

ISSUES OF SENIOR MEDICAL TOURISTS

Dr Ranbir Singh
Institute of Hotel & Tourism Management
M.D.University Rohtak Haryana India

ABSTRACTS

Senior tourists represent a substantial portion in medical tourism and need special care because of higher risk from travel related diseases. Present study finds that tourism industry has already started to make changes in its service provisions for this section of tourists. Pre-traveling consultancy with family doctors, required document preparations, medical traveling kit, carefulness in selection of traveling clothes, food and water quality, availability of seat at proper place in plane, variation of insulin need in diabetics during traveling are some of major concern areas where Medical Tourism Facilitators (MTFs) can play desired role by providing customized services. Proper vaccination based on the nature of destination selected at properties can definitely reduce suffering and enhance the satisfaction level of patients. The contemporary rules and regulations related to medications, use of drugs and treatment procedures need to be communicated properly to patients before departure.

Keywords: Senior, Medical, Tourist, Issues, Problems, MTFs, Role, Guidelines.

Introduction

Perceived subjective age is always younger than chronologic age, more than half of seniors feel 16 to 17 years younger than actual (Cleaver M, Muller TE, 2002). The subjective feeling equipped with higher purchasing power is pushing growth of senior tourism. In Thailand, Lonely Planet has become a chartroom of 'older Travelers more than 55 years age with a percentage of more than 15 (Prystay C., 2004) International tourism consists of 15 to 30% share from the tourists aged more than 60 (Hill DR, 2000; Scoville SL, Bryan JP, Tribble D, et al., 1996 and Armand L.2006) and with passage of time percentage is increasing. Even Volunteer Tourism consists of more than 6 percent travelers aged more than 50 years (Schlesinger R., 2006). Because of seniors increased difficulty in adjusting to different climate, humidity, temperature and their reduced responses to vaccines against hepatitis A, B and rabbis (Leder K, Weller PF, Wilson ME., 2001) and influenza (Monto AS, Ansaldi F, Aspinnall R, et al.,2009), they need more careful planning. But most of these travelers perceive that small infections may not cause them seriously and they have enough immunity. As a result this section of tourists were found with higher level of vulnerability in travel related diseases than any other category of international tourists (Behrens RH, Collins M, Botto B, et al.,1995; Leder K, Tong S, Weld L, et al.,2006; Lynch M, Bulens S, Polyak C, et al.2005; Scolari C, Tedoldi S, Casalini C, et al.,2002; Skarbinski J, James EM, Causer LM, et al.,2006; Steinberg EB, Bishop R, Haber P, et al.,2004). Majority of these tourists are found not covered by any health insurance because of high premium as it is proportionate to claims, costly medical evacuation and death in other countries (Sand M, Bollenbach M, Sand D, et al., 2008 and Redman CA, MacLennan A, Walker E., 2011). Tourism industry has started to respond for this section. Emergence of ski clubs for age group of "50 years and above" and special ski boards with control unit are the evidences (Ryst S., 2004). Airlines by providing better sign, spacious well lit bath rooms and easier latches are making all necessary arrangements to feel them comfortable (Pinto B., 2005). More prone to infections, requirement of more personalized travel and health care services and more disposable income makes the section attractive for travel trade. Numerous studies (Hong et al., 1999; Jang and Ham, 2009; Norman et al., 2001; Lindqvist and Björk, 2000; Fleischer and Pizam, 2002; Nyaupane et al., 2008; Ananth et al., 1992; Lieux et al., 1994; Sund and Boksberger, 2007; Javalgi et al., 1992; Romsa and Blenman, 1989; Möller et al., 2007; Shoemaker, 2000; You and O'Leary, 2000; Boksberger and Laesser, 2009; Cleaver, 2004; Hsu and Lee, 2002; Shoemaker, 1989) have been conducted to analyze their demographic and psychographic profiles, but the studies related to their requirement for travel related illness are very few. This study with aim to identify their health related problem while traveling is based

on secondary data collected from the studies conducted in tourism, medical science and other relevant disciplines. The article in its first section discusses the problems and second part consists recommendations for travel service providers and overseas patients.

