relaxed life, moving slowly, noticing, appreciating and
247 learning; heightening their senses and expanding their understanding and appreciation of the
248 country as a whole.

249 Taking a different approach, White and White (2004) discussed 'endings' as a motivation to travel:
250 changed family circumstances such as children leaving home, the death of a partner, anticipation of
251 the end of good health, and work changes. They focused on travel as a transitional experience
252 between one thing and another, and its effect on personal identity. Regardless of their motivation
253 and age, participants considered travel a rite of passage.

254 *Social Networks, Connection and Sense of Community*

255 One of the most positive aspects of travelling was the experience of meeting other people on the
256 road, some of whom remained lifelong friends (Onyx & Leonard, 2005). Grey nomads are part of a
257 larger age-related cohort of people who have retired from the workforce; social interaction amongst
258 them is pronounced because retirement has separated them from work-related interactions and
259 social connections (Holloway, 2009). New social networks developed with new-found friends who
260 were fellow travelers (Patterson, 2011). Alongside this, travel was also seen in terms of extension of
261 domesticity, with grey nomads continuing their everyday home activities on a smaller scale
262 (Holloway, 2009). Additionally, Halcomb et al. (2017) reported that most travelers used a mobile
263 phone, email or social media to maintain contact with family and friends at home.

264

265 **Question 2: Pre-travel health-related planning and preparation**

266 Travelers recounted a range of planning prior to departure in relation to their social and healthcare
267 needs. Tate et al. (2006) found that 9% carried health summaries from their GPs. Eleven years later
268 23.7% carried a list of medications, which for 44% was self-prepared, and for 42.7% came from a
269 doctor (Halcomb et al., 2017). This latter study focused on health needs for those with chronic
270 illness, their health preparedness and wellbeing whilst travelling and an offshoot study focused on
271 people with a diagnosis of cancer, reporting that they travelled regardless and because of their
272 diagnosis (Stephens et al., 2018). Calma et al. (2018)'s participants (all > 60 years and with at least
273 one chronic disease) described a high level of awareness of their health needs, limitations and health
274 management strategies with expertise developing through their travel experience.

275 Brayley and Obst (2010) explored how health status may impact road safety, such as deterioration in
276 visual acuity and slowing of cognitive processing as part of the aging process. They made the point
277 that grey nomads' experience of road travel can be considerably different to that generally
278 experienced by older drivers. Many grey nomads embark on extended road trips, driving and towing
279 heavy vehicles in rural and remote areas. They may have limited experience or training relevant to
280 the conditions in those areas, such as driving on dirt or narrow bitumen roads, safely negotiating
281 road trains, dealing with wildlife on the road, and strong cross winds while towing. There is also the
282 potential impact of fatigue due to driving long distances. The combination of unfamiliar
283 environmental hazards and stressors alongside health-related aging effects may result in additional
284 health and road safety risks and incidents with undesirable outcomes.

285 **Question 3: Grey nomads' experiences in relation to their health and healthcare provision**

286 Many of these participants had one or more age related or chronic illnesses. Tate et al. (2006) found
287 55% of travelers had chronic disease, and 61.9% took regular medication. Halcomb et al. (2017)
288 reported 40.2% of long-term travelers with hypertension, 22.8% with arthritis, 13% with diabetes,
289 and 17.1% with other health conditions. Of these, 11.1% had ceased work due to illness or disability,
290 and 42.7% reported that their illness affected their daily life. Almost one quarter (23.7%) required
291 ongoing prescription medication. However, the health of these grey nomads was not dissimilar to
292 that reported by this age group of the Australian community generally (Australian Bureau of
293 Statistics, 2013).

294 Onyx and Leonard (2007) considered the health of grey nomads in relation to the dominant decline
295 model of aging as opposed to what many participants wanted: adventure, freedom, learning and
296 positive aging. These authors proposed that grey nomads were illustrating a 'Ulyssean' model of
297 ageing which entails the exploration of new ideas, activities and learning as well as intellectual,
298 psychological and emotional growth. This theme was picked up by other authors (Cridland, 2008;
299 Hillman, 2013; Holloway, 2009), who reported grey nomads with similar expressions of improving
300 health and greater wellbeing when travelling. Participants reported their health improved as a
301 consequence of living the grey nomad lifestyle, which they explained as resulting from no
302 responsibility, therefore no stress and better health. Over 80% of grey nomads reported good to
303 excellent health (Onyx & Leonard, 2007).

304 A minority of participants experienced acute events. Obst et al. (2008) found that 5% had a medical
305 emergency while travelling, such as falls; three had resulted in broken arms and one in a damaged
306 knee. Another medical emergency in a remote area related to painful kidney stones, requiring a one-

307 hour trip to reach help. A further 14% had experienced a health scare including severe chest pains,
308 back injuries, deep vein thrombosis, severe arthritis, cervical cancer diagnosis, pneumonia, and
309 fainting. Onyx and Leonard (2007) reported that 32% of men and 21% of women had experienced a
310 major “health scare” in the previous two years, treated locally at regional hospitals or by GPs.

