Despite impressive improvements since the launch of the millennium development goals (MDGs), many countries will not reach the targets on maternal and child mortality, partly because of the lack of attention to determinants of health (box 1) beyond the health sector. For example, the 2010-15 Global Strategy for Women’s and Children’s Health, launched by the United Nations secretary general to accelerate progress on MDGs 4-6,1 failed to consider determinants of health or interventions beyond the health sector. The maturation of the goals this year provides an opportunity to reflect on how coordinated multisectoral action could achieve more ambitious targets for women and children’s health, such as ending preventable maternal, newborn, and child deaths in all countries.

The finalisation of the 2016-30 sustainable development goals (SDGs; which urge a more ambitious targets for women and children’s health) and the upcoming launch of the 2016-30 Global Strategy for Women’s, Children’s, and Adolescents’ Health (Every Woman Every Child 2.0; EWEC 2.0) also make it timely to consider how multisectoral action can be facilitated in countries, including in updating and developing new national strategies for reproductive, maternal, newborn, child and adolescent health (RMNCAH). Here we review evidence on the contribution of action on determinants, discuss major obstacles, and propose key steps for global and national strategies to provide guidance.

Methods
The conclusions and recommendations in this article are drawn from a review of the literature, estimates of the effects of interventions, country lessons, and the authors’ experiences. The range of products from the Commission on Social Determinants of Health2 and the Success Factors’ project provided key inputs, along with multiple rounds of consultation undertaken as part of the process of updating the global strategy, which included online and face to face consultations.

The determinants of health paradox: increasing recognition but limited action
Progress on RMNCAH can be accelerated by interventions beyond the health sector. The contribution of non-health sectors, including the contributions of different sectors and interventions, is best understood for mortality in children under 5.6 About half the decrease in child mortality in low and middle income countries since 1990 is due to non-health sector investments.5

Estimates for the contribution of educational improvement vary—as high as 51.2% for 1970-2009.7 Malnutrition remains the underlying cause of 45% of child deaths.8 Environmental factors are important contributors to diarrhoea, malaria, and respiratory infections (among the greatest causes of death in children under 5), as well as injury and malnutrition. About a third of all disease in children can be attributed to modifiable environmental factors such as water quality and access, air pollution, unsafe sanitation, exposure to chemicals, and climate change.9

Better female education, reduced fertility rates, urbanisation, women’s access to resources, and infrastructure improvements (roads, electricity, housing, information and communications technology) can also reduce maternal mortality.10 Interactions between different determinants, such as the impact of women’s and girls’ education on fertility rates and their joint impact on health outcomes, are also important.11 Structural societal factors, such as poverty, gender inequality, and other forms of discrimination (such as racism) and inequality directly and indirectly affect RMNCAH and generate health inequities. Interventions to mitigate these adverse factors (such as reducing poverty, ending child marriage, or tackling violence against women and children) help improve women’s, children’s, and adolescents’ health, but there is a lack of comprehensive evidence of the effects of specific interventions on mortality. The correlation between economic growth and improvements in maternal and child mortality is complex, with wide variations in performance between countries of similar wealth levels,12 mediated by differences in health systems and determinants. This underscores the importance of policy choices and attention to inequities in health and wealth, and of prioritising new resources for marginalised communities, which often lack political influence. Globally there has been a call for attention to transnational and commercial determinants of health given their increasing impact on health and widening disparities.13-15

Multisectoral efforts to improve determinants of health are therefore extremely important for RMNCAH—to reduce inequities, create healthier environments, and increase coverage of health interventions. The related millennium and sustainable development goals will not be achieved without them. For example, no country has reduced newborn and child mortality to the SDG target levels through healthcare alone, without transformations in social and economic development. Evidence on which policies and interventions are necessary is also accumulating.16

Despite the eight MDGs being presented as a joint agenda, including key determinants, in practice the different goals were not...
BOX 1: DETERMINANTS OF HEALTH

The determinants of health are the conditions in which people are born, grow, live, work, and age, and the distribution of power, money, and resources that affect these conditions. They encompass social, economic, political, environmental, and cultural dimensions. Here, we use “determinants” to cover all of these factors (“social determinants of health” or “underlying determinants”) are sometimes used in a similar way).

