Stefano Calciolari, Domenico Ferrari, Laura González Ortiz, Marco Meneguzzo, Tobiolo Gianella: Health Service Delivery in Rural Areas: Two Swiss Cases. Yearbook of Swiss Administrative Sciences 2014: Pages 83–95

Health Service Delivery in Rural Areas

Two Swiss Cases

Stefano Calciolari, Laura González Ortiz, Marco Meneguzzo, Tobiolo Gianella
Università della Svizzera Italiana, Via G. Buffi 13, 6900 Lugano, Switzerland

Domenico Ferrari
Scuola Universitaria Professionale della Svizzera italiana (SUPSI), Via Violino 11, 6928 Manno, Switzerland

Social trends and the costs of health technologies lead to concentrate the availability of specialized services. This raises debates on the appropriate geography of healthcare. An example is the discussion about the rationality of closing small hospitals, typically located in rural and/or remote areas. We analyzed two cases of rural and/or remote areas of Switzerland experiencing a radical reorganization of a previously existing hospital.

Keywords: Rural/remote areas, health service delivery, case studies, Switzerland

1 Introduction

The financial crisis has raised pressures toward reforming the welfare systems of Western countries. These pressures have also structural causes. In particular, the combination of declining fertility and mortality rates, and the increase in life expectancy has meant that the populations are becoming weighted increasingly towards older age group in most European countries (Tinker, 2002; COM, 2006). This trend is projected to enlarge and deepen globally (Anderson and Hussey, 2000) – with the proportion of people aged 65 or over is expected to overcome the threshold of 26% in the European Union in 2040 (Giannakouris, 2008) – thus influencing dramatically the economic, social and political spheres (United Nations, 2001).

However, this trend also impacts on healthcare, because it is associated with a high prevalence of chronic diseases, and high risks of poly-morbidities and adverse outcomes (Anderson and Hussey, 2000; WHO, 2005). In addition, elderly people use by far more healthcare services than the younger aged groups (OECD, 1996).

The aforementioned phenomenon and technologic advances have led to emerging clusters of complex patients that call for reorganizing the health service delivery according to innovative criteria (Beaglehole et al., 2007; Calciolari and Ilinca, 2011). These reorganization efforts have concerned both outpatient and inpatient care settings (Lega and Calciolari, 2012). In addition, the rising specialization of medicine and the costs of new health technologies tend to concentrate the availability of specialty care in «centers» as opposed to «peripheries», due to

the availability of the skills and knowledge necessary to use them and/or to take advantage of economies of scale and ensure quality of care (Cain and Mittman, 2002; Dimick et al., 2003).

Remarkably, the health management literature has not focused on specific contexts that might most bear the burden of such trends: rural and remote geographic areas. These areas tend to anticipate the national demographic forecasts. In fact, although studies predict a decline of the European rural population (from 100 million in 2000 to around 75 million in 2030), the proportion of elderly people in rural areas, compared to urban areas, is expected to increase due to out-migration of younger people and/or the in-migration of retirees (Klijn et al., 2005). Moreover, the concentration trend of advanced health technologies might worsen the situation of rural residents: indeed, they often have limited access to care providers (McCusker et al., 1997). Increased distance between residents and providers, per se, is commonly thought to decrease the utilization of health services (Bronstein and Morrisey, 1990). This «barrier effect» is greater for people with reduced access to transportation means (e.g., the elderly), and for those living in sparsely populated areas where distances between residences and healthcare facilities are large (e.g., rural residents).

We analyzed the health service delivery configuration in two rural and/or remote areas of Switzerland resulting from reorganization initiatives aimed to satisfy the needs of their local, aging population coherently with the technologic, epidemiologic, and medical trends. In addition, Switzerland has a strongly decentralized political system, based on subsidiarity, consensual decision-making, and the institutions of direct democracy. Since 1996 there is a national health insurance law based on the principles of patients' freedom of choice and autonomy of both the health insurance and service delivery systems at the cantonal level, within national guidelines. As a consequence, there is a significant heterogeneity between the 26 cantonal health systems.

