Introduction:

Special Issue on Innovations in Health Care System Reform in OECD Countries

Sanni Yaya, and Georges Danhoundo,
University of Ottawa, Canada

Health care systems can be seen as a house, with financing and service provision as two pillars resting on a foundation of shared values, perceptions and guiding principles. The roof would then represent the regulation of the interactions between service providers, financing agencies, and potential beneficiaries such as patients (Rothgang et al., 2010: 11). Health care systems in the Organization for Economic Cooperation and Development (OECD) countries seem to be in a state of permanent change, i.e. they seem to continuously strive to adjust to economic, political, and social demands. Indeed, the economic recession that followed the oil price shocks of the 1970s marked the end of the Golden Age of the welfare state and triggered a range of cost containment measures in OECD countries that have continued over four decades up to the present. Currently, the OECD health care systems have to deal with a new phase of economic turmoil brought on by the most recent financial crisis (Starke, 2007). According to Rothgang and colleagues (2010), this doesn’t mean that OECD countries have had an easy time curtailing public financing and implementing reduced welfare policies. This observation is particularly meaningful for the health care sector because its legitimacy relies on its ability to provide a satisfactory standard of health care for all citizens, regardless of their ability to pay for care.

Because of demographic and epidemiological realities, as well as widening health inequalities and advancements in medical technology that increase the demand for health care, OECD countries face challenges deciding the amount of public funds that should go to health services. Consequently, there has been an increase in demand for reforms which ensure cost containment while allowing high quality health care services for populations (Rothgang et al., 2010). However, the introduction of reforms has translated into a change in the role of state health care provision, financing and regulation. Indeed, for most OECD countries, health is typically the largest area of government expenditure, after social protection, and is one of the main areas of public expenditure projected to come under additional pressure (Frisina, 2008; Hernández de Cos and Moral-Benito, 2014; Rothgang et al., 2010).

Most countries have recently adopted reforms enhancing the role of markets in their health care systems, notably through the introduction of the public contract model, competition among providers as well as among third-party purchasers, in addition to the reinforcement of consumers’ choice of provider (Freeman and Schmid, 2008; OECD, 2011). Despite enduring differences at the systemic level, most countries have reformed their health care systems along these lines. Although health systems have delivered big improvements in health, they can be
slow to adapt to new challenges. Reform efforts to date have not been sufficient to deal with many of the underlying pressures contributing to spending growth. In light of these developments, what are the characteristics of the OECD health systems? What are global health systems challenges? How does the value of money translate into health care systems? What is the role of innovation in reforming health care systems?

Characteristics of OECD health systems

The response to various socio-economic pressures have differed considerably across health care systems types; in fact OECD countries have resorted to a wide variety of institutional arrangements to provide health insurance coverage and to finance and deliver health care while responding to these pressures (OECD, 2011; Rothgang et al., 2010). Interestingly, evidence shows that OECD countries share common challenges and experiences. We release here some characteristics of OECD health care systems in relation to health care insurance and financing while also describing the relationship between insurance/financing and delivery systems.

The range of health care services covered by basic (primary) health care coverage (i.e. the first source of financial protection for health care users) and financing arrangements (e.g. user charges) for these services vary significantly across countries. Variation depends on the dimensions of health coverage and cost-sharing arrangements which include whether medical care is free at the point of care, the level of coverage for different functions of care, policies to cover people from excessive co-payment and catastrophic expenditure on health (e.g. caps on cost-sharing), as well as specific cases and possible exemptions for different population sub-groups such as children, disabled, people with chronic diseases, seniors, low-income (Rose, 2013). The three models in OECD countries are as follows: single, universal and multiple insurers. These three models exhibit different degree of competition-based reform approaches and the extent of consumer choice.