Problems in Overseas Traveling and Senior Medical Tourists

Seniors even if living with transplanted organ, regular dose of immunosuppressive drugs and cancer survivors are interested to fulfill their dreams of traveling. Immunosenescence, reduced effect because of age is found very commonly in these people (Grimprel E, Von Sonnenburg F, Sanger R, et al., 2005; Kaml M, Weiskirchner I, Keller M, et al., 2006; Seccombe LM, Peters MJ., 2006). Apart that, a senior tourist faces numerous physiological problems arising because of age. No doubt, airlines maintain air pressure equivalent to an average of about 8000 feet above sea level but for seniors with oxygen prescriptions, the contemporary practices of related services does not indicate sufficiency (Seccombe LM, Peters MJ.2006). Existences of medical emergencies, in case of patients of cardiac respiratory problems have witnesses this problem (Chan SB, Hogan TM, Silva JC., 2002; Delaune EF III, Lucas RH, Illig P., 2003). Sufferings like truncated sleep arising from traveling across more than five time zones creates sleep deprivation (Monk TH, Buysse DJ, Carrier J, et al., 2000; Monk TH., 2005; Monk TH, Buysse DJ, Reynolds CF III, et al., 1995 and Monk TH, Buysse DJ, Reynolds CF III, et al., 1993) which takes more time for recovery in case of seniors (Brendel DH, Reynolds CF III, Jennings JR, et al., 1990). "Jet-lag" symptoms are also found with more impacts in these tourists. The study conducted by (Cox ID, Blight A, Lyons JP., 1999) found the seniors with more stress resulted from take off and landing, flight delays and in area mentioned for baggage reclaim. A few thousands such cases have been recorded in airline industry (DeHart RL., 2003). The elderly travelers at early dementia stage were more prone to delirium onboard because of zolpidem (sleep aids), dehydration and drinking alcoholic beverages (Low JA, Chan DKY, 2002). Increase in insulin requirement while traveling to west and decrease in eastward traveling in crossing of five or more time zones also makes problems for diabetics (Burnett JC., 2006). The sudden discomfort in abdominal because of Bacteria presence in food especially in case of developing countries has been noticed. Vomiting because of toxic gastroenteritis was another problem found commonly among senior tourists. Cooper MC. (2006) stated that reduction in fresh vegetables, fruits and fluid consumption contributes constipations. Gastrointestinal problems were found among international tourists because of change in nature, quantity of food and level of immunity (Brewster SJ, Taylor DN., 2004). Travelers with diabetic history and gastric surgery were found at highest level of risk associated

to infection. Gordon ME., (1991), Cooper MC. (2006). Tetanus and diphtheria are also fatal risks for seniors while traveling overseas. According to (Hill DR., 2000) incomplete immunity may be the reason. But it is important to record that routine immunization for those whose birth was before 1957 (van Treeck U, 2006; US Department of State. 2006) Immunization to mumps is a requirement in international travelers (MMWR Morb Mortal Wkly Rep 2006)

Figure 1. Immunizations to consider

- ✓ Influenza
- ✓ Diphtheria
- ✓ Tetanus
- ✓ Measles-mumps-rubella
- ✓ Pneumococcal pneumonia
- ✓ Varicella
- ✓ Hepatitis A
- ✓ Hepatitis B
- ✓ Polio
- ✓ Rabies
- ✓ Typhoid

Apart these vaccinations, practices at destination itself can pose problem for travelers because till date many regions of world use non-sterilized or unsafe injection practices (Hutin YL, Hauri YM, Husson B, Armstrong GL., 2003) which can be followed by acute injury. Injections associated with transfusion should be dealt with more careful. The result of Hill DR., (2000) indicates that 8% of travelers were in requirement of medical assistance and out of which 17% received injections. Use of injections should be according to standard practices. Apart that proper vaccination according to destination visited should be administrated. Arrest records collected from various countries shows that adult male travelers patronize the 'commercial sex workers' in most of the cases (Bacaner N, Stauffer B, Boulware DR, et al., 2004). No doubt eradication of Polio has reduced the risk but vaccinations for the same are also recommended. Rabies vaccination should be considered pre-travel requisite in those cases where occupational exposure exists. Steinberg EB, Bishop R, Haber P, et al., (2004) found little number of

typhoid cases in USA which were related to overseas traveling but the typhoid vaccine is recommended for senior travelers visiting to the countries where the disease was endemic (Steinberg EB, Bishop R, Haber P, et. al.2004). Yellow fever virus can be endemic at some destinations and proper attention is also needed for it.