The objective of this study is to describe and discuss organizational arrangements and some key operational aspects of the service delivery in two small rural hospitals of the Canton of Ticino in Switzerland.

2 Background and empirical setting

Managing healthcare in rural/remote areas concerns two main challenges: (a) coping effectively with the clusters of complex patients emerging from the aforementioned trends; (b) dealing with the geographic isolation.

As far as the first challenge is concerned, the new clusters of patients are characterized by complexity of needs and/or instability. Therefore, it is paramount that they receive the full range of needed services in a coordinated fashion (Brown et al., 2002).

As a matter of fact, there is a stream of literature focused on the principles, logics and solutions aimed to meet such standard of care. The field is called «integrated care» and its broad research object is captured by the widely cited definition of Kodner and Spreeuwenberg (Kodner and Spreeuwenberg, 2002: 3): «Integration is a coherent set of methods and models on the funding, administrative, organizational, service delivery and clinical levels designed to create connectivity, alignment, and collaboration within and between the cure and care sectors. The goal [...] is to enhance quality of care and quality of life, consumer satisfaction and system efficiency for patients with complex, long-term problems cutting across multiple services, providers and settings.» The definition gives a sense of how deeply intertwined are the different elements of a health system. However, we focused on the organizational and service delivery levels in this work.

With regard to the second challenge (geographic isolation), distance from larger centres alters the access to healthcare for local patients, the type of practice provided by local providers, the professional attractiveness, and so forth (Bourke et al., 2012). The nature of healthcare provided in the rural communities is influenced by the local availability of services (Barjis et al., 2013). In fact, public transportation is often expensive or not available in rural areas, and this represents a relevant barrier to service accessibility. Spatial isolation has also implications in terms of social relations for both patients and professionals. It influences the capacity of accumulating repeated social interactions – between individuals and groups – which develop trust, reciprocity, behavioural norms, or, in other words, social capital (Coleman, 1994). Farmer et al. (2003) argue that the local provision of primary care contributes to create both service infrastructure and social capital. From a managerial point of view, this has implications in terms of human resource management and establishing/nurturing institutional opportunities of professional interactions within the local community (horizontal linkages) and with the broader health system (vertical linkages).

In Switzerland, the individuals aged over 65 currently represent 12.4% of the population and they are expected to overcome the threshold of 26% by 2035 (UST, 2011a). The country is characterized by low population density – about 191 people/km2 in 2011, 55% of the municipalities with less than 1,000 inhabitants and only five municipalities with more than 100,000 inhabitants – and 60% of the territory occupied by mountains (UST, 2011b). Therefore, care integration can play a strategic role to enhance the Swiss health system's capacity of providing coordinated care.

Indeed, the Conférence suisse des directeurs et directrices cantonaux de la santé (Swiss Conference of the Cantonal Ministers of Public Health) has recently published a document analysing several innovative models of care provision aimed to cope with the issues posed by the epidemiologic trend (CDS, 2012). In particular, the document describes the international cases of the Maisons de santé pluridisciplinaires (MSP – multidisciplinary health homes) in France, the Primär-

versorgungspraxen (PVP – first intervention medical practices) in Germany, the Multiprofessional health centers (MHC) in Finland, and the Patient-centered medical homes (PCMH) in the United States. The common aspects characterizing the four cases are: the multidisciplinary assessment and triage of each new patient, an evidence-based medicine approach, the programmed follow-up and monitoring of care results, the delegation of medical functions to non-medical professionals, the enhancement of service access (e.g., extended hours), and patient empowerment.

The aforementioned document also mentions several Swiss cases. Interestingly, two of the most important cases outlined are located in rural and/or remote geographic areas. Table 1 shows the main geographic and demographic characteristics of the cases: the Social and Health Center of Vallemaggia (hereafter Cevio) and the Health Center of Val Müstair (hereafter St. Maria).

