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EDITORIAL

Reflections on the Liberian Civil War, 1989-2003

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Conflicts of interest: None.

The generation which experienced war in Europe – World War II – is passing away and with it those who can tell ‘in their own words’ from war experience and trauma. On the other hand accelerating globalization confronts us with a series of armed conflicts all over the world. The civil war in Liberia was one of these. All of the possible fuelling factors were brought to bear on it: ethnic differences, economic domination by a ruling class - the progeny of the freed slaves in 1822, and the long litany of misrule by various administrations crowned by the execution of predominantly people of American descent in the 1980 coup d’état, all set the stage for a final showdown.

The conflict involved eight armed factions fighting for dominance and lasted with a short interruption from 1989 to 2003. Whereas, for example in Germany, there is an abundance of literature describing and analyzing personal and social experience during the war[for example translated into English (1)]; it is not so in Liberia. The veterans of the various rebel groups and even former members of the regular army usually live in very poor conditions and those invalidated populate begging the streets. Furthermore there are thousands of civil victims and especially an estimated 10-15% of the female population raped, more than half a million (out of a population of about four million at the time) were killed (2) and close to one million dislocated.

Although people have generally enjoyed peace in Liberia for over a decade by now that peace can still be described as fragile. Every year one can observe signs of simmering instability when ex-combatants make threats on radio and in newspapers that they will disturb the peace in the country for claims of perceived benefits they have against the Government - in concert with left behind widows and children and their disabled comrades. The condition of those who are physically or mentally disabled is appalling, the standard of living at the edge as usually there is no income; the acquisition of a daily meal becomes a problem. They are considered by the national community to be responsible for the atrocities and the suffering of the civilian people although they were often in the child and adolescent age when entering the armed factions, hardly mature enough to discern between what was right and what was wrong to do even in a war situation (3).

Different from the reaction on the Ebola epidemic (4) which posed a threat to themselves, the international community has rarely taken notice of the victims of the civil war in Liberia and few people seem to be concerned about the abundance of psychiatric disease including Posttraumatic Stress Disorder. Even less realized is the threat of further social disruption as any organized reconciliation process involving ex-combatants is missing. Documented experience in Europe and notably Germany shows war traumata handed over through several generations, from the parents experiencing war to their children and even grand-children, a threat for social stability and cohesion: ‘Because of the war my parents simply did not experience that the world is a safe place where one can feel well and protected. And exactly the same feeling I ascertained in myself although there was no external inducement’ [own translation (1)].

To listen to the ostracized invalids from the civil war and take note of what they have to say is the aim of the explorative study by Aloysius Taylor hoping to initiate public discussion aimed at healing the Liberian society.

References

1. BodeS. The Forgotten Generation – The War Children Break their Silence. Klett-Cotta, Stuttgart; 2004. https://www.sabine-bode-koeln.de/war-children/the-forgotten-generation/.
2. EdgertonRB. Africa’s armies: from honor to infamy. Amazon; 2004. https://www.amazon.co.uk/Africas-Armies-Infamy-Robert-Edgerton/dp/0813342775.

3. KokuloFasuekoi J. A Journalist’s Photo Diary. Auto-publication, date unknown, Monrovia, Liberia. https://www.barnesandnoble.com/w/rape-loot-murder-james-kokulo-fasuekoi/1105497189?ean=9781468591620.
4. Gostin LO, Lucey D, Phelan A. The Ebola Epidemic: A Global Health Emergency. JAMA 2014;312:1095-6.

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ORIGINAL RESEARCH

Introduction of the European Union case definitions to primary care physicians has improved the quality of communicable diseases notification in Tuzla, Bosnia and Herzegovina

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Abstract

Aim: The Public Health Reform II project was implemented in Bosnia and Herzegovina from December 2011 to December 2013 and was funded by the European Union Aid schema. The principal aim of the project was to strengthen public health services in the country through improved control of public health threats. Workshops for primary care physicians were provided to improve the situation and increase communicable diseases notification rates in eight selected primary care centres. They were followed with visits from the project's implementing team to verify the effects of trainings.

Methods: The quality of notifications from physicians in Tuzla region was compared before and after the workshop. The timeliness was used as an indicator of quality. Medians of timeliness before and after the training were compared by use of Wilcoxon test, whereas the averages of timeliness were compared by use of the t-test.

Results: There were 980 reported cases, 80% before the training and 20% after the training. A lower median of timeliness for all the reported cases after the training was statistically significant compared to the median value before the training. A similar picture was revealed for specific diseases i.e. tuberculosis and enteritis, not so for scarlet fever and scabies.

Conclusion: The significant reduction in time response between the first symptoms and disease diagnosis indicates the positive impact of the training program in Tuzla. Hence, primary care physicians provided better quality of reported data after the training course.

Keywords: Bosnia and Herzegovina, communicable diseases notification, surveillance, timeliness, Tuzla.

Conflicts of interest: None.

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Introduction

Surveillance on communicable diseases is defined as an ongoing, systematic collection, analysis, interpretation and dissemination of infectious disease data for public health action (1,2). Effective surveillance provides information on infections that are the most important causes of illness, disability and death, populations at risk, outbreaks, demands on health care services and effectiveness of control programs so priorities for prevention activities can be determined (3,4).

The primary aim of infectious diseases surveillance is to eliminate and eradicate disease incidence with two core functions: early warning system for outbreaks and early response to disease occurrence, known also as epidemiological intelligence. An early warning and response system for the prevention and control of communicable diseases is essential for ensuring public health at the regional, national and global levels. Recent cases of severe acute respiratory syndrome, avian influenza, haemorrhagic fevers and especially the threats arising from the possibility of misuse of biological and chemical agents demonstrate the need for an effective system of surveillance and early warning at national level providing a higher data structure (5-7).

The structure of surveillance system is based on the existing legislation, goals and priorities, implementation strategies, identification of stakeholders and their mutual connections, networks and partnerships and also capacity for disease diagnosis. Primary care physicians or general practitioners who provide the first contact with a patient play a crucial role in the system. The surveillance system relies on the detection of communicable disease in the patients and disease notification (8-10).

The project Public Health Reform II (Europe Aid/128400/C/SER/BA)was implemented in Bosnia and Herzegovina from December 2011 till December 2013 and was funded by the European Union Aid schema. Its principal aim was to strengthen public health services in the country through improved control of public health threats. One of the three components of the project dealt with enhancing and improving assessment of global public health and the system of communicable diseases notification.

Based on an interest from regional public health authorities, eight of them were selected to participate in some workshops. Interviews with general practitioners in each region were taken during the initial phase of the activities. Professionals who were interviewed indicated the following challenges for the surveillance system they contribute to: the list of mandatory notified diseases too long, clear case definitions and rationale for surveillance missing, mixture of case-based (11) and syndromic surveillance (12), lack of capacity for cases confirmation and a low level of communication among all surveillance stakeholders.

The interview findings led to organization of workshops for primary care physicians in eight primary health care centres during March 2013. The aim was to improve the situation and increase notification rates. It was expected that acquiring deeper insights into the role of disease notification would lead to an increased effectiveness of the surveillance system. Outcomes from the effort to improve the quality of notifications in the region of Tuzla are reported in this paper. Physicians from the county were invited in cooperation with the local public health office and notifications were stored in electronic format. This set-up of the endeavour was uniformly repeated across all the eight regions of Bosnia and Herzegovina.

Methods

Study design

The study was designed with the aim of revealing potential effects of updating primary care physicians with details of surveillance. Thus, a cohort of primary care physicians was used to follow the effects. Selection of participants was on the basis of interest. No attempts to randomize were undertaken. The project collected baseline data on notification from the database maintained by the Tuzla epidemiologists for year 2012 up to February 2013. The workshop was carried in March 2013. The project attempted to keep contact with participants by email and bypersonal visits. Data from the same source were collected until October 2013. There were 20 participants at the first workshop. Estimating the proportion from the total of those who serve the region was not possible because of the lack of data. However, the total number of general practitioners listed in 2014 was 378 physicians (13) as our participants were mostly from offices within the city of Tuzla. Our estimate is based on the average number of citizens per general practitioners (GPs) in the region which is 1263 inhabitants per GP. Tuzla has 120441 inhabitants according to the census from 2013, which results in about 95 general practitioners in the city. Hence, participation in the workshop represents approximately 21% of all primary care physicians in Tuzla.

Workshop

The workshop started with an introduction of aims and expected outcomes. Assessment of knowledge on surveillance, disease reporting and attitudes to disease notification followed. Principles of communicable disease surveillance and use of case definitions with emphasis on importance of surveillance, techniques, categories and use of the EU case definitions were presented by the project. Following discussion dealt with everyday problems and opinions on the system of surveillance as well as the use of the EU case definitions. At the end of the workshop each participant received a copy of the EU case definitions, translated into the local language. Local management of primary health care centres and people from epidemiology department were also invited to participate as observers.

All data were anonymised and no ethical considerations were identified.

Data processing

The timeliness for notifications obtained from primary care physicians in the town of Tuzla was compared before and after the workshop. The timeliness was used as an indicator of quality, as it reflects the speed between steps in a public health surveillance system (14).

We chose the following definition of timeliness out of several options: *"Average time interval between date of onset and date of notification by general practitioners/hospital (by disease, region and surveillance unit). It means time interval between the first symptoms of diseases and reporting"*, as defined by the ECDC (15). Timeliness was computed from dates stated in individual notifications separately for those noted before and after the workshop.

The file was sorted based on the ICD-10 diagnosis stated by the physician notifying the case and laboratory confirmation. Timeliness was computed for all the diagnoses as well as selected ICDs for tuberculosis (A15), scarlet fever (A38), enteritis (A09) and scabies (B86).

Differences in medians before and after the workshop were compared by use of the two-sample Wilcoxon Rank Sum Test and Signed Rank Tests and the average values were compared by the two-sample independent t-test from the R project (16), with a level of statistical significance set at $P \leq 0.05$.

Results

As Table 1 illustrates, the sample comprised 980 reported cases, 784 (80%) were before the training and 196 (20%) were reported after the workshop.

In total, 147 primary care physicians reported syndromic diagnosis of a communicable disease case (140 before the workshop and 69 after the workshop).

Table 1. Timeliness for notified cases before and after the workshop

Total sample				
Sample	**Total**	**Before**	**After**	**P-value**
Total Cases	980	784	196	
Median	1	6	1	0.030*
Average	12	20.2	9.2	0.039†
Maximum	152	152	133	
Minimum	0	0	0	
Tuberculosis				
Sample	**Total**	**Before**	**After**	**P-value**
Total Cases	159	99	60	
Median	58	60	13	0.014*
Average	57.1	57.6	27	0.019†
Maximum	152	152	133	
Minimum	0	0	0	
Enteritis (A09)				
Sample	**Total**	**Before**	**After**	**P-value**
Total Cases	132	86	46	
Median	2	3	2	0.035*
Average	3.7	3.2	2.7	0.065†
Maximum	41	41	23	
Minimum	0	0	0	
Scarlet fever (A38)				
Sample	**Total**	**Before**	**After**	**P-value**
Total Cases	33	17	16	
Median	0	1	0	0.487*
Average	1.8	1.6	1.5	0.611†
Maximum	13	13	13	
Minimum	0	0	0	
Scabies (B86)				
Sample	**Total**	**Before**	**After**	**P-value**
Total Cases	98	71	27	
Median	0	1	0	0.512*
Average	1.7	3.9	2.7	0.481†
Maximum	37	37	13	
Minimum	0	0	0	

*P-values from Wilcoxon test.

†P-values from t-test.

The difference in medians of timeliness for the total sample (Table 1) indicates a reduction from 6 days to 1 day following the workshop; the average of the indicator was reduced to one half. The difference was statistically significant for both the median value (p=0.03) and the mean value (p=0.04). The reduction for notified cases of tuberculosis was more pronounced. It went down from a median of 60 days to 13 days (p=0.01), whereas the mean from 57.6 days to 27.0 days and this difference was statistically significant too (p=0.02).

The median of timeliness notification for enteritis cases was significantly lowered after the workshop from 3 days to 2 days and this difference was statistically significant (p=0.03). Furthermore, this difference was also evident in the comparison of mean values.

There were no significant differences in both median and mean values in the timeliness for scarlet fever and scabies before and after the workshop (Table 1).

Discussion

The surveillance system in Bosnia and Herzegovina suffered after the war. It is not stabilized yet, experiencing lack of funds, and it is both organizationally as well as politically divided. It is run on a regional basis, where all primary care physicians are legally required to notify cases based on syndromic diagnosis. Such a system is characterized by underreporting due to lack of responsibility and weak supervision from authorities. Nevertheless, some authors have demonstrated positive effects of an information campaign on improved notifications in a province of Vojvodina, Serbia (17) where public health services operate in a similar environment to Bosnia and Herzegovina.

This project in Bosnia and Herzegovina aimed to increase syndromic notification rates through focused workshops as an example for regional epidemiologists how to continue with improving quality of the surveillance. However, we are aware that the quality consists of a multidimensional character and the timeliness is only one of them. Thus, using it for a proxy of quality has its limitations. Timeliness of a surveillance system depends on a number of factors and its assessment should include a consideration of how the data will be used and is specific for individual diseases under surveillance (3,18). Other indicators of timeliness are also available, such as the average time interval between the date of outbreak notification and the date of the first investigation or proportion of outbreaks notified within 48 hours of detection and the like. Obtaining a comprehensive assessment of surveillance quality requires considering more attributes, such as sensitivity, representativeness, usefulness, simplicity, acceptability and flexibility (15,19). Therefore, even so, this report demonstrates a significant reduction in notification time between syndromic diagnosis and notifications, and the quality improvement was achieved incompletely. Another opened question is whether or not achievements are to be sustained. Nevertheless, the changes in notifications were observed after the workshops, based on a follow-up evaluation.

Our findings are congruent with similar studies where timeliness of disease notification was also followed and reported, before and after some type of intervention with a main aim to reduce time response between two steps in the process of reporting. Implementation of electronic laboratory reporting resulted in reducing the median of timeliness to 20 days versus 25 days for non-electronic laboratory reporting (20). Another study has demonstrated reduced median of timeliness for notifications by 17 days from the year 2000 to 2006 with a higher rate of notification completeness (21).

The importance of increased interaction between primary care physicians and surveillance professionals in notifying communicable diseases was demonstrated in our study, as well. Providing case definitions from the EU and along with the local ones was appreciated and probably contributed to improved notification rates. The fact that standard case definition is a premise for data quality and validity (22) was reconfirmed with similar studies reported (23,24), where increased dedication to reporting with data quality- timeliness and completeness was observed. There are factors which are beyond the influence of physicians, such as patient’s awareness of symptoms, patient’s search for medical care, capacity for case confirmation, reporting of laboratory test results back to the physician and to other surveillance stakeholders and public health agencies, which limit the validity of interpretation of the findings, too. Another limitation stems from the limited time of the study, where 80% of cases were reported before the workshop and 20% of cases were notified after the workshop. Another serious limitation of this study stems from the design used. Given the specific audience we worked with, namely general practitioners from various parts of the administrative area, the selection of the study participants was "on the basis of interest". As an EUROPEAID project we had no other choice. Therefore, the results based on such constrained participation should not be utilized with valid statistical inference on the level of population. The sample representativeness may seriously affect the generalizability (external validity) of the findings. Nevertheless, the study was intended to be more of a pilot nature, demonstrating the feasibility of monitoring the quality of the surveillance system.

Communicable disease surveillance is the first step towards prevention and it is one of the most important tools used in public health. The surveillance system should be regularly evaluated in terms of usefulness and quality by defined standards and recommendations. In this report, we shared results of the surveillance system evaluation in Tuzla, Bosnia and Herzegovina by using one of quality standards- timeliness of disease notification before the training and after the training. This study underlined the importance and effectiveness of increased communication and feedback procedures between primary care physicians and surveillance professionals, use of standard case definition and surveillance evaluation. The identified outcomes of evaluation should be the basis for setting priorities and activities to improve the quality and effectiveness of the surveillance system.

References

1. World Health Organization. Communicable disease surveillance and response systems. Geneva, Switzerland; 2006. http://www.who.int/csr/resources/publications/surveillance/WHO_CDS_EPR_LYO_2006_2.pdf (accessed: 29 March, 2017).
2. World Health Organization. Recommended Surveillance Standards (second edn.). Geneva, Switzerland; 1999. http://www.who.int/csr/resources/publications/surveillance/whocdscsrisr992.pdf (accessed: 29 March, 2017).
3. Centres for Disease Control and Prevention. Progress in improving state and local disease surveillance – United States, 2000–2005. Atlanta, USA; 2005. http://www.cdc.gov/MMWR/preview/mmwrhtml/rr5013a1.htm (accessed: 21 July, 2015).
4. Lemon SM, Hamburg MA, Sparling FP, Choffnes ER, Mack A. Global Infectious Disease Surveillance and Detection: Assessing the Challenges- Finding Solutions. Washington, DC: The National Academies Press; 2007.
5. European Centre for Disease Control and Prevention. Surveillance objectives. Stockholm, Sweden. http://ecdc.europa.eu/en/activities/surveillance/Pages/surveillance_objectives.aspx (accessed: 29 March, 2017).
6. Weinberg J. Surveillance and control of infectious diseases at local, national and international levels. Clin Microbiol Infect 2005;11:11-4.
7. Rolfhamre P, Grabowska K, Ekdahl K. Implementing a public web based GIS service for feedback of surveillance data on communicable diseases in Sweden. BMC Infect Dis 2004;4:17.

8. Jamison DT, Breman JG, Measham AR, Alleyne G, Claeson M, Evans DB, et al. Disease Control Priorities in Developing Countries, 2nd edition. Washington DC: World Bank; 2006.
9. Baker MG, Fidler DP. Global Public Health Surveillance under New International Health Regulations. Emerg Infect Dis2011;7:1058-63.
10. Souty C. Improving disease incidence estimates in primary care surveillance systems. Popul Health Metr 2014;19:12.
11. WHO. WHO Technical consultation on event-based surveillance- Meeting report. Lyon: France; 2013. http://www.episouthnetwork.org/sites/default/files/meeting_report_ebs_march_2013_final.pdf (accessed: 29 March, 2017).
12. Henning, KJ. What is syndromic surveillance. MMWR Morb Mortal Wkly Rep 2004;53:7-11.
13. Institute for Public Health FB& H. Health statistics annual Federation of Bosnia and Herzegovina. Sarajevo; 2013. http://www.zzjzfbih.ba/wp-content/uploads/2009/02/Zdravstveno-statisticki-godisnjak-FBiH-20121.pdf (accessed: 29 March, 2017).
14. Thackers SB, Stroup DF. Future directions for comprehensive public health surveillance and health information systems in the United States. Am J Epidemiol 1994;140:383-97.
15. European Centre for Disease Control and Prevention. Data quality monitoring and surveillance system evaluation – A handbook of methods and applications. Stockholm, Sweden; 2014. http://ecdc.europa.eu/en/publications/publications/data-quality-monitoring-surveillance-system-evaluation-sept-2014.pdf (accessed: 29 March, 2017).
16. The R Project for Statistical Computing. Vienna, Austria.http://www.R-project.org/ (accessed: 29 March, 2017).
17. Duric P, Ilic S. Quality of infectious diseases surveillance in primary health care. Sri Lank J Infect Dis 2012;2:37-46.
18. Yoo HS, Park O, Park HK, LeeEG, Jeong EK, Lee JK, et al. Timeliness of national notifiable diseases surveillance system in Korea: a cross-sectional study. BMC Public Health 2009;9:93.
19. Buehler JW, Hopkins SR, Overhage JM, Sosin DMT. Framework for evaluating public health surveillance systems for early detection of outbreaks: recommendations from the CDC Working Group. MMWR Recomm Rep 2004;53:1-11.
20. Samoff E, Fangman MT, Fleischauer AT, Waller AE, Macdonald PD. Improvements in timeliness resulting from implementation of electronic laboratory reporting and an electronic disease surveillance system. Public Health Rep 2013;128:393-8.
21. Jansonn A. Timeliness of case reporting in the Swedish statutory surveillance of communicable diseases 1998-2002. Scand J Infect Dis 2004;36:865-72.
22. Jajosky RA, Groseclose S. Evaluation of reporting timeliness of public health surveillance systems for infectious diseases. BMC Public Health 2004;4:29.
23. Turnberg W, Daniell W, Duchin J. Notifiable infectious disease reporting awareness among physicians and registered nurses in primary care and emergency department settings. Am J Infect Control 2010;38:410-13.
24. Keramarou M, Evans MR. Completeness of infectious disease notification in the United Kingdom: A systematic review. J Infect 2012;64:555-64.

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ORIGINAL RESEARCH

Enhancing health system's governance through demographic and health surveys in transitional European countries: The example of Albania

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Abstract

To inform policymakers well, there is a need to promote different types of health examination surveys as additional sources of valuable information which, otherwise, would not be available through routine/administrative statistics. This is especially important for former communist countries of South Eastern Europe including Albania, where the existing health information system (HIS) is weak.

Among many efforts to strengthen the HIS in Albania, there is currently a commitment to undertake a second round of a nationwide Demographic and Health Survey (DHS). This survey will involve a nationwide representative sample of about 17,000 private households, where all women aged 15-59 years and their respective partners will be interviewed and examined.

Externally, the upcoming Albanian DHS will contribute to the European Union accession requirements regarding provision of standardized and valid health information. Furthermore, the DHS will considerably enhance the core functions of the Albanian health system in line with the WHO recommendations. Internally, the DHS will promote societal participation and responsibility in transitional Albania. Importantly, the forthcoming survey will promote good governance including transparency, accountability and health system responsiveness. Also, the DHS will allow for collection of internationally valid and standardized baseline socio-demographic and health information for: assessment of future national trends; monitoring and evaluation of health programs and interventions; evidencing health disparities and inequities; and cross-national comparisons between Albania and different countries of the European Region. Ultimately, findings of the DHS will enable rational decision-making and evidence-based policy formulation in Albania including appropriate planning, prioritization and sound resource allocation. However, transfer of the information collected and implementation in public health policies and interventional programs is rather challenging for most of the countries, particularly for transitional post-communist countries of South Eastern Europe including Albania.

Keywords: Albania, Demographic and Health Survey (DHS), health examination survey, health information system, health interview survey, health system governance.

Conflicts of interest: None.

The need to strengthen health information systems

A "health information system" (HIS) is conventionally defined as a system which collects, stores, processes, conducts analysis, disseminates and communicates all the information related to the health status of the population and the activities and performance of health institutions and other health-related organizations (1). From this point of view, a suitable and well-designed HIS incorporates data generated from routine information systems, disease surveillance systems, but also laboratory information systems, hospital and primary care administration systems, as well as human resource management information systems (1,2). The ultimate goal of a well-functioning HIS is a continuous and synchronized endeavor to gather, process, report and use health information and the knowledge generated for the good governance of health systems; in other words: influence policy and decision-making, design activities and programs which eventually improve the health outcomes of the population, but also contribute to more efficient use of (often limited) resources (1,3,4). At the same time, the evidence generated from HIS may suggest the need for further research in certain areas (1,5). Nevertheless, a major prerequisite for a good health system governance consists of a wide array of valid and reliable data, which are not often available from a traditional (routine) or administrative HIS (2,6).Therefore, there is a clear need to promote different types of health examination surveys and health interview surveys as valuable sources for generation of additional health information which, otherwise, would not be available based on routine/administrative statistics. This is important in any health care system, where reforms are underway constantly (7).

Health examination surveys and health interview surveys

Issues related to the quality of life of individuals, patient satisfaction of health care delivery, knowledge, attitudes, perceptions, or beliefs of individuals, as well as health literacy levels in general are all important components which should be measured at a population level in order to design and tailor health strategies and policies accordingly (1,3). From this perspective, health examination surveys are a powerful tool which enrich a certain HIS and provide useful clues about the health status of populations, quality of life, as well as access, utilization and satisfaction with health care services. In this framework, the European Health Examination Surveys (EHES: http://www.ehes.info/) and the European Health Interview Surveys (EHIS: http://ec.europa.eu/eurostat/web/microdata/european-health-interview-survey) constitute two major exercises which are carried out in most countries of the European Union (EU). Indeed, health examination surveys and health interview surveys are conducted periodically in most of the EU countries generating important evidence about the magnitude and distribution of selected ill-health conditions and health determinants at a population level.

Based on the unique value of health examination surveys and health interview surveys, there is a clear call for undertaking a similar exercise also in transitional former communist countries of South Eastern Europe including Albania.

Country profile: Albania

After the collapse of the communist regime in early 1990s, Albania has undergone significant political, social and economic changes striving towards a market-oriented economy (8). Nevertheless, the particularly rapid transition from state-enforced collectivism towards a capitalistic system was associated with poverty, high unemployment rates, financial loss and social mobility, and massive emigration (9). At the same time, however, the transition period in Albania was associated with increased personal and religious freedom in a predominantly Muslim secular society (8,10). All these features continue to spot Albania as a distinctive country in Europe, notwithstanding the similarities in many characteristics with other transitional countries in the Western Balkans and beyond. The health care sector has suffered substantially during the transition period and there has been a significant change in the epidemiological profile of the population in the past few decades with a remarkable transition towards non-communicable diseases (NCDs) (11,12). Indeed, there is a tremendous increase in the total burden of NCDs in Albania including heart disease, cancer, lung and liver diseases, and diabetes (11,12). Against this background, there is an urgent need for an integrated approach for both prevention and improvement of health care in order to face the high burden of NCDs in transitional Albania (12).

In any case, the existing HIS in Albania has insufficient routine health data for a valid and reliable analysis of disease trends and the associated risk factors. The first round of a nationwide Demographic and Health Survey (DHS) in Albania was conducted in 2008-2009 (13). Almost ten years later, there is currently an urgent need to carry out a second DHS round which would generate valuable information regarding selected key socio-demographic characteristics and health data of the Albanian population, which are otherwise not available based on routine/administrative statistics. Not only that with new data new needs for priorities in the health system governance can be identified, but the changes and potential effects of health policy decision-making of the last years can be measured too.

The Albanian Demographic and Health Survey (DHS) 2017-2018

Among many efforts to strengthen the HIS in Albania, there is currently a commitment to undertake a second round of a nationwide DHS. The upcoming round of DHS in Albania will be implemented by the National Institute of Public Health and the Institute of Statistics with technical support from the US-based company ICF International (https://www.icf.com/). Funding has been already provided by the Swiss Cooperation and the United Nation agencies operating in Albania.

The DHS will involve a nationwide representative sample of about 17,000 private households. All women aged 15-59 years and their respective husbands/partners living permanently in the selected households or present in the household on the night before the survey visit will be eligible to be interviewed in the DHS.

The specific objectives of the DHS will be to: i) collect data at a national, regional and local level which will allow the calculation of key demographic rates; ii) analyze the direct and indirect factors which determine the level and trends of fertility and abortion in Albania; iii) measure the level of contraceptive knowledge and practice of Albanian men and women; iv) collect data on family health including immunization coverage among children, prevalence of most common diseases among children under five and maternity care indicators; v) collect data on infant and child mortality and maternal mortality; vi) obtain data on child feeding practices including breastfeeding, collect anthropometric measures to use in assessing the nutritional status of children including anemia testing; vii) measure the knowledge and attitudes of women and men about sexually transmitted diseases and HIV/AIDS; viii) assess key conventional risk factors for NCDs in Albanian men and women aged 15-59 years including dietary patterns and nutritional habits, smoking status, alcohol consumption, physical activity, systolic and diastolic blood pressure, and measurement of anthropometric indices (height and weight, as well as waist and hip circumferences).

The data collected will be scientifically analyzed and scientific reports and policy briefs will be subsequently written and disseminated for a wide audience including health professionals, social workers, policymakers and decision-makers, as well as the general public. In addition, the open data source approach will enable secondary (in-depth) analysis to all interested researchers and scientists all over the world.

Contribution of the Demographic and Health Survey (DHS) to health system governance in Albania

Table 1 presents the potential contribution of the upcoming Albanian DHS at different levels (international, national, regional, and local level), recognizing that different actors of health system governance which are located at different levels, yet, interact with each-other (14,15). Selected potential contributing characteristics (features) include different dimensions pertinent to both, the international environment and cooperation, as well as the internal (national) situation/circumstances.

Table 1. International relevance and contribution of the "Albanian Demographic and Health Survey 2017-18" to governance processes at national, regional and local levels

INTERNATIONAL RELEVANCE	
Characteristic	**Description**
European Union	Fulfillment of accession requirements, and contribution to the "Europeanization" process of Albania
World Health Organization (WHO)	Strengthening of the core functions of the health system (in line with the WHO recommendations)
NATIONAL (CENTRAL) GOVERNMENT	
Characteristic	**Description**
Democracy	A good exercise for strengthening societal participation and responsibility
Governance	Enhancing good governance: transparency, accountability and responsiveness
Informing policy	Prioritization, evidence-based planning and allocation of resources
Research	Strengthening research capacities at a national level
National data	Collection of (good quality) nationwide representative health data
National disparities	Evidencing overall (national) disparities in terms of place of residence (urban vs. rural areas), ethnicity, minorities, vulnerable subgroups, socioeconomic categories, as well as sex- and-age group differences
Baseline national data	Useful baseline data for assessing national trends over time, as well as monitoring and evaluation of nationwide health programs and interventions
Cross-country comparisons	Use of internationally valid/standardized instruments will eventually enable cross-national comparisons with the neighboring countries and beyond
REGIONAL LEVEL: INTERFACE BETWEEN THE CENTRAL AND THE LOCAL GOVERNMENT	
Characteristic	**Description**
Research	Strengthening research capacities at a regional level
Regional data	Collection of sub-national data
Regional disparities	Evidencing sub-national (regional) health disparities and inequities
Baseline regional data	Baseline data for assessing regional trends, as well as monitoring and evaluation of regional health initiatives, programs and interventions
LOCAL GOVERNMENT	
Characteristic	**Description**
Research	Strengthening research capacities at a local level
Local data	Collection of health data at a local level
Local disparities	Evidencing local health disparities and inequities
Individual-based data	Potential for intervention (treatment and counseling of people in need)
Baseline local data	Baseline data for assessing local trends, as well as monitoring and evaluation of interventions implemented at a local level

Regarding the international environment, the upcoming Albanian DHS will significantly contribute in terms of fulfillment of accession requirements to the EU related to provision of standardized and valid health information/data. On the other hand, the DHS will also contribute considerably to the enhancement of the core functions of the Albanian health system in line with the WHO recommendations (16). According to WHO, four vital functions of health systems include provision of health care services, resource generation, financing, and stewardship (16).The upcoming survey will support most of these core functions in the context of a particularly rapid process of transformation and reform of the Albanian health system.

