SECOND GAVI EVALUATION
GAVI ALLIANCE

13 September 2010

SG1 REPORT

Prepared by:

CEPA LLP
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<tr>
<td>AD</td>
<td>Auto Disable</td>
</tr>
<tr>
<td>AED</td>
<td>Academy for Educational Development</td>
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<tr>
<td>AFRO</td>
<td>Africa Regional Office (WHO)</td>
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<tr>
<td>AMRO</td>
<td>Americas Regional Office (WHO)</td>
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<tr>
<td>APR</td>
<td>Annual Progress Report</td>
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<tr>
<td>BCC</td>
<td>Behaviour Change Communication</td>
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<td>BPHS</td>
<td>Basic Package of Health Services</td>
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<tr>
<td>CCM</td>
<td>Country Coordination Mechanism</td>
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<tr>
<td>CDC</td>
<td>Center for Disease Control and Prevention</td>
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<td>CEPA</td>
<td>Cambridge Economic Policy Associates</td>
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<tr>
<td>CFCS</td>
<td>Challenge Facility for Civil Society</td>
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<tr>
<td>CGD</td>
<td>Centre for Global Development</td>
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<tr>
<td>CHeSS</td>
<td>Country Health Systems Surveillance</td>
</tr>
<tr>
<td>CIDA</td>
<td>Canadian International Development Agency</td>
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<tr>
<td>CLUCs</td>
<td>Countries with Large Numbers of Unimmunised Children</td>
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<tr>
<td>CME</td>
<td>Community Midwifery Education</td>
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<tr>
<td>cMYP</td>
<td>comprehensive Multi Year Plan</td>
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<td>COD</td>
<td>Cash On Delivery</td>
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<td>CRHDP</td>
<td>Consolidated Regional Health Development Plans</td>
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<td>CSAI</td>
<td>Civil Society Advocacy Initiative</td>
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<td>CSO</td>
<td>Civil Society Organisations</td>
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<tr>
<td>CSS</td>
<td>Community System Strengthening</td>
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<tr>
<td>DFID</td>
<td>UK Department for International Development</td>
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<tr>
<td>DQA</td>
<td>Data Quality Audit</td>
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<tr>
<td>DQS</td>
<td>Data Quality Self-assessment</td>
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<tr>
<td>DRC</td>
<td>Democratic Republic of Congo</td>
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<tr>
<td>DTF</td>
<td>Dual Track Financing</td>
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<tr>
<td>DTP</td>
<td>Diphtheria, Tetanus and Pertussis</td>
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<tr>
<td>EMRO</td>
<td>East Mediterranean Regional Office (WHO)</td>
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<td>EPI</td>
<td>Expanded Program for Immunisation</td>
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<tr>
<td>EURO</td>
<td>Europe Regional Office (WHO)</td>
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<tr>
<td>FBCI</td>
<td>Faith-Based and Communities Initiatives</td>
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<td>FLCF</td>
<td>First Level Care Facility</td>
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<td>FMA</td>
<td>Financial Management Assessment</td>
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1 The list includes acronyms and abbreviations used in the SG1 annexes (Supporting Paper 10.1).
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<tr>
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<th>Full Form</th>
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<tbody>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GFATM/GF</td>
<td>Global Fund for HIV/ AIDS, TB and Malaria</td>
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<tr>
<td>GHA</td>
<td>Global Health Actors</td>
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<tr>
<td>GHP</td>
<td>Global Health Partnership</td>
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<tr>
<td>GNI</td>
<td>Gross National Income</td>
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<tr>
<td>GoB</td>
<td>Government of Bangladesh</td>
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<td>GTZ</td>
<td>German Development Cooperation</td>
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<td>HDDP</td>
<td>Health District Development Plans</td>
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<tr>
<td>HEWs</td>
<td>Health Extension Workers</td>
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<tr>
<td>HMIS</td>
<td>Health Management Information System</td>
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<tr>
<td>HQ</td>
<td>Head Quarter</td>
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<tr>
<td>HR</td>
<td>Human Resources</td>
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<td>HSCC</td>
<td>Health Sector Coordination Committee</td>
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<td>HSS</td>
<td>Health System Strengthening</td>
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<td>ICC</td>
<td>Inter-agency Coordination Committee</td>
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<tr>
<td>IEC</td>
<td>Information Exchange Communication</td>
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<tr>
<td>IHP</td>
<td>International Health Partnership</td>
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<td>INS</td>
<td>Injection Safety Support</td>
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<tr>
<td>I-PACS</td>
<td>Initiative to Promote Afghan Civil Society</td>
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<tr>
<td>IRC</td>
<td>Independent Review Committee</td>
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<tr>
<td>ISS</td>
<td>Immunisation Services Support</td>
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<tr>
<td>JRF</td>
<td>Joint Reporting Forms</td>
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<tr>
<td>JSI</td>
<td>John Snow, Inc.</td>
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<tr>
<td>KAP</td>
<td>Knowledge Attitudes and Perceptions</td>
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<tr>
<td>LDC</td>
<td>Least Developed Country</td>
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<tr>
<td>LFA</td>
<td>Local Fund Agent</td>
</tr>
<tr>
<td>LICUS</td>
<td>Low Income Countries Under Stress</td>
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<tr>
<td>M&amp;E</td>
<td>Monitoring &amp; Evaluation</td>
</tr>
<tr>
<td>MAP</td>
<td>Multi-sectoral AIDS project</td>
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<tr>
<td>MCH</td>
<td>Maternal and Child Health</td>
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<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
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<tr>
<td>MDR TB</td>
<td>Multi Drug Resistant TB</td>
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<tr>
<td>MMIS</td>
<td>Making Medical Injections Safer</td>
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<tr>
<td>MoH</td>
<td>Ministry of Health</td>
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<td>MoPH</td>
<td>Ministry of Public Health</td>
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<tr>
<td>MoU</td>
<td>Memorandum of Understanding</td>
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<tr>
<td>NGO</td>
<td>Non Governmental Organisation</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>NIP</td>
<td>National Immunisation Program</td>
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<td>NTP</td>
<td>National TB Program</td>
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<tr>
<td>NVS</td>
<td>New and underused Vaccines Support</td>
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<tr>
<td>ODA</td>
<td>Official Development Assistance</td>
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<tr>
<td>OLS</td>
<td>Ordinary Least Squares</td>
</tr>
<tr>
<td>PAHO</td>
<td>Pan American Health Organisation</td>
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<tr>
<td>PATH</td>
<td>Program for Appropriate Technology in Health</td>
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<tr>
<td>PBF</td>
<td>Performance Based Financing</td>
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<tr>
<td>PCSE</td>
<td>Panel Corrected Standard Errors</td>
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<tr>
<td>PEPFAR</td>
<td>U.S. President's Emergency Plan for AIDS Relief</td>
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<tr>
<td>PHC</td>
<td>Primary Health Care</td>
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<tr>
<td>PPP</td>
<td>Purchasing Power Parity</td>
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<tr>
<td>PR</td>
<td>Principle Recipient</td>
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<td>PRSPs</td>
<td>Poverty Reduction Strategies</td>
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<tr>
<td>PVOs</td>
<td>Private and Voluntary Organisations</td>
</tr>
<tr>
<td>RFP</td>
<td>Request For Proposal</td>
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<tr>
<td>RQDA</td>
<td>Routine Data Quality Assessment</td>
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<tr>
<td>SEARO</td>
<td>South East Asia Regional Office (WHO)</td>
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<tr>
<td>SG</td>
<td>Strategic Goal</td>
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<tr>
<td>SIGN</td>
<td>Safe Injection Global Network</td>
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<tr>
<td>SWAp</td>
<td>Sector Wide Approach</td>
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<tr>
<td>TAP</td>
<td>Transparency and Accountability Policy</td>
</tr>
<tr>
<td>TBA</td>
<td>Trained Birth Assistant</td>
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<tr>
<td>TRP</td>
<td>Technical Review Panel</td>
</tr>
<tr>
<td>TWG</td>
<td>Technical Working Group</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNAIDS</td>
<td>Joint United Nations Program on HIV/AIDS</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organisation</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children's Fund</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<tr>
<td>VAT</td>
<td>Value Added Tax</td>
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<tr>
<td>VF</td>
<td>Verification Factor</td>
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<tr>
<td>WB</td>
<td>World Bank</td>
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<tr>
<td>WDU</td>
<td>Waste Disposal Unit</td>
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<tr>
<td>WHO</td>
<td>World Health Organisation</td>
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<tr>
<td>WPRO</td>
<td>Western Pacific Regional Office (WPRO)</td>
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SUMMARY AND CONCLUSIONS

This report provides the detailed analysis and evaluation material for Strategic Goal (SG) 1. A summary of the analysis can be found in the Executive Summary and Section 5 of the Evaluation Report. However, for ease of reference, we provide an overview of the conclusions contained in the detailed chapters in this report here.

1. Evaluation questions for SG1

GAVI’s Strategic Goal 1 is: “to contribute to strengthening the capacity of the health system to deliver immunisation and other health services in a sustainable manner.”

The four SG1 evaluation questions are structured by program and are the following:

- SG1.1: What have been the results and value add of GAVI’s Injection Safety Support (INS) program at country and global levels?
- SG1.2: What have been the results and value add of GAVI’s Health Sector Coordination Committee (HSS) program at global and country levels?
- SG1.3: What have been the results and value add of GAVI’s Immunisation Services Support (ISS) program?
- SG1.4: What have been the results and value add of GAVI’s Civil Society Organisation (CSO) program?

2. Results and value add of INS program (SG1.1) (Section 3)

The analysis conducted as a part of this evaluation strongly suggests that the INS program has been a success. The main area of INS value add has been GAVI’s role in introducing and accelerating uptake of Auto-Disable (AD) syringes and safety boxes (‘safety equipment’) in countries. Another area of strong results is the sustained use and funding of safety equipment in routine immunisation after GAVI support. Our analysis of country Annual Progress Reports (APRs) indicates that all countries that have completed INS funding by 2006 for which we have data, have sustained the financing of safety equipment after the end of GAVI’s support. In addition, analysis of Joint Reporting Form (JRF) data suggests that GAVI INS has had a positive impact on injection safety policy indicators (although attribution to GAVI is difficult).

These conclusions on GAVI’s added value are strengthened by qualitative feedback from the surveys, country visits, and structured interviews – in particular, there was unambiguous support (88% of respondents agree/ strongly agree) in the e-survey for attributing GAVI’s role in improving injection safety practices and standards in GAVI countries. Comparison of safety equipment uptake indicators in GAVI countries vis-à-vis GAVI ineligible low and lower-middle income countries highlights higher uptake in GAVI countries, also establishing its value add.

An area of concern that remains is injection safe disposal and waste management practices – that countries are resource constrained to address. GAVI has also not had much impact on price reduction in AD syringes – evidence suggests that whilst some positive gains have been made,

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2 56 of the 59 Phase I countries and six of the 13 Phase II countries are included.
they pre-date GAVI’s support. In addition, while GAVI has been instrumental in uptake of safety equipment for routine immunisation, its influence on broader health areas is more limited and less conclusive.

3. Results and value add of HSS program (SG1.2) (Section 4)

The recent HSS evaluation by HLSP notes that it is too early to measure the results of the program and also difficult to attribute any changes in outcomes to GAVI funding. We have therefore focused our assessment of HSS on the strategy, approach, delivery model, and where possible, proposed/expected results at the country level. A number of our conclusions are similar to those outlined in the recent HSS evaluation and tracking study, and hence these are known to GAVI.

Our evaluation concludes that the evidence in terms of results and added value of the HSS program is mixed. Overall, the importance of GAVI’s HSS program in addressing health system bottlenecks has been widely recognised, but questions are raised on whether the program dilutes GAVI’s immunisation focus (including diverting limited resources away from it), and if GAVI is appropriately equipped to deliver this support.

Given the burden that GAVI-funded vaccines put on health systems, its support through HSS is justified and deemed essential. It is also noted that flexibility of funding and country ownership are valued features of GAVI HSS. However, several issues detract from the effectiveness of its delivery model, including limited HSS capacity in-house, absence of country/regional presence, limited knowledge of country HSS context, and weak M&E systems and processes.3

As noted above, it is too early to measure impact of the program at country level. The focus on key system bottlenecks suggests that GAVI HSS could potentially make an impact on addressing key system constraints (although it is likely to be difficult to measure and attribute to GAVI).

To assess HSS value add, we compared the GAVI approach to other HSS donor organisations such as the World Bank, Global Fund, and United States Agency for International Development (USAID). Given the mix of positive and less valued features of GAVI’s HSS approach as compared to other organisations, we cannot say that the GAVI approach is better or worse than others. GAVI’s relative strengths are flexibility and predictability of funding, inclusive application process, promotion of country ownership, etc.

Further, despite being a much smaller (in terms of value of grants) and latter HSS donor than these comparator organisations, GAVI is playing a vital role in conceptualising, designing and implementing the HSS funding platform. This suggests GAVI value add in raising the profile of immunisation amongst HSS donors – which might not have occurred in the absence of its HSS program.

4. Results and value add of ISS program (SG1.3) (Section 5)

The analysis of the ISS program performance brings out the positive aspects of innovation and value add, but some aspects of ISS results (such as linkage to DTP3 coverage) are less conclusive to establish.

3 The HSS Platform is expected to address some of the key issues identified in GAVI’s delivery model such as improved country level processes and coordination, stronger M&E systems, etc.
Overall, the ‘rewards based’ and ‘flexible’ aspects of the ISS program are hailed as important innovations in immunisation and healthcare. Over 70% of the e-survey respondents either agree or strongly agree with the statement that ‘performance based rewards and provision of flexible cash are key examples of the value add of GAVI’s ISS program’.

However, interviews and the Expanded Program for Immunisation (EPI) manager and e-survey feedback highlight some issues regarding immunisation data quality and reliability in countries, chances of misuse of funds, and the risk of funds lying idle. In this regard, the utilisation analysis of ISS funds disbursed also indicates that on average, about 50% of ISS funds available to a country in a year remain unutilised. This low level of utilisation could reflect country governments holding on to some funds for use over the short/medium term, given the variable nature of ISS rewards (but we have not found any evidence to prove or disprove this).

Our regression analysis shows some tentative evidence of a positive impact of ISS disbursements on Diphtheria, Tetanus and Pertussis (DTP3) coverage (although not statistically significant at 10% level). Following Lu at al’s approach, evidence of positive impact of ISS disbursements on DTP3 coverage is only significant (at the 10% level) for countries with initial coverage of 65%-80%. (contrary to the finding by Lu et al and the previous ISS evaluation work by Abt Associates). Interview and country feedback suggest that the incentive effects of ISS rewards are effective up to a certain level of coverage. Beyond that, the rewards are not adequate to reach out to the last 10-20% of the unimmunised population.

A strong area of ISS value add is the introduction of Data Quality Audit/ Self-assessment (DQA/ DQS) – all evidence sources explored are unanimous that these have facilitated the improvement of data reporting and quality, although it is recognised that more remains to be done (in some countries more than others). GAVI’s DQA/ DQS is also seen to have influenced the development of similar tools by organisations such as Global Fund and John Snow Inc. (JSI). GAVI is a key contributor to the World Health Organisation (WHO) led process of building upon the basic tools of data quality and audit, together with partners such as Center for Disease Control and Prevention (CDC) – an example of the Alliance partners working together.

Overall, since GAVI is the only donor funding the expansion of routine immunisation coverage to the unreached, countries regard the ISS program to be of high added value.

5. Results and value add of CSO program (SG1.4) (Section 6)

Some fundamental design and process issues have resulted in the low uptake and popularity of the CSO program (especially Type A support). The issues include lack of clarity on program objectives, small grant sizes, limited country publicity, delays in approval and disbursement processes, reliance on governments to submit CSO proposals, etc.

The responses from the e-survey were generally equally divided between agree/strongly agree, disagree/strongly disagree, and neutral on the statement ‘GAVI’s CSO program has not contributed much to facilitating/expanding the role of CSOs in delivering immunisation and health services’.

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5 GAVI is aware of these issues and is working to address them.
Our assessment is that the CSO program design needs a clearer definition of outputs, and performance indicators and targets to be able to assess progress on its objective of increased CSO engagement in countries. Whilst it is too early to measure program outcomes, one result of the Type A support in some countries has been the inclusion of CSO representatives in the Health Sector Coordination Committees (HSCC) or equivalent – leading to increased recognition and coordinated involvement of CSOs in immunisation/ health programs.

In developing a framework to assess value add, we compared the GAVI CSO program with other organisations. The limited comparison, particularly with Global Fund, offers lessons and suggests that GAVI has a low level of value add in its program so far. However, the potential to involve CSOs more meaningfully to reach GAVI’s immunisation objectives is recognised. In that regard, GAVI’s CSO program has helped in including CSOs as a key stakeholder at the immunisation discussion table at global and country levels.

6. Overall conclusions on SG1

Taking GAVI’s efforts in the round, we would rate the achievement of its first goal to be partial, although some results might be forthcoming in Phase III of GAVI’s support.

In terms of contributing to ‘strengthening the capacity of the health system’, we note that:

- INS has contributed to adoption/ increased uptake of injection safety equipment for immunisation, and improved safety standards/ practices in GAVI countries. However, as an unintended consequence, it has increased the burden for sharps waste management and disposal in countries.

- By definition, HSS aims to plug gaps in the wider health systems (and not just immunisation), but program results are too early to measure and the value of HSS grants are very small (vis-a-vis total health expenditure) to make a wide-ranging impact.

- There is mixed feedback on whether ISS rewards have strengthened immunisation systems – on one hand, it is designed to be a small proportion of total immunisation expenditure and over 50% of ISS funds disbursed to a country remained unutilised in a given year. On the other hand, there is some weak evidence of a positive impact of ISS disbursements on DTP3 coverage (in countries with 65-80% coverage). By financing unfunded parts of the immunisation system (that no other donor funds), it has enhanced immunisation capacities in countries, especially to reach remote areas.

- The CSO program is yet to contribute substantively to enhancing CSO role/ engagement in immunisation and health systems, although its potential is recognised.

In terms of sustainability of support, INS funding has done well, but there are issues with regards to sustainability of ISS funding. It is too soon to comment on sustainability of HSS and CSO, given the nascent stage of their implementation.

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6 Reasons include the minimalistic nature of CSO engagement by GAVI (rather than substantive program implementation such as the Global Fund including CSOs as Principal Recipients of funds), small grant sizes, inability to disburse to CSOs directly, low program uptake of Type A support, amongst others.
1. **INTRODUCTION AND BACKGROUND**

GAVI’s first Strategic Goal (SG1) is: ‘to contribute to strengthening the capacity of country health systems to deliver immunisation and other health services in a sustainable manner.’ It seeks to achieve this goal by providing support through the following programs: Health System Strengthening (HSS), Immunisation Services Support (ISS), Injection Safety Support (INS), and Civil Society Organisations (CSO). This document provides an analysis of the achievements of GAVI on SG1 (i.e. the ‘results’), as also an assessment of the areas where GAVI has ‘added value’.

1.1. **Evaluation approach**

1.1.1. **Scope of evaluation**

We have structured our evaluation questions under SG1 by program, as presented in Table 1.1.

<table>
<thead>
<tr>
<th>SG3 evaluation themes/ issues</th>
<th>SG1 evaluation themes/ issues</th>
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<tr>
<td>SG1.1 What have been the results and value add of GAVI’s INS program at country and global levels?</td>
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<tr>
<td>SG1.2 What have been the results and value add of GAVI’s HSS program at global and country levels?</td>
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<tr>
<td>SG1.3 What have been the results and value add of GAVI’s ISS program?</td>
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<tr>
<td>SG1.4 What have been the results and value add of GAVI’s CSO program?</td>
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The focus of our evaluation is on GAVI Phase II in particular, as per the Terms of Reference and drawing on/ extending the analysis of earlier evaluations of the SG1 programs. Where possible, we emphasise the assessment of ‘value add’ of the programs at global and country levels, including definition of the counterfactual and the criteria to compare GAVI with these alternate approaches (given that a bulk of the existing evaluations of SG1 programs were around the ‘results’ question).

1.1.2. **Methodology**

The evaluation of GAVI’s performance on SG1, as explored through the evaluation sub-questions set out in Table 1.1 above, has been informed by a number of sources of evidence. These include the review of documentation, quantitative analysis, regression analysis, structured interviews, surveys, country studies, and case studies of comparators and counterfactual analysis, where relevant. Each of these sources of evidence is described in more detail in Section 2 of the GAVI Second Evaluation Report. We note here the main features of the methodology as relevant for the SG1 evaluation:

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7 In our Inception Report, we had structured the HSS question into two, examining results and added value separately. However, having collected the evidence, we believe there are strong overlaps/ inter-linkages between the two questions, on account of which we have merged into one question (similar to the other three SG programs).

8 This includes the INS Phase I Evaluation by JSI, the Evaluation of the first five years of ISS funding by Abt Associates, the GAVI Phase I Evaluation (2000-05) by Abt Associates which covered ISS and INS programs, and the more recent HSS Tracking Study and Evaluation completed in 2009.
• The evaluation of the GAVI INS program draws heavily on the World Health Organisation (WHO)-United Nations Children’s Fund (UNICEF) Joint Reporting Forms (JRFs) data, which includes a range of indicators on injection safety policy, financing, uptake, etc. The analysis from the JRF data is interpreted with the help of other sources of evidence such as the structured interviews and country visits, which have also been used for triangulation. The assessment of value add has relied on two key counterfactuals/comparators, namely: (i) a comparison with middle income non-GAVI eligible countries; and (ii) the performance of another donor injection safety program – the PEPFAR Making Medical Injection Safer (MMIS).

• The evaluation of the GAVI HSS program has primarily focused on an assessment of the strategy/delivery model, as against outcomes/impacts, given: (i) that it is too early to assess the impact of GAVI HSS funding, since it is a relatively new program; and (ii) the focus of the recent HSS evaluation and tracking studies (which we draw on). Further, we use the feedback from country visits, structured interviews, and the e-survey and Expanded Program for Immunisation (EPI) manager survey. In addition, we also analyse the value add of GAVI HSS by comparing GAVI’s approach with other HSS donors such as the Global Fund, World Bank, USAID, etc.

• The evaluation of GAVI ISS has relied on a mix of evidence sources – including review of the data and information included in the country Annual Progress Reports (APRs), structured interviews, surveys and regression analysis. The country visits are also a source of information on ISS performance.

• The evaluation of the GAVI CSO program relies mostly on review of documentation, including the recent CSO Type A review report, and qualitative feedback from interviews and surveys. None of the countries visited have a CSO program. We also assess other health initiatives that engage with CSOs as comparators to draw lessons for GAVI value add.

More details on the methodology employed for the assessment of the GAVI SG1 programs is provided in the individual sections on the four programs below.

General limitations

The overall limitations of the evaluation (as presented in Section 3.2 of the Evaluation Report) hold for SG1 as well. In addition, we present the key limitations of the data/evidence sources used particularly in the evaluation of SG1:

• The APR data are not complete/in analysable formats, which constrained the level of analysis possible and the robustness of our findings.

• EPI manager survey received a much lower response rate than anticipated – we had expected this to be a key source of feedback for country level program performance.

Further to these, two limitations to note particularly for the HSS and CSO programs are:

• The HSS and CSO programs are still in early days of implementation, making results/impact too soon to measure.
• Although we recognise that programs such as HSS and CSO are very country context specific, we were able to visit only five countries; narrowing our country level sample feedback to these (therefore, difficult to generalise the findings). The focus of the country studies of other recent evaluations are different to this evaluation and therefore our assessment of the SG1 programs mainly relies on a global level assessment.

Analysis of Robustness

Across all the evaluation sub-questions and their themes/issues being analysed, in order to assess the strength of a conclusion, we have allocated a ‘robustness scoring’ to each main finding. The definitions of the four scores (A-D) are set out in Table 1.2 below. But in general we are making an assessment of both:

- the extent to which we have a range of evidence types (e.g. quantitative and qualitative) and different sources (e.g. different data bases) that point to the same conclusion – we refer to this as ‘triangulation’; and

- the underlying quality of individual data types and evidence source (e.g. as determined by sample size, reliability/ completeness of data).

Table 1.2: Robustness ranking for evaluation findings

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>The finding is consistently supported by the full range of evidence sources, including quantitative analysis and qualitative evidence (i.e. there is very good triangulation); and/or the evidence source(s) is/ are of relatively high quality and reliable to draw a conclusion (e.g. solid sample sizes are available and there are no major data quality or reliability issues).</td>
</tr>
<tr>
<td>B</td>
<td>There is a good degree of triangulation across evidence, but there is less or ‘less good’ quality evidence available. Alternatively, there is limited triangulation and not very good quality evidence, but at least two different sources of evidence.</td>
</tr>
<tr>
<td>C</td>
<td>Limited triangulation, and/or only one evidence source that is not regarded as being of a good quality</td>
</tr>
<tr>
<td>D</td>
<td>There is no triangulation and/or evidence is limited to a single source and is relatively weak; or the quality of supporting data/information for that evidence source is incomplete or unreliable.</td>
</tr>
</tbody>
</table>

Points to note for readers in interpreting these scores are as follows:

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9 We have referred to the country reviews carried out in previous GAVI (Phase I and SG1 program-specific) evaluations. Findings from these country studies have been integrated where relevant (included under ‘desk review of documentation’).

10 In our Inception Report, we had anticipated assigning a robustness scoring to the evidence as opposed to the conclusion. Our judgement is that the revised approach is preferable – since it is more tractable and has less repetition. Further, assigning a robustness rating to the conclusion allows us to take account of the strength of the range of evidence sources applicable in drawing that conclusion.
• They are not absolute measures of the robustness of the evidence base. Rather they are relative rankings that are intended to allow the reader to get an indication of our assessment of the strength of a finding.

• The scores are themselves judgemental and reflect our assessment of the evidence base that exists or that we have been able to identify as part of our evaluation.

• It is important to note, that it is possible for us to have ‘good’ triangulation of ‘high quality’ evidence but a mixed or ambiguous conclusion on GAVI performance. This might occur if we have a good range of evidence that all points to mixed performance.

1.2. Background

A total of $952m of GAVI funding was approved for SG1 programs for the period 2001-10, spread across 73 countries\(^{11}\), of which approximately $646m has been disbursed to date. Additional approvals have also been made until 2015, taking total approvals to just over $1bn over the period 2001-15. In 2001, total approvals and disbursements across all countries were $14.7m, rising to over $200m in approvals and $150m in disbursements by 2007, but then falling slightly since then. Within this, some disaggregated trends include:

• Of the four SG1 programs, the two main recipient programs are HSS (48%) and ISS (38%).

• In total, over the period 2001-10, Africa (AFRO) has received the highest SG1 funding (57% of total funding). The other two main recipient regions are East Mediterranean (EMRO - 18%) and South East Asia (SEARO - 18%)\(^{12}\).

• Over the period 2001-10, in terms of the GAVI categorisation of countries for co-financing, ‘poorest’ countries received the highest approvals (36%). ‘Intermediate’ and ‘fragile’ countries also received a large proportion of total approvals (29% and 24%, respectively), while ‘least poor’ countries received a small proportion of approvals (9%).

Annex 1 provides details regarding annual GAVI approvals and disbursements, breakdown by SG1 programs, breakdown by WHO region, and breakdown by GAVI categorisation of countries for co-financing. The Annex also presents the performance against GAVI strategy indicators.

1.3. Structure

• Section 2 presents an assessment of GAVI’s performance against the strategy (2007-10) indicators.

• Sections 3 – 6 deal in turn with each of the four evaluation questions under SG1.

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\(^{11}\) At present there are only 72 GAVI-eligible countries, with four additional countries being eligible for support over the period 2000-05.

\(^{12}\) Please note that throughout this report we use the WHO classification of regions: Africa (AFRO); Eastern Mediterranean (EMRO); Europe (EURO); Americas (PAHO); South-East Asia (SEARO); and Western Pacific (WPRO).
• Section 7 provides our conclusions in relation to the evaluation at the SG level as a whole and any observations / themes that relate more widely to GAVI.

• The paper is supported by the following annexes:
  o Annex 1 provides background information on GAVI SG1 programs.
  o Annex 2 provides background information to support the evaluation of the GAVI INS program.
  o Annex 3 provides background information to support the evaluation of the GAVI HSS program.
  o Annex 4 provides background information to support the evaluation of the GAVI ISS program.
  o Annex 5 provides background information to support the evaluation of the GAVI CSO program.

All annexes to the SG1 Report have been presented in Supporting Paper 10.1.
2. PERFORMANCE AGAINST GAVI STRATEGY INDICATORS (2007-10)

The GAVI Alliance Strategy 2007-10 sets out the hierarchy of outcomes, outputs and indicators to support the achievement of the overall goal: “Save children’s lives and protect people’s health through increased access to vaccines in poor countries”. In this section, we provide an assessment of GAVI’s SG1 performance against the strategy indicators, and also comment on the achievement of outputs for the goal.

Where relevant, we have included information from our evaluation work to assess progress against the strategy indicators. However, our evaluation parameters do not translate directly to the strategy indicators and hence the evaluation conclusions and analyses are wider. We provide a number of general observations about the 2007-10 Strategy and GAVI’s monitoring of progress in our analysis of SG4.¹³

2.1. SG1 outcome and outputs

The SG1 outcome is defined in the 2007-10 Strategy as: ‘Strengthened capacity of the health system to deliver immunisation and other health services in a sustainable manner’. This outcome is supported by four outputs:

- Output 1.1: ‘GAVI ISS support will reach an increased number of countries and countries that have received support including those with specific demographic, social or programmatic features will have increased and/or maintained high coverage’ (maps to our evaluation question SG1.3)
- Output 1.2: ‘Countries with HSS support will have made improvements to their health system to deliver immunisation and other child health interventions’ (maps to our evaluation question SG1.2)
- Output 1.3: ‘GAVI countries that have received CSO support have improved CSO engagement with relevant stakeholders and increased access to quality health services and interventions’ (maps to our evaluation question SG1.4)
- Output 1.4: ‘GAVI countries will have developed and satisfactorily implemented comprehensive policies and strategies on immunisation injection safety and related waste, supported by a monitoring and evaluation framework’ (maps to our evaluation question SG1.1)

For each of these outputs, there are several relevant indicators. Supporting Paper 8 provides further details on the indicators tracked and progress made to date to achieve the output, as well as the data/information sources.

