1. Summary

Health systems are integral to improving health outcomes and good health outcomes enable economic growth. A well-functioning health system ensures the efficient use of limited resources and a more equitable distribution of health. Investing in health systems in Asia Pacific is critical for the region’s development. This is not only because of the potentially huge economic costs associated with the rapidly rising non communicable disease (NCD) epidemic, but also because many health systems in the region face significant inefficiency and inequity challenges. To maximise returns on investments, it is important that efforts are made to strengthen health systems and tackle some of the key causes of inefficiency and inequity. Without a stronger health system, the growing NCD burden cannot be effectively addressed alongside the existing infectious diseases.

2. Introduction

Traditionally, the policy debate on health systems has been dominated by concerns about sustainability and the system’s ability to fund itself in the face of growing cost pressures.\(^1\) Containing costs continues to be a major priority for most health systems especially those of low and middle income countries (LMICs) that struggle to provide the most basic level of quality health services to their population. The economic crises that have plagued many countries including those in the Asia Pacific have compounded these concerns.

Over the past decade, a parallel discussion has evolved about the role health systems themselves can play in improving health. This ‘new wave of thinking’ recasts health systems as integral to improving health and in turn achieving better economic growth rather than simply a drag on society’s resources.\(^1\) In this part of the compendium we will first examine the different pathways through which investments in health systems are expected to maximise health outcomes and promote the efficient use of scarce resources for health. We will then go on to assess the strength and breadth of evidence in support of the argument for health systems investment.

3. The meaning and goals of health systems

The definitions of ‘health systems’ vary significantly ranging from narrow definitions focussing on medical care through to broad approaches encompassing all possible determinants contributing to health.\(^1\) The definition provided by the World Health Organization (WHO) lies somewhere in the middle of this range. It defines a ‘health system’

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as comprising all the organisations, institutions and resources that are devoted to producing health actions whose primary purpose is to improve health.\textsuperscript{2}

The term ‘health system’ is often used interchangeably with ‘healthcare system’. The main difference between the two is that ‘healthcare system’ focuses more narrowly on the supply-side whereas ‘health system’ covers a much wider range of institutions and actors beyond what is traditionally known to be the health sector.\textsuperscript{3} Lack of consensus on the meaning of health systems and an agreed set of metrics for evaluating their performance, partly explains the difficulties in calculating returns from investing in health systems.

It is important to note that when making a case for investing in health systems that context matters enormously. Health systems, the relationships upon which they are based and the emphasis placed on over-arching goals such as improvements to health, equity and efficiency will vary considerably across countries and influence the degree to which investments in health systems translate into improved health and economic growth.

\section*{4. The case for investment in health systems}

Support for investment in health systems strengthening in LMICs has grown significantly in recent years.\textsuperscript{4} This support rests on 2 key arguments.

First, it has been argued that health systems can make direct contributions to economic growth.\textsuperscript{5} In Thailand, the healthcare and social work sector employed nearly 7 million people in 2009 and Cambodia had over 32,000 people employed by the human health and social work sector in 2008.\textsuperscript{6, 7} Aside from employment, health systems can be key drivers and consumers of technological innovation and research and development.\textsuperscript{8} In general, the direct contribution of health systems to economic growth has not been pushed strongly as a justification for investment in health systems, partly because of a lack of evidence\textsuperscript{9} and partly because investment in other areas of government activity may result in greater gains in health and societal well-being than through health systems.\textsuperscript{10, 11}