311 One study set in a very remote area of the Kimberley Ranges proposed that grey nomads could be an
312 impost on local healthcare services (Tate et al., 2006); this was the only study to recruit healthcare
313 professionals. Another author flagged this same point as an implication of study findings (Calma et
314 al., 2018). Despite studies reporting improvements in participants’ health as they lived a nomadic
315 lifestyle (Cridland, 2008; Hillman, 2013; Holloway, 2009), nonetheless, there were reports of health
316 service need and usage. Of online survey participants, 24% had sought medical attention to obtain a
317 prescription, 57% reported having prescriptions filled during their travel, and 8.9% had returned
318 home from their travels due to poor health (Halcomb et al., 2017). Calma et al. (2018) reported the
319 difficulties experienced by grey nomads in relation to accessing health services and medication and
320 achieving continuity of care while travelling. Conducting telephone interviews with eight and 14
321 participants with chronic disease and cancer, respectively, Calma et al. (2018) and Stephens et al.
322 (2018) reported how they became experts in managing their health whilst travelling.

323

324 **Discussion**

325 Onyx and Leonard (2005) referred to the emergence of grey nomads in Australia as a phenomenon:
326 a remarkable occurrence. Grey nomads became a topic of interest because of the ageing population
327 (Australian Bureau of Statistics, 2019) and the increasing number of retired people with the time and
328 resources to travel the country (Holloway, 2009). Australian grey nomads are a unique peripatetic
329 group, many motivated by the desire for travel, adventure and freedom and actively avoiding
330 structured activity. This contrasts North American “snowbirds” and “sunseekers” who travel to one
331 destination where there are in-park recreational facilities, where they stay for prolonged periods
332 (Halcomb et al., 2017; Onyx & Leonard, 2005; Prideaux & McClymont, 2006).

333 The grey nomad literature originates from a diverse range of academic fields: social sciences, media
334 studies, psychology, marketing tourism and business, and environmental science as well as health.
335 The reported perspectives on the grey nomad experience are consequently broad, including identity,
336 purpose, social capital, wellbeing and healthy aging as well as health and illness management,
337 translating and transcending daily living into a peripatetic lifestyle.

338 The studies included in this review fell primarily into two groups. Publications before 2011 were
339 mainly concerned with a broad description of travelling people. Whilst predominantly recruiting
340 relatively smaller samples, these early studies (Cridland, 2008; Holloway, 2009; Obst et al., 2008;
341 Onyx & Leonard, 2005, 2007; Prideaux & McClymont, 2006; Tate et al., 2006; White & White, 2004)
342 focused on identifying the travelling population. Although small scale, these were the first studies
343 from this population, which examined why grey nomads travelled. After 2011, health emerged as a
344 specific consideration, from health and illness as social characteristics as part of healthy ageing to a
345 more medical view of people living with chronic disease and how they manage this whilst travelling
346 (Calma et al., 2018; Halcomb et al., 2017; Stephens et al., 2018). Included studies were published in
347 health or ageing related journals. and were anticipated to inform the social trends of an ageing
348 population and early retirement (Onyx & Leonard, 2007).

349 A defining characteristic of these participant groups was that they were predominantly older, i.e. >
350 50 years. Other age groups were little described, and often excluded. Even the most recent large
351 survey, which focused on health (Halcomb et al., 2017) and did not apply age criteria, recruited only
352 15.1% aged <50 years. Whilst papers did not consistently report participants' demographic
353 characteristics, and recruitment criteria were not always clearly articulated, this population is clearly
354 predominantly older age. An important theme emerging from this literature is that of ageing as a
355 continuance of choice, activity and pursuit of interests. This contributes to the growing literature
356 that challenges the stereotype of older people as increasingly inactive, passive with necessarily
357 deteriorating health (Aronson, 2020). Participants also talked of making new and often enduring
358 friendships on the road. The social networks they established contrast the picture of loneliness and
359 isolation conventionally expected for this age group (von Soest, Luhmann, Hansen, & Gerstorf,
360 2020). The travelling population clearly described their lives as active and engaged, further
361 supporting Onyx and Leonard (2007) claim that they are "rewriting the script of aging", to continuing
362 personal growth and social engagement rather than retreat and decline.

363 Despite the increasing proportion of women in the older population (Australian Bureau of Statistics,
364 2019) relatively few women are evident in this literature. Of the 3,273 participants in the included
365 studies only 644 were identified as female (not all studies reported gender). Almost all women were
366 travelling in heterosexual relationships (Halcomb et al., 2017; Onyx & Leonard, 2005; Prideaux &
367 McClymont, 2006). In all 14 publications only two solo women were identified (Holloway, 2009;
368 Onyx & Leonard, 2005). However, social media platforms including Facebook™ indicate many
369 women are currently travelling Australia. At least eight Facebook™ closed groups are exclusively for
370 women travelling domestically in self-contained vehicles, sharing their experiences and destinations
371 with photographs and discussions.