The following sub-sections contain progress assessments for each output organised by evaluation question (rather than by output) for ease of reference.

¹³ GAVI second evaluation, SG4 evaluation report.
2.1.1. SG1.1

Output 1.4 is ‘GAVI countries will have developed and satisfactorily implemented comprehensive policies and strategies on immunisation injection safety and related waste, supported by a monitoring and evaluation framework’. This maps to our evaluation question SG1.1 on INS.

The evidence sources for progress include the 2008 progress reported in the 2009-10 Work Plan and Budget, Partner progress reports, and our analysis in the SG1 evaluation report.

Table 2.1 summarises the strategy indicators for this output, and our assessment of the progress made. Not all indicators in this output are defined in enough granularity for measurement. Furthermore, there is evidence to show that the safe disposal policy implementation target for 2008 has not been met, and there is conflicting evidence for the % of countries with a safe disposal policy. Overall, since at least one indicator has not been met, the output has not been met.

Table 2.1: Indicators for Output 1.4 and assessment of progress

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Assessment of Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injection safety - X% of countries that have developed and implemented comprehensive policies and strategies on safe injection practices</td>
<td>• Absence of both a baseline and target imply an assessment cannot be made.</td>
</tr>
<tr>
<td>Injection safety – Monitoring &amp; Evaluation (M&amp;E) framework developed and implemented</td>
<td>• M&amp;E framework developed but no evidence of framework implementation</td>
</tr>
<tr>
<td></td>
<td>• Even though the indicator has been partially met, an assessment cannot be made due to the lack of information.</td>
</tr>
<tr>
<td>Safe disposal - X% of countries have a policy on safe segregation, treatment and disposal of injection equipment</td>
<td>• Data available presents conflicting evidence on 2008 target</td>
</tr>
<tr>
<td>• 60% by 2007</td>
<td></td>
</tr>
<tr>
<td>• 90% by 2008</td>
<td></td>
</tr>
<tr>
<td>Safe disposal - X% of countries with policy, will have implemented the policy</td>
<td>• It is not clear whether this indicator relates to INS countries or all GAVI eligible countries. Either way, even though significant progress has been made, the indicator has not been met for 2008.</td>
</tr>
<tr>
<td>• 60% by 2007</td>
<td></td>
</tr>
<tr>
<td>• 90% by 2008</td>
<td></td>
</tr>
</tbody>
</table>

2.1.2. SG1.2

Output 1.2 is ‘Countries with HSS support will have made improvements to their health system to deliver immunisation and other child health interventions’. This maps to our evaluation question SG1.2.

Table 2.2 summarises the strategy indicators for this output, and our assessment of the progress made. The first two indicators are related to ‘inputs’ or ‘processes’, whereas the third indicator is more ‘results’ oriented. However, the first two indicators have no baseline or target, and there is no evidence base for the third.

Overall, since not all indicators can be assessed, we are not able to assess whether the output has been met.
Table 2.2: Indicators for Output 1.2 and assessment of progress

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Assessment of Progress</th>
</tr>
</thead>
</table>
| % of partner support mechanisms in place in GAVI countries                | - It is not clear whether the indicator measures the % of partners with support mechanisms in place or the number of partner support mechanisms.  
- Ambiguity of indicator and absence of both a baseline and target imply an assessment cannot be made. |
| % of GAVI countries that have been approved for HSS support               | - There is no baseline or target included in indicator, no assessment can be made.     |
| All countries receiving HSS support for at least two years will have addressed health system constraints as indicated in their original proposal | - The information is not reported by countries in APRs, without this, the linkage between HSS constraints and activities often cannot be established.  
- Also, there are no target figures or baselines in place to measure progress against these indicators |

2.1.3. SG1.3

Output 1.1 is ‘GAVI ISS support will reach an increased number of countries and countries that have received support including those with specific demographic, social or programmatic features will have increased and/or maintained high coverage’, hence this maps to our evaluation question SG1.3 on ISS.

The evidence sources for progress include WHO / UNICEF coverage estimates for Diphtheria, Tetanus and Pertussis (DTP3), Partner progress reports, 2008 progress reported in the 2009-10 Work Plan and Budget, and our analysis in the SG1 evaluation report.

Table 2.3 summarises the strategy indicators for this output, and our assessment of the progress made. For the second indicator, it is not clear what the baseline should be for measuring increased coverage, furthermore, there is not defined list of ‘Countries with Large Numbers of Unimmunised Children’ (CLUCs) hence it is not possible to measure this aspect of the indicator.

Overall, neither indicator has been met; hence we conclude the output has not been met.
### Table 2.3: Indicators for Output 1.1 and assessment of progress

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Assessment of Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of GAVI eligible countries receiving ISS support:</td>
<td>• Although the 2008 target was exceeded, the lack of progress in 2009 has resulted in the 2009 target not being met.</td>
</tr>
<tr>
<td>• Increased from 50% to 65% by 2008</td>
<td></td>
</tr>
<tr>
<td>• Increased to 90% by 2009</td>
<td></td>
</tr>
<tr>
<td>• Increased to 95% by 2010</td>
<td></td>
</tr>
<tr>
<td>X% of countries receiving ISS support would have increased coverage by at least 5% Fragile States and CLUCs would have increased coverage by at least 10%:</td>
<td>• No clear list of CLUCs as the criteria for this is being defined by the Large Countries advisory group; hence this information could not be determined.</td>
</tr>
<tr>
<td>• 50% by 2007</td>
<td></td>
</tr>
<tr>
<td>• 65% by 2008</td>
<td></td>
</tr>
<tr>
<td>• 80% by 2009</td>
<td></td>
</tr>
<tr>
<td>• 90% by 2010</td>
<td></td>
</tr>
<tr>
<td>• Although the 2008 target was exceeded, the lack of progress in 2009 has resulted in the 2009 target not being met.</td>
<td></td>
</tr>
</tbody>
</table>

#### 2.1.4. SG1.4

Output 1.3 is ‘GAVI countries that have received CSO support have improved CSO engagement with relevant stakeholders and increased access to quality health services and interventions’, hence this maps to our evaluation question SG1.4 on CSO support.

The evidence sources for progress include the 2008 progress reported in the 2009-10 Work Plan and Budget and our analysis in the SG1 evaluation report.

Table 2.4 summarises the strategy indicators for this output, and our assessment of the progress made. One of the indicators has been met and another is on track. The second indicator (Type A funds) is not well defined therefore cannot be measured, whereas the indicator for an M&E framework cannot be assessed due to lack of information. In general, other than the fourth indicator that is still being developed, others are all process/input indicators.

Overall, since not all indicators can be assessed, we are not able to assess whether the output has been met.

### Table 2.4: Indicators for Output 1.3 and assessment of progress

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Assessment of Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanisms for proposed Civil Society window operational by 2007</td>
<td>• Evidence indicates that mechanism is operational therefore target has been met.</td>
</tr>
<tr>
<td>% of total ‘Type A’ Civil Society funds (Type A)</td>
<td>• There is no baseline or target included in indicator, hence no assessment can be made</td>
</tr>
</tbody>
</table>
| % of total funds of Civil Society funds (Type B) disbursed (to the 10 pilot countries) | • Data is not yet available for 2009.  
  • Given 2008 target has been met, at this stage, the indicator is on track to be met for 2009-10. |
| M&E research framework for impact assessment of CSO support developed and lessons learned disseminated and used to inform practice | • An assessment cannot be made due to the lack of supporting information or evidence to the contrary. |
3. **SG1.1: RESULTS AND VALUE ADD OF INS PROGRAM**

3.1. **Introduction**

The evaluation question here is: ‘What have been the results and value add of GAVI’s INS program at country and global levels?’

3.1.1. **Scope of evaluation question**

The INS evaluation by John Snow, Inc. (JSI)\(^{14}\) reviewed 58 countries that were approved for funding in the period 2002-04 (although the countries that were approved in 2004 received INS support until 2006). On most of the INS themes, we examine both the Phase I and II INS countries, particularly to compare performance on some of the indicators across both Phases. However, in some areas where data was not readily available in analysable formats, the focus has primarily been on the 13 additional countries that were approved for INS funding in the period 2005-09.\(^{15}\)\(^{16}\)

The focus of this evaluation is the support provided to countries through GAVI’s INS window. It is noted that the GAVI New and underused Vaccines Support (NVS) window provides vaccines bundled with injection safety equipment, but this is not assessed here.

Table 3.1 summarises our lines of enquiry for the INS program under the results and value add questions respectively. Although presented as such, we would also examine GAVI’s added value on some areas of results – i.e. in GAVI’s absence, could the same results have been achieved?

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\(^{15}\) The countries approved for INS support for the period 2005-07 are Benin, Guinea Bissau, India, Moldova (cash), Mongolia, and Nicaragua; for 2006-08 are Bosnia (became ineligible in 2006), Cuba, Liberia (cash), Madagascar, and Malawi; for 2008-10 are Cote d’Ivoire, and Nigeria.

\(^{16}\) Of these, two countries received cash support.
Table 3.1: Evaluation of INS results and value add

<table>
<thead>
<tr>
<th>Results</th>
<th>Value add</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country level</strong></td>
<td><strong>• Comparison of uptake of safety equipment and development of policies in GAVI and non-GAVI eligible countries.</strong>&lt;br&gt;<strong>• Attribution of safety and waste management practices in country to GAVI support.</strong>&lt;br&gt;<strong>• Comparator analysis – Impact achieved through the PEPFAR Making Medical Injections Safer (MMIS) (^\text{17}) program, as compared to GAVI INS.</strong></td>
</tr>
<tr>
<td>• Introduction of safety policies/ plans/ budgets for INS Phase I and II countries</td>
<td></td>
</tr>
<tr>
<td>• Trends in uptake of safety equipment (i.e. Auto-Disable (AD) syringes and safety boxes) in the INS Phase I and II countries.</td>
<td></td>
</tr>
<tr>
<td>• Sustainability of funding for safety equipment after GAVI support in INS Phase I and II countries.</td>
<td></td>
</tr>
<tr>
<td>• Sustainability in use of safety equipment after GAVI support.</td>
<td></td>
</tr>
<tr>
<td>• Impact (positive and negative) on safe disposal/ waste management in Phase II countries.</td>
<td></td>
</tr>
<tr>
<td>• Impact, if any, on safety practices in the broader country health systems in Phase II countries.</td>
<td></td>
</tr>
<tr>
<td><strong>Global level</strong></td>
<td></td>
</tr>
<tr>
<td>• Impact of GAVI funding on prices of ADs.</td>
<td></td>
</tr>
<tr>
<td>• Impact of GAVI funding on promotion of new safety equipment manufacturers, especially in developing countries.</td>
<td></td>
</tr>
</tbody>
</table>

Each of these is discussed in detail starting at Section 3.3 below.

### 3.1.2. Sources of evidence

We have drawn on the evidence sources set out in the table below in answering this evaluation question. Quantitative analysis based on a review of documentation (such as the country APRs, WHO-UNICEF JRFs, the Phase I INS evaluation etc.) was the main source of evidence, in addition to the responses to the electronic surveys. These were supplemented by structured interviews - although most stakeholders commented more generally on the success of the INS program rather than specific issues under it such as safety policy/ uptake etc.

The country visits were useful in providing information/ examples of INS performance at country level. We have also undertaken a limited desk-based comparison of GAVI INS program

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\(^{17}\) MMIS was initiated in 2004 as a part of the President’s Emergency Plan for AIDS Relief (PEPFAR) focusing on countries with high HIV prevalence. John Snow, Inc. (JSI) and its subcontractors, Program for Appropriate Technology in Health (PATH), Academy for Educational Development (AED), and the Manoff Group, were awarded funds through the Centers for Disease Control and Prevention (CDC) and the US Agency for International Development (USAID) to implement “Rapid Interventions to Decrease Unsafe Injections” in 11 countries in Africa and Caribbean (Botswana, Cote d’Ivoire, Ethiopia, Haiti, Kenya, Mozambique, Niger, Nigeria, Rwanda, South Africa, Tanzania and Uganda). The overall goal is to establish an environment where patients, health care workers, and the community are better protected from the medical transmission of HIV and other blood-borne pathogens.
with the PEPFAR Making Medical Injections Safer program (recognising that MMIS was much more restricted in its funding, coverage in terms of countries, and the period of its operation).

### Table 3.2: Evaluation question 1.1- INS program

<table>
<thead>
<tr>
<th>Evidence source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of documentation</td>
<td>Review of all GAVI documentation and literature on INS program (including GAVI country APRs, WHO-UNICEF JRF, etc.)</td>
</tr>
<tr>
<td>Quantitative analysis</td>
<td>Comparisons of key metrics in relation to immunisation safety from JRF and APRs</td>
</tr>
<tr>
<td>Structured interviews</td>
<td>Interviews with a range of GAVI stakeholders, including Secretariat, Board members, GAVI partners, experts, etc.</td>
</tr>
<tr>
<td>Electronic surveys</td>
<td>One question on INS in the e-survey and EPI manager survey.</td>
</tr>
<tr>
<td>Country studies</td>
<td>All five field visit countries have had an INS program.</td>
</tr>
<tr>
<td>Comparator analysis</td>
<td>Comparison of GAVI INS with MMIS to understand relative value add.</td>
</tr>
</tbody>
</table>

#### 3.1.3. Structure

The rest of the INS review is structured as follows:

- Section 3.2 provides a brief background on the INS program funding to date.
- Sections 3.3 – 3.12 discuss in turn each of the INS ‘themes’ or issues that examine GAVI’s results and added value in relation to this program. For each theme, we present the evidence by source.
- Section 3.13 concludes on INS results and added value, and assigns a robustness rating to the conclusion by theme, based on the available evidence.

#### 3.2. Background

A total of $116m of INS funding was approved for the period 2002-10, spread across 71 countries, of which approximately $108m has been disbursed to date. The average duration of support was 3.1 years – but varies slightly across countries. Other trends include:

- Throughout the period 2002-08, disbursements equal approvals, but not since 2008. By 2010, total approvals are $116m, whereas total disbursements are slightly less at $108m. Disbursements have equalled approvals for all regions, except AFRO that has received about 80% of its approved INS grants to date (2002-10).
- Majority of disbursements have been split between three regions – SEARO ($39.1m), AFRO ($31.5m), and WPRO ($20.1m). SEARO has the highest average disbursement (per GAVI country that received INS disbursement) being $4.9m, followed by WPRO.

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18 In most cases, funding was provided for three years, but in some cases it was provided for around two, four or five years.
19 Data on disbursements is by ‘program year’ i.e. recorded as a disbursement when approved by the IRC/ Board as against when actually disbursed to the countries.
20 We have data up to February, 2010 only.
with an average of $4m. AFRO has a very low average ($0.9m), despite receiving a large share of total INS disbursements.

- Based on cumulative approvals received by all countries over 2002-10, a majority (66%) of approvals were for supply only (in value terms). The remaining 34% of approvals were split fairly evenly between cash only (20%), and cash & supply (14%). The majority (81%) of cash approvals were made in WPRO, and the majority of supply only approvals (85%) were split between AFRO (47%) and SEARO (38%). SEARO received the vast majority of cash & supply approvals (62%).

Annex 2 provides details of trends in INS approvals and disbursements over time, proportion of total INS approvals/ disbursements by WHO region to date, average INS disbursements by country for each of the regions, and distribution of total INS disbursements among the 71 recipient countries.

The annex also includes a discussion of previous evaluation findings.

3.3. Introduction of safety policies/ plans/ budgets

The first area of ‘results’ that we examine under the INS program is the introduction of safety policies/ plans/ budgets by the GAVI countries.

3.3.1. Quantitative analysis

Our analysis here is based on the data collected in the WHO-UNICEF JRFs.\(^{21,22}\) We have analysed five indicators related to injection safety policy:

- whether a line item was included in the national budget for purchase of injection supplies for routine immunisations;
- whether the country had an activity workplan for immunisation safety;
- whether the country had an activity workplan for waste management;
- whether the country had a policy for disposal; and
- whether the country carried out monitoring for immunisation safety.

Country data for each of these indicators is binary in nature i.e. countries respond with a ‘yes’ or a ‘no’ to each of these indicators in each year. Owing to the poor quality of data in the JRFs (e.g. incomplete data for countries\(^{23}\), inconsistent data between years for countries, etc.\(^{24}\)), we have

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\(^{22}\) The JRF data covers a total of 129 wide-ranging indicators, and are provided for 192 countries over the period 2000-08.

\(^{23}\) A large proportion of data is missing (51% of all observations for our indicators of interest), or there are blank responses or, in some cases, poorly coded responses. We do not make any attempt to interpolate these missing values, and instead highlight where analysis is based on a small number of responses.

\(^{24}\) For instance, in the three years before its INS support began, Bhutan reported having a line item in the national budget for injection safety supplies in 2000 and 2002, but not in 2001. Rather than try to form a definitive judgement for each country based on such data (which would run the risk of being arbitrary), we instead calculate
followed an approach of averaging the country’s response in each of the three periods of: (i) before; (ii) during; and (iii) after GAVI INS support. This approach helps ensure that: (i) on average, the ‘correct’ response/status of a country is picked up; and (ii) maximum observations are included in the analysis (as otherwise we would have to exclude countries with incomplete/inconsistent data).

There are some additional caveats to our analysis, due to the quality of the data included in the JRFs:

- We note that the data is self-reported, and that there are no alternative data sources that can be used to verify the data.
- Our approach is biased by the period covered by the data: 2000-08. Thus the start year for the period ‘before GAVI INS support’ is 2000, and the end year for the period ‘after GAVI support’ in 2008 for all countries.
- Where we generate comparisons across time based on periods before, during, and after INS support, we include only countries with observations in all three periods.

We look at trends in these indicators in the years before, during and after the period of support to assess country-level results for the INS Phase I and Phase II countries (see Table 3.3 below). Note that the percentage figures in each cell denote the ‘proportion of years’ where the countries included in the sample (number denoted in parenthesis) respond with a ‘yes’ to the indicator. Although this figure does not denote the proportion of countries per se, it is representative of the extent of policy/budget/plan change over the period concerned. Note that the percentages for each period/indicator are averages across all countries and years in that period.

the average proportion of years in which countries report a particular policy, over all countries and years for which we have data.
Table 3.3: Proportion of years in which INS countries implemented injection safety policies (2000-08)25

<table>
<thead>
<tr>
<th>Period</th>
<th>Line item in national budget</th>
<th>Workplan for injection safety</th>
<th>Activity plan for waste management</th>
<th>Policy for disposal</th>
<th>Monitoring for imm. Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I countries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before support</td>
<td>63% (57)</td>
<td>71% (57)</td>
<td>n/a</td>
<td>57% (12)</td>
<td>46% (58)</td>
</tr>
<tr>
<td>During support</td>
<td>61% (57)</td>
<td>91% (57)</td>
<td>n/a</td>
<td>100% (12)</td>
<td>63% (58)</td>
</tr>
<tr>
<td>After support</td>
<td>74% (57)</td>
<td>90% (57)</td>
<td>n/a</td>
<td>81% (12)</td>
<td>74% (58)</td>
</tr>
<tr>
<td>Phase II countries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before support</td>
<td>78% (6)</td>
<td>84% (6)</td>
<td>80% (5)</td>
<td>100% (3)</td>
<td>66% (6)</td>
</tr>
<tr>
<td>During support</td>
<td>89% (6)</td>
<td>94% (6)</td>
<td>80% (5)</td>
<td>100% (3)</td>
<td>78% (6)</td>
</tr>
<tr>
<td>After support</td>
<td>100% (6)</td>
<td>83% (6)</td>
<td>60% (5)</td>
<td>100% (3)</td>
<td>67% (6)</td>
</tr>
</tbody>
</table>

Source: WHO/UNICEF JRF data.

The evidence for Phase II countries is mixed:

- The proportion of years in which countries had a line item in the national budget for purchase of injection supplies for routine immunisation rose (from 78% before INS support to 100% after).

- However, the proportion of years in which countries had an activity workplan and carried out monitoring for injection safety saw only a temporary boost during the support period, before falling back to pre-support levels.

- The proportion of years in which countries had an activity workplan for waste management fell in the period after INS support.

In contrast, for the Phase I countries, there was an improvement in all four policy indicators for which data was available from the period before INS support to the period after. Overall, the data suggests that the impact on policy of Phase II of INS support may have been slightly less successful than the impact in Phase I. However, given the few countries/ data points for Phase II, and the general limitations of the JRF data, we do not put too much emphasis on this comparison.

3.3.2. Country visits

Country visits were conducted in Bangladesh, Bolivia, Mali, Nigeria and Uzbekistan between April and June 2010. Feedback from country visits suggests the positive influence of GAVI INS support in the introduction, strengthening and implementation of injection safety policies and practices.

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25 Figures for INS countries in this table are based only on countries which provided data for all three periods - 'Before', 'During' and 'After' - for the question concerned. The number of countries included in the sample for each question is provided in brackets.

Figures for each period are averages across all years in that period for which countries provided data.

Missing data points are excluded from this analysis - we do not attempt to interpolate the missing values.

The average figures presented are unweighted, as this analysis is done at the country level. We do not adjust the averages, for example, to reflect population differences between countries.
Table 3.4: Country visit feedback on introduction of safety policies/plans/budgets

<table>
<thead>
<tr>
<th>Country</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>GAVI is credited to be instrumental in the introduction of safety policies and practices in the country. Prior to 2004, Bangladesh used glass syringes which had to be sterilised and were more difficult/expensive to transport. A national policy on injection safety was approved by the Cabinet in 2004. We understand that this was a condition laid down by GAVI for approval of Bangladesh's application for INS support.</td>
</tr>
<tr>
<td>Bolivia</td>
<td>The INS window was important in raising awareness of the importance of safety injections in the country. Although the country was already moving in this direction, the INS window added impetus to the process. However, there is no specific information on GAVI's influence on safety policies in the country.</td>
</tr>
<tr>
<td>Mali</td>
<td>While GAVI did not play a role in the development of the policy per se, its implementation was facilitated through the INS support.</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Nigeria's injection safety policy specified AD syringe use before INS support began, but there was minimal uptake in the routine immunisation sector. The primary impact of INS support has been in facilitating uptake in line with existing policy.</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>One of the key aspects of the added value of GAVI INS support to the country was in the implementation of an overall government policy on the safe use of injections in the country (although as mentioned in the section below, it did not continue the use of AD syringes after GAVI support). We understand that in 2001, the government decreed safe injection use across the health system; however, the actual implementation of this decree was supported by the introduction of GAVI INS support.</td>
</tr>
</tbody>
</table>

3.3.3. Conclusion

Analysis of JRF data suggests that GAVI INS has had a positive impact on policy indicators. Safety policy impact in Phase II support countries may have been slightly less successful than the impact in Phase I. However, we note the caveats of few data points for Phase II, and the general limitations of the JRF data.

Attribution to GAVI is difficult even where a safety policy was introduced during the INS funding period. However, the country visits suggest that GAVI INS has been instrumental in the introduction and/or strengthening of injection safety policies in some countries.

3.4. Uptake of safety equipment and sustained use after GAVI support

We review here the results of the INS program in terms of country uptake of AD syringes and safety boxes, and related to this, whether countries sustained the use of safety equipment after GAVI support. Our analysis is based on the WHO-UNICEF JRF database, and the same caveats regarding the data quality/reliability, as mentioned in Section 3.3 above, apply.
3.4.1. Quantitative analysis

We have analysed three indicators related to uptake of safety equipment, again looking at trends in these indicators in the years before, during, and after the period of support to assess country-level results. The relevant indicators are:

- whether the country reported using AD syringes for routine immunisations;26
- the proportion of districts supplied with sufficient numbers of AD syringes; and
- whether the country reported using non-AD disposables.

For details on the methodology and related caveats, please refer Section 3.3.1 above.

Table 3.5 below summarises the results for the INS Phase I and Phase II countries.

Table 3.5: Proportion of years in which INS countries used safety equipment (2000-08)27

<table>
<thead>
<tr>
<th>Period</th>
<th>Used AD syringes for routine immunisation</th>
<th>% districts supplied with sufficient AD syringes</th>
<th>Used syringes for routine immunisation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase I countries</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before support</td>
<td>97% (50)</td>
<td>98% (20)</td>
<td>88% (39)</td>
</tr>
<tr>
<td>During support</td>
<td>99% (50)</td>
<td>99% (20)</td>
<td>51% (39)</td>
</tr>
<tr>
<td>After support</td>
<td>99% (50)</td>
<td>100% (20)</td>
<td>26% (39)</td>
</tr>
<tr>
<td><strong>Phase II countries</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before support</td>
<td>85% (6)</td>
<td>68% (3)</td>
<td>86% (6)</td>
</tr>
<tr>
<td>During support</td>
<td>88% (6)</td>
<td>100% (3)</td>
<td>40% (6)</td>
</tr>
<tr>
<td>After support</td>
<td>100% (6)</td>
<td>100% (3)</td>
<td>33% (6)</td>
</tr>
</tbody>
</table>

Source: WHO/UNICEF JRF data.

The evidence for the Phase II countries is unambiguous: all three indicators show an improvement. The proportion of years in which countries used AD syringes rose from 85% to 100%, and the proportion of years in which countries with districts supplied with sufficient AD syringes reached 100%. At the same time, the proportion of years in which countries using non-AD disposables fell from 86% to 33%. The third of these indicators indicates a large improvement.

The evidence for the Phase I countries is also clear, with all three uptake indicators showing an improvement from the period before INS support to the period after. In terms of their impact on uptake, the two phases appear similarly successful, although Phase II achieved comparable end results from a worse starting position in terms of AD syringe use.

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26 This does not imply that a country uses only AD syringes for immunisation; the indicator just shows that a country answering ‘yes’ on this question implies that it uses AD syringes (could be amongst other types of syringes).
27 Figures for INS countries in this table are based only on countries which provided data for all three periods - 'Before', 'During' and 'After' - for the question concerned. The number of countries included in the sample for each question is provided in brackets.
28 i.e. not AD syringes
A similar analysis by the WHO compares post-support JRF results with pre-support Injection Safety Assessment Reports (completed by 42 of the 71 INS countries). It confirms that uptake of AD syringes (for immunisation and therapeutic use) and safety boxes increased sharply, and safety box shortages have fallen.\(^29\)

### 3.4.2. Review of documentation - APR analysis

62 countries provided some information on sustainability in use of safety equipment through their 2008 APRs.\(^30\) We do not present detailed analysis here, as the extent of information provided was minimal. However, we can provide brief summary points:

- All country reports implied that use of safety equipment had continued in 2008, after GAVI INS support had ended. However, in one case (Guinea-Bissau), this was only possible due to utilisation of leftover stocks from the previous year.
- Most reports (76\%) did not comment in detail on the extent of safety equipment use. Among those that did comment, a greater proportion (15\%) reported complete use of safety equipment rather than incomplete or partial use (10\%).

### 3.4.3. EPI manager survey

The EPI manager survey posed the question ‘Do Auto Disable (AD) syringes and related safety equipment continue to be used in your country for vaccines supported by GAVI earlier (i.e. after GAVI INS support has ended)?’

All of the 19 countries that responded to the question noted continued use of safety equipment after GAVI support (eight of them reported use of government funding), while one country noted that continued use is subject to availability of necessary funding.\(^31\)

Therefore, the limited evidence from the EPI manager survey suggests sustained use of safety equipment after GAVI support.

### 3.4.4. Structured interviews

The INS program is widely recognised as having influenced the uptake of safety equipment in countries, by stakeholders, including the Regional Working Groups, GAVI partners, and Board members. On account of GAVI, a number of countries have introduced safety equipment in their routine immunisation programs; and countries that already used AD syringes have expanded their use to all routine immunisation programs.

### 3.4.5. Country visits

Feedback from country visits suggests the influence of GAVI INS support in the increased uptake of safety equipment.

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\(^29\) Based on information provided by WHO injections safety officer.

\(^30\) Two countries did not provide this information (Azerbaijan and Turkmenistan), and we do not analyse the results for the seven Phase II INS countries, for whom support was still provided in 2008.

\(^31\) A total of 23 responses were received to the EPI Manager survey. However for this question in particular, four of the responses were blank.
Table 3.6: Country visit feedback on uptake of safety equipment

<table>
<thead>
<tr>
<th>Country</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>GAVI is said to have played a major role in increasing uptake of safety equipment across routine immunisation programs, not just for GAVI vaccines. After GAVI support, Bangladesh not only sustained the use of safety equipment but also developed a local manufacturer for the same. Since GAVI INS support ended in 2006, AD syringes and safety boxes were continued to be used at health facilities across the country. EPI has been procuring safety material from an existing local manufacturing company, JMI Bangla, which was identified with technical assistance from WHO.</td>
</tr>
<tr>
<td>Bolivia</td>
<td>EPI officials believe that without INS, the country would not have fully implemented safety injections process in such a short time. In other areas, the progress to implement injection safety procedures has been slower. Immunisation is the only area where there has been full implementation.</td>
</tr>
<tr>
<td>Mali</td>
<td>While GAVI did not play a role in the development of the policy per se, its implementation was facilitated through the INS support. Mali also sees continued use of AD syringes for routine immunisation after GAVI support, where government funds safety equipment for traditional vaccines and GAVI continues to provide safety equipment for yellow fever and pentavalent vaccines through its bundled support approach.</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Nigeria’s wide uptake of safety equipment began only after GAVU INS support. AD syringe use is now established in the routine immunisation sector. GAVI INS support to Nigeria covers the period 2008-10. As such the issue of sustainability remains to be seen, however government feedback during the visit suggested that it expects to continue funding and using safety equipment once GAVI support ends.</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>The experience of Uzbekistan is different from the other four field visit countries, in that it is the only country that has not continued the use of AD syringes in its routine immunisation sector (that is, apart from the bundled support provided for GAVI funded vaccines). This is on account of the cheaper disposable (i.e. not AD) syringes, manufactured locally. Safety boxes however continue to be used.</td>
</tr>
</tbody>
</table>

3.4.6. Conclusion

There is clear evidence of the take up of safety equipment in both the INS Phase I and Phase II I countries, reflected in the increase of all three JRF uptake indicators (from the period before GAVI INS support to period after), and findings of a WHO analysis. Interview and country visits feedback corroborate the same. The general consensus seems to that where injection safety policies and practices did not exist, GAVI’s INS program was instrumental in its introduction and awareness building. Where countries already had this in place, GAVI facilitated its wider usage in routine immunisation.