The other, more widely posited argument in favour of investing in health systems is that strong and efficient health systems are needed to maximise gains from health investments both in terms of health outcomes and the efficient and equitable use of health resources.\textsuperscript{12} In

\begin{itemize}
\item \textsuperscript{5}Figueras J, McKee M, Lessof S and Duran A, N. M. (2008), Health systems, health and wealth: Assessing the case for investing in health systems. Copenhagen: WHO Regional Office for Europe.
\item \textsuperscript{7}Ministry of Planning (2010) Labour and Social Trends in Cambodia 2010. Phnom Penh: Ministry of Planning.
\item \textsuperscript{8}Figueras J, McKee M, Lessof S and Duran A (2008).
\item \textsuperscript{9}Mills A (2011) Health Systems in Low- and Middle-Income Countries. In: Glied S, Smith PC, editors. The Oxford Handbook of Health Economics Published Online: Oxford University Press.
\item \textsuperscript{10}CMH. Macroeconomics and Health: investing in health for economic development. Geneva: Commission on Macroeconomics and Health; 2001.
\item \textsuperscript{12}Figueras J and McKee M (2012)
\end{itemize}
this section of the compendium we examine the evidence around this second argument with particular emphasis on the Asia Pacific region. Part 1 of the compendium highlights the link between health and economic growth.

4.1 Impact of health systems investments on health outcomes

No systematic reviews of the evidence on the relationship between health systems investment and health outcomes have been published. There are multiple reasons why evidence on this topic is limited. Methodologically, it is challenging to disentangle the relative influence of health systems on health outcomes from the impact of other determinants of population health, especially living and working conditions, income, education and the most common lifestyle-related risk factors. Also, there is significant time lag between health systems investments and their impact on outcomes, especially when health outcomes are measured through indicators such as overall mortality. For these and other reasons, much of the existing evidence comes from process evaluations using intermediate indicators of effect such as adherence to national policies or guidelines, change in knowledge or practice, health service utilisation rates and so on. None of these studies focus specifically on the Asia Pacific Region.

Our rapid review of the evidence identified three key peer-reviewed studies that have attempted to measure the health outcomes effect of investments in health systems.

A study recently published in the *Lancet* (November 2013) uses simulation modelling to estimate the health and socio-economic returns of investments in women’s and children’s health. The analysis provides an updated estimate of the health, social, and economic benefits of investing in strengthening health systems to deliver reproductive, maternal, neonatal and child health (RMNCH) interventions in 74 low- and middle - income countries that account for more than 95% of maternal and child deaths worldwide (some in the Asia Pacific region). The results clearly demonstrate that increasing health expenditure by just $5 per person per year up to 2035 could yield up to nine times that value in economic and social benefits. The returns include possible greater gross domestic product (GDP) growth through improved productivity, and prevention of the deaths of 147 million children, 32 million stillbirths, and 5 million women by 2035. (For more on this study see Stenberg et al. *Advancing social and economic development by investing in women’s and children’s health: a new global investment framework*). See Paper 1 of this Compendium for more on the link evidence linking health to GDP growth.

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14 The effects of health systems investments on health outcomes may not be known until well beyond the investment period when public interest in the investment may have waned.


Another study measures the level of health care coverage through indicators of pre-paid (pooled) public and private health expenditure and immunization rates, in an attempt to evaluate access to needed care and protection from financial hardship due to health payments.\textsuperscript{20} It uses a large panel dataset encompassing 153 developing and developed countries. The results indicate that expansions in health system coverage lead, on average, to improved general population health. Higher government health spending per capita was consistently found to reduce both child and adult mortality rates. The estimated gains were the largest for under-five mortality and were larger for LMICs than in the full sample. The implied marginal cost of saving a year of life was just around US$1,000 in the full sample of countries based on the results for under-five mortality and public health spending. Higher immunisation coverage was also found to decrease mortality rates. Overall, the study offers credible evidence that investing in broader health coverage can generate significant gains in terms of population health. (For more on this study see Moreno-Serra and Smith (2011) \textit{The effects of health coverage on population outcomes: a country-level panel data analysis}).\textsuperscript{21}