Role of Medical Tourism Facilitators

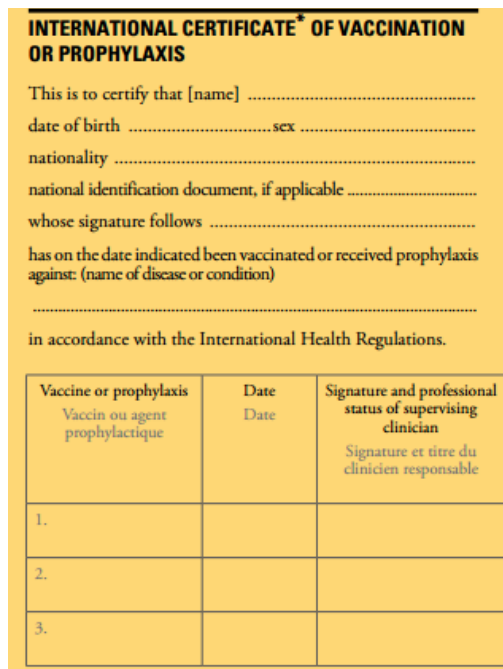
A) Before Patients' Departures

MTFs essentially as part of their services have to provide and arrange for the travel itinerary, mode, medical history, allergies records and others before patients traveling. Senior medical tourists because of difference in their psychological and physiological changes, immunity and their higher probability in proneness to infections, need effective co-ordination and collaboration of MTFs for alternations or even detraction of traveling. At very first phase of interaction, MTFs should ensure that the patients should carry letter from his/her attending doctor (of native place) explaining medical conditions, prescribed medicines with generic names, recent reports like electrocardiogram (EKG), prescriptions and specific medication name (if any) required during traveling. To avoid counterfeit of required medicines, patients should buy medicines at origin places (Chen LH, Wilson ME, Schlagenhauf P., 2006). Lumber T, Strainic PA.,(2005) study recommends international diabetic travelers to carry double the amount of required insulin, strips, syringes, insulin pen, alcohol strips. MTFs have duty to guide patients to carry medications in original containers in "items hand checked" and not in "checked luggage". If possible, removing shoes for security check in case of diabetic patients can be avoided but subject to availability of alternate procedure. Need of extra time for those patients should be consideration of MTFs. In order to maintain required anamnesis response level, older tourists may need re-boosting of vaccine like HAV (Inflammation of the liver caused by the hepatitis A virus) and diphtheria, before traveling. MTFs should encourage patients to consult their physician 5 to 6 weeks before departure. Leder K, Weller PF, Wilson ME., (2001), Grimprel E, Von Sonnenburg F, Sanger R, et al., (2005) and Genton B, D'Acremont V, Furrer HJ, et al., (2006) advised that the patients should take antimaleurial agents as prescribed by doctor before traveling to malarias regions. Patients traveling to the tropics should use sunscreen on their exposed skin (US Department of Health and Human Services, 2007; Gordon ME., 1991; Schlagenhauf P, Beallor C, Kain KC. Malaria, 2004 and Wallace MR, Sharp TW, Smoak B, et al. 1996). MilenoMD,Bia FJ.(1998) advise to diabetic travelers to report immediately, the symptom of infection in urinary tract or

wounds of soft tissues if exists. All senior medical tourists should be advised to wear loose fitting clothes for their comfort in arm and leg stretching during traveling.

B) During travelling

International certificate of vaccinations and prophylaxis (ICV & P) as shown in Fig



INTERNATIONAL CERTIFICATE* OF VACCINATION OR PROPHYLAXIS

This is to certify that [name]
 date of birth sex
 nationality
 national identification document, if applicable
 whose signature follows

has on the date indicated been vaccinated or received prophylaxis against: (name of disease or condition)

in accordance with the International Health Regulations.

Vaccine or prophylaxis Vaccin ou agent prophylactique	Date Date	Signature and professional status of supervising clinician Signature et titre du clinicien responsable
1.		
2.		
3.		