While all OECD countries have some form of publicly financed and administered health insurance programs (OECD, 2004), some forms are more predominant than others. For instance, in the United States and Switzerland, private health insurance is the dominant form of basic coverage. In Germany and the Netherlands, private health insurance is used as the primary coverage for a sizeable minority of the population. In Japan, Korea, Mexico and a number of Nordic and Eastern European countries, private health insurance policies are not commonly used. In other countries, private health insurance is used to fill gaps in the individual’s benefit package, i.e. a supplemental policy or absorb out-of-pocket payments called a complementary insurance. In Australia, Ireland, Italy, Spain and the United Kingdom, private insurance is combined with coverage provided by universal public programs. It is worth mentioning that such coverage is purchased mainly to increase choice of providers and timeliness of care (OECD, 2004 and 2011). Each approach has strengths and weaknesses, i.e. the models listed above have differential effects on equity. Indeed, evidence shows that systems based on individual premia as exhibited in standard private insurance arrangements and/or with a high degree of cost sharing result in a large share of the cost to vulnerable groups and the users of those services. This happens because income is related to health status and financing which can disproportionately affect low-income households. Financing models that rely on ability to pay, i.e. taxes or social insurance
contributions and that use a low degree of cost-sharing are generally more equitable in their financial impact and to foster greater equity of access to care (Hernández de Cos and Moral-Benito, 2014; OECD, 2004 and 2011).

The way health care financing and delivery systems are publicly administered has policy implications, particularly for cost control and efficiency (Figueras and Mckee, 2012). In spite of considerable variation within systems, OECD countries can be classified as consistent with one of the three following approaches: the public integrated model, the public contract model and the private insurance/provider model (OECD, 2004: 22). It is worth mentioning that elements of more than one of these approaches exist in most countries and that the dominant one has tended to shift under reforms.

The public-integrated model combines budget financing of health care provision with hospital providers that are part of the government sector. This model merges the insurance and provision functions and pays staff on a salary basis, although, in some cases, doctors can have private patients while serving as public-sector employees. Ambulatory doctors and other health care professionals can be either public employees or private contractors to the health care authority. This approach allows complete population coverage as well as the containment of the growth of overall costs as the system is under budget control. Nonetheless, incentives to increase output, improve efficiency or maintain quality and responsiveness to patients’ needs are weakened under this approach. Although, this does not necessarily happen in the ambulatory sector, where payment systems are more often linked to provider output (Rothgang et al., 2010).

In the public-contract model, public payers contract with private health care providers. The payers can be either a state agency or social security funds. Indeed, evidence shows that single-payer arrangements have a stronger position toward providers as in the public-integrated model and are more likely to have lower administrative costs than do multiple payers systems. In this model, the private hospitals and clinics are run on a non-profit basis and independent private contractors generally supply ambulatory care. In general, payments of providers is made on an ex post basis for service provided. This model presents the advantage of being more responsive to patient needs than public-integrated arrangements. However, it is less successful in containing health care costs, requiring additional regulation and control by the public authorities.

The private insurance/provider model uses private insurance combined with private providers. Insurance coverage can be compulsory (Switzerland) or voluntary (the United States), and in the case of the latter, affordable insurance may not be available to some individuals. In the past, payment methods have been traditional and the model is considered to be highly responsive to patient needs and offers a variety of choice. However, cost control has been weak. In terms of response, managed care plans that provide incentives for volume and price control expanded rapidly in the United Stated during the 1990s (Rose, 2013). This model displays restrictions as insurers selectively contract with competing providers and limit patient choice of providers and services.

In the next section, we examine the global health systems challenges in OECD countries.
Global health systems challenges

Whether they are universal or not, public or private, all health care systems continuously change in response to a number of socio-economic, political, legal, operational and other factors. As such, health care systems are shaped by the populations they serve (Khemani and Carlyle, 2008). OECD countries share similar challenges to health care systems as demands for health care services are rapidly increase and consequently outstrip the capacity of those systems. According to Snowdon and Chen (2011), there are three key global health system challenges posing significant strain on the health care systems of OECD countries. The three challenges are as follows: shifts in population demographics and social characteristics, balance between containing costs while maintaining access and quality and fragmented health care delivery models and bias towards acute versus chronic illness services delivery.

One of the most significant demographic factors affecting the health care systems of OECD countries is the aging population. The population of all OECD countries is aging to the point at which a large number of people have now reached retirement age (Hernández de Cos and Moral-Benito, 2014). The percentage of people greater than 65 years of age in OECD countries has increased significantly between 1990 and 2010. For instance, in Canada, the percentage of the population greater than 65 years of age is predicted to rise to 18.2 per cent by 2020. In addition to being older, people in OECD countries are living longer as the life expectancy beyond age 65 is approaching 20 years in many OECD countries (Snowdon and Chen, 2011: 11). The increase in life expectancies results in the prevalence of cognitive decline, functional impairment, disability and need for chronic illness management that increase the demand for health care services. For instance, health spending in Canada is reported to be 4.7 times higher for people greater than 65 years of age than people less than 65 years of age and accounts for approximately 40 per cent of total health spending (Snowdon and Chen, 2011: 11). Apart from the ageing population, chronic non-communicable diseases and chronic illness, the need for advanced health technologies present challenges to health systems. Indeed, the impact on health care systems of people who are obese or living with diabetes becomes obvious when considering that the long-term consequences of this burden have yet to be realized and the demand for new health technologies and related high-technology medical interventions contribute significantly to upfront health care costs required for acquisition and use of the technologies as well as any associated training and resources (Snowdon and Chen, 2011; OECD, 2011; Figureas and McKee, 2012).