Characteristic	Country	Cevio	St. Maria
Geographic area	Switzerland	District of Vallemaggia	Municipality of Val Müstair
Surface (km2)	41,285	569.5	198.65
Rural area	-	Yes	Yes
Nearest town[a] > 10'000 inhab. > 30'000 inhab.		 25 km 67 km	 68 km 125 km
Distance to the nearest general hospitala	-	25 km	62 km
Remote area	-	Yes	Yes
Touristic location	-	Yes	Yes
Resident population[b]	8 million	5,795	1,552
65-79-year-old	12.4%	846 (14.6%)	254 (16.4%)
>80-year-old	4.8%	372 (6.4%)	100 (6.4%)

[a] Distance calculated from the municipality where the health center is located.
[b] Referred to the inhabitants of the geographic area

Table 1: Location and demographic features of the cases in 2011

Most of the definitions of rural areas are based on the concepts of population density, demographic structure, use of the soil (Susckmith and Philip, 2000; Ryan-Nicolls, 2004) and living conditions (Hugo, 2005). The two aforementioned Swiss cases share at least the former three traits: in fact, according to the criteria of the

Swiss Federal Statistical Office, the majority of the municipalities in the two geographic areas are classified as agrarian, agrarian with industrial activities, or agrarian with touristic destinations (Schuler et al., 2005). In addition, the cases are located in remote areas, according to a definition based on the concepts of logistical inaccessibility (Hugo, 2005) or limited access to services and opportunities of social interaction (Woods, 2006). Finally, they are placed in two different Cantons; therefore, they represent a purposive sample to suggest common, important aspects to design sustainable healthcare for populations living in rural/remote contexts.

3 Methods

We analyzed the two aforementioned cases by conducting semi-structured interviews with the directors of each organization. The interviews were based on a predefined list of dimensions and elements (Table 2) selected according to the literature (Moscovice and Stensland, 2002; Bourke et al., 2012).

Institutional framework and history	Strategic partnerships
Geographic and demographic features	Recruitment and HRM
Financing mechanisms	Decision-making and accessibility
Service delivery configuration	Synergies and problems

Table 2: Dimensions of analysis for each case study

Before the meetings, we sent our list of questions to each contact person to allow her/him to collect information and eventually prepare presentations and/or documents useful to complement the interviews. On average, each interview lasted three hours and was conducted in each location by at least two researchers (among the authors), who also had the opportunity to see the logistics of the two centers. Interviews were conducted in Italian or German, according to the preferences of the interviewees, in the period April–October 2012. Researchers took notes and classified provided documents during the interviews. Further information exchanges, by e-mail of by phone, followed the interviews in order to either confirm or complement the elaborated information until data saturation was reached (Hennink et al., 2011).

In the following sections we present the results of our analysis by comparing the two case studies based on common dimensions (Yin, 2003), and discuss their managerial and policy implications.

4 Results

The results of the two case studies are discussed in a comparative fashion along the dimensions are listed in Table 2. Each sub-section is dedicated to a specific dimension, except for the geographic and demographic features (synthesized in

Table 1), the financing mechanisms, which did not appear to be different across the cases and compared with the rest of the country[1], and the synergies and problems, which are addressed in each subsection and in the concluding section.

4.1 Institutional framework and history

Cevio is the result of a conversion of a local hospital, part of the Ente Ospedaliero Cantonale (EOC, the public network of hospitals of Canton Ticino), in 2002. The EOC provides Cevio with medical supervision and manages the laboratory, the radiology, the physiotherapy and the ergotherapy services. The health center is a private foundation that manages two nursing homes with 33 long-term care beds, 12 beds (15 since 2013) dedicated to temporary high intensity care cases (i.e., elderly patients discharged from hospitals and in need of non-medical but high intensity care), 14 short-term care beds and an organization unit (12 places) assisting disabled adults. The center also manages the home care services.