372 **Health and Health Planning**

373 Ten of the 14 included publications reported on the travelers' health and their health planning. Most
374 studies identified the elements of planning as having health checks before trips, carrying letters from
375 their GP regarding their health status and needs, lists of current medications and a sufficient supply
376 of prescriptions, medication and the necessary storage requirements (Calma et al., 2018; Cridland,
377 2008; Hillman, 2013; Holloway, 2009; Tate et al., 2006). Some travelers planned their travel route to
378 be at specific destinations to access relevant healthcare or stayed at destinations close to healthcare
379 services (Cridland, 2008; Hillman, 2013; Stephens et al., 2018). Two studies whose participants were
380 chosen because they were either living with chronic conditions (Calma et al., 2018) or were cancer
381 survivors (Stephens et al., 2018) discussed in detail their planning and organisation for self-
382 management of their condition while travelling. This contrasted the relatively less prepared picture
383 presented by the broader population sample from Fitzroy Crossing some twelve years earlier (Tate
384 et al., 2006). Some had a plan for potential medical emergencies including communication devices
385 such as UHF or CB radios, and notifying local homesteads on the route of more risky adventures
386 (Halcomb et al., 2017; Hillman, 2013; Onyx & Leonard, 2005).

387 Most grey nomads have their care planned by healthcare professionals in metropolitan Australia
388 raising implications both for the education of urban health care providers on rural service availability
389 and for the integration of care delivery between metropolitan, regional, rural and remote areas.
390 Health care that is planned in metropolitan areas may not be available in non-metropolitan
391 locations. The care planned for travelers must be suitable for delivery at their various destinations,

392 for example availability of medications. The educational needs of both travelers and their health
393 care providers as it relates to care planning for prolonged domestic travel should be clarified.

394 Only one study included health practitioners' views, reporting that travelers should carry and make
395 available to clinicians information such as healthcare summaries, allergies, previous medical history
396 and lists of active problems and medications, radiology and pathology results, and hospital
397 admissions (Tate et al., 2006). These authors discuss grey nomads in terms of the burden they place
398 on remote health infrastructure but without quantifying what this might entail. Clearly, the capacity
399 of regional, rural and remote services to meet travelers' needs warrants review. Many but not all
400 participants prepared for their trips in relation to their health by addressing items of the healthcare
401 practitioners' wish list. A universal electronic medical record was suggested to address availability of
402 health information; this has yet to be fully achieved in Australia. Halcomb et al. (2017) and Calma et
403 al. (2018) refer to the introduction of the voluntary national electronic health record system "My
404 Health Record" but also acknowledge its limitations in terms of uptake, incomplete and potentially
405 out of date data. These authors also suggest telehealth and telephone help lines as ways to enhance
406 healthcare access for travelers. Earlier, in 2009, Holloway recommended better policy resourcing
407 and infrastructure to improve healthcare services in rural and remote Australia. It is not clear from
408 this literature what improvements have occurred beyond the introduction of My Health Record as
409 the limited health infrastructure in regional rural and remote Australia remains an issue (Australian
410 Institute of Health and Welfare, 2019) . Tate et al. (2006), Holloway (2009) and more recently Raven
411 (2016), Halcomb et al. (2017), Calma et al. (2018) and Stephens et al. (2018) all recognise and flag
412 the topic as a priority for policy review and further research.

413 **Health and Healthcare Experiences**

414 Some participants accessed healthcare services without difficulty (Calma et al., 2018; Hillman, 2013;
415 Obst et al., 2008; Onyx & Leonard, 2005). A few reported lack of shared medical information and
416 limited access to prescription medications at some pharmacies (Calma et al., 2018). Whilst most
417 reported improved health, a small number terminated their trip because of health problems
418 (Halcomb et al., 2017). The numbers of people who are visiting regional, rural and remote areas
419 makes it imperative to better understand these travelers, particularly those on the road for longer
420 periods and further from their home services. The implications of this travelling population for the
421 provision of health services, policy, health infrastructure, education and workforce planning in rural
422 and remote communities can only be surmised and research is urgently needed.

423

424 **Limitations**

425 The search strategy employed 'grey nomad', 'traveler' and related terms including their mode of
426 travel but may have missed literature if none of these specific words were used. The search was run
427 on five health-related databases and Google Scholar, but searching reference lists identified some
428 further studies including some published in travel and tourism journals not indexed in health
429 databases. These papers solely reported demographic characteristics of travelers but were excluded
430 as it was not possible to differentiate holidaymakers from longer-term travelers. Nonetheless it is
431 possible that material may have been missed from tourism related databases.

432

433 **Conclusion**

434 This review found only a small literature, of predominantly qualitative studies. Table 2 demonstrates
435 the mixed quality of reporting in which the trustworthiness of the work was seldom addressed. It
436 demonstrates how little is known about grey nomads, especially women travelers, the health and
437 other needs of this population

438 In summary, research about grey nomads in the early 2000s explored their characteristics and
439 experiences, including their health status and motivations to travel. Identified as primarily older and
440 almost exclusively heterosexual couples, their patterns of chronic illnesses were similar to the age-
441 matched general population, but their health was reported as improved by the less stressful
442 lifestyle. After 2011 fewer studies were published and the emphasis changed from the broader
443 experience of grey nomads' lifestyle to travelers managing chronic illness. The older person
444 demographic, i.e., those over 50 years, remained predominant. No state or national statistics are
445 available for grey nomad populations.