Figure No.2 (Source: www.who.int/ihr/ports_airports/icvp_note/en/)

No. 2 needs to be submitted at the time of arrival in destination country. In case of any exemption required in vaccination, filled and verified by authorized doctor is to be submitted. Issuance of waiver certificate does not guarantee the entry to destination country rather it is subject to rules and regulations of concern government. Senior medical tourists with poor hearing and eyesight feel under stress when face' self service counters (like Kiosks) and fleshes on monitors and screens about changing information about gates particularly in noisy and crowded environment of airports (Low JA, Chan DKY, 2002). Prevalent motion sickness among these travelers can be minimized by arranging their flights at nights. Their seats may be away from engine and best place is over the wings for getting the benefit of gravity center (Aerospace Medical Association Medical Guidelines Task Force, 2003; Chan SB, Hogan TM, Silva JC, 2002; Delaune EF III, Lucas RH, Illig P., 2003). During day flights their seats are recommended near window for reduction in vestibular stimulation (Goodwin T., 2000; Dowdall N., 2000; Low JA, Chan

DKY, 2002). Use of medicine antihistamines for motion sickness should be taken as per schedule advised by doctor because variation in dose can create problem of urinary retention for older patients (Low JA, Chan DKY, 2002). Senior tourists are also advised to eat food which is served piping hot and drink bottled and sealed water. Water, boiled or treated with chemicals, has been recommended for these travelers. In absence of water or soaps, gel containing more than 60% alcohol is advised for hand wash before eating (Sattar SA, Abebe M, Bueti AJ, et al.,2000; Morton JL, Schultz AA,2004). MTFs are suggested to aware the tourists that prevention of initial bites of mosquitoes is important in prevention of vector borne diseases. Vectors can be avoided by using repellent such as DEET (chemical name, N, N-diethyl-meta-toluamide) for exposed skin and using tents, clothes and shoes which have permethrin-base.

CONCLUSIONS AND RECOMMENDATIONS

Ever increasing percentage of senior tourists which is up-to certain extent is unable to cope with changes like climate and humidity level at destination has compelled the travel industry to change in its service provisions. The study aimed to identify the problems faced by this segment found the major issues related to proper vaccination and use of immunosuppressive drugs before departure, during baggage reclaim, flight delays, and jetlag and lack of hygiene food availability at destination need to be addressed properly at time. The study suggests MTFs to arrange all required documents, medicines, clothing arrangement and awareness required by individual traveler in order to make his/her traveling comfortable. Apart the provisions of consultations to personal physician at market and destination, MTFs are further advised to be very careful about the service related to food and water. Annual increase in number of senior medical tourists indicates bright business of MTFs but there is need to do business more carefully choosing customized approach. Most updated information on the relationship among doctor, MTF and patients is a necessity for desired results.

References

- Adams PF, Schoenborn CA. Health behaviors of adults: United States, 2002-04. *Vital Health Stat* 10 2006;10 (230):1–140.
- Aerospace Medical Association Medical Guidelines Task Force. Medical guidelines for airline travel. 2nd edition. *Aviat Space Environ Med* 2003; 74:A1–19.
- Ananth, M., DeMicco, F.J., Moreo, P.J. and Howey, R.M. (1992), "Marketplace lodging needs of mature travelers", *The Cornell Hotel and Restaurant Administration Quarterly*, Vol. 33 No. 4, pp. 12-24
- Armand L. French tourists abroad in 2006: results from the survey "Follow-up of tourists preferences." *Bull Epid Hebd* 2007; 25–26:218–221.
- Behrens RH, Collins M, Botto B, et al. Risk for British travellers of acquiring hepatitis A. *BMJ* 1995;311:193.
- Boksberger, P.E. and Laesser, C. (2009), "Segmentation of the senior travel market by the means of travel motivations", *Journal of Vacation Marketing*, Vol. 15 No. 4, pp. 311-322.
- Brendel DH, Reynolds CF III, Jennings JR, et al. Sleep stage physiology, mood, and vigilance responses to total sleep deprivation in healthy 80-year-olds and 20-year-olds. *Psychophysiology* 1990;27:677–85.
- Brewster SJ, Taylor DN. Epidemiology of travelers' diarrhea. *Travel Medicine*. In: Keystone JS, Kozarsky PE, Freedman DO, editors. London: Elsevier; 2004. p. 175–84.
- Bulletin Online. 2006. Available at: <http://www.aarp.org/bulletin/yourlife/peacecorps>. html. Accessed November 1, 2006.
- Burnett JC. Long- and short-haul travel by air: issues for people with diabetes on insulin. *J Travel Med* 2006;13:255–60.
- Centers for Disease Control and Prevention. Fatal respiratory diphtheria in a US traveler to Haiti and Pennsylvania, 2003. *MMWR Morb Mortal Wkly Rep* 2004;52:1285–6.