This has been achieved in the context of AD syringes costing slightly more than regular disposable (i.e. not AD) syringes (except in Uzbekistan where disposable syringes are

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32 Bangladesh is one of the two GAVI-eligible countries (the other being India) that successfully produces AD syringes locally, following the end of GAVI INS support.
manufactured locally), suggesting that GAVI INS support has been successful in demonstrating the value of the safety equipment to countries.

Also, evidence consistently points towards the sustained use of AD syringes and safety equipment after the end of GAVI INS support (except in Uzbekistan, as mentioned above). In countries that are currently receiving GAVI INS support, the governments expect to continue to use safety equipment once support ends.

3.5. Sustainability of funding for safety equipment

This section examines if countries have sustained the funding for AD syringes and safety boxes (either through own or other donor funds), post GAVI support.

3.5.1. Review of documentation: APR information

We examine the financial sustainability of safety equipment after GAVI INS support has ended. We note that some countries continue to receive safety equipment from GAVI through the ‘bundled approach’ for vaccines supported through the NVS program.

The analysis is based on information provided in the 2008 GAVI APRs. To maintain consistency with the previous INS evaluation, we follow their approach of classifying countries into one of three categories:

- High sustainability countries – safety equipment is fully government funded;
- Medium sustainability countries – safety equipment is funded via a mixture of government and donor support; and
- Low sustainability countries – safety equipment is funded entirely by donors.

These results should be interpreted with caution, given the following data caveats:

- In many cases, the data provided in the APRs does not clearly state whether the safety equipment is being funded at present, and within this, whether it is being funded mostly through government or donor resources – and hence we have had to use our judgment in concluding the situation for these countries.
- In some cases, the required information is not available in the 2008 APR, and so where possible and appropriate, we have used information from earlier APRs.
- Although all countries for which we have information do refer to continued use of safety equipment, we are generally unable to determine from the APRs the precise extent of usage. Hence, where we have classified a country as “High” sustainability, it does not necessarily imply that safety equipment is used for 100% of immunisation injections.

33 http://www.unicef.org/supply/index_vaccine_safety.html. AD syringes, as per the UNICEF procurement, cost about 2 cents more per unit. The total cost differential depends on the volumes purchased by countries.

34 GAVI supplies safety equipment bundled with vaccines funded through NVS. If a country receives safety equipment in this way, we do not record it as donor funding for safety equipment for the purposes of INS analysis.

35 In order to improve robustness, two team members have compiled this information from the APRs independently and the conclusions have been cross-checked for consistency.
Table 3.7 presents our findings on sustainability of funding for safety supplies after GAVI support has ended. 56 of the 59 Phase I countries and six of the 13 Phase II countries are included.\textsuperscript{36}

<table>
<thead>
<tr>
<th>Sustainability</th>
<th>Phase I countries</th>
<th>Phase II countries</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>65%</td>
<td>67%</td>
<td>66%</td>
</tr>
<tr>
<td>Medium</td>
<td>13%</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>Low</td>
<td>22%</td>
<td>33%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Source: Country APRs

The results are similar for Phase I and Phase II countries. For both groups, a majority of countries – 65% for Phase I countries and 67% for Phase II – reported that the national government was the sole source of funding for safety supplies (i.e. High sustainability). Of the countries that reported receiving some donor funding, most reported exclusive reliance on donors.

Overall, the results are positive, suggesting that 100% of the countries (for which data is available/ GAVI support has ended) have been able to sustain funding for safety equipment – through governments or other donors. However, there remains scope for some governments to self-fund the safety equipment – as can be seen from the table, while more than half of the examined INS countries (Phase I and II total) did transition to full government funding, and 77% provided some government funding, 23% remained wholly reliant on donor support. This proportion was actually higher for the Phase II countries – though the sample size is very low – suggesting that the Phase I and II INS countries broadly achieved similar results on sustainability.

We have also analysed briefly the experience of countries over time, to determine whether there are any trends in sustainability. This analysis is significantly affected by missing data, and so we do not present detailed results here (see Annex 2 for full tables of results). However, we simply note that (in line with the conclusions from the earlier INS Evaluation) countries rarely transition from one sustainability rating to another. If a country is unable to provide government funding immediately on completion of INS support, it is highly unlikely to be able to do so in the few years after.

3.5.2. Review of documentation: comprehensive Multi Year Plan (cMYP) information

Data from 42 countries’ cMYPs indicates that average planned expenditure per child on injection supplies is set to rise, from $0.58 in the first year of plans to $1.16 in the final year.\textsuperscript{37} However, by the final year of the plans, only 58% of this expenditure is backed by secure financing, with a further 32% backed by probable financing. The forecasted funding gap is therefore 10% if all sources of finance are included. (Note that for routine immunisation as a whole (i.e. vaccines,

\textsuperscript{36} Of the Phase I countries, insufficient data was available for Azerbaijan, Kyrgyzstan and Turkmenistan. Seven of the Phase II countries (Bosnia & Herzegovina, Cote d’Ivoire, Cuba, Liberia, Madagascar, Malawi and Nigeria) were due to complete INS support in 2008 or later, and are excluded from this analysis.

\textsuperscript{37} This is based on the cMYP information provided by countries, and has not been analysed/ checked by us.
injection supplies, and immunisation systems-related expenditure); the total funding gap is 23% in the final year of the plans).

This funding gap is concentrated in the four EURO countries for which we have data (Armenia, Kyrgyzstan, Moldova and Tajikistan). In these countries, forecasted GAVI finance falls to near zero from the fourth plan year onwards, and is only partially replaced by government finance.

Whilst this is futuristic, it shows that INS sustainability could become an issue, unless budgeted for by the government (from its own finances or through other donors).

3.5.3. Country visits

Feedback from country visits feedback suggests continued funding of the safety equipment (disposable non-AD syringes in case of Uzbekistan) after the end of GAVI support, mainly through government funding.

Table 3.8: Country visits feedback on sustainability for funding of safety equipment

<table>
<thead>
<tr>
<th>Country</th>
<th>Sustainable?</th>
<th>High/ Medium/ Low?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>Yes</td>
<td>High</td>
</tr>
<tr>
<td>Bolivia</td>
<td>Yes</td>
<td>High</td>
</tr>
<tr>
<td>Mali</td>
<td>Yes</td>
<td>High</td>
</tr>
<tr>
<td>Nigeria</td>
<td>n/a</td>
<td>n/a (see text below)</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>No</td>
<td>n/a (see text below)</td>
</tr>
</tbody>
</table>

Uzbekistan does not use AD syringes in its routine immunisation sector, however, the funding of disposable non-AD syringes is fully supported by the government. Safety boxes are used at present (since the start of GAVI support) and are again fully funded by the government.

Consultees informed us that the choice of disposable syringes was primarily driven by the lower price of these as compared to the AD syringes and the fact that they are produced locally - many consultees clearly noted that if the price of AD syringes was comparable, they would in fact prefer to use them instead of the disposable non-AD syringes. Local production also implies that these can be paid for in local currency, from budgetary allocations, and do not face the difficulty of foreign exchange convertibility – a key issue for Uzbekistan in procurement of commodities produced overseas.

Funding gaps are 65% on average in Year 6 in those four EURO countries. This compares with 9% (AFRO), 0% (EMRO), and 17% (SEARO). The defining feature of the EURO region is diminishing planned finance from GAVI combined with low planned government finance. In the other regions, government finance is higher (SEARO) or GAVI finance is sustained (AFRO/ EMRO), and planned expenditure is lower.

Bolivia had a $0.5m underspend in INS grants. We understand that this was due to a miscommunication, which meant that the Government had itself funded the purchase of AD syringes in the period 2005 onwards (highlighting its commitment to the use of ADs) – which duplicated GAVI funding. Bolivia has requested (through PAHO) that GAVI allow it to redeploy these resources to invest in cold chain capacity (to purchase of a number of refrigerated lorries for the regional level).

Nigeria is still receiving GAVI INS funding, but stakeholders said they would continue to fund safety equipment after GAVI terminated support.

We understand that AD syringes are priced at around $0.57/ unit compared to $0.05-0.06/ unit for disposable (non-AD) syringes.
3.5.4. Structured interviews

Stakeholders highlight that the sustained financing of safety equipment by countries after the end of GAVI INS support is a key area of GAVI value addition. GAVI’s introduction and demonstration of benefits of INS have motivated countries to sustain funding beyond the period of its support.

3.5.5. Conclusion

The financial sustainability analysis based on APR information, country visits, and interviews all point to sustained financing of safety equipment after GAVI support. In fact, 100% of the countries for which APR data is available/ GAVI funding has been completed have been able to sustain funding for safety equipment – through government budget or through other donors. However, there is scope for some country governments to be more self-reliant in terms of funding safety equipment (rather than rely on other donors).

3.6. Impact on health waste management

This section examines the health waste management/safe disposal policies and practices in the 13 Phase II INS countries, and the extent to which GAVI may have had an impact (positive or negative) on these.

3.6.1. Review of documentation

We draw on the WHO checklist for action at the national and local level with respect to safe healthcare waste management. The checklist lays down four broad areas:\footnote{http://www.gavialliance.org/resources/safety_memoire2.pdf}

i. **National policy for safe healthcare waste management:** designation of responsible authority, regulatory framework and guidelines, integration into overall waste management plan, monitoring and evaluation.

ii. **Comprehensive system of healthcare waste management:** assignment of waste management responsibilities to personnel, allocation of resources, minimisation of waste, segregation of waste, safe collection, handling and storage, safe treatment and disposal.

iii. **Awareness and training:** inclusion of waste management in the curricula of healthcare personnel, national training package, train the trainers program, education on health risks, education on safe practices.

iv. **Selection of options for management of healthcare waste:** review of available options, checks of safety and environment-friendliness, workers’ safety, evaluation of sustainability, assessment of acceptability, monitoring of safety and efficiency.

Table 3.9 presents the number of GAVI INS Phase II countries that have reported positive steps/ good practices with respect to the WHO checklist, and also the number of countries that have reported problems pertaining to the four action areas. This analysis involves our judgement in assessing the information presented by the countries in the APRs regarding their sharps waste.
management, against the good practices laid down under the WHO checklist above.\textsuperscript{43} The analysis is also impacted by the poor quality of information included in the country APRs.

Overall, while only two of the 13 countries report to have a national policy for medical waste management (Madagascar, Moldova), positive developments in this area have been reported by a number of countries. In particular, countries have performed well with respect to awareness and training on waste management. A greater number of countries have reported issues in developing systems and financing safe disposal methods (e.g. incinerators). However, it is difficult to attribute any of these practices to GAVI, based on the APR data.

Table 3.9: Status of GAVI INS Phase II countries with respect to action areas relating to waste management

<table>
<thead>
<tr>
<th>Action areas</th>
<th>Number of countries that have adopted good practices</th>
<th>Number of countries reporting problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>National policy for safe healthcare waste management</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Comprehensive system of healthcare waste management</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Awareness and training</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Selection of options for the management of health care waste</td>
<td>4</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: INS Phase II Countries’ APRs

Table 4 in Annex 2 presents a sample of the positive steps taken by these countries and some areas that require improvement, as reported in the APRs.

We also examine separately the two Phase II countries – Moldova and Liberia – that have received INS support in cash,\textsuperscript{44} and if any of these grant funds have been invested in safe disposal.

- Liberia is reported to have spent over half of the total INS cash support on activities relating to sharps waste management.
- On the other hand, about 3.7% of Moldova’s support was spent on such activities.

Table 5 in Annex 2 provides details of the use of funds for sharps waste management by the two countries and associated expenditures. The funds have mainly been used for capacity-building in terms of training, infrastructure etc.

3.6.2. EPI manager survey

The question in the EPI manager survey was ‘Please describe the impact, if any, of GAVI INS on safe disposal/waste management’.

Most countries noted that safety boxes are used to store injection waste, and that the waste is disposed by burning and burying. A limited number of countries (7 of 21 countries that responded to the question on waste management) use incinerators where they are available. Of

\textsuperscript{43} Where countries have reported both good practices and some problems, we have made an informed judgement as to whether the response is positive or problematic overall.

\textsuperscript{44} Total INS cash support received by Moldova was $0.15m, and that by Liberia was $0.27m.
these, the EPI manager in Laos reported that incinerators were available in every province of the country.

In general, EPI managers acknowledge the positive impact of GAVI INS on the environment through the introduction of safe waste disposal practices (in relation to disposal methods that were previously in practice in some countries e.g. throwing used syringes in rivers). The program has resulted in the reduction of contamination due to reuse of needles and potential safety hazard associated with improper treatment of sharps waste. Incinerators have been constructed and are in use, where available. However, it is highlighted that burning and burying methods of disposal are still common practice, and sharps containers/ safety boxes are not available in adequate quantities at all health centres.

Table 9 in Annex 2 summarises the responses on the impact of GAVI INS on safe disposal and waste management.

3.6.3. Country visits

During country visits, health waste management was a highlighted as an important concern, more so given the likely higher burden on waste management with the planned introduction of the pneumococcal and rotavirus vaccines. Lack of incinerators and ‘open-air burn and bury’ practices are cited as common problems.

### Table 3.10: Country visits feedback on health waste management

<table>
<thead>
<tr>
<th>Country</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bangladesh</strong></td>
<td>Bangladesh faces issues with sharps waste management and the Government is reported to require GAVI’s support in this area (APR 2008). The final disposal of waste is unsatisfactory owing to a lack of incinerators and burning and burying still being commonly practiced.</td>
</tr>
<tr>
<td><strong>Bolivia</strong></td>
<td>According to the APR, final disposal of Bolivia waste is still not satisfactory. Waste is buried in specified controlled sites in urban areas, and burnt and buried in minor urban and rural areas.</td>
</tr>
<tr>
<td><strong>Mali</strong></td>
<td>Safe disposal of medical waste continues to be a problem in Mali. It was highlighted in the field visit that Mali does not have enough incinerators for waste management. In addition, Mali’s APR for 2007 also notes some problems regarding the poor quality of the incinerators.</td>
</tr>
<tr>
<td><strong>Nigeria</strong></td>
<td>Waste management at most points of delivery in Nigeria is limited to the use of safety boxes, and GAVI has contributed to the uptake of these. There remain significant challenges to waste safe disposal (“burn and bury” approach has been a longstanding feature of official injection safety policy).</td>
</tr>
<tr>
<td><strong>Uzbekistan</strong></td>
<td>Challenges to safe disposal (incineration) persist in some, more remote, areas in the country. Larger centres and those in towns appear to have operational systems in place – either at their premises (if they are outside main towns) or collection and disposal services in urban centres by the coordinated action of central authorities.</td>
</tr>
</tbody>
</table>
3.6.4. Conclusion

The 13 GAVI INS Phase II countries appear to have made some progress towards sharps waste management, during and after the period of GAVI support – but this remains a major area of concern. While there is increased awareness of sharps waste management, and several countries have put in place health waste management policies/guidelines, inadequate resources and financing constraints have slowed down actual implementation of safe disposal plans. Country visits and the survey responses also highlight this as an issue across all GAVI INS countries.

3.7. Impact on wider health systems

This section evaluates if GAVI’s INS support has influenced or impacted safety practices in the wider country health systems, outside of the vaccines funded by GAVI.

3.7.1. EPI manager survey

The EPI manager survey poses the question, ‘Please describe the impact, if any, of GAVI INS on injection safety policies/practices in the broader immunisation and health systems in your country.’

A limited number of respondents acknowledge the contribution of GAVI in the adoption/strengthening of injection safety policies and practices in the broader immunisation and health systems in their country. While some countries (e.g. Malawi) report that disposable (non-AD) syringes continue to be used in other health sectors, EPI managers in Uganda and Nepal note that GAVI INS was catalytic in the introduction of AD syringes in the curative health sector as well. In Ethiopia, the introduction of safety boxes through GAVI INS has improved waste management in the broader health sector.

GAVI is considered to have spread awareness regarding the importance of injection safety among policy makers, and enabled the training of health personnel. However, AD syringes are still not typically used in the broader health sector and it has been pointed out that GAVI should do more in terms of advocacy for the introduction of injection safety policies/safety equipment in curative care and family planning programs.

Table 10 in Annex 2 summarises the responses on the impact of GAVI INS on injection safety policies/practices in the broader immunisation and health systems.

3.7.2. Country visits

Feedback from the visits suggests that GAVI INS has had an influence on the gradual introduction and adoption of injection safety policies and practices on the wider health systems – non-GAVI supported vaccines, curative care, family planning and HIV/AIDS programs. Through the INS program, GAVI has enabled changes in health worker attitude and overall awareness with respect to injection safety.
Table 3.11: Country visits feedback on impact on wider health systems

<table>
<thead>
<tr>
<th>Country</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>In Bangladesh, stakeholders suggest that the introduction and adoption of injection safety policies and practices for immunisation would not have happened without GAVI. The national policy on injection safety states that AD syringes are to be used in all EPI programs in the country, i.e. not just GAVI-supported vaccines. Attempts are being made to gradually introduce the use of the safety equipment in curative care as well. According to government officials and GAVI’s implementing partners, injection safety practices are also observed in family planning and HIV/AIDS programs.</td>
</tr>
<tr>
<td>Bolivia</td>
<td>Immunisation is the only area where there has been full implementation of injection safety procedures – in other areas, progress has been much slower.</td>
</tr>
<tr>
<td>Mali</td>
<td>In Mali, GAVI INS support played a catalytic role in encouraging the widespread adoption of AD syringes and safety boxes in other health sectors such as curative health, etc. Interviewees informed us that AD syringes and safety boxes are being used in both the public and private sectors, with the latter being an important provider of curative health support.</td>
</tr>
<tr>
<td>Nigeria</td>
<td>In Nigeria, there is little evidence that INS has influenced the spread of safety practices to other sectors (such as the curative health).</td>
</tr>
</tbody>
</table>
| Uzbekistan | Stakeholder consultations in Uzbekistan highlighted two key aspects of the value add of GAVI INS support:  
  - All stakeholders noted that GAVI INS support had led to a discernable increase in overall awareness on safety and change in attitude / working practice among the medical staff. As a result, there has been a significant reduction in problems associated with re-use of syringes, pointing towards a system wide improvement in the correct use / safety of injections.  
  - We also understand that GAVI INS support has played a part in promoting a nationwide certification program for vaccinators (i.e. medical staff that administer vaccines). Relevant medical staff are trained and certified (three day training course followed by an exam, which is undertaken on an annual basis) in immunisation issues more generally, and injection safety, including use and disposal of syringes. |

3.7.3. Review of documentation – APR analysis

We assess the impact of the GAVI INS program on the broader health sector in the 13 Phase II INS countries based on the information contained in the APRs. Some of these countries have reported adoption of injection safety policies during the period of GAVI support across all immunisation activities in the country (not just GAVI supported vaccines). For example, Moldova reported the use of GAVI INS cash support for the financing of immunisation campaigns against the mumps epidemic in 2008. Other effects on the health sector beyond immunisation are in the form of health worker training in waste disposal, behavioural changes in health staff, adoption of guidelines and initiation of plans for all hazardous medical waste, etc.
The table below characterises whether the wider INS impact in the 13 countries was in the area of (a) safety plans/policies, (b) safety practices/training, or (c) waste management.\textsuperscript{45} It also mentions the area of wider health systems outside of GAVI vaccines that have been impacted. Most of the wider health impact (beyond immunisation) has been seen in waste management.

\textbf{Table 3.12: INS impact on wider health systems}\textsuperscript{46}

<table>
<thead>
<tr>
<th>Country/ period of INS support</th>
<th>Safety plans/ policies</th>
<th>Safety practices/ training</th>
<th>Waste management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin (2005-07)</td>
<td>All injectible vaccines</td>
<td>Anti-measles, curative activities</td>
<td></td>
</tr>
<tr>
<td>Guinea Bissau (2005-07)</td>
<td></td>
<td>All new health centres</td>
<td></td>
</tr>
<tr>
<td>India (2005-07)</td>
<td></td>
<td>Routine immunisation/Primary Health Centres</td>
<td></td>
</tr>
<tr>
<td>Moldova (2005-07)</td>
<td>All immunisation</td>
<td>Lab support for all infectious diseases</td>
<td></td>
</tr>
<tr>
<td>Mongolia (2005-07)</td>
<td>All immunisation</td>
<td>All immunisation</td>
<td></td>
</tr>
<tr>
<td>Nicaragua (2005-07)</td>
<td>All immunisation</td>
<td>All immunisation</td>
<td></td>
</tr>
<tr>
<td>Bosnia (2006-08)</td>
<td></td>
<td>All immunisation</td>
<td></td>
</tr>
<tr>
<td>Liberia (2006-08)</td>
<td></td>
<td>EPI</td>
<td></td>
</tr>
<tr>
<td>Madagascar (2006-08)</td>
<td></td>
<td>HIV/ AIDS; District waste management</td>
<td></td>
</tr>
</tbody>
</table>

\textit{Source: Country APRs}

In general, most countries have reported some evidence of safety or waste management policies/practices in the national immunisation systems (rather than other areas of healthcare such as curative or therapeutic, or other diseases). Also, the below information is purely based on self-reported country APR data, and therefore the shading does not imply that 100\% of the safety/waste management needs have been met; rather it only suggests that INS safety practices might have had some level of influence for non-GAVI vaccines (although attribution to GAVI is not possible).

\textbf{3.7.4. Conclusion}

GAVI INS support generally appears to have influenced the adoption of injection safety policies across all immunisation activities (including non-GAVI vaccines) but less so in terms of broader healthcare. The impact on the broader health sector beyond routine immunisation is mainly limited to health worker training and awareness generation regarding the importance of injection safety among policy makers, health workers, and the community; and some areas of waste management (particularly for the INS Phase II countries).

\textsuperscript{45} Annex 1 (Table 6) presents a more detailed version of this table, setting out the specific areas of influence in wider country health systems.

\textsuperscript{46} This information for Cuba (2006-08), Malawi (2006-08), Cote d'Ivoire (2007-09), and Nigeria (2007-09) are not available in their APRs.
3.8. Trends in global prices and suppliers of safety equipment

In this section, we examine the results of GAVI INS in terms of the impact on the prices of and number of suppliers for the safety equipment.

3.8.1. Review of documentation

We have not repeated the analysis carried out by the JSI INS Evaluation, which extended to 2008 and addressed the issue of prices for safety equipment. Its key findings were:

- Demand for AD syringes has strengthened considerably since their introduction in the 1990s, and due to GAVI’s decision to procure and provide INS commodities.
- From 1992 to 2001, the weighted average price of an AD syringe fell from $0.13 to $0.06. This decrease predates GAVI INS support; since 2002, prices have been stable, and the evaluators conclude that GAVI has had little impact on prices.
- An increase in the number of suppliers has helped to reduce prices. The number of suppliers rose from a single supplier in 1992 to five suppliers of 0.5ml AD syringes, two suppliers of BCG AD syringes and two suppliers of safety boxes in 2005.

However, according to data supplied to us by UNICEF, despite the fall in AD syringe prices, they are still about two cents more expensive than regular disposable (non-AD) syringes. This suggests that countries perceive value in adopting AD syringes for routine immunisation, despite a higher price.

3.8.2. Country visits

Of the five field visit countries, only Bangladesh has a local safety equipment manufacturer – JMI Bangla (although JMI Bangla did not as such receive financial/ technical support from GAVI, it now supplies 100% of Bangladesh’s safety equipment needs). JMI Bangla supplies AD syringes at a price lower than that at which UNICEF was procuring syringes until 2006.

A case study on JMI Bangla is provided in the table below.

Table 3.13: JMI Bangla

| Established in 1991, JMI Bangla is a joint venture by JMI Bangla Pharma Co. Ltd. and a Korean firm, Myung International (Pvt.) Ltd. The firm started the production of AD syringes and safety boxes after GAVI INS support to Bangladesh ended in 2006. They are currently the only AD syringe manufacturers in the country. JMI Bangla entered into an agreement with the Government of Bangladesh in 2005 according to which the government committed to buy syringes from them for a period of five years, at a price controlled by the government. The technology for production has been licensed from Star Syringes UK. Their current capacity of production is close to 220 million pieces of AD syringes/year. They supply 100% of the safety equipment needs for all EPI vaccination in Bangladesh, and also export to countries such as Peru, Nepal, Bhutan and Pakistan. The price of syringes is Tk 6/piece ($0.09/piece) including VAT @ 1.5%. This is lower than the price at which UNICEF was procuring syringes until 2006 (Tk 6.6/piece i.e. $0.1/piece), notwithstanding inflation effects since 2006. The identification of this local manufacturer was supported by WHO that carried out a feasibility study to establish the firm’s capability of acquiring technology to produce AD syringes. Thus, while this cannot fully be attributed to

http://www.unicef.org/supply/index_vaccine_safety.html
GAVI, it did help sustain the use of safety equipment in Bangladesh after the end of GAVI INS at prices slightly lower than that of UNICEF.

Source: Visit to JMI Bangla

3.8.3. Conclusion

While AD syringe prices have shown a marked decline over the years, most of the price reduction pre-dates GAVI and cannot be attributed to it. GAVI’s key contribution in the area has been in terms of demand for AD syringes, through the procurement and supply of safety equipment to supported countries. In terms of suppliers of safety equipment in developing countries, Bangladesh is a good case in point. However, GAVI did not as such have a role in this supplier being established.

3.9. Comparison of safety policy and uptake in GAVI and non-GAVI countries

3.9.1. Review of documentation

We assess GAVI’s value-add in this area by comparing results for INS countries with other countries, based on the same set of JRF indicators introduced above in Sections 2.3 and 2.4 above. We compare the policy and uptake indicators for the 64 countries that have completed INS support (in the years after support ended only) with those for 46 GAVI ineligible low and lower-middle income countries. For details on the methodology and related caveats, please refer Section 3.3.1 above.

If the INS program has indeed added value, then we should see that in the years after INS support, the countries concerned achieve improved outcomes (both on the policy and uptake indicators) relative to other GAVI ineligible countries. This is to some extent what the JRF data suggests (see Tables 3.14 and 3.15 below), though the evidence is clearer for indicators reflecting uptake than for those reflecting policy.

48 Results are also presented for the five GAVI eligible countries which did not receive INS support, but are not discussed here as the sample size is small relative to the other groupings.
Table 3.14: Percentage of years where low and lower-middle income countries have a positive policy outcome (2000-08) 49 50

<table>
<thead>
<tr>
<th>Country category</th>
<th>Line item in national budget</th>
<th>Workplan for injection safety</th>
<th>Activity plan for waste management</th>
<th>Policy disposal</th>
<th>Monitoring for imm. Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAVI ineligible</td>
<td>83%</td>
<td>72%</td>
<td>65%</td>
<td>77%</td>
<td>78%</td>
</tr>
<tr>
<td>GAVI eligible, did not receive INS</td>
<td>76%</td>
<td>73%</td>
<td>57%</td>
<td>85%</td>
<td>39%</td>
</tr>
<tr>
<td>INS countries – Post-support</td>
<td>77%</td>
<td>89%</td>
<td>80%</td>
<td>89%</td>
<td>74%</td>
</tr>
<tr>
<td>Evidence of INS value add</td>
<td>X</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>X</td>
</tr>
</tbody>
</table>

Source: WHO/UNICEF JRF data.

As can be seen from the table above, the evidence is mixed for the policy variables. The post-INS countries were more likely than the GAVI ineligible low income countries to have an activity workplan for immunisation injection safety or waste management, and were more likely to have a policy regarding disposal. However, they were less likely to include a line item in the national budget for purchase of supplies or to carry out monitoring for immunisation safety.

Table 3.15 presents the indicators for uptake of AD syringes.

Table 3.15: Percentage of years where low and lower-middle income countries are using safety equipment (2000-08) 51

<table>
<thead>
<tr>
<th>Period</th>
<th>Used AD syringes for routine immunisation</th>
<th>% districts supplied with sufficient AD syringes</th>
<th>Used disposable syringes for routine immunisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAVI ineligible</td>
<td>72%</td>
<td>98%</td>
<td>86%</td>
</tr>
<tr>
<td>GAVI eligible, did not receive INS</td>
<td>97%</td>
<td>90%</td>
<td>70%</td>
</tr>
<tr>
<td>INS countries – Post-support</td>
<td>99%</td>
<td>99%</td>
<td>20%</td>
</tr>
<tr>
<td>Evidence of INS value add</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Source: WHO/UNICEF JRF data.

As can be seen from the table, uptake of AD syringes was far higher (99%) for the post-INS GAVI countries than for the GAVI ineligible low income countries (72%). Conversely, use of

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49 The underlying income classification is based on yearly World Bank categorisations. Bosnia-Herzegovina and Cuba were re-classified by the World Bank as upper-middle income countries in 2007 and 2007-08 respectively, but are included here in the lower-middle income category for all years.

50 Figures for 'INS countries – Post-support’ are averages across all post-INS support years for which countries provided data.

51 Missing data points are excluded from this analysis - we do not attempt to interpolate the missing values.

52 The average figures presented are un-weighted, as this analysis is done at the country level. We do not adjust the averages, for example, to reflect population differences between countries.

50 Note that for GAVI ineligible countries we have used the entire sample period for the data (2000-08), while for GAVI eligible countries post INS support, the average has been calculated only for the years after GAVI INS support ended. While this may create a negative bias for the GAVI ineligible countries (as the years before the mid year (2004) carry the same weight for example), given the poor quality of data and a number of missing values, we consider this as the most optimum approach.

51 For details on data and related caveats, please see section 3.3.1 above.

52 Non-AD.
non-AD disposables was lower (20%) for the post-INS GAVI countries than for the GAVI ineligible low income countries (86%).

This suggests that the INS program may have added more value in the area of uptake of AD syringes than in the area of injection safety policy, though this can only be a tentative conclusion based on the above evidence. Further, the JRF data does not imply any clear attribution of changes in uptake or safety policies to GAVI’s support – rather, it only suggests that these changes occurred during or after GAVI funding.

3.10. E-survey results

The previous sections examined GAVI’s results in terms of influencing safety and waste management policies and practices in countries. This section uses the e-survey responses to assess the GAVI value add in terms of whether the changes in safety and waste management practices since GAVI support can be attributed to INS funding.

The statement in the electronic survey was, ‘Improved injection safety practices and standards in GAVI countries can be attributed to its INS program’.

The e-survey feedback on the INS program is mainly positive. As shown in the figure below, a significant proportion (88%) of all adjusted respondents to this statement either agree or strongly agree. Close to 8% do not agree or disagree (neutral) and another 4% disagree with the statement. Table 7 in Annex 2 presents an examination of the electronic survey feedback by stakeholder category.