A key policy challenge in most OECD countries is to improve outcomes of the health care system while containing cost pressures. In that regard, the public health care spending is projected to increase by 3.5 to 6 percentage points of GDP by 2050 in the OECD area (Joumard et al., 2010). In light of this development, exploiting efficiency gains in health care is considered to be crucial to meet rapidly growing health care demand, without putting the public finances on an unsustainable path. A number of OECD countries have addressed the growing demand for health services by putting in place many strategies related to cost containment and provide health care services within the scope of national resources. Decision makers struggle to find a trade-off between the key objectives of cost, access to care and quality outcomes that trigger population health and wellness. According to Snowdon and Chen (2011), these objectives are inextricably interwoven, and a major challenge for OECD countries today is to contain their health care costs
at a level that also affords the system’s commitments to access and quality. In many OECD countries such as Canada, U.S., France, Germany, Netherlands and Switzerland, the health expenditure has increased as they spent more than 10 per cent of their GDP on health (OECD, 2011). While these health care expenditures have not been without value, as the OECD suggests that increased spending has been largely responsible for improvements in health outcomes and life expectancies, there is no evidence that the magnitude of health care expenditure have been significantly for improvements in better access or quality of care (Hernández de Cos and Moral-Benito, 2014; Snowdon and Chen, 2011). In other words, there is no clear evidence that countries that spend more on health care, such as Canada, Switzerland and the U.S. have proportionately increased levels of consumer satisfaction or greater population health outcomes, which points to significant efficiency gaps.

Most OECD countries have failed to coordinate and integrate health care services resulting in fragmented health care services. This fragmentation is characterized by the number of venues that patients are required to visit to seek care as well as the involvement of multiple caregivers who provide different forms of care such as primary care physicians, nurses, pharmacists, specialists, medical assistants and other health professionals (Snowdon and Chen, 2011). Furthermore, the fragmentation of health care services results in long waiting times and skills in systems navigation to seek health care. In addition, Snowdon and Chen (2011) have identified the lack of integration and failure to coordinate care as a leading cause of inefficiency, resulting in waste and avoidable errors. The lack of coordination of care services represents a particular threat to preventive care and longitudinal processes for patients with chronic diseases such as the elderly and those with complex specialist needs for cardiac care, cancer treatments or diabetes management, which inevitably require services from multiple health and social care providers. OECD countries including Canada, Germany, Australia, France, Netherlands and Switzerland have a long way ahead in regard to improving the low levels of coordination and integration in their health systems. Moreover the geography of Canada and Australia poses additional challenges to their integration; a reality which has resulted in many sparsely populated, rural areas with little access to care. The lack of coordination of health care services appear as one the biggest challenges in health systems as coordination requires a holistic approach including care providers and the adoption of information and communication technologies which are costly. Implementing structural changes require different actors to hold together for common objectives. This is demanding if not challenging. However, it has to be done in OECD countries to gear towards quality health services.

The ability to face health care systems challenges in OECD countries also depends on how money is used. The next section analyzes the relationship between money expenditure and quality health care systems.