As for the internal environment, at a central (national) level, the DHS will be an important exercise for strengthening societal participation and responsibility, which is fundamental given the low participation rates and societal contribution in post-communist countries such as Albania. From a governmental point of view (4), the forthcoming survey is expected to promote good governance in terms of transparency, accountability and health system responsiveness. Conversely, the DHS exercise will considerably strengthen national research capacities in Albania. The survey will be conducted in close collaboration with the University of Medicine, Tirana, and other scientific and research institutions in Albania which will help to further strengthen the epidemiological and the overall capacities of the Albanian research community. Furthermore, the DHS will allow for collection of nationwide high-quality information including a wide array of demographic and socioeconomic characteristics and valuable health data. Such data will provide useful baseline information for assessment of national trends in the future, as well as monitoring and evaluation of nationwide health programs and health interventions. In addition, this baseline information will evidence national disparities and inequities regarding the place of residence (urban vs. rural areas), ethnicity groups and minorities, vulnerable/marginalized segments, socioeconomic disadvantaged categories, as well as sex- and-age group health differences. At the same time, employment of standardized and internationally valid instruments for data collection will allow for cross-national comparisons between Albania and different countries of the European Region. Ultimately, at a central (national) level, findings of the DHS will enable rational decision-making and evidence-based policy formulation in Albania including appropriate planning, prioritization and sound resource allocation.

At a lower level, the DHS exercise will help to strengthen research capacities and collaboration at a regional level. This will be an important added value given the new administrative/territorial reform which was fairly recently implemented in Albania. In addition, availability of health data at a regional level will help to tailor regional policies in accordance with the epidemiological profile and health problems of the respective population groups, as well as monitoring and evaluation of different interventions and programs implemented at a regional level.

At the lowest (i.e., local) level, the DHS will similarly but even more specifically contribute to evidence-based policy formulation and rational decision-making at a local/community level. Likewise, the survey will contribute to the enhancement of research capacities at a local level, which will be particularly valuable for many under-resourced communities in Albania characterized by limited and not properly trained research personnel. It should be noted that, for the first time ever, the upcoming DHS round will be a unique opportunity to collect representative data at the lowest administrative level in Albania. Also, importantly, the survey will offer a unique opportunity for intervention regarding potential treatment and especially counseling of individuals in need, particularly those who, for different reasons, have limited access to health care services, such as the case of Roma community (17).

Conclusion

The upcoming DHS round will be a unique opportunity for Albania for strengthening research capacities at a national and local level. In addition, the DHS will provide valuable baseline evidence highlighting regional disparities and subgroup inequities which are assumed to have been rapidly increasing given the rapid political and socioeconomic transition of Albania in the past three decades. Furthermore, this survey will offer an opportunity for evidence-based policy formulation in Albania. Overall, the DHS exercise will be an important tool for strengthening the core functions of the Albanian health system contributing also to the Europeanization process and accession to the EU. However, transfer of the information collected and implementation in public health policies and interventional programs is rather challenging for most of the countries, particularly for transitional post-communist countries of South Eastern Europe including Albania.

References

1. World Health Organization. Framework and Standards for Country Health Information Systems. Geneva, Switzerland, 2008. http://apps.who.int/iris/bitstream/10665/43872/1/9789241595940_eng.pdf (accessed: 14 March, 2017).
2. Kilpeläinen K, Tuomi-Nikula A, Thelen J, Gissler M, Sihvonen AP, Kramers P, Aromaa A. Health indicators in Europe: availability and data needs. Eur J Public Health 2012;22:716-21.
3. Holland W. Overview of policies and strategies. In: Detels R, Beaglehole R, Langsan M, et al. (eds.). Oxford Textbook of public health, 5th edn. Oxford University Press, 2009:257-61.
4. Greer SL, Wismar M, Figueras J (eds.). Strengthening health system governance: Better policies, stronger performance. Open University Press, 2016.
5. Beaglehole R, Bonita R. Public health at the crossroads: which way forward? Lancet 1998;351:590-2.
6. Detels R. The scope and concerns of public health. In: Detels R, Beaglehole R, Langsan M, et al, editors. Oxford textbook of public health, 5thedn. Oxford: Oxford University Press, 2009:3-19.
7. Marušič D, Prevolnik Rupel V. Health care reforms. Zdr Varst 2016;55:225-7.
8. Nuri B, Tragakes E. Health care systems in transition: Albania. Copenhagen: European Observatory on Health Care Systems, 2002.
9. Burazeri G, Goda A, Tavanxhi N, Sulo G, Stefa J, Kark JD. The health effects of emigration on those who remain at home. Int J Epidemiol 2007;36:1265-72.
10. Burazeri G, Goda A, Kark JD. Religious observance and acute coronary syndrome in predominantly Muslim Albania: a population-based case-control study in Tirana. Ann Epidemiol 2008;18:937-45.
11. Institute for Health Metrics and Evaluation (IHME). Global Burden of Disease Database. Seattle, WA: IHME, University of Washington, 2014. http://www.healthdata.org (accessed: 14 March, 2017).
12. Albanian Institute of Public Health. National health report: Health status of the Albanian population. Tirana, Albania, 2014.
13. Institute of Statistics, Institute of Public Health (Albania) and ICF Macro. Albania Demographic and Health Survey 2008-09. Tirana, Albania: Institute of Statistics,

Institute of Public Health and ICF Macro, 2010. https://dhsprogram.com/pubs/pdf/FR230/FR230.pdf (accessed: 14 March, 2017).
14. Barbazza E, Tello JE. A review of health governance: definitions, dimensions and tools to govern. Health Policy 2014;116:1-11.
15. Kuhlmann E, Larsen C. Why we need multi-level health workforce governance: Case studies from nursing and medicine in Germany. Health Policy 2015;119:1636-44.
16. World Health Organization. World Health Report 2000 – Health systems: improving performance. Geneva, Switzerland, 2000. http://www.who.int/whr/2000/en/index.html (accessed: 14 March, 2017).
17. de Graaf P, Rotar Pavlič D, Zelko E, Vintges M, Willems S, Hanssens L. Primary care for the Roma in Europe: Position paper of the European forum for primary care. Zdr Varst 2016;55:218-24.

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Evaluation of an implementation strategy for a World Health Organization (WHO) public health report: The implementation of the International Perspectives on Spinal Cord Injury (IPSCI) in Romania

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Abstract

Aim: This paper aims to evaluate a strategy for the implementation of public health policy recommendations from the World Health Organization’s (WHO) report “International Perspectives on Spinal Cord Injury” in Romania. More specifically, it seeks to: a) evaluate implementation actions with a focus on a number of people reached and status of completion at 12 months follow-up; b) describe implementation activities undertaken in the course of one year, and; c) evaluate perceived barriers and facilitators of implementation at 12 months follow-up.

Methods: A cross-sectional design was adopted with two surveys administered in 2014/15 among key implementers in Romania. The questionnaires contained open-ended, multiple choice and 5-point Likert scale questions. Results on the implementation status, implementation activities performed and self-reported barriers and facilitators were analysed and reported using descriptive statistics.

Results: Implementation completion rate was 75%, with 4390 persons directly or indirectly benefiting from the implementation-related activities listed in the final implementation plan reporting. A broad range of implementation experiences was reported. Most common activity types were delivery of services, technical trainings, implementation coordination and development meetings. Most useful tools and processes were the Romanian language version summary of the report, educational meetings, and local consensuses processes. Reported outcomes included the direct output produced, evidence of services provided, and individual or organizational level impact. Most barriers were named for the policymakers and academia as stakeholder groups and most facilitating influences for the private sector, with dependence of policymakers on constituency interest scoring highest barrier and the general availability of European Commission and European Structural Funds highest facilitator.

Conclusion: The surveys proved to be both feasible and useful tools to expand our understanding of implementation and to supplement the more standard used implementation strategies at country level.

Keywords: implementation, implementation strategy, public health report, spinal cord injury, World Health Organization.

Conflicts of interest: None.

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Introduction

Although spinal cord injury (SCI) is a low-incident condition, it can be devastating and costly in both human and social terms (1). SCI can occur as a consequence of trauma, infection, inflammation, degeneration, tumour, or another disease and often results in a significant decline of physical capacity (2). SCI - a principal cause of permanent disability - has become a significant concern for public health mainly because it places substantial socioeconomic burden on affected individuals and their families, communities and the healthcare system (3). It is considered a particularly pervasive stressor as people who sustain these injuries experience profound alterations in almost all aspects of their life (4). However, many of the difficulties experienced by people with SCI do not result from the condition itself, but from inadequate medical care and rehabilitation services, and from barriers in the physical, social and policy environments (5). Implementation of measures aiming at removing barriers to access to healthcare and enhancing the effectiveness of rehabilitation and community reintegration is therefore imperative (1).

To help propel the implementation of evidence-informed health care and policy for people with SCI forward, the World Health Organization (WHO) in collaboration with the International Spinal Cord Society in 2013 published a global report titled *"International Perspectives on Spinal Cord Injury"* (IPSCI) (6). The report assembles and summarizes the best available scientific evidence and information on spinal cord injury together with the lived experience of people with spinal cord injury and makes recommendations for actions that are consistent with the aspirations for inclusion and participation as expressed in the United Nations Convention on the Rights of Persons with Disabilities (CRPD) (1).

The CRPD (7) reaffirms the universal human rights and fundamental freedoms of all people with disabilities and calls upon states to secure and promote their inclusion and participation in all aspects of civil, social, economic and community life. Notably, the treaty marks a paradigm shift in understanding disability as the result of physical and social barriers interacting with impairments and health states in a way that deprives people of equal opportunities for societal participation. This view implies that multiple systems and stakeholders from health to social and employment sectors must undertake coordinated actions to translate the normative recommendations of international law into concrete benefits for those living with disability (8). For this reason, the WHO has recognized the necessity to strengthen governments' capacities in implementing their legal obligations through evidence based programmatic guidance, including guidance on policy implementation. Indeed, while the Convention is among the "most significant policy catalysts" for disability policy at the global level, nonetheless, "the most significant implementation constraints are at the national level" (7,9).

To investigate all aspects of implementation, including activities used to put interventions or innovations into practice and contextual factors that influence these activities, one can look toward implementation research (10). This discipline offers insights for selecting evidence-informed policies and interventions, identifying how to implement these in the disability context across populations and resources, and evaluating outcomes.

In implementation research, widespread development of programmatic instruments and innovative tools promises to expedite policy implementation in various contexts. These tools are to a large extent tailored to specific purposes and contexts and have limited prospects for large-scale or long-term prospective testing (11). It is now well-established, however, that the transfer of knowledge to support implementation is more complex than it usually appears and is more difficult in the trans-disciplinary domain of public health policy (12,13). Pragmatically, there is no "one-size-fits all" health policy and it would be naive to expect implementation tools to work across different domains of public health policy, from clinical care guidelines to policy recommendations of international public health organizations.

Generally, the WHO’s effort to strengthen health policy implementation research and practice has been led by the Alliance for Health Policy and Systems Research with its international academic and civil society partners network (14).The Alliance highlights the value in documenting and analysing implementation experiences and sharing lessons for unravelling the otherwise invisible facets of the complex process of policy implementation and allowing implementing agents, facilitators and ‘champions’ to better understand their practice and realize their roles by reframing their perspective and refocusing their expectations. This will lead to better judgments about whether a particular strategy works or is relevant to other circumstances and situations, leading to measurable improvements in efficient health systems (15).

In light of this, the objective of this paper is to evaluate an implementation strategy for the WHO IPSCI report in Romania.

The context

The research project was led by a partnership between a Romanian non-governmental organization dedicated to delivering health and social services to people with disabilities and a Swiss health research institute specialized in SCI. The partnership organized the development of a strategy to implement the IPSCI report in Romania in August 2012. The strategy consisted of a set of implementation actions or interventions described in a central implementation plan, to work in combination, and administered by a coordinated group of implementers. The resulting implementation activities that are evaluated in the present paper started in March 2014 and lasted for 12 months.

Implementation research is by definition a participatory, stakeholder-driven and evidence-informed process (10). Adopting this approach is particularly important in disability research as persons with disabilities have long been denied equal voice in research and policy processes due to power asymmetries and misallocation of technical and financial resources.

In this project, the participatory process of developing the implementation strategy and its evaluation involved three main phases: the preparatory phase, the implementation strategy development phase, and the monitoring and evaluation phase. The preparatory phase consisted of a group discussion by the research project team to identify and select mechanisms to develop the strategy. The implementation strategy development phase encompassed focus group interviews (FG) of people with SCI, policy makers, system and service developers and managers, and representatives of NGOs to elicit insights into key implementation considerations, a stakeholder dialogue (SD) with participants from the same pool of FG participants from Romania and international experts to develop an implementation strategy, including the use of tools and processes. The development process was informed by a conceptual framework and guiding principles which have been previously developed by the authors (16). The monitoring and evaluation phase included surveys administered over the course of one year to monitor implementation activities by a core implementation group and evaluate the strategy. The question was now, what actually happened on the ground during 12 months of implementation and in how far the development process infused implementation activities that were successful.

More specifically, this paper seeks to: a) evaluate implementation actions with a focus on the number of people reached and the status of completion at 12 months follow-up; b) describe implementation activities undertaken in the course of one year; and c) evaluate perceived barriers and facilitators of implementation at 12 months follow-up.

Methods

Due to the lack of validated instruments to measure activities using the conceptual implementation framework, and given the research aim of focusing on the tools developed during the SD and documenting their use in implementation activities undertaken, new and fit-for-purpose survey questions were developed by the research project team. As a result, two surveys were developed in the preparatory phase and finalized after the implementation strategy development phase: First, the *Online Report Card Survey* to document implementation activities throughout the course of one year, and second a *One Year SD Follow-up Survey* to capture implementation experiences such as perceived barriers and facilitators, among others. In addition, the implementation plan was used as a basis for the summative evaluation of activities at 12 months after the start of implementation.

Surveys

Development: The *Online Report Card Survey* questions were first developed by the lead author along the central elements of the comprehensive implementation framework and based on insights from the FGs and SD (16). The survey was independently reviewed by an implementation science expert and an expert on rehabilitation systems and services from the research project team. The survey was tested by a third health scientist who was not involved in the project. The questions were revised based on feedback. The *One Year SD Follow-up Survey* questions were developed based on the online survey and on first screening of response data to its questions. This survey was reviewed by two team members and reviewer comments were incorporated in the revision.

Setup and design: The surveys were self-administered, with both quantitative and qualitative data elements. They contained both open-ended questions and questions with predefined response options ranging from yes/no ('Did the activity take place in relation to another event or initiative?') to five-level psychometric scales ('What tools were used during the implementation activity and how useful where they?' – 'very useful' to 'not at all useful'). Both surveys were administered in English.

The Online Survey was administered beginning after the SD in four waves from March 2014 until February 2015 capturing implementation activities during 3-month reporting periods each. It took approximately 20 minutes to complete each time. The SD follow- up survey was a one time, one year follow up survey to the SD.

Components: The Online Survey was composed of nine personal and demographic questions followed by 26 questions categorized by the essential implementation components asking, among others, about the kind of implementation activity, relation to the three central themes identified during the SD (Medical rehabilitation and follow up in the community, Independent living, Employment and Inclusive education), tools used including those introduced during the SD, processes followed, relation of activity to IPSCI recommendation, and perceived receptiveness of audience.

In the *One Year SD Follow-up Survey* participants were asked to judge the extent (0 -5 Likert scale) of hindering and facilitating influence attributes or factors of stakeholder groups had on implementation. These attributes had been jointly identified during the SD and were now being evaluated based on 12 months of implementation experience.

Participant recruitment: Participants included a convenience sample of ten residents of Romania, seven who had participated in the SD and three from the focus groups. As described elsewhere, participants of the SD and focus groups had been recruited on a participant roster developed by the researchers to maximize heterogeneity and representativeness. All participants were given an information sheet about the survey and asked to sign a consent form.

Data analysis: Qualitative survey data from open-ended questions were content-analysed by two researchers. The specificity and intensity of responses were determined by means of a thematic, open and selective description of meaningful concepts and themes using sentences as units of analysis (17,18). Categories were then produced using inductive reasoning. Conversely, descriptive statistics of quantitative data, such as frequency distributions, were carried out.

Implementation plan

During the SD, five documents were developed that separately described problems related to the three central themes identified during the SD (i.e., SCI medical rehabilitation and follow up in the community, Independent living, Employment and Inclusive education), options to target these problems, facilitators and barriers by stakeholder groups, and next steps. These documents then served as a baseline analysis for the development of the implementation plan. The final evaluation of the plan was based on the categories ‘number of people reached’ and ‘status’ defined as either ‘completed’ or ‘incomplete’ at 12 months implementation by the core implementation group.

Results

Implementation plan

The implementation plan listed 40potential actions in the categories *presentations*, *publications*, *report development activities*, *trainings*, *services*, *consultations*, *conferences*, and *social events.* Actions planned included, among others: the development of a group statement based on IPSCI recommendations, which was disseminated among key stakeholders; a 2-day scientific conference held in Bucharest; a Disability Gala that was broadcasted on national television; an emergency call centre for persons with SCI; an SCI rehabilitation guide; and a meeting with high ranking government officials.

Of those listed, 29 actions were rated as “completed” and 11 as “incomplete” (75% completion rate). Those listed as incomplete included also activities already planned or still in progress at 12 months. In total, 4390 persons had directly or indirectly benefited from the implementation related activities listed in the final implementation plan reporting. They were either active participants in activities, such as trainings, or the audience of oral presentations.

Implementation activities captured

Although the response rate dropped in the *Online Report Card Survey*, all ten participants responded at least, and often more than, once over the course of the year (10, 8, 3, 4 at time points 1- 4). The one year SD follow up survey to the same pool of core implementers had a response rate of 9/10, one survey was returned incomplete.

Overall, respondents seemed to have understood the questions well, as the large majority of open responses were clear and to the point intended.

No respondent reported technical problems accessing the online survey platform or the paper based questionnaires. One respondent reported language difficulties and was assisted by a colleague. The *Online Report Card Survey* captured 36 (14, 12, 5, 5 in time points one to four) implementation activities overall.

Table 1 provides an overview of these implementation activities.

Table 1. Implementation activities reported

Implementation activities (number of reports: 36)	
Type of activity	**Percent (number)**
Delivery of social support services	30.5% (11)
ICF training	19.4% (7)
Implementation coordination and development meeting	19.4% (7)
ICF implementation in support services	5.6% (2)
Oral presentation	5.6% (2)
Dissemination through personal communication	2.8% (1)
Expert workshop	2.8% (1)
Guideline development	2.8% (1)
Organizing a scientific conference	2.8% (1)
Review of current state and report development	2.8% (1)
Stakeholder meeting	2.8% (1)
Workshop at scientific conference	2.8% (1)
Venue or setting	**Percent (number)**
Within an organization	36.1% (13)
Workshop by invitation only	33.3% (12)
Meeting by invitation	27.8% (10)
During a scientific conference	8.3% (3)
Other	8.3% (3)
Within government ministry	2.8% (1)
Link to other activity	**Percent (number)**
Yes	61.1% (22)
No	38.9% (14)
Implementation goal	**Percent (number)**
Delivery of workshop	22.2% (8)
Development implementation content and/or group	19.4% (7)
Promotion or dissemination of implementation content	13.9% (5)
Professionalization of services	11.1% (4)
Social reintegration of wheelchair users	8.3% (3)
Implement specialized knowledge	8.3% (3)
Improve independence of people with SCI	5.6% (2)
Increase awareness	5.6% (2)
Improve services and procedures	2.8% (1)
Raising level of acceptance and self-competence in PWSCI	2.8% (1)
Influencing the revision of disability assessment	2.8% (1)
Publish report	2.8% (1)
Organizing a conference	2.8% (1)
Influence administration of existing services	2.8% (1)
Delivery of products and services	2.8% (1)
Main implementation theme	**Percent (number)**
Independent living	55.6% (20)
Medical rehabilitation and follow up in the community	27.8% (10)
Employment & inclusive education	16.7% (6)
Target audience	**Percent (number)**
People with disabilities	50% (18)
Disability professionals	33.3% (12)
Representatives of government and public authorities	33.3% (12)
Civil society	22.2% (8)
Health professionals	19.4% (7)
Students	11.1% (4)
Family members of people with disabilities	8.3% (3)
Implementers, implementation and human rights experts	8.3% (3)

Pupils and teachers	8.3% (3)
Support service professional	8.3% (3)
Representatives of international organizations	2.8% (1)

Link with IPSCI recommendation	**Percent (number)**
2. Empower people with spinal cord injury and their families	30.6% (11)
3. Challenge negative attitudes to people with spinal cord injury	19.4% (7)
7. Implement recommendations	19.4% (7)
1. Improve health sector response to spinal cord injury	11.1% (4)
5. Support employment and self-employment	11.1% (4)
6. Promote appropriate research and data collection	5.6% (2)
4. Ensure that buildings, transport and information are accessible	2.8% (1)

Use of materials and content	**Percent (number)**
ICF case studies (distributed)	69.4% (25)
Facilitators	66.7% (24)
Barriers	63.9% (23)
The problem	50% (18)
The options	50% (18)
Next steps	50% (18)
Scientific paper on implementation (distributed)	27.8% (10)
Other	16.7% (6)

Adaption of content to local context	**Percent (number)**
No, the documents were used as they are	36.1% (13)
Yes, they were translated further	36.1% (13)
Yes, they were shortened	13.9% (5)
Other	13.9% (5)
Yes, they were rearranged	11.1% (4)
Yes, they were rewritten	11.1% (4)
Not applicable	5.6% (2)

Monitoring tools	**Percent (number)**
Longitudinal patient or recipient documentation	30.6% (11)
Outcome questionnaire	22.2% (8)
Activity documentation	8.3% (3)
Group discussion	2.8% (1)
Mapping of documents	2.8% (1)
Testimonials	2.8% (1)
No monitoring of activities	30.6% (11)

Receptiveness of audience	**Percent (number)**
in favour	66.7% (24)
slightly in favour	30.6% (11)
neither in favour nor against	2.7% (1)

Implementation activities respondents participated in most were by a large margin *Social support services* (31%), followed by *ICF trainings* and *Implementation coordination and development meetings* (both 20%). The majority of implementation activities took place *within an organization* (34%) and participation was *by invitation* in 63% of activities. About two thirds of activities were related to other events or projects (63%).

Asked to state the explicit goal of the implementation activity they were part of, respondents named the *delivery of a workshop or training* (n=8) most often, followed by the *development of implementation content and / or forming an implementation group* (n=5), the *promotion or dissemination of implementation content* (n=4), and *professionalization of services* (n=4).

In terms of goals targeting the person level, *improving independence of people with SCI* (n=2), *social reintegration of wheelchair users* (n=2), their *participation in services* (n=3), and *raising the level of acceptance and self-competence in people with SCI* (n=1) were named.

Respondents were also asked to what main implementation theme, identified during the SD as main focus of implementation efforts, the activities related to. In 56% of cases and by a large margin these were related to the theme *Independent living*. In addition, implementation activities mainly related to the IPSCI recommendation *Empower people with spinal cord injury and their families* (31%). The recommendation *Challenge negative attitudes to people with spinal cord injury* (20%) and *Implement recommendations* scored both second highest.

Key messages of activities were directed at raising awareness toward problems people with SCI face in terms of accessibility barriers, poor health, denial of rights, and social exclusion. These messages highlighted an inclusive and rights based approach (*Obstacles can be overcome and people live independently with the right supports; People with disabilities should be socially and financially independent; People with disabilities have rights they should access).*

Further key messages targeted the system and service level, calling for an improvement of medical SCI rehabilitation, provision of services based on the ICF approach, and stating that better access to AT and mobility training improves the lives of people with disabilities and the elderly. In addition, employment services should consider all abilities of people with SCI also in relation to their functioning capacity in a specific environment and not only assessed from a medical point of view.

Finally, key messages toward implementation stated that successful implementation of IPSCI recommendations would first require a rethinking of legislation and policies on disability in line with CRPD, and that it necessitates joint action by key experts, sustained by policy.

The main target audience of activities were people with disabilities followed by disability professionals and representatives from government and public authorities.

Out of the seven total documents created or introduced during the SD, the ICF case studies and the facilitators' document were used most often. In 73% of cases respondents had adapted these documents to the local context, mostly by translation (36%).

In terms of processes or techniques used and their usefulness (Figure 1), respondents found in61% of their activities elements of *educational meetings or teachings* (of health professionals, government employees, people with SCI and families) either fairly useful or very useful as well as *local consensus processes* (meeting to discuss and agree on implementation goals, steps, etc.) in 47% of cases.

Tools rated most useful during implementation activities (Figure2) were the IPSCI summary in Romanian (83% of cases), the IPSCI full report in English (61%), the ICF and own documents or media (53%). Other, very specific WHO media was in the majority of cases not used.

Twenty-five out of 36 activities were monitored. About 97% of the target audience reported to have been *in favour or slightly in favour* (0-5 Likert scale) of the implementation activities.

Asked to describe the main outcomes of their activities, respondents named direct output produced, evidence of services provided, and individual or organizational level impact. Activity related output included the development of and promotion of implementation content (n=11), such as an implementation plan, technical information, or a journal article. Also, the organization of an expert group to develop an implementation plan was highlighted as one such direct output.

Evidence of service provision (n=13) included the recruitment of clients and services delivered (registration, assessment, program development, training). In addition, some activities were evaluated by participants (n=3) leading to sum scores of how far training participant's expectations were met.

Individual level impact (n=23) was reported as knowledge gain or change of perspective and awareness in the target audiences, including a better understanding of rehabilitation objectives, outcomes and problems by health professionals. Furthermore, specific skills were acquired by the target audience, their independence improved, and their activity and social participation increased. Finally, one respondent named improved working procedures and working tools used within the target organization as a direct organizational level impact (n=1).

During the SD participants had listed most anticipated barriers for the stakeholder group policy makers and NGO.