Centers for Disease Control and Prevention. Health information for international travel 2008. Atlanta (GA): US Department of Health and Human Services, Public Health Services; 2007. p. 487–92.

Centers for Disease Control and Prevention. Notice to readers: updated recommendations of the Advisory Committee on Immunization Practices (ACIP) for the control and elimination of mumps. MMWR Morb Mortal Wkly Rep 2006;55:629–30.

Chan SB, Hogan TM, Silva JC. Medical emergencies at a major international airport: inflight symptoms and ground based follow-up. Aviat Space Environ Med 2002;73:1021–4.

Chen LH, Wilson ME, Schlagenhauf P. Prevention of malaria in long-term travelers [review]. JAMA 2006;296:2234–44.

Cleaver M, Muller TE. I want to pretend I'm eleven years younger: subjective age and seniors' motives for vacation travel. Soc Indic Res 2002;60:227–41.

Cleaver, M.S. (2004), "Discovery, connection, nostalgia: key travel motives within the senior market", Journal of Travel and Tourism Marketing, Vol. 17 No. 1, pp. 55-71.

Consular Information Sheet. Venezuela. US Department of State. 2006. Available at: http://travel.state.gov/travel/cis_pa_tw/cis/cis_1059.html. Accessed December 12, 2006.

Cooper MC. The elderly travellers. Travel Med Infect Dis 2006; 4:218–222.

Cooper MC. The elderly travellers. Travel Med Infect Dis 2006;4:218–22.

Cox ID, Blight A, Lyons JP. Air-terminal stress and the older traveller. Age Ageing 1999; 28:236–7.

DeHart RL. Health issues of air travel. Annu Rev Public Health 2003;24:133–51.

Delaune EF III, Lucas RH, Illig P. In-flight medical events and aircraft diversions: one airline's experience. Aviat Space Environ Med 2003;74:62–8.

Galazka A. The changing epidemiology of diphtheria in the vaccine era. J Infect Dis 2000; 181(Suppl 1):S2–9.

Galazka AM, Robertson SE. Diphtheria: changing patterns in the developing world and the industrialized world. *Eur J Epidemiol* 1995;11:107–17.

Genton B, D’Acremont V, Furrer HJ, et al. Hepatitis A vaccines and the elderly. *Travel Med Infect Dis* 2006;4:303–12.

Goodwin T. In-flight medical emergencies: an overview [review]. *BMJ* 2000;321:1338–41. Dowdall N. “Is there a doctor on the aircraft?” Top 10 in-flight medical emergencies [review]. *BMJ* 2000;321:1336–7.

Gordon ME. Gastrointestinal and other vulnerabilities for geriatric globetrotters. *Clin Geriatr Med* 1991;7:321–30.

Grimprel E, Von Sonnenburg F, Sanger R, et al. Combined reduced-antigen-content diphtheria- tetanus-acellular pertussis and polio vaccine (dTpa-IPV) for booster vaccination of adults. *Vaccine* 2005;23:3657–67.

Hill DR. Health problems in a large cohort of Americans traveling to developing countries. *J Travel Med* 2000;7:259–66.

Hill DR. Health problems in a large cohort of Americans travelling to developing countries. *J Travel Med* 2000; 7:259–266.

Hong, G., Kim, S.Y. and Lee, J. (1999), “Travel expenditure patterns of elderly households in the US”, *Tourism Recreation Research*, Vol. 24 No. 1, pp. 43-52

Hsu, C.H.C. and Lee, E. (2002), “Segmentation of senior motorcoach travelers”, *Journal of Travel Research*, Vol. 40 No. 4, pp. 364-373

Hutin YL, Hauri YM, Husson B, Armstrong GL. Use of injections in healthcare settings worldwide, 2000: literature review and regional estimates. *BMJ* 2003;327(1075):1075.