**Value for money: making health care stronger**

According to Amartya Sen, health is a constitutive part of economic growth. Health seems to be the main condition to earn income, and the people with a higher income can more easily seek medical care, have better nutrition and freedom to lead healthier lives (Sen, 2000). In
addition, the social gradient in health within countries and health inequities within and among countries are caused by the unequal distribution of power, income, goods and services, access to health care, just to name a few (Marmot, 2008). This implies, among others, a clear need to contain public spending on health care. As such, achieving value for money in the health care sector is an important objective in all OECD countries. Indeed, health care spending per capita has risen by over 70 per cent since the early 1990s in OECD countries. This translated in a significantly healthier population – as shown by increased life expectancy and lower mortality for diseases such as cancer. Indeed, life expectancy has increased, on average, by about one year every 4 years since the early 1990s. However, spending on health care absorbs on average over 9 per cent of GDP in OECD countries, though with a wide cross-country variation (OECD, 2010: 3). In fact, the countries that spend the most are not necessarily the best in terms of health outcomes, suggesting that there is scope to improve the cost-effectiveness of spending. Most OECD countries emphasize the necessity for health care spending to be more effective so that health care demand may not undermine public finances. In face of the recent crisis and their impact on public budgets, the concern for effective spending has heightened pressures for reform and made it more urgent. For example, public spending on health care is one of the largest government spending items in OECD countries. On average, it absorbed 15 per cent of general government spending in 2007 (more than 6 per cent of GDP), up from 12 per cent in 1995 (OECD, 2010: 3).

The persistent growth of health care expenditure, the cross-national variation in health care spending, and the abundant literature on health care financing rest on the relationship between health care systems and thriving economies. Indeed, the assumption that efficient health care systems trigger fiscal consolidation is common in OECD countries and research suggest that all OECD countries can get more value for money from their health care spending (Hernández de Cos and Moral-Benito, 2014). While healthier populations are important for thriving economies, it is worth asking whether health can be prioritized in the context of severe economic restriction. The trade-off between health priorities and economic pressures is not always easy to find and more research have to be conducted for quality evidence taking into variations in economic, political and social realities of OECD countries.

The increase of life expectancy appears to be the main target of health care spending in OECD countries and one assumes that on average across the OECD countries, life expectancy at birth could be raised by more than two years – holding health care spending steady – if all countries were to become as efficient as the best performers. By way of comparison, a 10 per cent increase in health care spending would increase life expectancy by only three to four months. Furthermore, it is argued that in more than one third of OECD countries, exploiting efficiency gains in the health care sector would allow improving health outcomes as much as over the previous decade while keeping spending constant. Countries such as Germany, the

United Kingdom and the United States are comprised in this group. However, in a majority of OECD countries, continuing to improve health outcomes would require increasing health care spending, though by a smaller amount than over the previous decade. It is worth mentioning that across OECD countries, there is no trade-off between achieving more equal health outcomes within countries and raising the average health status of the population and the
countries with the lowest health inequalities also tend to enjoy high health status: Iceland, Italy, and Sweden are considered as good examples.

Inequalities in health status are high in a number of OECD countries and tend to be relatively low in countries with a private insurance-based system such as Germany, the Netherlands and Switzerland (OECD, 2010). This happens because the regulations in these countries, such as the requirement on insurers to enrol any applicant and equalisation schemes across insurers to compensate for high risk enrollees, help limit the hunt for better-off patients and the desire to shed bad risks known as cream-skimming. In addition, administrative costs tend to be higher in those countries where private insurance plays the predominant role. They also exceed the OECD average by a considerable margin in Belgium, France, Luxembourg, Mexico and New Zealand, exhibiting a potential for reducing spending in these countries.

Based on evidence across OECD countries, there is no health care system that performs systematically better in delivering cost-effective health care and the efficiency estimates vary more within country groups sharing similar institutional characteristics than between groups, signalling that big-bang reforms are not warranted (Hernández de Cos and Moral-Benito, 2014; OECD, 2011). As such, it may be more practical and effective for each country to adopt the best policy practices implemented by countries in its own group while borrowing the most appropriate elements from other groups (OECD, 2010 and 2011).

The debate around a common conceptual framework for health systems performance assessment, and the development of tools to measure health systems outcomes, and to work with countries in applying these tools is far from over. While evidence is necessary in the realm of health performances, each country is specific and taking the step to measure progress across countries may require integrating social, historical and economic variables.

Reforming health care systems through innovation

The health systems of OECD countries exhibit a rich platform of innovation in areas such as community-based health care services delivery, primary health care services management, consumer engagement, the utilization of health information technology and system integration. There is very limited empirical evidence on the impact of the innovative approaches at the health system level in any of OECD countries. Despite a number of very transformative changes in health services in these countries, there has been limited evidence of the impact of change and innovation on either population health outcomes or the productivity and efficiency of health systems. In addition, although a number of countries have made impressive strides in various areas to improve the quality of care delivered and health outcomes for the population, no country has managed to completely transform their health system to achieve sustainability (Snowdon and Chen, 2011: 67).