Figure 1. Implementation techniques and their perceived usefulness by number of cases

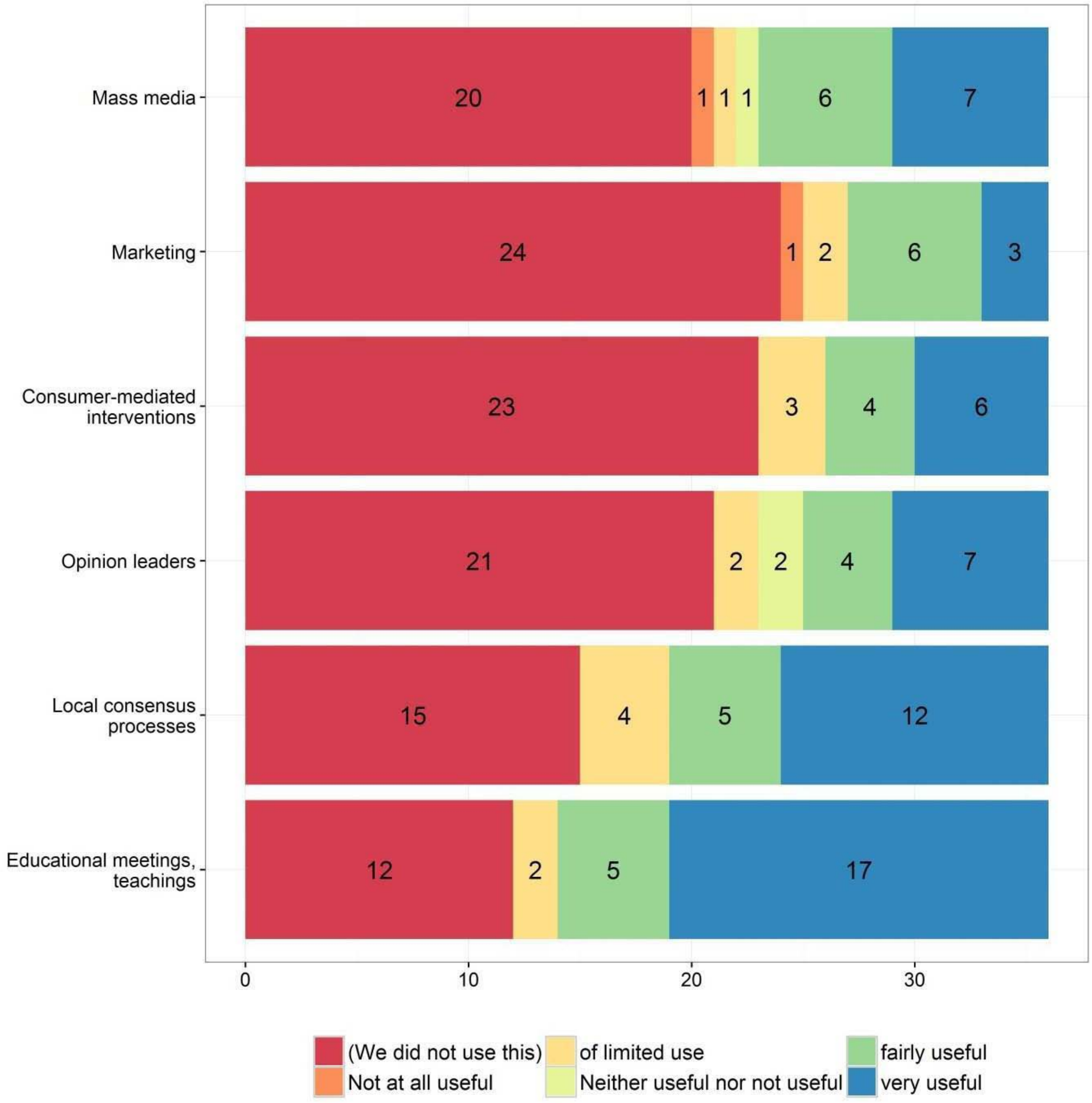
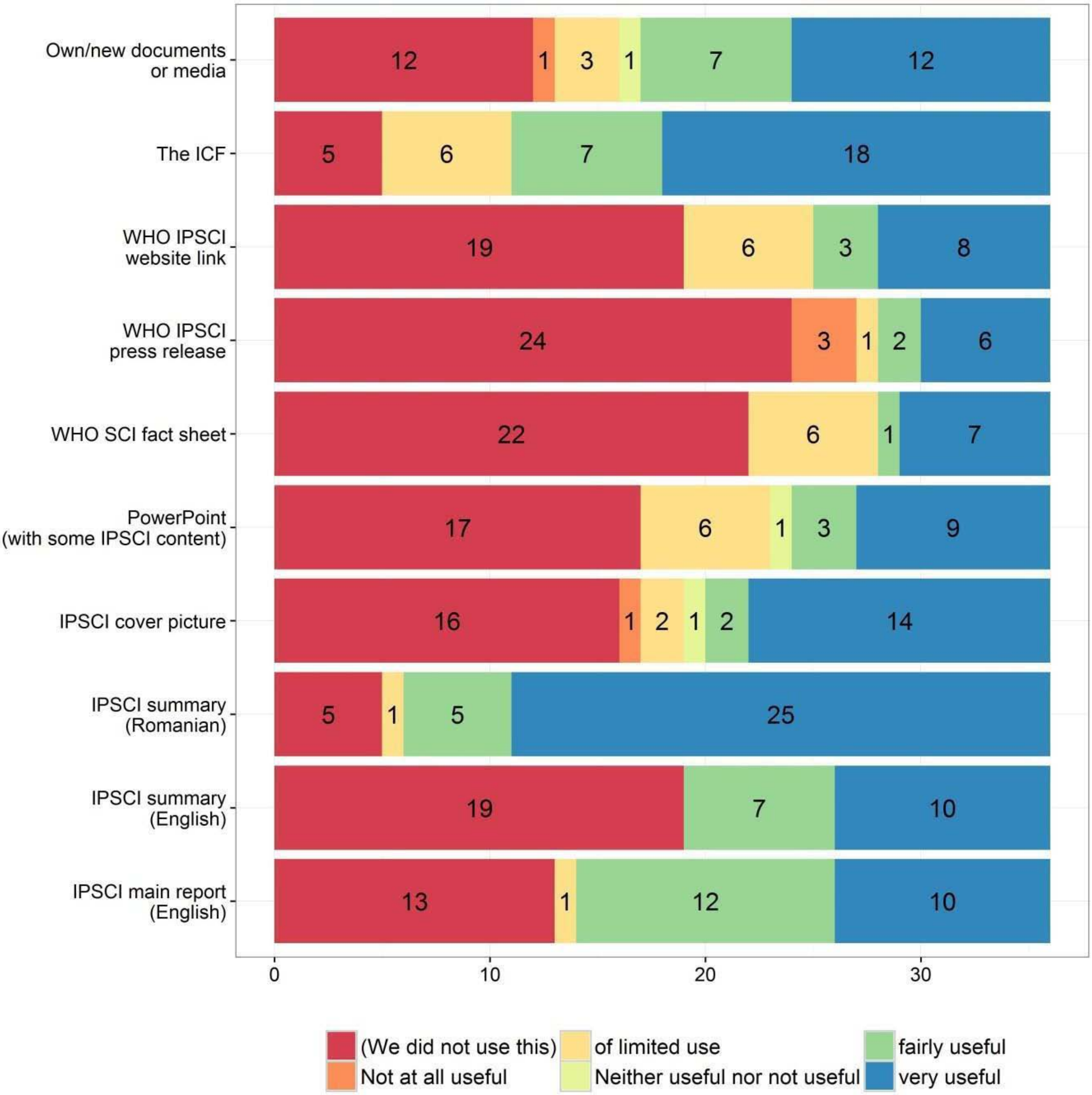
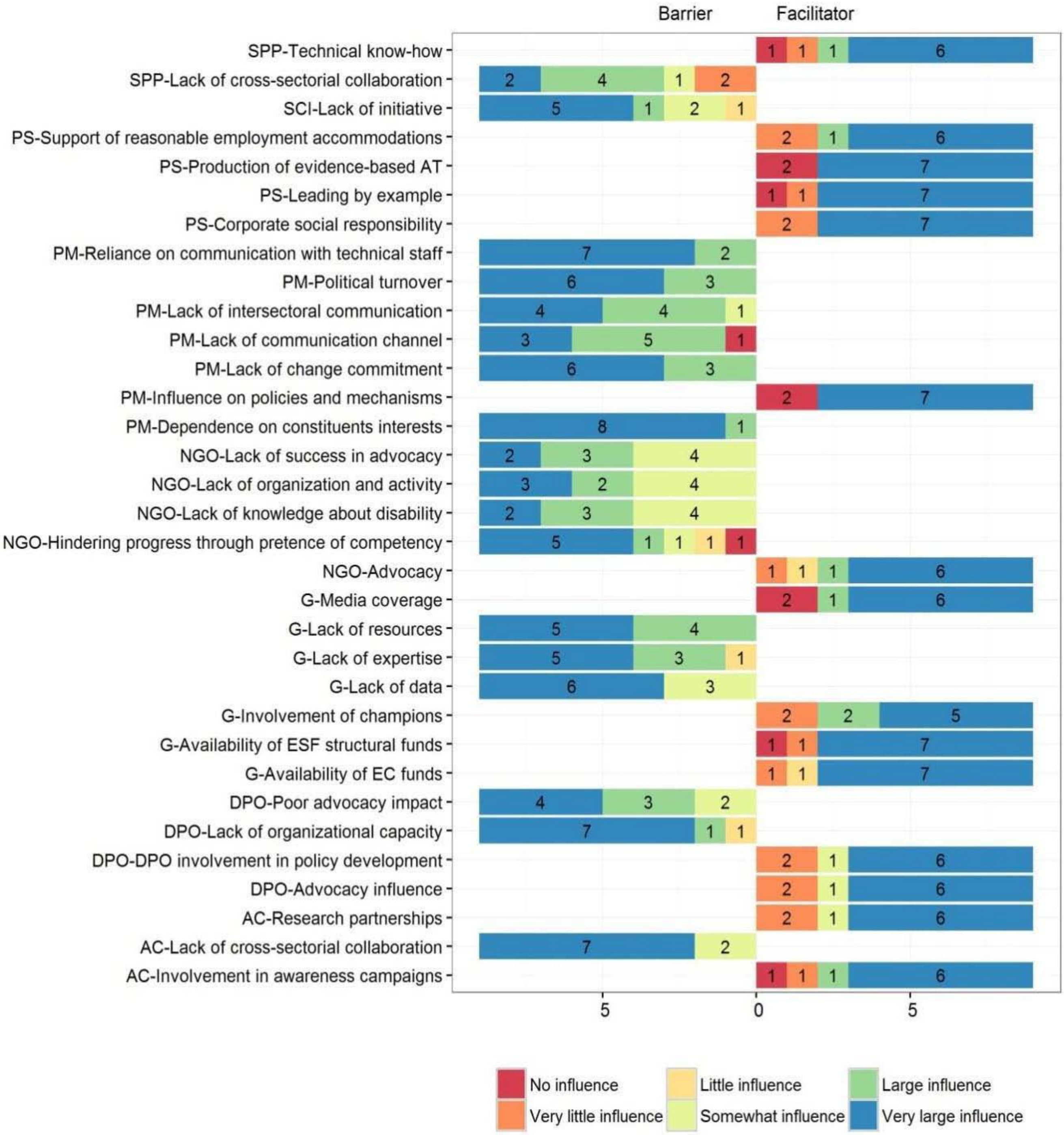


Figure 2. Implementation tools and their perceived usefulness by number of cases



Respondents also rated the extent of hindering and facilitating factors by stakeholders had on implementation during the last 12 months (Figure 3). These factors had been jointly formulated during the SD and listed most barriers for the policy maker and academia stakeholder group (6 & 4) and most facilitating influences for the private sector (4). Only nine out 26 factors had been rated of no influence and all as either of large or very large influence. The dependence of policy makers on constituency interest scored as highest barrier and the general availability of European Commission and European Structural Funds highest facilitator, possibly counterbalancing the general lack of funds and resources as general barrier.

Figure 3. Perceived barriers and facilitators by stakeholder group and in general terms



Legend: AC - Academia; DPO – Disabled people's organization; G- General; NGO – Non-governmental organizations; PM – Policy makers; PS – Private sector; SCI – People with SCI; SPP - Service and product providers.

Discussion

Summary of main results

When summarizing the main results of the surveys it is important to note that multiple and different kinds of implementation activities were undertaken over the course of the monitoring period. These were to a very large extent completed (75%) and had involved over 4000 people. The activities produced direct output, evidence of services provided, and indications of individual or organizational level impact.

On closer examination patterns become apparent in the data. A majority of activities were concerned with the delivery of social support services, ICF trainings, and implementation coordination and development meetings. These activities mostly took place within an organization, by invitation and related to other events or projects. Consequently, goals were largely related to improving independence of people with SCI, the delivery of workshops or trainings, and development of implementation content or formation of an implementation group. Subsequently, activities largely related to the overall theme of independent living with key messages of the need for awareness raising, improvement of service provision, and the necessity to coordinate implementation efforts. Evenly matched are the target audiences -- people with disabilities, disability professionals and representatives from government and public authorities. The most useful processes were educational meetings or teachings and local consensus processes.

Most notably in terms of tool usefulness is that the IPSCI summary in Romanian, the IPSCI full report in English, the ICF and their own documents and media scored most useful, while WHO media products were least used or useful. Although these tools had been introduced during the SD, implementers resorted to using tools that were more linguistically accessible or their own tools. An additional indication that language accessibility is an important issue is the fact that in one third of cases SD documents were translated for further use in implementation.

Finally, the implementers rated substantial hindering and facilitating influences stakeholder groups had on their implementation efforts.

Lessons learned

Beyond offering insights into actual implementation experiences, we can draw three lessons from the experience that can help in the development and application of an implementation strategy for a WHO public health report.

First, we can see that the overall implementation strategy worked in terms of pre-defining activities in a plan and coordinating the implementation groups’ efforts. This was apparent in activity achievement as documented in the implementation plan and established through implementation content and group development meetings as documented in the monitoring survey.

Secondly, results indicate that the process of developing the implementation strategy had a positive impact of building the team for the core implementation group, ownership and participation, as well as on focus and the continuation of efforts, and, lastly, on implementation outcomes.

Finally, the monitoring mechanism drafted during the implementation strategy development process is feasible, faithful and useful as the surveys were able to display the broad range of implementation experiences with their many facets. This fact underscores the usefulness of the underlying conceptual implementation framework used to map out the survey questions across core implementation components toward planning, administering and monitoring implementation (16).

However, the surveys could also benefit from a closer alignment with recently developed surveys in similar contexts (19,20). In particular, this would mean adding survey questions within the *Online Report Card Survey* assessing the specific impacts the process to develop the strategy had, similar to those survey cycles used in stakeholder dialogue researched by Boyko and colleagues (21). Overall, survey design, analysis and interpretation can be standardized by further application in similar case studies to improve data quality.

Results in light of research in the field

Waltz and colleagues as part of the Expert Recommendations for Implementing Change (ERIC) study recruited a panel of experts in implementation science to sort 73 implementation strategies and to rate their relative importance and feasibility. The ratings reflect similar processes identified in the present case as the most important and feasible, for instance, identifying barriers and facilitators to implementation, developing stakeholder interrelationships, training and educating stakeholders, and engaging consumers (22).

Furthermore, participatory implementation strategy development mechanisms create strong coherence in the implementation group and a shared sense of commitment greatly benefiting outcomes. Findings from the international consortium project ‘EquitAble’ of two European and four African countries highlight very similar lessons learned when developing and implementing a joint project (23). Likewise, identifying implementers during strategy implementation in terms of professional knowledge, involvement in issue, networks, ability to influence, and interpersonal competencies will benefit implementation processes (24,25).

Finally, drawing on standard outcome variables proposed for implementation outcome research (26) this study shows that the following are the most relevant: *reach* in terms of the number of people directly or indirectly involved throughout Romania; *adoption* and *fidelity* in terms of level of activity completion; perceived usefulness of implementation tools and processes; and signs of *sustainability* in terms of technical expertise introduced to services on the ground.

Limitations and implications for future research

In the present case, much of the implementation success must be attributed to the core implementation group and the influence the individual implementers had in their respective organizations (27). This is particularly evident in the role of main project partners and their effective interplay. Although the core implementation group members were selected from the pool of focus group and SD participants who in turn were invited based on a detailed participants’ recruitment scheme to reach heterogeneity in group composition, the group constitutes a small convenience sample lacking representativeness. This limits the generalisability of results. Expanding on the number of implementers involved will increase reach and generalisability of results. However, inclusion of participants from one particular country only will always introduce a cultural bias. Respondents could have over or underrated specific elements or tools of implementation that are either lacking in their country or are in general under prioritized. In effect, what was accomplished here is a pilot of two surveys that are innovative in their own right and fill an important gap in the toolset of implementation research. Subsequent research using these, or modified versions of these surveys also in other contexts and countries will help to refine the methodology and strengthen the survey approach.

Another limitation might be the reporting bias of the implementers. The implementers might have felt obliged to report favourably on implementation interventions within the realm of their own organizations, although specific precautions were made in term of anonymity of responses and disclosure of implementation group composition. It must be kept in mind, however, that the concern here is not so much the accuracy of the reporting, as the self-awareness of the implementers of what they have committed themselves to do. It is extremely difficult to avoid self-serving responses in this context, and independent verification of these results would go far beyond this study.

When it comes to evaluation, defining appropriate impact indicators at the start of the project will help measure implementation outcomes and impact in wider contexts in addition to the project-related process and output indicators (28,29). Context data and information on stakeholder influences on implementation could be set in reference to network analysis as it has been applied in health systems research (11,30).

Conclusion

As WHO's Alliance for Health Policy and Systems Research has made clear, any effort to strengthen health policy implementation research and practice depends on clear documentation and analysis of the experience of implementers 'on the ground'. Agents, facilitators and other implementation 'champions' have always been the engine of implementation, and it is crucial to understand their motivations, experiences, and self-perception of their implementation roles. In this paper we have presented one important method for achieving this, in the form of surveys used to evaluate an implementation strategy for the WHO IPSCI report in Romania. Despite limitations in this study – described above – it is clear from this initial, piloting of the surveys that they are both feasible and extremely useful tools to supplement the more standard used implementation strategies at country level.

References

1. World Health Organization, International Spinal Cord Society. International perspectives on spinal cord injury. Geneva: WHO; 2013.
2. Kirshblum SC, Burns SP, Biering-Sorensen F, Donovan W, Graves DE, Jha A, et al. International standards for neurological classification of spinal cord injury (revised 2011). J Spinal Cord Med 2011;34:535-46.
3. Weerts E, Wyndaele JJ. Accessibility to spinal cord injury care worldwide, the need for poverty reduction. Spinal Cord 2011;49:767.
4. Post MW, van Leeuwen CM. Psychosocial issues in spinal cord injury, a review. Spinal Cord 2012;50:382-9.
5. von Groote PM, Shakespeare T, Officer A. Prevention of spinal cord injury. Inj Prev 2014;20:72.
6. Biering-Sorensen F, Brown DJ, Officer A, Shakespeare T, von Groote P, Wyndaele JJ. IPSCI, a WHO and ISCoS collaboration report. Spinal Cord 2014;52:87.
7. United Nations. Convention on the rights of persons with disabilities, Resolution 61/106. New York, NY: United Nations; 2006.
8. World Health Organization, World Bank. World Report on Disability. Geneva: WHO; 2011.
9. Priestley M. In search of European disability policy, between national and global. ALTER 2007;1:61-74.
10. World Health Organization, Alliance for Health Policy and Systems Research. Implementation research in health, a practical guide. Geneva: WHO; 2013.
11. Contandriopoulos D, Lemire M, Denis JL, Tremblay É. Knowledge exchange processes in organizations and policy arenas, a narrative systematic review of the literature. Milbank Q 2010;88:444-83.
12. Winter S. Implementation, Introduction. In: Peters J, Pierre BG, editors. Handbook of public administration. London: Sage; 2003:205-11.

13. Ettelt S, Mays N, Nolte E. Policy learning from abroad, why it is more difficult than it seems. Policy & Politics 2012;40:491-504.
14. World Health Organization - Alliance for Health Policy and Systems Research, Geneva, Switzerland.http://www.who.int/alliance-hpsr/en/(accessed: March 6, 2017).
15. World Health Organization, Alliance for Health Policy and Systems Research. Investing in knowledge for resilient health systems, strategic plan 2016-2020. Geneva: WHO; 2016.
16. von Groote PM, Giustini A, Bickenbach JE. Analysis and implementation of a World Health Organization health report, methodological concepts and strategies. Am J Phys Med Rehabil 2014;93:S12-S26.
17. Zhang Y, Wildemuth B. Qualitative analysis of content. In: Wildemuth B, editor. Applications of Social Research Methods to Questions in Information and Library Science Santa Barbara, CA: Greenwood Press; 2009:308-19.
18. Miles MB, Huberman AM. Qualitative data analysis, An expanded sourcebook. Beverly Hills, California: SAGE; 1995.
19. Lavis JN, Boyko JA, Gauvin F-P. Evaluating deliberative dialogues focussed on healthy public policy. BMC Public Health 2014;14:1.
20. Moat KA, Lavis JN, Clancy SJ, El-Jardali F, Pantoja T. Evidence briefs and deliberative dialogues, perceptions and intentions to act on what was learnt. Bull World Health Organ 2014;92:20-8.
21. Boyko J, Lavis J, Dobbins M. Deliberative dialogues as a strategy for system-level knowledge translation and exchange. Healthcare Policy 2014;9:122-31.
22. Waltz TJ, Powell BJ, Matthieu MM, Damschroder LJ, Chinman MJ, Smith JL, et al. Use of concept mapping to characterize relationships among implementation strategies and assess their feasibility and importance, results from the Expert Recommendations for Implementing Change (ERIC) study. Implement Sci 2015;10:1.
23. MacLachlan M, Amin M, Mji G, Mannan H, McVeigh J, McAuliffe E, et al. Learning from doing the EquitAble project, content, context, process, and impact of a multi-country research project on vulnerable populations in Africa. Afr J Dis 2014;3:1-12.
24. Greenhalgh T, Robert G, Macfarlane F, Bate P, Kyriakidou O. Diffusion of innovations in service organizations, systematic review and recommendations. Milbank Q 2004;82:581-629.
25. Newman J, Cherney A, Head BW. Policy Capacity And Evidence-Based Policy In The Public Service. Public Management Review 2016:1-20.
26. World Health Organization (WHO). A guide to implementation research in the prevention and control of noncommunicable diseases. Geneva: WHO, 2016.
27. Hupe P. What happens on the ground, persistent issues in implementation research. Publ Pol Adm 2014;29:164-82.
28. Fretheim A, Oxman AD, Lavis JN, Lewin S. SUPPORT tools for evidence-informed policymaking in health 18, planning monitoring and evaluation of policies. Health Res Policy Syst 2009;7:S1-S18.
29. Oxman AD, Bjorndal A, Becerra-Posada F, Gibson M, Block MA, Haines A, et al. A framework for mandatory impact evaluation to ensure well informed public policy decisions. Lancet 2010;375:427-31.
30. Blanchet K, James P. How to do (or not to do), a social network analysis in health systems research. Health Policy Plan 2012;27:438-46.

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von Groote PM, Skempes D, Bickenbach JE. Evaluation of an implementationstrategy for a World Health Organization (WHO) public health report: The implementation of the International Perspectives on Spinal Cord Injury (IPSCI) in Romania (Original research). SEEJPH 2017, posted: 11October 2017. DOI 10.4119/UNIBI/SEEJPH-2017-151

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ORIGINAL RESEARCH

The Dutch long-term care reform: Moral conflicts in executing the Social Support Act 2015

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Abstract

On 1 January 2015, a new long-term care reform entered into force in the Netherlands, entailing amongst others a decentralization of long-term care responsibilities from the national government to the municipalities by means of a new law: the Social Support Act 2015. Given the often disputed nature of the reform, being characterized on the one hand by severe budget cuts and on the other hand by a normative reorientation towards a participation society, this article examines to what extent municipalities in the Netherlands take (potential) moral conflicts into account in their execution of the Social Support Act 2015. In doing so, the article applies a ‘coherentist’ approach (consisting of both rights-based and consequentialist strands of ethical reasoning), thereby putting six ethical principles at the core (non-maleficence & beneficence, social beneficence, respect for autonomy, social justice, efficiency and proportionality). It is argued that while municipalities are indeed aware of (potential) moral conflicts, the nature of the new law itself leaves insufficient room for municipalities to act in a sufficiently proactive and supportive/empowering manner on these challenges.

Keywords: ethical reasoning, long-term care reform, moral conflicts, The Netherlands.

Conflicts of interest: None.

Introduction

Background

In 2006, the Council of the European Union made reference to “a set of values that are shared across Europe” in its ‘Council Conclusions on Common Values and Principles in European Health Systems’ (1). The Council Conclusions stipulate that “[t]he health systems of the European Union are a central part of Europe's high levels of social protection, and contribute to social cohesion and social justice as well as to sustainable development. The overarching values of universality, access to good quality care, equity, and solidarity have been widely accepted in the work of the different EU institutions” (1). This set of values was subsequently reinforced a year later in the European Commission’s ‘White Paper Together for Health: A Strategic Approach for the EU 2008-2013’ (2), comprising the EU’s health strategy supporting the overall ‘Europe 2020’ strategy (3).

The healthcare sector, and more specifically the long-term care sector, has always been a source for ethical debate. Typical ethical issues (or moral conflicts) in long-term care decision-making include the debate on whether we should only look at people’s deficits or also to their rest capacities (4),“the nature and significance of the elder's diminished capacity for self-care and independent living”, the question “whether an older adult should continue to live at home”, “the obligation of the elder to recognize and respect the limits that family members may justifiably set on their care giving responsibilities”, a loss of autonomy “when the decision is made to change either the elder’s place of living or support services” and “the balance to be struck between independence and safety” (5).

However, as argued by Ranci and Pavolini (6), “[o]ver the past two decades, many changes have happened to the social welfare policies of various industrial countries. Citizens have seen their pensions, unemployment benefits, and general healthcare policies shrink as ‘belt tightening’ measures are enforced”. At the same time, Ranci and Pavolini (6) argue, “long-term care has seen a general growth in public financing, an expansion of beneficiaries, and, more generally, an attempt to define larger social responsibilities and related social rights”. Consequently, Pavolini and Ranci (7) conclude that “[f]aced with the problems associated with an ageing society, many European countries have adopted innovative policies to achieve a better balance between the need to expand social care and the imperative to curb public spending”. The adoption of such innovative policies is referred to here as reforms in long-term care policies.

The unfold of long-term care reforms even seems to be exacerbated in the aftermath of the 2008 economic crisis, when many European countries introduced austerity measures that in many cases appeared to have adverse effects on health systems and/or social determinants of health (8-12). Moreover, Schröder-Bäck et al. argue that “[t]he current protracted economic crisis is giving rise to the scarcity of public health resources in Europe. In response to budgetary pressures and the Eurozone public debt crisis, decision makers resort to a short-term solution: the introduction of austerity measures in diverse policy fields. Health and social policy tend to be easy targets in this regard, and budget cuts often include a reduction of healthcare expenditure or social welfare benefits” (13). Jongen et al. (14) add to this that “this crisis has had a much more direct and short-term influence on the quality of countries’ long-term care system than more gradual developments such as population aging and declining workforces, mainly due to austerity measures being the result of, or being accelerated by, this crisis”.

Also the Council Conclusions make reference to this changing context of many European countries’ long-term care system, by stating that “[i]t is an essential feature of all our systems that we aim to make them financially sustainable in a way which safeguards these values into the future” (1). Moreover, the document stresses patient empowerment, by stating that “[a]ll

EU health systems aim to be patient-centred. This means they aim to involve patients in their treatment, to be transparent with them, and to offer them choices where this is possible, e.g. a choice between different health care service providers" (1). At the same time, the Council Conclusions acknowledge that "[d]emographic challenges and new medical technologies can give rise to difficult questions (of ethics and affordability), which all EU Member States must answer. […] All systems have to deal with the challenge of prioritising health care in a way that balances the needs of individual patients with the financial resources available to treat the whole population" (1).

Although sharing some characteristics, every long-term care reform is embedded within peculiar national traditions and is therefore unique. This is true all the more for the latest Dutch long-term care reform, that entered into force on 1 January 2015, and which can be considered as the latest major step in a more all-encompassing 'market-oriented reform' of the Dutch healthcare system in general. The 2015 reform can be characterized as having a "hybrid structure" (15), characterized, on the one hand, by a "reign in expenditure growth to safeguard the fiscal sustainability of LTC" (16), and on the other hand by a "multiplicity of regulations to safeguard public values" (15). More concretely, as argued by Maarse and Jeurissen (16), the 2015 long-term care reform consists of four interrelated pillars: expenditure cuts, a shift from residential to non-residential care, decentralization of non-residential care (implying a transfer of responsibilities in that policy domain from the national government to the municipalities), and a normative reorientation. The latter refers to the notion that "[u]niversal access and solidarity in LTC-financing can only be upheld as its normative cornerstone, if people, where possible, take on more individual and social responsibility. The underlying policy assumption is that various social care services may be provided by family members and local community networks" (16). Indeed, a general shift in focus from formal care provision to informal care provision is added by Jongen et al. (17) as a key element of the 2015 Dutch long-term care reform. It is, however, exactly this normative reorientation, and its underlying assumption of an increased informal care provision, that is often disputed. As argued by Maarse and Jeurissen (16): "An important line of criticism is not only that informal care is already provided at a large scale, but also that the potential of 'unexplored' informal care is overestimated. Furthermore, the negative externalities for caregivers who deliver informal care are underestimated". Moreover, while residential care remains under the responsibility of the national government after the entry into force of the 2015 long-term care reform, and a large part of non-residential care came under the responsibility of the health insurers, it is the municipalities that became under the Social Support Act 2015 (SSC 2015) [in Dutch: *Wet maatschappelijkeondersteuning (Wmo) 2015*] responsible for particularly those parts of non-residential care dealing with support directed towards the social participation of people with severe limitations (in the wordings of the official legal text of the Social Support Act 2015 (authors' own translation): "people with disabilities, chronic mental or psychosocial problems"), as well as with support for informal caregivers (17). Indeed, the official legal text of the Social Support Act 2015 stipulates that "citizens who themselves or together with people in their immediate environment are not sufficiently self-sufficient or insufficiently able to participate [in society], must be able to rely on organized support by the government" (authors' own translation). However, municipalities have a large discretion in making this obligation to provide support concrete (the so-called 'postcode [zip code] rationing'), which may lead to unequal access to long-term care in different municipalities (16).

Literature research

So far, the academic literature has not extensively scrutinized the potential moral conflicts resulting from the implementation of the Social Support Act 2015, and is more about organization and logistics than about ethics. The available literature either touches upon mere elements of an all-encompassing ethical debate, or upon the perspective of specific groups. As an example of the former, van der Aa et al. (18) consider the presumed impact of the 2015 long-term care reform on such elements as good quality of care and solidarity. Van der Aa et al. argue that the above-mentioned ‘zip code rationing’ might well lead to differences between municipalities in the degree of solidarity as perceived by citizens (‘zip code solidarity’). Furthermore, van der Aa et al. argue that it should not be taken for granted that municipalities, by simply making an efficiency move, can guarantee an equal level of care quality with the decreased budget they are faced with for executing their new long-term care tasks. Next, Grootegoed and Tonkens (19) consider the impact of the Dutch shift in focus from formal to informal care provision on such elements as respect for autonomy or human dignity and argue that “the turn to voluntarism does not always prompt recognition of the needs and autonomy of vulnerable citizens” and furthermore that “the virtues of voluntarism may be overstated by policy makers and that the bases of recognition should be reconsidered as welfare states implement reform”. Examples of literature focusing on the perspective of specific groups include the articles by Dwarswaard et al. (20) and Dwarswaard and Van de Bovenkamp (21) on, respectively, self-management support considered from the perspective of patients and the ethical dilemmas faced by nurses in providing self-management support (whereby self-management is defined as “the involvement of patients in their own care process” (21), and in that way relates to the above-mentioned notion of individual responsibility).

Study objectives and research questions

No comprehensive ethical approach towards the impact of the Social Support Act 2015, however, appears yet to exist. The current study intends to fill in this gap, by answering the following research question: To what extent did/do municipalities in the Netherlands take potential moral conflicts into account when implementing and executing the Social Support Act 2015?