446 Where this was raised, a few studies reported participants' minimal use of healthcare services while
447 travelling. Whilst the sole study to recruit healthcare practitioners, at a single remote site, argued
448 that grey nomads adversely impacted local healthcare services, no detail was provided. This gap
449 poses a substantial challenge for health policy and service development, and health resource
450 allocation to non-metropolitan Australia. The significant numbers of people visiting regional, rural
451 and remote areas make it imperative to better understand these travelers, particularly those on the
452 road for longer periods and further from their home services. The implications for policy and
453 strategy, for infrastructure and workforce planning, education and training for healthcare services in
454 rural and remote communities can only be surmised although the need for better policy and
455 infrastructure to improve the provision of healthcare services has been argued. Discussion has been
456 ongoing for many years, particularly in the community, about the limited health infrastructure in
457 regional, rural and remote Australia (Australian Institute of Health and Welfare, 2019). The
458 information deficits revealed by the paucity of material available for inclusion in this review only
459 serve to highlight this issue further and research is desperately needed.

460

461 **Conflict of interest**

462 The authors declare no conflict of interest

463

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466

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469

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536

Figure 1: Flow diagram of literature searching and screening

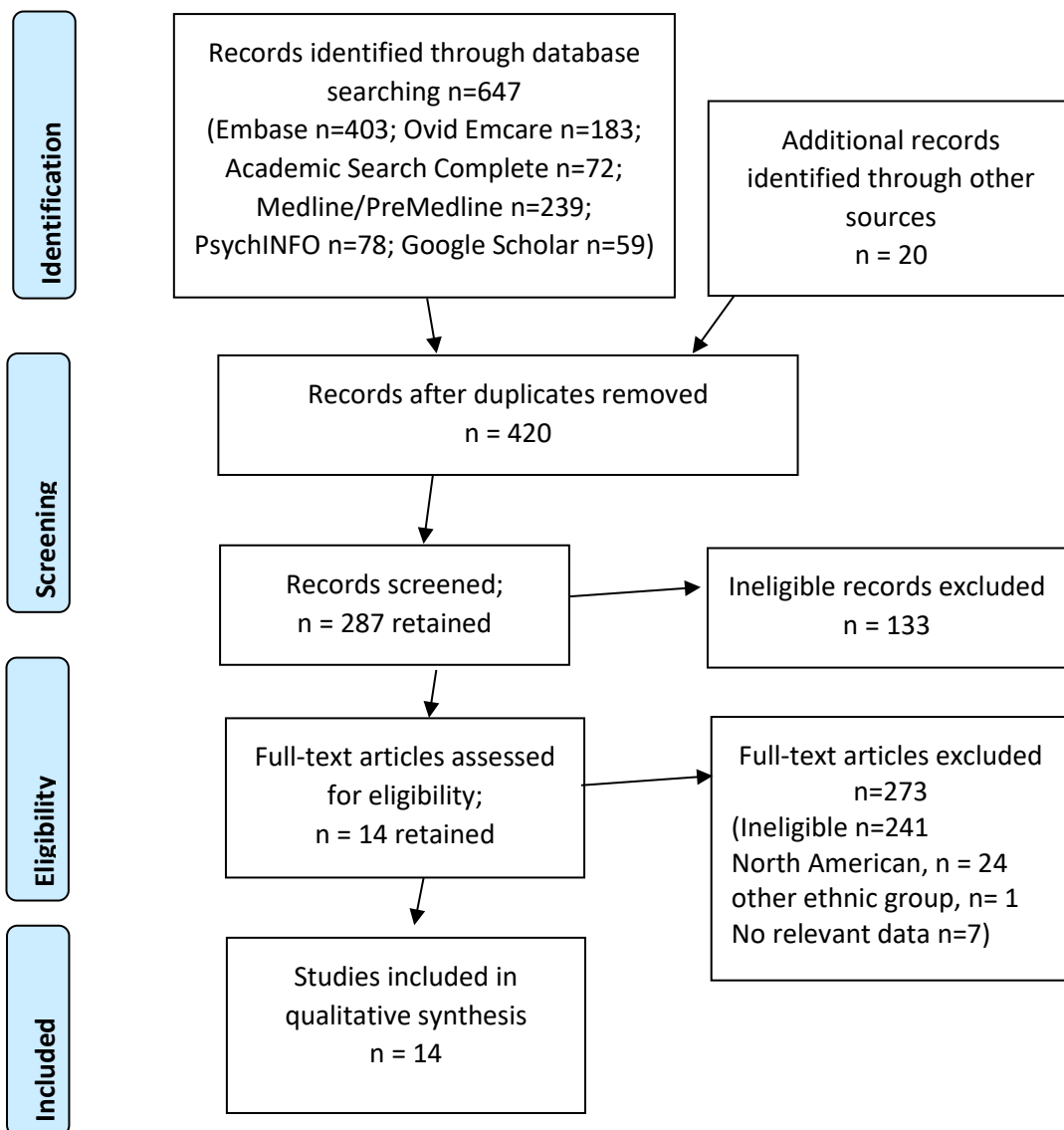


Table 1 Search Strategy Example for Ovid PsychINFO

Search Number	Search Terms
1	Grey nomad*.mp
2	(Motorhome* or camper*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
3	(Snowbird* or Sunseeker*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
4	((Health or ill) and health).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
5	Exp Chronic illness/ or chronic disease*.mp.
6	Long term condition*.mp.
7	Drug therapy*.mp.
8	1 or 2 or 3
9	4 or 5 or 6 or 7
10	8 and 9