Determinants crucially influence the health of women, children, and adolescents, who often experience discrimination and unequal access to resources and realisation of their rights, resulting in exposure to adverse socioeconomic, political, and environmental conditions. These factors directly cause inequities of health in this population within and between countries. Determinants affect access and coverage of essential health interventions and directly affect health, including through the shaping of social norms and behaviours.

Gender (in)equality is a key determinant of health that transcends sectors and illustrates this concept well. Manifestations of gender inequality (such as differential access to education and health services, forced and early child marriage, unequal labour market participation and remuneration, and violence against women and children) are major contributors to maternal and child mortality. Measures to mitigate these factors can improve health outcomes and reduce disparities.

Determinants are not static but interact with each other and change with the evolving context. Action within various sectors (such as health, education, water and sanitation, environment related sectors, and nutrition) and joint action across and between sectors (cross sectoral and intersectoral action) is needed to improve determinants.

managed together. Improvements in health service coverage have been crucial to progress in MDGs 4-6, but the contribution of multisectoral interventions to the health specific goals has been insufficiently tracked and documented. This failure to recognise the importance of key policies across a range of sectors undermines efforts to reach RMNCAH outcome targets, as well as efforts to increase coverage of healthcare interventions. Identifying why some groups have lower health service coverage, even in countries with overall strong performance, requires a focus on, and measurement of, determinants such as discrimination, poverty, and gender inequality. All providers of healthcare (including faith based organisations) must be considered and interventions in other sectors such as roads, utilities, and finance prioritised. The effects of deficiencies in other sectors on health systems have been neglected—a recent review of healthcare facilities found that 38% lacked water, 19% had no sanitation, and 35% lacked water and soap for handwashing.

Investment in institutions to advocate for, pioneer new approaches, or regulate multisectoral work has also been inadequate. Working across sectors for health has proved challenging, especially in settings with a high RMNCAH burden. The challenge is not just how to identify the key interventions in non-health sectors but how to catalyse work with other sectors and contribute to policies and interventions that are of core concern to other sectors but that can be shaped to maximise positive health outcomes. This requires building the capacity of the health sector to work with other sectors and identify areas of mutual concern. Issues of governance, financing (and co-financing across sectors), implementa-

- Supporting actions within single sectors that form their core business (such as ensuring children attend school and learn well for the education sector, access to safe water for the water and sanitation sector, or access to clean power for the energy sector)
- Ensuring the health sector recognises its own role in generating health disparities (such as discrimination and abuse, provision of differential quality of care to different groups, and inadequate water and energy supplies to health facilities) and maximises its key role in primary prevention
- Identifying, promoting, and co-financing actions that require collaboration between two or more sectors (intersectoral work) to produce joint or “co-benefits” and to maximise health benefits (such as the use of cleaner stoves to reduce indoor air pollution, or sexuality education in schools).

Although work on determinants often focuses on intersectoral efforts, the greatest benefits often lie in the first two activities above—addressing structural forces and social and gender norms (for example, reducing poverty or increasing gender equality) and single sectors doing their own core business well. For example, for the education sector, keeping adolescent girls in school and providing a good education that enables their economic empowerment has greater health impact than collaborative activities to increase health literacy or undertake school based health clinics. When considering multisectoral action, the health sector has too often focused on marginal collaborations at the expense of recognising the impact of the core work of other sectors.

Determinants also influence global and national leadership, accountability, and the actions of the health and other sectors. Structural inequalities in power at global, national, district, and community levels obstruct the policy and implementation choices needed for equitable delivery of essential services and for harnessing the resources needed for multisectoral implementation. The MDGs were not explicitly aimed at reducing these imbalances in power, and although the SDGs focus on inequality more explicitly, it is unclear how effectively global targets can deal with such structural challenges. Global and national strategies can draw from existing conceptual frameworks for determinants, such as that of the Commission on Social Determinants of Health, and recent adaptations, such as for child wellbeing, to consider how implementation can account for these obstacles.

What is now needed for action on determinants of RMNCAH

Ensuring multisectoral action on determinants of RMNCAH will require prioritisation and resources to overcome the obstacles discussed above. Global and national strategies, including EWEC 2.0, can contribute by integrating a focus on determinants as “core business.” We propose four key steps for inclusion in such strategies.