The final study investigates why some countries achieve better health outcomes than others at similar levels of income. The ‘\textit{Good health at low cost study}’ looks at five regions which have succeeded in either achieving long-term improvements in health and access to services or implementing innovative reforms relative to their neighbours.\textsuperscript{22} Strategic investment in health systems was a key to accelerating and sustaining the achievements in health. The study notes that attributes to success include good governance and political commitment, effective bureaucracies that preserve institutional memory and can learn from experience, and the ability to innovate and adapt to resource limitations. (\textit{For more on this study see Balabanova et al. (2013) Good Health at Low Cost 25 years on: lessons for the future of health systems strengthening}).\textsuperscript{23}

These three examples show that investment in health systems can impact positively on health outcomes, and as part 1 of this compendium demonstrates, improved health enables economic growth. The next section brings together the arguments and available evidence for investing in health systems in Asia Pacific.

\subsection*{4.2 Improving efficiency}

To maximise returns on investments in health systems, it is important that efforts are made to tackle some of the key causes of inefficiency within health systems in the Asia Pacific (see World Health Report 2010 for leading causes of inefficiency in health systems).\textsuperscript{24}

There is evidence of substantial inefficiency in the delivery of health services in the region. For example, several countries do not have proper referral systems that link facilities and rationalise their use. This often leads to unnecessary use of hospitals for conditions that can be treated in primary health care (PHC) facilities.\textsuperscript{25} In the Philippines, for example, patients frequently bypass health centres and clinics and go directly to hospitals with primary health issues. This causes heavy traffic in the hospitals and result in over-utilisation of resources.\textsuperscript{26} Inappropriate hospital admissions and duplication of services are also common. In Mongolia,
40% of admissions to tertiary hospitals are considered medically unnecessary. A significant level of inappropriate admissions occur in the district hospitals, with one study suggesting that about 30% of admissions to district hospitals are chronic cases which do not require acute treatment.\textsuperscript{27} In Malaysia, the lack of coordination between public and private health services has resulted in duplication, lack of continuity and underutilisation of high-end expensive technology.\textsuperscript{28}

Another key area of health system inefficiency in the region is supply of medicines. Spending on medicines represents a substantial proportion of health spending in Asia Pacific countries. In Vietnam and in Papua New Guinea (PNG), pharmaceutical spending accounted for 50.9% and 51.4% of total health spending respectively in 2009.\textsuperscript{29} However, frequent shortages of essential medicines persist, especially in PNG, despite the huge cost. Inappropriate use of health workers and health system leakages persist in countries such as PNG and add to overall resource wastage.

The different causes of inefficiency in health systems in the Asia Pacific region can only be tackled effectively through a systems’ approach. Investment in health systems would allow a broader re-allocation of resources (both old and new) across health systems dimensions to maximise efficiency gains. It is worth noting that addressing current inefficiencies would not solve the existing funding gaps facing many health systems. However, it would provide them an additional avenue for generating resources which can be re-invested in priority areas.\textsuperscript{30}

4.3 Promoting equity

Health equity is a fundamental societal goal and one of particular importance for health systems. Health financing systems are an important lever in determining the availability and affordability of health services and by implication, health equity.

There is evidence of significant inequalities in health financing in the Asia Pacific region. In general, a large proportion of health budgets in the region is allocated to hospitals, which unduly benefit the rich over the poor.\textsuperscript{31} Studies tracking how the benefits and burdens of public financing for health in the region are distributed have found a disproportionate financing burden on the poor (see O’Donnell and colleagues).\textsuperscript{32} This has been accredited in part to an ‘over-dependence’ on out-of-pocket (OOP) payment for financing health care.\textsuperscript{33} In countries such as Pakistan, Laos, The Philippines, Bangladesh and Vietnam, OOP payments represent more than 50% of total health expenditure.\textsuperscript{34} The impact of OOP payment on household consumption is largely negative though varies across countries. A recent analysis of the economic consequences of ill health in Indonesia by Sparrow and colleagues\textsuperscript{35} found that ill health events impact negatively on income from wage labour for