53 Note, however, that we also considered the performance of the post-INS countries relative to a group of 57 upper-middle income countries. The richer countries have a substantial advantage in terms of economic power, but the indicators we consider are better for the post-INS countries (both for the policy and uptake sets of indicators). Though we acknowledge there is limited value in this comparison, it does strengthen the conclusion that INS support has improved injection safety practices beyond what could have been achieved without any support.

54 Adjusted % is calculated after taking out the ‘not aware/ no view’ and the blank responses to the statement.
The contribution of GAVI INS to improved injection safety practices and standards in GAVI countries is also widely acknowledged in the qualitative feedback to the above survey statement. GAVI has been instrumental in the introduction and widespread use of AD syringes in a number of countries, and has enabled a greater focus on injection safety issues among policy makers. That said, a number of respondents have noted that the credit for sustainability and institutionalisation of safety practices is also due to country political commitment, local leadership, and other program initiatives.

It is however highlighted that more can be done in the area of waste management and to introduce safety practices in the broader health sector beyond immunisation.

Table 8 in Annex 2 presents the key themes of the qualitative feedback and corresponding frequency of responses.

3.11. Comparator analysis – MMIS

As part of assessing GAVI value add on INS, we reviewed if there are other donors in this area and how their focus/ approach to injection safety compares with GAVI.

Following the WHO, UNICEF and United Nations Population Fund (UNFPA) Joint Statement in 1999 on the use of AD syringes in immunisation services, and the formation of the Safe Injection Global Network (SIGN), an advocacy body; GAVI is the only donor that has funded the uptake and use of safe injection kit through its INS program (other than bundling safety equipment with the vaccines provided under its NVS program) - to the best of our knowledge. UNICEF has largely been a procurement agent for injection safety equipment, unless the country sources the kit locally/ on its own.
MMIS (Making Medical Injections Safer) is the only possible comparator to GAVI, although in the sector of HIV/ AIDS safety. It is a 5-year initiative launched in 2004 as a part of the US President’s Emergency Plan for AIDS Relief (PEPFAR). It focuses on safety practices for HIV/AIDS 11 countries in Africa and the Caribbean with high HIV prevalence - Botswana, Cote d'Ivoire, Ethiopia, Haiti, Kenya, Mozambique, Niger, Nigeria, Rwanda, South Africa, Tanzania and Uganda. However, unlike GAVI, MMIS support was not related to funding (supplies or cash) injection safety, but rather on: health care waste management; safe injection commodity management; monitoring and evaluation; and training and capacity building.

Annex 2 presents a detailed account of MMIS activities and results in its areas of focus, based on a review of documentation and drawing on some of the country MMIS reports. Overall, the conclusion is that GAVI’s influence and role in injection safety for immunisation is much wider than MMIS – both in terms of the number of countries funded, as well as its instrumental contribution to these countries’ introducing safety policies and practices in routine immunisation, and in select countries, in wider health systems. Therefore, it has demonstrated strong relative value add.

That said, MMIS has lessons to offer GAVI in terms of its results in the areas of safe disposal (for example, the proportion of MMIS surveyed health facilities in Mozambique showing satisfactory disposal of used sharps rose from 50% in 2005 to 94% in 2008), support in planning and pooled procurement of safety equipment by governments, and capacity building and training in injection safety standards and guidelines.

Feedback from GAVI partners suggests that the 12 countries that received MMIS support are now back to using regular syringes in their HIV/AIDS program, because the type of safety syringe used under the program was retractable syringes, which are more expensive relative to AD syringes.

3.12. Overall conclusions on SG1.1

‘What have been the results and value add of GAVI’s INS program at country and global levels?’

Our main findings from the INS evaluation are summarised below, along with our overall conclusions.

3.12.1. Summary

Table 3.16 below presents our conclusions by theme.

55 To promote safety equipment uptake, MMIS tries to mobilises additional donors to address injection device security, and supports advocacy at national and global levels for financing safety syringes and boxes and avoiding excessive donor dependence.
<table>
<thead>
<tr>
<th>Issue/ Theme</th>
<th>Findings</th>
<th>Robustness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction of safety policies/ plans/ budgets</td>
<td>JRF data analysis suggests that INS impact on safety policy is positive, but stronger impact for Phase I support countries (although Phase II countries are smaller in number). Where policy introduced, difficult to attribute to GAVI.</td>
<td>C</td>
</tr>
<tr>
<td>Safety equipment uptake and sustained use</td>
<td>All three JRF uptake indicators have improved for Phase I and II countries. Same outcome as per WHO analysis. All 19 countries that responded to the EPI manager survey question on sustained use of safety equipment noted continued use after GAVI support. Country visits confirmed the same.</td>
<td>B</td>
</tr>
<tr>
<td>Sustainability of funding for safety equipment</td>
<td>Majority of Phase I and II countries (&gt;65%) reported 'high sustainability', based on APRs. Consultations and country visits also suggest sustainability of funding.</td>
<td>B</td>
</tr>
<tr>
<td>Impact on safe disposal/ waste management</td>
<td>Remains an area of concern across most countries. Awareness of sharps safe disposal has gone up, but practices lag behind (especially use of incinerators), especially due to shortage of resources.</td>
<td>A</td>
</tr>
<tr>
<td>Impact on safety practices in the broader country health systems</td>
<td>Largely influenced safety policies, practices, and training for routine immunisation in Phase II countries, and to a more limited extent in wider health systems such as HIV/ AIDS, family planning, curative care etc. GAVI role difficult to attribute.</td>
<td>C</td>
</tr>
<tr>
<td>Trend in prices of ADs; Promotion of new safety equipment manufacturers, especially in developing countries</td>
<td>Prices have fallen over years (pre-dates GAVI) as number of suppliers has also increased. GAVI's demand is helpful but difficult to attribute to fall in prices.</td>
<td>B</td>
</tr>
<tr>
<td>Comparison of uptake of safety equipment in GAVI and non-GAVI eligible countries</td>
<td>INS program has added value in safety equipment uptake for GAVI countries compared to ineligible countries. But attribution to GAVI is difficult. Less conclusive evidence of added value for safety policy indicators.</td>
<td>C</td>
</tr>
<tr>
<td>Attribution of safety and waste management practices in country to GAVI support</td>
<td>Very positive feedback (88% agree/ strongly agree) from the e-survey and structured interviews on GAVI role in safety policy/practices, but less so for waste management.</td>
<td>B</td>
</tr>
</tbody>
</table>
### Evaluation question SG1.1: Results and value add of INS program at country and global levels.

<table>
<thead>
<tr>
<th>Issue/ Theme</th>
<th>Findings</th>
<th>Robustness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis of comparator MMIS</td>
<td>GAVI has demonstrated strong relative value add being the only INS donor in immunisation and compared to MMIS activities in HIV/ AIDS sector.</td>
<td>C Review of documentation</td>
</tr>
</tbody>
</table>

#### 3.12.2. Conclusions

The analysis conducted as a part of this evaluation strongly suggests that the INS program has been a success. The main area of INS value add has been GAVI’s role in introducing and accelerating uptake of AD syringes and safety boxes in countries. Another area of strong results is the sustained use and funding of safety equipment in routine immunisation after GAVI support. Our analysis of country APRs indicates that all countries that have completed INS funding by 2006 for which we have data\(^56\), have sustained the financing of safety equipment after the end of GAVI’s support. In addition, analysis of JRF data suggests that GAVI INS has had a positive impact on injection safety policy indicators (although attribution to GAVI is difficult).

These conclusions on GAVI’s added value are strengthened by qualitative feedback from the surveys, country visits, and structured interviews – in particular, there was unambiguous support (88% of respondents agree/ strongly agree) in the e-survey for attributing GAVI’s role in improving injection safety practices and standards in GAVI countries. Comparison of safety equipment uptake indicators in GAVI countries vis-à-vis GAVI ineligible low and lower-middle income countries highlights higher uptake in GAVI countries, also establishing its value add.

An area of concern that remains is injection safe disposal and waste management practices – that countries are resource constrained to address. GAVI has also not had much impact on price reduction in AD syringes – evidence suggests that whilst some positive gains have been made, they pre-date GAVI’s support. In addition, while GAVI has been instrumental in uptake of safety equipment for routine immunisation, its influence on broader health areas is more limited and less conclusive.

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\(^{56}\) 56 of the 59 Phase I countries and six of the 13 Phase II countries are included.
4. **SG 1.2: RESULTS AND ADDED VALUE OF HSS PROGRAM**

4.1. **Introduction**

The question here is ‘What have been the results and added value of GAVI’s HSS program at global and country level?’

4.1.1. **Scope of the evaluation question**

GAVI HSS funding as a percentage of country health expenditure and Official Development Assistance (ODA) flows is small and the program has been underway only for a short time (the first round of GAVI HSS countries were disbursed funds in April 2007). The recent HLSP evaluation of HSS notes that it is difficult to attribute any changes in outcomes to GAVI funding. Even at the time of the next planned evaluation in 2012, their view is that, at best, it would be possible to link HSS inputs to outputs rather than outcomes or impacts.

In that context, as set out in the Inception Report, we focus our assessment of HSS on the strategy, approach, processes and expected program results at country level. This is supplemented by a comparative analysis of the program vis-à-vis other HSS donors. Our evaluation scope thus covers:

- **Strategy and approach of GAVI HSS** in terms of its basic objectives, health sub-sector focus, criteria for provision of support, and whether GAVI’s HSS program relates specifically to immunisation versus broader health/ Maternal and Child Health (MCH) goals. We also look at the extent to which the program adheres to the principles of GAVI HSS such as predictability of funding, harmonisation with other donors’ HSS activities, etc.

- **Delivery model**, including the application process and requirements, level of involvement of GAVI partners and implementation structures, and types of activities funded (upstream/downstream). We also analyse the degree of alignment of GAVI HSS with country processes and existing structures.

- **Comparative analysis of GAVI HSS vis-à-vis other HSS donors** (at the global level) in order to assess the relative strengths and weaknesses of GAVI HSS, which in turn informs our assessment of whether GAVI’s value add is ‘weak’ or ‘strong’ in this area. Where appropriate, we have also drawn lessons from alternate HSS approaches that seek to better achieve the Paris aid principles and / or GAVI HSS principles.

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57 As against the approach presented in CEPA’s Inception Report, we have combined the results and value add of the HSS program under one question, since there is a fair degree of overlap of evidence sources to answer the two evaluation questions.

58 Funding for HSS was agreed upon by the GAVI Board in December 2005. Funding has been approved for 2009 and 2010.


• **Country level analysis of results and value add** of GAVI HSS, which focuses on the types of activities funded by the program, health systems bottlenecks addressed, in-country processes, and expected results and outcome indicators, to the extent possible.

• **Proposed HSS Funding Platform** and GAVI’s role in the same (although we note that the work on developing the platform is ongoing at the time of writing this report).

### 4.1.2. Methodology and sources of evidence

Given the above defined scope of the evaluation question, our main source of evidence is a review of documentation of the approaches of GAVI as well as other comparator HSS donor organisations. This is supplemented by information from structured interviews – primarily with GAVI HSS stakeholders (e.g. the erstwhile GAVI HSS Task Team, and GAVI partners) and comparator HSS organisations – as well as the electronic survey, EPI manager survey and country visits.

Our country level assessment is limited to the countries visited – out of the five countries visited; Bangladesh, Bolivia, Mali and Nigeria have been approved for HSS support, of which funds have been disbursed to Bolivia\(^{61}\), Mali\(^{62}\) and Nigeria\(^{63}\) (however HSS funds have not been used in Nigeria as of April 2010).

Where relevant, we draw upon the findings and conclusions of the recent HSS evaluation and tracking studies, to avoid duplication of their work.

The table below provides a brief description of the evidence sources used in the HSS review.

<table>
<thead>
<tr>
<th>Evidence source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of documentation</td>
<td>Review of all GAVI documentation on the HSS program (including proposals, APRs), particularly the recent HSS evaluation and tracking studies, as well as general literature on the common platform, etc.</td>
</tr>
<tr>
<td>Structured interviews</td>
<td>Interviews with a range of GAVI stakeholders, including Secretariat, Board members, GAVI partners, experts, HSS task team, etc.</td>
</tr>
<tr>
<td>Electronic surveys</td>
<td>One question on HSS in the e-survey and EPI manager survey.</td>
</tr>
<tr>
<td>Country studies</td>
<td>All field visit countries, except Uzbekistan have been approved for HSS, but only Mali and Bolivia have commenced implementation.</td>
</tr>
<tr>
<td>Comparator analysis</td>
<td>Comparison of GAVI HSS with other HSS donors such as the Global Fund, World Bank, USAID etc. to understand relative value add.</td>
</tr>
</tbody>
</table>

**Limitations of evidence sources**

- HSS activities are still in the early stages of implementation (of the 40 countries reporting on HSS in 2009 APRs, only 10 had received funds for at least one year). Therefore, there

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\(^{61}\) GAVI HSS program in Bolivia covers the period 2008-10, and funds were disbursed in 2008.

\(^{62}\) Mali’s HSS proposal covers the period 2009-11, and funds were disbursed in 2008.

\(^{63}\) Nigeria’s HSS proposal covers the period 2008-10. HSS funds were disbursed in 2008; however, given delays on the part of the Nigerian government in implementing the funds, no funding was spent until April 2010.
was limited information to review in the APRs (which in any case, mainly cover activity monitoring rather than results).

- Of the five countries chosen for field visits, four have been approved for GAVI HSS support – Bangladesh, Bolivia, Mali, and Nigeria. Of these, HSS funds have been disbursed to Bolivia, Mali and Nigeria. Due to internal institutional delays, Nigeria is yet to start spending the HSS funds as of April 2010. Thus, the number and composition of selected countries place a limitation on casual inference from field visit analyses.

- Usefulness of the EPI manager survey as a source of evidence is poor with respect to evaluation of HSS value add. Also, since country EPI managers do not handle/ manage HSS programs, we received limited feedback on HSS from the EPI manager survey.

- While we were able to secure meetings with all the comparator HSS organisations, it was difficult to obtain full information on all our comparison criteria. Therefore, we have had to rely largely on a review of documentation in developing this analysis.

4.1.3. Structure of the section

The remainder of this section is structured as follows:

- Section 4.2 presents an assessment of the strategy and approach of GAVI HSS.
- Section 4.3 discusses the delivery model of GAVI HSS.
- Section 4.4 sets out a comparative assessment of GAVI HSS vis-à-vis other donors that support health systems.
- Section 4.5 attempts to present the evidence to date in relation to possible impact of GAVI HSS at the country level.
- Section 4.6 assesses the contribution of GAVI to the proposed HSS funding platform.
- Section 4.7 concludes on the results and added value of the HSS program.

4.2. Background

A total of $460m of HSS funding was approved for the period 2007-10, spread across 37 countries, of which approximately $264m has been disbursed to date. Additional approvals have also been made until 2015, taking total approvals to $525m over the period 2007-15. Within this, some trends include (refer Annex 3 for details):

- Over the period 2007-10, the majority of approvals were made to AFRO (62%). The other two main recipients were SEARO (16%) and EMRO (15%). Disbursements by geography have been made in similar proportions to approvals, the main differences being that AFRO has a greater proportion of disbursements to date, whereas SEARO has a smaller proportion.

- Average disbursements differ between the regions. EMRO has the highest average ($11.3m), AFRO and WPRO have similar averages ($9.1m and $7.9m, respectively, and
SEARO's average is lower at about $3.6m. AMRO and EURO have very small averages ($0.5m and $0.4m, respectively).

- 25 countries account for 97% of total HSS disbursements received ($257.2m out of a total of $264.3m). Ethiopia has the highest level of disbursements at $76.5m. The next two largest recipients are also AFRO countries - namely Democratic Republic of Congo ($41.7m) and Nigeria ($22.1m).

Annex 3 also presents a summary of the findings from previous HSS evaluations/studies.

4.3. Strategy and approach

In this section, we assess the overall strategy and approach of GAVI HSS in terms of the definition and principles of HSS, overall focus, country eligibility, and allocation and duration of funding. We present evidence from a range of sources – review of available documentation, structured interviews, country visits, and the electronic survey. Conclusions are based on these sources of evidence, along with CEPA judgements.

The following section on “delivery model” focuses on the application process, monitoring requirements, activities financed, implementation structures and role of GAVI partners in the HSS program.

4.3.1. Review of documentation

This section describes the overall strategy and approach of GAVI HSS in terms of its objectives, country eligibility criteria, areas of focus of HSS funding, and health sub-sector focus.

Definition and overall approach

GAVI’s definition of HSS is based on the World Health Report 2000 definition – ‘improving critical components of health systems to effectively improve health outcomes’ – to fit in within the context of immunisation systems. GAVI HSS funds are specifically targeted at bottlenecks/barriers in health systems that make it difficult to improve the provision of, and demand for, immunisation and other child and maternal health services.

A GAVI commissioned study on the development of a strategic framework to increase access to routine immunisation within the overall health sector (McKinsey 2003) states that achievement of the 80/80 target would require country-specific and health sector barriers as well as global drivers to be addressed. Based on an assessment of the current coverage rates and likely evolution, the report recommends localised and tailored solutions to ensure sustainable improvements in coverage that eventually benefit the entire health system. This study informed the investment case for the creation of the HSS program.

GAVI's health systems’ components include:

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64 GAVI (2003): “Achieving our immunisation goal – Final Report”
• Stewardship/ governance/ leadership: defining sector strategies, clarifying roles, managing competing demands.
• Health financing: ensuring fair and sustainable financing, including financial protection.
• Human resources: having a sufficient and productive workforce.
• Information and knowledge: ensuring the generation and use of information.
• Technology and infrastructure: ensuring adequate drugs, equipment, and infrastructure.
• Service delivery: improving organisation, management and quality of services.

B. Marchal et al (2009)\textsuperscript{65} quote the example of the creation of GAVI’s HSS window as a “promising sign” that suggests recognition by Global Health Actors (GHAs) of the need to redefine approaches to HSS. However, Naimoli (2009)\textsuperscript{66} notes the criticism that “GAVI HSS design partners never conceptually came to terms with what a health system is or what the causal pathway might be through which HSS could achieve impact; what it means, in practice, to be “catalytic” and “innovative”\textsuperscript{67} while striving to be in harmony with existing sector-wide and other approaches for supporting health systems; or how GAVI was to capitalise on the collective knowledge, diverse skills, existing activities, and previous experiences in systems strengthening of its many partners.”

\textbf{Focus of GAVI HSS}

The stated objective of GAVI HSS is to achieve and sustain increased immunisation coverage, through strengthening the capacity of health systems to provide immunisation and other health services. Figure 4.1 presents a conceptual framework of GAVI HSS, linking GAVI’s support to health systems with improved immunisation coverage and child and maternal health outcomes.

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{65} Bruno Marchal, Anna Cavalli, Guy Kegels (2009): “Global health actors claim to support health system strengthening – Is this reality or rhetoric?”, PLoS Med 6(4)

\item \textsuperscript{66} Joseph F. Naimoli (2009): “Global Health Partnerships in practice: Taking stock of the GAVI Alliance’s new investment in health system strengthening”, International Journal of Health Planning and Management

\item \textsuperscript{67} “Catalytic” and “innovative” are principles of GAVI HSS. Other principles include country-driven, country-aligned, harmonised, predictable, additional, inclusive and collaborative, results-oriented and sustainability-conscious. A detailed discussion of the extent to which GAVI meets its HSS principles is provided in the HSS Evaluation Report – we do not seek to repeat the same here.
\end{itemize}
\end{footnotesize}
However, in practice, it is not entirely clear if GAVI HSS has a strong focus on immunisation. While there is a view that GAVI HSS has a potential to optimise GAVI’s overall investment in immunisation (Naimoli 2009), a recent review of GAVI approved HSS activities to assist GAVI in increasing its capacity to prepare the Health Systems Funding Platform design found clear evidence that GAVI-funded HSS activities are not simply immunisation-specific in their scope. Of the 54 country proposals reviewed, 30 referred to both maternal and child health as their primary objective, and four addressed child health. 14 countries emphasised improvements to the overall health system (which has an impact on MCH), while only six countries focused exclusively on strengthening capacity to deliver immunisation.

**Country eligibility**

Any of the 72 GAVI-eligible countries can apply for HSS support if: (i) the country has a national health plan (or equivalent national health strategy) that covers the duration of the requested HSS support; and (ii) the country has a fully costed cMYP (or can justify that they will have a final cMYP prior to the start of funding), which covers the duration of the requested HSS support.

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69 While countries that have been officially notified by the GAVI Secretariat that they are in default regarding co-financing of new vaccine requirements can apply for GAVI HSS, approval of HSS support is conditional on the country coming out of default status and fulfilling co-financing requirements.

70 The national health plan, cMYP, and the GAVI HSS proposal may be developed simultaneously, but a final written draft endorsed by the Health Sector Coordination Committee (HSCC) or equivalent national body is a prerequisite for applying for GAVI HSS support.
According to Naimoli (2009), the prevailing argument for the current country eligibility criteria is that every country should have the same opportunity to secure HSS support. The countervailing argument put forward is that there should be 10-12 “pathfinder” countries to begin with, with robust health sector plans already in existence and supported by partners. The benefits of such an approach are the early lessons offered by doing and immediate return on investment.

**Allocation of funding between and to countries**

Two levels of funding are available:

- Countries with a Gross National Income (GNI) per capita below $360 (based on 2006 World Bank data) are eligible for $5 per new-born child, per year, for the duration of the GAVI HSS support.
- All countries are eligible for $2.50 per new-born child per year for the duration of GAVI HSS support.

B. Galichet et al (2010)\(^7^1\) acknowledge GAVI HSS processes to be predictable and non-competitive since countries are allocated a figure already calculated on GNI and annual births.

**Duration of funding**

GAVI HSS support is available for the duration of the National Health Sector Plan (or country equivalent) or until 31 December 2015, whichever is sooner. Countries where the GAVI HSS support expires in 2009 may re-apply for the support.

According to Naimoli (2009), “the duration of the investment (2005-10) ensures predictable financing for each country’s health system through the life of its health sector plan”.

### 4.3.2. Structured interviews

A common theme of feedback on GAVI’s HSS approach is that there needs to be better definition of objectives that are clearly linked to immunisation.

Whilst there is agreement that health systems are important for the achievement and sustainability of immunisation goals, there are mixed views on whether it is efficient for GAVI to have its own HSS window. There is concern that HSS may not be the best area of GAVI’s comparative advantage and that it is diverting resources and attention away from GAVI’s core business of immunisation. Stakeholders were concerned about the competing priorities on GAVI due to the incorporation of an HSS funding window, and noted that other organisations such as the World Bank, WHO, etc may be better (and already established) channels for HSS.

On the other hand, some suggested that given the burden that GAVI-funded vaccines put on health systems, its support through HSS is justified. Although, within this, some noted that while it is important for GAVI to check that a well functioning/supportive health system is in place

(before introduction of new vaccines), whether it should finance this itself is more of a question/option for GAVI.

Comments were also provided on some aspects of GAVI’s delivery approach for HSS, which also raised the question on whether GAVI is the right agency to deliver HSS (see Section 4.4 below).

Other points of feedback on GAVI’s strategy and approach include the following:

- GAVI should have followed a more selective and systematic approach, rather than engage across so many countries. A few countries should be picked to study the model in detail in order to transfer learning (pathfinder countries). However, a criticism against the pilot approach for HSS is that it is not equitable.

- Views have been expressed regarding the increased burden on country health systems (e.g. cold chain, warehousing, vaccine administration, etc.) as a result of GAVI’s introduction of new vaccines. For example, interviews during the field visits indicated that countries’ needed to upgrade their cold storage capacity in order to introduce the GAVI supported vaccines, which was done through bilateral funding support in Bangladesh, Nigeria and Uzbekistan.

- One of the principles of GAVI HSS says that the money should be used as part of a pooled fund, if possible. Most countries have not been able to use GAVI HSS money as part of their pooled fund. Thus, at the country level, the support is not very harmonised with other donors/sources of funding.

- Flexible use of funds is generally acknowledged as a positive feature of GAVI HSS since it provides leverage to country governments to fill financing gaps in implementation of plans effectively and enable capacity building. However, this flexibility is also considered a ‘ticking bomb’ given the issues of financial mismanagement.

4.3.3. Electronic survey

The electronic survey posed the statement, ‘GAVI’s funding for health system strengthening in countries contributes towards increased and sustainable immunisation coverage’. This question actually referred to all of GAVI’s health system related programs under SG1 – i.e. INS, ISS, HSS and CSO. However, a large number of respondents appear to have interpreted this as relevant to the HSS program in specific. As seen in Figure 4.2 below, a significant majority (75%) of adjusted respondents agree/strongly agree with the statement. While close to 18% are neutral, only about 8% disagree/strongly disagree.

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72 Excluding “Not aware/no view” and “Blank” responses.
Figure 4.2: E-survey responses to question 6 – ‘GAVI’s funding for health system strengthening in countries contributes towards increased and sustainable immunisation coverage’ (282 responses received, of which 268 are non-blank)

Table 2 in Annex 3 presents an examination of the survey responses to the statement by stakeholder category.

‘Open field’ comments from survey respondents suggested that they consider GAVI HSS valuable, and that the current thinking is that it is too early to comment on results and outcomes of this window of support. There is a need for a strong M&E framework to enable measurement of results and outcomes. While there is a view that GAVI HSS does not have a clear immunisation focus, some respondents believe that the contribution of HSS towards immunisation coverage would depend to a large extent on country context, transparency in use of funds, and specific country proposals.

There is evidence that HSS funds have been utilised to address systemic barriers that constrain attainment of immunisation objectives, and the program has prioritised health systems on governments’ development agendas. GAVI HSS has however, been criticised on account on the relatively small amounts of funding, delays in implementation of planned activities owing to delayed disbursement of funds, and lack of a clear focus on immunisation. Table 3 in Annex 2 presents the key themes of the qualitative feedback and corresponding frequency of responses.

4.3.4. Conclusion

GAVI’s HSS strategy and approach shows its wider focus beyond immunisation to the broader country health systems - especially child and maternal health systems. Whilst this might be part of the HSS design, several see this as a dilution of GAVI’s core objective. However, it is widely recognised that health systems bottlenecks impede the achievement of immunisation coverage goals. At the extreme, some question whether GAVI is the right agency and well placed in terms of delivery capability to offer HSS support.
On the positive side, GAVI’s flexibility to allow countries to propose and own their HSS activities is appreciated and this is seen to enhance country ownership of the program. However, there are mixed views on the overall effectiveness of its strategy and approach in terms of harmonisation with other donors, limited transfer of learning across countries, etc.

4.4. Delivery model

This section provides a review of the GAVI HSS delivery model in terms of application processes and monitoring requirements, activities financed by GAVI HSS, institutional structures for implementation, and the involvement of GAVI partners in the implementation of HSS grants at the country level.

A number of recent studies have examined the GAVI HSS delivery model, and we present here their main findings (in the ‘review of documentation’ section below). In addition, we have also examined this issue through structured interviews and the EPI manager survey, carried out as a part of this evaluation.

4.4.1. Review of documentation

Application process

In terms of background, the HSS proposal development is led by the country’s Health Sector Coordination Committee (HSCC) or a similar planning committee, which includes in-country partners such as WHO, UNICEF, World Bank, CSOs, and bilateral donors. Countries can request up to $0.05m to help draft the proposal.

Following submission, proposals are screened by the GAVI Secretariat, followed by pre-assessment by a WHO expert group. Written feedback is provided to the Independent Review Committee (IRC), which then reviews proposals and makes recommendations for approval.

A review of the documentation on the GAVI application process has highlighted a number of issues with the application process, including the following:

- The GAVI HSS evaluation reports that the time between submission of HSS proposals and formal GAVI Board approval may range from four to six months. There have however, been significant delays in approval of HSS proposals and disbursement of

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73 The proposal development and implementation process in the country is led by the HSCC (or equivalent) rather than the ICC, which is responsible for the application and implementation processes for other GAVI programs. Thus, two separate institutions handle HSS and immunisation.

74 The composition of the HSCC varies by country. In some cases CSOs are also involved.

75 The grants have been well-received and used, but there is mixed interpretation regarding whether they are meant for the government or technical partners (GAVI HSS Evaluation 2009).

76 The average elapsed time from submission of proposal to formal GAVI Board approval for all HSS grants are as follows: Round 1 = 4 months, Round 2 = 5.5 months, Round 3 = 5.5 months, Round 4 = 6 months (adjusted average), Round 5 = 15 months (only one application included – Cambodia’s second) (GAVI HSS Evaluation 2009).
approved funds. Approval with clarification is by far the most common response of the IRC.\textsuperscript{77}

- Recent introduction of Financial Management Assessment (FMA) has delayed the disbursement of approved HSS funds in a number of countries. Whilst FMA contributes to sound financial management which is critical, particularly since HSS support is cash-based; its introduction has caused disruption of implementation of planned HSS activities in affected countries.

- Concern has been expressed regarding the depth and breadth of IRC’s expertise in health systems, particularly in the area of financing. It is believed that the IRC is too detached from country realities to make an informed decision on an application. There is also scepticism about the ability of an external review committee to pass judgements on HSS applications (Naimoli 2009).

- A background paper on experiences of GAVI HSS investment (GAVI 2007)\textsuperscript{78} points towards the need for clear and concise application guidelines as these are directly linked to proposal drafting and review processes.

- Countries have identified the need for quality technical support to assist in developing and implementing proposals that is delivered in a locally appropriate way. However, scaling up any institutional capacity to respond to this need without the usual reliance on international consultants remains challenging (GAVI 2007).

\textit{Monitoring requirements}

In terms of background, we understand that countries are expected to report on the performance of their GAVI HSS program through the APRs. The nature of reported information on HSS activities in the APRs varies vastly across countries, given that the countries are undertaking a range of HSS interventions in accordance with their approved country proposals.

M&E is highlighted as a key area of challenge for GAVI HSS. Given the country-driven approach, each country’s proposal and hence, indicators are different. Some countries may use basket funding which makes it difficult to measure any attribution of GAVI HSS funding. It is also mentioned that the first few years may be viewed as an “investment” since impact indicators may not be reached and since it may be difficult to measure actual implementation for several years (GAVI 2007).