In regard to primary health care, a number of OECD countries have shifted health care services from a dominant acute care sector model to a more robust community-based health care service delivery model (for example Australia, Canada, Netherlands, Germany). In regard to Netherlands, consumers are highly engaged with a scope to manage their own health care
services and to take advantage of market competition to reduce costs and stimulate competitive approaches to health care service delivery. Primary health care information consists of restructuring accountability for how physicians offer care and chronic illness management by resorting to financial models that incentivize and support consumer engagement. The primary health care innovation also consists of mobilizing health services to keep patients at home, improving quality of health care in the community and avoiding hospitalization. The chronic illness management is part of the primary care innovation in a number of OECD countries. For example, disease management programs have been highly successful in incentivizing both physicians and patients to engage in quality management of chronic illness in Germany. For example, France has directed its innovation initiatives on ensuring that health care plans are made mandatory for chronic illness patients by exempting these patients from co-payments on their treatments. Most primary care innovations values health IT in the form of Smart Cards engaging consumers further in managing and communicating their own health information, even though complete adoption of this IT strategy has not been fully realized (Snowdon and Chen, 2011: 45).

The consumer engagement model has been set up differently across the OECD countries. In Netherlands, consumers manage their personal health budget to plan and negotiate their own personal health care services, i.e. consumers coordinate their own health care services and decide who will provide their care and for what price. Thus, consumers have a clear and active decision-making role in managing their own health care. The consumer-directed model allows consumers to control and have responsibility in coordinating their own care by making their own choices in selecting service providers and hiring care staff using either spending vouchers/credits or the cash provided to them. In Switzerland, the consumer engagement is geared toward health literacy and the competencies required engaging patients and educating them in ways to reduce unnecessary consumption of health care services (OECD, 2011; Snowdon and Chen, 2011).

A number of OECD countries have implemented innovation strategies in integrated care. For example, the U.K. has implemented the Unique Care Program. This program combines both social services and health services to support vulnerable populations such as frail, elderly and high risk populations to help maintain health and independence at home. This innovation helps reduce the rate of hospitalization and emergency department admissions. According to Snowdon and Chen (2011), Unique Care is a case-management approach that focuses on people who are at-risk for entering into a hospital for chronic illness management. This approach relies on both social services and health care and has proved to fit the health and wellness needs of vulnerable populations. In addition, it relies on educating existing personnel already involved with the patient’s treatment in an attempt to promote care coordination between health professionals within the system. In the United Sates, the Geisinger Health System in Pennsylvania is an integration pioneer. According to Snowdon and Chen (2011), the Geisinger Health System operates on a so called hub and spoke model of 250 primary care physicians located within community (spokes) and 450 specialists located in major hospital (hubs) which streamlines communication between acute and primary care providers. Geisinger provides for round-the-clock primary and specialist care, nurse care coordinators, virtual care-management support, home-based monitoring and a personal care navigator to respond to inquiries and manage care in the community.
OECD countries such as Canada, Australia and the U.K. have geared toward health IT. Indeed, telehealth technology has proved to facilitate the transition of a primarily acute care system to a decentralized health care delivery model in communities. For example, Australia has implemented a telehealth initiative since June 2011 and consultations via video conferencing are fully funded by the Medicare system. In addition, Australian government has initiated an incentive system to encourage physicians to use telehealth technology in their practice including startup costs of installing the technology and compensation for physicians who use telehealth for consultations. In Canada, Ontario’s telemedicine network (OTN) is considered as one of the largest in the world with access available from all hospitals and numerous other health care facilities across the province. In addition to providing for clinical care of patients in remote areas of the province, the network assists in providing access to distance education. The network provides for both live, web-based conferencing as well as a store-and-forward service allowing for delayed review of clinical images and data by specialist consultants (Snowdon and Chen, 2011).

Overview of contents

This special issue focuses on innovations in health care system reform in OECD countries. It aims to shed light on evidence of innovation and its impact on health systems and to place them into perspective. Indeed, international experiences and innovations in health care reforms can offer an opportunity for countries to learn from each other’s experiences in funding and managing health care systems, despite the well-documented differences between them in medical culture, health care institutions, and in actual medical practices.

