Syria: effects of conflict and sanctions on public health

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ABSTRACT

The past 18 months have witnessed considerable turmoil in countries of the MENA region. The Syrian Arab Republic (SAR) is one such country, currently in the midst of a civil war. This report draws attention to some of the recent achievements of its health services, where, despite a dearth of published materials, the country achieved remarkable declines in maternal mortality and infant mortality rates. Its health sector now faces destruction from on-going violence compounded by economic sanctions that has affected access to health care, to medicines and to basic essentials as well as the destruction of infrastructure. This paper draws attention to the achievements of the country’s health services and explores some of the consequences of conflict and of sanctions on population health. Readers need to be mindful that the situation on the ground in a civil war can alter on a daily basis. This is the case for Syria with much destruction of health facilities and increasing numbers of people killed and injured. We retain however our focus on the core theme of this paper which is on conflict and on sanctions.

Keywords health services, morbidity and mortality, public health

Introduction

For more than 16 months, the Syrian Arab Republic (SAR) has been in turmoil with violence escalating on a daily basis. At the time of writing, the United Nation (UN) has declared the country in a state of civil war; whilst the army struggles to maintain its credibility in facing the opposition, civilians are trapped with high casualties from both sides. Financial and political support for a change in regime means that the possibilities of a political solution are increasingly remote.¹

In this volatile environment and as concerned public health physicians and scholars, we wish to highlight some of the achievements of health services in Syria that would have guaranteed the country fulfilling the health Millennium Development Goals (MDG). We discuss in particular the gains in health status made due to the efforts of public health professionals. We also examine the possible consequences of sanctions and the current crisis on the future of public health delivery in Syria.²

For this purpose we rely on secondary data from the Ministry of Health (MOH) and the Central Bureau of Statistics (CBS) combined with the information from the World Health Organization (WHO–EMRO) and additional online sources on sanction effects from the ICRC, the UN and WHO. Peer-reviewed papers were accessed through Google-scholar and Medline searches, using key words, Syria and population health, public health, sanctions and included a series of reports from the WHO and the UN.

Background

Syria is a lower middle income country with a population of 22.3 million and a per capita income of $3900 in 2009 and a land area of 185 180 km².³,⁴ Limited contact with western researchers resulted in a lack of awareness of its achievements in health status. The progress and capacity of its health services is now in real jeopardy from the violence of a protracted war and from economic sanctions. There is a growing danger that a combination of war and sanctions will affect health service delivery with potentially irreversible consequences for the population, already evident in its early stages.⁵–⁷
Public health achievements: some key features

Syria achieved substantial improvements in population health over the past decades. Contributory factors include access to maternal and child health services through comprehensive primary health care, health promotion and education supported by a network of Women's Committees, better nutrition through food subsidies and an acknowledgment of the need to address the social determinants of health, largely unknown to the region. Some of the achievements of the health system may be summarized as the following:

- Comprehensive vaccination coverage
- Improved levels of literacy (particularly among women)
- Plans to address a rising incidence of non-communicable diseases (NCDs) through partnership with local communities
- A re-organization of services in 1998 to increase the local level control as part of the process of decentralization
- Steps towards systematization of data and trends through the Health Metrics Network and the Syrian National Health Accounts.\(^3,8\)

The following two tables highlight a declining infant mortality rate (IMR) and a greatly improved maternal mortality rate (MMR).

Table 1 shows significant declines in IMR from 132 per 100,000 live births in 1970 to 14 in 2010; and in MMR from a high of 482 per 100,000 live births in 1970 to 45 in 2010. The decrease is a notable achievement, given the relatively low per capita income and public expenditure on health services.\(^9–11\)

Syria appears to be somewhat of an outlier for health outcomes in the region in relation to per capita expenditure on health amounting to $79 per annum (2008) compared with Jordan ($246) and Egypt ($200).\(^7,8\)

Table 2 shows MMR trends in Syria over two decades compared with those of Jordan and Egypt. The MMR for Syria are lower despite low investment and an absence of donor input. This suggests that the health sector was largely self-sufficient until a bi-lateral agreement with the European Union (EU) in 2003.\(^12\) These health outcomes were achieved through an integrated approach to health services including primary, secondary and tertiary care and one where institutional deliveries constituted >90% of all deliveries.\(^7,8\)