The HSS evaluation report concludes that GAVI is unable to monitor satisfactorily (according to its own principles and standards) its HSS grants at input, output or processes level. This in turn implies that GAVI (unlike say, the Global Fund) would not be able to link its funding

\textsuperscript{77} By December 2008, a total of 51 countries had applied for GAVI HSS funds, of which 44 were eventually successful and got their grants approved. In addition, eight countries were asked to either resubmit their proposals, or got a conditional approval (GAVI HSS Evaluation 2009).

\textsuperscript{78} GAVI Alliance (2007): “Experiences of the GAVI Alliance Health System Strengthening Investment”
disbursements to performance/results. The key issues with the M&E framework pointed out by the Evaluation are:

- In general, the monitoring and reporting processes used for GAVI HSS grants run in parallel to and separate from national systems. This seems to be on account of timing of HSS rounds and lack of alignment with country planning/budgeting cycles. Moreover, the reporting mechanisms i.e. APRs have been found to be hard to integrate with national planning and reporting systems.

- Challenges to monitoring of GAVI HSS money are highly correlated with the ability of the country to monitor health sector activity more generally, and the level at which GAVI HSS indicators is reported.

- While GAVI HSS funding is concentrated on supporting interventions at the decentralised level, monitoring of inputs, outputs and outcomes are aggregated and often reported only at the national level.

- It is not clear if GAVI is monitoring the right things. Activity monitoring is generally undertaken by countries. Input (tracking the use of HSS funds) and output monitoring are weak. Even where nationally agreed HSS indicators exist (e.g. Cambodia) they are not being routinely used to measure progress.

A review of 31 HSS applications submitted between November 2006 and June 2007 by J. Naimoli (2009) reports problems with M&E frameworks, particularly the availability of baseline data, whether the number of indicators is reasonable and in line with the national health sector monitoring framework, and whether targets are realistic. Doubts have also been raised about the capacity of countries to carry out the M&E plans proposed.

Institutions

Broadly, the institutions involved in the implementation of GAVI HSS are as follows:

- At the global level, there had been a GAVI HSS task team (which no longer exists). This 10-member task team had been co-chaired by WHO, UNICEF, and the World Bank and has representation from the GAVI Alliance Secretariat, donors such as DFID, USAID, Gates Foundation, developing countries and the civil society. The task team had overall responsibility of launching, steering, and advising on the roll out of GAVI HSS.

- At the country level, the planning department of the Ministry of Health (MoH) is responsible for the implementation of GAVI HSS grants and the HSCC (or equivalent) for application/ongoing review.

The following issues concerning the institutional structure have been identified:

- While the goodwill and collegiality within the HSS task team is acknowledged, a number of constraints have been pointed out such as a shifting mandate, fluctuating membership, irregular leadership, inadequate specification of individual member roles, responsibilities, and mutual accountabilities, a lack of clarity in relationships with other GAVI task teams, ill-defined processes for joint decision-making and conflict resolution, and insufficient
breadth and depth of technical expertise in health systems (Naimoli 2009). This led to the
task team being dismantled.

- Although the institutional arrangement promoted by GAVI at the country level aims to
create ownership of the HSS program by the MoH (given the intended wider scope of
HSS beyond immunisation), in practise this has caused problems of coordination
between the EPI and the planning department of the MoH.

- The institutional responsibility is further complicated with the introduction of the GAVI
FMA process for all cash based programs – this includes HSS and ISS. Since the latter
vests with the EPI department of the MoH and former the planning department, and the
FMA with the Ministry of Finance, the FMA sign-off process in countries involves
multiple departments. In the case of Bangladesh and several other countries, this
(amongst other factors) has caused a delay in signature of the FMA aide memoire,
delaying disbursement of approved HSS funds (often to nearly or more than a year since
HSS approval).

- Finally, in some countries the HSCC (or equivalent body) has not played an effective/
contributory role as a result of poor participation of members, infrequent meetings, etc.
For example, we understand from consultees that there is room to improve the
functioning of this Committee in Nigeria. The HLSP HSS Evaluation (2009) also finds
weak HSCC engagement, and points out that its role is often limited to the signing of
APRs rather than validating the information in them. Issues such as missing signatures of
key HSCC stakeholders in HSS proposals have also been highlighted.

Activities financed

While the focus is on service delivery and impact at the sub-national level, the program
recognises that national functions (e.g. commodity procurement, health information systems) are
also essential. 75% of the funding is proposed to be used at the district level or below.

- There are three priority areas for GAVI HSS: (i) health workforce mobilisation,
distribution and motivation targeting personnel engaged in immunisation and other
health services at district level or below (ii) Organisation and management of health
services, including financial management (iii) Supply, distribution and maintenance
systems for drugs, equipment, and infrastructure for primary health care. As an indication
of the allocation of GAVI HSS funding across different areas of health systems, Figure
3.3 shows the breakdown of proposed HSS activities for the first 49 GAVI HSS
proposals.

- Funding is available for the length of national health sector strategic plan (or country
equivalent). Countries can re-apply as long as a new national health sector
plan/comprehensive multi-year plan for immunisation is developed.
Key players in the GAVI HSS application and implementation process are country governments. The program strives to involve all major stakeholders (beyond immunisation) – government entities, GAVI partners, civil society, private sector, etc.

A review of 48 funding applications from 40 countries in the first four rounds of GAVI HSS (October 2006 – October 2007) by B. Galichet et al (2010) found the application process to be fairly inclusive. Beyond the HSCC, combinations of eight stakeholder categories were involved in the drafting and review of the applications: the MOH, Ministry of Finance, other government ministries or agencies, bilateral donors, multilateral agencies, health professionals (public or private), domestic universities, civil society and Non-Government Organisations (NGOs).

On the other hand, GAVI partners have reported few incentives to fully engage in HSS activities, and even fewer rewards from their respective institutions for doing so. A major, unresolved issue with regard to effective partnering at the country level is the protection of partners who do not endorse an HSS application from the inevitable criticism of holding up disbursement of GAVI funds. Questions have been raised repeatedly by partners within countries regarding accountability for application quality, implementation, and financial management (Naimoli 2009). This relates, in part, to the definition of roles, responsibilities, and liabilities of partners at country level.

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79 http://www.gavialliance.org/vision/policies/hss/index.php

80 Applications were scored (on a scale of 0 to 4 corresponding to non-inclusive and highly inclusive respectively) based on four criteria: (i) evidence of a Health Systems Coordination Committee meeting at least twice a year; (ii) the participation of at least four international stakeholders in the application process; (iii) presence of one or more of the private sector, civil society, independent health professionals, academics; and (iv) documentary evidence of stakeholder attendance at preparatory meetings.

80 The analysis covers 46 successful HSS proposals from 45 countries (since December 2005) implying a total of $523m commitment by the GAVI Board.
The following are the key findings of the HSS Evaluation report with regards to the involvement of GAVI partners in HSS:

- The proposal design process was fairly “inclusive”, involving a combination of different levels of ministries, and their technical and development partners. Bilateral partners play more the role of reviewers through their membership of the HSCC. It is also common for districts and provinces to be involved in the design of the proposal in cases where implementation is planned to be decentralised (e.g. Rwanda, Honduras). However, involvement of the civil society or private health providers is found to be quite weak.

- Technical support to the application process was provided by partners such as UNICEF and WHO through staff time, by organising regional workshops (Manila, Cairo, Nairobi, Cameroon, Ouagadougou, Tegucigalpa, Sri Lanka, and Istanbul), facilitation of meetings and coordination of design processes. The role of the World Bank was found to be minimal (which was also confirmed during most of our field visits).

- There is some evidence that GAVI HSS funds have served to strengthen existing coordination mechanisms around HSS issues, promoting clarity on HSS and the roles of all health partners in this domain. In Democratic Republic of Congo (DRC), while a National Steering Committee for HSS existed, the arrival of GAVI funds encouraged its operationalisation, sending a strong signal to health sector partners that HSS issues are a priority for the Ministry of Public Health (GAVI HSS Evaluation Report 2009). Technical support by GAVI partners such as UNICEF and WHO almost ceased at the stage of grant implementation, mainly because their role is not clearly defined.

4.4.2. Structured interviews

It has been noted in the interview feedback that the role (and accountabilities) of GAVI partners in countries needs to be better defined in the implementation of HSS grants. GAVI partners in countries are required to sign the country proposals and APRs - feedback suggested that some of the country partners are not comfortable with this and are unsure of the liability implied by signing of country APRs.

Other points of feedback on GAVI HSS’ delivery model:

- Views were expressed that a bulk of GAVI’s support goes towards funding HSS inputs such as buildings, vehicles, salaries of health workers etc. It is hence, akin to direct ‘procurement’ support, rather than health reforms. This is however consistent with GAVI’s aim of supporting key areas of health system bottlenecks/ unfunded activities in countries.

- GAVI’s lean and hands-off business model may not work well for HSS – and this was one of the reasons for interviewees questioning whether GAVI is the appropriate agency to deliver HSS. There is a need for a strong financial management/ coordination unit at the country level to manage HSS funds. Moreover, given that GAVI has no in-country presence, it is not always possible to maximise opportunities to address gaps that are not being filled by other sources of funding.
• GAVI does not have sufficient in-house capacity to handle HSS which is more complicated than its other windows of support. Relying completely on country partners may not work effectively, as they have alternate priorities and schedules. This was also cited as an important factor that raises the question on the suitability of GAVI for HSS in the absence of country/regional presence.

• A lot of countries are not ready to make proper use of GAVI HSS funds. For instance, a number of approved HSS proposals do not lay out proper procurement plans for use of funds or plans to disburse to districts etc. Another problem is that the money arrives off-cycle, and hence cannot be spent in the particular fiscal year. There is often no financial management/coordination unit (e.g. DRC was disbursed its HSS funds, but absence of such an oversight unit delayed implementation).

• There are weaknesses in GAVI’s HSS monitoring framework. In reality, only a few individuals at the country level (e.g. MCH services director) manage the HSS program and the APR HSS information is filled out by whomever is perceived to be responsible for the program. Also, it is not known how funds are spent at the country level. While the HSS tracking study provides some of this information, and GAVI has started requiring countries to provide such information in their APRs starting 2009, the quality of APR information is generally under question.

4.4.3. Conclusion

Our conclusions based on the above sources of evidence are as follows:

• GAVI HSS primarily funds service delivery and Human Resource (HR) gaps, which arguably are the main health systems constraints in countries.

• There have, however, been significant delays in approval and/or disbursement of GAVI HSS funds that have resulted in a delay in implementation of planned activities. The recent introduction of FMA, although with the aim to promote sound financial management, is seen to have contributed significantly to delays in disbursement.

• In terms of implementing structures, the institutional divide between HSS and immunisation programs in country,81 and GAVI’s capacity constraints in-house for HSS implementation in countries and arguably challenges of not having regional/country presence,82 have created problems of coordination in some cases. This raises the question as to the suitability of the GAVI model to deliver HSS support effectively. Moreover, monitoring and evaluation continue to be one of the key challenge areas for GAVI HSS.

• While the application process is found to be sufficiently inclusive of all GAVI partners at the country level, there are concerns among partners regarding their responsibilities and accountability for application quality, implementation, and financial management.

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81 However, in some countries, the Planning department being responsible for HSS is considered a positive factor in terms of coordination of GAVI HSS with country health plans and budgets.

82 Some felt that the GAVI partners in countries are adequate for supporting governments in HSS planning and implementation in countries. Others felt that GAVI’s partners are more immunisation focused and that HSS requires a different set of skills/experience that the Alliance might not be best placed to offer.
Overall, our assessment is that the above identified issues with GAVI’s current delivery model does deter from its effectiveness to reach defined goals.

4.5. Analysis of other HSS donor approaches

4.5.1. Introduction

A comparative analysis of GAVI HSS vis-à-vis other donors that support health systems has been undertaken in order to assess the relative strengths and weaknesses of GAVI HSS, and to form judgements regarding the value add of GAVI in this area. Three comparator organisations have been included in the analysis – Global Fund, USAID, and World Bank. These organisations have been selected for detailed case studies in order to have a mix of GHP, multilateral, and bilateral organisations as comparators. Also, in the current HSS landscape, each of these players has a significant role to play (as compared to the other GHP/ bilaterals that provide HSS support)\(^{83}\). The Global Fund and World Bank, along with GAVI are also a part of the proposed common financing platform.

The key sources of evidence include a review of documentation, structured interviews, and electronic survey.

4.5.2. Review of documentation

Annex 3 presents a detailed comparative analysis of the HSS approaches of GAVI, Global Fund, World Bank, and USAID in terms of their strategy, financing, delivery model, efficiency and contribution to global HSS policy development. Brief summaries of the HSS approaches of the chosen comparator organisations are presented below:

- **Global Fund**: The overall goal is to target health systems barriers to reducing the burden of HIV, TB and Malaria through a vertical, disease-specific funding approach. A third of Global Fund’s commitments to date have been spent on general health systems activities, including $2bn spent specifically on HSS.

- **The World Bank**: There is no separate HSS window or earmarked funds, and the funding is more in the nature of broad health sector support. The focus is on both reforms/ policy and inputs to country health systems. Of a total $3.1bn under Health Nutrition and Population (HNP) lending in 2009, $1.4bn was for health systems performance.

- **USAID**: Support provided is both disease/ health area-specific and also for broad health systems improvement. There is a strong focus on supporting policies and management arrangements in the health sector. Close to $822m was spent on health systems in 2008.

The following are the key aspects of the comparative assessment at the global level. The assessment does not suggest that one donor is better than the other on any criteria, but rather

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\(^{83}\) We recognise that DFID is another bilateral that is active in HSS support. As a part of their poverty reduction initiatives, DFID focuses on the delivery of better health services in less developed regions. According to their Annual Report 2008-09, the UK is committed to spend £6bn on health systems and services over seven years to 2015, in addition to the previously announced £1bn commitment to the Global Fund for AIDS, TB and Malaria. DFID also supports IHP+, Affordable Medicines Facility for Malaria (AMFm), Medicines Transparency Alliance, UNFPA and GAVI.
seeks to highlight the differences in approaches, as explained below the table. Also, please note that these are relative and not absolute assessments, i.e. the rating for each organisation is to be interpreted in relation to the other organisations included in the comparative analysis.

Table 4.2: Comparison of HSS approaches of key donors

<table>
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<tr>
<th>Criteria</th>
<th>GAVI</th>
<th>Global Fund</th>
<th>World Bank</th>
<th>USAID</th>
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<tr>
<td>Size of HSS funding</td>
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<tr>
<td>Broad health systems support</td>
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<td>Direct focus on poorest countries</td>
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<td>Inclusive of stakeholders during application process (govt, donors, CSOs)</td>
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<td>Predictability of funding</td>
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<td>Harmonisation with existing country systems/ budget cycles/ processes</td>
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<td>Flexibility of funding</td>
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<td>M&amp;E/ results orientation</td>
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Legend:  Low  Medium  Medium to High  High

In summary:

- GAVI is currently the only donor that has a separate HSS window for specific health systems support, as against general health sector support of other donors such as the World Bank and bilateral donors. The Global Fund links its health systems support to the reduction of HIV/AIDS, TB and Malaria burden, and provides the support as part of its funding for the three diseases. Thus, the dedicated HSS window of GAVI is regarded as a positive feature particularly by beneficiary governments – in terms of increasing the profile and focus on system bottlenecks and immunisation.

- GAVI HSS support\(^{84}\) is focused on the poorest countries of the world, whereas the Global Fund\(^{85}\) and World Bank\(^{86}\) also support low and upper middle income countries.

- The total amount of HSS funding by GAVI is relatively low in the context of spending by development partners. Till date, Global Fund has spent close to $2bn specifically on

\(^{84}\) GAVI provides support to 72 poorest countries of the world, based on 2003 World Bank GNI data.

\(^{85}\) Global Fund supports low, low middle and upper middle income countries with high disease burden.

\(^{86}\) World Bank provides funding to all member countries. Terms of lending vary across low, lower middle, upper middle and high income categories (based on World Bank estimates of GNI per capita 2008).
HSS activities. On the other hand, GAVI has disbursed only about $265m (2007-09) in the form of HSS funding to countries.

- GAVI’s approach appears to be more flexible in terms of use of funds by countries. For instance, Global Fund’s HSS grants cannot be used to address health system bottlenecks outside of the three diseases. The flexibility of GAVI HSS money provides leverage to the governments to meet the financial gaps in the implementation of their health plans, identify country-specific key health system barriers in their HSS proposals, and develop own plans to implement HSS grants.

- Implementation of GAVI HSS grants is through existing institutional structures, unlike separate mechanisms such as the Country Coordination Mechanism (CCM) of the Global Fund. USAID mostly works through appointed private agencies/ NGOs to coordinate its country programs.

- There is a higher degree of predictability of GAVI funding since it spans the duration of the national health plan (although the current funding crisis has created some uncertainty). In contrast, the terms and scope of World Bank loans may not coincide with country plans and could be restructured during mid-term review of projects (although we understand that this does not happen much in practice). The Global Fund approves grants for two years initially, and continued funding is contingent upon satisfactory performance. During the grant period, disbursement of tranches is linked to periodic demonstration of programmatic progress and financial accountability.

- The M&E framework and link between disbursement of HSS funds and performance is relatively weak in GAVI (despite annual progress reporting by GAVI countries, the information is sometimes incomplete/ inconsistent and often of poor quality). The Global Fund’s emphasis on performance based funding on the other hand has been viewed favorably, although the recent Global Fund evaluation notes that it remains work in progress, requiring attention to both the mechanics of how the system is implemented as well as the data in which it is grounded.

Thus GAVI’s approach appears to have a number of positive features as compared to other donor approaches – however its approach is not exactly ‘preferred’ to that of other donors, given that other donors have different positive attributes as well. We conclude therefore that it is difficult to establish GAVI’s added value vis-a-vis comparator HSS donors, as there is a balance of evidence of some positive characteristics in GAVI’s approach as well as of other less valued aspects.

The HSS Funding Platform is expected to leverage the strengths of different donors’ HSS models to be better in line with the Paris principles.

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87 Global Fund generally provides up to five years of funding, but approval/ disbursement of subsequent tranches is linked to reaching specified milestones.

88 Macro international Inc. (March 2009): “The Five-Year Evaluation of the Global Fund to Fight AIDS, Tuberculosis, and Malaria. Synthesis of Study Areas 1, 2 and 3”.
4.5.3. Electronic survey

The statement in the electronic survey was, ‘GAVI HSS support has been more effective than the HSS support offered by other donors such as the Global Fund, World Bank etc.’

The majority feedback on this statement (amongst those that had a view) is either neutral or positive. As seen in Figure 4.4 below, close to 45% of ‘adjusted\(^{89}\) stakeholders expressed a neutral view, i.e. neither agree nor disagree. About 40% of the ‘adjusted’ respondents agree or strongly agree that GAVI HSS support has been more effective than that offered by other donors. The remaining 15% disagree/ strongly disagree.

Figure 4.4: E-survey responses to question 7 - ‘GAVI HSS support has been more effective than the HSS support offered by other donors such as the Global Fund, World Bank etc.’ (282 responses received, of which 267 are non-blank)

Table 4 in Annex 3 presents the examination of electronic survey responses stakeholder category.

In terms of the qualitative feedback, a majority of stakeholders felt that they were not in a position to comment on the effectiveness of GAVI’s HSS support vis-à-vis that offered by other donors such as the Global Fund and World Bank. The general view is that such an assessment would require the development of an M&E framework with harmonised indicators. Comparison is difficult since donors are focused on different goals, and the difficulty of attributing outcomes to specific interventions further compounds the problems.

Nonetheless, the relative strengths of GAVI’s HSS program were identified as the flexibility in procedures/ requirements, visibility in support, predictability of funding and promotion of country ownership. However, it has been pointed out that the level of financial commitments is

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\(^{89}\) ‘Adjusted’ number of respondents has been calculated after excluding “Not aware/ no view” and “Blank” responses.
relatively low and that GAVI lacks the technical expertise to provide health systems infrastructure support.

Table 5 in Annex 3 presents the key themes of the qualitative feedback and corresponding frequency of responses.

4.5.4. Structured interviews

This section summarises key points of comparison of GAVI HSS vis-à-vis other health systems donors with respect to a mix of criteria:

- GAVI relies on countries proposing the HSS funded activities it would like to undertake. In general, the guiding principle for countries to define activities is to address the key health systems bottlenecks – promoting country ownership. However, in case a country proposes to undertake HSS activities that are not in line with the main bottlenecks, GAVI would not be able to influence this. In this regard, some consultees felt that the negotiations-based approach to funding – where the donor discusses and agrees spending priorities with the governments, followed by World Bank and USAID may ensure that HSS money effectively targets the key health systems bottlenecks in a particular country. The Global Fund (similar to GAVI) is country demand driven, it also allows countries to apply for small grants to be used for analytical work, technical assistance etc. such that high quality proposals may be developed. This has been found to be quite useful, based on feedback from countries to the Global Fund.

- GAVI HSS, being a dedicated window, has increased visibility for addressing health system bottlenecks and as a result, on immunisation. The HSS support by other donors such as Global Fund (although much higher in quantum of support) is less known as its woven into the disease based funding.

- GAVI’s current monitoring framework for HSS is weak. That said, the World Bank too has been criticised for weak monitoring, and other donors such as USAID and Global Fund have acknowledged difficulties in defining HSS indicators and attributing results. Several of these organisations are however looking to improve their M&E frameworks. For example, the Global Fund has recently introduced an M&E toolkit for its activities and is generally looking to strengthen its results measurement. Through the HSS funding platform, GAVI, Global Fund, the World Bank, and WHO are seeking to develop more integrated and improved monitoring frameworks.

4.5.5. EPI manager survey

The question in the EPI manager survey is, 'Please comment on whether GAVI HSS support is more or less effective as compared to other HSS support received by your country and why?'

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90 This is as per one of the comments in the e-survey. It does not specify what is being referred to – but based on the previous evaluation/discussions during structured interviews, our view is that this might refer to a mix of the IRC review team, the partners, under-staffing of the Secretariat, etc.
The flexibility of GAVI HSS processes (in relation to Global Fund, for instance), alignment with national plans, and the inclusiveness of the process in terms of extensive stakeholder participation have been highlighted as relative strengths of the program in relation to other HSS support received by countries. However, there is a lack of clarity in management procedures, delays in approvals/disbursements, and poor interaction between the EPI and other government sectors with respect to GAVI HSS.

Table 6 in Annex 3 summarises EPI manager responses on the effectiveness of GAVI HSS support compared to other HSS support.

4.5.6. Conclusion

While all other donors currently supporting HSS provide general health sector support, GAVI has a separate HSS window – this has helped increase the profile of health system bottlenecks and the link with immunisation at global and country levels, and GAVI is now one of the lead partners in the HSS Platform. The relative strengths of GAVI HSS lie in its flexible approach, high degree of predictability of funding, use of existing country processes and structures (although some institutional/procedural issues are highlighted), and promotion of country ownership. However, in comparison to other HSS donors (e.g. GF, USAID, World Bank), GAVI HSS funding is small in magnitude and the link between performance and disbursement of funds (i.e. M&E) is weak.

Thus given the mix of relatively positive and less valued features of GAVI’s approach to HSS as compared to other organisations, we cannot say that the GAVI approach is better or worse than others.

4.6. Impact at the country level

This section assesses the impact of GAVI HSS at the country level in terms of in-country processes, level of involvement of partners, types of activities funded and key health sector bottlenecks targeted. The assessment is informed by field visits and the EPI manager survey. Since the number of countries visited that have HSS programs is limited, this section should be interpreted more by way of providing observations from the specific countries rather than generalised conclusions. We are unable to draw substantive conclusions on program impact since its still early days of implementation.

4.6.1. Country visits

Country visits were conducted in Bangladesh, Bolivia, Mali, Nigeria and Uzbekistan between April and June 2010. We present below the findings under the HSS program for these countries. Bolivia, Mali and Nigeria have been disbursed HSS funds, but Bolivia and Nigeria are yet to begin utilising them. Bangladesh is awaiting disbursement of the HSS funds pending signature of the FMA aide memoire by its government. While a draft HSS proposal has been prepared by Uzbekistan, the application process has been stalled on account of limited human resources for proposal development and the recent introduction of FMA requirement.

91 However, following our country visit, we understand from GAVI that the process is now complete - the FMA Aide Memoire has been signed by GAVI’s Deputy CEO and has been couriered to Dhaka for GoB signature.
**Bangladesh**

GAVI HSS funding for Bangladesh was approved in 2008 to cover the period 2009-10. However, no part of the approved amount of $13.7m has been disbursed so far. In light of the delay in disbursement of funds, the assessment of value add of GAVI HSS in the country should be interpreted in the context of comparing GAVI’s HSS approach/proposed activities to other donors, rather than results of the program. Also, none of the other donors in Bangladesh have an explicit HSS program, although their funding contributes to some aspects of health system strengthening.

On comparison of GAVI’s HSS approaches and proposed activities in the country vis-à-vis other development partners such as Global Fund, World Bank, USAID and GTZ, the following appear to be the key relative strengths of GAVI HSS:

- its alignment with national plans and existing implementing structures; and
- flexibility in the use of HSS money, as laid out in the country proposal.

However, it appears to be less strong in terms of harmonisation (given separate stream of HSS funding, separate FMA compared to other donors’ financial assessments, separate reporting, etc.); and results orientation (some other donors have linked disbursement to measurable milestones. Also, the separation of institutional responsibilities for GAVI’s vaccines and HSS programs has not been viewed positively as it increases transaction costs and leads to delays.

A more detailed analysis of the results and value add of GAVI HSS in Bangladesh is presented in Section 5.2.1. and 5.2.2 of the Bangladesh Evaluation Report.

**Bolivia**

Bolivia’s HSS proposal was approved in 2008. Its overall aim is ‘to extend the coverage and improve the quality of maternal and child comprehensive care in health services in 35 prioritised municipalities of the country by 2010’. Within this, it has two strategic objectives (on the supply and demand side respectively) as follows:

- **Strategic Objective 1:** To reorganise health care networks and improve the quality of care, as well as the capacity for management in health in the 35 prioritised municipalities. There are three interventions identified to support the achievement of this relating to establishing the baseline situation, and the providing training on current norms for adequate care of mother and child, and improving coordination between levels of health management and donor supporters.

- **Strategic Objective 2:** To Strengthen promotion and prevention interventions in maternal and child health, with a community and intercultural approach; empowering communities in their responsibility for health care in the 35 prioritised municipalities. The interventions here include: research on communities’ knowledge, practices and attitudes; Identification of needs and ways to address problems with maternal, neonatal and child health using participatory approaches; and training for health workers on the intercultural approach and compassionate care for communities.
We understand that PAHO was particularly important in supporting the Ministry of Health and Sports in the preparation of the proposal – and that the proposal was well regarded by GAVI.

Although the first year disbursement was made to Bolivia, it has not been used. The lack of activity reflects the repeated changes in political leadership in the Ministry of Health and the resulting changes in officials. We understand that decisions have not been taken on how to implement (i.e. whether it should be done with Ministry of Health leadership, or should be contracted to consultants / NGOs).

**Mali**

Mali’s application for HSS funding was approved in 2008 and the first tranche of money was disbursed the same year. However, there was a delay in the use of funds owing to miscommunication between the concerned government departments regarding the arrival of funds. Given this delay, it is too early to comment on the impact of GAVI HSS in Mali.

Expected results, as noted in the proposal itself, are enhanced vaccination coverage, improved quality of supply of healthcare services and increased take-up of services in all targeted areas. One of the areas being funded through the GAVI HSS support include providing support for sending physicians to the district level. This is regarded as a key constraint that was not being funded previously, and will help better access to health care for the population.

The following appear to be the key areas of value add of GAVI HSS in Mali:

- GAVI works through existing government structures and plans, as against developing a parallel system of support.
- GAVI’s approach has been closely aligned with the country plans and implemented through the government structures, and as a result
- GAVI has been quick to support Mali in HSS as against other donors.
- GAVI HSS funding has contributed towards making the country think more strategically about HSS and the need to attract more donor funding. For example, GAVI HSS funding has led to the Government reviewing the role of different partners in the health system, so as to determine the areas where GAVI can provide support.

A more detailed analysis of the results and value add of GAVI HSS in Mali is presented in Sections 5.2.1 and 5.2.2 of the Mali Evaluation Report.

**Nigeria**

A total of $44.7m was approved for Nigeria under the GAVI HSS window for 2008-11. The full approved amount of $22.1m was disbursed in 2008; however, given delays on the part of the Nigerian government in implementing the funds, no funding was disbursed in 2009. The delay in the implementation of the HSS funds by the Nigerian government was caused by a number of internal procedural and institutional delays – complex institutional mechanism for delivery, efforts to harmonise donor support in the country and a lack of political leadership.

Thus, it is too early to comment on any results achieved through GAVI HSS funding in Nigeria as funds are just being put to use. However the importance of GAVI HSS funding is highlighted
by all stakeholders – albeit recognising clearly the extent of demand in Nigeria in comparison to the available resources.

The key areas of value add of GAVI’s HSS program are as follows:

- The GAVI approach of providing flexible cash to be used as per the priorities of the government which helps align the support more closely with the government plans/structures.

- As against the disease-related HSS support provided by the Global Fund, the more broad-based sector wide approach of GAVI is viewed as more beneficial by the government.

- GAVI’s processes for proposal approval and fund disbursement are considered to be relatively efficient, particularly in the context of World Bank support.

The key relative weaknesses of GAVI are in terms of the duration of funding and stability/predictability of funding. GAVI HSS’ three-year window compares unfavourably in this respect to the World Bank support that covers up to 10 years (from 2003 to 2012), and the Global Fund’s four year program started in 2009.

A more detailed analysis of the results and value add of GAVI HSS in Nigeria is presented in Sections 5.2.1 and 5.2.2 of the Nigeria Evaluation Report.

Uzbekistan

We understand that a draft HSS proposal was developed by the immunisation department at the MoH. However this process has stalled given the limited human resource available for development of the proposal and in particular as the intended nature of GAVI HSS is wider than the immunisation field. (The MoH in Uzbekistan is organised such that different areas of health operate in a ‘vertical’/separate manner, with limited interaction between different health areas)

Also, stakeholder feedback suggests that any intention to apply for GAVI HSS reached a complete halt with the introduction of the FMA requirement. Uzbekistan’s government policy does not allow external audit of its ministries’ accounts, and hence, the requirement of FMA has made receiving any cash grants from GAVI directly to the Ministry of Health budgets impossible.

