

THE
GRADUATE
INSTITUTE
GENEVA

GLOBAL
HEALTH
CENTRE



FINAL RESEARCH REPORT

KEY MESSAGES: GETTING THE MOST OUT OF POLIO ERADICATION

STEPHEN A MATLIN
MICHAELA TOLD
ILONA KICKBUSCH
JULIANNE PIPER

Citation of this policy briefing: SA Matlin , M Told, I Kickbusch, J Piper (March 2017). Key Messages: Getting the most out of Polio Eradication. Geneva: Global Health Centre, the Graduate Institute of International and Development Studies.

The content of this report has been drawn from a comprehensive research paper entitled *"Getting the most out of polio eradication: The political dimension"*, completed at the Global Health Centre in 2016 with the involvement of Emilia Richard.

This report is part of a project supported by the Bill and Melinda Gates Foundation.

GETTING THE MOST OUT OF POLIO ERADICATION: 10 ACTIONS FOR EUROPE

Europe has been a traditionally strong player in development assistance and a significant contributor to polio eradication. The following ten key messages summarise the findings of a research project conducted on the social and political barriers to polio eradication; they serve as a call to action for European actors to ensure the polio endgame and a lasting legacy:

1. European governments should sustain and increase financial support to polio eradication. European countries must not be 'free riders', benefitting without appropriately contributing to the global public good of polio eradication.
2. On the one hand, European institutions should contribute effectively to strengthen the political will of European governments and on the other, the European governments should provide political support and implement the recommendations of the European institutions in the countries still affected by polio or in countries at risk.
3. European institutions and European governments should act together to ensure continuing capacity for resilience following certification and realise the long-term benefits of polio assets for health systems and Universal Health Coverage (UHC).
4. European actors must recognise and promote linkages between polio eradication and other important health initiatives, such as SDG3, strengthening of health systems, achieving UHC, and strengthening global health security.
5. European institutions should show leadership in multi-stakeholder negotiations and collaborations to ensure the success of the GPEI and its partners.
6. Europe faces its own challenges of containment and resilience. 'Missed children' constitute a significant risk for Europe. Strengthening polio resilience and containment capacities should be coordinated between WHO EURO, the ECDC, the EC and European governments.
7. European actors must act together, fostering dialogue and maximising collaboration and coherence among their constituents. The European institutions should play a leading role in ensuring that diverse actors investing in polio eradication work together.
8. European institutions and governments need to act together to ensure that polio transition processes not only benefit national health systems but also result in the effective capture of valuable polio assets for European and multilateral institutions.
9. European institutions should be pro-active in bringing together the key actors dealing with transition processes (e.g. the GPEI, the Global Fund, Gavi and others) to facilitate better coordination and complementarity.
10. European institutions should support and reinforce the role of the Polio Transition Independent Monitoring Board (TIMB).

THE CHALLENGES

The Global Polio Eradication Initiative (GPEI) was launched in 1988, with the target date of 2000 for the completion of its mission. Seventeen years later, global stakeholders and front-line workers continue to work towards the elusive goal of eradication. Success is now within reach and will generate great rewards in terms of lives protected from a crippling disease, and a legacy that can benefit health systems and future global health programs. At the same time, the costs of failure would be very high: among others, added disease burden; increased financial needs to continue worldwide vaccinations, surveillance and control; and major deterrent effects for other global health initiatives.

Ending polio will provide an enormous opportunity to ensure the legacy of the world's largest ever global public health initiative, but it will also mean the eventual dismantling of the GPEI. Therefore, the GPEI is increasingly focusing on the legacy of polio eradication: on the one hand, the need to build resilience at the national level; and on the other

hand, to create country ownership and transition the many polio assets into national health systems. However, these transition processes are far from automatic. As a unique partnership in global health, the GPEI and its partners will require unprecedented reflection, determination and political commitment to successfully complete these tasks. The Global Health Centre (GHC) at the Graduate Institute, Geneva has conducted a research project in 2015-2016 on the endgame and legacy of the polio eradication initiative, centering on the European dimension. The study examined the political barriers to polio eradication and the lessons learnt for policy-making and governance, while elucidating critical dimensions of resilience and transition. The research team examined relevant literature, undertook in-depth individual interviews with key actors in Europe and held dialogues in Geneva, London, Berlin, and Oslo. Moving beyond official positions, the study provides fresh insights into the diverse motivations and policies of European actors, their anxieties and aspirations for polio eradication, and the roadmap ahead.