Despite past economic pressures and isolation, Syria could credit itself with improved living standards, together with greater citizen awareness of health issues, strengthened by improvements to infrastructure, access to clean water, expanding public healthcare systems and local production of >90% of medicines.\(^4\) The integration of health care has been a significant factor for the country to be on target to meet the health MDGs (Fig. 1).\(^9,13\)

Public health services: changes implemented to structure

Progress in public health was achieved through the provision of free health care to citizens, with a ceiling on charges for private providers. The right to comprehensive health coverage is guaranteed by the Constitution of Syria despite external pressures to fully commercialize the health sector.\(^5,10,11\) >80% of beds remained in the public sector and a fee-for-service system is applied for outpatient services. Health services were facing a restructure owing to a major agreement with the EU in 2003, which was subsequently integrated into the 10th Five-Year Plan (2006–2010). But despite the changes resulting from this agreement the core of health care remained in the hands of the MOH, an

<table>
<thead>
<tr>
<th>Year</th>
<th>Egypt</th>
<th>Syria</th>
<th>Jordan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>82 (51–130)</td>
<td>46 (20–100)</td>
<td>59 (35–100)</td>
</tr>
<tr>
<td>2005</td>
<td>90 (56–150)</td>
<td>50 (22–110)</td>
<td>66 (38–120)</td>
</tr>
<tr>
<td>2000</td>
<td>110 (69–180)</td>
<td>58 (26–130)</td>
<td>79 (46–140)</td>
</tr>
<tr>
<td>1995</td>
<td>150 (94–240)</td>
<td>77 (34–180)</td>
<td>95 (55–170)</td>
</tr>
<tr>
<td>1990</td>
<td>220 (130–350)</td>
<td>120 (52–290)</td>
<td>110 (64–210)</td>
</tr>
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enduring feat in an epoch of commercialization and privatization that has permeated the whole region.12–14

Whilst there is a growing trend towards the commercialization and fragmentation of services in Syria by province, the health indicators of the country with an emphasis on managing risk and attention to preventive services remained a credit to the public sector. The country’s health services have mainly stood apart in a fragile picture of public health in the region where there is a strong emphasis on high-tech tertiary care with a general lack of preparedness for the growing incidence of non-communicable disease.9,13,15–19

There is a risk also that Syria will abandon its legacy of integrated care.

Despite weaknesses in the trajectory of current health services, health professionals in Syria with support from the regional office of the WHO (EMRO) were able to provide more than adequate health care for citizens. Over the past year and more recently, a full-blown civil war as well as economic sanctions is having serious consequences for population health and the health system as we document in the final section.

Sanctions and effects

Since May 2011, Syria has faced economic sanctions of which imports of crude oil and most exports and project investments form a major part of Syria’s Gross Domestic Product. Their consequences, particularly for population health, are having a serious impact.14,15

Economic sanctions have caused the USD exchange rate value of the Syrian Pound (SP) in the market to rise from 45 to >70 SP with ramifications for the whole economy. Table 3 highlights the cost of basic essentials such as cooking oil and gas, milk and eggs. These have doubled and tripled over the past year, halving the purchasing power of salaries which in turn are affected by the loss of parity of the SP. The combination of price increases and the loss of value of income has had a devastating effect upon families especially among those with children, pregnant women and elderly people unable to access health services or to purchase essential food and medicines owing to escalating costs.7,15,16

The collapse of the exchange rate increased the cost of health services and in particular of medicines mostly borne out-of-pocket. The costs of medicines to treat NCDs, for example, are seriously affected.7,14–16 The value of salaries has been eroded with thousands of job losses in the service sector (tourism in particular) which was booming prior to the conflict.

Sanctions have also led to interruptions in power supply for several hours per day in many areas. These expose vulnerable people to extreme winter and summer temperatures and undermine the vaccines cold chain supplies contributing to interruptions in the vaccination programme. In the
longer term, this will lead to the loss of gains made in infection prevention and control in diseases such as poliomyelitis, and contribute to a rise in morbidity and mortality among children.\textsuperscript{5,6} Sanctions have prevented the entry of essential medical supplies into the country, including those for cancer, diabetes and heart disease, which are not produced locally and is having an impact upon the thousands dependent upon such medication to treat long-term conditions.\textsuperscript{5,14,16,17} There are reports that many current refugees into countries bordering Syria are seeking treatment for urgent chronic conditions.\textsuperscript{5,14,16,17} The harm to health indicators will remain hidden as the consequences will only become evident over a longer period in time.