1. Framing determinants and multisectoral action

The health sector often lacks conceptual and practical understanding of determinants of RMNCAH and multisectoral action. New global and national strategies need to clarify the different types of action required:

- Addressing structural forces and social and gender norms that affect all of society, including those that drive disparities, which require wide ranging cross sectoral policies driven by heads of government and championed by key societal agents of change
2. Identifying key SDG targets for joint tracking and action
MDGs 4-6 strongly underpinnned global and national efforts on maternal and child health and the SDGs aim to provide a similar platform. RMNCAH is well represented by SDG 3 (the “health goal”), with updated MDG 4-6 targets, new targets on non-communicable diseases and injuries, and on universal health coverage, all of which require multisectoral efforts.

However, the SDGs will be more comprehensive, with 17 goals and 169 targets proposed, encompassing a greater number of sectors related to RMNCAH. This comprehensive scope implies a need to learn from the fragmentation of sectors during the implementation of the MDGs, with goals identified with single sectors. Unintended implementation of the MDGs, with goals useful for accountability at country and global level (for example, extending and expanding the current Countdown to 2015 platform) This is a clear avenue for EWEC 2.0 to make a contribution.

3. Prioritising key multisectoral interventions, policies, and indicators for action
Most global and national strategies on RMNCAH have highlighted key healthcare interventions needed but not interventions and policies led by other sectors. As global and national strategies are updated to incorporate the SDGs (including EWEC 2.0), they should include a guide to multisectoral action on determinants, prioritising key policies and interventions, with indicators for joint monitoring against the SDG targets. Table 1 lists initial proposals for key determinants, interventions, policies, indicators, and SDG targets to be prioritised as part of EWEC 2.0.

4. Implementing multisectoral efforts
Efforts to drive multisectoral action on determinants of health have often stalled at the implementation phase, even when policy makers accept the rationale and conceptual framework. Governance, financing, and joint monitoring of multisectoral action to achieve targets on RMNCAH have proved difficult in practice. While the details of these problems are often beyond the scope of global and national strategies, they are fundamental to implementation. Different countries’ successes in driving multisectoral efforts to improve RMNCAH (table 2) provide useful guidance that merits greater dissemination, including through South-South collaboration (direct collaboration and technical assistance between low and middle income countries).

Specific guidance is needed on the work and governance of different types of multisectoral action (single sector, intersectoral, and cross sectoral), including on how key policies for RMNCAH can be implemented and linked across sectors, even in low income, high burden settings. Lessons are available from the HIV movement’s response, tobacco control, and the environmental sector. Building governance for a multisectoral approach can benefit from obligations under the human right to health, which calls for healthcare and interventions.
Table 1: Key reproductive, maternal, newborn, child, and adolescent health determinants; interventions; indicators; and corresponding sustainable development goal (SDG) targets