Shifting Political Landscapes

The changing global political context poses significant challenges for polio eradication efforts. In its nearly thirty year of existence, the GPEI operated within and adapted to significantly changing global and European contexts. Important global shifts have included: the end of the Cold War and emergence of an increasingly multi-polar world; acceleration of globalization; the emergence of health as a significant foreign policy issue; financial crises and global economic downturns with slow recoveries; a reframing of development and the reconceptualization of aid; a paradigm shift in global health; and the prominent rise of the global health security agenda. In addition, local wars, insurgencies and conflicts in the remaining polio-endemic countries have had significant geopolitical implications with direct impacts on polio eradication efforts.

Europe¹ has been affected by these global changes but also by regional dynamics. Important recent regional factors influencing European politics and priorities have included, among others, the Greek financial

crisis which weakened the Euro currency; a large influx of migrants and refugees from the Middle East, Asia and Africa; and the decision by the UK to exit from the European Union (EU). These developments have resulted in political shifts in the EU and refocused the attention of European policy-makers towards prioritizing European interests. In some cases, there have been corresponding shifts of resources, including the reallocation of official development assistance (ODA) towards addressing the needs of migrants and refugees.

These issues, risks and challenges are connected through a political thread. It relates to the choices that different actors make about their priorities and their preferences for how to balance them. From the global donors and managers to local communities, families and individuals, this political thread interweaves with and links the circles of influence comprising the diverse actors involved in polio eradication.

Risks to Polio Eradication

There are currently three important dimensions of the global polio eradication efforts:

First, critical needs must be met to ensure that eradication is achieved and sustained;

Second, there is a pressing call to effectively capture and transition polio assets, both at global and national levels; and

Third, beyond physical resources, the GPEI represents immense knowledge, experiences and processes which need to be absorbed by the global health community.

Europe has a role to play in all three of these aspects. Through their engagement, European actors need to make financial contributions to the global public good of polio eradication which are commensurate with their capacities; however, they also need to demonstrate political commitment in the face of real programmatic risks. It is ultimately the political dimension and the strength of political linkages made that will determine the fate of this global health initiative.

Polio eradication is not a 'done deal'

Given the incredible success of the GPEI and its partners, it is tempting to think of eradication as effectively complete.

However, it is vitally important that everyone in global health – not just polio advocates – continuously asks: *“what happens if we do not succeed with eradication given that 60 to 80 countries are still at risk?”*

To avoid failure, the global health community must galvanize action, including building resilience and strengthening containment. Europe has too much to lose to ignore this risk.

THE EUROPEAN DIMENSION

Following several missed targets for eradication, polio was declared a Public Health Emergency of International Concern (PHEIC) in May 2014. It was still a PHEIC at the end of 2016. More could be done to respond to this Emergency – this is a political choice that countries make.

Countries decide the extent to which they invest in the achievement of a global public good, such as the eradication of a disease. European

countries should not be perceived as ‘free riders’ with regard to the global public good of polio eradication. This is also linked to the choices countries make to invest in achieving the Sustainable Development Goals (SDGs), many of which share the characteristics of global public goods.

Efforts are needed to sustain Europe’s political will for polio eradication

“If we fail in polio eradication, it will be due to political reasons, not technical ones.” (Interviewee No. 20)

“The biggest mistake we can make is to assume that it is all done. It is not all done and you require not only funding but you also need European governments to continue to advocate to other donors and to also country governments that we are still not out of the woods.” (Interviewee No. 12)

The **major challenges to the polio endgame are predominantly political rather than technical**. Individual European actors have made important political contributions to polio eradication. However, it was consistently noted throughout the research that these contributions are rarely coherent or coordinated across the region. This is considered a significant weakness in the polio eradication story. Furthermore, several interviewees expressed concerns about the current level of European political support and the prospects for maintaining it at a sufficient level

to ensure adequate financing, engagement and future prioritization of polio eradication. These concerns applied to all levels of the Initiative, from GPEI partners to countries.