As the core of the 2015 Dutch long-term care reform is characterized by, on the one hand, severe budget cuts, and, on the other hand, by a normative reorientation towards a participation society wherein people are expected to take on more individual and social responsibility (16,17), we additionally formulated the following sub-research questions: 1. How do municipalities divide scarce resources in the social domain in a fair way?; 2. How do municipalities empower citizens towards a participation society? In answering both research questions we consider the potential moral conflicts experienced by municipalities, as executers of the Social Support Act 2015, with regard to those entitled (or proclaim to be entitled) to receive support on the basis of the Social Support Act 2015, as well as with regard to relatives providing informal care to the previous group. Despite the fact that the nature, as well as corresponding reforms, of individual countries’ long-term care systems differ, the systematic approach of assessing moral conflicts resulting from the introduction of new long-term policies as applied in this study could also be transferred to other countries were long-term care reforms are being implemented. At the same time, several policy lessons could be derived from the experiences of Dutch municipalities with the 2015 long-term care reform.

Methods

Research method and study design

To answer our research question, a mixed-method research approach was chosen. First, a document analysis was conducted, in order to explore if, and to what extent, ethical values and principles are literally incorporated in the legal text of the Social Support Act 2015. For this analysis we only considered the primary source (the legal text itself) and no other, secondary documents (such as municipal policy documents). Second, policy advisors (responsible for the long-term care policy domain) of all 390 Dutch municipalities were invited to complete anonline survey. Henceforth, no sampling technique had to be applied, although of course we had to compile a mail distribution listconsisting of either the general e-mail addresses of municipalities, or the e-mail addresses of the specific departments the intended policy advisors are working. In some smaller municipalities these policy advisors were not only responsible for the long-term care policy domain, but for the whole social domain (next to the long-term care decentralization, municipalities were simultaneously also faced withdecentralizations in the field of youth care and in the field of labor participation of people with an occupationaldisability); in large municipalities more than one person might be responsible for the long-term care policy domain. However, in our explanatory notes we specifically asked to forward our demand to one of the intended policy advisors, in order to avoid multiple respondents from the same municipality. The reason for choosing policy advisors, instead of politicians, had to do with the potential political bias that politicians might have with regard to the topic of this study. Indeed, the potential ethical implications surrounding the long-term care decentralization constitutes a politically sensitive issue in many municipalities, as clearly came to the forefront in one of the two test-interviews, which was conducted with the major of a municipality (the other test-interview was conducted with a professor of old age medicine). Moreover, while each municipality also has several so-called ‘Social Support Act consultants’ [in Dutch: *Wmoconsulenten*], who do the actual fieldwork, implying the one-to-one contact with individual (potential) clients, these employees are believed to lack an overarching helicopter view. In principle, participation in the online survey was anonymous, except when a respondent declared to be willing to participate in an in-depth telephonic interview. These in-depth interviews constituted the third step in our mixed-method research approach, and were intended to expand on the survey, instead of asking new questions. Anonymity of these respondents has been guaranteed by omitting persons’ and municipalities’ names here.

Theoretical framework and conceptual model

For the analysis of the potential moral conflicts surrounding the implementation and execution of the Social Support Act 2015, we applied a ‘coherentist’ approach(consisting of both rights-based and consequentialist strands of ethical reasoning) as offered by Schröder-Bäck et al. (22), thereby putting six ethical principles at the core that are considered to capture the specificities of the current study (non-maleficence & beneficence, health maximisation / social beneficence, respect for autonomy, social justice, efficiency and proportionality). Taking into account the variety of seemingly similar concepts such as ‘ethical dilemmas’, ‘moral conflicts’, ‘moral dilemmas’, et cetera, it should however first be clarified which definition is applied in this study and what is meant with it. Given the heavily-loaded connotation of the term ‘ethical dilemma’, we prefer the term ‘moral conflict’ here. Subsequently, based on the Stanford Encyclopaedia of Philosophy (23), we define a ‘moral conflict’ as follows: A moral conflict appears if one thinks one has good moral reasons to do one thing, but also good moral reasons to not do it, or do something that is in conflict with it. So either decision is not perfect. Or, in other words: a moral conflict arises if the moral norms and values we would like to follow guide us to conflicting/opposing actions. A coherentist ethical approach, then, implies that an ethical analysis “should be based on a variety of plausible norms and values” and that none of the traditional ethical approaches is therefore superior to the other (22). Instead, they all contribute important moral insights. Schröder-Bäck et al. (22) add to this that “their norms do weigh prima facie the same and need to be plausibly unfolded and specified in a given setting. When they are contextualised and specified they develop their normative weight and power”. This prima facie status of the ethical principles thus “supports the process of careful ethical deliberation and reflection”. Moreover, specifying the more ‘overarching’ ethical approaches into a concise set of ethical principles is considered as a useful, practical, tool for medical and public health ethics (24). Each of these six principles will be discussed in detail in the following.

Non-maleficence and beneficence: non-maleficence implies that “a healthcare professional should act in such a way that he or she does no harm, even if her patient or client requests this” (25). Beneficence is connected to non-maleficence, the only difference being that non-maleficence involves the omission of harmful action and beneficence actively contributes to the well-being of others (25). Because of their intimate connection, both principles are considered under one heading here. Considering the overarching approaches to ethical reasoning as mentioned above, the principles of non-maleficenceand beneficencecorrespond to the ‘do no harm’ principle under the consequentialist approach to ethical reasoning.

Health maximisation / social beneficence: although in the literature one can find either of these terms, we refer to social beneficence as the norm that says that it is a moral goal to improve the wellbeing of people on an aggregated population level. Social beneficence resembles in a significant way the consequentialist principle of utilitarianism. Utilitarianism is the ethical theory that requests from an action or omission to be in such a way that the maximization of best consequences would follow.

Respect for autonomy: the ‘respect for autonomy’ principle implies a tempering of the “paternalistic benevolence contained in the principles of non-maleficence and beneficence” (25). In that way, the ‘respect for autonomy’ principle is closely related to the ‘human dignity’ principle under the rights-based approach to ethical reasoning. Moreover, without taking into account the ‘respect for autonomy’ principle, it would under the principle of health maximisation / social beneficence alone be allowed “to use individuals (or whole groups) for other than their own ends and even sacrifice them if only this provided a greater net benefit, i.e. maximised health” (24).

Social justice: the principle of (social) justice as referred to under the rights-based approach to ethical reasoningcan be considered another side constraint to the principle of health maximisation / social beneficence. As Schröder-Bäck et al. (24) put it: “It does not only matter to enhance the net-benefit; it also matters how the benefits and burdens are distributed”. Moreover, this also includes “a fair distribution of health outcomes in societies, which is often discussed in terms of public health as ‘health equity’” (25), which is considered by Daniels as a matter of fairness and justice (26). In fact, the principle of ‘equity’ constitutes the core of the values of the ‘Council Conclusions on Common Values and Principles in European Health Systems’. As Schröder-Bäck et al. (22) put it: “The other three overarching values can be conceptualised as specifications of equity (and of social justice). *Access to good quality of care* and *universality* can be seen as a reiteration of the core demands of equity and justice”, while “solidarity is seen as a characteristic that describes the willingness of members of communities to be committed to the principle of justice or to each other”. In short, one could argue thus that “[j]ustice approaches in health care often demand nothing more than universal access to good quality care” (22). Or, as the World Health Organization (WHO) puts it: “universal health coverage (UHC) is defined as ensuring that all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship” (27).

Efficiency: efficiency requires the efficient use and distribution of scarce health resources (24).

*Proportionality:*the principle of proportionality, finally, emphasizes that it is "essential to show that the probable public health benefits outweigh the infringed general moral considerations. All of the positive features and benefits must be balanced against the negative features and effects" (24). In their 'ethical criteria for immunization programmes', Verweij and Dawson (28) combine the principles of efficiency and proportionality under one heading, by stating that a "programme's burden/benefit ratio should be favourable in comparison with alternative […] options".

Data collection

For the document analysis, we specifically considered the presence of the values as stipulated by the 'Council Conclusions on Common values and principles in European Union Health Systems', as well as the six ethical principles elaborated on above. Next, for the survey and in-depth interviews, these principles have been broken down into representative survey/interview questions, allowing for a structured and comparative analysis of potential moral conflicts. Schröder-Bäck et al. (25) applied a similar approach within the context of developing a curriculum for a short course on ethics in public health programmes, by suggesting a checklist consisting of several questions around each of the ethical principles they applied in their study (largely comparable to the six principles as applied in the current study). With the respective author of that study, one question for each of the above six principles was chosen, adapting them to the specificities of the current study, and translated into Dutch (see Table 1 for the final survey/interview questions).

The reason for choosing merely one question per category had to do with the practical limitations of using open-ended questions in an online survey: based on Andrews (29) as well as on two test-interviews we conducted, the response rate to open-ended survey questions is considered to be substantially lower than in the case of closed-ended survey questions, especially when the number of questions would be too high. The questions covering each of the six ethical principles were preceded by a general question on the identification of potential moral conflicts (intended to trigger respondents, before directing them into the six predefined categories), and followed by two general questions on the way (if applicable) municipalities deal with the identified moral conflicts.

Data analysis

The document analysis implied a scrutinization of the presence (or non-presence) of the values and principles elaborated on abovein the legal text of the Social Support Act 2015, either in terms of a literal incorporationin the legal text, or in terms of indirect referrals to the respective values and principles.

The data of the surveys and interviews were analysed through the application of a directed approach to qualitative content analysis (30). We chose for this approach, as it allows for an analysis that "starts with a theory or relevant research findings as guidance for initial codes" (30). In that way, we were enabled to directly apply our theoretical framework of ethical reasoning in the interpretation and categorisation of the research data, with the six predefined ethical principles as initial coding categories. Within each of these categories, we clustered the respondents' answers in 'dominant responseclusters' as a way of quantifying to some extent our qualitative survey results. This approach allowed for an organized inclusion of the main results in this article. Obviously, qualitative results can never completely be quantified, as each specific answer remains unique. Therefore, in order to add some extra weight to our results, we included direct respondents' quotes to several of the dominant response clusters.

Table 1. Survey/Interview questions

Part 1: Identifying potential moral conflicts		
Q1: According to you,what are the most important moral conflicts (if any) your municipality has been faced with in the context of implementing and executing the Social Support Act 2015?		
Ethical principles	**Original selected 'check marks'(25)**	**Adapted questions**
Ethical principle 1: *Non-maleficence & beneficence*	Overall, for both non-maleficence and beneficence, is it possible to assess whether more benefit than harm is produced by intervening (or not intervening) and, if so, on what side (benefit or harm) does the equation finally fall?	Q2: According to you, will more people (both care recipients as informal caregivers) have advantage or disadvantage as a result of the introduction of the Social Support Act 2015? How do these advantages and disadvantages look like?
Ethical principle 2: *Health maximization / social beneficence*	Does it [the proposed intervention] have a sustainable, long-term effect on the public's health?	Q3: According to you, will the Social Support Act 2015 have a sustainable, long-term, effect on the quality of life of the entire (older) population?
Ethical principle 3: *Efficiency*	Awareness of scarcity of public money; saved money can be used for other goods and services.	Q4: According to you, how does your municipality deal with the availability of the scarce resources that are available for the Social Support Act 2015?
Ethical principle 4: *Respect for autonomy*	Does the intervention promote the exercise of autonomy?	Q5: According to you, does the Social Support Act 2015 provide sufficient opportunity for people's freedom of choice with regard to the care and support they wish to receive (and the way how they receive it)?
Ethical principle 5: *(Social) justice*	Does the intervention promote rather than endanger fair (and real) equality of opportunity and participation in social action?	Q6: According to you, do people under the Social Support Act 2015 have an equal opportunity to live their lives the way they want (or, in other words: is the freedom of choice as mentioned in the previous question also practically possible for every person)?
Ethical principle 6: *Proportionality*	Are costs and utility proportional?	Q7: According to you, will costs and utility under the Social Support Act 2015 be proportional?
Part 2: Dealing with moral conflicts		
Q8: According to you, how does your municipality deal with the moral conflicts as identified under part 1? Or, in other words: what are your municipality's solutions to these moral conflicts? Q9: According to you, are there, for your municipality, alternative ways of executing the Social Support Act 2015, that will lead to less moral conflicts?		

Results

Document analysis

In terms of the values as stipulated by the 'Council Conclusions on Common values and principles in European Union Health Systems', the legal text of the Social Support Act 2015 only literally makes reference to the value of 'access to good quality care', although quality of care should be understood here as 'good quality of (social) support'. Indeed, as was explained in the previous chapter, the Dutch long-term care system is, as of 1 January 2015, divided into three laws, of which the Social Support Act 2015 constitutes the one mainly dealing with social types of care (directed at increasing or maintaining the self-sufficiency and social participation of vulnerable citizens) instead of traditional healthcare. The municipalities' responsibility under this law can therefore best be understood as providing adequate social support services instead of providing actual healthcare services. Nevertheless, this focus on social types of care instead of traditional types of healthcare, or on 'well-being' instead of 'health' as a desired outcome of support, does not imply that the Social Support Act 2015 should not be based on certain key ethical values or principles. Also the Council Conclusions (1) go further than traditional healthcare, by implying that "[t]he health systems of the European Union are a central part of Europe's high levels of social protection, and contribute to social cohesion and social justice as well as to sustainable development". With regard to good quality of social support, then, Article 2.1.1 of the Social Support Act 2015 stipulates that "[t]he municipal council is responsible for the quality and continuity of services" (authors' own translation), while Article 3.1 continues by stating that "[t]he provider shall ensure the provision of good quality services" (authors' own translation). Services either refer here to 'general services' (in Dutch: *algemenevoorzieningen*), or to 'customized services' (in Dutch: *maatwerkvoorzieningen*). The latter, subsequently, is defined in the legal text as a "range of services, tools, home adaptations and other measures, tailored to the needs, personal characteristics and capabilities of a person" (authors' own translation). Solidarity is by definition an important component of this law, and is referred to in the first sentence of the legal text, which points out that "citizens bear a personal responsibility for the way they organize their lives and participate in society, and that may be expected of citizens to support each other in doing so to the best of their ability" (authors' own translation). The values of universality and the, more overarching, value of equity (being part of the principle of social justice in our theoretical framework) are indirectly referred to in the introduction of the legal text by stating that "citizens who themselves or together with people in their immediate environment are not sufficiently self-sufficient or insufficiently able to participate [in society], must be able to rely on organized support by the government" (authors' own translation). As a result of the limited literal inclusion of these ethical values, it is not surprising that the more specified ethical principles derived from these values are hardly included in literal terms in the legal text neither. The only exception here is the 'respect for autonomy' principle, that could be derived from the wording of Article 2.1.2 (4.c), which stipulates that municipalities in their social support policy should specifically take the freedom of choice into account of those citizens that are entitled to customized support services.

Survey and interviews

Having considered the literal inclusion of the ethical values and principles in the legal text of the Social Support Act 2015, a next step in our research process was to examine to what extent municipal policy advisors consider the execution of the Social Support Act 2015 to be in compliance with the six ethical principles as applied in this study. In totality 70 policy advisors completed the survey, constituting 18 per cent of Dutch municipalities. In total, ten of these respondents also appeared to be willing to participate in an in-depth interview. The results of the surveys and in-depth interviews are described question by question in the followingsection and discussed simultaneously (as the in-depth interviews were intended to expand on the survey results instead of asking new questions).Given the number of respondents, only those answers that most frequently resulted from our analysis (the 'dominant response clusters' mentioned above) are discussed here. The direct respondents' quotes that are included are believed to represent the respective cluster best and are the authors' own translations from Dutch to English.

Question 1 (general identification of moral conflicts). Although not all respondents confirmed the existence of moral conflicts with regard to the implementation and execution of the Social Support Act 2015, most respondents did identify one or more moral conflicts. In general, our respondents identified threetypes ofmoral conflicts. First, the conflict of adhering to the Social Support Act's underlying theory of moving towards a participation society vs. the limited budget and time-frame that is offered to municipalities for supporting this change process. Indeed, the theoretical idea of moving towards a society wherein citizens take up more individual and social responsibility and where care and support is provided on a customized basis and closer to home, is considered by many as a positive normative development. However, the severe budget cuts that accompany the long-term care decentralization (expected to lead to budgetary shortfalls), as well as the rapidity of the reform process, hamper municipalities' opportunities for supporting this development. Or, as one respondent put it: "Pragmatism prevails over quality demands". Second, respondents identified the conflict of how to efficiently coordinate responsibilities between the three different long-term care Acts. The fact that municipalities under the long-term care reform only got responsibility for parts of the long-term care sector might lead to unclarity and confusion, not the least among (potential) recipients of care/support, regarding under which Act one is entitled to care/support. Moreover, some respondents indicated that an insufficient coordination between the three laws sometimes results in a lack of incentives among municipalities to invest in prevention and informal care support, as the financial benefits of these investments might not be evident for the 'own law', but only for the 'other laws'. The third moral conflict identified relates to the correct assessment of citizens' self-sufficiency and their ability to social participation vs. their care/support needs and the urge to empowerment. The fact that municipalities have a large policy discretion in executing their responsibilities under the Social Support Act 2015 even complicates this point, as similar situations might well lead to different assessments in different municipalities. Particularly difficult, then, is how to justify these differences to citizens.

Question 2 (ethical principle 1: non-maleficence and beneficence). Most respondents appeared to have a rather neutral stance when it comes to assessing the non-maleficence and beneficence of the Social Support Act 2015, arguing that the Act leads to advantages for some and disadvantages for others, especially on the short-term. Or, as one respondent put it: "It depends on the individual perception of people whether they experience the introduction of the new Social Support Act as an advantage or a disadvantage". Moreover, getting used to a new situation always takes time, especially for those citizens that were already entitled to care or support under the pre-2015 situation. Advantages primarily include the provision of customized care closer to home, in line with people's specific living conditions, instead of standard care provisions like in the pre-2015 situation. Disadvantages primarily include the, already above-mentioned, high degree of policy discretion of municipalities regarding their allocation of support measures—which tends to lead to perceptions of 'unfairness' or 'subjectivity' among citizens—, a lower level of formal care provision as experienced by individual citizens and consequently the increasing burden on informal caregivers.

Question 3 (ethical principle 2: health maximization / social beneficence). The decreasing level of formal care provision can also be considered as a disadvantage on a societal level, when considering the more long-term expected consequences of the implementation of the Social Support Act 2015. At the same time, a decreasing level of formal care provision is not considered by all respondents as a disadvantageous development. As one respondent put it: "If we execute it [the Social Support Act 2015] well, this will increase quality of life. However, this also entails that we should carefully deal with informal caregivers". One of the more long-term advantages is indeed believed to be the creation of a better awareness and appreciation among citizens about care in general, as a result of the diminishing resources for formal care provision, leading to a more inclusive society—characterized by the emergence of a new quality of life—wherein people have a better esteem of their own possibilities as well as a better appreciation of each other. At the same time, many respondents pointed out that this 'emergence of a new quality of life' is not so much due to the Social Support Act 2015 (or the long-term care reform in general), but more to overarching trends such as demographical developments (people get older and older), technological developments in healthcare (which facilitate people in achieving a decent quality of life) and changing ways of thinking about care in general (such as other perspectives on civic engagement and patient empowerment). As one respondent put it: "The quality of life has always had a different standard than the generation before". Or, as another respondent put it: "Laws don't have an influence on quality of life".

Question 4 (ethical principle 3: respect for autonomy). Respect for autonomy was considered by most respondents as being sufficiently covered by the Social Support Act 2015, specifically through the inclusion of the freedom of choice as mentioned under Article 2.1.2 of the Social Support Act 2015. Concretely, the freedom of choice as referred to in Article 2.1.2 implies either the choice between several by the municipality selected providers (when one is entitled to customized care services) or a fully open choice (when one is entitled to a personal budget). Yet, respondents did put several remarks to this freedom of choice. First, due to the large discretion municipalities have in executing the Social Support Act 2015, the interpretation of freedom of choice differs between municipalities (indeed, some municipalities offer a larger selection of providers than others). As one respondent put it: "The new Social Support Act isn't designed as to 'support wishes', nor as a 'right to support'. Therefore, there is a strong dependence on supplemental local rules". Second, in practice, freedom of choice is not always considered as an added value by people, especially by vulnerable people that are often just looking for good quality support. As one respondent put it: "For that [freedom of choice] there is little attention among people. Moreover, it is questionable whether that is actually needed; people merely want good quality care instead of freedom of choice" (author's own translation).

Question 5 (ethical principle 4: social justice). In line with the previous question, the question about social justice was basically about people's capabilities of making use of their right to freedom of choice. Answers to this question were divided. On the one hand, many respondents considered the majority of people that are entitled to support under the Social Support Act 2015 to be indeed capable of making use of their right to freedom of choice. Moreover, when necessary, support is offered to clients by the municipality. As one respondent put it: "The municipality is actively cooperating with 'client supporters' to facilitate people as good as possible in their freedom of choice" (these 'client supporters' are people that work independently from the municipality). On the other hand, other respondents emphasized that not everyone, especially vulnerable groups in society, are capable of applying their freedom of choice, neither has everyone a social network at her/his disposal to support them in doing so. Moreover, freedom of choice depends to some extent on people's own resources. Indeed, under the Social Support Act 2015, the own financial contributions people are expected to pay for the care/support they receive have grown as compared to the pre-2015 situation, which might lead to the avoidance of care/support (31). As a result, respondents argue, differences in society grow when it comes to the possibility of people to make use of their freedom of choice under the Social Support Act 2015. As one respondent put it: "A barrier to care is created, that leads to a split in society: if you have money you can buy care yourself; if you little money you'll have to do it with a stripped care system".

Question 6 (ethical principle 5: efficiency). With regard to the allocation of scarce resources, respondents' views could be divided into three main groups. One part considered the budget available for the execution of their long-term care responsibilities, which was substantially lowered as compared to the pre-2015 situation, to be leading in the allocation of resources, implying that care/support demands are (according to these respondents) considered more critically—on the basis of stricter indications—as compared to the pre-2015 situation. As one respondent put it: "The resources are distributed as indicated by the national government". Moreover, some municipalities try to focus on general (collective) support services instead of on customized (individual) support services in order to remain within their budgetary margins. A second groups considered demand to be key in decision-making, implying that as much as possible is done to do what is necessary, at least for the most vulnerable groups. In case of shortages, solutions are (according to these respondents) considered to be the appeal to general municipal resources or the transfer of resources from other policy domains within the municipality. Indeed, many municipalities are currently searching for more integral ways of working between the different parts of the social domain within their municipality (17). One respondent formulated it as follows: "It starts with the client and we do what is necessary; many roads lead to Rome". A third, though smaller, group took a more neutral stance and considered the underlying idea of the long-term care reform (truly progressing towards a participation society) to be key in decision-making, implying that 'new', 'creative', or 'innovative' solutions have to be sought in balancing between a limited budget and the existing (or even growing) care/support demand. One respondent covered this point by stating that we should "learn people how to fish instead of supplying the fish". Apart from an increased focus on prevention (e.g. by supporting, or cooperating with, citizens' initiatives and/or informal care organizations), it remains however unclear what is exactly meant by 'innovative solutions'.

Question 7 (ethical principle 6: proportionality). Next, respondents were asked whether they think the Social Support Act 2015 can be considered as a proportionate measure for the goals it intends to pursue. In general, respondents considered this proportionality indeed to be present, thereby primarily making the comparison to the pre-2015 situation, which was considered by many as 'unfair' and 'untenable' due to the often exaggerated care demands of people (the so-called 'claim-mentality'). Or, in the words of one respondent: "A greater reliance on an own network / own resources will eventually replace the claim-mentality ('I am entitled to') and thus be cheaper".Another group of respondents considered the underlying idea of the decentralization (providing care and support on a customized basis and closer to home) as a positive normative development, while being worried about the budget cuts that accompanied the decentralization. As one respondent put it: "There will only be a balance in case of sufficient budget and autonomy for municipalities". For this group of respondents, the Social Support Act 2015 is considered to be putting a disproportionate burden on society. For part of this latter group, this disproportionality is likely to reduce in the longer-term, due to a gradually reducing 'claim-mentality' within society. For another part, however, the reduction of long-term care costs in the longer-term will not be the result of a more efficient provision of long-term care, but will simply be the result of the mere fact of less available financial resources (and thus less possibilities), leading logically to less expenses in the long-term care sector.

Question 8 (dealing with moral conflicts). The last two questions of the survey referred to the way municipalities deal with the identified moral conflicts. In general, most respondents pointed to the importance of communication and transparency here. On the basis of regular deliberations, meetings and conversations with both care/support providers, surrounding municipalities, care/support recipients and their informal caregivers, and other stakeholders, the execution of the Social Support Act 2015 is evaluated regularly and adapted where necessary. Moreover, although the large discretion that municipalities have in assessing citizens' care/support needs is considered by many citizens as unfair or subjective (as we mentioned before), the best way of dealing with this discretion according to our respondents is to critically assess each individual situation in-depth, offer customized support where possible, be open and transparent towards care/support recipients and their informal caregivers, and thoroughly explain the choices made where necessary. As one respondent captured it: "Continue discussions, while in the meantime also ensuring that the necessary care delivery continues".

Question 9 (dealing with moral conflicts: alternatives). Subsequently, respondents were asked whether they foresaw alternatives with regard to the execution of municipalities' long-term care responsibilities. Many pointed to the unlikelihood of such an option, as the Social Support Act 2015 is an established fact by law. Others argued that neither option would be perfect and that turning to an alternative law now would be going back to square one. Most respondents, however, interpreted this question not so much in terms of alternatives to the Social Support Act 2015 in itself, but in terms of possible alternatives in the execution of this law. Most of these respondents pointed to the potential release of more financial resources by the national government. At the same time, respondents acknowledged that although the availability of more financial resources would make life easier, it would not dissolve moral conflicts. A second alternative would be a clearer delineation between (or integration of) the different long-term care Acts. Respondents argued for example that it would have made more sense if the complete package of non-residential care services was put under responsibility of either the municipalities, or the health insurers. Currently, the majority of non-residential care services is under responsibility of the health insurers, and only a small part under responsibility of the municipalities. Finally, respondents pointed to the need for more innovative and unorthodox solutions, arguing that the Social Support Act 2015 is not an aim in itself, but a means to deliver good care/support. Or, as one respondent put it: "Every law has an Article 5", implying that governments should sometimes turn a blind eye in the execution of policies.

Discussion

Principal findings and conclusions

The aim of this study has been to examine to what extent municipalities in the Netherlands take/took potential moral conflicts into account when implementing and executing the Social Support Act 2015. We intend to answer our research question by relating the results corresponding to each of the six principles of our theoretical framework back to the coherentist approach of ethical reasoning this framework was based on. As was mentioned before, the coherentist approach is based on two main strands of ethical reasoning, being the 'rights-based approach' and the 'consequentialist approach'. Within a consequentialist approach, "actions are judged for their outcome and overall produced value" (22). This approach is basically founded on such principles as 'health maximisation' and 'do no harm' (22), corresponding to the principles of non-maleficence & beneficence and social beneficence in our theoretical framework. In a public health context a consequentialist approach to ethical reasoning implies that health should be maximised, “as long as health maximisation is not endangering the maximisation of the overall utility of people” (22). As was described in the previous chapter, most of our respondents appeared to have a rather neutral stance with regard to assessing the non-maleficence and beneficence of the Social Support Act 2015, emphasizing that it depends to a large extent on the individual perception of people whether they experience the introduction of the new Social Support Act as an advantage or a disadvantage. With regard to social beneficence we found that, despite worries about the decreasing level of formal care provision, most respondents considered the creation of a better awareness and appreciation among citizens about care in general to be one of the more long-term advantages of the Social Support Act 2015. At the same time there are also doubts about the impact that a law can have on such developments as new ways of thinking about long-term care (referred to above as a ‘normative reorientation’ towards long-term care). Indeed, concepts such as the concept of ‘positive health’ as developed by Huber et al. (4) are gaining importance within the healthcare sector.The conceptof ‘positive health’ considers health as “the ability to adapt and to self manage” (4) instead of considering it under the traditional WHO definition as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (32).

A rights-based approach is basically founded on such principles as ‘human dignity’ and ‘justice’, corresponding to the principles of respect for autonomy and social justice of our theoretical framework, and claims that “persons have rights to fair equality of opportunity” (22). In a public health context this implies that people have a right to (equal opportunity) “to receive appropriate healthcare and live in environments in which social determinants of health are distributed in a fair way” (22). As we saw in the previous chapter, most respondents considered respect for autonomy to be sufficiently covered by the Social Support Act 2015, mainly by its emphasis on freedom of choice. At the same time, however, our respondents pointed out that exactly freedom of choice is something that is not always of added value in a context wherein people are often just looking for good quality support. Moreover, while social justice (people’s capabilities of making use of their right to freedom of choice) was considered to be sufficiently present for the majority of people, it is also exactly this point that respondents appeared to be most worried about in light of the Social Support Act 2015, especially when applying it to vulnerable groups in society. Indeed, the legal text of the Social Support Act 2015 hardly stresses the importance of such notions as ‘equity’, one of the core underlying values of the principle of social justice. Although the legal text stipulates that “citizens who themselves or together with people in their immediate environment are not sufficiently self-sufficient or insufficiently able to participate [in society], must be able to rely on organized support by the government”, it remains unclear when exactly someone is ‘insufficiently self-sufficient’, ‘insufficiently able to participate in society’, and (in case someone is entitled to support) when one is entitled to ‘general services’ and when to ‘customized services’. Indeed, as was argued by Maarse and Jeurissen (16), municipalities actually have a large policy discretion with regard to the allocation of support measures (the so-called ‘zip code rationing’), which may lead to unequal access to long-term care. In fact, this point was one of the three main moral conflicts as identified by our respondents under question 1 of the survey. Moreover, as argued by Van der Aa et al. (18), with the advent of the Social Support Act 2015 a shift can be witnessed from a ‘right to care’ to a ‘right to customized support’. Next, although solidarity is by definition an important component of the Social Support Act 2015, the Act foresees a shift from formal to informal solidarity (18). It remains, however, doubtful how much can be expected of this informal solidarity. As Maarse and Jeurissen (16) already pointed out, “the potential of 'unexplored' informal care is overestimated. Furthermore, the negative externalities for caregivers who deliver intense informal care are underestimated". Finally, the legal text of the Social Support Act 2015 stipulates that "it is desirable to set new rules, in order to bring citizens' rights and duties more in line with each other" (authors' own translation), which tends to imply a decreasing government responsibility for citizens' rights to equality of opportunities regarding access to good quality care/support.