\textsuperscript{27} WHO (2013) Mongolia Health System Review. Health Systems in Transition, 3(2).
\textsuperscript{28} WHO (2013) Malaysia Health System Review. Health Systems in Transition, 3(1).
\textsuperscript{30} WHO (2010).
\textsuperscript{33} Langenbrunner JC and Somanathan A (2009).
\textsuperscript{34} OECD/World Health Organization (2012).
the poor and those in the informal sector. For the rural and poor population, this leads to a
decrease in consumption, sale of family assets or increased borrowing.\textsuperscript{36}

Other avenues of inequalities in health systems in the region include unfair geographical
distribution of health infrastructure, human resources for health and uneven access to
services and essential medicines. It is estimated that 25-30\% of the Asia Pacific population
lacks access to essential preventive and curative health care.\textsuperscript{37}

Investment in health systems provides the best platform to sustainably promote equity in
health. Several countries in the region acknowledge this and have sought to improve health
equity and protect the poor through different mechanisms with varying degree of success.
The Cambodian Health Equity Fund is one widely cited example.\textsuperscript{38} There is evidence that
the Fund has improved access to medical services for the poor. However, questions have
been raised about its financial sustainability and the Cambodian government's capacity to
expand it using domestic resources.\textsuperscript{39} Another good example is Thailand's universal health
coverage which has been shown to significantly improve access to health care for the poor
(see Limwattananon et al. (2012) Why has the Universal Coverage Scheme in Thailand
achieved a pro-poor public subsidy for health care?).\textsuperscript{40}

\subsection*{4.4 Reorienting health systems to meet the changing disease profile}

The changing population and disease patterns in Asia Pacific provide a strong rationale for
investment in health systems. Countries in the Asia Pacific region are undergoing
demographic and epidemiological transitions. Falling burden of communicable diseases in
some countries (e.g. Singapore, South Korea) has increased longevity and burden of non-
communicable diseases.\textsuperscript{41, 42} WHO estimates that in East Asia and the Pacific, NCDs will
account for up to 80\% of all deaths and 40\% of all morbidity by 2030.\textsuperscript{43} In other countries
(e.g. Cambodia, Myanmar and Fiji) deaths from infectious diseases and injuries continue to
occur alongside rising deaths from chronic diseases (the double burden of disease).\textsuperscript{44}

There is the need for national health systems to restructure to meet the changing disease
profile. A recently launched \textit{Lancet Commissions report}\textsuperscript{45} notes that tackling infections and
RMNCH disorders, while also reducing NCDs and injuries, will best be achieved through a

\begin{thebibliography}{9}
\footnotesize
\parencite{\textsuperscript{36} Sparrow R and de Poel EV (2013).}
\parencite{\textsuperscript{37} WHO (2008).}
\parencite{\textsuperscript{41} WHO (2008).}
\parencite{\textsuperscript{44} Chongsuvivatwong V, Phua KH, Yap MT, Pocock NS, Hashim JH, Chhem R, et al.}
\parencite{\textsuperscript{45} The Lancet Commissions Report – Global Health 2035: A world converging within a generation – was launched on 3 December 2013.}
\end{thebibliography}
diagonal approach,\(^{46}\) with stronger health systems that are focused on achieving measurable health outcomes. Disease-specific funding can deliver direct and measurable results and may be desirable as a temporary measure, particularly when a rapid response is needed to gain economies of scale, address the needs of a target population group, or deliver very complex interventions that require a highly skilled workforce.\(^{47}\) However, disease-specific funding can also undermine health systems’ capacity by creating excessive demand on health workers, distorting wages, escalating recurrent costs to levels that are unsustainable without external funding, and generally producing parallel systems that may lead to duplication of services and inefficient use of resources.\(^{48, 49}\) In Mozambique, Mussa and colleagues recently reported that vertical funding has created inequalities in the national health systems by skewing in-service training in favour of nurses linked to vertical programs, and triggering ‘internal brain drain’ to such programs.\(^{50}\) Atun and colleagues also noted that in several countries in the eastern part of the WHO European Region, vertical programs appear to have impaired the effective management of HIV, tuberculosis, substance abuse and mental health.\(^{51}\) Investment in health systems strengthening in the Asia Pacific offers the best possible opportunity for national governments to reorient existing health systems to meet the rising NCD challenge.