Going forward, the difficulty in using cash grants in Uzbekistan (caused by the structure of the current legal and regulatory framework in the country might impinge any application for HSS funding. For example, current legislation requires that funds, if approved, are used in accordance with stringent (and often economically difficult) national rules and regulation (e.g. per diem rates, transport, fuel etc.), that may not be quite conducive to the activity supported by the grant.

4.6.2. EPI manager survey

The EPI manager survey posed the question, ‘Could you please state the three main activities (i.e. activities receiving the largest share of funds) for the HSS support received by your country and comment on whether/how they tackle the key bottlenecks in the health system?’
A total of 19 EPI managers have responded to this question in the survey. Of the 19 respondent countries, nine have reported on the activities for which the received HSS support was used and whether/how the activities tackled key bottlenecks in the health systems. The remaining have reported delays in application approval and in disbursement of approved funds (FMA is a key reason for delay), or that this window of GAVI support is not applicable to their country.

GAVI HSS is addressing key health system bottlenecks by funding activities such as transport, cold chain equipment, capacity building of health personnel, increasing coverage and quality of services, mobilising community support for MCH etc.

4.6.3. Review of documentation

HSS proposals/ Country APRs

In this section, we assess the extent to which GAVI HSS activities seek to address the health sector gaps identified by the countries in the proposals. We also then examine, based on information available in the APRs, the extent to which the proposed activities are implemented.

Table 8 in Annex 3 presents the key health sector bottlenecks laid down in country HSS proposals, proposed HSS activities and the status of implementation of activities for a selection of countries to which funds had already been disbursed by 2008 (since the 2008 APRs are the latest available reports that can provide information on implementation of proposed HSS activities). Of the 15 HSS countries that received funds in 2007, the analysis focuses on Cambodia, Cameroon, Liberia, Vietnam, Yemen and Zambia, based on data/information availability. A few limitations of the analysis are also presented with Table 8 in Annex 3.

The key findings of the analysis are as follows:

- Wide variation in the identified constraints and proposed HSS activities by country.
- The most common bottlenecks indentified by countries in their HSS proposals appear to be related to human resources (inadequate staffing, high turnover rates, low level of knowledge, skills, productivity and motivation of health personnel) and financing for the health sector (inadequate funding, particularly through the state budget; financial management issues). Other health systems barriers concern service delivery, health infrastructure, information systems, leadership and policy.

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93 Required information was consistently and (relatively) clearly reported by these countries in HSS proposals/ APRs, as relevant. The excluded countries are: Afghanistan (Implementation progress of proposed HSS activities is reported only as a “%” in the 2008 APR; no details on actual activities implemented), Burundi (2008 APR is not in English), Congo DR (2008 APR is not in English), Ethiopia (HSS proposal presents details of previous assessments' findings and does not clearly identify overall bottlenecks), Georgia (2008 APR does not report on implementation status of proposed HSS activities), Kenya (2008 APR does not report on implementation status of proposed HSS activities), Korea DPR (2008 APR does not report on implementation status of proposed HSS activities), Kyrgyzstan (2008 APR does not report on implementation status of proposed HSS activities) and Rwanda (Implementation progress of proposed HSS activities is reported only as a “%” in the 2008 APR; no details on actual activities implemented).
While Table 8 in Annex 3 provides examples of proposed HSS activities, given the diversity in activities and small sample size of countries, it is difficult to draw a conclusion regarding the most common proposed activities.

The health systems barriers identified in HSS proposals seem to be in line with proposed activities. This suggests that the potential for impact of GAVI HSS activities may be high, given that activities funded appear to be closely linked to the identified bottlenecks. For instance, a number of countries that consider human resource problems to be among the key health sector bottlenecks propose to use GAVI HSS funds for the purpose of training health personnel.

It is less straightforward to draw conclusions on the implementation status of proposed activities by countries since most countries had only been using HSS funds for a short period at the time of the 2008 APRs submission. The implementation progress varies widely both across countries and across activities with each country, depending on the nature of activity.

Findings from other HSS studies

The key related findings from various studies of HSS proposals/ APR information are presented below:

- Galichet’s review has segregated the identified barriers into operational* and systemic barriers. Of the 462 barriers founds in 48 HSS proposals, 258 (55.8%) were at the systemic level, with 204 (44.2%) at the operational level.

- Human resource issues were identified as a major health sector bottleneck (82% of the analysed 12 largest successful HSS proposals) in a study by L. Brenzel and C. Waddington.

- L. Brenzel, C. Waddington also find that all proposed activities relate to service delivery and health workforce building blocks, as defined by WHO.


- In a preliminary analysis of the first 31 HSS proposals, P. Hill et al (2007) finds the links between identified constraints and proposed responses to be often unconvincing. The report highlights two design factors that may be responsible for the lack of linkages:

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*Operational constraints have been defined in the study as those that are primarily at the district level or below and can be addressed with funding or resources.

*Systemic constraints have been defined in the study as those that require more comprehensive systems changes and cannot be addressed with funds or resources alone.

Logan Brenzel, Catriona Waddington: “Health System Strengthening Support from the GAVI Alliance: Early experience and lessons”

Peter Hill, Naima Hammani et al (2007): “Key features of the 2006-07 proposals: a report to the GAVI HSS task team – Preliminary findings from the first 31 proposals.”
the guidelines do not ask for an explicit description of how constraints and responses are linked (through narrative, diagram, log frame, table or other).

- the guidelines provide a number of examples of the kind of activities GAVI would like to see in the proposals, but these examples are basically operational level examples and the link to examples of identified constraints is tenuous.

- A review of 40 countries reporting on GAVI HSS in their 2009 APRs undertaken by the HSS consultants appointed to assist GAVI in preparation for the Joint Funding Platform, found limited information in the APRs. Only a few countries had received HSS funds for at least one year and activities were still in the early stages of implementation. The report did point out that it remains clear to the reviewers that the activities, if successfully implemented, should have a positive impact on maternal and child health.

- Sustainability of proposed activities has not been adequately addressed. Naimoli (2009) finds that few proposals explore long-term financing needs or anticipated funding gaps, particularly for recurrent expenditures. There were concerns that some of the applications might result in distortions in spending or contingent liabilities (e.g. salaries), which would require continued financing well beyond the life of HSS.

**Impact of new vaccine introduction by GAVI on health systems: APR information**

Some stakeholders expressed a view that the introduction of new vaccines by GAVI into routine immunisation programs of countries places a burden on country health systems, as countries are not sufficiently prepared in terms of logistics infrastructure, surveillance and monitoring systems, health worker training, etc. for the new vaccines. It was felt that the linkages between GAVI’s HSS and NVS program could be strengthened.

In order to support countries in the preparation for new vaccine introduction, GAVI provides a one-time grant worth $100,000 when a new vaccine is introduced in a country. Based on the APR information on the use of vaccine introduction grants, the money seems to have been used on a range of activities. Some of these directly support the introduction of new vaccines such as training of health personnel, awareness generation, logistics support etc, while others provide more indirect support (e.g. data collection, M&E, supervision etc.). The nature of activities is generally observed to be similar across countries and the new vaccines associated with the grant.

Table 4.3 provides examples of the activities funded through the vaccine introduction grant. It is clear that a number of these activities - particularly those in the area of capacity building, health workforce and infrastructure – contribute to the strengthening of country health systems.

**Table 4.3: Vaccine introduction grants: Examples of activities funded**

<table>
<thead>
<tr>
<th>Examples of activities funded</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vaccine introduction support activities</strong></td>
</tr>
<tr>
<td>• Training of health personnel</td>
</tr>
<tr>
<td>• IEC activities and purchase of communication equipment</td>
</tr>
<tr>
<td>• Awareness campaigns for vaccine preventable diseases, including new vaccines</td>
</tr>
</tbody>
</table>

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Examples of activities funded

- Production of awareness material e.g. posters
- Purchase of syringes, cold chain equipment, vehicles etc.
- Enhancement capacities for storage and distribution of vaccines
- Organisation of mass immunisation campaigns
- Setting up of technical committees for introduction of new vaccines

Other related support activities

- Epidemiological surveillance
- Planning and supervision
- Monitoring and evaluation activities (e.g. M&E of EPI data quality)
- Data collection
- Construction of incinerators and related training

Source: Country APRs

4.6.4. Conclusion

The field visit countries receiving HSS support provide limited evidence as yet for results and value add of GAVI HSS owing to delays in delays in disbursement of funds and/or in implementation of planned activities.

While there is wide variation in the constraints identified and activities proposed by countries in HSS proposals, human resource gaps appear to be a common bottleneck in countries. There broadly seems to be some alignment between identified constraints and proposed HSS activities, suggesting potential for impact. Also, based on the APR information, we understand that vaccine introduction grants provided by GAVI have been expended in strengthening health systems (e.g. through training, logistics support, M&E, etc.), which might mitigate the greater burden that new vaccines place on a country’s health system.

However, it is difficult to draw conclusions regarding the implementation of HSS activities given that most countries have started using the funds only recently and progress is not yet adequately reported in country APRs to date.

4.7. Role in Health Systems Funding Platform

This section presents a brief description of GAVI’s current and proposed role in the Health Systems Funding Platform. Annex 3 provides background information on the Platform, including areas of work and proposed work plan.

4.7.1. Review of documentation

Role of GAVI

GAVI, through the Secretariat and Implementing Partners, particularly WHO, is playing a key role in the conceptualisation and development of the proposed Platform. The Platform serves as a good example of innovative and catalytic action demonstrated by GAVI, as well as the Global
Fund and the World Bank, in harmonising donor efforts in this area and to reduce country burden, with the aim to increase alignment to the Paris aid principles.

A few examples of GAVI’s contribution to the ongoing process are as follows:

- **GAVI IRC members** would participate in the ongoing scoping missions and implementation of the platform.
- **GAVI** would work individually and jointly with the Global Fund to develop materials for policy committees and Board considerations regarding mechanisms for soliciting new HSS funding proposals and funding decisions.
- Contribution to the development of a joint framework for harmonisation and alignment of fiduciary and procurement mechanisms through in-depth discussions and country case studies.
- Contribution to the development of a common performance and monitoring framework.

### 4.7.2. Structured interviews

Feedback from the interviews suggests that GAVI HSS has helped increase visibility for the need for HSS at the global level. Now immunisation is discussed in the context of broader health systems, which is important. The proposed common financing platform is one example of this increased visibility. However, it cannot necessarily be said that there are any new players in HSS as a result of GAVI’s efforts in the area.

### 4.7.3. Conclusion

GAVI is clearly a key player in the formulation and implementation of the Health Systems Funding Platform, and driving this agenda forward. Despite the small amount of GAVI HSS funding relative to other players such as GF or the World Bank, GAVI is contributing to the Platform in a significant way.

### 4.8. Overall conclusions on SG1.2

‘What have been the results and added value of GAVI’s HSS program at global and country level?’

Our main findings from the HSS evaluation are summarised below, along with our overall conclusions.

#### 4.8.1. Summary

Based on the analyses presented above, Table 4.4 summarises our main conclusions on GAVI’s HSS program.
Table 4.4: SG1.2 – HSS findings

| Evaluation question SG1.2: Results and value add of HSS program at global and country levels. |  |
| --- | --- | --- |
| **Issue/ Theme** | **Findings** | **Robustness** |
| Strategy and approach of GAVI HSS | GAVI’s HSS focus goes beyond immunisation to child health and broader health systems. Downstream service delivery focus seeks to address key health sector gaps, but questions remain about whether GAVI is best placed for HSS support. | B Based on review of documentation, interview feedback, and electronic survey. |
| Delivery model, including processes and institutional structures | Delays in approval process and more recently in disbursements, after FMA introduction. Issues in monitoring systems/ process. Institutional divide versus EPI programs in countries. Limited in-house HSS capacities. | B Draws on HSS evaluation, review of documentation, country visits |
| Comparative analysis with other HSS donors | GAVI is the only donor with a specific HSS program, although its funding levels are lower than Global Fund, World Bank, USAID, etc. Some comparative strengths such as flexibility, predictability; but results orientation/ M&E is weak. We conclude therefore that it is difficult to establish GAVI’s added value vis-a-vis comparator HSS donors, as there is a balance of evidence of some positive characteristics in GAVI’s approach as well as of other less valued aspects. | B Primarily a review of documentation, supplemented by some interviews. E-survey and EPI manager survey feedback is mixed. |
| Impact at the country level | Too early to measure results. Proposed HSS activities appear to address identified bottlenecks in country health systems. Vaccine introduction grants support system strengthening activities. | C Limited evidence from country visits and selected HSS proposals/ APRs. |
| Role in common financing platform | Despite its small HSS funding size, key partner in designing, shaping/ implementing common platform. | C Review of documentation and interviews but work on Platform is still ongoing. |

4.8.2. Conclusions

The evidence in terms of results and added value of the HSS program is mixed. A number of our conclusions are similar to those outlined in the recent HSS evaluation and tracking study, and hence these are now well known to GAVI.

Whilst the stated objective of HSS is to increase and sustain immunisation coverage by financing key health system bottlenecks, a recent review of HSS approved activities found clear evidence that they are broader than immunisation in scope – extending to maternal and child health and the wider health system (as per its design). That said, stakeholder perceptions are different and a significant majority (75%) of respondents to the evaluation e-survey strongly agreed/ agreed to
the statement that ‘GAVI’s funding for health system strengthening in countries contributes towards increased and sustainable immunisation coverage’.

Stakeholder views also differ on whether GAVI is necessarily the right agency with the appropriate delivery structures in countries to implement the HSS program (which might divert limited resources from its core immunisation mission). On the other hand, some suggested that given the burden that GAVI-funded vaccines put on health systems, its support through HSS is justified and essential to increase coverage. Also, an analysis of the uses of vaccine introduction grants provided by GAVI suggests that they are typically used for direct and indirect support activities for vaccine adoption such as training, vaccine awareness campaigns, enhancing vaccine storage and distribution capacities, M&E, etc.

Several issues have been pointed out with respect to GAVI’s HSS delivery approach and implementing structures in countries - (a) keeping these distinct from the vaccine program (planning versus EPI department in the MoH, HSCC versus ICC) has raised coordination issues and at times, delays in the HSS grant process; (b) significant delays in approval of HSS proposals and disbursement of approved funds, more so with the recent introduction of FMA; (c) IRC’s expertise and knowledge of country health contexts to pass judgements on HSS applications; and (d) weaknesses in M&E and inability of country APRs to provide reliable information on HSS results. We understand that the HSS funding platform is looking to address some of the identified issues.

It is too early to measure impact of the program at country level. However, the focus on key system bottlenecks suggests that although a small percentage of the total health sector spend in a country, GAVI HSS could potentially make an impact on addressing key system constraints. That said, the focus of GAVI HSS has been beyond immunisation and child health. Therefore, whilst there might be some impact of HSS on vaccine coverage, it is likely to be difficult to measure and attribute to GAVI. The recent HSS Evaluation report also suggested that measurement of outcomes and impact is challenging, and will require a substantial revision to its monitoring and annual review process.

To assess HSS value add, we compared the GAVI approach to other HSS donor organisations such as the World Bank, Global Fund, and USAID. This analysis and the survey qualitative responses highlighted GAVI’s relative strengths to be flexibility and predictability of funding, alignment with country systems/ institutions and inclusive application process, promoting country ownership, etc. The e-survey quantitative feedback on such comparative analysis was broadly neutral – most felt they could not comment on GAVI HSS’ effectiveness vis-à-vis others.

Further, despite being a much smaller (in terms of value of grants) and latter HSS donor than these comparator organisations, GAVI is playing a vital role in conceptualising, designing and implementing the HSS funding platform. This suggests GAVI value add in raising the profile of immunisation amongst HSS donors – which might not have occurred in the absence of its HSS program.

Please note, however, that this question related to all SG1 health system programs – HSS, ISS, INS and CSO. However, several respondents seem to have interpreted it as focussed on the HSS program.

Reasons for inability to compare included lack of clear M&E framework, differences in goals/ focus of donors, inability to attribute HSS outcomes, etc.
5. **RESULTS AND VALUE ADD OF ISS PROGRAM**

5.1. **Introduction**

This third evaluation question under SG1 is ‘What have been the results and value add of GAVI’s ISS program?’ The ISS program was introduced in 2000, and provides cash grants to support routine immunisation in countries. The two main characteristics of ISS funding are its:

- Flexibility (i.e. countries/ governmens can spend ISS funds in any manner they deem appropriate to increase routine immunisation); and
- Performance basis (i.e. after the initial two years of ‘investment funding’, funding in later years is based on additional number of immunised children above projected targets).  

5.1.1. **Scope of evaluation question**

The earlier ISS evaluations by Abt Associates covered the first five years of GAVI ISS funding (2000-05), when most countries were nearing the end of their investment funding phase. Since 2005, most countries are in the rewards phase of their ISS funding, which is the period of focus of this evaluation.

Table 5.1 summarises our lines of enquiry for the ISS program under the results and value add questions respectively.

<table>
<thead>
<tr>
<th>Results</th>
<th>Value add</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ISS approvals by different country typologies.</td>
<td>• Additionality of ISS funding (selected GAVI countries for Phase II).</td>
</tr>
<tr>
<td>• Utilisation of ISS funding.</td>
<td>• Added value of innovations such as ‘performance based rewards’ and ‘flexible cash’ – at country and global levels.</td>
</tr>
<tr>
<td>• Contribution of ISS funding to country immunisation expenditure/ financing.</td>
<td></td>
</tr>
<tr>
<td>• Sustainability of ISS funding.</td>
<td></td>
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<tr>
<td>• Impact of ISS funding on DTP3 coverage.</td>
<td></td>
</tr>
<tr>
<td>• Geographical equity analysis.</td>
<td></td>
</tr>
<tr>
<td>• Effectiveness of Data Quality Audit/ Self-assessment (DQA/ DQS).</td>
<td></td>
</tr>
</tbody>
</table>

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101 ISS reward funding is calculated at $20 per additional child receiving DTP3 above the number of children targeted the first year after application. $20 is the estimated cost of fully vaccinating a child with the basic series of six antigens.

102 The evaluation reports were submitted by Abt Associates Inc. in 2004 and 2007.

103 However, we are constrained by absence of data from GAVI on the break-up of investment and rewards ISS funding by country. This data could have been potentially useful to analyse the extent of reward funding by country typology, DTP coverage, etc.
5.1.2. Methodology and sources of evidence

The ISS evaluation draws on a range of evidence sources, including review of available documentation and data (such as previous evaluation reports, APRs, cMYP), structured interviews, electronic and EPI manager surveys, and regression analysis.

The table below sets out a brief description of the evidence sources used.

*Table 5.2: Description of sources of evidence for SG1.3 – Results and value of add of ISS*

<table>
<thead>
<tr>
<th>Evidence source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of documentation</td>
<td>Review of GAVI documentation on the ISS program.</td>
</tr>
<tr>
<td>Quantitative analysis</td>
<td>Analysis based on APRs and cMYP data.</td>
</tr>
<tr>
<td>Structured interviews</td>
<td>Interviews with a range of GAVI stakeholders, including Secretariat, Board members, GAVI partners, experts, etc.</td>
</tr>
<tr>
<td>Electronic surveys</td>
<td>One question on ISS in the e-survey and EPI manager survey.</td>
</tr>
<tr>
<td>Country studies</td>
<td>All five field visit countries have received ISS funding.</td>
</tr>
<tr>
<td>Regression analysis</td>
<td>Regressing ISS disbursements on DTP3 coverage rates. Extending Lu et al regression analysis on ISS impact on DTP3 coverage levels for countries grouped by different levels of baseline coverage rates.</td>
</tr>
<tr>
<td>Comparator analysis</td>
<td>Comparison of the ISS performance based approach with other rewards based programs.</td>
</tr>
</tbody>
</table>

5.1.3. Structure

The rest of the ISS review is structured as follows:

- Section 5.2 provides the background on GAVI ISS funding to date.
- Sections 5.3 - 5.11 in turn discuss each of the themes of ISS results and added value.
- Section 5.12 concludes.

5.2. Background

The main trends with regards ISS funding are as follows:

- Over the period 2001-10 total ISS approvals are $356.4m, whilst total disbursements have been $262.5m (as of February 2010). The main reasons for this difference are the spike in ISS approvals in 2007, and also the lack of ISS disbursements in 2009 and early

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104 We understand from GAVI that data on ISS funding for Liberia and Niger has not been correctly inputted in the database provided to CEPA for this evaluation.
Additional approvals have been made up to 2013, taking the total ISS approvals over the period 2001-13 to $380.8m.

- ISS funding has fluctuated over the period from GAVI inception to date, with spikes in 2004 and 2007. The significant spike in ISS funding in 2007 is almost entirely due to approvals for Nigeria and Pakistan. Combining these two countries, approvals rise sharply from $6.9m in 2006 to $51.9m in 2007, then fall again to just $7.9m in 2008.

- Majority of ISS disbursements over the period 2001-10 has been to AFRO (63%). The other two main regions that have been disbursed ISS funds are SEARO and EMRO (17% and 16% respectively). The remaining 4% of ISS disbursements have been split between WPRO, EURO and PAHO.

- The average size of funding in each region does not follow exactly the same pattern as for total disbursements: SEARO and EMRO have the highest average size of $8.9m and $8.6m respectively. AFRO, despite having much higher total disbursements, has a much lower average size of $4.5m. The three smallest recipients of total disbursements - WPRO, EURO and AMRO - also have very low average funding sizes ($0.9m, $0.4m and $0.3m, respectively).

- The top 25 recipients comprise of countries from three regions - AFRO, SEARO and EMRO. The top recipient is Nigeria ($30.6m), which has received roughly $5m more than the next largest recipient. The largest recipients in WPRO, EURO and AMRO (Lao PDR, Haiti and Tajikistan) have received a relatively minimal quantity of disbursements, at $1.4m, $1.3m and $1.1m respectively.

Annex 4 provides details in terms of trends in ISS approvals and disbursements over time, proportion of total ISS funding that has been approved / disbursed by WHO region to date, average size of ISS funding by WHO region, and distribution of total ISS disbursements among the 62 recipient countries. The annex also includes a discussion of the findings of previous evaluations.

5.3. Analysis of ISS approvals by country typology

Annex 4 also presents the detailed analysis of the distribution of ISS approved funds by co-financing country categories and Low Income Countries Under Stress (LICUS)/ non-LICUS countries. The key conclusions are:

- The analysis of ISS approvals by the co-financing categorisation of GAVI countries shows that the ISS approvals have benefitted the ‘poorest’ and ‘intermediate’ countries more than the ‘least poor’ ones. However, given the number of poorest countries, the average approval per country is relatively low (although still higher than the average for least poor countries).

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105 ISS disbursements fell to zero in 2009 and early 2010. The program was temporarily suspended in 2008. After the program was resumed (except in a few GAVI countries), there have been no disbursements in 2009 because the IRC review is lagged by nine months. The IRC only reviews data on the previous year’s performance once the WHO/UNICEF estimates are available in September. It won’t be until after the IRC in September 2010 and subsequent Board approval that the disbursements for program year 2009 will be sent to countries.
• Approvals to LICUS and non-LICUS countries are roughly equal - both total and average per country - and so there appears to be little bias here.

• However, annual approvals made to ‘Fragile’ countries have declined since 2007. This might suggest that the situation in fragile countries inhibits them from attaining the DTP annual coverage targets to be eligible for rewards funding.

• Also, the spikes in ISS funding in 2004 and 2007 might be attributed to large birth cohort countries such as Bangladesh, Nigeria, and Pakistan – whose large population sizes / growth rates make them more likely to receive ISS rewards.

5.4. Utilisation of ISS funds

This section examines the use of ISS funds by countries drawing on the APR information. It reviews the extent and timing of utilisation of funds after disbursement from GAVI, key areas where countries deploy these funds, spend at national versus sub-national level, etc.

5.4.1. Quantitative analysis

We have analysed data provided in the APRs to assess two aspects of utilisation of ISS funds:

• the extent to which funding available in a year has been spent by the country; and

• the distribution of ISS spend.

Use of available ISS funds by countries

The country APRs report on the amount of funds disbursed by GAVI in each year, the funds spent/ utilised by the country in that year, and the balance carried forward to the next year. CEPA has collated this data for all countries for the period 2006-08, to assess the extent to which available funds in a year are being spent by the countries. The motivation for this analysis was to assess whether countries absorb the quantum of ISS funds made available by GAVI in a year.

It is important to note the methodology behind this analysis and some data limitations.

• For a country to be included in this analysis in a given year, their APRs must provide the following three figures: Balance carried forward from previous year, ISS funds disbursed in current year, and balance carried forward to next year. Countries were excluded in a given year if these three items of data were not available. As a result, the number of countries included in each year was variable: 24 in 2006; 30 in 2007; and 26 in 2008.\textsuperscript{106}

• Data from APRs was slightly inconsistent, and required a few assumptions to be made. For example, some values needed to be converted into US dollars, and with the exchange rate fluctuating over time this may have marginally reduced accuracy. In addition, checks

\textsuperscript{106} This specific analysis we have carried out relies on the quality/ completeness of APR data. Hence we have not used the ISS data from GAVI Finance which includes all ISS countries but does not have the data points for this analysis.
were made to ensure that non-utilisation did not exceed 100%. Where it was difficult to make a reliable assumption, the country was excluded from the analysis for that year.

Figure 5.1 below shows the extent of utilisation of ISS funds in a year, calculated as the 'Balance carried forward to next year' as a percentage of 'ISS funds carried forward from the previous year plus ISS funds received during the current year'. The key points to note are:

- On average, about 50% of the ISS funds available in that year (both funds disbursed in the current year by GAVI and any balance that may be carried over from previous years) are not spent by the countries in that year.

- The non-utilisation of ISS disbursements, as per this measure, increases slightly over the period 2006-08. This may be due to the consistent carrying forward of balances from previous years' disbursements, which would require an increase in spending by countries in order to maintain the same percentage rate of non-utilisation.

**Figure 5.1: Percentage of ISS funds that have not been utilised in a year, 2006-08 (%)**

In addition, a comparison of the opening and closing balance for countries, in each of the three years for which we have data, shows that for roughly 50% of the countries, the closing balance was greater than the opening balance (52% of countries in 2006, 51% in 2007 and 45% in 2008). This implies that an amount equal to at least the balance left over from a previous year is not being spent in the current year as well.

Figure 5.2 below shows the non-utilisation by individual countries in 2006-08, by showing the proportion of countries which fall under certain non-utilisation brackets. For example, the pie chart for 2006 shows that just over a quarter of countries had a zero percent non-utilisation in that year. The key points are:

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107 Because the number of countries in each year varied (according to data availability), non-utilisation has been calculated as a weighted average of the non-utilisation of individual recipient countries.

108 For those countries the 'balance carried forward to the next year' was zero, indicating that they had spent all previous balances and funds disbursed to them by that point in time.
• In 2006, approximately two thirds of countries have a non-utilisation of either 0% or 1%-50%, with the other third of countries having a rate of between 50% and 100%. Figure 5.1 above shows that the overall non-utilisation rate in 2006 (for all countries) was 48%, which indicates that the countries in the 50%-100% bracket were larger ISS recipients than countries in the 0%-50% brackets.

• In 2007, the proportion of countries in the 0% to 50% non-utilisation brackets falls from two-thirds (in 2006) to just below a half. Simultaneously, the proportion of countries in the 50%-99% and the 100% brackets both increased, and therefore it is no surprise that the overall non-utilisation for 2007 (shown in Figure 5.1 above) increased from 48% (in 2006) to 55%.

• In 2008, the proportion of countries in the particular non-utilisation brackets almost precisely returns to the pattern in 2006, although with slightly more countries in the 100% bracket and a slightly fewer countries in the 0% bracket (compared to 2006). Compared to 2007, 2008 has a higher proportion of countries with a low non-utilisation.

• However, it is interesting to compare this feature to an increase in the overall non-utilisation rate, shown in Figure 5.1 above, which increases from 55% (in 2007) to 61% in 2008. This indicates that the countries with higher non-utilisation must be larger ISS recipients because they are having a greater influence on the overall non-utilisation rate. Taking a closer look at the data, this is the case. Taking the five largest recipients in 2008 as a sub-group, their overall non-utilisation rate is 63%. This explains why the non-utilisation rate in Figure 5.1 above rises to 61% in 2008.

Figure 5.2: Proportion of countries within non-utilisation brackets (%); 2006–08

Source: Country APRs

Annex 4 provides a robustness check of the above analysis using GAVI ISS disbursement data. The above analysis indicates that a substantial proportion of the ISS disbursements to a country have not been utilised in that year. To some extent, this may be driven by the timing of the disbursement from GAVI i.e. if the ISS funds have been disbursed towards the end of the year, the country may not have utilised the funds until the following year. However the relatively large

109 'Largest' recipients were defined as the top 5 countries which had the largest total of 'ISS balance carried forward from 2007' plus 'ISS funds received in 2008'. For example, Nigeria (the largest recipient in 2008, with almost a quarter of the 'balance carried forward plus funds received' measure) had a non-utilisation rate of 96%, which will have significantly affected the overall non-utilisation rate.
proportion of unutilised funds, and also the consistent pattern over the three years examined, might suggest other factors as well:

- It may be the case that country governments have limited absorptive capacity for these funds.
- It may also stem from countries’ decisions to keep some funds for the short/medium term, given the uncertainty associated with receiving ISS rewards. However, we have not seen any evidence to support or disprove this hypothesis.

**Distribution of ISS spending to districts**

Figure 5.3 presents the distribution of ISS spending by countries across the central, state and district levels\(^\text{110}\) for the period 2006-08. The graph is based on aggregate figures for 24 ISS countries that have consistently reported this information in the 2006, 2007, and 2008 APRs. The distribution of funds spent at the three levels has remained broadly the same across the three years, with the greatest proportion being spent at the district level. This concurs with feedback received that ISS funds are mostly spent at sub-national level on delivery aspects of routine immunisation. One might draw the inference that ISS funds might be used to reach previously unfunded districts/hard to reach areas - although there is no data to prove this, country feedback suggests the same. It is however difficult to comment on the equity of coverage at district level.