Our first sub-research question was specifically directed towards the way municipalities divide scarce resources in the social domain in a fair way. As we saw in the previous chapter, our respondents' views towards principles of efficiency and proportionality were quite divergent. On the one hand, the availability of less public resources for long-term care and the higher own financial contributions people are expected to pay for the care/support they receive might eventually lead to a more conscious use of care (and in that way contribute to the normative reorientation of creating a true participation society). On the other hand, however, these developmentsmight unconsciously lead to the creation of an access barrier to care (especially for the less affluent in society) or to the avoidance of necessary care. In fact, the conflict of adhering to the Social Support Act's underlying theory of moving towards a participation society while at the same time having to deal with the limited budget and time-frame that is offered to municipalities for supporting this change process was one of the three main moral conflicts as identified by our respondents under question 1 of the survey. Moreover, within the context of the Social Support Act 2015 'efficiency' might primarily be understood as a way of justifying the budget cuts that accompanied the long-term care decentralization, instead of as a moral obligation to efficiently use scarce health resources. At least part of the solution to the dilemma of how municipalities then can divide scarce resources in the social domain in a fair way might be provided by the 'accountability for reasonableness' approach of procedural justice by Daniels and Sabin (33), which offers a "minimum ethical standard in times of economic downturn characterized by scarcity of resources and when not all needs are being satisfied" (13). The accountability for reasonableness approach requires certain conditions to be met in order for a process of allocating scarce healthcare resources to be 'fair': the process (including the reasoning behind it) has to be transparent to the public, the reasons by which decisions were made have to be relevant, and it should be possible to revise any decision in case of new evidence or arguments (13). These conditions are quite in line with our results under question 8 (dealing with moral conflicts), emphasizing the importance of communication and transparency in the process of dealing with moral conflicts (such as the division of scarce resources).

Finally, in order to answer our second sub-research question (regarding the way municipalities empower citizens towards a participation society), it has to be determined how the kind of efficiency goals as discussed under the previous sub-question can be reconciled with moving towards a participation society; or, in other words, does the latter lead to the former, or does the former require the latter? Is thus "participation" a good value or a fig leaf or metaphor for a liberalist mindset? We argue that although participation is an intended goal of the Social Support Act 2015, citizens are insufficiently supported to achieve that participation. As we argued before, 'support' under the Social Support Act 2015 is intended to be limited to those citizens who themselves or together with people in their immediate environment are not sufficiently self-sufficient or insufficiently able to participate. Or, as Maarse and Jeurissen (16) put it: "The WMO 2015 gives applicants a right to publicly funded support if they cannot run a household on their ownand/or participate in social life". However, proactively supporting citizens towards the initial goal of creating a participation society (e.g. by focusing on preventive measures), is much less pronounced in the legal text of the Social Support Act 2015. Article 2.1.2 (c, d and e)points in general terms at, respectively, the early determination of citizens' support needs, the prevention of citizens' reliance on support, and the provision of general support services (provided without the prior examination of the recipient's need, characteristics and capabilities). However, how to achieve these points is left to the municipalities' discretion. In the same vein, Article 2.1.2b points out that "the different categories of informal caregivers should be enabled as much as possible to perform their duties as informal caregiver" (authors' own translation), but this point is not specified in the remainder of the legal text. This point is therefore, we argue, much less concrete as compared to the old 2007 Social Support Act (under which municipalities where merely responsible for domestic help), where support for informal caregivers was concretized in such sub-themes as information, advice, emotional support, education, practical support, respite care, financial support and material support. At the same time, this high degree of policy discretionfor municipalities under the 2015 Social Support Act gives room for 'innovative and unorthodox solutions', as was indicated by several of our respondents, although this may require the availability of more financial resources and/or a clearer delineation between (or integration of) the different long-term care Acts (the latter being one of the three main moral conflicts as identified by our respondents under question 1 of the survey).

Coming back to our main research question ("To what extent did/do municipalities in the Netherlands take potential moral conflicts into account when implementing and executing the Social Support Act 2015?"), we conclude by arguing that while municipalities are indeed aware of (potential) moral conflicts, the nature of the new law itself leaves insufficient room for municipalities to act in a sufficiently proactive and supportive/empowering manner on these challenges, as well as on the long-term aim of the Social Support Act 2015 of achieving a true participation society. The reasoning behind this argumentation is that although the new law appears to emphasise such ethical principles as social beneficence and respect for autonomy, the lack of emphasis on notions of social justice threatens to impede the effectuation of the intended goals in practice. Moreover, the Social Support Act 2015 seems to be mainly directed towards achieving a certain outcome (the maximisation of social beneficence through the creation of a participation society), instead of stipulating how that outcome should exactly be achieved in a fair manner. As such, the Social Support Act 2015 insufficiently seems to provide equality of opportunity with regard to long-term care access, both between citizens within the same municipality, as (and perhaps especially) between different municipalities. At the more short-term, taking into account a minimum set of ethical principles allows for the allocation of (seemingly scarce) resources that is, at the least, as fair as possible.

Study strengths and limitations and suggestions for further research

The principle strength of this study has been the application of a broad ethical approach towards scrutinizing a new, and still sensitive, policy responsibility of Dutch municipalities. We have shown that taking into account a minimum set of ethical principles, raises awareness of (potential) moral conflicts within the context of the new Social Support Act. Being aware of such conflicts, at its turn, helps in executing the new responsibilities under the Social Support Act in an appropriate manner (or in justifying decisions towards citizens) and gives room for municipalities to act in a as proactively as possible manner on the challengesresulting from these new responsibilities. Next, the fact that all Dutch municipalities were invited to participate in our study led to a reasonable response rate, in terms of reaching a saturation point in our data analysis. At the same time, the limited response rate to the invitation for a telephonic interview might have led to a certain selection bias, as not all respondents have given the same level of in-depth explanation to their survey answers. Moreover, it might have been valuable if additional questions were added to the in-depth interviews, although also the semi-structured character of these interviews already allowed for a certain (though limited) degree of further exploration within and beyond the initial interview items. Finally, also our argument with regard to the allegedly insufficient support with regard to achieving a participation society leaves room for further research, as this is exactly a topic that holds a more long-term perspective. As such, it may be worth considering within a number of years to what extent the Social Support Act 2015 actually contributed (or not) to the creation of a true participation society.

References

1. Council of the European Union. Council conclusions on common values and principles in European Union health systems (2006/C 146/01). Official Journal of the European Union 2006;49:C 146/1-3.
2. Commission of the European Communities. White Paper. Together for Health: A Strategic Approach for the EU 2008-2013. Brussels: Commission of the European Communities, 2007.
3. Commission of the European Communities. Europe 2020: A strategy for smart, sustainable and inclusive growth. Brussels: Commission of the European Communities, 2010.
4. Huber M, Knottnerus JA, Green L, van der Horst H, Jadad AR, Kromhout D, et al. How should we define health? BMJ 2011;343(d4163).
5. MacCullough LB [Internet]. Long-Term Care Ethics - Ethical Issues In Long-term Care Decision-making. Available from: Medicine Encyclopedia, http://medicine.jrank.org/pages/1063/Long-Term-Care-Ethics.html (accessed: March 21, 2016).
6. Ranci C, Pavolini E. Reforms in Long-Term Care Policies in Europe. New York: Springer-Verlag, 2013.
7. Pavolini E, Ranci C. Restructuring the welfare state: reforms in long-term care in Western European countries. J EurSoc Policy 2008;18:246-59.
8. Brand H, Rosenkötter N, Clemens T, Michelsen K. Austerity Policies in Europe—Bad for Health. BMJ 2013;346(f3716).
9. Karanikolos M, Mladovsky P, Cylus J, Thomson S, Basu S, Stuckler D, et al. Financial crisis, austerity, and health in Europe. Lancet 2013;381:1323-31.
10. Arie S. Has austerity brought Europe to the brink of a health disaster? BMJ 2013;346(f3773).
11. McKee M, Karanikolos M, Belcher P, Stuckler D. Austerity: a failed experiment on the people of Europe. Clin Med 2012;12:346-50.
12. Quaglio G, Karapiperis T, Van Woensel L, Arnold E, McDaid D. Austerity and health in Europe. Health Policy 2013;113:13-9.
13. Schröder-Bäck P, Stjernberg L, Borg AM. Values and ethics amidst the economic crisis. Eur J Public Health 2013;23:723-4.
14. Jongen W, Burazeri G, Brand H. The influence of the economic crisis on quality of care for older people: system readiness for innovation in Europe. CIEJ 2015;28:167-91.
15. Maarse H, Jeurissen P, Ruwaard D. Results of the market-oriented reform in the Netherlands: a review. Health Econ Policy Law 2016;11:161-78.
16. Maarse JAM, Jeurissen PP. The policy and politics of the 2015 long-term care reform in the Netherlands. Health Policy 2016;120:241-5.
17. Jongen W, Commers MJ, Schols JMGA, Brand H. The Dutch Long-Term Care System in Transition: Implications for Municipalities. Gesundheitswesen 2016;78:e53-61.

18. Van der Aa MJ, Evers SMAA, Klosse S, Maarse JAM. Hervorming van de langdurige zorg. Blijft de solidariteitbehouden? [Reform of long-term care in the Netherlands: solidarity maintained?]. Ned Tijdschr Geneeskd 2014;158(A8253).
19. Grootegoed E, Tonkens E. Disabled and elderly citizens' perceptions and experiences of voluntarism as an alternative to publically financed care in the Netherlands. Health Soc Care Comm 2017;25:234-42.
20. Dwarswaard J, Bakker EJ, van Staa A, Boeije HR. Self-management support from the perspective of patients with a chronic condition: a thematic synthesis of qualitative studies. Health Expect 2016;19:194-208.
21. Dwarswaard J, Van de Bovenkamp H. Self-management support: A qualitative study of ethical dilemmas experienced by nurses. Patient EducCouns 2015;98:1131-6.
22. Schröder-Bäck P, Clemens T, Michelsen K, Schulte in den Bäumen T, Sørensen K, Borrett G, Brand H. Public health ethical perspectives on the values of the European Commission's White Paper "Together for Health". Cent Eur J Public Health 2012;20:95-100.
23. McConnell T [Internet]. Moral Dilemmas. Available from: The Stanford Encyclopedia of Philosophy, http://plato.stanford.edu/archives/fall2014/entries/moral-dilemmas/ (accessed: March 21, 2016).
24. Schröder-Bäck P, Brand H, Escamilla I, Davies JK, Hall C, Hickey K, et al. Ethical evaluation of compulsory measles immunisation as a benchmark for good health management in the European Union', Cent Eur J Public Health 2009;17:183-6.
25. Schröder-Back P, Duncan P, Sherlaw W, Brall C, Czabanowska K. Teaching seven principles for public health ethics: towards a curriculum for a short course on ethics in public health programmes. BMC MedEthics 2014;15(73).
26. Daniels N. Just Health: Meeting Health Needs Fairly. Cambridge: Cambridge University Press, 2008.
27. World Health Organization [Internet]. What is universal coverage? Available from: http://www.who.int/health_financing/universal_coverage_definition/en/ (accessed: March 21, 2016).
28. Verweij M, Dawson A. Ethical principles for collective immunization programmes. Vaccine 2004;22:3122-6.
29. Andrews M. Who Is Being Heard? Response Bias in Open-ended Responses in a Large Government Employee Survey. Public Opin Quart 2004;69:3760-6.
30. Hsieh H, Shannon SE. Three Approaches to Qualitative Content Analysis. Qual Health Res 2005;15:1277-88.
31. De Koster Y [Internet]. Kwart zorggebruikers mijdt dure zorg [Quarter of care users avoidsexpensive care]. BinnenlandsBestuur 2016; Feb 10. Available from: http://www.binnenlandsbestuur.nl/sociaal/nieuws/kwart-zorggebruikers-mijdt-dure-zorg.9518647.lynkx (accessed: April 1, 2016).
32. World Health Organization [Internet]. Constitution of the World Health Organization. Available from: http://www.who.int/governance/eb/who_constitution_en.pdf (accessed: April 4, 2016).
33. Daniels N, Sabin JE. Accountability for reasonableness: an update. BMJ 2008;337(a1850).

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ORIGINAL RESEARCH

From their own words: An explorative qualitative study on the experience of combatants disabled in the Liberian civil war,1989-2003

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Abstract

Aim: To explore the experience of fighters disabled during the Liberian civil war; what they did and what was done to them; and what happened after their demobilization.
Methods: Six focus group discussions were organized in Monrovia, the capital of Liberia, with 50 invalid veterans aged 10 to 25 at their entrance into the war and eightwomen wounded, although civilians, sampled as in convenience. In addition,sevenkey-informant interviews took place. All encounters were agreeably taped, transcribed and summarized under the items of the discussion guide.
Results: Most ex-combatants joined the fighting to protect themselves and their families who were targeted by rebel fighters or joined to revenge the killing of close family members by fighters from all sides including government soldiers. Nearly all the former fighters interviewed expressed their desire to be trained in various areas of life skills. A vast majority of the ex-combatants are living from begging in the streets.Those from factions feel that government cares for former regular soldiers and discriminates those from other warring factions. The lack of housing for ex-combatants with war related infirmities is of paramount concern to them. They feel that the post-war reintegration program did not achieve its objectives. In the communities, they are stigmatized, blamed as the ones who brought suffering to their own people. The key informants are calling for establishment of trust fund for survivors of the civil war who are disabled.
Recommendations: Establishment of a trust fund for survivors of the civil war who are disabled; reform of the National Bureau of Veteran Affairs to include the disabled ex-combatants of all former warring factions; erection as planned of the proposed Veterans Hospital; a national census of disabled ex-combatants and war victims.

Keywords:civil war, demobilization, disabled combatants, Liberia, reconciliation.

Conflicts of interest: None.

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Foreword

The civil conflict has been over for nearly as many years as it lasted. The scars however are as visible today as were the horrible episodes of atrocities that characterized life during the war years. The wrecked economy of Liberia following the onset of the civil war, gross human rights violations, involvement of child soldiers and use of harmful substances by both armed fighters and civilians are all hallmarks of the Liberian civil war. Thousands of young people who were active members in the numerous fighting forces got maimed and are today disabled for various causes. What is true for nearly all of them is the fact that they are living under difficult circumstances - no jobs, no housing, and no sustainable care. With no preparation to face the harsh post conflict and post Ebola environment in Liberia, the disabled ex-combatants deserve attention that will give them hope, attention that will harness their potentials not only for sustaining themselves but for promoting peace in the nation. This publication, though conducted in only one of the 15 counties of Liberia, contributes to the knowledge needed for the attainment of a better living condition for disabled ex-combatants as well as promoting sustainable peace in Liberia.

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Introduction

Liberia, to mean „Land of the Free ‟, was founded by freed American slaves who were sponsored to settle in Africa as early as 1822. Annexation of land from the indigenous tribes enabled the country to be formed until statehood was declared 1847. The lack of full integration of the indigenes was the main trigger for the civil war beginning on Christmas Eve in1989 (1).

The large number of young people exposed to arms and use of harmful substances constitutes a significant risk for the sustainability of peace in the country.The idea to undertaking this explorative study into their feelings and experience comes from the general observation of the appalling conditions of disabled veterans. Unable to earn a living due to the lack of skills compounded by the fact that they have lost parts of their bodies, the former combatants are in serious need of assistance which is not forthcoming. Not only are the disabled ex-combatants unable to provide daily food for themselves, but they are under incessant barrage of accusations of bringing suffering to their people. Such stance inhibits a free flow of material assistance to them as well as social acceptance (2).

Therefore this investigation attempts to documentfrom *their own words*the past and present experience of former fighters who were disabled and traumatized during the civil war in Liberia including a selected number of civilian women wounded. In addition key informants have been interviewedand asked for their analysis and recommendations.

Methods

Study Population

The qualitative studytook place inMontserrado County which includes the capital Monrovia with more than a million inhabitants, about a quarter of Libe‟risa entire population. The respondents were recruited by non-probability sampling as in convenience between March 29 and May 3, 2017 through the Amputees Football Club in Monrovia (4) and consisted of two categories of respondents: The first comprised of five focus groups of ten former combatants each, together 50participants who were disabled as a result of their participation in the fighting. These persons were from various fighting forces including those from the national army. Additionally, there were eight women who received their disabilities from bullets and bombs even though they were civilians; some were targeted while others were accidental.The selection process did not allow anyone to attend more than one focus group.

Focus group discussions

The study relied on a participatory approach and semi-structured narrative format.The discussion guide for the focus groups,taking about three hours,comprised a set of nine questions, assembled by four experts - three Liberian and one European - familiar with the setting. The questions were introduced to the focus groups by amoderator:

1) Why and for which faction (out of eight) did you join the fight?
2) What was your rank and war-name and what weapons did you use?
3) What made you brave and how did you get wounded?
4) Did you commit atrocities yourself?
5) Did you meet later your comrades or your victims?
6) What is your experience with the demobilization program after the war ended?
7) Where and how do you live now and how are you received by thecommunity?
8) Are you satisfied with your living conditions and what are your expectations?
9) How did you as a women experience the civil war?Voices of Female Survivors.

Key-informant interviews

The seven key informants contacted had witnessed events during the civil war and were knowledgeable about former fighters and the programs initiated for their return to civilian life. They saw what happened or took part in what happened such as rendering social, relief or medical services to the population affected by the war. These included stakeholders and others such as project officers, focal point persons in security sector institutions, community leaders, and relevant government personnel. Although they were professionals in their own right, some of them were seen as rebel supporters because they operated in particular geographic locations controlled by warring factions. Seven such persons were interviewed on issues surrounding the following topics:

1) The Disarmament, Demobilization, Rehabilitation and Reintegration Program (DDRR)
2) Key challenges facing ex-combatants
3) Strategic recommendations

Information processing

All encounters were agreeably taped, transcribed and summarized under the items of the discussion guide by a team of Liberians under the guidance of the author.

Results

I. The Focus Group Interviews (FDG)

Characterization of the participants

Most of the discussants were young school-going children, when the war started. However, as the war progressed educational institutions in the war-affected areas were shut down, leaving thousands of idle youths susceptible to align themselves as child soldiers, boys and also girls (5),with the warring faction that was present in their areas of domicile.

1) Why and for which fraction did you join the fight?

For most, as seen from their age profile, serving in the military was never then thought of. The discussants disclosed that the war was brought home when they witnessed the gruesome murder and mutilation of their relatives, the personal pain inflicted on them by those bearing arms whether government troops or members of opposing warring factions, the looting of their family‟s properties or just the excitement of being with members of their age group, all thatserved according to them as motivating factors to become fighters themselves. A couple of others were forcefully recruited and others joined because they were used as porters of ammunition and goods for the men at arms.Defections from the national army became commonplace joining one of the rebel factions (see box), some related to ethnical or religious background. Their allegiance to the armed group to which they belonged became stronger than the bond with their families and socio-cultural institutions that nurtured them and that they once respected.

2) What was your rank and war name and what weapons did you use?

In order to persuade their men to obey their authority, those in command assigned meaningless ranks to fighters under their command. Such arbitrary ranks gave them an air of greatness. Additionally, there was no previous training to back the ranks. The discussants informed that rebel training sometimes lasted for only two months.
Examples of these fake ranks given by the discussants are: Field Commander, Full Colonel, General, Captain, Brigadier General, Lt. Colonel, Major, Chief of Staff.

War-names or nicknames played an important role in the behavior of the individual combatant and how he/she was perceived by comrades and commanders. Besides being used as a means to motivate combatants into action, nicknames served to conceal the real identity of the fighter. Nicknames were also used to promote certain behavior of the fighter. For example, “dog killer” could mean killer of the enemy (the dog). Someone bearing such nick name would live to prove that he is a killer of the enemy. Similar other nicknames of discussants were: Major Danger, Super killer, No Ma No Pa.

Military groups named by participants as their own ones:

Armed Forces of Liberia (AFL)

- Lofa Defense Force (LDF)
- Liberians United for Reconciliation and Democracy (LURD)
- National Patriotic Front of Liberia (NPFL)
    - Independent National Patriotic Front of Liberia (INPFL)
    - National Patriotic Front of Liberia-Central Revolutionary Council (NPFL-CRC)
- United Liberation Movement of Liberia for Democracy (ULIMO)
    - United Liberation Movement of Liberia for Democracy-Johnson faction (ULIMO-J)
    - United Liberation Movement of Liberia for Democracy-Kromah faction (ULIMO-K)

The discussants indicated that they used various weapons during the course of the war. The predominant one was the Kalashnikov (AK47 and others in the series). The combatants used the guns to exploit the civilians in their controlled areas, a major factor for the mass exodus of people out of the country. The proliferation of small arms in all areas controlled by warring factions made the entire country unsafe at the time especially that the combatants according to them served as the “justice systems” in their controlled areas. Many of these weapons were traded among warring factions as some combatants switched sides or needed money. However, heavier weapons fielded were more supervised by those in command.

3) What made you brave and how did you get wounded?

Myths and rumors surrounding the composition of rebel fighting forces and their use of mystic powers coupled with the government‟s mismanagement of the war, greatly aided the demoralization of the better trained government troops to the point of stimulating mass defections.The rapid advance of rebel forces mainly rested on the highly motivated youths most of whom were given drugs and other substances to influence their behavior, giving them a false sense of invincibility. Some others mentioned the use of drugs and strong alcoholic drinks given them by their commanders as sources of their bravery. Some wore amulets on their necks and “hands for protection” against bullets. A discussant explained that he was given a talisman belt to wear around his waist which could hold him tight and become very hot when enemies were around. These good luck charms turned up to be fake; many fighters died or got wounded due to their belief in these charms. Other reasons cited as sources of their bravery are as follows:

- Colleagues made me brave
- AFL distributed the New Testament Bible
- God and the arm given to me
- The gun gave me power
- The urge to revenge for the killing of relatives

- American war movies
- Family members were not around, so fear left me when I joined.

The discussants narrated various ways in which they received wounds which led to their disability today. To wit:

- Mistake from friendly forces
- Enemy fire, on the frontline
- Aerial bombardment by Alpha Jet
- Personal mistake handling grenade
- Fell in enemy ambush.

Some of the other causes of wounds which resulted into amputation of limbs are directly reflective of the low level of training of the fighters as regards safe handling of weapons.

4) Did you commit atrocities yourself?

Discussants admitted that they also committed atrocities in response to what others did to them and their people. They said that they killed and raped in revenge for what was done to their family members or relatives. They informed that they saw wickedness in the extremes such disembowelling of pregnant women and using their intestines to intimidate other people at checkpoints. The discussants said that they burned houses and other peop‟lepsroperties because of anger. The discussants also admitted to beating people, looting goods and killing domesticated animals. Asked if they have any regrets for also committing crimes against others, a few said they do regret but most of them said no, as they were under the influence of drugs or were forced by their commanders. One discussant said that he did not do anything to anyone but only killed enemies on the battlefield.

5) Did you meet later your comrades or your victims?

The participants said that they sometimes see their colleagues and those who commanded them during the war, most of them in same impoverished conditions as they are and sometimes even worse. These past commanders, they said, sometimes even asked for help from the disabled ex-combatants in this study: “Our former commanders feel more frustrated than us, because they have no more power to do anything or command other people to do something for them”. Some met also their victims and begged them to forgive, others saw them on the street but were not given a chance to talk to them or even beaten in revenge.

6) What is your experience with the demobilization program after the war ended?

The most contentious issue reference the transition from active combatants to civilian life was the Liberia *Disarmament, Demobilization, Rehabilitation and Reintegration Program (DDRR)* up to 2009. Nearly all of the discussants were not pleased with how it was handled. The vocational training to which some went was rather too short. They informed that they were promised packages at the end of the training which many of them did not receive. They said that their names were written down to be contacted when the packages were reading and up till now nothing has been done. A discussant informed that he entered the DDRR program and spent five days and afterwards used his ID (identification) card to enter a vocational institution where he spent nine months, graduating with a certificate but the tools given him and his colleagues did not match the certificate. A few others admitted that they sold their ID cards for money.According to discussants who fought for the warring factions, they are dissatisfied over how the government did not arrange a better package as that made for the regular soldiers when in their opinion all of them had served their country.

- USD 150 was given to rebel fighters as a one-shot resettlement package

- Government of Liberia soldiers were given USD540 and also benefited from appropriate pension arrangement.

7) Where and how do you live now and how are you received by the community?

Most of the disabled ex-combatants congregated in Monrovia and its immediate environs for fear of reprisal as stigma against them in their original communities is described as high. Most of them are blamed for the atrocities and the sufferings that the civilian population had to endure during the civil war. As a result the furthest distance from the city centre where most disabled are living turned out to beCareysburg and Gardnersville whereas the heaviest concentration is in Paynesville, all less than 50 km away. The discussants were frankto also admitthat they wereashamed toreturn to their original places of residence. Furthermore the high cost of rent, distance from their usual places of street begging and the fact that there are some people in their original locals who want them to die, were cited as compelling reason for finding new places to live.Many of the fighters refused to go home even up totoday.

Some participants were received well by their families but were rejected by their communities. One discussant said that his parents and other family members cried upon seeing him and later encouraged him not to harm himself. Another discussant said that reception was good at first after DDRR but when the money they received from the DDRR was exhausted he was thrown out. Yet another informed that he had a girl pregnant for him at time of disarmament but right after his money was finished too, she left him and said that the pregnancy was not his.

The psychological anguish and social marginalization ex-combatants have been subjected to have led some of them to attempt suicide. The suicidal inclinations among freshly-wounded ex-combatants were motivated by feelings of being useless after losing limbs, ashamed of their conditions, thinking that they would be rejected by women, being mocked by children or just share embarrassment at the disability. Asked why they did not carry out their desire to commit suicide after all, they gave the following reasons:

- Another disabled friend encouraged me not to kill myself
- I made my own decision not to kill myself
- Nurses at the hospital talked to me and promised me “false legs” after one year.

As a result of all these inconveniences, they move in groups and sleep in makeshift huts and market places where the night will find them after a hectic day of begging for alms from humanitarians in the street corners and in front of supermarkets and other public places.

Figure 1. Disabled war combatants 1017

8) Are you satisfied with your living conditions and what are your expectations?

The overwhelming majority of discussants indicated they are not satisfied with their present conditions, both physical and economic. However, they do accept the fact that their physical conditions in the given situation cannot be reversed, so they must live with it. They stated that "No one can be satisfied with this kind of condition, there is nothing we can do" (picture).

All the respondents felt that the DDRR was hastily planed and haphazardly implemented and that the implementation period of less than 3 years was grossly inadequate. Those who were enlisted in skills training programs were given 6 months to complete the training. They expected the program to last much longer to allow them acquire the knowledge and skills that are marketable. They expected the DDRR to provide free medical care and "We need housing and education for our children as well as jobs to move us from begging in the streets. We also need training to become peace ambassadors to reconcile our country and prevent war".

9) How did you as a women experience the civil war?Voices of Female Survivors

"My son and his friend were hit when they went in our yard to get water from the well. I took them both to JFK Hospital and when I went to Front Street, I was hit too and my hand got broken. I was assisted by government security and ICRC; the Ministry of Finance gave me money to attend to my injury."

"I was a student in grade seven in 1996 when I got shot entering into my own father's house. The boy who shot me did it intentionally; five persons were also fired, 2 survived. I used tube for one year eight months."

"I got hit also in 1996. They took me to Redemption Hospital. One ECOWAS man helped me and carried me to Ghana. I waited 9 month to remove the bullets. I lost one hand and foot."

"I made many attempts to kill myself, each time I tried to do so someone would interrupt."

"I did not go to school. I went to do business, when I got shot at the age of 23, only my mother stood by me, my boyfriend ran away."

"I have had two children since my injury. One is going to school."

"I am making and selling hand bags, neck ties, etc. Don Bosco taught me."

“Particles are still in my body; they can be removed but someone has to foot the bill.”
“We need help. The government is not focused on the disabled.”
“We need micro-loan, wheel chairs and all disabled materials”

II. Perspectives of Key Informants

During the study a number of key informants knowledgeable about the former fighters and the programs initiated for their return to civilian life were identified and interviewed. Their perspectives have been summarized below.

Among the views expressed by all key informants is the fact that there was not a dependable exit strategy for the thousands of ex-fighters especially those who be invalids from the war. It is not surprising therefore that disabled ex-combatants are finding it difficult to survive today. Having gained nothing from the war, physically impaired and not receiving any subsistence from government or other humanitarian organizations, the disabled ex-combatants civilians are the true victims of the Liberian civil war. The key informants feel that for all practical purposes the ex-combatants are marginalized by the Government of Liberia and rejected by the larger society.