### 5. Appraisal of evidence on returns on health systems investments

There is a large and growing body of evidence about the weakness of health systems in LMICs, particularly in sub-Saharan Africa and the Asia Pacific. These weaknesses affect the performance of health systems and make them incapable of delivering affordable cost-effective interventions to those in greatest need.

In contrast, linking good health systems to health outcomes is very complex and the evidence is tenuous at best. In specific cases such as vaccination for smallpox or the use of insulin for type 1 diabetes, the role of health services is self-evident. However, in many other instances, particularly regarding population health, the evidence is far from definitive. This is partly due to the potential influence on health outcomes of factors outside the health sector such as education, housing and employment as already highlighted in section 3.1.\(^{1052}\)

There is also a lack of evidence on the returns from strategies for investing in health systems in terms of their value for money within the health sector and across other areas of government activity.\(^{53}\)

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\(^{46}\) Diagonal approach to health financing aims for disease-specific results through improved health systems.


\(^{50}\) Mussa A, Pfeiffer J, Gloyd S and Sherr K (2013)

\(^{51}\) Atun RA, Bennett S and Duran A (2008)

\(^{52}\) Figueras J, McKee M, Lessof S and Duran A, N. M. (2008)

\(^{53}\) Figueras J and McKee M (2012)
6. Conclusion

There are important efficiency and equity gains to be made by investing in strengthening health systems in the Asia Pacific region. Studies show that without strong and efficient health systems in the region, maximising health outcomes with available resources will be difficult, especially in the context of the rising NCD epidemics.

Looking to the future, in order for policy-makers and donors to mount the most convincing case for further investments at the health system level, performance measurement systems must be in place to demonstrate returns on current investments. These systems are currently lacking for many countries in the Asia Pacific Region.

Key messages

- ‘Health systems’ comprise all the organisations, institutions and resources that are devoted to producing health actions whose primary purpose is to improve health.
- Strong and efficient health systems are needed to maximise gains from health investments in terms of improvements in health and the efficient and equitable use of resources.
- A study just published in the *Lancet* suggests that increasing health expenditure by just $5 per person per year up to 2035 could yield up to nine times that value in economic and social benefits. The returns include possible increased GDP growth through improved productivity, and prevention of the deaths of 147 million children, 32 million stillbirths, and 5 million women by 2035.
- There is evidence of substantial inefficiency and inequalities in health systems in the Asia Pacific region that lead to resource wastage. For example, one study suggests that about 30% of admissions to district hospitals are chronic cases which do not require acute treatment.
- There is substantial inequity in financing and geographical distribution of health infrastructure in the Asia Pacific region. In several countries the poorest 20% of households receive significantly less than 20% of the public health subsidy. In countries such as Pakistan, Laos, the Philippines, Bangladesh and Vietnam, out-of-pocket payments represent more than 50% of total health expenditure.
- The changing population and disease patterns in Asia Pacific provides a strong rationale for investment in health systems; this will offer the best possible opportunity for national governments to reorient these health systems to meet the rising NCD challenge.
- In future, in order for policy-makers and donors to mount the most convincing case for further investments in health systems, performance measurement systems must be established.
**Table of sound bites, supporting evidence and summary of the strength of the evidence**

Investment in health systems improves health outcomes in a more effective, efficient and equitable manner; and good health outcomes foster economic growth