Jang, S. and Ham, S. (2009), “A double-hurdle analysis of travel expenditure: baby boomer seniors versus older seniors”, *Tourism Management*, Vol. 30 No. 3, pp. 372-380.

Javalgi, R.G., Thomas, E.G. and Rao, S.R. (1992), "Consumer behavior in the US pleasure travel marketplace: an analysis of senior and nonsenior travelers", Journal of Travel Research, Vol. 31 No. 2, pp. 14-19

Kaml M, Weiskirchner I, Keller M, et al. Booster vaccinations in the elderly: their success depends on the vaccine type applied earlier in life as well as on pre-vaccination antibody titers. Vaccine 2006;24:6808–11.

Leder K, Tong S, Weld L, et al. Illness in travelers visiting friends and relatives: a review of crowd. Wall St J (East Ed) 2004;R12.

Leder K, Weller PF, Wilson ME. Travel vaccines and elderly persons: review of vaccines available in the United States. Clin Infect Dis 2001; 33:1553–1366.

Lieux, E. M., Weaver, P. A. and McCleary, K. W. (1994). Lodging Preferences of the Senior Tourism Market, Annals of Tourism Research, 21(4): 712-718

Lieux, E. M., Weaver, P. A. and McCleary, K. W. (1994). Lodging Preferences of the Senior Tourism Market, Annals of Tourism Research, 21(4): 712-718

Low JA, Chan DKY. Air travel in older people. Age Ageing 2002;31:17–22.

Low JA, Chan DKY. Air travel in older people. Age Ageing 2002;31:17–22.

Lumber T, Strainic PA. Have insulin, will travel: planning ahead will make traveling with insulin smooth sailing. Diabetes Forecast 2005;58(8):50–4.

Lynch M, Bulens S, Polyak C, et al. Multi-drug resistance among Salmonella typhi isolates in the United States, 1999-2003. Presented at the Sixth International Conference on Typhoid Fever and Other Salmonellosis. Guilin, China; November 12, 2005.

Mature Age Visitors in Australia. 2008. Available at:
http://www.tra.australia.com/content/documents/Snap_hot%20and%20Factsheets/Mature%20Age/Mature_

McQuillan GM, Kruszon-Moran D, Deforest A, et al. Serologic immunity to diphtheria and tetanus in the United States. *Ann Intern Med* 2002;136:660–6.

MilenoMD, Bia FJ. The compromised traveler. *Infect Dis Clin NorthAm* 1998;12:369–412.

Möller, C., Weiermair, K. and Wintersberger, E. (2007), “The changing travel behaviour of Austria’s ageing population and its impact on tourism”, *Tourism Review*, Vol. 62 Nos 3/4, pp. 15-20

Monk TH, Buysse DJ, Carrier J, et al. Inducing jet-lag in older people: directional asymmetry. *J Sleep Res* 2000;9:101–16.

Monk TH, Buysse DJ, Reynolds CF III, et al. Inducing jet lag in an older person: directional asymmetry. *Exp Gerontol* 1995;30:137–45.

Monk TH, Buysse DJ, Reynolds CF III, et al. Inducing jet lag in older people: adjusting to a 6-hour phase advance in routine. *Exp Gerontol* 1993;28:119–33.

Monk TH. Aging human circadian rhythms: conventional wisdom may not always be right. *J Biol Rhythms* 2005;20:366–74.

Monto AS, Ansaldi F, Aspinall R, et al. Influenza control in the 21st century: optimizing protection of older adults. *Vaccine* 2009; 27:5043–5053.

Morton JL, Schultz AA. Healthy hands: use of alcohol gel as an adjunct to handwashing in elementary school children. *J Sch Nurs* 2004;20:161–7.

Muller TE, O’Cass A. Targeting the young at heart: seeing senior vacationers the way they see themselves. *Journal of Vacation Marketing* 2001;7:285–301.

Newman RD, Parise ME, Barber AM, et al. Malaria-related deaths among US travelers, 1963- 2001. *Ann Intern Med* 2004;141:547–55.