1) The Disarmament, Demobilization, Rehabilitation and Reintegration Program (DDRR):

All the key informants dubbed the DDRR program as a long-term failure exercise, not only because of its failure to retrieve all the weapons from the ex-combatants but its inability to implement a program for providing sustainable basis for marketable life skills. They were unanimous on their fact that the DDRR program also lacked credible trauma healing offering as well as the availability of psychosocial counselling. It is the view of some key informants that the major reason standing in the way of true reintegration of ex-combatants is that the DDRR only put a quick-fix program that did little to prepare the ex-fighters for the life they were destined to face after disarmament.

2) Challenges facing ex-combatants:

The current state of the disabled ex-combatants is appalling, their dependency on handouts to feed themselves and their dependents not guaranteed from day to day; hopelessness is written in their faces, said one key informant. Their presence in the streets begging for livelihood reminds those who carry hurt in their hearts from the civil war.

The informants generally believe that the provision of housing for disabled ex-combatants will not only dignify them and restore their self-esteem, but it will be easier to control or maintain them in any skilled training program that they may hereafter be given. They recommend skills training need assessment among disabled ex-combatants before any such training is initiated for them unlike the approach employed during the DDRR.

A key informant who happens to be a medical doctor confided that some of those who sustained bullets wounds in their bodies need follow-up treatment but they lack the means. If their exit strategy had been thoroughly planned, a referral program could have been in place to address such persons‟ conditions.The need for access to free health care was discussed and emphasized.

SUMMARY OF SOME MAJOR FINDINGS

- Most ex-combatants joined the fighting to protect themselves and their families who were targeted by rebel fighters
- Others joined to revenge the killing of close family members by fighters from all sides including government soldiers
- Some ex-combatants joined the fighting because they were tired of carrying looted materials or

ammunition for fighters through long distances

- Nearly all the former fighters interviewed expressed their desire to be trained in several areas of life skills
- A vast majority of the ex-combatants are living from begging in thestreets.
- Several ex-combatants are concerned about the education of their children and are asking for educational support for them
- Ex-combatants want to serve as peace ambassadors and are requesting to be trained to serve as counsellors for other youths to deter them from engaging in violent activities and prevent war in this nation
- Those from factions feel that government cares for former AFL soldiers and discriminates those from other warring factions
- The lack of housing for ex-combatants with war related infirmities is of paramount concern to them
- The ex-combatants feel that the DDRR program did not achieve its objectives because it was poorly planned and implemented in the rush
- In the communities, they are stigmatized. They are blamed as people who brought suffering to their own people.
- They are denied job opportunities even when the job requires only elementary school knowledge
- They are discriminated against even by taxicabs especially if they carrycrutches.
- The key informants are calling for establishment of trust fund for survivors of the civil war who are disabled.

3) Strategic recommendations

The ex-combatants, especially those who are disabled and had come from the warring factions, are no longer in the mathematics associated with post-war assistance to fighters. The National Bureau of Veterans Affairs caters exclusively to former Armed Forces of Liberia (AFL) fighters. There is no provision for free medical service. The AFL still maintains a medical unit but does not have the mandate to give free treatment to disabled ex-fighters. An elaborate plan for the construction of a Veterans Hospital never got off the blueprint. Aside from their inability to provide basic needs for themselves, disabled ex-combatants as well as their civilian victims need support to upkeep and educate their children.

The need for conducting a census of those who became disabled by the war, ex-combatants as well as their victims, was underscored. Women in this category were in significant number and are grappling with life's challenges. Their leadership is calling for reparation for these innocent people and they have been advocating for this since the days of the TRC, the Truth and Reconciliation Commission, enacted by the Parliament in 2005 but nothing has materialized. Some disabled could be trained to perform a variety of tasks for their sustenance and for the promotion of national peace and security. They could be prepared to serve as receptionists, ticket sellers for the LMA, the Liberia Marketing Association, at city parking services, car washers and the like.

Discussion and Recommendations

Certainly an explorative investigation as presented here does not allow generalizingthe results. However even the limited information collected indicates a major deficit in dealing with the sequelae of the Liberian civil war. The hardship imposed on the disabled by the very nature of their disabilities is exacerbated by the lack of opportunities for gainful employment to match their various forms of disabilities and skills, the uncertain source of daily meal and sometimes hostile attitude from some of the community members. This investigation,however underlines the need to execute a more representativestudy including the disabled war veterans as well as their victims, a study which would allow representative data and their advanced qualitative and quantitative analysis. The present publication can only serve as a trigger.

Nevertheless the findings of the study demonstrate that the ex-combatants of the civil war and even more the disabled civilian victims are forgotten not only by the Government of Liberia, but also by aid agencies. The post-war status of the ex-combatants was not factored into the transitional arrangements such as the DDRR program for the combatan‟tsreturn to civilian lifeconfirming an earlier analysis of 2007 (6). If government and the nation at large continue to ignore the plight of these sizable population groups, the security of the nation will remain fragile(7) and national reconciliation will be elusive and unachievable.

It is therefore recommended with priority that:

- The government of Liberia revisits or reforms the National Bureau of Veteran Affairs to include the disabled ex-combatants of all former warring factions.
- The proposed Veterans Hospital be erected as planned to cater to the health needs of active service personnel, veterans of the civil war and disabled ex-combatants of former warring factions for whom no health service is available. While this is being done, it is recommended that the mandate of the AFL Medical Unit be expanded to provide free medical service to the disabled ex-fighters and war victims.
- A national census of disabled ex-combatants is executed, an imperative about peace building in the aftermath of the civil crisis. This exercise would provide a thorough needs assessment that will put into place client-responsive actions that promote peace building, reconciliation and inclusiveness of those who are disabled by the war either during active combat or civilians as a result of inadvertent explosions and wanton acts of cruelty(8).
- Arrangements be made for a minimal (financial) survival package for each disabled ex-combatant which can enable them to afford at least a meal a day so that they will be able to contribute to national peace and reconciliation efforts.

Furthermore it is highly recommended that:

- Some low cost housing arrangement be put into place for all disabled victims of the war.
- Carefully designedlife skills training programs that are effective and efficient to make ex-combatants marketable or capable of sustaining themselves instead of begging in thestreets.
- Continued education programs for ex-combatants who have dropped out of school due to lack of support and are desirous of learning be established.
- Scholarship programs and tuition support for children of war victimsare put in place.

References

1. Gerdes F. Civil War and State Formation, the Political Economy of War and Peace in Liberia. Campus Frankfurt/New York; 2013.
2. Lord JE, Stein MA: Peacebuilding and reintegrating ex-combatants withdisabilities. The International Journal of Human RightsVol. 19/3,2015. http://www.tandfonline.com/doi/full/10.1080/13642987.2015.1031515?src=recsys.
3. Harrell MC, Bradley MA. Data Collection Methods Semi-Structured Interviews and Focus Groups. RAND Corporation: Santa Monica, CA: 2009. http://www.rand.org/content/dam/rand/pubs/technical_reports/2009/RAND_TR718.pdf.
4. Bloomfield S. Liberia's amputee footballers: from civil war to African champions-Their injuries are a painful reminder of a bitter conflict, but this football teamis

bringing pride to the country. The Observer, 10 January 2010. https://www.theguardian.com/sport/2010/jan/10/liberia-amputee-football.

5. International Labour Office, Programme on Crisis Response and Reconstruction:Red Shoes - Experiences of girl-combatants in Liberia. Report coordinated by Irma Specht, Geneva; 2017. http://www.ilo.org/wcmsp5/groups/public/@ed_emp/@emp_ent/@ifp_crisis/documents/publication/wcms_116435.pdf.
6. Jennings KM.The Struggle to Satisfy: DDR through the Eyes of Ex-combatants in Liberia. International PeacekeepingVol. 14/2,2007. http://www.tandfonline.com/doi/full/10.1080/13533310601150800?scroll=top&needAccess=true.
7. Wiegink N.Former Military Networks a Threat to Peace? The Demobilisation and Remobilization of Renamo in Central Mozambique. Stability: International Journalof Security and Development. 4/1, 2015; p.Art. 56. DOI: http://doi.org/10.5334/sta.gk.
8. Johnson K, Asher J, Rosborough S, Raja A, Panjabi R, Beadling C, Lawry L. Association of combatant status and sexual violence with health and mentalhealth outcomes in post-conflictLiberia. JAMA 2008;300:676-90. DOI: 10.1001/jama.300.6.676.

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REVIEW ARTICLE

Preparing society to create the world we need through "One Health" education

Report of a global survey and web conference on "One Health" K-12 education, 18 November 2016

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Abstract

Aims: A previous concept paper published in this journal (1), and a Press Release in June 2016 (2), focused on the importance of raising awareness about the UN-2030 Sustainable Development Goals (SDGs) (3) and, in particular, developing a better understanding about the critical need to ensure the sustainability of people and the planet in this decade and beyond through education. The One Health Education Task Force (OHETF), led by One Health Commission (4) in association with the One Health Initiative (5) agreed to conduct an online survey and conference in the fall of 2016 to engage interested colleagues in a discussion about the possible application of One Health in K-12 (or equivalent) educational settings.

Method: The survey instrument, reviewed by a panel of experts (below), was conducted in September and October 2016 and focused on basic concepts, values and principles associated with One Health and Well-Being. Input was sought on the various ways that One Health intersects with the UN Sustainable Development Goals and how they might work together toward common objectives. Questions also explored 'why, how, and where' One Health could be incorporated into K-12 curricula, and who should be involved in creating this new curriculum.

Results and Conclusions: Overall, there was general consensus that this initiative could make a significant contribution to implementing the SDGs[3] through the One Health spectrum as well as the priorities and major challenges that would be encountered in moving this initiative forward. Five strategies were presented for embedding the SDGs and One Health through curriculum innovation from early years to tertiary education and beyond. Importantly, a "Community of Practice" model was put forward as a means to support and promote the SDG goals through One Health teaching and learning in a meaningful and supportive way for the benefit of all involved. A subsequent conference in November 2016 provided an opportunity to present the results of the survey and conduct a more in depth discussion about potential curriculum development designs, possible project funding sources, and implementation challenges.

Keywords: education, One Health, global health.

Conflicts of interest: none.

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Introduction

The *One Health* concept is rightly gaining timely support and momentum worldwide as we are all becoming increasingly aware that humans, animals, plants and the environment must be in much better balance or harmony to ensure the present and future of our planet. It is gradually becoming clear that to realise or indeed re-capture this state of equilibrium, One Health and Well-being must be at the heart of socioeconomic, environmental and geopolitical decision-making at global, regional, national and local levels, thereby informing, as the Commonwealth Secretariat Health and Education Unit (ComSec HEU) posits Governance, Knowledge Development, Capacity Building and Advocacy (6). Over the past 18 months or so, and in line with the UN-2030 Global Goals (3) (or Sustainable Development Goals-SDGs) agreed late 2015, that embraced a broad notion of sustainable development – how all things are interconnected – climate, energy, water, food, education -we have been researching and developing ideas on how the One Health Task Force might support sustainability of the planet and people. Our deliberations led us to the fundamental question of how we might address perhaps the most important social problem of our time, that is, *'how to change the way humans relate to the planet and each other to ensure a more sustainable future for all life.'* (2)

Our unanimous conclusion is that learning about 'One Health and Well-Being' needs to play a much greater role in the education of our children and younger generation as well as society in general. To these ends, we developed position papers, issued a Press Release (2) in June 2016, to which many webinar attendees responded, followed by an on-line survey In September-October to solicit wider input on One Health Education. The survey thus informed an online One Health Education Conference on November 18, 2016 (7). The main purpose of the webinar was to share and build on the survey findings with a view to informing a 'robust' One Health education project funding proposal. A vital consideration governing the proposal was the potential of raising awareness about the social determinants of human-animal-environment interactions as well as the limitations presented by an unbridled human population expansion in the face of finite natural resources.

Many of the task force discussions reminded us that while we are advancing scientifically and technologically, we are also faced with a huge ingenuity gap – that is finding answers to unprecedented social problems that on many days seem to overwhelm us – climate change, health and food security, armed conflicts, ideological extremism, economic uncertainty, global inequalities, inequities and imbalances, to name a few. The Ebola crisis especially caught the world's attention in this regard. There are no easy answers. But encouraging young people to gain a better understanding of the planet we all share and need to sustain, along with our individual responsibilities to each other, and learning not only 'to do things better' but also, perhaps most importantly , 'to do better things' through collaboration and education, must surely be part of the way forward.

Underpinning our resolve to engage children and young adults in the pursuit of achieving the UN-2030 Global Goals through education and the One Health Education Initiative (OHEI) is captured in the recently published book, Global Population Health and Well-Being in the 21st Century (8). A recurring theme in the publication is that achieving the 17 SDGs and targets requires a fundamental paradigm or mind-shift in the coming decades: moving us from a view that sees the world as 'a place primarily for humans and without limits' to one that views the world holistically, ensuring it is fit for purpose in the long run for humans, animals, plants and the environment or our ecosystem. *One Health* provides us with the 'unity around a common cause' (9) toward which all of us need to aspire and which we believe is fundamental to building THE WORLD WE NEED.

Summary of online One Health education survey results

The purpose of the One Health Education online survey was to elucidate concepts, values and principles that respondents associated with One Health, and to begin to define how the One Health concept might be operationalized in K-12 schools. Invitations to participate in the survey were sent to individuals that had previously expressed interest in the One Health K-12 Education initiative expressed through presentations, in response to the published concept note and a press release, and through individual conversations. Seventy-six people responded to one or more questions on the survey. Of the 52 (68.4%) respondents who answered the question about highest level of education attained, 31 held one or more doctoral-level (18 PhD, 9 DVM, 4 MD, 1 JD), 14 held master's-level, and 7 held bachelor's-level degrees. Of the 53 (69.7%) respondents who answered the question about country where they worked, 21 answered USA, 15 Europe (including 6 in the UK), 10 Africa, 5 Asia or Southeast Asia, 1 South America, and 1 answered Middle East.

One Health concepts, values and principles

Words that respondents most commonly cited were "health" and the health domains (human, animal, environment/ecosystem/ecology). Respondents also cited words that represented common ground among One Health disciplines, e.g., inter-, coop-, collab-, coor-, integ-, uni- and holi-. "Sustain" and "educ-" were mentioned frequently, as were "dise- and "zoo-." Respondents preferred the Venn Diagram and Triad representations of One Health by far over other representations.

Values most commonly cited as most essential to One Health are sustainability, cooperation, diversity/biodiversity and responsibility, leadership and understanding. Innovation was also noted.

The type of sustainability judged to be the most important type by far was ecologic sustainability, economic and cultural/social only moderately so.

A high degree of agreement (>90%) was given to the following statements: "*The health of humans, other animal species and plants cannot be separated*," and "*Environment includes both natural and built environments*." More than 80% of respondents agreed that "H*umans have a moral imperative to address One Health challenges,*" and "*One Health should be practiced so that there is no net (ecosystem) loss of biological diversity*." More than two-thirds of respondents agreed with all other statements except "When you optimize health for one species, health for others is marginalized or eliminated." This implies that the health of species is inter-related and should not be viewed as mutually exclusive.

The factors contributing most to current One Health problems are compartmentalization of health services and policies, lack of knowledge/understanding, lack of funding streams that encourage collaboration and provide support for One Health initiatives, poverty-distribution of wealth-inequity, overemphasis of treatment of individuals (human and animal) at the expense of preventive medicine and population health, political systems that support individual/corporate interests above all else, and overemphasis of human health at the expense of animal/environmental health. Other factors mentioned were that One Health was too veterinary-centric and that there was a need to acknowledge differences between the developed and developing world.

One Health education and the SDGs

Respondents related K-12 education most closely to SDG 3 (ensure healthy lives and promote well-being for all ages). Also related, although slightly less so, were SDG 14 (conserve and sustainably use the oceans, seas and marine resources for sustainable development), SDG 15

(Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss), SDG 6 (Ensure availability and sustainable management of water and sanitation for all), and SDG 2 (End hunger, achieve food security and improved nutrition and promote sustainable agriculture). Other sustainability goals not included in the 17 SDGs included improving animal welfare, developing sustainable strategies for control of feral animals, invasive species and pests (to humans), moving to clean energy sources, developing new tools for impact assessment, and promoting greater intake of locally raised foods.

Operationalizing One Health education in K-12

Why?

Long-term outcomes of a One Health-themed curriculum included products (trained educators, better policies and decisions, multidisciplinary approaches to risk, sustainable environment/ecosystems/communities, successful adaptation to climate change, new disciplines, better communication, reduction of the gender gap, more recycling, project design competitions), changes in attitudes and behaviors, more and better engagement as citizens with policy and as consumers, and better health and greater awareness of human populations relationship with the planet and its inhabitants. A number of people anticipated that systems/interdisciplinary thinking would be an outcome.

What?

Students should be exposed to all concepts listed**,** although personal responsibility (how individual actions impact One Health) and respect for natural systems and human responsibility for planetary health were the most important, followed by environmental contexts of One Health issues and corporate, political and societal responsibility (how their actions impact One Health). One person noted that equity and social justice was important, as was the moral imperative of viewing nature as equally important as humanity.

Students in One Health-themed educational programs should learn collaboration, interdisciplinary thinking, systems-thinking, problem-solving and team-building skills. Entrepreneurship, environmental ethics were also noted. One person remarked that *"In my opinion, students in One Health must, before anything else, gain the ability to immediately look for solutions from all media when facing a problem that requires a more complex approach. Basically questioning themselves -- what would an engineer/medic/chemist/vet/etc. do when faced with the current problem?"*

How?

Challenges most commonly cited that could be used to illustrate One Health in K-12 education were diseases (vector-borne, zoonotic, food-born), food security, antimicrobial resistance, environmental pollution (of air, water, soil), climate change and loss of biodiversity/disruption of ecosystem services.

Where?

College and university students are the groups most exposed at present to One Health concepts (although fewer than 20% of respondents believed they were exposed at all). Fewer than five percent of respondents believed that students at all other levels of education are exposed to these concepts. Respondents believed that at levels below college/university, it's most important to introduce One Health concepts to students at all educational levels, although it's most important in high/secondary schools and slightly less so in middle schools.

One Health-themed curricula should be piloted in publicly-funded schools and in colleges or universities. One person suggested piloting One Health education in religious classrooms because a lot of teaching goes on there from K-12 (NB: makes sense as long as Pope Francis is in charge!). Virtual classrooms were also noted.

Barriers and challenges to piloting and scaling up

The main barrier to incorporating a OH-themed program into K-12 education is constraints posed by the current educational system, including lack of knowledge and understanding on the part of teachers and the public, the need for adequate teacher training, rigid limits posed by established curricula, government objectives, and the requirement for standardized testing.

Also noted were overloaded curricula, lack of adequate resources (validated K-12 curricula, infrastructure, access to the internet and IT, materials such as case studies, activities, textbooks, pedagogical methods and tools), and inertia of current educational systems and their representatives. Many respondents stated that One Health is complex, requires simplification, and concrete and practical examples to make it more easily understood.

Major logistical challenges to scaling-up a K-12 One Health curriculum to a global stage that respondents anticipated were lack of funding and resources (IT, infrastructure, human resources, content, simulation exercises, alternate delivery platforms), constraints posed by current educational systems (different education systems/formats/settings, teacher training, limitations imposed by pre-existing curriculum requirements, need for tailored education to different contexts, underserved areas sustainable funding), and cultural and language differences. One person noted the need to first measure the added value of pilot projects before scaling up.

Who?

The most common educational stakeholder sector that should be represented in developing the concept of a One Health-themed education initiative into a successfully-funded proposal included various members of educational systems (teachers and educators at all levels (including university) of public and private sector, educational/instructional/ curriculum designers, school administrators, teacher associations, teacher training institutions, teachers unions, and educational researchers). Government was also mentioned frequently. Interesting suggestions included church schools, where a great deal of education takes place, parents and students, and publishers of textbooks.

Funding organizations that might support implementation of a One Health-themed education initiative included government sectors (education, development, health), various private foundations (Wellcome Trust, Melinda & Bill Gates Foundation, Soros Foundation, The Josiah Macy Jr. Foundation, Rockefeller Foundation, Skoll Foundation, the Global Fund, the Foundation for International Medical Education and Research), International nongovernmental organizations such as those originating in the EU and the UN, and banks such as the World Bank. Also mentioned were the European Social Fund, The Network: Towards Unity for Health, the European Horizon 2020 Program, and the Global Partnership for Education.

Other comments and suggestions worthy of mention were:

- A One health curriculum has to be content rich and 'not just another vague thing' about relationships and collaboration, and that it needs to address critical problems like climate change, agricultural intensification, comparative medicine, environmental health threats.
- Consider strengthening and using innovative on-line teaching, flipped class room, take advantage of existing educative one health tools (MOOC on one health, environment challenges, etc.), and create new ones.

- The biggest challenge we face in implementing a One Health curriculum at a global stage is the lack of a major driving force in One Health. Although we are trying our best as One Health clusters, we need to have a major support from a so called "Poster Boy", something that will catalyze our efforts.
- One-Health should be a process that start at pre-primary level to change mind-sets, although there should be entry-levels at all phases for those who were not exposed from the start. It will be beneficial if the one-health principles thinking can be incorporated as it relates to different subject streams (e.g. economics, social science, and others).
- We need to understand that we, as individuals, are not quite the center of the Universe and that our actions, even though they may not bring us much benefit/losses, surely can influence everyone around us.
- This is an extremely important project at a very volatile time in our world. Education is the key to supporting and delivering the UN 2030 SDGs.

Strategies for K-12 One Health curriculum innovation

This segment of the conference presented some of the ways that the One Health Education Task Force has considered to utilize One Health concepts in curriculum development for K-12 classroom applications. Feedback from the participants was requested and additional ideas that might be considered for the program and funding proposal were encouraged.

We have explored the following five potential options to consider for our proposal: Curriculum Innovation Grants for Educators, Curriculum Development Workshops for Teachers, Teacher Training Programs, a One Health Education Network, and an On-Line Knowledgebase of One Health Curriculum Materials. We understand that there are different needs among various educational systems and across countries around the world, so the options presented below are not mutually exclusive and we could consider one or any combination of these within the larger project.

i) Curriculum innovation grants for educators

The initial idea that we explored was a program that would offer grants to teachers to develop and implement a One Health focused curriculum at their school that meets specific criteria and objectives set by the One Health Education Task Force. We are attracted to this idea because we understand that teachers themselves know best how to reach their students, what curricular designs work within their institutions and grade levels, and what tools are most effective at reaching outcomes. In addition, by engaging teachers directly and offering opportunities for innovation, we feel that other teachers would be more likely to adopt and share successful methods among themselves, either thru example and their existing networks, or with formal mentoring.

This program would offer *competitive* innovation curriculum development grants to teachers or teams of educators on an annual basis. The focus of this program could be open ended or could involve a changing One Health theme each year to ensure diversity of topics. Applicants would be asked to meet very specific guidelines that target values, skills and knowledge criteria using One Health approaches. These guidelines would be developed by the One Health Education Task Force and would be informed by wider conversations with the One Health global community, including the survey recently conducted. Proposals would need to emphasize interdisciplinary engagement as a fundamental tenet of One Health principles. As time goes by, successful methods and curricula would be shared through the proposed OH Education Network and Knowledgebase described below and would not be limited only to participants in the program.

ii) Curriculum development workshops for teachers

We have received feedback that some teachers would never have the time to devote to curriculum development themselves. Some have also expressed concern that they do not know the subject area well enough to be able to write a curriculum or innovate very effectively along One Health lines. In response, we decided we needed to create an opportunity for motivated teachers to learn more about One Health and receive some direct assistance in creating One Health themed curricula. We are proposing to do this through a series of summer workshops, which would include summer salary for participants. This would be an annual opportunity and could again be open ended or focused on changing themes or topics. Workshops would involve participation by "experts" in One Health, depending on the topics selected, and would also include curriculum development professionals to assist teachers in classroom applications. The workshops would emphasize innovative learning methods that target One Health values, skills and knowledge criteria as described above and would provide an important networking opportunity for sharing and mentoring between teachers and experts.

iii) Teacher training programs

A third concept that we are proposing is to work with teaching training programs already in existence that are interested in building One Health approaches into their training programs. This approach would involve new teachers in the process of curriculum development and could be implemented through specific courses or teaching modules. By working with teaching training programs we would be creating opportunities for innovation from the ground up which may provide greater opportunity for broad integration of One Health values across subjects. In this environment, we would also be in a good position to inculcate One Health skills and knowledge in teachers during a critical period in their own development as educators. This approach would also ensure that appropriate regional programming is being developed that best meet the needs of local education systems and would maximize benefits and outcomes which may not be otherwise adaptable from a more universal, less regional approach. It was suggested that we think about promoting this opportunity to make sure teachers that need it to take advantage of it. This could be done by developing introductory one health presentations and using social media to reach a broad audience. The example of an IVSA program was given where they are "developing a one health presentation to school children on veterinary public health, one health and explaining the diversity and active contribution of vets and medics to the human-animal-environment interface. We plan to distribute it to our member organisations in over 60 countries and translate it to at least 2/3 languages for teachers to use. We hope to use social media to spread the word, to students will promote or present this workshop to communities, to families and then to schools- to encompass student centred learning (Bhavisha Patel)."

iv) One Health education network

The creation of a One Health Education Network will be critical to global adoption of any curriculum innovation that results from this initiative. We feel that it would be very valuable to foster mentorship and sharing among project participants and provide opportunities for others outside the project to benefit from the teaching expertise that develops as a result of this initiative. Over several years this could develop into a robust and supportive cohort of One Health Educators around the globe and provide the best mechanism for achieving Sustainable Development Goals globally through One Health.

The OHE Network would provide a directory of One Health educators, facilitate communication between educators with social networking tools, and facilitate mentorship connections between educators and One Health experts. The network could act as a platform for organizing meetings and presentations, and would facilitate collaboration on future projects. Importantly, the network could become self-sustaining simply through the interest and enthusiasm of the participants and provide longevity to the investment of this project for years to come.

v) On-Line knowledge base of one health curriculum materials

Finally, we want to openly share the products of any of these curriculum development programs as we start a movement and inspire teachers around the world to adopt One Health principles in their teaching. We propose to build an open access technology platform for sharing curriculum that will serve as a repository for products of any grants or workshop programs developed through this initiative. Sharing outwardly to the world would provide an opportunity for feedback and dialogue to improve these products and encourage, in an organic way, the transition of more curriculum to include One Health principles. Over time, this knowledgebase could also link to or include contributions from outside this project and broaden the impact and engagement for One Health themed educational initiatives that furthers our global objective for achieving Sustainable Development Goals through One Health themed education.

Above are the five main programs we have focused on to date and we encourage feedback and input from a broader audience. There are many details to work out, and the scale of these programs is still undetermined. What follows is a summary of the participant suggestions and calls for clarification concerning the strategies presented.

First and foremost we would like to clarify that the scope of this project is intended to be global. While initial implementation of pilot projects may precede full globe reach, the pilot projects would likely include a diversity of sites. The exact structure or timeline has not yet been determined. The different nature of various education systems around the world and even within a country like the US was brought up as a challenge. Within the US, there is a great deal of variation and level of influence between state agencies and the federal government through the Department of Education. Some states may be more receptive than others to the type of curriculum initiative we are proposing. We hoped that the first option which asks for teachers themselves to come forward, would take care of some of this diversity. Teachers would presumably be proposing curriculum development that would work within their own context. The great differences between developed educational systems and developing educational systems will also be a challenge and may require two different efforts or pathways.

Some clarification about who will make up the group of "One Health" experts to participate will be needed, especially since there are no specific well defined criteria for a One Health expert, or any standardized system for accreditation or academic degree existing today. We are specifically look for content experts to provide necessary knowledge and resources, as well as curriculum development experts, and the specific qualifying criteria that defines a participating "expert" still needs to be worked out.

An excellent suggestion was made to consider including parents in grants or workshops to help bridge the resource gap in some low-income schools where parent leaders play an important volunteer role. Engaging with parents may also promote greater acceptance with the community outside the school.

The concept of a "community of practice" approach was mentioned as a model for the knowledgebase as well as the network. One way to do this might be to target a specific group of people involved in middle and high school education and connect them with existing experts or groups that might have resource materials to provide, such as the OIE. We would very much like these two programs, the knowledgebase and the network, to operate as a community of practice in One Health education. One significant outcome will a One Health education foundational body of work that currently does not exist.

Another mentorship model to consider would be the twinning model, used in the USAID Emerging Pandemic Threats program and others to share between developed and developing educational systems or institutions.

There were a couple of cautionary remarks to conclude this section. First of all, considering the large scope of programs and challenges for implementation, there was some concern about staff time and capacity necessary to follow through with this initiative and a need to establish realistic priorities. We are very aware of this and will be considering these questions as we approach funders and develop a timeline. Lastly, beware of the top down approach being proposed by our group of One Health champions. This will not work without active engagement with K-12 education partners. We have discussed this at length and have been struggling to find the appropriate enthusiastic partners. We welcome any good ideas or introductions to institutions or people that we can draw in to this initiative that will provide the appropriate input. Dr. Lueddeke will provide more detail on our potential partners defined to date.

Funding considerations for a One Health education initiative

This segment of the conference focused on three main funding considerations:

i) Linking UN 2030 Sustainable Development Goals to *One Health* education initiatives (10);
ii) Supporting projects through existing development mechanisms;
iii) Possible funding sources.