The current form of St. Maria results from a process similar to Cevio: the original hospital was converted when it lost the surgery and gynecology specialties, due to a revision in the cantonal hospital planning. The joint financial efforts of the Canton of Grisons, the previously existing six municipalities (merged in a single municipality through an aggregation process ended in 2009), and local private donors allowed to complete the renewal of the building in 2005. The center is an autonomous public entity.

In the two cases a depopulation process is ongoing and the local market labor is hardly attractive for professionals, especially for the younger. This contributes to the aging trend.

[1] On this aspect one can refer to the country profiles available at www.commonwealthfund.org and www.euro.who.int.

4.2 Service delivery configuration

The two centers offer significantly different ranges of services (summarized in Table 3), though the needs of the local population might be considered quite similar.

NH = Nursing Home; INT = in-house; EST = contracted-out; I/E = INT/EST; * = planned

Characteristic	Cevio	St. Maria
NH (long-term beds)	X (INT)	X (INT)
NH (short-term beds)	X (INT)	X (INT)
NH (intensive care beds)	X (INT)	-
Psychogeriatrics	-	-
Geriatric rehabilitation	-	-
NH (sheltered flats)	X (INT)*	-
Palliative care	-	-
Day center for the elderly	X (I/E)	X (INT)*
Meal service	X (I/E)	X (INT)
Home care (Spitex)	X (I/E)	X (INT)
Disabled adults	X (I/E)	-
General practice	X (EST)	X (INT)
Inpatient care	-	X (INT)
Outpatient surgery	-	X (INT)
Emergency intervention	-	X (INT)
Radiology	X (EST)	X (INT)
Laboratory	X (EST)	X (INT)
Physiotherapy practice	X (EST)	X (EST)
Pharmacy	X (EST)	X (INT)
Childbirth (obstetrician)	-	X (EST)
Pediatric consulting	X (EST)	X (EST)
Cardiology consulting	-	-
Orthopedy consulting	-	-
Nutrition consulting	-	-
Tropical medicine consulting	-	X (EST)
Psychiatric consulting	-	X (EST)
Neuro- and bio-feedback practice	-	-
Dental practice	-	X (EST)
Podology practice	-	X (EST)
Kinesiology practice	-	X (EST

Table 3: Service delivery configuration in the two cases

Few services, either directly or outsourced, are provided by the two centers: meal service, home care, radiology, laboratory, and pediatric counseling. This might suggest that they are the bulk of essential health services.

Interestingly, Cevio does not deal with emergencies; however, there is a tight relationship between the center and the general practitioners, who also play the role of first emergency aid. In fact, each of the three general practitioners is equipped with a car dedicated to this purpose. In this respect, Lishner et al. (2000) suggested that emergency services utilization patterns may significantly differ within rural areas – and not only between rural and urban areas – depending on the specific local features. Compared with St. Maria, Cevio is closer to an urban center. However, from the interviews it emerged also the idea that the organizational arrangements concerning emergency services were based on the availability and capacity of some professionals and their creative approach toward the satisfaction of the local needs.

4.3 Strategic partnerships

The two centers have formed partnerships with the nearest hospitals to their location. Cevio relies on the Regional Charity Hospital of Locarno and the Hildebrand rehabilitation clinic to find physicians who regularly provide planned medical services in the center, and to centralize the procurement of pharmaceuticals and medical supplies. In addition, the home care services are delivered by a dedicated team on the basis of a service contract with the Homecare Association of Locarnese and Vallemaggia (ALVAD).

St. Maria has a partnership with the hospital of Samedan for training, while the hospital of Scuol provides appropriate emergency services to the patients transferred by helicopter (an airstrip is placed on the roof of the center).

The aforementioned partnerships allow the centers to take advantage of the specialized know-how available in a hospital, either by planning the transfer of selected professionals to the centers (to provide training or answer to predictable medical needs) or by arranging the transfer of patients where the appropriate health technologies are available (typically in emergency situations).