*Figure 5.3: ISS spending at central, state and district levels by countries (%)*

![Graph showing distribution of ISS spending](image)

Source: Country APRs

---

\(^{110}\) APRs also require countries to report on distribution of expenditure across public (central/state/district) and private sectors. This has not been presented since a majority of the ISS countries have not reported figures for private sector spending of GAVI ISS funds.
Distribution of ISS spend by activity

Figure 5.4 presents the areas of ISS funding by countries during 2006-08. While the proportion of ISS funds spent on various activities has varied across the years, the key areas of spending are HR, building and equipment, and Information, Exchange, and Communication (IEC)\(^{111}\). This shows that ISS spend has mostly been towards downstream delivery aspects, and at times broader than immunisation. The previous ISS evaluation supported the finding (based on country feedback, since the APR analysis was not conclusive in this area) that ISS funds were used to fill gaps in donor and government immunisation funding.

Figure 5.4: Areas of ISS funding by countries\(^{112}\)

![Bar chart showing distribution of ISS spend by activity]

Source: Country APRs

5.4.2. Country visits

Country visits were conducted in Bangladesh, Bolivia, Mali, Nigeria and Uzbekistan between April and June 2010. Uzbekistan has not been covered in the country summaries below as the country does not receive GAVI support under the ISS program.

Low utilisation rates of GAVI ISS funds have been reported on account of reasons ranging from lack of effective communication from GAVI regarding the use of funds to low state-level capacity for proposal drafting.

\(^{111}\) Human Resources include spending on personnel and training. The building/equipment category encompasses vehicles, cold chain equipment and construction of buildings for vaccine storage. IEC comprises expenditure on social mobilisation, outreach campaigns etc. “Other” may include maintenance and overheads, epidemiological surveillance, stationary etc.

\(^{112}\) The graph presents aggregate figures for 24 ISS countries that have consistently reported this information in the 2006, 2007 and 2008 APRs.
Table 5.3: Country visits feedback on utilisation of ISS funds

<table>
<thead>
<tr>
<th>Country</th>
<th>Feedback on utilisation of ISS funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>Over the years, Bangladesh has used ISS funding primarily for recurrent expenditures such as injection supplies, personnel, transportation, maintenance and overheads, training, consultancy, IEC/mobilisation, etc. In the past, problems have been reported in terms of delays in carrying out planned activities on account of lengthy government procedures involved in expending any approved budget, and change of signatories.</td>
</tr>
<tr>
<td>Bolivia</td>
<td>In Bolivia, the level of ISS funding is relatively low. Funds have been used to improve communications with vaccination centres, and information management through the purchase of computers. The money has also been used to strength the capability to monitor and conduct evaluations of the performance of vaccination through the acquisition of several vehicles – some of which have been provided as ‘rewards’ to regions with good coverage performance. It is believe that policy prioritisation is the driver for increased coverage as opposed to the ISS funding (which simply improves the data capture which, according to them, will show an increase).</td>
</tr>
<tr>
<td>Mali</td>
<td>In Mali, there is an unspent balance of about $1m of ISS funds since 2007. However the issue here is not low government capacity to absorb the funds, rather, there appears to be some confusion amongst the Malian government as to whether they are allowed to use these funds or not. While GAVI does not have any restrictions on the use of disbursed ISS funds, this has not been communicated effectively to Mali – resulting in the unspent balance sitting in the accounts for over two years now. At the same time, the activities that were previously funded by ISS have not received funding from any other source. Feedback during the country visit suggested that this is negatively impacting the immunisation systems, with the related impact on coverage.</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Nigeria’s federal structure, in which a high degree of autonomy is held by states, generates complexity in the ISS implementation process. There has historically been low utilisation resulting from limited state-level capacity for proposal drafting, although revised guidelines developed in 2009 have encouraged states to submit proposals. However, some states (generally those with higher access to resources) do not see application for ISS funding as a priority, also contributing to a lower utilisation rate.</td>
</tr>
</tbody>
</table>

5.4.3. Conclusion

The conclusions on the two aspects of ‘utilisation’ (i.e. the extent of utilisation of funds, and distribution of use) analysed in this section are:

- **Low utilisation rates of GAVI ISS funds** have been found, with an average of 50% of funds available to a country in a year (previous year’s balance + new disbursements) remaining unutilised. This may suggest limited absorption capacity or late disbursement in a year or delayed decisions on use of funds given its flexible nature. It may also stem from countries’ decisions to keep some funds for the short/medium term, given the uncertainty of ISS rewards (although we have not found evidence to prove or disprove this).  

- **A large proportion of ISS funds** are spent at the district level on downstream delivery areas such as human resources, building and equipment and IEC activities. This is consistent with countries needing to push funding to sub-national level to have an impact.
on coverage in remote districts/unreached areas, an important area of value add of GAVI ISS funding.

5.5. **Contribution of ISS to country immunisation spending**

The design of ISS support is intended for it to be a small part of the country immunisation spend. This section validates the extent to which ISS funding contributes to a country’s immunisation expenditure using a range of evidence sources such as the comprehensive Multi-Year Plans (cMYPs) data, interview feedback, etc.

5.5.1. **Quantitative analysis**

We have analysed data from countries’ cMYPs to assess the relative share of GAVI ISS funding as a proportion of total country immunisation services expenditure\(^{113}\). This is a noted feature of the design of the ISS program and we verify this using the available data.

The analysis is constrained by two specific limitations of the cMYP data. First, the available sample of countries changes from year to year. This is because: (a) the first year covered by the cMYP varies from 2004 to 2006; and (b) most countries exclude the year immediately after the first, baseline year (i.e. a country whose cMYP begins in 2004 will typically not include any data for 2005). This limits our ability to examine trends over time in expenditure or finance, as it is difficult to determine a consistent sample of countries. Second, very few countries provide data that allow us to observe the impact of ISS funds being introduced. Most cMYPs begin in 2005/06, which is after the introduction of ISS funding in Phase I countries.

Also note that a country cMYP reports on one year of actual data, followed by approximately five years of forecast data. Hence our analysis below draws mostly on forecasted data.

*Planned expenditure on ISS type services*

Overall, specific expenditure on ISS type activities/services (i.e. immunisation systems related expenditure) for immunisation is planned to increase substantially across the countries for which we have cMYP data (see Section 4.4.3 and Annex 10 of the SG3 evaluation report for details). Average expenditure is projected to grow by 43% between the first and second plan years, and by an annual rate of 2.5% thereafter.

Financing this planned expenditure appears challenging (again see Section 4.4.3 and Annex 10 of the SG3 evaluation report for further details). Even including both probable and secure sources of finance, there is an average forecast funding gap of 31% in the second plan year and 39% in the final plan year.

*GAVI ISS funding as a proportion of total immunisation services expenditure*

Within this context we assess the contribution (actual/forecasted) made by GAVI ISS funding to immunisation systems related expenditure, aggregating across all countries for which we have

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\(^{113}\) Defined so as to exclude spending on vaccines and injection materials.
Table 5.4: ISS funding as a proportion of immunisation systems expenditure

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GAVI finance as a % of total systems related expenditure (avg.)</td>
<td>5.1%</td>
<td>4.6%</td>
<td>8.5%</td>
<td>5.0%</td>
<td>5.4%</td>
<td>4.3%</td>
<td>4.4%</td>
<td>4.7%</td>
</tr>
<tr>
<td>GAVI disbursements/approvals as a % of total systems related expenditure (avg.)</td>
<td>4.5%</td>
<td>2.7%</td>
<td>5.8%</td>
<td>5.6%</td>
<td>4.1%</td>
<td>4.3%</td>
<td>4.9%</td>
<td>4.9%</td>
</tr>
<tr>
<td>No. of countries in sample</td>
<td>40</td>
<td>30</td>
<td>17</td>
<td>37</td>
<td>33</td>
<td>30</td>
<td>27</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: Country CMYP data.

Overall, as intended, GAVI ISS funding is not a major source of forecasted finance for immunisation system expenditure. GAVI finance (as reported by countries) comprises only 5.1% of total system-related expenditure, while GAVI disbursements comprise only 4.5%.

5.6. Sustainability of ISS funding

This section examines the sustainability of GAVI ISS funding using a range of evidence sources - cMYPs data, interview feedback, and country visits.

5.6.1. Structured interviews

Stakeholder feedback suggests that while GAVI ISS funds have been a key force for countries to invest in increasing coverage to the unreached – especially since no other donor funds are available for this purpose. However, it is believed that GAVI can do more to advocate for greater sustainability of immunisation financing among country governments, and should provide country-level decision makers with more information regarding long-term cost projections and scale of commitment involved to increase routine immunisation coverage.

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114 As noted above, we are missing data for some countries in some years, and so the sample of countries varies from year to year. Hence we attach more weight to the aggregate figures than to any yearly fluctuations. Countries are included only if they were receiving ISS support in the year in question.

115 The analysis has been conducted using two sources of data in order to check for robustness (especially given that the cMYP data may be of relatively poorer quality).

116 An alternative approach would be first to sum financing and expenditures across countries, and then calculate the percentage. This would implicitly weight each country’s contribution to the answer according to the magnitude of its expenditure, rather than weighting each country equally. This approach produces similar results when we apply it to the country-reported GAVI finance data. However, weighting each country by the magnitude of its expenditure reduces the importance of ISS funding as a proportion of the total when GAVI disbursement data is used.

117 GAVI disbursement figures are used for the period 2005-09, after which approvals figures are used.

118 The difference can be accounted for by two factors. First, countries may use funding from other GAVI sources (e.g. HSS) for expenditure items categorised as immunisation services. Second, there may be timing differences between when funds are disbursed and when they are used.
In addition, we understand that ISS funding has been temporarily suspended by GAVI when there have been major issues of data quality/reliability in countries (e.g. Mali), reports of misuse of funds/corruption (e.g. Uganda), or broader data quality concerns as the basis of ISS rewards (e.g. outcome following the Lancet (2008) article). Several countries have struggled to finance the ISS funded activities on the suspension of funding, resulting in them remaining unfunded.

### 5.6.2. Country visits

Feedback during country visits suggest that there is concern regarding the sustained funding of ISS activities once GAVI support ends or if funding is suspended. (Please note that Uzbekistan has not been covered in the country summaries below as the country does not receive GAVI support under the ISS program.)

<table>
<thead>
<tr>
<th>Table 5.5: Country visits feedback on contribution to country immunisation spend</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bangladesh</strong></td>
</tr>
<tr>
<td>Most stakeholders are of the view that it would be tough for Bangladesh to self-fund entirely the immunisation activities that are currently being funded by GAVI.</td>
</tr>
<tr>
<td><strong>Bolivia</strong></td>
</tr>
<tr>
<td>n/a[120]</td>
</tr>
<tr>
<td><strong>Mali</strong></td>
</tr>
<tr>
<td>Activities that were funded through ISS support are currently not being funded through other channels, following the temporary suspension of ISS funding from GAVI after 2007, following persistent data quality problems.</td>
</tr>
<tr>
<td><strong>Nigeria</strong></td>
</tr>
<tr>
<td>Although we were not able to gather data to support this, some stakeholders suggested that state governments have been encouraged by the availability of ISS funding to provide greater amounts of funding for immunisation services. However, although budget lines have been introduced for such activities, some state-level stakeholders (particularly in Sokoto state) indicated that funding these activities sustainably may be a challenge.</td>
</tr>
</tbody>
</table>

### 5.6.3. Review of documentation

Although the issue of sustainability is addressed in detail under SG3.3, we note here two key points for immunisation services type expenditure specifically based on a cMYP analysis:

- First, in general, countries have planned large increases in immunisation services type expenditure over the period of cMYPs.
- Second, in terms of finance per child, average secure and probable finance is projected to remain broadly flat.

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[119] ISS disbursements were nil in 2009 and early 2010, following the Lancet 2008 article (Lim et al (2008): “Tracking progress towards universal childhood immunisation and the impact of global initiatives: a systematic analysis of three-dose diphtheria, tetanus and pertussis immunisation coverage”, Lancet Vol. 372, December 13) when GAVI investigated the data quality issue in countries. Since then, ISS funding has resumed, except in six countries (Mali, Nigeria, Chad, Central African Republic, Indonesia, and Guinea), where data quality issues persist.

[120] The level of ISS resources are very low compared with total immunisation expenditure. Routine immunisation (including systems and vaccine spend) is funded using around 5% of the public health insurance fund.
The average financing gap for immunisation services type expenditure therefore reaches 39% by the final plan year, far higher than funding gaps for vaccines (1% for new vaccines and 8% for traditional) or injection supplies (10%). Sustainability appears to be a significant medium- to long-term issue for immunisation services type expenditure.

5.6.4. Conclusion

Concern has been expressed by stakeholders regarding the sustainability of GAVI ISS funding to countries and whether GAVI could do more towards governments planning for/sustaining the areas of ISS supported funding after the GAVI grants end. The issue of ISS sustainability is also pertinent when the program gets temporarily suspended in countries\(^\text{121}\) – when the ISS funded areas remain neglected by the government.

5.7. Impact of ISS funding on DTP3 coverage

In this section, we analyse the impact of ISS funding on DTP3 coverage levels. We also extend Lu et al’s (2006) analysis of the impact of ISS funding on coverage levels for different country groups, using additional data from 2005 onwards, and present results from a series of extended regression models.

5.7.1. Background on coverage rate estimates

In assessing trends and patterns in DTP3 coverage rates, a key choice is the source used for national coverage rates. There are three main options: (a) WHO/UNICEF estimates, (b) country reported administrative rates, and (c) survey-based measures. We have reviewed the work done by Lim et al (Lancet, 2008) to guide our choice.

Lim et al analyse the above three sources in order to determine whether there is any evidence that ISS funding (in particular its reward based nature) might encourage over-reporting. To do this, they take survey-based measures of coverage as a benchmark and use regression techniques to test whether there is any relationship between deviations of official coverage rates from survey-based rates and the presence of GAVI ISS. They find that survey-based measures have increased more gradually and to a lesser extent than either WHO/UNICEF or country reported rates. Their evidence suggests that ISS funding has indeed incentivised over-reporting of countries’ administrative rates and, to a lesser extent, the WHO/UNICEF estimates.

In the absence of suitable survey-based measures to use in our analysis, we therefore make most use of WHO/UNICEF estimates in our analysis, particularly the regression analysis. However, we note that possible over-reporting may influence results based on these estimates.

5.7.2. Regression analysis

We assess the relationship between DTP3 coverage rates and ISS funding. We also extend Lu et al’s (2006) analysis of the impact of ISS funding (which analysed differences in this relationship by country group according to their baseline coverage rate) to incorporate additional data from

\(^{121}\) This has happened in case of serious data quality/ corruption issues in country (e.g. Mali, Uganda), or say, as a result of investigations in 2009 following the Lancet (2008) article.
Finally, we also estimate a series of alternative regression models, based on different specifications, which in our view, may provide additional insight on the impact of ISS funding on DTP3 coverage rates.

Our analysis tests the following three main hypotheses:

- ISS disbursements have a positive effect on DTP3 coverage rates;
- The impact of ISS disbursements on DTP3 coverage rates varies depending on a country’s initial coverage rate; and
- The above conclusions are robust to the source used for DTP3 coverage.

The following sub-sections set out our approach, main results, and conclusions. Annex 4 contains full details of each.

Approach

Our primary question of interest is whether ISS disbursements have a positive effect on DTP3 coverage rates. To address this question, our core model is:

$$Y_{it} = \alpha + \beta I_{it} + \gamma N_{it} + \rho Y_{it-1} + \theta Z_{it} + \epsilon_{it}$$

where $Y$ denotes the coverage rate (as estimated by WHO/UNICEF), $I$ denotes ISS disbursements per surviving child, $N$ non-ISS GAVI disbursements (i.e. GAVI NVS, HSS, INS and CSO disbursements), and $Z$ denotes control variables including Gross Domestic Product (GDP) per capita (in natural log form) and the World Bank’s Political Stability index (the subscript $t$ denotes the year and $i$ denotes the country observation). The coefficient of interest is $\beta$, which represents the effect of ISS disbursements (per surviving child) on DTP3 coverage.

This is based on the approach developed by Lu et al, although at this stage we do not estimate the model separately for different country groups. Following Lu et al, we estimate an Ordinary Least Squares (OLS) regression with Panel Corrected Standard Errors (PCSE) as suggested by Beck and Katz. Essentially this is a standard OLS regression, with corrections to the standard errors to take account of the time series (by year, denoted by subscript $t$) and cross-sectional (by country, denoted by subscript $i$) structure of the data. Also following Lu et al, we include the term $Y_{it-1}$ - the lag of the coverage rate - to account for autocorrelation. The variable indicating non-ISS GAVI disbursements is excluded from some specifications, in order to focus on the relationship between ISS disbursements and DTP3 coverage.

A secondary question is whether there are any differences across countries in the relationship between ISS disbursements and DTP3 coverage. We focus on three different country groups identified by Lu et al, based on initial coverage rates of <65%, 65%-80%, and >80%. The above model is estimated separately for each group of countries; these models are referred to as the ‘split sample’ models. In each case, the coefficient of interest is again $\beta$, which in these models represents the relationship for a particular group of countries.

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122 A full background review of this work is contained in Annex 4.
123 Where the number of surviving children is defined using births minus infant mortality based on UN data.
Main Results

We present below the main results which inform our overall conclusions. Further detail can be found in Annex 4. In each table the dependent variable is the WHO/UNICEF estimates of coverage rates, and baseline groups, where used, are determined using WHO/UNICEF coverage rates in the year before ISS funding began.

Our first set of results is based on estimating the model described above on a sample which includes all countries pooled together. The results are presented in Table 5.6 below, where column (1) represents the results for a model excluding non-ISS disbursements, and column (2) the results for a model including non-ISS disbursements. The rows report the coefficients for each explanatory variable, along with the standard errors in parentheses below. (Please note that in the tables in the rest of this section (and in Annex 4); ‘ISS per child’ refers to ISS disbursements per surviving child).

Table 5.6: Regression results using a pooled sample

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISS per child</td>
<td>0.39</td>
<td>0.34</td>
</tr>
<tr>
<td></td>
<td>(0.29)</td>
<td>(0.27)</td>
</tr>
<tr>
<td>Non-ISS per child</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.06)</td>
<td></td>
</tr>
<tr>
<td>Ln of GDP per capita, PPP (2005 $)</td>
<td>0.63*</td>
<td>0.68*</td>
</tr>
<tr>
<td></td>
<td>(0.37)</td>
<td>(0.36)</td>
</tr>
<tr>
<td>WB political stability index</td>
<td>0.3</td>
<td>0.34</td>
</tr>
<tr>
<td></td>
<td>(0.40)</td>
<td>(0.40)</td>
</tr>
<tr>
<td>Lag of coverage</td>
<td>0.92***</td>
<td>0.92***</td>
</tr>
<tr>
<td></td>
<td>(0.02)</td>
<td>(0.02)</td>
</tr>
<tr>
<td>Constant</td>
<td>2.27</td>
<td>2.02</td>
</tr>
<tr>
<td></td>
<td>(2.62)</td>
<td>(2.63)</td>
</tr>
<tr>
<td>Observations</td>
<td>827</td>
<td>826</td>
</tr>
</tbody>
</table>

Dependent variable is WHO/UNICEF estimate of coverage rates
Standard errors below coefficients in parentheses. * p<0.10, ** p<0.05, *** p<0.01

Although the coefficient of interest is positive in both models, there is no significant evidence (at the 10% level) of a positive relationship between ISS disbursements and DTP3 coverage. Thus, we cannot conclude that ISS disbursements have increased DTP3 coverage rates.

Our second set of results is a replication of Lu et al’s methodology using our full revised and updated dataset. These results are presented in Table 5.7 below, where each column represents the results (estimated separately) for a particular group of countries. Panel A reports the results from a model excluding non-ISS disbursements and Panel B the results from a model including non-ISS disbursements.

---

125 The lag of the coverage rate is a significant explanatory variable, indicating the presence of autocorrelation.
Table 5.7: Regression results using a split sample

Panel A: ISS only

<table>
<thead>
<tr>
<th></th>
<th>Baseline &lt;=65%</th>
<th>Baseline 65-80%</th>
<th>Baseline &gt;80%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISS per child</td>
<td>0.51</td>
<td>0.85***</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>(0.32)</td>
<td>(0.30)</td>
<td>(0.35)</td>
</tr>
<tr>
<td>Ln of GDP per capita, PPP (2005 $)</td>
<td>0.6</td>
<td>-0.03</td>
<td>0.46</td>
</tr>
<tr>
<td></td>
<td>(0.57)</td>
<td>(0.24)</td>
<td>(0.70)</td>
</tr>
<tr>
<td>WB political stability index</td>
<td>0.53</td>
<td>0.06</td>
<td>-0.32</td>
</tr>
<tr>
<td></td>
<td>(0.54)</td>
<td>(0.57)</td>
<td>(0.56)</td>
</tr>
<tr>
<td>Lag of coverage</td>
<td>0.94***</td>
<td>0.80***</td>
<td>0.80***</td>
</tr>
<tr>
<td></td>
<td>(0.03)</td>
<td>(0.05)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>Constant</td>
<td>1.13</td>
<td>15.71***</td>
<td>14.85***</td>
</tr>
<tr>
<td></td>
<td>(4.18)</td>
<td>(4.90)</td>
<td>(3.83)</td>
</tr>
<tr>
<td>Observations</td>
<td>325</td>
<td>165</td>
<td>337</td>
</tr>
</tbody>
</table>

Dependent variable is WHO/UNICEF estimate of coverage rates
Standard errors below coefficients in parentheses. * p<0.10, ** p<0.05, *** p<0.01

Panel B: ISS & non-ISS

<table>
<thead>
<tr>
<th></th>
<th>Baseline &lt;=65%</th>
<th>Baseline 65-80%</th>
<th>Baseline &gt;80%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISS per child</td>
<td>0.51</td>
<td>0.66*</td>
<td>-0.01</td>
</tr>
<tr>
<td></td>
<td>(0.32)</td>
<td>(0.35)</td>
<td>(0.35)</td>
</tr>
<tr>
<td>Non-ISS per child</td>
<td>0.07</td>
<td>0.08</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>(0.08)</td>
<td>(0.05)</td>
<td>(0.07)</td>
</tr>
<tr>
<td>Ln of GDP per capita, PPP (2005 $)</td>
<td>0.63</td>
<td>0.02</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td>(0.59)</td>
<td>(0.26)</td>
<td>(0.65)</td>
</tr>
<tr>
<td>WB political stability index</td>
<td>0.55</td>
<td>0.03</td>
<td>-0.27</td>
</tr>
<tr>
<td></td>
<td>(0.54)</td>
<td>(0.57)</td>
<td>(0.54)</td>
</tr>
<tr>
<td>Lag of coverage</td>
<td>0.93***</td>
<td>0.79***</td>
<td>0.80***</td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(0.06)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>Constant</td>
<td>1.3</td>
<td>15.72***</td>
<td>14.42***</td>
</tr>
<tr>
<td></td>
<td>(4.17)</td>
<td>(4.91)</td>
<td>(3.53)</td>
</tr>
<tr>
<td>Observations</td>
<td>325</td>
<td>165</td>
<td>336</td>
</tr>
</tbody>
</table>

Dependent variable is WHO/UNICEF estimate of coverage rates
Standard errors below coefficients in parentheses. * p<0.10, ** p<0.05, *** p<0.01

**There is evidence of a significant positive effect for countries with baseline coverage of 65-80% only.** This evidence is significant only at the 10% level in the model including non-ISS disbursements, though if these are excluded the evidence is significant at the 1% level. Contrary to Lu et al’s results, we find a significant relationship only for this group; they find evidence only for countries with coverage below 65%. These results also differ from the findings of Abt Associates, which found evidence of a positive relationship for all countries.

Based on ISS disbursements alone, these estimates imply that an additional $1 of funding per surviving child raises DTP3 coverage by 0.85 percentage points in countries with an initial DTP3 coverage rate between 65 and 80%. Controlling for the impact of non-ISS disbursements reduces the effect to 0.66 percentage points, and diminishes its significance.
Extensions

We also estimate a series of extensions (see Annex 4 for further details):

- **Interaction terms model.** Rather than estimating a separate relationship for each country group, we include all country groups in a single model and interact the ISS disbursements variable with dummy variables indicating which group a country belongs to. This provides a direct test of differences in the relationship of interest between groups.

- **Model with lagged ISS disbursements.** We include as an additional explanatory variable the lag of ISS. This takes into account the fact that ISS may have a delayed effect, for example if countries do not immediately utilise funds.

- **Logit model.** In these models, we substitute the DTP3 coverage variable with its logit transformation, which can be more appropriate if the underlying variable is a probability— in this case the probability that a child receives DTP3. Briefly, this transformation allows the marginal effect of ISS to fall as DTP3 coverage approaches 100%, reflecting the possibility that gains in coverage become more difficult or more expensive as coverage approaches 100%.

The first extension to this analysis helps to assess whether the differences in the relationship between the three groups are significant. As noted above, we address this question using an alternative model including interaction terms between ISS disbursements per surviving child and country group. The results of this are presented in Table 5.8 below.
### Table 5.8: Regression results using interaction terms

**Panel A: ISS only**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISS per child</td>
<td>0.11</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>(0.37)</td>
<td>(0.36)</td>
</tr>
<tr>
<td>ISS per child*Baseline coverage &lt;80%</td>
<td>0.46</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.51)</td>
<td></td>
</tr>
<tr>
<td>ISS per child*Baseline coverage 65%-80%</td>
<td></td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.42)</td>
</tr>
<tr>
<td>ISS per child*Baseline coverage &lt;65%</td>
<td></td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.58)</td>
</tr>
<tr>
<td>Ln of GDP per capita, PPP (2005 $)</td>
<td>0.38</td>
<td>0.42</td>
</tr>
<tr>
<td></td>
<td>(0.36)</td>
<td>(0.40)</td>
</tr>
<tr>
<td>WB political stability index</td>
<td>0.21</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>(0.39)</td>
<td>(0.39)</td>
</tr>
<tr>
<td>Lag of coverage</td>
<td>0.90***</td>
<td>0.89***</td>
</tr>
<tr>
<td></td>
<td>(0.02)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>Constant</td>
<td>6.61*</td>
<td>7.36**</td>
</tr>
<tr>
<td></td>
<td>(3.40)</td>
<td>(3.53)</td>
</tr>
<tr>
<td>Baseline covg &lt;80%</td>
<td>-1.77**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.71)</td>
<td></td>
</tr>
<tr>
<td>Baseline covg 65%-80%</td>
<td></td>
<td>-1.52**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.61)</td>
</tr>
<tr>
<td>Baseline covg &lt;65%</td>
<td></td>
<td>-2.42*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.42)</td>
</tr>
<tr>
<td>Observations</td>
<td>827</td>
<td>827</td>
</tr>
</tbody>
</table>

Dependent variable is WHO/UNICEF estimate of coverage rates.

Standard errors below coefficients in parentheses. * p<0.10, ** p<0.05, *** p<0.01

Model (1) includes two groups: the reference group of countries with baseline coverage >80% and those with baseline coverage <80%.

Model (2) includes three groups: the reference group of countries with baseline coverage >80%, those with baseline coverage of 65%-80%, and those with baseline coverage <65%.
Panel B: ISS & non-ISS

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISS per child</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>(0.34)</td>
<td>(0.33)</td>
</tr>
<tr>
<td>ISS per child*Baseline coverage &lt;80%</td>
<td>0.45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.54)</td>
<td></td>
</tr>
<tr>
<td>ISS per child*Baseline coverage 65%-80%</td>
<td></td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.47)</td>
</tr>
<tr>
<td>ISS per child*Baseline coverage &lt;65%</td>
<td></td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.59)</td>
</tr>
<tr>
<td>Non-ISS per child</td>
<td>0.03</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
<td>(0.09)</td>
</tr>
<tr>
<td>Non-ISS per child*Baseline coverage &lt;80%</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td></td>
</tr>
<tr>
<td>Non-ISS per child*Baseline coverage 65%-80%</td>
<td></td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.12)</td>
</tr>
<tr>
<td>Non-ISS per child*Baseline coverage &lt;65%</td>
<td></td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.12)</td>
</tr>
<tr>
<td>Ln of GDP per capita, PPP (2005 $)</td>
<td>0.42</td>
<td>0.46</td>
</tr>
<tr>
<td></td>
<td>(0.36)</td>
<td>(0.39)</td>
</tr>
<tr>
<td>WB political stability index</td>
<td>0.25</td>
<td>0.24</td>
</tr>
<tr>
<td></td>
<td>(0.39)</td>
<td>(0.39)</td>
</tr>
<tr>
<td>Lag of coverage</td>
<td>0.89***</td>
<td>0.88***</td>
</tr>
<tr>
<td></td>
<td>(0.02)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>Constant</td>
<td>7.04**</td>
<td>8.18**</td>
</tr>
<tr>
<td></td>
<td>(3.39)</td>
<td>(3.50)</td>
</tr>
<tr>
<td>Baseline coverage &lt;80%</td>
<td>-2.17***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.84)</td>
<td></td>
</tr>
<tr>
<td>Baseline coverage 65%-80%</td>
<td></td>
<td>-1.75**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.74)</td>
</tr>
<tr>
<td>Baseline coverage &lt;65%</td>
<td></td>
<td>-3.18**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.62)</td>
</tr>
<tr>
<td>Observations</td>
<td>826</td>
<td>826</td>
</tr>
</tbody>
</table>

Dependent variable is WHO/UNICEF estimate of coverage rates.
Standard errors below coefficients in parentheses. * p<0.1, ** p<0.05, *** p<0.01
Model (1) includes two groups: the reference group of countries with baseline coverage >80% and those with baseline coverage <80%.
Model (2) includes three groups: the reference group of countries with baseline coverage >80%, those with baseline coverage of 65%-80%, and those with baseline coverage <65%.
The coefficients for the interaction terms (e.g. ‘ISS per child*Baseline coverage <80%’) represent the differences in this impact for the specified group(s), relative to the omitted reference group (countries with initial coverage above 80%).

In both models (and whether two or three groups are used), there is no significant evidence of a positive relationship between ISS and DTP3 coverage across all countries. Since it is the omitted reference group, this also means there is no significant evidence for countries with initial coverage above 80%. Finally, since none of the coefficients on the interaction terms is significant at the 10% level, there is no statistically significant difference in the relationship for countries with initial coverage below 80%. We therefore cannot conclude with confidence that the relationship between ISS and DTP3 coverage varies by country group (classified into three groups according to their baseline coverage rates i.e. <65%, 65-80%, and >80%).