Norman, W.C., Daniels, M.J., McGuire, F. and Norman, C.A. (2001), “Wither the mature market: an empirical examination of the travel motivations of neo-mature and veteran-mature markets”, *Journal of Hospitality and Leisure Marketing*, Vol. 8 Nos 3/4, pp. 113-130

Pinto B. Getting air travel ready for baby boom generation. ABC News Original Report. 2005. Available at: <http://abcnews.go.com/WNT/LivingLonger/story?id%125695>. Accessed November 8, 2006.

Prystay C. Backpacking in the golden years; more retirees take to road for exotic, no-frills

Redman CA, MacLennan A, Walker E. Causes of death abroad: analysis of data on bodies returned for cremation to Scotland. *J Travel Med* 2011; 18:96–101.

Reed C. Travel recommendations for older adults. *Clin Geriatr Med* 2007; 23:687–713.

Romsa, G. and Blenman, M. (1989), "Vacation patterns of the elderly German", *Annals of Tourism Research*, Vol. 16 No. 2, pp. 178-188.

Ryst S. Winter games: ski resorts are designing more programs and services for the 50-plus

Sand M, Bollenbach M, Sand D, et al. Epidemiology of aero medical evacuation: an analysis of 504 cases. *J Travel Med* 2010; 17:405–409.

Sattar SA, Abebe M, Bueti AJ, et al. Activity of an alcohol-based hand gel against human adeno-, rhino-, and rotaviruses using the fingerpad method. *Infect Control Hosp Epidemiol* 2000;21:516–9.

Schlagenhauf P, Beallor C, Kain KC. Malaria. *Travel Medicine*. In: Keystone JS, Kozarsky PE, Freedman DO, editors. London: Elsevier; 2004. p. 137–67.

Schlesinger R. Giving peace a chance. American Association of Retired Persons (AARP)

Scolari C, Tedoldi S, Casalini C, et al. Practices on malaria preventive measures of migrants attending a public health clinic in northern Italy. *J Travel Med* 2002;9:160–2.

Scoville SL, Bryan JP, Tribble D, et al. Epidemiology, preventive services and illnesses of international travelers. *Mil Med* 1997; 162:172–178.

Seccombe LM, Peters MJ. Oxygen supplementation for chronic obstructive pulmonary disease patients during air travel [review]. *Curr Opin Pulm Med* 2006;12:140–4.

Shoemaker, S. (1989), "Segmentation of the senior pleasure travel market", *Journal of Travel Research*, Vol. 27 No. 3, pp. 14-21

Shoemaker, S. (2000), "Segmenting the mature market: 10 years later", Journal of Travel Research, Vol. 39 No. 1, pp. 11-26.

Skarbinski J, James EM, Causer LM, et al. Malaria surveillance—United States, 2004. MMWR Surveill Summ 2006;55:23–37.

Steinberg EB, Bishop R, Haber P, et al. Typhoid fever in travelers: who should be targeted for prevention? Clin Infect Dis 2004;39:186–91.

Steinberg EB, Bishop R, Haber P, et al. Typhoid fever in travelers: who should be targeted for prevention? Clin Infect Dis 2004;39:186–91.

Sund, K.J. and Boksberger, P. (2007), "Senior and non-senior traveller behaviour: some exploratory evidence from the holiday rental sector in Switzerland", Tourism Review, Vol. 62 No. 3, pp. 21-26.

the GeoSentinel Surveillance Network. Clin Infect Dis 2006;43:1185–93.

travel; skip talk about colonoscopy. Wall St J (East Ed) 2004;B1.

van Treeck U. Measles outbreak in Germany: update. Eurosurveillance Weekly Report. 2006;11(4). Available at: <http://www.eurosurveillance.org/ew/2006/060413.asp>. Accessed November 1, 2006.

Wallace MR, Sharp TW, Smoak B, et al. Malaria among United States troops in Somalia. Am J Med 1996;100:49–55.

Wright ER. Travel, tourism, and HIV risk among older adults. J Acquir Immune Defic Syndr 2003;33(Suppl 2):S233–7.

You, X. and O'Leary, J.T. (2000), "Age and cohort effects: an examination of older Japanese travelers", Journal of Travel and Tourism Marketing, Vol. 9 Nos 1/2, pp. 21-42.