It is well known that cold weather is especially difficult for vulnerable groups such as older people, but in this case it is aggravated by the difficulties of obtaining oil for heating. As the price index (Table 3) shows, the cost of heating oil increased 2-fold in the past year alone. Cold weather in the absence of heating will increase droplet and respiratory tract infections among the most vulnerable. There are indications that these are on the rise following a bitterly cold winter in 2011–2012. In the long run, an increase in mortality and morbidity, from respiratory tract infections among older people and children is likely. It will lead also to a loss in gains made towards increasing life expectancy and decreasing child mortality rates. Refugees, whose numbers escalate by the day and who are fleeing from violence, are increasingly facing dismal conditions which include limited access to basic essentials such as food and water, compounded by the psycho-social impact (especially on children) of dislocation, living with fear and uncertainty and without any well-established routine activities.

Sanctions: do they work?

Western governments have long used sanctions and economic embargoes as a means of promoting democracy but have often failed to acknowledge their effects on civilians despite mounting evidence.\textsuperscript{14,16,18--20} The most recent international sanctions against Syria were intended to prevent conflict but have not deterred the inflow of arms, damaging the economy and health services both of which are intrinsically linked.\textsuperscript{5,14,16,21} Sanctions in general have caused controversy because economic embargoes inevitably affect all parts of an economy including households. They affect the cost of living, the prices of medicines (which households have to purchase) and the price of utilities such as electricity and water.\textsuperscript{5,14,15,22} All of these have a direct effect on population health. Such actions in principle contravene the charter of the UN Covenant for Economic Social and Cultural Rights because they cause major disruption to food, pharmaceuticals and sanitation supplies.\textsuperscript{23}

Conclusion

Since the devastation caused to population health by sanctions in Iraq,\textsuperscript{4,18,20} there have been regular challenges from public health professionals, moral philosophers, human rights lawyers among others to their use on the grounds that they are tantamount to ‘collective punishment’ and therefore against international law.\textsuperscript{5,6,23} [Concerns about sanctions were also expressed by the UN’s Committee on Economic, Social and Cultural Rights as early as 1997. In an extensive discussion the Committee noted that trade sanctions almost always have a dramatic impact on the rights recognized in the Covenant on Economic Social and Cultural Rights frequently causing “significant disruption in the distribution of food, pharmaceuticals and sanitary supplies.” (Para 3 in http://www.unhcr.org/refworld/type, GENERALa,47q7079eO,O.html.)] It is not yet clear in which of these categories Syria will fall into, but the rising deficiencies to health system infrastructure from a range of sweeping deprivations already suggest catastrophic effects to population health in the years ahead.\textsuperscript{5,6,22} [Navi Pillay, Commissioner for Human Rights for the UN, reported gross

\begin{table}[h]
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\begin{tabular}{|l|c|c|}
\hline
\textbf{Item} & \textbf{Price before sanctions (SP)} & \textbf{Price after sanctions (SP)} \\
\hline
Gas (one cylinder) & 250 & 800 \\
Mazoot (1 litre) & 13 & 30 \\
Vegetable ghee (Aseel) (4 kg) & 615 & 675 \\
Cheese 1 kg & 80 & 180 \\
Yogurt 1 litre & 35 & 100 \\
Sugar 1 kg & 50 & 65 \\
Cow ghee 1 kg & 290 & 350 \\
Milk 1 litre & 20 & 55 \\
Vegetable oil 1 litre & 60 & 100 \\
Rice 1 kg & 40 & 160 \\
Eggs 30 & 80 & 200 \\
Tea 250 g & 30 & 45 \\
Tomatoes 1 kg & 15 & 50 \\
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\end{tabular}


The global health and human rights agenda is on an ascendance with a collection of dedicated scholars and lawyers on board determined to defend the right to accessible quality health care for all. The situation in Syria for the majority of the population is an urgent one; the effects of the Gulf war sanctions on the health and nutritional status of Iraqis, in particular children and women, were devastating and more recently on the IMR in the Gaza Strip due to Israeli sanctions.\textsuperscript{18,20,24} One can only hope that the world will have learned some lessons from these experiences and prevent the collective punishment of innocent civilians including men, women, children and elderly people, not just in Syria, but everywhere.

\section*{References}
\begin{enumerate}
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