<table>
<thead>
<tr>
<th>1. A well-functioning health system enables the achievement of good health outcomes and good health outcomes can foster economic growth.</th>
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<tbody>
<tr>
<td><strong>Examples/soundbites</strong></td>
</tr>
<tr>
<td>I. Health systems are not a drain on resources but an opportunity to invest in the health of the population and in economic growth. 5</td>
</tr>
<tr>
<td>II. In countries that have achieved ‘good health at low cost’, strategic investment in health systems was a key to accelerating and sustaining achievements in health.</td>
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<tr>
<td>III. In 2010 only 43 per cent of health centres in Cambodia were able to provide the full minimum package of services due to financial and other resource constraints.</td>
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<tr>
<td>IV. In sub-Saharan Africa, low per capita income, limited capacity for domestic revenue mobilization, and pervasive health system bottlenecks complicate governments’ ability to respond effectively to the health challenges in their citizens.</td>
</tr>
<tr>
<td><strong>Evidence behind the statement</strong></td>
</tr>
<tr>
<td>This statement is based on evidence from recent 1, 2 reviews that seek to make more explicit the role of health systems in improving health as part of the broader debate about the link between health and economic growth.</td>
</tr>
<tr>
<td>The seminal work of the Commission on Macroeconomics and Health and the publication by WHO on Health Systems Strengthening as well as several recent reviews on health systems provide the basis for this statement. 1, 3</td>
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<tr>
<td><strong>Strength of evidence and contexts where it does not hold true</strong> 1</td>
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<tr>
<td>There is growing evidence supporting this statement. It is becoming increasingly clearer that weak health systems are unable to deliver proven, available and affordable interventions to improve health outcomes.</td>
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<tr>
<td>Linking good health to health systems is complex and challenging. This is partly because there are several issues at the health systems and outcomes interface that we still do not fully understand. As a result some people question whether investment in other areas is capable of yielding greater health dividends than investment in health systems.</td>
</tr>
<tr>
<td>E.g. the Commission on Social Determinants of Health argue that tackling social inequalities may yield higher health returns than investment in health systems. 4</td>
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</table>
2. To maximise returns on investments in health systems, it is important that efforts are made to tackle some of the key causes of inefficiency within health systems in Asia Pacific.

**Examples/soundbites**

I. Efficiency gains within the health sector provide an additional avenue for generating resources which can be re-invested in health systems.

II. Low-income countries could save annually 12–24% of their total health spending by improving hospital or workforce efficiency.

III. In Mongolia, 40 per cent of admissions to tertiary hospitals are considered medically unnecessary. A significant level of inappropriate admissions occur in the district hospitals, with one study suggesting that about 30 per cent of admissions to district hospitals are chronic cases which do not require acute treatment.11

IV. In sub-Saharan Africa, it is estimated that up to 70% of medical equipment remains idle because of mismanagement of the technology acquisition process, lack of user training, and lack of effective technical support.6

V. Improved efficiency often makes it easier for the Ministry of Health to mount a case for obtaining additional funding from the Ministry of Finance.6

**Evidence behind the statement**

These statements are based on evidence from studies suggesting that highlight inefficiencies in health systems and the need to seek value for money. The World Health Report 20106 and several other studies have looked into health systems efficiency.

For example, Evans and colleagues compared the efficiency of national health systems using econometric analysis.7 Handed and colleagues also investigated the determinants of healthcare system’s efficiency in OECD countries.8

**Strength of evidence and contexts where it does not hold true**

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There is significant evidence suggesting that health systems in many LMICs are inefficient, 9 particularly in terms of service delivery. Many countries continue to allocate more resources to hospitals despite the evidence that Primary Health Care remain the most viable system for their contexts.10

The issue of inefficient use of resources is not peculiar to LMICs or the Asia Pacific. Therefore the evidence is not region-specific. However, there is no disagreement that using available health care resources wisely will help countries improve coverage and health outcomes.