Table 2 Critical Appraisal of Included Publications Using CASP Tool

	1 Aims	2 Appropriate Methodology	3 Design Appropriate to Aims	4 Appropriate Recruitment Strategy	5 Data Collection	6 Researcher Participant Relationship	7 Ethical Issues	8 Data Analysis	9 Findings	10 Research Value	Survey Tool Validity and Reliability
1 White & White 2004	Yes	Yes	Yes	Yes	Yes	Can't tell	Can't tell	Yes	Yes	Adequate	N/A
2 Onyx & Leonard 2005	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Adequate	N/A
3 Prideaux & McClymont 2006	Yes	Yes	Yes	Yes	Yes	Can't tell	Can't tell	Yes	Yes	Adequate	N/A
4 Tate et al. 2006	No	Yes	Can't tell	Yes	Yes	Can't tell	Can't tell	Yes	Can't tell	Adequate	N/A
5 Onyx & Leonard 2007	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Adequate	N/A
6 Cridland 2008	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Adequate	N/A
7 Obst, Brayley & King 2008	Yes	Yes	Yes	Yes	Yes	Can't tell	Can't tell	Can't tell	Yes	Adequate	Can't tell
8 Holloway 2009	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Adequate	N/A
9 Braley & Obst 2010	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Adequate	N/A

10 Patterson 2011	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Can't tell	Yes	Yes	Adequate	N/A
11 Hillman 2013	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Adequate	N/A
12 Halcomb et al 2017	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Adequate	Can't tell
13 Calma et al.2018	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Adequate	N/A
14 Stephens 2018	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Yes	Adequate	N/A

Table 3 Included Publications

Reference	Aim	Type of study	Setting/ Recruitment Location	Sample/Method Description	Source of Findings
1 White & White 2004	Examine how mid-life and older long-term travelers describe their motivations for travelling and their experiences in outback Australia and if their stories evidence long-term travel as transition between endings and new beginnings.	Ethnography	The observational sites included caravan parks, camping areas or campgrounds in national parks and roadside stops in the central, northern, and western Outback areas of Australia over a period of 3 months	Participant observation, conversations and semi-structured interviews with 45 long-term travelers.	The data were analyzed thematically. The themes were guided by the conceptualization of the study and issues emerging from the data. The transcripts and notes were read twice, recurring points of view noted, and exemplars of repeating themes cited.
2 Onyx & Leonard 2005	Identify the motivational patterns of Australian grey nomads, the similarities and differences with North American Snowbirds	Ethnographic account using in-depth taped semi-structured interviews in order for respondents to tell their own story.	The first researcher travelled 16,000kms in a motorhome over 2.5month, stopping at camping sites, free rest areas, commercial caravan parks, National Parks, including some known and targeted sites in Western Australia, Northern Territory, and Queensland.	Convenient sampling using a brief survey to identify basic demographics, an ethnographic survey, with 1 questionnaire per travelling vehicle and tape-recorded in-depth interviews of 215 men and 203 women.	The questionnaire was used to identify basic demographics, place of origin, number of weeks travelled and planned and the type of vehicle used. The narrative interview asked about what motivated people to become grey nomads.

3 Prideaux & McClymont 2006	Investigate the demographic characteristics of caravanners	Paper based snapshot survey.	Managers of 2 caravan parks in Goondiwindi distributed surveys over 3-month period.	1 Person per travel party > 16 years was approached. 200 Questionnaires were distributed 161 returned, 12 incomplete 74.5% response rate	Survey instrument developed and pilot tested no information provided
4 Tate et al. 2006	Investigation of the health burden of travellers on limited health care services in remote Australia	Survey conducted by face to face interview and by telephone	Fitzroy Crossing River Lodge Caravan Park in the Kimberley District of Western Australia. All doctors and nurse in the Kimberley providing primary health care.	Two groups: 1. Travellers in the caravan park were recruited face to face between 2.30pm and 5.30pm over 5 days. n260 travellers. 2. Local doctors and nurses (HCP) in the Kimberley recruited by phone; 40 Doctors and 24 nurses.	Traveller survey items included current medical illnesses, frequency of use of medical services, written health information. HCP survey items included the importance of different components of written health information about the travellers.
5 Onyx & Leonard 2007	To explore the experience of grey nomads (minimum age 50 years) in relation to the literature on aging in particular the dominant decline model of aging	Ethnographic account using in-depth taped semi-structured interviews in order for respondents to tell their own story.	The first researcher travelled 16,000kms in a motorhome over 2.5month, stopping at camping sites, free rest areas, commercial caravan parks, National Parks, including some known and targeted sites in Western Australia, Northern Territory, and Queensland.	216 Questionnaires; interviews of 23 couples, 2 single informants and 1 group totalling "some 400 travellers".	The questionnaire was used to identify basic demographics, place of origin, number of weeks travelled and planned and the type of vehicle use. The narrative interview about health status and episodes of health scares over the previous 2 years, difficulties encountered while travelling,