4.4 Recruitment and human resource management

The phenomenon of depopulation is typical of rural and/or remote areas. In fact, young people are likely to move to urban centers also due to the lack of professional opportunities close to home. Hancock et al. (2009) found that external circumstances significantly affect physicians' sense of community attachment and self-actualization. In particular, geographic isolation challenges physicians with lack of basic services, feelings of alienation and isolation, lack of professional

opportunities, limited resources for their children and partners, and other personal and professional problems. Therefore, it is hard to attract new professionals in rural and/or remote areas.

In the two cases, we found a common strategy to cope with this problem: developing partnerships aimed to integrate the employees in wide professional networks. Indeed, this can enrich the professional content of organizational roles and reduce professionals' feeling of isolation. For instance, St. Maria has taken advantage of its partnership with the hospital of Samedan to establish a training program for health professionals.

In addition, we found uncommon strategies. For instance, Cevio encourages personnel exchanges in the partner institutions and the creation of multidisciplinary teams aimed to foster knowledge sharing and interchangeability of professionals in the care processes; while St. Maria demonstrated a creative approach in designing job offers such as job sharing opportunities, and paired positions (for couples) to reconcile family and work needs.

4.5 Decision-making and accessibility

We found some peculiar decision-making mechanisms in St. Maria. In this case, at the operating level, the home care service plays the role of «antenna» identifying the needs in the whole geographic area; subsequently, a multidisciplinary team of the center decides about the resources necessary for each identified case. At the strategic level, the Director plans and decides together with a committee of three representative members of the small local community (the primary school teacher, the veterinary physician, and one member of the town council).

In the two cases the service coordination is mainly fostered through the logistic centralization (single entry point) and by the formalization of general quality standards (both the centers obtained an ISO certification, for the organization as a whole). St. Maria also adopted care guidelines. General practitioners are strictly related with the health center and sometimes are delegated to complement the service delivery configuration of the center (as in the mentioned case of emergency services in Cevio). Santa Maria offers extended opening hours for patients: from 7:30 am to 12:00 pm and from 2:00 pm to 6:00 pm, with 24h availability of a physician in case of emergency.

5 Discussion and conclusions

The two cases analysed are the result of a conversion of local hospitals into health centers. The process can be interpreted, on one hand, as a rationing of the local technologic and infrastructural capital and, on the other hand, as an optimization of the coordination of the health and social resources available within and close to the community.

Currently, there is a political debate (e.g., in Switzerland and Italy) concerning the rationality of closing small hospitals. They are typically located in rural and/or remote areas and are part of the social and political identity of the community. The advocates for closing such hospitals support their position with both economic and quality of care reasons, though this strategy – per se – could negatively influence equity of access to health services, especially for clusters of complex patients.

First, there is the necessity to replace the hospital with a subject that can be a reference point for the social and health needs of the local community. It should have a leading role for coordinating the local resources and building a network of relationships aimed to both maintain the local availability of necessary medical services and nurture professional opportunities, knowledge sharing among the employees, and social relations. In such conditions, even politically sensitive issues (the availability of emergency services, for instance) can find a creative solution (like in the case of Cevio).

Second, and linked with the previous point, the human resource management is a crucial aspect that deserves special attention in terms of both developing strategic partnerships and using all the flexibilities to compensate for the structural lack of professional attractiveness of the local labour market.

Finally, the geography of service provision is an important aspect. In particular, the centralized logistics (resulting from restructuring long-term care facilities, for instance) is both a coordinating trigger and a resource. As far as the latter is concerned, the interviewees emphasized two points: first, the centralization allows for cross-financing between services (e.g., in St. Maria the homecare service generates financial surplus that is annually used to support other activities); second, it could be used to attract the local health and social resources in a common, equipped setting. This may open up alternatives about contracting or outsourcing services according to the development of needs and strategic options.

The findings of this study could be useful to compare evidence from other small rural hospitals and to explore the transferability of solutions designed to cope with the health and social needs of populations that anticipate the demographic structure of Western countries.