In the first article Key Competencies for Promotion Service Innovation and Implications for the Health Sector, Temidayo. O. Akenroye and Christoph W. Kuenne shed light on the essential competences to promote service innovation. The article is based on systematic review of literature and studies on the topics of service improvement and innovation which have been published in various journals. Using current knowledge from the literature, the authors identify seventeen competences for aiding service innovation and classify the competences into five organisational practices for promoting service innovation: knowledge management, employees’ engagement and users’ empowerment, cooperation & collaboration, effective leadership and agility. The authors discuss the implications of the findings for the health sector and future research.

In L’appropriation des innovations managériales par les établissements de santé : à propos du rôle des agences régionales. L’exemple de l’utilisation des données de performance, Touati, N. and Brabant, B. examine the usage of performance data by Heath institutions. Based on qualitative research conducted in Quebec on a health district that has promoted the use of performance data, the article analyze the roles entrusted to health district offices. The authors shed light on the capital gain associated with following-up organizations and presented challenges related to the implementation of the new framework designed by district health offices.
In *How New Governance Shapes Changes in the Long-Term Care Home Sector in Ontario, Canada*, Poland Lai examines the insights of New Governance in order to explain how law was used to promote innovations in health care governance in the Canadian province of Ontario between 2004 and 2012. New Governance refers to a family of approaches that are more flexible and less prescriptive. The author’s research includes review of government documents, legislation and other sources in order to identify changes to regulation and governance. The article also draws upon interviews with seven organizations in the sector, which were conducted as part of a larger project to help contextualize and explain the changes in law. The author argues that, while the formal legal and regulatory apparatus continue to be used to regulate the provision of care and treatment, New Governance approaches represent additional processes and procedures to problem-solve challenges in the sector. Law is being used to formalize or strengthen these processes and procedures in order to allow long-term care home residents, families, friends, and workers to participate in problem-solving. This increasing emphasis on processes can be understood as an attempt to broaden the scope of possible solutions and changes that could be implemented in the sector. For future research, the author suggests that more attention be paid to interrogating the relationships that enable New Governance techniques.

In *Systemic Innovation Model Translated into Public Sector Innovation Practice*, Juha Koivisto, Pasi Pohjola and Niina Pitkänen explore a systemic innovation model and its translation into public sector innovation practice in the welfare and health field. This systemic innovation model has been developed in the Innovillage project (2009-2013) and it has been incorporated into an open web-based development environment for enabling and enhancing collaborative innovation activity. Innovillage is a national innovation community for innovation activities in the welfare and health field in Finland. The article argues for a systemic and collaborative innovation practice where the “relevant” actors with respect to the object of development co-design, co-develop and co-enact the object through the innovation process. The article consists of three parts. The first part defines the basic concepts and content of the systemic innovation model. The second part describes the structure of the web-based development environment for enabling and enhancing collaborative innovation activity. The third part analyses the user experiences of collaborating and co-developing in the web-based environment. In the discussion implications are drawn, on the basis of the analysis of user experiences, for the further development of the systemic innovation model, web-based development environment and public sector innovation practice. In *Innovation through Public-Private Partnerships in the Greek Healthcare Sector: How is it achieved and what is the current situation in Greece?*, Konstantinos Biginas and Stavros Sindakis analyze the public-private partnerships in the Greek heath care sector, as well as the impact of this entrepreneurial activity to the development of innovation. The primary focus of the article is to provide a complete and updated picture of the institution of the PPPs and to evaluate PPPs as an alternative means of production of public works and services. Furthermore, it attempts to compare the implementation of the PPPs in several projects across different European countries and provide an overview of the Greek experience of the PPPs. Finally, the evaluation of the institution of the PPPs along with suggestions for future action aimed at profit maximization, better utilization of the projects and maximization of social benefits are made, taking under consideration the ever-increasing demands and special socio-economic circumstances of our contemporary society.
About the authors

**Sanni Yaya, Ph.D.** is Associate Professor of Economics and International Health at the University of Ottawa’s Interdisciplinary School of Health Sciences. His research interest includes the design and implementation of health systems reforms and their impact on outcomes. He can be contacted at sanni.yaya@uOttawa.ca

**Georges Danhoundo, Ph.D.** is Part-Time Professor in Sociology at the School of Sociological and Anthropological Studies, University of Ottawa. His research focuses on malaria in pregnancy, health systems, maternal, newborn and child health in West Africa. He can be contacted at gdanhoun@uOttawa.ca

References