					travellers' networks, access to information and resources.
6 Cridland 2008	Examine the internal temporary mobility patterns of seasonal movers to Northern Australia during the winter months	Surveys and face to face interviews	Caravan parks and camping sites at coastal and inland destinations in Tropical Australia (above the Tropic of Capricorn)	Grey Nomads visiting or residing above the tropic of Capricorn. Questionnaire distributed; structured and semi-structured audio recorded face-to-face in-depth interviews with individuals Convenience sample	Quantitative and supportive qualitative data regarding the socio-economic/ demographic status and movement patterns of grey nomads visiting different types of destinations across northern Australia
7 Obst, Brayley & King 2008	To detail distances, trip duration and places visited by grey nomads; the health and road safety risks and current knowledge and management of those risks. Identification of and access to road safety information	Survey	Participants were recruited at the Queensland Caravanning and Camping Show in Brisbane June 2008	Show visitors randomly approached, who had taken a long-term road trip in the last 2 years. Invited to participate by filling out the survey and returning it to the boxes provided or by reply paid envelope. n136 participants were over 50 years of age and had undertaken a long- term road trip in the last two years; 93 males, 43 females.	The survey asked for demographic information, details of trips undertaken in the last 2 years, the occurrence of road or safety incidents, and other issues related to road safety
8 Holloway 2009	To develop insights and arrive at	Ethnography using interviews	Caravan parks, camping areas in national parks, tourism sites,	Convenient sampling of 40 young 55-65years,	Reponses to ethnographic interviews

	provisional conclusions about how grey nomads gain meaning and pleasure from their travelling lifestyle choice.		roadside rest areas in northern and mid- west Western Australia, Uluru and the Nullabor	intermediate 65-70 years and older > 70 years self-drive retirees travelling with their own caravan, campervan, mobile homes and/or tents.	
9 Braley & Obst 2010	Explore what travellers understood as their sense of social identity the level of community they experienced	Survey conducted face to face and electronic	Surveys distributed at recreational vehicle events and rallies and caravan parks in 6 States. Electronic survey to membership of camping and caravan clubs.	Convenience sampling of (a) recreational road travellers 50years – 80+ years in 6 States (b) Camping and caravan club members	Survey developed for the study including the Three Factor Model of Social Identity and Sense of Community Index
10 Patterson 2011	Investigate grey nomads' engagement with friends and family while "on the road".	Ethnography and a narrative research technique was also used	Data collected from four couples on an extended, multi-destination holiday in the Northern Territory and Western Australia over a 7-week period.	The sample consisted of four female and four male partners, all over 50 years of age, retired or semi-retired.	Narratives were used to illustrate themes about the everyday experiences of grey nomads on tour. Travel diaries and photos and a questionnaire returned by email were all submitted at the end of the trip and thematic analysis was applied.
11 Hillman 2013	Investigate how grey nomads in Australia perceive their health and	Qualitative interview study using grounded theory technique as an	In a caravan park in a Central Queensland coastal over a 2-month period	20 Participants were interviewed comprised of nine couples and two individuals all over the age of 56 years	18 Questions included standard demographic questions, travelling times and duration, mode of transport, travelling

	social needs and activities when these were limited or maximised by their travel plans and aspirations	inductive interpretive approach.		Open ended semi-structured in-depth face to face interviews accessed using “snowballing”.	companions and accommodation; health concerns, community engagement and social activities.
12 Halcomb et al 2017	Explore the health needs and health planning of Australian long-term travellers and their current planning strategies for health and health care	Online survey	Recruited online using Facebook, Twitter, blogs, forums and web newsletters, social media Sept 2015-Feb 2016	N316 survey respondents had been travelling continuously for 3 months or more or had done so in the last 12 months	Survey items included demographics, travel, health conditions, planning and needs; QOL-BREF (an internationally validated tool)
13 Calma et al.2018	Explore the experiences of grey nomads travelling with chronic conditions i.e. older people with chronic diseases, travelling across Australia and the challenges in accessing health care services	A qualitative descriptive phase of a larger mixed method study which used telephone interviews of participants.	Online survey through social media and caravanning forums. Subsequent telephone survey.	The participants were individuals recruited from social media sites and caravanning forums who had travelled around Australia for more than 3 months for the last year. Of those consented to participate, people aged over 60 years, living with at least one chronic condition. Potential participants were contacted randomly until data saturation was achieved i.e.	Questions focused on health needs as they relate to chronic illness, health preparedness and wellbeing whilst travel ling.

				emergent themes recurred and no new patterns were evidenced.	
14 Stephens 2018	Explore the experiences, health needs and strategies of grey nomads living with a diagnosis of cancer	Prospective qualitative phase of a larger, sequential, explanatory, mixed-methods project using semi-structured interviews by telephone	Respondents of an online survey recruited through social media and caravanning forums who agreed to a subsequent telephone survey. Geographical location was not identified	Of the survey respondents who volunteered to be interviewed purposive sampling of 14 people who self-identified with a diagnosis of cancer.	Semi-structured, in-depth interviews were conducted over six months in 2016, and analysed using thematic analysis.