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Policies and interventions</th>
<th>Indicator</th>
<th>SDG targets*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income and social protection</td>
<td>Reduce poverty through the use of child and gender sensitive cash transfer programmes designed with health sector input, especially on use of conditionality</td>
<td>Proportion of population below $1.25/day disaggregated by sex and age group</td>
<td>1.1, 5.4</td>
</tr>
<tr>
<td>Food security</td>
<td>Prioritise measures to enhance food security in communities with high mortality burden</td>
<td>Prevalence of undernourishment</td>
<td>2.1</td>
</tr>
<tr>
<td>Nutrition in infants and young children</td>
<td>Implement Infant and Young Child Feeding (IYCF) guidelines</td>
<td>Prevalence of stunting in children under 5 years of age, rate of exclusive breast-feeding among infants under 6 months of age</td>
<td>2.2</td>
</tr>
<tr>
<td>Education of adolescent girls</td>
<td>Prioritise support for adolescent girls to receive a quality education, including through mechanisms such as cash transfers</td>
<td>Completion rate (%) of upper secondary education by girls</td>
<td>4.1</td>
</tr>
<tr>
<td>Early child development</td>
<td>Implement a multisectoral approach to early child development for all children, using a progressive universalism approach to maximise gains for the worst off</td>
<td>Early Childhood Development Index</td>
<td>4.2</td>
</tr>
<tr>
<td>Ending child marriage</td>
<td>Enact legislation and provide social support services to end child marriage</td>
<td>Proportion of women aged 20-24 who were married or in a union before age 18 years</td>
<td>5.3</td>
</tr>
<tr>
<td>Ending violence against women and children</td>
<td>Enact legal frameworks criminalising all forms of violence and abuse against women and children</td>
<td>Proportion of ever partnered women and girls (aged 15-49) subjected to physical or sexual violence (or both) by a current or former intimate partner in the past 12 months</td>
<td>5.2</td>
</tr>
<tr>
<td>Access to improved sanitation and hygiene</td>
<td>End open defecation and provide universal access to improved sanitation facilities and hygiene measures, and encourage implementation of sanitation safety plans</td>
<td>Proportion of population using safely managed sanitation services</td>
<td>6.2</td>
</tr>
<tr>
<td>Access to electricity</td>
<td>Prioritise new infrastructural development for energy access in communities with high mortality burden, including in health facilities</td>
<td>Proportion of population with electricity access</td>
<td>7.1</td>
</tr>
<tr>
<td>Exposure to household air pollution</td>
<td>Increase use of clean home energy fuels and technologies (for cooking, heating, lighting)</td>
<td>Proportion of people using primarily clean fuels or technologies (for cooking, heating, lighting), where “clean” is defined by WHO guidelines</td>
<td>7.1</td>
</tr>
<tr>
<td>Hazardous child labour</td>
<td>Systematic detection and elimination of hazardous child labour</td>
<td>Proportion and number of children aged 5-17 years engaged in child labour, by sex and age group (disaggregated by the worst forms of child labour)</td>
<td>8.7</td>
</tr>
<tr>
<td>Lead in the environment</td>
<td>Eliminate non-essential uses of lead (such as in paint) and ensure the safe recycling of waste that contains lead</td>
<td>Number of countries that have regulated lead in paint</td>
<td>12.4</td>
</tr>
<tr>
<td>Climate change</td>
<td>Enhance climate resilience of environmental determinants of health (such as climate resilient water, sanitation, and hygiene infrastructure and management practice)</td>
<td>Population coverage with climate resilient infrastructure and management practices (such as climate resilient water safety plans)</td>
<td>13.2</td>
</tr>
<tr>
<td>Birth registration</td>
<td>Build civil registration and vital statistics systems to achieve universal birth and death registration</td>
<td>Proportion of children under 5 whose births have been registered with civil authority</td>
<td>16.9</td>
</tr>
</tbody>
</table>

*See figure
†Purchasing power parity.

on the “underlying” determinants, providing a legal and normative framework for tackling determinants.

Tools and methods are available for analysing health risks and benefits associated with policies implemented across and within different sectors (such as “health in all policies” and health impact assessment) and to review specific determinants (such as gender assessments and audits and gender responsive planning and budgeting).24-25 The engagement of women, children, and adolescents in decisions about their own health should be prioritised when designing new governance structures, measurement tools, standards, and policies.

EWEC 2.0 should aim to mobilise financial resources for action on determinants of RMNCAH. All countries already invest resources on determinants as part of core work in other sectors. The question is whether EWEC 2.0, and its follow-up, can accelerate investment in a set of key policies and interventions on determinants. Discussions on single national investment plans have already identified key areas where non-health sector interventions are crucial for RMNCAH outcomes.26

Global and national RMNCAH strategies (particularly EWEC 2.0 at the global level) should monitor key determinants and interventions beyond the health sector as part of their accountability follow-up, harnessing existing monitoring initiatives in other sectors. Global reports on RMNCAH need to be linked with efforts in other sectors—such as nutrition, water, and sanitation—to deliver joint information and accountability and allow cross sectoral analysis and prioritisation for investment and implementation at country level. Disaggregating data for indicators for interventions in health and non-health sectors would facilitate a greater focus on equity and reinforce attention on determinants, given that drivers of disparity lie mostly beyond the health sector.

Evidence gaps on determinants remain to be filled, mostly by implementation research. For example, evidence on the health impacts of specific interventions within sectors and on interventions and policies to address societal or structural forces is sparse, whereas evidence on interventions for social protection and environmental...
determinants is more robust. Evidence of multisectoral impact is scattered and often drawn from modelling exercises, which assess correlation but do not provide specific evidence on the mechanisms that directly improve health. Tools used in RMNCAH planning and budgeting (such as the lives saved tool) should encompass interventions beyond the health sector, but this will require improving the evidence base. The generation of costing and effectiveness data for key interventions and policies for RMNCAH outside of the health sector would increase understanding of their health gains and of the value of “co-benefits” shared between health and other sectors.