3. Health equity is a fundamental societal goal and fair financing an important lever in achieving equitable distribution of health

**Examples/soundbites**

I. Health inequalities undermine economic performance, increase social costs and diminish societal well-being.5

II. In countries such as Pakistan, Laos, Philippines, Bangladesh and Vietnam, OOP payments represent more than 50per cent of total health expenditure.19

III. In Cambodia, despite the increasing investment in health from government and external sources, the largest portion of health expenditure comes from OOP sources and goes towards unregulated private health care.20

IV. Inequities in health is not only about financing but also about the unfair geographical distribution
of health infrastructure, human resources and uneven access to services and essential medicines. It is estimated that 25-30 per cent of the Asia Pacific population lacks access to essential preventive and curative health care.\textsuperscript{21}

**Evidence behind the statement**

The evidence behind these statements comes from multiple sources including studies that investigate health care financing in the context of health systems and health reforms.\textsuperscript{10, 12, 13}

Several of these studies originating from the Asia Pacific region have been conducted by the World Bank, the Asian Development Bank, and health economists/systems analysts with interest in benefit and financing incidence analyses.\textsuperscript{14-16}

A recent analysis of the economic consequences of ill health in Indonesia by Sparrow and colleagues\textsuperscript{17} found that ill health events impact negatively on income from wage labour for the poor and those in the informal sector.

In general, these studies aim to generate evidence to assist policymakers make better decisions about health financing.

**Strength of evidence and contexts where it does not hold true**

+++ There is strong evidence from the Asia Pacific region and elsewhere suggesting inequitable financing in low-income countries that rely heavily on out-of-pocket payment.\textsuperscript{14, 18} Many of such countries have weaker health systems.

Countries that have implemented pro-poor financing reforms have been able to improve equity in access to health care access.

Not all LMICs have weak health systems or depend heavily on OOP payments. Sri Lanka is a low-income country but has a relatively well-functioning health system.

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**4. Vertical funding can deliver direct and measurable results and may be desirable as a temporary measure but it can also undermine health systems’ capacity and create inefficient use of limited resources.**

**Examples/soundbites**

I. Disproportionately concentrating funds into disease-based initiatives in LMICs may compromise health systems and fragment complex interventions.\textsuperscript{27}

II. Although international aid for health to developing countries doubled to $14bn between 2000 and 2007, much of the increase was tied to individual diseases and was delivered outside of recipient countries’ planning and budgeting systems, challenging the recipients.\textsuperscript{23}

III. In Mozambique, vertical funds channelled outside of the Ministry of Health to NGOs and other agencies quadrupled from $75 million to an estimated $300 million between 2001 and 2008, accounting for over 58% of all health sector spending by 2008. This created inequalities in the national health system.\textsuperscript{30}

**Evidence behind the statement**

This statement is based on the long-standing debate about the comparative effectiveness of vertical versus horizontal funding of health services in LMICs.\textsuperscript{22-24}

The debate about vertical versus horizontal funding dates back many years.\textsuperscript{22} The 1993 World Development Report (Investing in Health), for example, focused significantly on Disability Adjusted Life Years (DALYs) gained through specific vertical disease interventions and indirectly promoted
vertical funding.25

More recently, there is growing consensus that optimal health systems are the key to improving health,26 and consequently, there have been calls for donors to move from vertical towards horizontal funding.23 However, vertical funding remains the dominant mode of channelling global health resources.27

Strength of evidence and contexts where it does not hold true

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Despite the many years of debate, the evidence on the comparative effectiveness of vertical versus horizontal funding is still mixed.

On the one hand, vertical funding has contributed significantly to better targeting of resources at high priority diseases such as HIV/AIDS, Tuberculosis and Malaria in developing countries.28, 29

On the other, it has created fragmentation of health systems and duplication of services leading to inefficient use of resources and significantly undermining the broader health systems strengthening agenda.22, 30

A diagonal funding approach has been more recently proposed as a way out of the polarisation between vertical and horizontal funding.22, 29 Diagonal funding uses explicit intervention priorities to drive the required improvements into the health system, dealing with such generic issues as human resource development, financing, facility planning, drug supply, rational prescription, and quality assurance.22, 29

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23. England R. The dangers of disease specific programmes for developing countries. BMJ. 2007; 335(7619): 565-.