Though in practice ‘political commitment’ is very complex, it is clear that Europe has an opportunity to take leadership and ensure accountability with regard to its support for this global project.

Why is polio eradication an investment case for European actors?

Interviewees stressed several arguments which could potentially strengthen European support to the GPEI in this last phase:

- Ending polio means achieving a global public good.
- Politicians can associate themselves with a success story, rather than a failure.
- Cost-effectiveness and value for money are strong political motivators.
- The long-term legacy benefits of polio eradication and their linkages to other health priorities are attractive arguments to further investment.
- The transitioning of polio assets to other goals, such as the SDGs, routine immunization, health systems strengthening, and Universal Health Coverage (UHC) mitigates the increased scepticism towards vertical programmes.

European actors have made important contributions, but could ‘try harder’

If viewed as a single entity, Europe’s overall financial contribution would be relatively high, having amounted to US\$ 2.7 billion (19.7% of the total) in the period 1988-2015. From 2006-2015, Europe’s overall contribution fell to 16.5% of the total, but this proportional drop reflected the significant engagement of the Bill and Melinda Gates Foundation (BMGF), which contributed nearly US\$ 2.9 billion in the most recent period. If the BMGF contributions are set aside, Europe’s contribution to the remainder for the whole period was 24.3% and for the years 2006-2015 22.2%. The EU currently accounts for about 24% of the world’s GDP and more than half of the world’s ODA. Analyzing these figures, Europe’s contribution to the GPEI was therefore proportionally roughly

in line with its share of the world’s GDP – though less than half as much of its significant share of the world’s ODA.

However, Europe is not a monolithic actor but consists of a series of overlapping and interconnected circles and centers of influence comprising individual countries, organizations and groups. It is therefore important to note that Europe’s total contribution to polio eradication is being made by a very small number of sources. In recent years, the UK, Germany and Norway have been the largest European financial supporters. Many other countries and the European Commission (EC) have made modest contributions to the GPEI.



Geneva 2016, © GHC/S. Deshpriya

Polio eradication is a global public good

The global eradication of an infectious disease is a classic example of a global public good for health (GPGH)². A major problem that arises in the GPGH debate is the question of who pays: some may financially contribute because they have the means to do so and see the benefit to themselves and others; some may benefit from the GPGH but ‘free-ride’ by not contributing, especially if they have less means and/or do not see it as their highest priority of investment. The problem of free-riders was mentioned by interviewees and was linked to the creation of the GPEI as a voluntary partnership.

- *“It has allowed many countries to free-ride without contributing a fair share of the resources required to create the global public good of a polio-free world; through the complexity of the governance process”* (Oslo Dialogue).
- Several interviewees emphasized that *“many countries have contributed to the eradication effort from their own resources [domestic or loans taken for the purpose] and especially Afghanistan and Pakistan, now at the front line, are doing so”* (London, Oslo and Geneva Dialogues). This participation will increase as transition progresses and it *“can serve as a model mechanism and a lever for the transformation from a paradigm of aid to one of shared responsibility, in the spirit of the SDGs”*.

The global public goods framing is indeed consistent with the SDG agenda, as well as the humanitarian agenda, in emphasizing shared responsibility and the objective of ‘leaving no one behind’. In this context, it was suggested that *“polio eradication can be viewed as an early test for reaching the SDGs”*. When polio eradication is viewed as a global public good, political commitment to finish the job, to strengthen containment and resilience, and to ensure effective transition of assets and lessons concerns everyone and benefits everyone.

This framing necessitates that the ‘donor-recipient’ terminology is abandoned and that *“emphasis should be placed on partnering in which all are investors in a common cause”* (Oslo Dialogue).

Another open question is whether the successful achievement of polio eradication could be used to increase momentum for other global public goods. There are undoubtedly opportunities to exploit linkages with areas like health security and align with what is, in effect, the global public good of effective global capacity to respond to public health crises.

The migrant crisis in Europe presents both challenges and opportunities

Fears surrounding the mass influx of migrants and refugees to Europe have included concerns that infectious diseases, including polio, will be carried into the region. This is a largely erroneous perception, as many migrants and refugees have good health status and their health problems are mainly in areas other than infectious diseases.