**Limitations**

The above four areas are first steps in a full determinants approach to RMNCAH. This approach may seem “selective,” missing the complexity and comprehensiveness required. The ambitious visions of initiatives such as the UN Commission on Sustainable Development and the WHO Commission on Social Determinants of Health are not limited to increased uptake of specific interventions within sectors but mark a paradigm shift in the organisation of societies. A multidisciplinary and multi-institutional approach with new participatory processes is needed to realise the full vision of the SDGs.

We did not cover the two way association and contribution of health to other sectors because of the abundance of literature in this area. For example, it has been estimated that increases in health expenditure in high burden countries would have enormous economic and social benefits, and that about 24% of recent full income growth in low and middle income countries came from health gains. The association between determinants and individual agency, capability, and opportunities is also complex, and further work on the drivers of behaviour is warranted, including social and cultural norms—for example, their role in perpetuating gender inequality, racism, and other forms of discrimination.

We acknowledge these limitations and do not imply that these broader questions can be ignored. Instead, the areas highlighted represent practical starting points in moving efforts on RMNCAH beyond the health sector to tackle determinants, with the hope that follow-up work can engage with these greater complexities, which are particularly important for reducing disparities.

### BOX 2: KEY GLOBAL ACTIVITIES TO SUPPORT MULTISECTORAL ACTION ON DETERMINANTS OF REPRODUCTIVE, MATERNAL, NEWBORN, CHILD AND ADOLESCENT HEALTH (RMNCAH)

1. Joint global and national monitoring of interventions and targets (table 1) driven by the United Nations secretary general’s office, building on existing sectoral monitoring efforts and incorporating a gender sensitive lens
2. Efforts to synthesise and generate data on the cost and effectiveness of key RMNCAH outcomes of multisectoral interventions and policies
3. Efforts to synthesise and build knowledge on incentives for intersectoral action, including how joint efforts can drive mutual benefits for RMNCAH and the core business of other sectors
4. Mobilise the Every Woman Every Child movement, in particular governments and civil society (including faith based organisations), to invest in champions (such as parliamentarians) and institutions to steer multisectoral action on determinants
5. Mobilise financing and incentivise multisectoral collaboration and action through existing partnerships and new financing mechanisms
6. Consider how the Every Woman Every Child innovation pipeline can contribute further to multisectoral action
7. Request the United Nations to coordinate, as appropriate, the work needed between sectors, including setting an example by better coordination within itself

### Table 2 | Examples of successful multisectoral interventions on determinants of reproductive, maternal, newborn, child, and adolescent health

