Note: This is an excerpt from my original paper, I only included the Intro and Discussion.

Surgical Services within National Health Plans and Related Documents: A review of 173 Member States from the WHO Country Planning Cycle Database

Introduction

A rapidly growing body of literature suggests that the global burden of surgical diseases is large, that there is an associated huge unmet need for surgical and anaesthetic services, and that essential surgical care can be delivered in a cost effective manner even at the district hospital level in low- and middle-income countries (LMICs).[1 2 4 7 8 9] Alongside the establishment of an Emergency and Essential Surgical Care (EESC) programme in WHO in 2004 (www.who.int/surgery) and groundswell of interest generated by the *Lancet* Commission on Global Surgery and the Disease Control Priorities, 3rd Edition, Volume 1 *Essential Surgery*, the World Health Assembly passed Resolution 68.15: "Strengthening emergency and essential surgical care and anaesthesia as a component of universal health coverage".[3] Achieving universal access to surgical care will require a multidisciplinary and multi-sectoral effort aimed at strengthening each health system, including a clear policy framework to support strengthening surgical service delivery at the regional, national, and local levels, especially in LMICs where the greatest unmet need for surgical care exists.[4] In responding to this resolution, countries will need to take stock in how surgical care has been addressed within their national health plans and related policies, in order to provide an adequate framework with which to strengthen delivery.[5] The purpose of this study is to examine countries' national health plans to determine whether surgical care and anaesthesia has been included at all, and to what extent and in what context it has been mentioned.

Discussion

There is an enormous unmet need for emergency and essential surgical procedures, especially in the more rural and remote areas within the LMICs.[11] In response to the resolution concerning surgical care passed unanimously at WHA 68[4], all governments and their Ministries of Health are charged with developing a vision, crafting policies, and developing strategies and health care plans to implement the necessary changes to enhance the delivery of safe, timely, and effective surgical and anaesthesia services. Strong leadership and commitment will be required to guide the implementation process, recognizing that this will require a multidisciplinary, multi-sectoral effort, which may take significant time to fully implement.[6] Policies must be harmonized with the agendas of other stakeholders, including donors, professional societies, and both governmental and non-governmental organizations, working together to implement the necessary changes to achieve these shared goals. Without strong leadership during the implementation phase, policies will remain aspirational rather than operational. It should be noted that WHO's EESC programme has been engaged in a number of consultations and workshops with Ministries of Health since its inception in 2004 that have led to several countries, namely Mongolia and Tanzania, to facilitate this process.[7] In addition, a planning tool was developed by WHO to assist integration of EESC into national health plans.[8]

We suggest that each country perform a gap analysis of the availability of emergency and essential surgical and anaesthesia services, and this data could be used to drive an evidence-based national surgical care plan that would be fully integrated into the national health policy. Our findings suggest that while direct or indirect references to surgical care is commonly mentioned in national health plans from countries of all income levels, surgical care has not been discussed as with regards to the need for training health care professionals to develop a

competent workforce who can provide surgical care. In addition anaesthesia, a key part of all surgical care has been significantly neglected within national health plans.

While it is estimated that a very low percentage of the world's surgical procedures are performed in the low income countries, 97% of low income countries included some element of surgical care in their documents, versus only 64% for high income countries where the majority of surgical procedures are performed.[9, 10] This discrepancy suggests a sizeable gap between what countries aspire to and what is being implemented. The reasons for this incongruity are likely multifactorial, contextual, and involve each building block within a health system including governance, infrastructure/physical resources, human resources for health, information (monitoring and evaluation), and financing.[11] Surgical services were often implied (disaster relief, obstetric or trauma care) and/or mentioned as specific interventions (caesarean section, cataracts), rather than in any cohesive, systemic manner. The fact that only a few of thousands of possible surgical interventions have been mentioned may be explained by the influence of vertical or disease specific initiatives and their funding streams, for example caesarean section as it relates to maternal and child health programs or male circumcision as it relates to HIV/AIDS initiatives. Very few documents (38%) mentioned the resources required to deliver surgical services, despite the findings of a number of studies using the WHO Situational Analysis Tool (SAT) in which gross deficiencies in infrastructure and physical resources were identified at facilities in low and middle-income countries, especially at the district level (15). [12 13 14 15 16]

Clear policy frameworks will be required by countries to adequately respond to the WHA resolution to strengthen surgical care and anaesthesia delivery within the context of universal access. Important issues to be addressed include deficiencies in equipment and infrastructure, training of the surgical workforce and financial strategies to minimize catastrophic and

impoverishing expenditure and maximize utilization of services.[11] [12] [13] [14] [15] [16] [16] [17] Policies concerning the surgical workforce must be developed to establish the appropriate number of surgical and anaesthetic care providers, facilitate their training, ensure their distribution (and retention) relative to the population, and to maintain their competencies and accreditation.[11] Countries will need to determine the extent to which task shifting and/or task sharing will be utilized to enhance their workforce, and to regulate spill-over of tasks. The delivery of surgical and anaesthesia services must be monitored within the health system, from the "bird's eye" view at the national level to the data required managing individual health facilities; metrics must be tailored to each level for which the data is collected.

There are several limitations to this manuscript that must be mentioned. Our search terms could have been expanded, possibly leading to additional references within the documents, and direct contact with Member States was out of the scope of this study. Many of the documents were not in English and thus we relied on translations of our search terms, which could have led to errors in retrieval. Also, surgical care may have been addressed in other documents which were not captured using our search strategy, for example sub-national or district level documents. Recognizing these limitations, our findings serve as a suitable baseline which can be revisited to assess how countries are responding at the policy level to the resolution on emergency and essential surgical care as a component of universal health access.