The migrant crisis, however, impacted the polio eradication effort in terms of funding: an increasing proportion of ODA from some traditionally generous donors is allocated to help meet the in-country costs of receiving and hosting migrants and refugees. This may potentially restrict the financial contributions to the polio eradication efforts as confirmed by some interviewees (Interviewee Nos. 29, 15).

Nonetheless, the issue of migrants and refugees is also an opportunity to encourage stronger European engagement in both the endgame

and legacy of polio eradication: European health security is best served (1) by ensuring the global eradication of polio as soon as possible; (2) by helping to build resilience in the countries and regions from which many of the migrants and refugees originate; and (3) by strengthening resilience and containment of the poliovirus within Europe itself, including by addressing the children missed through low vaccination coverage and parental refusal to vaccinate their children.

European cooperation is vital to strengthen Europe’s polio resilience and containment capacities and must involve collective and coordinated action between WHO EURO, the European Centre for Disease Control (ECDC), the EC and individual countries.

LEARNING LESSONS: RESILIENCE & TRANSITION, TRANSLATION, AND LEGACY

If effectively transitioned, polio assets, including surveillance, laboratories, tracking systems and trained vaccinators, can serve as a backbone for resilient public health systems. These systems are critical both to responding to infectious disease outbreaks locally, and to building a foundation for an effective global system for health security. A certain consensus has emerged through the policy dialogues and interviews that the *“assets, lessons and resources of the Polio Initiative should eventually be transitioned, primarily through national governments, to benefit other existing health priorities”* and that national governments should be responsible for the future administration of the human resources infrastructure (London Dialogue).

The transition of people, processes, structures, resources and objectives from a ‘vertical’, stand-alone polio eradication program into a more

‘horizontal’ structure of a country’s general health services (which in many countries still need to be developed and expanded), presents historical, technical, financial, and motivational challenges, all influenced and connected by internal and external political factors. A successful transition will only have happened when effective polio resilience and containment is ensured and a country’s health system strengthened.

Legacy planning at country level must be complemented by translating relevant knowledge and systems at the global level, with the goals of contributing to the planning of future disease eradication campaigns or other global health initiatives and strengthening global health governance more broadly.

The polio endgame, resilience and transition: interdependent processes

This is a critical period in the polio eradication initiative because the interruption of wild polio virus (WPV) transmission is almost complete but delays have added greatly to ongoing costs of the Initiative. The global community’s increased attention to transition processes needs to be balanced with the ongoing eradication efforts, the need to strengthen resilience, to ensure containment, and to secure GPEI’s legacy. While it is important that discussions of transition and legacy do not detract

from support for the endgame, it is equally important to acknowledge the interdependencies between achieving eradication and maintaining it through strengthened resilience and effective transition. These processes are not independent stages of the polio eradication effort, but mutually reinforcing components of a sustainable global public good for health.

Leveraging Polio: vertical vs. horizontal approaches

The transfer of assets from the GPEI is a double transition: it requires a shift in ownership from the global initiative to individual countries, with the attendant challenges of financing and managing them; and a shift in character from being stand-alone to being integrated into national health capacities. Interlocutors in the study saw challenges in sustaining commitment as a major issue at all levels, from the political will needed at high levels to the diligence required of managers and the need to overcome resistance from local workers and communities to the absorption of previously privileged ‘external’ elements and objectives.

Across Europe, supporters and potential supporters of the GPEI have complex attitudes towards vertical programmes, shaping their decisions about whether and to what extent to support the Initiative.