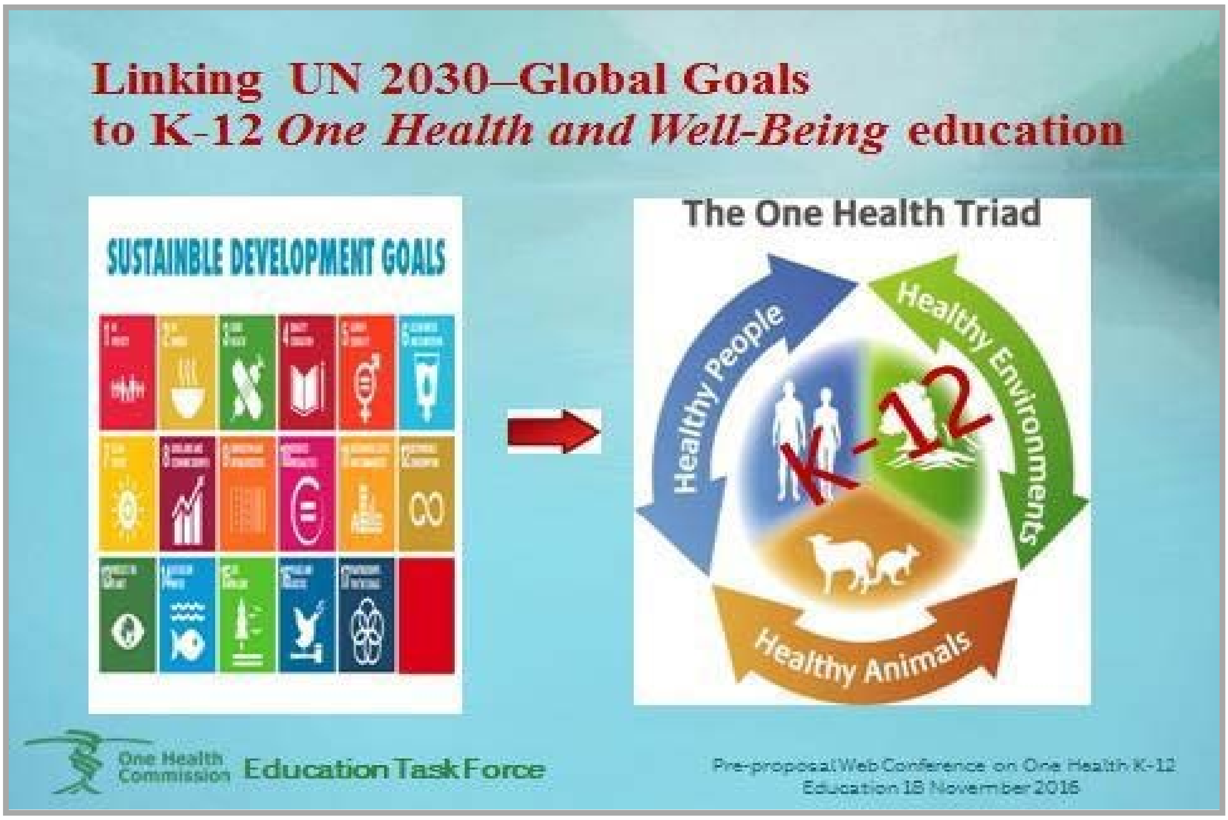
A key argument for project funding decisions was that the One Health concept and approach need to be considered as a lens or filter for shaping global policy and strategy regardless of the SDG goals and targets being evolved and implemented, including K-12+ education (Fig.1).

And, while the Habitat III The New Urban Agenda (11) agreed in October 2016 is a highly commendable achievement, according to a word search, the 19 documents failed to mention terms or explanatory paragraphs/recommendations related as Planet, One Health, Conservation, Animals, Epidemic, Root causes, Overcrowding, Inequities, Automation, Eco footprint, Infectious disease, Non-communicable disease and only singularly cited the words Prevention, Healthy lifestyles, Ageing population, Mental health.

More than 70 % of the world's 9 billion population will be living in cities by 2050 or before. One Health crosses all discipline boundaries, and it is important that the project planners identify and collaborate across existing networks, as shown in Fig. 2.

Consideration to seeking funding from multiple funding sources might also be appropriate (e.g., Bill and Melinda Gates Foundation, UN agencies (e.g., UNDP, UNESCO), Rockefeller Foundation, MacArthur Foundation, the UK Department for International Development, and Welcome Trust). Several avenues will be pursued in the next few months, including making personal contact with potential partners or collaborators.

Figure 1. Linking UN 2030-global goals to K-12 One Health and well-being education



Linking UN 2030–Global Goals
to K-12 *One Health and Well-Being* education

Pre-proposal Web Conference on One Health K-12 Education 18 November 2016

Figure 2. Global networks (selected)

Global Networks:

United Nations 193 Members States -2 observer States
WHO Collaborating Centers (>700)
World Bank Global Learning Development Network (>120 institutions – 80 countries)
The Commonwealth (52 nations)
The European Union (27 nations)

Further to a question about identifying good partners, it is recognised that a traditional top down approach is not likely to work in this situation. An example of behaviour change that worked well in the U.S. in 70s and 80s is recycling, a local, bottom up endeavour. Interestingly, it was young people (children) being inspired by teachers that made the recycling movement happen in the U.S. We should be concerned about strictly advocating a top down approach for K-12 One Health Education. A successful approach has to start more locally, but be guided by national aspirations or goals. Local and national interests should be working in tandem. In the and the U.K. there has been very little discussion so far about the Sustainability Development Goals. We must draw on expertise locally and find support nationally to enable action groups.

We like to think of the dual concepts of One Health and 'well-being'. One Health is beyond any political or health system. It's really saying here is our planet, a very small planet, and we have got to keep it healthy regardless of how we are living our lives. It is probably the only non-divisive concept that we have right now. The UN development program folks have done a fairly good job with disseminating information. But, if the UN had incorporated One Health a year or so ago, we would be further along.

Meeting the needs of the diverse global community

Although we believe there exists One Health core values, principles and concepts, we recognize that operationalizing One Health in primary and secondary schools must recognize and appreciate educational, cultural and social differences among countries and educational systems. Therefore, no one model or curriculum will fit all situations. How then, can we begin to frame a proposal that honours One Health core values, principles and concepts, but is flexible enough to be adapted for diverse circumstances?

A point well-taken from the survey is that a validated One Health curriculum does not exist. For that reason, any attempt to propose one must include a pilot phase from which one could learn valuable lessons related to adoption, implementation, and evaluation of a curriculum before it could be modified and scaled up in one or more systems. Therefore, a successful proposal will focus on pilot studies in one or more education systems (to be defined), but at the same time, it must include metrics that could be used to judge whether or not here is evidence that scaling up and/or out is feasible and of value.

Various models have been used to pilot educational interventions, even those that encompass One Health, in colleges and universities and in the health workforce. Historically these have been piloted in one or more systems that are not linked, but in the last decade a twinning model has gained interest and acceptance. This model links two or more educational systems that, at its best, involves equal partners that each learn from the other; it can, however, evolve to a mentor-mentee situation whereby one partner assumes most of the responsibility and the other partner(s) assume lesser, more receptive roles. There may be other models of which we are not yet aware, and we look to others to suggest them. Twinning and other models have been implemented at various scales from local to national systems.

Participants seconded the idea of a proposal that takes a twinning approach and starts at the local level, with curricula that are meaningful to local communities and that involve parents, community members and students alike as teachers and learners. It would be instructive to apply twinning between a higher income and a lower income country, as is being done at a university level, and to look for points of alignment and difference. The proposal may want to consider adopting a term other than 'twinning," which is so closely associated with university-level activities and is, as was pointed out, often interpreted by higher income countries as "the world is here for us to remodel."

Building on responses to the survey, participants suggested that there is a need for concrete yet simple to grasp examples illustrative of One Health. If One Health is ultimately about changing behaviours, previous successful examples of changing public behaviours such as recycling (which was started by teachers and taken home to parents and communities by students) and smoking cessation (for which YouTube videos, cartoons and other popular media presentations have been developed and widely disseminated) might offer valuable lessons for how to accomplish behaviour change, but they must be grounded in One Health principles and guided by local customs and beliefs. A proposal would have to involve social scientists, particularly those with expertise in behaviour change and public health. If messages were meaningful and easy to grasp they could be taken to households with the support of government and international organizations. The first nine months of a child's life is critical to her/his perception of the environment as friendly or hostile, and having a 'village' teach One Health to young children could well establish a 'the environment is friendly' mindset (see the Foundation Vie's 1001 Critical Days of Development, also the First Five Initiative in California). Work on empowering girls is being conducted by the University of Wisconsin in Ghana and could illustrate successful implementation of this approach. A recent teacher-training workshop using student-centred active approaches was very well received by teachers who are used to the 'sage on the stage' approach so common in many countries. And, rather than importing more new material into already packed curricula, a proposal could instead strengthen existing curricula, for example, by supporting teachers to adapt current material using more 'hands-on' learning with the natural world that incorporate ethics of how we view and treat each other, animals and the environment. A third option would be to develop 'scaffolding' lessons that integrate existing curricula across disciplines and grade levels.

Scaling up and out presumes some early measures of success, but the goal of a One Health curriculum is to change behaviours. Because this is a long-term outcome, it cannot be used to judge the success of a One Health project in the short term. One suggestion was the level of involvement of a community could be used as an early indicator of success for a pilot project. Another metric being used in Ghana is the degree to which students who experience the curriculum in schools take that learning home to educate their parents, although the cultural appropriateness of children teaching adults has to be considered. Successful pilot projects would be shared widely, thereby developing a "Community of Practice" that would reflect the common goals of One Health teaching and learning and the richness of its adaptations.

Open panel discussion

In this section we discussed additional questions and received numerous suggestions that are not included in the sections above.

The topic of curriculum design was raised. We purposely do not want to prescribe what any given curriculum would look like, whether that be modules, week-long units, individual lectures or a scaffold of modules across grade levels and across subjects. We want to encourage i*nnovation* in curriculum design and pedagogy as much as possible and are hoping that educators would develop curricula together to produce integrated learning designs preferably to create modules that fit into an existing science class for example. Programs that cut across courses and grades would be optimal. Incentivizing collaborations and trans-disciplinary team-based curricula was suggested, over didactic 'preaching'. Curricula should incorporate issues based, inquiry based, problem based, small group based methods that focus on real issues, because our challenges today do cross disciplines.

Another suggestion was made to organize content around broad categories made up of a series of small modules or easy to digest, bite-sized pieces. This can be particularly important where language might be a challenge. The reference was made to experience in Ghana in the One Health and Girls Empowerment program with Junior and Senior High School girls. In those workshops they found that in addition to 'content' that the teachers loved learning about student-centred active teaching approaches that they had never been exposed to. They need to see other ways to teach.

There are likely some other good programs already on the ground that we could learn from. Several examples of these were mentioned including:

- an 8-12 grade curriculum for Veterinary Science and One Health Science in the State of Texas (try contacting Dr. Heather Simmons);
- a new MOOC addressing One Health that will be available through Coursera (https://www.coursera.org/) in Spring 2017;
- a University of Washington "Conservation Biology & Global Health" 3 day curriculum for high school students;
- the California State First Five initiative;
- examples of twinning as a collaborative development and support mechanism (e.g. USAID Emerging Pandemic Threats program).

However we proceed, the idea of piloting programs in different regions was felt to be important along with the willingness to be flexible and respond to community and cultural diversity in different parts of the world.

Some discussion centred on the topic of behaviour change. It will be important to include social scientists on the development team that have expertise in this area. One of our challenges is the goal of changing the mindset. 97% of world health funds are going toward *treatment* of disease and only 3% goes to prevention. This is from a global budget of $7.7 trillion US dollars. Because One Health is all about prevention strategies, initiatives like the GHSA should be interested.

It was suggested that there may be lessons learned from experiences in developing countries with HIV behaviour change programs, particularly how to reach communities.

Several participants stressed that one of the best ways to gain support for a new program and improve the possibility of success is to make sure there is a link with communities beyond the classroom, with the caveat that we need to be sensitive about the cultural appropriateness of kids teaching adults. Another potential ally could be the network of school nurses, a group that is greatly under-utilized and under-appreciated. If appropriately empowered, they could be a valuable asset. In any event we will need good partners in the K-12 system before moving forward since a top down approach will likely not work here.

Some discussion came up on the topic of finding funding for educational initiatives. It was suggested that it might be helpful to look at the portfolios of the various donors (e.g. USAID, DFID, multilateral and regional banks, etc.) to look for compatible interests in education. It can be very challenging to get an innovative, technical assistance grant. Reference was made to experience in a new regional project in West Africa called the *Regional Disease Surveillance Systems Enhancement Project*, a huge World Bank project that handles 15 countries in W Africa with OHAHU and WHO that involved several hundred million dollars. Another suggestion was to explore existing zoonotic disease initiatives, such as PREDICT or the Global Health Security Agenda (GHSA).

Some other potential funding sources mentioned include: Skoll, Ford, Rockefeller, Gates, the Instituyo Alana in Sao Paulo Brazil, African Union/ECOWAS.

In some cases, appealing directly to Ministries of Education or Health might find support for being the first one to institute something truly innovative (e.g. island nations like Fiji and Seychelles).

Conclusion

We assumed that most people attending this conference (10) do support the idea of K-12 One Health Education. Perhaps attendees, like us, are driven by the need to examine what is currently being done (in education) and to postulate what we *need* to be doing differently to prepare future generations. There are some attempts being made globally for One Health education at the graduate and professional education levels. But that is too late to significantly affect behaviours and in still attitudes of open collaboration and interactions. By then young people are already in their academic silos.

We are very concerned about current attitudes toward our human place on the planet. In this conference we have outlined some tangible, programmatic models that could be used in young children and expanded to a global community of practice to improve things for future generations. The UN Sustainable Development Goals are a wonderful target to aim for globally. But there is currently no mechanism to unite and implement them. One Health thinking and acting can do that.

Indeed, One Health is a pathway not only to the UN SDGs and planetary health, but also to Global *Security*. Health and well-being are profoundly embedded in and dependent on global government stabilities. As the last 10-15 years have shown, it can be very difficult to introduce One Health concepts to already established systems. But K-12 children will be our future global leaders. How do we help them understand the severity of what is going on right now in the world? What is restraining us from doing new things like taking One Health education and concepts to young children? We need to change today's mindset/paradigm of using up our global resources without regard for the health and well-being of our planet because future generations will depend on Mother Earth. How do we get individuals, governments and corporate bodies to think more holistically and sustainably about the health and well-being of people, animals and the planet? There is much work to do to make One Health the *default* way of doing business around the world. Children and One Health can be our 'Ray of Hope' for the future.

References

1. Lueddeke G, Kaufman G, Kahn L, Krecek R, Willingham A, Stroud C, et al. Preparing society to create the world we need through 'One Health' education. SEEJPH 2016;6. DOI 10.4119/UNIBI/SEEJPH-2016-122.
2. Lueddeke G, Stroud C. Preparing society to create the world we need through 'One Health' education! (Press Release). One Health Commission. Available at: https://www.onehealthcommission.org/documents/filelibrary/commission_news/press_releases/61016 OH_Education_Press_ReleaseFi_F7644A48F9910.pdf (accessed: March 20, 2017).
3. United Nations. United Nations. Transforming our world: The 2030 agenda for sustainable development. Available at: https://sustainabledevelopment.un.org/post2015/transformingourworld (accessed: March 20, 2017).

4. One Health Commission (OHC). (2017). Mission. Available at: https://www.onehealthcommission.org/en/why_one_health/ohc_mission/ (accessed: March 20, 2017).
5. One Health Initiative (OHI). Mission Statement. Available at: http://www.onehealthinitiative.com/mission.php (accessed: March 20, 2017).
6. The Commonwealth Secretariat (Health and Education Unit). Advancing sustainable social development through lifelong learning and well-being for all. Available at: https://drive.google.com/file/d/0B8wr6920su0aRHlyd0pDOERlajQ/view (accessed: March 20, 2017).
7. One Health Commission. One Health Education Conference. Available at: https://www.onehealthcommission.org/en/eventscalendar/one_health_education_online_conference/ (accessed: March 20, 2017).
8. Lueddeke G. Global Population Health and Well-Being in the 21st Century: Toward New Paradigms, Policy and Practice. New York: Springer Publication; 2016. Available at: http://www.springerpub.com/global-population-health-and-well-being-in-the-21st-century-toward-new-paradigms-policy-and-practice.html (accessed: March 20, 2017).
9. WWF International. Living Planet Report 2014. Available at: https://www.wwf.or.jp/activities/lib/lpr/WWF_LPR_2014.pdf (accessed: March 20, 2017).
10. Lueddeke G. The UN-2030 sustainable development goals and the One Health concept: a case for synergistic collaboration towards a common cause. World Medicine Journal, vol. 62, 2016: 162-167. Available at: http://lab.arstubiedriba.lv/WMJ/vol62/december-2016/#page=44 (accessed: March 20, 2017).
11. UN News Centre. HABITAT III: UN conference agrees new urban development agenda creating sustainable, equitable cities for all. Available at: http://www.un.org/apps/news/story.asp?NewsID=55360#.WO3xddQrJkg (accessed: March 20, 2017).

APPENDIX I – Participants in the One Health Education Conference and Survey *(respondents to the survey who identified themselves included)*

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Eliudi Eliakimu
Nirmal Kumar Ganguly, National Institute of Immunology, Department of Biotechnology, India
Julie Gerland, Noble Institution for Environmental Peace, Chief UN Representative
Aja Godwin
Ralf Graves
Michael Huang
Lai Jiang, Institute of Tropical Medicine, Belgium
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APPENDIX II – Survey Instrument

The following Survey was conducted by the One Health Education Task Force between October 16, 2016 and December 10, 2016 utilizing the Survey Monkey ® web based platform.

Introduction: The goal of this survey is to collect views on the importance of One Health in preparation for an online pre-proposal conference scheduled for mid-November. Survey feedback will help us define the parameters and design of a global One Health-themed educational funding initiative, spearheaded by the One Health Commission in association with the One Health Initiative. The proposed project focuses on the development and support of One Health (and well-being) curriculum materials, involving primarily K-12* teaching staff and education providers. The survey will help to identify ways of addressing challenges to successfully implement a number of pilot projects on a global scale. Subsequent educational initiatives will address post-secondary and professional education.

The survey will take approximately 20 minutes to complete.

The survey employs the One Health Commission definition of One Health: **"One Health is the collaborative effort of multiple health science professions, together with their related disciplines and institutions – working locally, nationally, and globally – to attain optimal health for people, domestic animals, wildlife, plants, and our environment."**

*"K-12" is defined as organized pre-primary through secondary school education. We acknowledge that this is not uniform terminology around the world, but will use this term for convenience.

Survey Questions

Objective 1*: *Identifying complex issues/examples that can be used to address the drivers of One Health challenges and can lead to sustainable solutions.

1) List 5 words that immediately come to mind when you think of *One Health* (open question):
2) Please rank the following types of sustainability from 1-5 in terms of their importance to One Health (1=most important and 5=least important)
    a. Ecological
    b. Economic
    c. Cultural/Social
    d. Ethical
    e. Justicial (of or relating to justice, as <u>opposed</u> to judicial)
3) List 3-5 One Health challenges that could be used to illustrate the need for a One Health approach. Include no more than <u>one</u> zoonotic disease.
4) Please choose what you believe are the 5 most important contributing factors to the development of One Health challenges (not limited to disease transmission) that should be considered in developing preventive policies or sustainable solutions or those challenges:
    a) Lack of knowledge/understanding
    b) Lack of methods and tools to investigate complex problems
    c) Lack of uniform standards for information management and sharing
    d) Compartmentalization of health services and policies
    e) Lack of funding streams that encourage collaboration and provide support for One Health initiatives
    f) Overemphasis of treatment of individuals (human and animal) at the expense of preventive medicine and population health

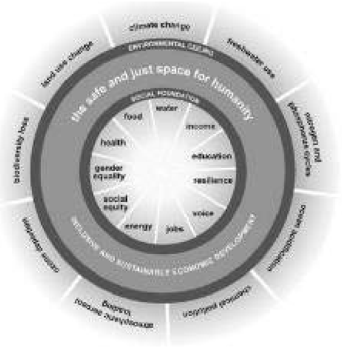
  g) Overemphasis of human health at the expense of animal and environmental health
  h) Human population growth and development
  i) Poverty, distribution of wealth, inequity
  j) Political systems that support individual/corporate interests above all else
  k) Globalization in the absence of global standards of practice
  l) Short-term decision/policy horizons
  m) Over-exploitation of natural resources
  n) Tribalism
  o) Climate change
  p) Other- open ended

Objective 2: Meeting the UN Sustainable Development Goals thru One Health-themed education **(http://www.un.org/sustainable-deevelopment-goals/).**

5) How well do you think a One Health-themed K-12 education program relates to each of the following SDGs (1=not at all related and 5=highly related)?
  a) End poverty in all its forms everywhere
  b) End hunger, achieve food security and improved nutrition and promote sustainable agriculture
  c) Ensure health lives and promote well-being for all at all ages
  d) Insure equitable and inclusive quality education and promote lifelong learning opportunities for all
  e) Achieve gender equality and empower all women and girls
  f) Ensure availability and sustainable management of water and sanitation for all
  g) Ensure access to affordable, reliable, sustainable and modern energy for all
  h) Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
  i) Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
  j) Reduce inequality within and among countries
  k) Make cities and human settlements inclusive, safe, resilient and sustainable
  l) Ensure sustainable consumption and production patterns
  m) Take urgent action to combat climate change and its impacts
  n) Conserve and sustainably use the oceans, seas and marine resources for sustainable development
  o) Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss
  p) Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective and accountable, inclusive institutions at all levels
  q) Strengthen the means of implementation and revitalize the global partnership for sustainable development
6) Are there other sustainability goals that you think should be included (open-ended):

Objective 3: Identifying values and principles that underlie a global One Health approach towards health and well-being for the planet.

7) Which one of the following graphical representations best captures the valuesand principles of One Health?



a) Sustainability donut

b) Umbrella

c) Triad

d) Venn diagram

e) Concentric circles

f) none of the representations are satisfactory

8) Which of the following <u>values</u> do you think are essential to the application of One Health? (please select all that apply)

- Balance
- Community
- Compassion
- Competence
- Compromise
- Cooperation
- Diversity/Biodiversity
- Empathy
- Experience
- Freedom
- Growth
- Humility
- Integrity
- Justice/Fairness
- Leadership
- Mindfulness
- Reason
- Resilience
- Respect
- Responsibility
- Rigor
- Self-awareness
- Sustainability
- Synergy
- Tolerance
- Transparency
- Understanding
- Vision
- Other (open ended)

9) To what degree do you agree with each of the following statements as it relates to One Health, where 1=strongly disagree and 5=strongly agree?
   a) When you optimize health for one species, health for others is marginalized or eliminated.
   b) One Health should be practiced so that there is no net (ecosystem) loss of biological diversity.
   c) The health of humans, other animal species and plants cannot be separated.

   d) One Health recognizes the intrinsic value of life on earth (plants, animals, microbes) regardless of a direct benefit to humans.
   e) "Environment" includes natural and built environments.
   f) One Health embraces the value of social interaction as a critical component of health and well-being.
   g) Humans have a moral imperative to address One Health challenges.
   h) Ecological, economic, social/cultural, ethical and justicial sustainability are equally important for One Health.
   i) The World Health Organization defines "health" as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." This definition also applies to other animals and ecosystems.
   j) Other (open ended).

Objective 4: Designing a global One Health-themed K-12 educational program that supports innovation by educators and learners.

10) In your experience, to what extent are students currently exposed to concepts related to One Health (including well-being) where 1=not at all exposed and 5=highly exposed?
   a) Pre-primary education
   b) Primary education
   Secondary education
   c) College and university education
   d) Adult education
   e) Other (open ended)
11) How important is it that students are introduced to One Health concepts in the educational curriculum at the following educational levels, where 1=not at all important and 5=highly important?
   a) Pre-primary school
   b) Primary School
   c) Middle School
   d) High School
12) In what types of schools would you pilot a One Health-themed curriculum, understanding that not all school types are found in every country (please select all that apply)?
   a) Publicly-funded schools
   b) Privately-funded schools
   c) Magnet schools
   d) Charter schools
   e) Independent schools
   f) Home school networks
   g) Extra-curricular education (after school)
   h) Summer school or camps
   i) Colleges or universities
   j) Other (open ended)
13) What broad-based skills should students learn through a One Health- themed educational program (please select any that apply)?
   a) Collaboration
   b) Communication to diverse audiences
   c) Concept mapping
   d) Conservation

   e) Experimental design/methods/inquiry
   f) Goal-setting
   g) Interdisciplinary thinking
   h) Leadership
   i) Problem-solving
   j) Systems thinking
   k) Team-building
   l) Other (open ended)

14) To what extent should students be exposed to the following concepts in a One Health-themed educational program, where 1=not at all exposed and 5=highly exposed?
   a) Role of natural and built environments in human and animal health and well-being
   b) Respect for natural systems and human responsibility for planetary health
   c) The connection between well-being and mental/physical health
   d) Personal responsibility – how individual actions impact One Health
   e) Corporate, political and societal responsibility – how their actions impact One Health
   f) Climate change and health of the planet
   g) Environmental contexts of One Health issues
   h) Staying healthy and making good choices for the environment
   i) "Cradle-to-grave" thinking
   j) Other (open ended)
15) In your opinion, what are 3 main barriers to incorporating a One Health-themed program in K-12 education in your country (open ended)?
16) What do you believe should be some long term outcomes (how might it change the knowledge, understanding, attitudes or behaviors of students) of a One Health-themed curriculum (open ended)?

Objective 5: Identifying challenges that must be addressed for a proposal to be funded

17) What educational stakeholder sectors (e.g. state, private, other) should be represented in developing the concept of a One Health-themed education initiative into a successfully-funded proposal (open ended)?
18) Please suggest up to 3 funding organizations that might support implementation of a One Health -themed education initiative (open ended).
19) Please list up to 3 major logistical challenges to scaling up a K-12 One Health curriculum to a global stage (open ended)?
20) Please provide any other comments or suggestions (open ended).

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REVIEW ARTICLE

Approaches to the international standards application in healthcare and public health in different countries

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Abstract

As a result of consequent development, and guided by an increasing demand of different types of the organizations regarding structured management, the system of standardization has been established. The idea behind standardization is adjusting the characteristics of a product, process or a production cycle to make them consistent and in line with the rules regarding what is proper and acceptable.

The “standard” is a document that specifies such established set of criteria covering a broad range of topics and applicable to commissioners of health, specialists in primary care, public health staff, and social care providers, as well as the local authorities and service users. Health products, ranging from medical devices and health informatics to traditional medicines and unconventional healing tools are all in the focus of standards’ application.

Different countries have their own quality management traditions based on their history, mentality, socio-economic environment and the local regulations. Taking into consideration that community social system organization and the quality of social infrastructure are the main foundations of social relations and future prosperity, here we review the existing standardization environment in the health sector in different countries, both developed and those on a convergence path. We focused on standardization environment in the United States of America, Great Britain, Germany, Ukraine, Russian Federation, Croatia and Albania. In order to simplify comprehension, we also demonstrate the algorithm of standardization, as well as the opportunities for application of the international standards in healthcare and public health.

Keywords: healthcare, international standards, public health.

Conflicts of interest: none.

Introduction

First traces of quality development appeared more than four thousand years BC, at the time when commodity barter had been replaced by the development of trade among Greek, Roman, Egyptian, Arab and Phoenician traders (1). Artisans described to their suppliers, by experience, using simple words, what kinds of materials they preferred. This was common practice, since the craftsmen had no tools to measure the composition, strength, chemical or physical characteristics of a given material. Industrial revolution contributed to the development of product specification (2). Manufacturers began issuing precise descriptions of materials and processing methods in order to ensure that supplies met certain quality criteria (3). Thus, producers were obliged to take samples from each batch, which was then subjected to tests determining its elasticity, tensile strength, etc. When the first factories were established, requirements for a higher degree of order, greater focus on precision and monitoring quality control of a product were introduced. Evolving through different stages, beginning with the 'division of labour' in the late 1700s until the beginning of the 20th century, the scope of activities from the beginning of a production cycle to the final phase led to the occurrence of the first model-based managerial approach (4). When the demands of tasks became too complex basic managerial principles, such as planning, execution, monitoring, controlling, completion and improvement were implemented (5). Therefore, to form a structurally oriented organization, systematic quality control became a necessity. Later on, such quality patterns and models became generally accepted and are today known as the Standards. In the modern society, social infrastructure quality is the main foundation of social relations and future prosperity, thus the purpose of this article is to review the existing standardization environment in the health sector in different countries, both developed and those on a convergence path; as well as to demonstrate a common algorithm for standardization and the opportunities for the application of international standards in healthcare and public health.