Stefano Calciolari, Domenico Ferrari, Laura González Ortiz, Marco Meneguzzo, Tobiolo Gianella: Health Service Delivery in Rural Areas: Two Swiss Cases. Yearbook of Swiss Administrative Sciences 2014: Pages 83–95

Zusammenfassung

Soziale Trends und die Kosten für neue Gesundheitstechnologien führen zur Bündelung hochspezialisierter Dienstleistungen. Die Diskussion über die geographische Verteilung des Gesundheitsangebots gewinnt an Bedeutung. Ein Beispiel ist die Diskussion über die Schliessung kleinerer Spitäler, die typischerweise in ländlichen und/oder entlegenen Gebieten liegen. Die Autoren analysierten zwei Fälle in ländlichen und/oder entlegenen Gebieten in der Schweiz, bei denen ein bereits bestehendes Spital jeweils einer tiefgreifenden Reorganisation unterzogen wurde. Die Studie kommt zum Schluss, dass die Diskrepanz zwischen Zugangsgerechtigkeit und finanzieller Nachhaltigkeit geschlossen werden kann.

Schlagworte: Ländliche/entlegene Gebiete, Leistungserbringung im Gesundheitswesen, Fallstudien, Schweiz

Résumé

Les tendances sociales et les coûts liés aux nouvelles technologies de santé poussent à concentrer l'offre de services spécialisés. Dans ce contexte, la discussion sur la répartition géographique des services de santé est plus actuelle que jamais. Un exemple en est le débat sur la rationalité de fermer les petits hôpitaux en régions rurales et/ou isolées. Dans ce contexte précis, nous avons analysé deux cas d'hôpitaux suisses ruraux et/ou isolés ayant fait l'objet d'une réorganisation radicale. Notre étude a révélé que la nécessité d'une équité d'accès aux soins et la viabilité financière de l'hôpital ne sont pas nécessairement incompatibles.

Mots-Clé: régions rurales/isolées, prestations dans le domaine de la santé, études de cas, Suisse.

References

Anderson, G., and Hussey, P. (2000). Population Ageing: A Comparison among Industrialized Countries. Health Affairs, 19(3), 191 - 203.

Barjis, J., Kolfschoten, G., and Maritz, J. (2013). A sustainable and affordable support system for rural healthcare delivery. Decision Support Systems, 56, 223 - 233.

Beaglehole, R., Ebrahim, S., Reddy, S., Voûte, J., Leeder, S., and Chronic Disease Action Group. (2007). Prevention of chronic diseases: A call to action. Lancet, 370(9605), 2152 - 2157.

Bourke, L., Humphreys, J., Wakerman, J., and Taylor, J. (2012). Understanding rural and remote health: A framework for analysis in Australia. Health & Place, 18(3), 496 - 503.

Bronstein, J., and Morrisey, M. (1990). Determinants of rural travel distance for obstetrics care. Medical Care, 28(9), 853 - 865.

Brown, L., Tucker, C., and Domokos, T. (2002). Evaluating the impact of integrated health and social care teams on older people living in the community. Health and Social Care in the Community, 11(2), 85 - 94.

Cain, M., and Mittman, R. (2002). Diffusion of innovation in healthcare. iHealthreports. www.chcf.org [September 2013].

Calciolari, S., and Ilinca, S. (2011). Organizing integrated care for frail elderly patients in Switzerland, Italy, United States, and Canada. In: Swiss Society of Administrative Sciences (Ed.), Yearbook of Swiss Administrative Sciences (pp. 151 – 165). Zürich: kdmz.

CDS (2012). «Nouveaux modèles de soins pour la médecine de premier recours.» www.gdk-cds.ch [October 2012].

Coleman, J. (1994). Foundations of social theory. Cambridge: The Belknap Press of Harvard University Press.

COM (2006). The demographic future of Europe - From challenge to opportunity Brussels. Commission of the European Communities, COM(2006) 2571 Final.

Dimick, J. B., Cowan, J. A. Jr., Upchurch, G. R. Jr., and Colletti, L. M. (2003). Hospital volume and surgical outcomes for elderly patients with colorectal cancer in the United States. Journal of Surgical Research, 114(1), 50 - 56.