- For some, a ‘vertical’ programme has the advantages to gain a high profile, attract funding from diverse sources and make rapid progress. This was good for the programme, good for countries – and *“good for donors because they see results and they know where the money goes. In the end, the parliamentarians are dependent on their electorate and it is easier to explain, easy to tell stories that resonate. . . and saving children lives is a non-controversial issue and easy to measure.”* (Interviewee No. 25)
- In contrast, some others viewed the evolution of the GPEI in parallel with the Expanded Programme on Immunization (EPI) as drawing attention, financial and human resources away from GPEI. This has been identified as a major flaw in the development of the GPEI, and one that can finally be rectified by the transitioning of polio assets into EPI within national health programmes.³

Many European countries have been at the forefront of the global effort to improve development approaches. In particular, emphasis has shifted from operating project-based, externally driven ‘vertical’ programmes to supporting systemic, country-owned ‘horizontal’ programmes. This shift is strongly exemplified by the replacement of the issue-specific Millennium Development Goals (MDGs) with the broader SDGs for 2030, and the concept of globally shared responsibility embedded within them. This has also resulted in the ambivalence about funding the GPEI and in some cases, has led to a preference for supporting Gavi or bilateral cooperation.

The transitioning of assets from the GPEI to country ownership and into ‘horizontal’ programmes is therefore an opportunity for the Initiative to align itself with the broader SDG objectives, not only at the country level, but in attempting to attract support among existing and potential contributors.



Berlin 2016, © GHC/A. Berry

Translating assets and knowledge at the global level

The implications of the polio legacy at the global level have received far less attention than the transitioning of the GPEI assets at the country level. Yet, the many polio eradication efforts offer diverse and important lessons for global health. These include the establishment and sustaining of polio as a priority on the international agenda; the strengths and weaknesses of financial, organizational and governance mechanisms built for polio efforts; and the GPEI's effectiveness in creating synergies between international action to achieve a global public good and national priorities and the need for capacity building. Many interviewees emphasized that the GPEI should have made more effort at the outset to identify and give stronger attention to the most challenging places (or “*tackle the worst first*”), while working towards swift gains in easier places to simultaneously demonstrate momentum and attract support. This would have helped to avoid the long ‘tail’ in which it seems that very large sums of money are being expended on the last few dozen or hundred cases, raising questions about cost-benefit and the difficulty of sustaining financial and political support in the face of other urgent priorities.

Hence, the transition of lessons learned, assets, and knowledge is not only for national institutions. Making the most of the polio legacy also requires translation of learning by diverse bilateral and multilateral

Falling off the agenda

Continued European support to polio can be considered at risk because of, among others:

- The perception that the job is virtually finished;
- The difficulty of sustaining attention in competition with other priorities;
- The increasing attention towards transition; and
- The desire to shift from vertical to horizontal programmes.

assistance partners and stakeholders to benefit the overall global health architecture, governance and future health initiatives.

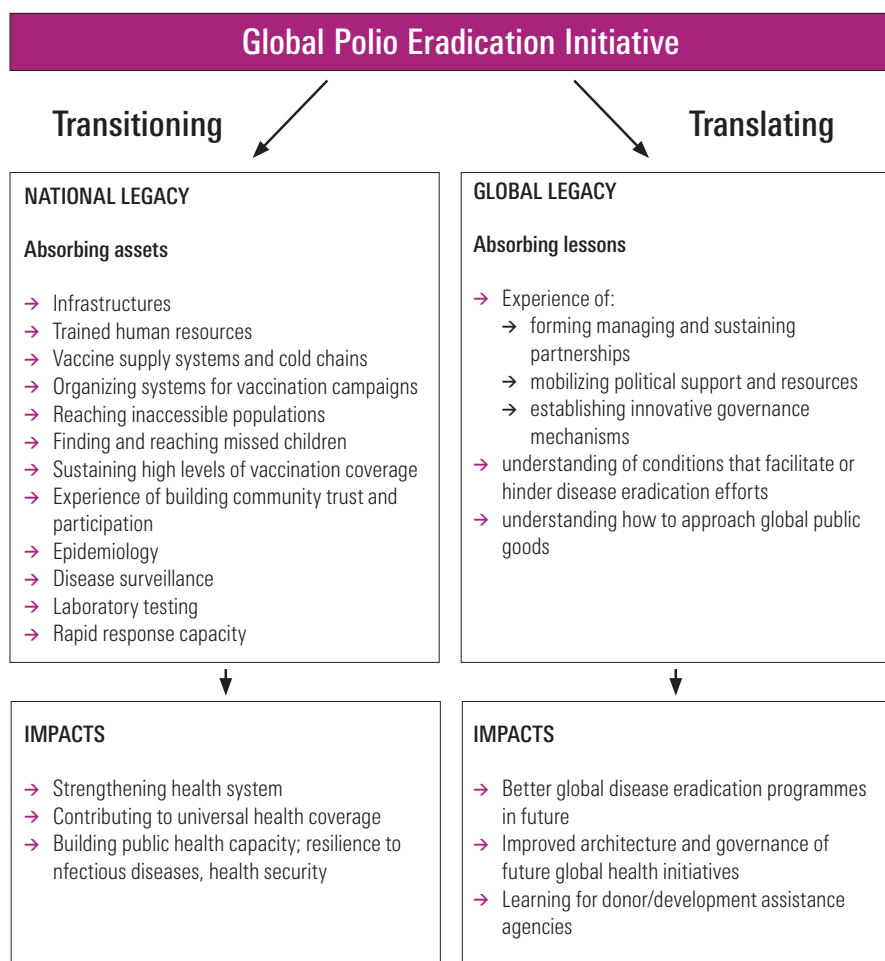
Creating linkages: transition is a two-way beneficial process