<table>
<thead>
<tr>
<th>Country</th>
<th>Determinant</th>
<th>Action</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peru</td>
<td>Malnutrition in children under 3 and in pregnant and lactating women</td>
<td>“Buen Inicio”—a package of community based interventions including health promotion by rural trained health promoters, hygiene, and antenatal care</td>
<td>Reduction in child stunting and anaemia in pilot communities, foundation for national strategy to combat child malnutrition</td>
</tr>
<tr>
<td>Rwanda</td>
<td>Governance and sex equality</td>
<td>Biannual joint health sector reviews and establishment of health sector working groups, creation of the Rwanda Women Parliamentarian Forum and the Women’s Council</td>
<td>Passage of bill to reduce gender based violence, highest global rates of female parliament participation, planned programme of health sector decentralisation</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>Sex equality and girls’ education</td>
<td>Efforts to increase girls’ participation in school</td>
<td>75% of women aged 15-24 completed lower secondary school in 2010; HIV prevalence decreased from 29% in 1997 to 14% by 2007</td>
</tr>
<tr>
<td>Malawi</td>
<td>Girls’ education</td>
<td>Randomised controlled trial provided conditional cash transfers (91-$15/ month) to 1200 women aged 13-22 and their parents while also paying school fees</td>
<td>Reduction in teenage pregnancies (29%) and early marriage (32%), prevalence of HIV infection fell by 64%</td>
</tr>
<tr>
<td>Uganda</td>
<td>Sex based violence</td>
<td>Collaborative SASAI study aimed at reducing sex based violence by implementing a violence prevention intervention in eight communities in Kampilal, qualitative data on social change also collected</td>
<td>52% lower rates of sex based violence and fewer concurrent sexual partners among men in SASAI/communities versus controls, sex based violence believed to be less acceptable and the idea that women can refuse sex more acceptable in SASAI communities</td>
</tr>
<tr>
<td>Niger</td>
<td>Early marriage and fertility</td>
<td>Creating safe spaces for adolescent women to interact with trained female mentors, community dialogue, home visits by mentors, health check-ups, literacy and numeracy training for girls, sexual and reproductive health promotion</td>
<td>Increased sexual and reproductive health knowledge among adolescent women, increased ability to read the alphabet, nearly 100% of females set a savings plan; girls believe they have the right to choose their spouse and programme is overall acceptable</td>
</tr>
<tr>
<td>Mozambique</td>
<td>Information and communication technologies</td>
<td>Community based, multisectoral project in which community health volunteers improve community use of maternal, newborn, and child health services through community engagement and mobile phones to follow pregnant women through pregnancy, reminders and advice provided through text or audio messages; made antenatal and postpartum visits</td>
<td>Increased credibility among community health volunteers, stronger linkages to health system, and expedited management of minor and major health complications</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Poor housing</td>
<td>Insulation and thermal envelope improvements in 1350 low income households</td>
<td>Reduced self reported respiratory illness, doctor visits, hospital admissions, and days off work or school; marginal increase in indoor temperatures but 13% reduction in energy use: health gains cost effective compared with carbon dioxide mitigation</td>
</tr>
</tbody>
</table>

* $1=£0.64; £0.91.
Conclusion

The launch of the SDGs and the 2016-2030 Global Strategy for Women's, Children's and Adolescents' Health provides an opportunity to “mainstream” multisectoral efforts on improving determinants of RMNCAH at global, national, and district levels. Important first steps are to clarify how multisectoral efforts on determinants fit into post-2015 efforts on improving RMNCAH; prioritise key determinants, interventions, policies, indicators, and SDG targets; and build the governance, financing, monitoring, and research needed for implementation. Box 2 summarises key activities at the global level, but the extent to which national strategies and implementation policies reorient their efforts to integrate a multisectoral focus on determinants of RMNCAH, informed by EWEC 2.0, will be more important. To support these efforts, we propose a UN commission on implementation and accountability of multisectoral action for women’s, children’s, and adolescents’ health. Similar to the Commission on Information and Accountability for Women’s and Children’s Health, this should collect available knowledge and put in place a multisectoral focus on improving determinants of RMNCAH at global and national levels.

This article has benefited from comments and suggestions from several colleagues, including Heather Adar Rohani, Yolari Balarajan, Ruth Bell, Simon Bland, Sophie Boisson, Diarmid Campbell-Lendrum, Bernadette Daelmans, Dmitri Davydov, Theresa Diaz, Peter Drury, Sharan Friel, Ivan Ivanov, Jonas Karlstrom, Rajat Khosla, Laura Laski, Don Matheson, Margaret Montgomery, Lesley Onyon, Payden, Maria Perez, Michaela Pfeiffer, Adair Rohani, Yarlini Balarajan, Ruth Bell, Simon Bland, suggestions from several colleagues, including Heather Adar Rohani, Yolari Balarajan, Ruth Bell, Simon Bland, and Stakeholder consultation held on 26-27 February 2015 in Geneva, Switzerland.

Norad, Oslo, Norway

United Nations Population Fund, New York

Cluster of Family and Community Health, WHO, Geneva

Social Determinants of Health Unit, WHO, Geneva

UNAIDS, Geneva

United Nations Development Programme, New York

Correspondence to: K. Rasanathan@unicef.org

© World Health Organization 2015. Licensee BMJ

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (https://creativecommons.org/licenses/by-nc-nd/3.0/), which permits use, distribution, and reproduction for non-commercial purposes in any medium, provided the original work is properly cited. In any reproduction of this article there should not be any suggestion that WHO or this article endorse any specific organisation or products. The use of the WHO logo is not permitted. This notice should be preserved along with the article’s original URL.


Cite this as: BMJ 2015;351:h4213