Farmer, J., Lauder, W., Richards, H., and Sharkey, S. (2003). Dr. John has gone: Assessing health professionals' contribution to remote rural community sustainability in the UK. Social Science & Medicine, 57(4), 673 - 686.

Giannakouris, K. (2008). Ageing characterises the demographic perspectives of the European societies. Statistics in focus, 72. Luxembourg: Eurostat.

Hancock, C., Steinbach, A., Nesbitt, T. S., Adler, S. R., and Auerswald, C. L. (2009). Why doctors choose small towns: A developmental model of rural physician recruitment and retention. Social Science & Medicine, 69(9), 1368 - 1376.

Hennink, M., Hutter, I., and Bailey, A. (2011). Qualitative research methods. Los Angeles: Sage.

Hugo, G. (2005). The state of rural populations. In: C. Cocklin and J. Dibden (Eds.), Sustainability and Change in Rural Australia (pp. 56 - 79). Sydney: University of New South Wales Press.

Klijn, J. A., Vullings, L. A. E., v. d. Berg, M., van Meijl, H., van Lammeren, R., van Rheenen, T., Tabeau, A. A., Veldkamp, A., Verburg, P. H., Westhoek, H., und Eickhout, B. (2005). The EURURALIS Study: Technical Document. Alterra, Wageningen. www.pbl.nl [March 2014].

Kodner, D., and Spreeuwenberg, C. (2002). Integrated Care: Meaning, Logic, Applications and Implications - a Discussion Paper. International Journal of Integrated Care, 2, e12.

Lega, F., and Calciolari, S. (2012). Coevolution of patients and hospitals: How changing epidemiology and technological advances create challenges and drive organizational innovation. Journal of Healthcare Management, 57(1), 17 - 33.

Lishner, D. M., Rosenblatt, R. A., Baldwin, L. M., and Hart, L. G. (2000). Emergency department use by the rural elderly. The Journal of Emergency Medicine, 18(3), 289 - 297.

McCusker, J., Healey, E., Bellavance, F., and Connolly, B. (1997). Predictors of repeat emergency department visits by elders. Academic Emergency Medicine, 4(6), 581 - 588.

Moscovice, I, and Stensland, J. (2002). Rural hospitals: trends, challenges, and a future research and policy analysis agenda. The Journal of Rural Health, 18 Suppl., 197 - 210.

OECD (1996). Ageing in OECD countries. A critical policy challenge. OECD Social Policy Studies. Paris, Organization for Economic Cooperation and Development, 20.

Ryan-Nicolls, K. (2004). Health and sustainability of rural communities. Rural and Remote Health, 4(242), 1 - 11.

Schuler, M., Dessemontet, P., and Joye, D. (2005). Les niveaux géographiques de la Suisse. Neuchâtel, UST.

Susckmith, M., and Philip, L. (2000). Social exclusion in rural areas: A literature review and conceptual framework, Scottish Executive Central Research Unit.

Tinker, A. (2002). The social implications of an ageing population. Mechanisms of Ageing and Development, 123(7), 729 - 735.

United Nations (2001). World Population Ageing: 1950 - 2050. New York, Department of Economic and Social Affairs, Population Division.

UST (2011a). Crescita demografica in tutti i Cantoni nei prossimi 25 anni. Comunicato stampa N. 0352-1103-10. www.bfs.admin.ch [August 2012].

UST (2011b). Bilancio della popolazione residente permanente, per Cantoni e Città, nel 2011. Stato e struttura della popolazione. www.bfs.admin.ch [August 2012].

WHO (2005). Preventing Chronic Diseases. A Vital Investment: WHO Global Report. www.who.int [October 2009].

Woods, M. (2006). Redefining the 'rural question': The new 'politics of the rural' and social policy. Social Policy and Administration, 40(6), 579 - 595.

Yin, R. (2003). Case study research. Design and methods. Thousand Oaks: Sage.