Many interviewees emphasized the value of linking polio with other issues that are emerging or are already in the limelight, especially broader health goals, to sustain the financial and political support for the endgame of polio eradication and/or to ensure the preservation of valuable polio assets beyond certification. Such relevant global health agendas are: health systems strengthening and UHC; routine immunization and the EPI; as well as global health security and the International Health Regulations (IHR). These areas provide opportunities for mutual reinforcement and two-way benefits, contributing both to the polio eradication effort itself and to connected agendas through relevant polio assets.

In addition, lessons can be drawn from the polio eradication efforts for improving the ways development aid is currently managed. In the last two decades, the aid context has changed in so far as the complex relationship between development assistance, humanitarian assistance and disaster or emergency response has become increasingly apparent,

requiring better coordination and increased sharing of policies and processes. This is particularly obvious when the capacities for prevention, detection and response to a disease outbreak are impaired by a combination of conflict and weak health systems. The capacities for recovery need to be built through a combination of short-term relief and long-term systems support.

It is therefore evident that ongoing polio eradication efforts can develop linkages with the evolving debate on how to better manage this nexus of aid modalities. In fact, linking health initiatives with humanitarian action can be considered as a powerful driver of action: “*The turning point we are getting to now is from global health programmes by humanitarian considerations, saving lives, as the key point for the Global Fund and Gavi. There are vaccines and medicines out there which do not reach the people. [...] If you are able to communicate how many lives you have saved by your interventions, this attracts funding from actors [...] who are very results driven.*” (Interviewee No. 25)



CROSS-CUTTING ISSUES FOR GLOBAL HEALTH

Polio eradication is a foreign policy matter

In recent years, a growing number of global health issues have become foreign policy concerns, and polio is no exception. As a foreign policy objective, European actors can encourage the political prioritization of polio eradication in the remaining endemic countries and in countries with weak resilience. European countries must make a political commitment to promote this prioritization through diplomacy at the highest levels of government and to provide the support to sustain this prioritization.

Polio eradication is also closely connected to the global health security agenda, both as a PHEIC and as a notifiable disease under the IHR. Despite the political momentum that the link with the global health security agenda undoubtedly provides, this link should be approached cautiously. Two major concerns arise when framing polio as a health security issue: first, there is a perception that the health security agenda is a 'northern' movement which is not globally inclusive; second, there is unease in some quarters surrounding what is perceived to be a growing and, often unwelcomed, role of security services in health provision.

Gender and community issues are inter-related and central

Polio eradication efforts, among other health programmes, have underscored the influence of community-level factors. These factors include, inter alia, systems of hierarchy and governance; political, religious, cultural and social factors; as well as attitudes and embedded mistrust of certain authorities and actors in different contexts. Taking these factors into account has been essential to programmatic polio functions, such as reaching missed children for vaccinations and increasing the acceptance of behavioural change to prevent disease transmission.

Gender issues are of critical importance here. Women have been prominently involved in polio eradication efforts as vaccination

volunteers, especially in Pakistan and Afghanistan where they have at times risked their lives. According to some interviewees, female vaccinators have not only contributed immensely to these efforts, but have also taken steps towards empowerment and greater autonomy. This research revealed once again that gender issues should not be tackled as they arise, but should be central to the initial planning and implementation of health initiatives.