Table 4 Findings from Included Publications

Reference	Travellers' age data	Travellers' other demographic data	Travellers' duration of travel	Health planning for the trip	Health Issues and Concerns	Implications for Healthcare Services
1 White & White 2004	45 interviewees in 3 major categories of mid-life and older people: parents with children, people approaching retirement, retirees. No data supplied	Not reported	'Some three months into their journey, others six months, others had been traveling for a year or longer	Not reported	Not reported	Not reported
2 Onyx & Leonard 2005	Males 64.5 (SD 6.3), females 61.3 (6.1) years	215 Men 203 women 93% travelled in couples 7%, including 1 female, travelled alone; 34% from major urban centre; 33% regional centre; 33% rural centre; 74% travelled with caravans; 7% motorhomes; others: campervan, reconditioned bus, car with trailer; 66% 4WD, 44% Vehicle less than five years old;	All > 3 months; 15% >1 year. The researchers themselves travelled for 2.5 months	Almost all respondents had a pre-prepared response for emergency which included a communication device such as a CB or UHF radio and could access the trucker's channel for help; Some made special arrangements e.g informing local homesteads of their riskier adventures. Most understood and accepted the risk	1.4% Male 1.5% female reported health poor; 14% Male 9.4% female fair; 47.9% male 45.8% female good; 36.7% male 43.3% female excellent; 32% Male 21% female had experienced a health scare in the previous two years. 18 of 26 Groups reported a major health issue. e.g heart attacks, aneurism, angina, cancer, limb amputation, spinal injury, diabetes and arthritis. Serious health	4 of 216 experienced a medical emergency, e.g. requiring helicopter evacuation, removal of gall bladder at a hospital in a town close by.

		83% Anglo-Saxon; 12% UK born; 3% Northern European		associated with health and travel All were aware of mutual support with other grey nomads by giving and receiving assistance with each other at some point.	issue often the trigger to travel.	
3 Prideaux & McClymont 2006	89% were aged 45 to 74-years; 4.8% younger (3.4% aged 35 to 44 years, 1.4% aged 18 to 24 years) and 6.1% older, at 75+ years.	92 Males, 56 females 87.9% middle age to retirement aged 45-74 years 3.4% 35-44 years 6.1% 75+ years 1.4% (2 respondents) 18-34 years 72.3% retirees 7.4% professionals 15.6% various other occupations	Median trip length 54 days. Average length of stay exceeded 10 weeks Mean 71.4 days SD 80.4 49% between one and three months 19.3% two – four weeks 17.2% three – six months	Not reported	Not reported	Not reported
4 Tate et al. 2006	Median age 61.3 years	18.5% Western Australia usual place of residence 76.9% Another State in Australia 4.6% From outside Australia	Median length of planned trip 14 weeks	57% Had sufficient medication for their entire trip 19% Had a list of medications 9% Of those with chronic illness had a health summary from their GP	55% Reported chronic disease of which: 9.6% Heart disease 6.5% Diabetes Mellitus 26.2% Hypertension 6.1% Lung disease 21.1% Dyslipidaemia 4.8% Mental illness 16.7% Other	Healthcare practitioners considered the following as important: 95% Healthcare summary 47% Pathology results 91% Active problem list 92% Allergies 87% Past medical history 31% Previous hospital admissions 100% Medication list 69% Usual GP 22% Radiology results

						30% Usual specialists
5 Onyx & Leonard 2007	As above	As above	As above	As above	As above	As above
6 Cridland 2008	Mean age of males 65.4 years and females 64.2 years; median age per vehicle 64 years.	95% traveling as heterosexual couples; <2% same sex couples; 3% singles	12 months or less	N=63 18% plan to be at specific destinations to access medical facilities, for prescriptions, GP or specialist blood tests	Grey nomad lifestyle improved their quality of life and health; males more ailments than females; females higher incidence of osteoporosis and depression; n=21 5% no medical condition reported; n=652 75% two or more conditions; n=136 16% more than 3 conditions; n=207 25% one condition requiring ongoing medication and treatment	Not reported
7 Obst, Brayley & King 2008	23% <55 years, 50% 56-65 years, 19% 66-70 years, 8% >70 years	93 Males and 43 females over 50 years. 80% were born in Australia, 7% were born in the United Kingdom, 5% born in New Zealand and the remainder from countries including Zimbabwe, Holland, Germany and the USA. 38% held junior certificates, 20% senior certificates, 15% trade	Trip duration range: 1-104 weeks with a median of 4 weeks. Kilometres travelled range: 600-40,000. 36% travelled in Autumn 28% in winter, 18% in spring and 18% in summer.	Not reported	6% experienced a road crash with no injuries reported. 5% experienced a medical emergency including minor falls, 3 resulted in two broken bones 1 injured knee; one participant painful kidney stones. 14% experienced other health scares such as chest pain, back injuries, deep vein	The health issues were treated at local regional hospitals or local general practitioners.