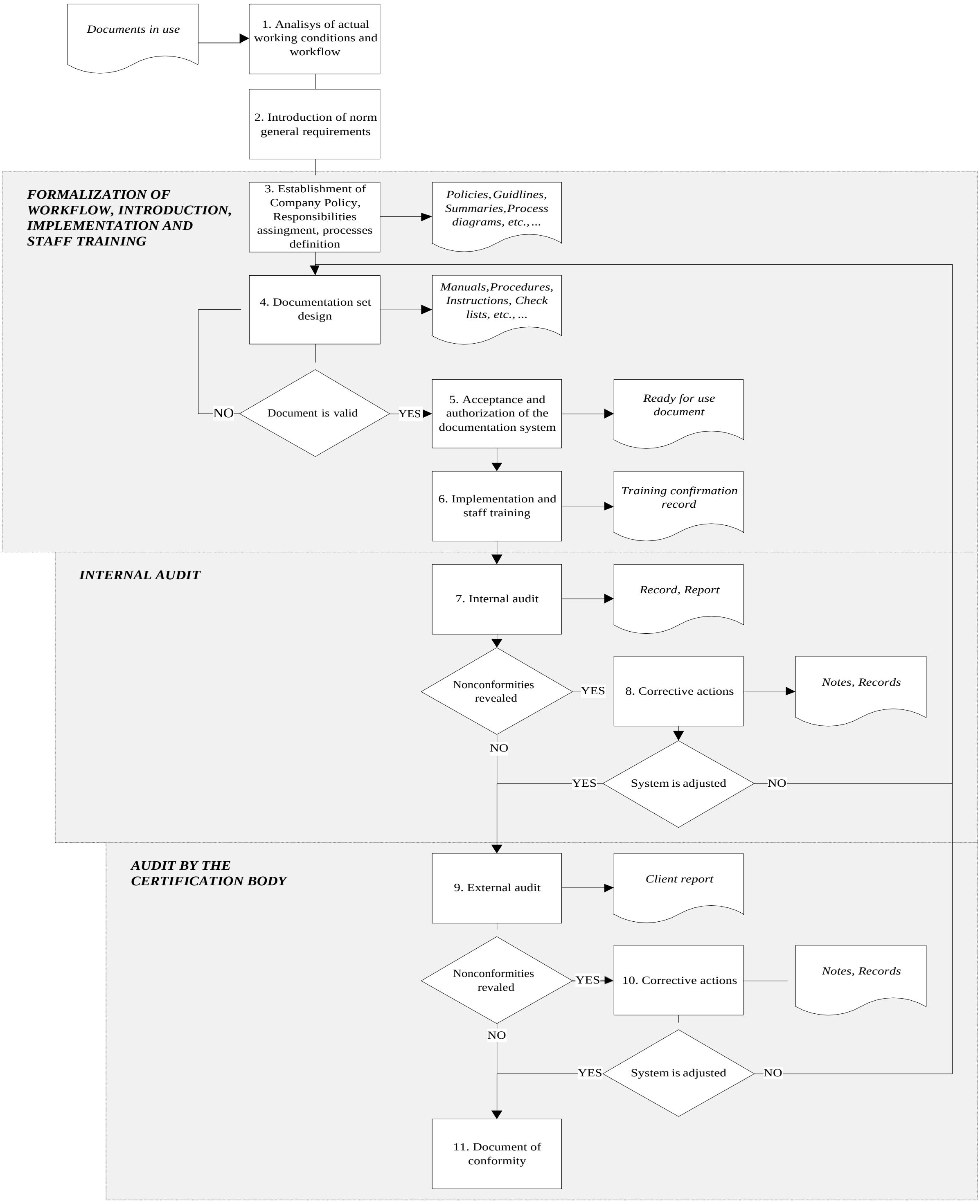
Definition and different types of standards

The idea behind standardization is adjusting the characteristics of a product, process or a production cycle as to make them consistent and in line with the rules regarding what is proper and acceptable. Standard is a document that specifies such established set of criteria. More than 21000 International Standards covering almost all aspects of human activity, including healthcare, have been published since February 1947, when the delegates from 25 countries met at the Institution of Civil Engineers in London and founded the International Organization for Standardization (ISO). Today, it encompasses 162 member countries and more than 238 technical committees taking care of the development of standards (6). After the foundation of the European Union a network of new institutions, such as the European Standardization Organizations (ESOs) consisting of 33 European countries, and CEN - the European Committee for Standardization, has been established. CEN together with the European Committee for Electro-technical Standardization (CENELEC) and the European Telecommunications Standards Institute (ETSI) are officially recognized by the European Union and by the European Free Trade Association to be responsible for developing voluntary standards on the European level (7). Regarding various products, materials, services and processes, CEN provides a platform for the European Norms (ENs) development (8). EN is to be implemented on a national level by being given the status of a national standard, and by withdrawing any conflicting national standards used previously. Therefore, the European Standard becomes a national standard in each of the 33 CEN-CENELEC member countries once adopted by the national body (9). For example, Croatia after entering EU had to harmonize the local HRNs (Croatian Norms) to conform to the ENs.

Standardization process

The functional diagram (Figure 1) introduces an 11-step assessment construct having been passed by any organization in attempt to obtain a particular certificate.

Figure 1. The 11-step assessment construct that an organization needs to go through in order to obtain a certificate *(source: Sarancha V, Nenad Pros 2016)*



Certification Body is a third party auditing firm that assesses organization against a specific international standard. Taking into account a huge amount of relevant documents and the complexity of the procedures, it is important to correctly identify the procedure required for the certification process at the beginning.

Approaches in different countries

Different countries have their own quality management traditions based on their history, mentality, socio-economic environment and the local regulations (10,11). This otherness is fundamental when considering well-developed countries such as the USA, Germany and Great Britain in comparison with the converging countries of Eastern and South-East Europe (12,13). Thereby, the USA has developed a quality infrastructure and there are many organizations that provide accreditation services covering various aspects of healthcare and public health. Some of them include the Accreditation Association for Ambulatory Health Care (14), the Community Health Accreditation Partner, the Joint Commission and the Accreditation Commission for Health Care, the American Accreditation Council, and the Healthcare Quality Association on Accreditation (15). One of the main acknowledged bodies in healthcare is the National Association for Healthcare Quality (NAHQ). It certifies professionals in healthcare awarding the Certified Professional in Healthcare Quality (CPHQ). CPHQ plays an important role in clinical outcomes, reliability and financial stability of the healthcare organizations. The key elements of their knowledge refer to information management, measurement and analytics, quality measurement and improvements as well as planning, implementation, evaluation, training, strategic and operational tasks concerning patient safety. In Great Britain, the national standards body is BSI Group (16). One of the outstanding resulting documents created by a group of representatives from BSI to help organizations put in place occupational health and safety performance is the Occupational Health and Safety Assessment Series 18000 (OHSAS) with its next revision OHSAS 18002 which was accepted as a standard. In the updated edition “health” component was given greater emphasis and current version became more closely aligned with the structures of ISO 9000 and ISO 14000. Thereby organizations could more easily adopt OHSAS alongside the existing management systems (17). Another institution is the United Kingdom Accreditation Forum or UKAF. Founded in 1998 by a group of leading healthcare accreditation organizations, nowadays UKAF is an umbrella structure for organizations providing healthcare accreditation. It operates with an interest in developing assessment and accreditation programmes in healthcare and public health (18). The National Institute for Health and Care Excellence (NICE) provides guidance and contains governance information, publications, and policies concerning healthcare. It collaborates with the public health institutions, social care professionals and service users, and it also designs concise sets of statements and guidelines to drive measurable quality improvements within a particular area of healthcare (19). Furthermore, there is a supervisory structure in the UK called the Professional Standards Authority. This body is responsible for overseeing the UK’s nine health and care professional regulatory bodies (20). Referring to the topics that focus on the subject it is important to mention the United Kingdom Accreditation Service (UKAS), the National Health Service (NHS), the Department of Health, etc. In Germany, as a result of agreement with the German Federal Government, the national standards body is the German Institute for Standardization (DIN). Its experts administer about 29,500 standards and it was one of the first well-structured certification institutions in Europe. DIN remains the competent authority in respect to the technical issues and widely known specifications for products and materials. The accreditation body for the Federal Republic of Germany is DakkS. It has a special Health/Forensics division, which among other tasks attests third-party certification bodies taking care of Healthcare, Forensic Medicine, Medical Laboratory

Diagnostics and Medical Devices. The German Worker's Welfare Association (AWO) also plays an important role. Together with ISO they have formed an effective tandem that ensures quality in AWO rehabilitation facilities and health organizations. The model combines requirements of ISO 9001 with those of AWO quality and risk assessment guidelines. Consequently, quality of a particular facility is measured by the care provided, the organization structure and the satisfaction of patients and residents. In addition, important requirements for patient safety are formulated by a German initiative called the German Coalition for Patient Safety. It provides a basis in processing the audits that are conducted in the client's premises, with the aim of providing the client with a feedback regarding the degree of implementation of the quality dimension of "patient safety", e.g. regarding a particular healthcare system unit. Speaking of developed economies, it can be concluded that as of today standardization has taken a strong position. In our opinion this is due to understanding by the managers of its effectiveness, as well as the level of comfort regarding integration of standards, clear description of the processes and therefore adherence to the relevant rules and procedures. In spite of positive sides of standardization, we have to understand that human factor in healthcare should also be taken into account, which means inapplicability of one approach only, the engineering approach to the human being as a mechanism. In comparison with the quality management systems present in the developed countries, Ukraine has relatively unbalanced quality infrastructure. It bears elements of the former USSR standardizing paradigm that has to be re-evaluated, updated and adapted to suit the existing economic and social environment. There are state and industry branch systems of standardization in Ukraine (21). The State branch includes the Ukrainian Scientific Research Institute of Standardization Certification and Informatics, and the Ukrainian State Research and Production Centre of Standardization, Metrology and Certification (22,23). The most flexible are the Service standards departments and the Industrial Standards Departments. State social standards in the health sector are regulated by the Ukrainian Law "Fundamentals of Ukraine on Healthcare" (24). Since Ukraine has become a participant of the Euro-integration process, the reform on the adaptation of local standards to the European and international norms has been significantly accelerated (25). The main principles are shown in the "National Strategy on Reforming the Healthcare System in Ukraine" which has been accepted for implementation in the period from 2015 – 2020 (26). More often, private clinics and research centres all over the country engage certification bodies to perform an external audit with the aim of meeting international quality requirements. Standardization in Russian Federation is based on GOSTs. The word GOST (Russian: ГОСТ) is an acronym for "государственный стандарт" which means the National Standard. There is a set of technical norms maintained by the Euro-Asian Council for Standardization, Metrology and Certification (EASC) (27). One of the steps towards the standardization is by issuing the Ordinance of the Ministry of Health "On the introduction of standardization into healthcare" (28). There are also many national programmes and ordinances in Russia dealing with the implementation of particular standards in public health (29). The problem in Russia is actually in hyper-regulation as regards the standardization. Numerous ordinances, guidelines and procedures on one hand, and a lack of specific implementation mechanisms on the other hand causes confusion and regress with regard to the harmonization of national standards with their international counterparts. Thus, the Organization for Economic Co-operation and Development (OECD) Series on Principles of Good Laboratory Practice (GLP) currently operates with GOST R53434-2009 "Principles of Good Laboratory Practice" together with the support of other 14 interstate standards which have already been successfully implemented. In Croatia, accreditation is provided only by the Croatian Accreditation Agency (HAA) which is a national accreditation body that complies with the requirements of the international and European standard for accreditation bodies adopted in the Republic of

Croatia as the Croatian Standard HRN EN ISO/IEC 17011: 2005. The HAA is a member of the International Laboratory Accreditation Cooperation (ILAC) and the European co-operation for Accreditation (EA). The ILAC is an international organization for accreditation bodies operating in accordance with ISO/IEC 17011 and involved in the accreditation of conformity assessment bodies including calibration laboratories (using ISO/IEC 17025), testing laboratories (using ISO/IEC 17025), medical testing laboratories (using ISO 15189) and inspection bodies (using ISO/IEC 17020). The EA is an association of national accreditation bodies in Europe which are officially recognised by their national governments to assess and verify (in line with the international standards) the organizations that carry out evaluation services such as certification, verification, inspection, testing and calibration (also known as conformity assessment services). On the other hand there are agencies in Croatia dealing with quality control issues on the national level. Thus, the Agency for Quality and Accreditation in Health Care is an authority whose competence refers to quality improvement in healthcare services and social care, as well as medical technology assessment according to the corresponding law (Official Gazette of the Republic of Croatia 124/11) (30). Targeted assistance in further development of Quality Infrastructure in Croatia has been successfully implemented by the Joint Research Centre of the European Commission with amended action programmes such as CARDS - Croatia project on the “Development of National Metrology, Standardization, Conformity Assessment and Accreditation System” (31). Other institutions that cope with quality paradigm introduction into the Croatian healthcare and public health system are Andrija Stampar School of Public Health and the European Society of Quality in Healthcare (32). According to the 2009 Ministry of Health National Background Report “Health in Albania”, the country has performed very well in sustaining high rates of economic recovery after the financial collapse of 1997 (33). Quality assurance of health systems has been outlined as a priority in Primary Healthcare Reform: A Pilot Project to Provide Evidence for Health Policy (34). The national agencies are empowered by the government to be responsible for accreditation of hospitals and licensing medical personnel. Albania maintains the initiatives and continuous a dialog with the public institutions such as the Institute of Public Health, private laboratories and clinics as well as with the international NGOs, WHO, UNICEF, WB and USAID regarding a more active participation of the country in the international activities of the quality system implementation (35). International quality bodies are successfully co-operating with the aim to internationalize standardizing efforts in healthcare. One of such example is the International Society for Quality in Health Care (ISQua). It is a parent institution for bodies providing international healthcare accreditation. ISQua provides services in guidance to health professionals, providers, researchers, agencies, policy makers and consumers as to achieve excellence in healthcare delivery to the public and to continuously improve the quality of care (36). Among others, quality bodies working on the international level are ASTM International (37), the International Accreditation Forum (IAF) (38), and the Council for Health Service Accreditation of Southern Africa (39), the Quality Management Institute, etc.

Quality paradigm implementation in healthcare and public health

Standards cover a broad range of topics and are applicable to commissioners of health, specialists in primary care, public health staff, and social care providers as well as the local authorities and service users. Health products, ranging from medical devices and health informatics to traditional medicines and unconventional healing tools are all in the focus of standards application (40). Standards are designed to establish patterns of quality and performance including the measures to protect and improve the safety of patients, to promote a culture of continual improvement, support efficient exchange of information and data protection while benefiting the environment. Depending on the scope of responsibilities and areas of activity every organization is able to voluntarily choose among the standards it wishes to implement. ISO has created about 1200 health standards that are grouped in families. Some of them, such as Environmental Management ISO 14000, Occupational Health and Safety OHSAS 18000, Guidance on social responsibility ISO 26000, Environmental management 14000 are featured as widely applicable to public health and healthcare. A family contains a number of standards, each focusing on different aspects of a corresponding topic. According to 2012 ISO Press release the most commonly used standard is Quality Management Standard ISO 9001 (belongs to ISO 9000 - Quality management systems). Due to its generic basis, it is applicable to all types of organizations. It enables a company to develop a Quality Management System (QMS) which implies the introduction of quality planning, quality assurance, quality control and quality improvement, and it is a perfect tool to measure the fundamental way of developing health services. ISO 9001 has been updated and together with the Cooperation for Transparency and Quality (KTQ) for Hospitals became the most acknowledged “brand” for quality recognition in healthcare. KTQ certification is aimed at hospitals, medical practitioners and institutions, rehabilitation centres, nursing homes, hospices, and emergency medical services. It shows that the focus is primarily on patient satisfaction, from the preparation of the patient’s stay until his discharge. A good example of such practical application of quality management in a combined clinic is perfectly demonstrated in the article by Eckert H. and Schulze U., (2004) (41). ISO 13485:2016 – Medical devices, is also a useful standard. It is designed to define the requirements of Quality Management System with the aim of demonstrating a company’s ability to provide medical devices and related services that meet the clients’ and regulatory requirements. Together with EN 15224:2012 - Certification of quality management systems in healthcare, with its emphasis on the hospital process and risk management, both standards become strong indicators of quality level of care provided at an institution. The best way to find a relative ISO standard is to search through the work of a particular ISO technical committee (TC) on the ISO web page, as follows: TC 76, Transfusion, infusion and injection, and blood processing equipment for medical and pharmaceutical use; TC 84, Devices for administration of medicinal products and intravascular catheters; TC 94, Personal safety - Protective clothing and equipment; TC 106, Dentistry; TC 121, Anaesthetic and respiratory equipment; TC 150, Implants for surgery; TC 157, Contraceptives/STI; TC 168, Prosthetics and orthotics; TC 170, Surgical instruments; TC 172, Optics and photonics; TC 173, Assistive products for persons with disability; TC 181, Safety of toys; TC 194, Biological evaluation of medical devices; TC 198, Sterilization of healthcare products; TC 210, Quality management and corresponding general aspects for medical devices; TC 212, Clinical laboratory testing and in vitro diagnostic test systems; TC 215, Health informatics; TC 249, Traditional Chinese medicine; ISO/PC 283, Occupational health and safety management systems.

Challenges, opportunities and benefits

Twenty-first century and the globalization bring new challenges to the organizations exposed to the global market. With a drastic number of competitors, growing demands of consumers and legislators, quality requirements of goods and services together with a lack of resources are constantly increasing (42). Be it in environmental protection, in the food industry or public health objective testing and calibration play a notable role. Assessments ensure that tested products, methods, services or systems are reliable with regard to their quality and safety, that they correspond to the technical criteria and conform with the characteristics, guidelines, and laws. Observational findings indicate that nowadays OECD countries have a relatively developed infrastructure of standards implementation in almost all segments of human activity, including social care and public health. According to ISO Health report, healthcare is one of the world’s largest and fastest-growing sectors of the society. In 2009 about 12.4% of gross domestic product of OECD was spent on healthcare. These countries are the basis for research and development, as well as the improvement of international standardization environment. On the other hand, studies have shown that South European countries together with Ukraine and Russia are, in the long run, heading towards the social paradigm shift and understanding of standardization principles. Most frequently cited problems refer to failure of recognizing positive effects of a systematic approach, financial means, long waiting lists, systematic delays in first aid providers, lack of competent staff due to “brain-drain” and insufficient organizations’ preparedness for the implementation of structural changes at all levels. Some health centres, clinics and hospitals are funded by the state or county budget revenues (Beveridge’s model) or partly from social insurance contributions deducted from the citizens’ wages (Bismarck model), and consequently do not recognize the need to increase the level of quality, responsibility and international standards compliance (43). In addition, high payroll taxes in Eastern and South European countries are discouraging formal employment, dampening labour demand and increasing employment in the informal sector (44). A study published in British Medical Journal estimates that medical errors are the third leading cause of death in the United States, that caused a quarter-million fatalities in 2013 alone (45). It obviously means that the reduction of risks of all kinds is also an important problem that needs to be resolved (46). Despite relatively well-structured *lex artis* in standardizing processes, its efficiency in many cases remains controversial. Sometimes, due to enormous amount of paperwork and bureaucracy, standardization can become a nuisance causing waste of time and human resources. Combination of all these factors, together with the unfair competition, weak governance and corruption may cause unwillingness towards continuous improvement which is the ultimate precondition for an efficient functioning of standardization in healthcare and public health (47). Public health and healthcare are vital and sensitive issues, and their importance pervades all aspects of social life due to their medical, social, political, ethical, business, and financial ramifications. Looking into the future, it is impossible to predict exactly how our world is going evolve, but current trends suggest that together with climate change, migration, urbanization, a growing and ageing population, poverty, emerging diseases, food and water shortages and a lack of access to health services, the future of health sector appears to be complicated. New fields of expertise such as medical tourism are on the rise (48). They create a pool of migrating specialists whose services and reliability need to be properly examined and permanently reviewed. In our opinion standardization is a step-by-step process that requires commitment and cooperation of all parties. It may flow both in the bottom-up and in the top-down directions. The key element of this evolutionary process is the end-user of services - the patient, in whose best interest the described changes should be made. The patient, service provider, health insurance officer, public health institution, legislative body - all of them form an integral network of relationships and responsibility. Therefore, awareness regarding the benefits of the standardization process and full understanding of its stages, by those included, are key factors in the overall success of its implementation. Quality management systems based on the international standards should be a strategic decision of the national public health institutions in an attempt to meet long-term strategic goals. If an organization wishes to use one of the worldwide-recognized norms it has to ensure its adherence to best practices in everything it is involved in (49). It also includes the mapping processes, setting performance targets and making sure that it continually improves and meets the goals of shareholders, clients, and patients. Regular audit processes and subsequent annual assessments meet the needs of health service providers, patients, in this way guaranteeing the quality of services and achieving maximum results. In this way, the standardization creates powerful tools in order to fine-tune the performance and manage the risks while operating in more efficient ways that allow time and capacity for innovation and creativity, finally leading to an overall success. As a result, public health and healthcare sectors may become sustainable and reliable social partners with a high level of responsibility, encouraging committed and motivated employees and satisfied patients.

References

1. D'Amato R, Salimbeti A. Sea Peoples of the Bronze Age Mediterranean c. 1400 BC–1000 BC. Osprey Publishing; 2015. ISBN-10: 1472806816.
2. Mathisen RW. Ancient Mediterranean Civilizations: From Prehistory to 640 CE. Oxford University Press; 2012. ISBN-10: 0195378385.
3. Lucas RE. The Industrial Revolution, Past and Future, Federal Reserve Bank of Minneapolis, The Region, Annual Report; 2003.
4. Agarwal B, Baily M, Beffa JL, Cooper RN, Fagerberg J, Helpman E, et al. The New International Division of Labour. Conference paper: 2009.
5. Kerzner HR. Project Management: A Systems Approach to Planning Scheduling, and Controlling, Wiley; 2013. ISBN-13: 978-1118022276.
6. International Organization for Standardization. ISO and Health 2016. Informational brochure. Available at: www.iso.org/iso/health (accessed: March 6, 2017).
7. European Committee for Electrotechnical Standardization. European Standards Organizations. Available at: https://www.cenelec.eu/aboutcenelec/whoweare/europeanstandardsorganizations/index.html (accessed: March 6, 2017).
8. European Committee for Standardization. Compass, 2010. Available at: https://www.cen.eu/about/Pages/default.aspx (accessed: March 6, 2017).
9. Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, DC: National Academy Press, 2001.
10. Shaw CD. External quality mechanisms for healthcare: summary of ExPeRT project on visitatie, accreditation, EFQM and ISO assessment in European Union countries. Int J Qual Health Care 2000;12:169-75.
11. Zabica S, Lazibat T, Duzevic I. Implementation of QMS on different levels of healthcare (original paper in Croatian), Poslovna izvrsnost Zagreb (original in Croatian), VIII 2014, N8, JEL: L15, 138.
12. Kodate N. Events, public discourses and responsive government: Quality assurance in health care in England, Sweden and Japan. J Public Policy 2010;30:263-89.
13. Shaw CD. Accreditation in European Healthcare. The Joint Commission Journal on Quality and Patient Safety 2006;32:266-75.
14. Accreditation Association for Ambulatory Health Care. About AAAHC, Available at: http://www.aaahc.org/about (accessed: March 6, 2017).
15. Healthcare Quality Association on Accreditation. Ensure the quality of your care with medical practice accreditation. Available at: https://www.hqaa.org/pages/sp/physician.aspx (accessed: March 6, 2017).
16. The British Standards Institution. Available at: http://www.bsigroup.com/en-GB/about-bsi/ (accessed: March 6, 2017).
17. OHSAS 18001:2007, Standard. Guidelines for the implementation of OHSAS 18001:2007 Standard.
18. United Kingdom Accreditation Forum (UKAF). Available at: http://www.ukaf.org.uk/accreditation.aspx (accessed: March 6, 2017).
19. National institute for health and care excellence. Quality Standards: Process guide, 2014. Available at: https://www.nice.org.uk/guidance/published?type=qs (accessed: March 6, 2017).

20. Department of Health. Guide to the Healthcare System in England 2013. Available at: www.orderline.dh.gov.uk (accessed: March 6, 2017).
21. Official web portal of the State Department of Intellectual Property. State Standards of Ukraine, 2010 (Original in Ukrainian). Available at: http://sips.gov.ua/en/laws_special_6 (accessed: March 6, 2017).
22. Decree of the Cabinet of Ministers of Ukraine. On standardization and Certification, (Original in Ukrainian). Verkhovna Rada Journal 1993, No. 27, art. 289.
23. Vialkova AI, Vorobjova PA, Stjepanenko AV. Standardization in Healthcare. Lectures. (Original in Ukrainian); 2007.
24. Pityulych MI, Shnitser IR. Social Norms and Standards of Health of Ukraine. (Original in Ukrainian). Efficient Economics (Journal) №3, 2015, UDK: 330.342:364.
25. Ministry of Healthcare of Ukraine. The Concept of financial reform of the Healthcare System of Ukraine. (Original in Ukrainian). Work program, 2016.
26. National Strategy of reforming the Health Care System of Ukraine 2015-2020 (original in Ukrainian), 2015.
27. Federal Agency on Technical Regulating and Metrology. National Standard. Available at: http://www.gost.ru/wps/portal/en/about?WCM_GLOBAL_CONTEXT=/gost/gost/aboutagency (accessed: March 6, 2017).
28. Ordinance of the Ministry of Health. On the introduction of standardization in healthcare, (original in Russian), 1998. Available at: http://www.ctmed.ru/DICOM_HL7/mz12_98.html (accessed: March 6, 2017).
29. Boll SV. The development of a uniform system of standardization in healthcare of Russia. (original in Russian). Russian Entrepreneurship (journal), 2006;8:148-52.
30. Mittermayer R, Huic M, Mestrovic J. Quality of Healthcare, Accreditation of health activities holders and assessment of health technologies in Croatia: The role of the Agency for Quality and Accreditation in Healthcare. Acta Med Croatica 2010;64:425-34.
31. European Commission, Joint Research Centre, Nikola Poposki, Ani Todorova, Lutgart Van Nevel. Development of national metrology, standardisation, conformity assessment and accreditation system in Croatia, 3rd interim report: CARDS 2004: Croatia, project No 116536: 2008.
32. Džakula A, Sagan A, Pavic N, Loncarek K, Sekelj-Kauzlaric K. Health System review. Health Syst Transit 2014;16.
33. Nuri B. In: Tragakes E (ed). Heath care systems in transition: Albania. Copenhagen, European Observatory on Health Care Systems; 2002:4.
34. Cook M, McEuen M, Valdelin J. Primary Health Care Reform in Albania. Bethesda, MD: The Partners for Health Reformplus Project, Abt Associates Inc. February 2005.
35. Hajdini G. The Institute of Public Health in Albania: Institutional Learning Survey. J Health Edu Res Dev 2015;3:148. doi:10.4172/2380-5439.1000148.
36. The International Society for Quality in Health Care. Available at: http://www.isqua.org/who-we-are/isqua-mission (accessed: March 6, 2017).
37. ASTM International. ASTM Standards for Healthcare Services, Products and Technology, 2014. Available at: www.astm.org (accessed: March 6, 2017).
38. The International Accreditation Forum (IAF). The IAF Multilateral Recognition Arrangement (MLA). Brochure. IAF B2 1/2012.
39. The Council for Health Service Accreditation of Southern Africa. Available at: http://www.cohsasa.co.za/mission-vision-values (accessed: March 6, 2017).
40. WHO Press. WHO Global Health Expenditure Atlas; 2012. ISBN 9789241504447.
41. Eckert H, Schulze U. Quality management in a combined clinic - the quality

management system according to DIN EN ISO 9001 of the The German Association of Spa Accommodation Resorts e. V. (VdKB). (Original in German). Rehabilitation (Stuttg) 2004;43:166-73.

42. Berger S. How We Compete: What Companies around the World are Doing to Make it in Today's Global Economy, Random House, New York; 2006.
43. Kutzin J. Bismarck vs. Beveridge: is there increasing convergence between health financing systems? 1st annual meeting of SBO network on health expenditure 21-22, OECD. WHO, Paris, 2011.
44. Hazans M. Informal Workers Across Europe: Evidence from 30 Countries. The Institute for the Study of Labor (IZA). Discussion Paper No. 5871: 2011.
45. Makary MA, Daniel M. Medical error - the third leading cause of death in the US. BMJ 2016;353. doi: http://dx.doi.org/10.1136/bmj.i2139. 2016.
46. European Commission. Occupational health and safety risks in the health sector. Guide to prevention and good practice. Available at: http://ec.europa.eu/progress (accessed: March 6, 2017).
47. Mayberry RM, Nicewander DA, Qin H, Ballard DJ. Improving quality and reducing inequities: a challenge in achieving best care. Proc (Bayl Univ Med Cent) 2006;19:103-18.
48. Medical Tourism Magazine. FAQ concerning the medical tourism, Sept-Oct 2009.
49. Lee DH. Implementation of quality programs in healthcare organizations. Service Business 2012;6:387-404.

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LETTER TO EDITORS

High level Communiqué from the InterAction Council

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Dear Colleagues,

Here is a link to a copy of a high level Communiqué from the InterActionCouncil that may also be of interest to *SEEJPH* readers.
As you may be aware, the Council brings together former world leaders (heads of government and senior officials) and focuses on issues related, among others, to global security and has been examining the role of health security over the last few years. At this year's meeting (30-31 May), co-chaired by HE Obasanjo from Nigeria and HE Bertie Ahern from Ireland, the session on Planetary Health, coordinated by Professor John Wyn Owen, resulted in the endorsement of the "Dublin Charter for One Health". Dr Joanna Nurse presented on the policy implications of Planetary and One Health in this session and is tasked by the InterAction Council with advancing the One Health Charter in collaboration with key partners.

Below is a summary of the main actions in the *Charter for One Health* that may in due course help to inform trans-disciplinary research, education and practice at national, regional and global levels with a view to sustaining people and planet health and well-being.

Your comments on how best to advance these key areas are requested-i.e. please let us know what is already happening, gaps and suggestions for how to advance the following:

1. Strengthening multi-sector solutions for the SDGs - the One Health approach has the potential to act as a unifying theme;
2. Resilience to emerging threats -including AMR, disease outbreaks, climate change and environmental impacts;
3. Mainstreaming One Health within public health systems for UHC -including environmental health;
4. Strengthen One Health Governance mechanisms for systems reform;
5. Building leadership for One Health for future generations;
6. Establish an independent accountability mechanism for advancing action on One Health.

Please send your comment to glueddeke@aol.com by 10 July.

Many thanks and best wishes!

George Lueddeke PhD

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[*] Link to the One Health Initiative *News* Item:
http://www.onehealthinitiative.com/news.php?query=InterAction+Council+Issues+%91THE+DUBLIN+CHARTER+FOR+ONE+HEALTH%92+Communiqu%E9

Link to a One Health primary to tertiary education article and proposal supporting the SDGs and One Health: http://africahealthnews.com/development-project-proposal-supporting-sustainable-future-people-planet/.

Conflicts of interest: none.

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