So far, neither gender analysis nor gender-disaggregated data have featured prominently in polio-related strategies and assessments. The gender dimensions of polio eradication efforts could thus be further explored, also in view of the transition planning ahead.

Overcoming donor fatigue and 'disease schizophrenia'

One of the most valuable lessons of polio eradication efforts for global health is the challenge of sustaining priorities over a long period of time, avoiding what one interviewee termed “*disease schizophrenia*”. “*There is no capacity in the international community to focus on diseases in the same time*” and health issues only gain political attention when they become a crisis (Interviewee No. 17). This is highly problematic given how quickly crises subside and other priorities emerge.

→ The maintenance of financial and political support has been challenging for the GPEI, complicated further by the recent shift from disease-oriented vertical to systems-oriented horizontal programmes. This challenge – exacerbated most recently by frequently missed deadlines and delays in reaching out to last polio

endemic areas - was partially overcome by the declaration of polio as a PHEIC. However, the longer the PHEIC persists, the less impact it may have in galvanizing attention.

→ There is no doubt that there will be outbreaks of other infectious diseases in future. However, “*we do not behave as if this is the case*” (Oslo Dialogue). “*By striking contrast, the military always secures resources for a high state of preparedness*” and conducts war games to prepare for hypothetical events. To date “*there has not been a mind-set to make such investments to prepare for or avert disease outbreaks*”. One reason is that “*it is difficult to persuade Finance Ministers of the importance of the issue – a key message for the global health community*” (Geneva Dialogue).

Resilience and containment: multi-sectoral, multi-level approaches

The critical role of European actors in polio eradication is most evident when approached from the angle of resilience and containment. Europe is home to several of the largest polio vaccine-producing laboratories, making strengthened containment directly relevant to European stakeholders and population health. Furthermore, the fifteen years which have passed since the region was certified polio-free have witnessed increasing complacency, gaps in routine immunization, and the rising popularity of anti-vaccination movements. All of these factors, combined with geopolitical shifts like the large influx of migrants, have weakened regional resilience to polio.

Achieving polio eradication and strengthening resilience require partnerships and prioritization across boundaries and sectors:

→ “*Resilience means partnership and multi-sectoral and multi-level collaboration is critical, including engaging with other sectors – water, sanitation, education – and coordination between global, national and community levels*” (Oslo Dialogue). “*But at the national and community levels, few know what is needed*” and there is a “*major challenge for the sustainable financing for resilience*”. Building and maintaining resilience and ensuring containment of the virus “*requires addressing political factors relating to strengthening communities*”.

→ “*European actors have a key role in supporting countries with strengthening resilient health systems, ensuring high routine immunization levels, etc. and maintaining commitment from national leadership. In Pakistan and Afghanistan you obviously need a resilient system, but it is really to get the political commitment to get the job done that is now necessary*” (Interviewee No. 14).



Oslo 2016, @GHC/Differ Media AS

- 1 In the context of this report, 'Europe' must be understood as a complex series of individual entities and groups that overlap and interconnect. It includes countries that inside and outside the European Union (EU), the European Economic Area (EEA) and the European Free Trade Association (EFTA); countries that are members of the EURO region of WHO, which extends beyond the boundaries of the European continent to Central Asia; as well as institutions of the EU, such as the European Parliament (EP) and the European Commission (EC) and the European Centre for Disease Prevention and Control (ECDC); and non-governmental entities, such as foundations and charities.
- 2 D. Woodward, R.D. Smith. Global Public Goods and Health: concepts and issues. Prevention or containment of communicable disease. Geneva: WHO 2016. <http://bit.ly/Woodward2017>
- 3 R. Steinglass. Routine immunization: an essential but wobbly platform. *Global Health Science and Practice* 2013, 1(3), 295-301. <http://bit.ly/Steinglass2013>
R. Fortner. How the focus on polio eradication in Nigeria undermines itself. *Humanosphere*. 26 November 2014. <http://bit.ly/PoliofocusNigeria>