		certificates, 27% a tertiary degree			thrombosis, sever arthritis, pneumonia, cervical cancer diagnosis and fainting fits.	
8 Holloway 2009	3 categories: 'young', 55-65years; 'intermediate' 65-70 years; 'older', 70+ years	18 Heterosexual couples, 3 single males and 1 single female.	Not reported	Health checks pre-travel, plan destinations in accordance to treatments and self-protective behaviours; accessibility of medications including Authority medications; the reluctance of some doctors to prescribe to a stranger, thus limiting ability to self-care and diminishes autonomy; travel fewer kilometres and fewer destinations as health and strength decline;	General health and well being improves; more meaningful lifestyle; stiff arthritic joints, cancer, major heart problems, physical losses associated with aging	Better policy resourcing and infrastructure to improve provision of health care services in rural and remote Australia is needed
9 Braley & Obst 2010	N=631 50years - >80years	N= 440 Males 139 females 52 not reported 73.4% from Queensland Most were couples	Not reported	Not reported	Not reported	Not reported
10 Patterson 2011	4 heterosexual couples > 50 years	Couple A and B were retired from private business; couple C retired foundry manager and laboratory technician; Couple D retired accountant and homemaker	Seven weeks	What medications to take for medical care and emergencies; access to medical care while on the road were outlined in Table 3 – Predeparture Decisions, however no findings	Not reported	The study results suggest that important social connections with family and newfound friendships were strengthened. Evening "happy hours" were considered important for socializing

				were reported		and as a means of obtaining information about where to travel next, and what to see and do. Participants remained reliant on family support to stay away for an extended period. Family members looked after pets, home/garden, and personal finances
11 Hillman 2013	Nine couples 2 individuals >56 years	All retired, identified as “grey nomads” and came from somewhere other than Queensland	All respondents > three months. 15% > one year. 20 % two years or indefinitely. For most respondents it was the second or third trip of that kind.	Most had contingency plans for unforeseen medical emergencies. Bi-annual check-ups and the agreement of GPs before travelling in-between check-ups. Carrying a list of medications, letters from GPs outlining medical history and other relevant information. Some travelled with enough prescription medication for the trip duration. Staying at destinations close to a hospital	Many responded that their health was a concern. Travel regardless of deteriorating health; travel as a potential last life experience Less-stressful lifestyle lead to health improvement, one respondent remarked “that stress is 90% of the illness”.	One couple visited a GP close to their travel destination and were on file at the practice. Nothing else reported
12 Halcomb et al 2017	Mean age 60.2 (sd 10.9) years, 62.3% retired, 52.8%	n=149 Males n=167 females 62.3% retired; 28.2% received aged	19.9% travelled >46 weeks in preceding year	n=206 65.2% of respondents and n= 179 74% travel	37.3% of respondents BMI >30; 5.7% and 3.7% of companions, smokers;	Not reported

	female, 76% reported a travelling companion	pension, 11.4% a disability pension; 7.3% were on paid leave from their employment. Main accommodation 67.1% caravan, 15.5% a motorhome		companions health check with GP before travel; n=102 32.3% travelled with information prepared by GP; n=72 22.8% visited an ED; n=63 19.9% visited another health provider	49.7% and 50.2% of companions consumed 1-3 standard drinks per day; 27.2% and 34.8% consumed alcohol 6-7 days per week; 40.2% hypertension, 22.8% arthritis, 17.1% other health conditions, 13.0% diabetes. 11.1% ceased work because of illness or disability; 42.7% reported long term illness affecting their everyday life. 8.9% returned from travels because of poor health	
13 Calma et al.2018	Selection criteria >60 years; n=8, 62-69 years	Selection criteria \geq 1 chronic illness; all had 2-5 diagnoses n=4 female, n=4 male	All >3 months in last year	Travel experience improved self-awareness about limitations and boundaries; several travelling with information from GP about their condition	Challenges of, eg insulin storage when travelling; developed self-management skills in recognition of exacerbations and deterioration and acting accordingly; use of health app to measure BP and heart rate; positive impact travel has on health	Some participants had difficulty accessing health services in rural and remote areas; inability to get into a GP meant attendance at ED; lack of shared medical information; limited pharmaceutical stock in some pharmacies

14 Stephens 2018	Not reported	14 Self-identified grey nomads with diagnosis of cancer	4 months – 15 years	Integration into travel of organisation and management of cancer treatment and follow- up; travel routes taken in accordance with health needs, supplies and services; took medication and cancer treatment histories.	Ongoing oral chemotherapy, acquisition and storage	Not reported
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