A further extension includes one lag of ISS and non-ISS disbursements as an additional explanatory variable (see Annex 4 for detailed results). The results from this model (using the split sample approach) indicate that, in addition to a significant contemporaneous effect detectable for countries with initial coverage of 65%-80%, there is a lagged effect only for countries with initial coverage of >80%. The results from the model using interaction terms suggest that these are indeed distinct relationships.

We also estimate an extension in which the dependent variable is a logit transformation of the coverage rate. In this case, based on the split sample model, we also find a significant positive effect for countries with initial coverage below 65% (though its magnitude and significance is greater for countries with initial coverage of 65%-80%). Based on this alternative logit model with interaction terms, we find that the relationship for countries with initial coverage of 65%-80% may be statistically different from that for other countries.

Finally, we also tested the robustness of our results to the source used for the dependent variable. We find that when country reported coverage rates are used instead of WHO/UNICEF coverage rates, the effects seen in the above models are stronger and more significant.

Summary and conclusions

Our main findings are as follows:

- There is some limited evidence of a positive impact of ISS disbursements on DTP3 coverage. Coefficients on ISS disbursements are generally positive, indicating a possible positive effect. However, this effect is not statistically significant (at the 10% level) in a model that pools data for all countries together, and in models on split samples, it is only statistically significant for countries with initial coverage of 65%-80%.

- There is mixed evidence of distinct relationships across country groups.
  - Based on results from split sample models (following Lu et al’s approach), the evidence of a positive impact of ISS disbursements on DTP3 coverage is only significant (at the 10% level) for countries with initial coverage of 65%-80%. However, since these results come from three separate models, it is not possible to compare results for each group of countries directly.
The evidence from models with interaction terms (which do give a direct test of differences between groups) suggests that differences across country groups are not statistically significant.

The evidence from a model using the logit transformation of the dependent variable supports two distinct relationships: a significant (at the 5% level) positive effect for countries with initial coverage of 65%-80%, and no significant effect for other countries.

Our results using extended data differ from those of Lu et al and Abt Associates. Although we do find tentative evidence of a positive effect, this evidence is strongest for countries with initial coverage between 65% and 80%. This contrasts with Lu et al’s results (which found strongest evidence for countries with initial coverage below 65%) and with Abt Associates’ results (which found evidence consistent with a positive effect for all countries).

Overall, we conclude it is likely that ISS disbursements have contributed to increases in DTP3 coverage, though it is not possible to estimate the impact precisely. Given that the results differ depending on model specification (and taking into account that previous studies have generated different findings); CEPA’s judgement is that differences between country groups largely represent statistical fluctuations.

However, to the extent that there is a fundamentally different relationship for countries with baseline coverage of 65%-80% (as supported by some of our model estimations), we suggest the following interpretation (although these have not been verified by evidence):

- countries with low baseline coverage rates may be particularly difficult countries (for example, fragile or LICUS countries), where a limited amount of ISS funding may not impact DTP3 coverage rates (especially given the context of the small percentage of ISS relative to other sources of immunisation systems expenditure);
- countries with ‘medium’ level of baseline coverage have benefitted from ISS funding (by targeting the flexible funding at district levels and covering the relatively ‘easier to reach’ unvaccinated children), raising their levels of coverage over time; and
- countries which started with relatively high levels of coverage (i.e. 80% or more as per our model) have not increased their coverage rates further through ISS funding – perhaps due to the relatively higher cost of reaching the ‘last mile’ and diminishing incentive effects.

5.7.3. Country visits

Uzbekistan has not been covered in the country summaries below as the country does not receive GAVI support under the ISS program.

Stakeholders in the visited countries attribute improved quality of immunisation services, expansion of outreach (especially, in remote rural areas), and reduction in geographical inequities to GAVI ISS support.
Table 5.9: Country visits feedback on impact of ISS funding on DTP3 coverage

<table>
<thead>
<tr>
<th>Bangladesh</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPT3 coverage in Bangladesh has increased from 83% in 2000 prior to the start of GAVI support to 95% in 2008. A majority of the stakeholders acknowledge GAVI’s contribution in the achievement. GAVI has contributed through the provision of inputs, resources, assistance in ground level planning, and introduction of additional staff for immunisation at the district level. While the country’s immunisation sector was always considered to be strong, it was generally agreed GAVI has helped expand outreach, especially in remote rural areas, and improved the quality of the immunisation program (through for example, financing better cold storage, vehicles for vaccine transportation, etc.).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bolivia</th>
</tr>
</thead>
<tbody>
<tr>
<td>The focus of ISS funding is on improving capacity to track coverage rate. ISS is therefore not expected to have any impact on coverage rate per se. However, EPI officials seem confident that government commitment to immunisation will mean that coverage rates are increasing. There is a particular issue with the denominator in the official coverage statistics which is still based on 2000 census data. We understand that the number of births per year has increased over the decade and so official coverage data understates the actual level of coverage.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mali</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government stakeholders in Mali informed us that ISS funds were used in sub-regions where the coverage rates were amongst the lowest, suggesting that ISS funding in Mali may have helped reduce geographical inequities in coverage rates.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nigeria</th>
</tr>
</thead>
<tbody>
<tr>
<td>The data do not suggest any link between ISS disbursements or ISS expenditure and the DTP3 coverage rate in Nigeria. However stakeholders interviewed did indicate the importance of ISS funding for strengthening immunisation systems in the country, and GAVI’s role in encouraging provision of additional finance from sub-national levels of government may have played a part.</td>
</tr>
</tbody>
</table>

5.7.4. Structured interviews

ISS is regarded as one of the only donor programs that provides support for increasing coverage rates for routine immunisation. While coverage rates in general have gone up in the recent years, it is difficult to attribute to GAVI or assess the counterfactual i.e. what the situation may have been in the absence of GAVI. The general view was that ISS funds are used to reach previously unreach areas and help expand coverage up to a certain level, beyond which the costs of increasing coverage increase significantly and ISS rewards have lesser value. It is also highlighted that greater effort is required to target equitable increase in coverage rates.

5.7.5. Conclusion

There is some tentative evidence of a positive relationship between ISS disbursements and DTP3 coverage (although not statistically significant at 10% level). Contrary to Lu et al’s earlier findings, our evidence is strongest for countries with baseline coverage between 65% and 80%.

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126 WHO/UNICEF estimates
127 DIMOs salaries and training are financed by GAVI ISS funds, strengthening the district level immunisation resources (particularly valued in Bangladesh given the current ‘outreach’ based immunisation model).
However, we cannot conclude with confidence that there are distinct relationships between ISS disbursements and DTP3 coverage for the different country groups.

While feedback from country visits and structured interviews note the increase in coverage rates in recent years and use of ISS funds to reach unreach areas, attribution to GAVI is considered difficult.

5.8. Geographical equity

In this section, we analyse the impact of GAVI (and ISS funding specifically) on geographic equity of coverage between districts. As in other areas of analysis, we focus on the DTP3 coverage rate as an overall indicator of equity.

We use two variables from the JRF database:

- the proportion of districts with low DTP3 coverage (<50%); and
- the proportion of districts with high DTP3 coverage (>80%).

Together, these variables indicate geographic equity, as indicated in Table 5.10. In principle, coverage can be geographically equitable at a range of different levels. However, as a measure of success GAVI would seek to propel countries into the upper-right quadrant, with equitably high coverage rates.

Table 5.10 Interpretation of geographic equity indicators

<table>
<thead>
<tr>
<th>Low % districts with low coverage</th>
<th>High % districts with high coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equitable (medium coverage)</td>
<td>Equitable (high coverage)</td>
</tr>
<tr>
<td>Equitable (low coverage)</td>
<td>Inequitable</td>
</tr>
</tbody>
</table>

As noted previously, the JRF data contain significant numbers of missing observations. Although we have data for 75 GAVI countries, the sample size for individual years varies from 48 in 2000 to 71 in 2008. In this analysis we simply calculate the average proportion across all countries for which we have data, and do not attempt to interpolate the missing values, noting that the sample size is reasonably high in all years.

This approach implies that the sample of countries in each year may be slightly different. However we do not view this as an issue as: (i) on an average, over 60 countries have been included in each year, with the range around this average being quite small); and (ii) the trend is similar when we carry out the analysis by restricting the sample analysis to the subset of countries with full data only.

The aim of the analysis is to try and separate the equity of coverage from the level of coverage. If average coverage is low, it could still be considered inequitable if a few favoured districts have high coverage while others have low coverage. By contrast, if coverage is low in all districts, then at least the situation is equitable in the sense that no one district is favoured.

The sample sizes fall from ~60 to 34 for the <50% districts indicator and 24 for the >80% districts indicator.
Within the set of GAVI countries, we present results separately for countries which were approved for ISS in Phase I and Phase II. We also present results for non-GAVI lower-middle income countries, as a benchmark for comparison.

Figure 5.5 and Figure 5.6 below present the results over the period 1998-2008. For GAVI countries as a whole, the average proportion of districts with low coverage has fallen (from 30% in 2000 to 8% in 2008), and the proportion with high coverage has risen (from 41% in 1998 to 70% in 2008).

Considering the Phase I and Phase II countries separately, it is clear that the trends are driven primarily by the Phase I countries. The Phase II countries had few districts with low coverage even in 2000, though they appear to have increased the proportion of districts with high coverage.

Comparing the GAVI countries with the non-GAVI benchmark countries, it appears there has been some convergence over time, particularly in the proportion of districts with high coverage where there was a large initial gap.

Figure 5.5: Average proportion of districts with low coverage

Source: WHO/UNICEF JRF data.

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130 Data for the proportion of districts with low coverage were unavailable for 1998 and 1999.
131 Low coverage defined as <50%.
132 We note a marginal deterioration in the trend during 2007-08. While we do not have a detailed hypothesis/explanation for this, we have examined the data as to what might be driving this trend. The first point to note is that the upturn in this indicator seems to be a combination of the 2007 figure being low relative to trend and the 2008 figure being higher relative to trend. The 2007 figure is especially low, partly because Djibouti and Somalia drop out of the sample. These are two of the worst-performing countries, with around 80% and 100% of districts having <50% coverage respectively. The 2008 figure is then especially high, partly because Somalia re-enters the sample, and partly because a few countries (CAR, Chad and, to a lesser extent, Haiti) report a very large deterioration in performance.
We interpret this as evidence that GAVI countries have improved in terms of geographic equity since GAVI funding was introduced. The proportion of high coverage districts has increased, while the proportion of low coverage districts has decreased. Reported gains over the period do not seem to have been concentrated in already high-performing areas.

It may be possible to attribute part of this improvement to GAVI. While GAVI countries have improved on both counts, the lower-middle income countries that did not receive GAVI support have seen little improvement. However, there is little reason to conclude that ISS funding specifically has contributed to geographic equity. There is no obvious relationship between the later introduction of ISS support in the Phase II countries and improvements in either indicator.

5.9. Effectiveness of DQA and DQS

DQA, introduced by GAVI in 2001 aims to verify and enhance immunisation monitoring and reporting performance. The audits seek to ensure that GAVI’s performance-based ISS funding is correctly calculated.

The DQA audit focuses on reporting practice at national level, and in a sample of 24 health units (four districts and six health units in each district). The DQA audit team checks the accuracy of the recording of the number of immunisations, transcription and aggregation of these numbers, and reporting from level to level in the system.

Key performance indicators are calculated for each administrative level that is assessed. These include quality of the system index, % of DTP vaccine wastage, % dropout DTP1 to DTP3,

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133 High coverage defined as >80%.  
134 The DQA reviews both the numbers of children reported to have received a DTP3 injection and the accuracy and completeness of the EPI reporting system. They also provide practical feedback to health staff on how to improve the quality of monitoring and reporting data. Source: GAVI (2002): “How to prepare for a Data Quality Audit: Briefing Paper”  
135 The DQA is conducted by two “external auditors” from the audit company and two “internal auditors” selected by the EPI or Health Management Information System (HMIS) program management.
timeliness and of completeness reporting, change in reported DTP3, and coverage in reported DTP3.

The GAVI Work Plan 2004-05 introduced a DQS tool on the basis of the DQA methodology, to help countries improve their information systems. The DQS is to be conducted by the countries themselves, and not intended to be a replacement for DQA. The methodology and tools for DQS were finalised in 2004 and DQS was implemented in Congo, Tanzania, and Indonesia that year.

Drawing on lessons from implementation of DQA, GAVI has planned a review of the tool as part of its workplan (2010). Plans for revision include (i) an increase in the sample size; and (ii) linking DQA with other work in the health sector such that it is not a ‘vertical’ immunisation tool but can more generally contribute towards the improvement of data quality in sector. There are ongoing discussions between GAVI, WHO and Global Fund, with support from Center for Disease Control and Prevention (CDC), on integrating efforts to make the audit a part of country health systems/sector reviews.

5.9.1. Review of documentation

Country DQA reports

To date, 59 DQAs have been conducted across 42 countries. Of these, 26 countries have had a single DQA, and 15 countries have had two DQAs, and 1 country has had 3 DQAs.

Table 5.11 below shows figures for DTP3 Verification Factor (VF) reported for the fifteen countries that have had two DQAs. Ideally, countries should aim to achieve a VF of 1, i.e. a perfect match between what is recorded and recounted by auditors at the primary data source and what is reported at the district level. The GAVI recommended level for VF is 0.80, below which the country EPI system is considered “unreliable”.

As seen in the table below (arranged in descending order of VF), countries have experienced significant improvement in their VF in the period between the two DQAs. Almost all 15 countries with two DQAs were reported to have “unreliable” EPI systems at the time of the first DQA. Nine of these countries achieved VFs greater than the GAVI recommended 0.8 in the second DQA. The average elapsed time between two DQAs is between two to three years, and the increase in VF ranges from 0.04 to 0.46. Although this improvement cannot be attributed solely to GAVI, feedback from the structured interviews, field visits etc. suggests that the DQA requirement by GAVI was instrumental in improving data quality and reporting.

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136 The planned review of the DQA is not connected to the ISS suspension/data quality issues as those do not reflect on DQA as such.

137 “DQA overview data by country, 17 March 2009”, Provided by GAVI.

138 The VF is the ratio of the recounted number of infants from the primary data source (records) and the number reported as receiving DTP3 in the monthly summary reports from all health units visited during the DQA.
Table 5.11: Post DQA improvement in Verification Factor

<table>
<thead>
<tr>
<th>GAVI country</th>
<th>Verification Factor</th>
<th>Change in Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DQA – I</td>
<td>DQA – II</td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td>0.53 (2002)</td>
<td>0.99 (2007)</td>
</tr>
<tr>
<td>Guinea</td>
<td>0.57 (2002)</td>
<td>0.95 (2004)</td>
</tr>
<tr>
<td>Madagascar</td>
<td>0.62 (2003)</td>
<td>1.00 (2005)</td>
</tr>
<tr>
<td>Kenya</td>
<td>0.49 (2002)</td>
<td>0.86 (2004)</td>
</tr>
<tr>
<td>Cameroon</td>
<td>0.54 (2002)</td>
<td>0.89 (2004)</td>
</tr>
<tr>
<td>Sudan</td>
<td>0.70 (2002)</td>
<td>0.96 (2004)</td>
</tr>
<tr>
<td>Yemen</td>
<td>0.73 (2003)</td>
<td>0.99 (2006)</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>0.67 (2004)</td>
<td>0.93 (2006)</td>
</tr>
<tr>
<td>Burundi</td>
<td>0.72 (2004)</td>
<td>0.94 (2006)</td>
</tr>
<tr>
<td>Haiti</td>
<td>0.40 (2002)</td>
<td>0.44 (2007)</td>
</tr>
<tr>
<td>Mauritania</td>
<td>0.69 (2004)</td>
<td>0.73 (2008)</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>0.97 (2002)</td>
<td>0.96 (2003)</td>
</tr>
<tr>
<td>Lesotho</td>
<td>0.78 (2004)</td>
<td>0.61 (2007)</td>
</tr>
<tr>
<td>Mozambique</td>
<td>0.55 (2002)</td>
<td>N/A (2004)</td>
</tr>
<tr>
<td>Nigeria</td>
<td>N/A (^{139}) (2004)</td>
<td>0.89 (2006)</td>
</tr>
</tbody>
</table>

Source: “DQA overview data by country, 17 March 2009”, Provided by GAVI

Based on the country DQA reports, the key recommendation areas that have been implemented include:

- Reporting guidelines have been developed and disseminated at the district level.
- Regular monitoring of vaccine wastage rates.
- Improvements in vaccine stock management through maintenance of stock cards, ledger books etc.

Some areas that still require improvement are:

- Procedures for surveillance and management of adverse effects following immunisation have still not been put in place.
- Further training of health workers in data management is required.
- Not all audited countries have computerised the recording of vaccination data.

Variance analysis

We also undertake an analysis of the variance between official government reported and WHO/UNICEF estimates\(^{140}\) of DTP3 coverage rates. This analysis seeks to understand the changes in

\(^{139}\) Could not be calculated at the national level due to lack of national DTP3<1 data.
this variance figure for countries as a result of DQAs. A decline in variance post a DQA implies that the official government reported and WHO/ UNICEF estimates are closer in the post-DQA period relative to the pre-DQA period.

- This suggests that among countries that have undergone a single DQA, close to 39% experienced a decline in this variance after the DQA\textsuperscript{141}. Within these countries, 66% have experienced a decline in variance such that the post-DQA variance figure is less than 0.5.

- Of the countries that have undergone two DQAs, 46% saw a decline in the variance after the first DQA, and about 70% countries saw an overall decline in the variance after both the DQAs. Within the countries experiencing an overall decline in variance after both DQAs, 56% have a variance of less than 0.5 after the second DQA.

Thus, a reasonable proportion of countries have undergone a decline in variance between official government reported and WHO/ UNICEF estimates for DTP3 coverage. A significantly greater proportion of ‘two DQA countries’ have seen an overall decline in variance as compared to the ‘one DQA countries’. To this extent, DQAs have indeed brought the official government reported and WHO/ UNICEF estimates closer.

\section*{5.9.2. Structured interviews}

Stakeholder feedback on DQA has been largely positive. It is generally believed that DQA is a strong value add of GAVI as it helps countries to improve their data collection and reporting systems. The introduction of the DQS has contributed to improved monitoring and reporting systems and has enhanced country ownership of the process.

Moreover, GAVI’s DQA/ DQS has proved to be a pioneering tool that has helped inform and been of value to several partners and stakeholders of the Alliance – a clear example of successful partnering in the Alliance to develop this innovative tool. It has also set the foundation for the development of similar data quality tools by other organisations such as the Global Fund, JSI, etc. It was emphasised that, not only would the basic DQA approach not have been developed in the absence of GAVI, but also that it has served a key contributor to the WHO-led process of building on the basic tools of data quality and audit (thereby showcasing an example of how the broader Alliance works together).

\textsuperscript{140} Official country data and WHO/ UNICEF estimates of DTP3 coverage provided directly by the GAVI Secretariat.

\textsuperscript{141} Relative to pre-DQA period.
Figure 5.7: Global Fund’s Data Quality Assessment tool

Global Fund’s Data Quality Assessment (DQA) tool

The Global Fund has developed two versions of the DQA: (i) the “Data Quality Audit Tool” which provides guidelines to be used by an external audit team to assess a program/project’s ability to report quality data; and (ii) the “Routine Data Quality Assessment Tool” (RQDA) which is a simplified version of the DQA tool for auditing that allows programs and projects to assess the quality of their data and strengthen their data management and reporting systems.

The tools draw upon GAVI’s DQA/DQS approaches in terms of the selection of sites per district for the audit, and calculation of a “Verification Factor” as an indicator of consistency in reported data.

Source: Structured interview feedback

However, feedback also suggested the issue of data quality deserves greater time and attention within GAVI and that there is scope to further strengthen the process.

Table 5.12 below summarises the key points of positive and negative feedback on DQA by GAVI stakeholders during our interviews.

Table 5.12: Stakeholders’ feedback on DQA

<table>
<thead>
<tr>
<th>Supportive comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>• DQA is a pioneering tool and now similar tools are being used by WHO in other areas.</td>
</tr>
<tr>
<td>• The DQA has enabled GAVI to identify problems with reported performance. Tougher conditions are now being imposed on the use of funds.</td>
</tr>
<tr>
<td>• Countries are conducting DQS and adjusting their immunisation reporting systems based on results.</td>
</tr>
<tr>
<td>• Critical for GAVI to introduce a system of checks and balances, especially since it was noted in Phase I that partners in countries were not able to report on cases of corruption/misreporting given their relationship with MoH.</td>
</tr>
<tr>
<td>• WHO immunisation data can come from either administrative or households survey data, and it is a complicated process to choose between the two. Hence, it is considered more appropriate if countries can report using their own sources.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Issues raised</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Circular argument on DQA not being very good in countries that need ISS support the most, i.e. countries with weak coverage levels also suffer from data reliability issues.</td>
</tr>
<tr>
<td>• Data quality is a fundamental issue and greater time and focus ought to be devoted to it by GAVI staff and partners.</td>
</tr>
</tbody>
</table>

5.9.3. EPI manager survey

Similar feedback was received from the EPI manager survey. While it is believed that DQA has enabled GAVI to establish the accuracy of country reported data and contributed to the

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143 While there was no specific question on DQA in the EPI manager survey, this section draws on all feedback to the survey.
strengthening of information systems in the countries, there remains considerable concern regarding data quality and hence, performance-based ISS rewards.

A few respondents of the EPI manager survey acknowledge that DQA is important because it helps establish the accuracy of data on which ISS rewards are based. DQA has also helped countries to assess and improve their data management systems. Of the 17 EPI managers that responded to the survey, three managers report having data issues and believe more can be done to ensure better quality of coverage data. All three countries have had a DQA, suggesting that whilst the DQA may have improved the reporting situation, data issues still remain.

Table 8 in Annex 4 summarises the key points of positive and negative feedback received from EPI managers.

5.9.4. Country visits

Uzbekistan has not been covered in the country summaries below as the country does not receive GAVI support under the ISS program.

The country visits bring out a mix of positive and negative experience on the DQA/DQS process. While there is indication of improvements in data management systems as a result of DQA, the approach has been criticised for a lack of robustness.

Table 5.13: Country feedback on DQA and DQS

<table>
<thead>
<tr>
<th>Country</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>Most major issues identified in the DQA have been addressed. Regular monitoring of the implementation status of the action plan is undertaken. By and large, significant improvement has been reported in the country’s data management systems. Efforts are being made to institutionalise DQS through training of district level personnel.</td>
</tr>
<tr>
<td>Bolivia</td>
<td>We understand that a DQS was expected to be conducted in 2009/10. However this has been postponed subject to the current review of ISS and data quality assessments.</td>
</tr>
<tr>
<td>Mali</td>
<td>A DQA was conducted in 2002, where the verification factor(^{144}) was found to be 0.75, and hence the EPI system of the country was classified as “unreliable”. Persistent data quality problems led to the temporary suspension of ISS funding, and no further disbursements have been made after 2007. There continues to be a big discrepancy between the administrative coverage rates and those estimated by WHO/UNICEF</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Problems were identified in the first DQA in Nigeria, but this served as a wake-up call and the second DQA in 2006 was felt to be improved. Since 2008, Nigeria has conducted yearly DQS, using government and ISS funds. However, some commented on lack of robustness of this approach.</td>
</tr>
</tbody>
</table>

\(^{144}\) The VF is the ratio of the recounted number of infants from the primary data source (records) and the number reported as receiving DTP3 in the monthly summary reports from all health units visited during the DQA. The GAVI recommended level for VF is 0.80.
5.9.5. Conclusion

Feedback from structured interviews, EPI manager survey, and country visits highlight the positive impact of DQA/ DQS on data quality and reporting. This is substantiated by the finding that nine of the 15 countries whose EPI systems were classified as “unreliable” at the time of the first DQA, showed a marked improvement at the time of the second DQA. Stakeholder feedback has highlighted a key area of value add in terms of the GAVI DQA/ DQS tool laying the foundation for the adoption of similar tools by other organisations. However, stakeholders have highlighted the need for greater time and attention for the issue of data quality and scope for strengthening the process.

5.10. Additionality of ISS funding

The analysis below seeks to assess the added value of ISS funding vis-à-vis other donor funding for immunisation services.

The ISS Phase I evaluation suggested that there is no conclusive evidence of whether GAVI funding has displaced or been additional to other donor funding. Their analysis is at global level for countries that have FSP data on total immunisation spend before and during GAVI ISS to see if spend has increased or decreased after ISS funding.

We have analysed data from countries’ comprehensive Multi-Year Plans to try to answer whether GAVI ISS funding has increased the net amount of funding available for immunisation services strengthening. The constraints of the cMYP data as set out in Section 4.4.1 apply here as well. In fact, the problem concerning data availability is more acute for this question. We are interested in observing the impact of ISS funding on other sources of funding to judge if it is ‘additional’. This requires data before and during the period of ISS support. Unfortunately such data is only available for four countries: Benin, Kyrgyzstan, Malawi, and Mongolia.

Hence, we follow a case study approach, recognising that patterns in evidence for these countries are not necessarily representative. The results for each country are as follows:

- **Benin** saw increases in expenditure and non-GAVI sources of finance following the introduction of ISS support. This suggests that GAVI might have crowded in other sources.
  - Average yearly expenditure rose from $5.2m before ISS support to $6.5m during the years of ISS support.
  - Average available finance rose by $1.0m, as against average GAVI finance/disbursements of $0.2m. Hence, non-GAVI finance rose by around $0.8m.

- **Kyrgyzstan**, there is evidence of a large decline in immunisation services expenditure, and so we attach little important to it as evidence of the impact of GAVI ISS funding.
  - Average yearly expenditure fell from $1.4m before ISS support to $0.5m during, a drop of 67%. Despite this large fall in expenditure, average finance also fell from 100% of expenditure to 79%.
Hence although average available finance fell by $1.0m we do not consider that this represents evidence of displacement due to GAVI ISS funding.

- The evidence for Malawi is difficult to interpret. There is no evidence of GAVI ISS displacing funding from other sources, but again we do not attach much importance to this evidence.
  - Average yearly expenditure rose from $10.3m before ISS support to $12.2m after.
  - Despite GAVI-recorded disbursements of an average of $0.7m per year during ISS support, GAVI is not recorded in the cMYP as a source of finance. We assume it has been excluded, and that the increase of $0.2m in average available finance represents additional finance from other sources.\(^{145}\)

- The introduction of ISS support in Mongolia saw average yearly expenditure increase, while non-GAVI finance remained unchanged.
  - Average yearly expenditure was $1.55m before ISS and $1.63m after.
  - Average available finance remained unchanged at $1.5m.

It is clear that only tentative conclusions can be drawn, since the evidence is incomplete or unreliable for two of the four countries. Based on evidence from Benin and Malawi, the introduction of GAVI ISS funding has not decreased funding from other sources, and may even have crowded in additional funds.

A final point to note is that the above evidence will tend to underestimate GAVI’s crowding-in effect – especially given the fact that bilaterals do not provide multi-year commitments to countries. Using the non-ISS countries as a control group, the data suggest that available finance falls over time – reflecting the fact that later years are forecasts only and therefore available finance would be more uncertain. In this context, our finding that the introduction of GAVI ISS funding does not diminish non-GAVI sources of finance is more significant.

The above analysis suggests that GAVI ISS funding has contributed to additional financing and expenditure.

5.11. Added value of ISS innovations

We assess here the innovative features of the ISS program such as ‘performance based rewards’ and ‘flexible cash’ – at country and global levels.

5.11.1. Review of documentation and comparator analysis

Performance based rewards

The performance-based funding model is not unique to GAVI. It has been employed by a number of development organisations and initiatives (including the Global Fund, the Millennium Challenge Account, and the European Commission) as a way to increase the accountability,

\(^{145}\) If our assumption is incorrect, this implies that finance from other sources has fallen by $0.5m.
efficiency and effectiveness of funded programs and services.\textsuperscript{146} The Centre for Global Development (CGD)\textsuperscript{147} has presented substantial evidence for the possibilities for performance incentives – both supply and demand side – to improve health behaviours and health systems in developing countries.

For example, Global Fund’s grant disbursement and grant renewal after the first two years are linked to achievement of specified performance milestones. The “Principal Recipient”\textsuperscript{148} reports regularly to the Global Fund on results achieved, verified by the independent “Local Fund Agent”\textsuperscript{149}, and the Global Fund Secretariat.

GAVI’s rewards based ISS program is generally considered a useful innovation in immunisation and child health, where rewards are linked to increases in DTP3 coverage levels as compared to the previous year. A CGD publication\textsuperscript{150} that presents ‘Cash On Delivery (COD)’ as a new approach to foreign aid and its potential application to the development goals such as primary education, health, infrastructure, environment etc., highlights the example of GAVI’s ISS. The innovativeness of the program is acknowledged by pointing out that, “In the health sector, the GAVI already operates a program that is in many ways similar to COD aid”.

However, the working of this innovation is contingent on a series of factors:

- Ensuring that the correct indicators are measured that provide suitable incentive effects to both sustain and improve performance over time.
- Prescribing the ‘right rewards’ that are adequate to cover the cost of winning the reward, and ensuring that the rewards reach the right governance level/recipient.
- Developing adequate capacities in countries and a robust monitoring and evaluation framework to measure specified performance indicators.
- Ensuring the veracity and quality of reported data.

This is in line with CGD’s thinking according to which, the question is not whether performance incentives can – under the right circumstances – change behaviour and improve service outcomes. The real question is “What are the right circumstances?” Two broad steps have been laid down for making payment for performance work: (i) diagnosis of the problem and identification of incentives that have potential to generate positive results, and (ii) selection of service providers and beneficiaries, the results to be rewarded, and mechanisms to monitor performance.

\textsuperscript{146} What is Performance-based Funding? [http://www.theglobalfund.org/en/performancebasedfunding/]
\textsuperscript{148} Global Fund signs a legal agreement with a Principle Recipient which is designated by the Country Coordination Mechanism. The PR receives financing directly and uses it to implement prevention, care and treatment programs or passes it on to other organisations (sub-recipients) who provide those services.
\textsuperscript{149} A Local Fund Agent is hired by the Global Fund to oversee, verify and report on grant performance. LFAs are selected through a competitive bidding process.
\textsuperscript{150} Nancy Birdsall et al (2010): “Cash on delivery: A new approach to foreign aid”, Centre for Global Development
As presented in the sections below, some issues have been raised by country beneficiaries and GAVI stakeholders on the above factors that have sometimes reduced the value of the ‘performance based’ model – for example, whether $20 per child is sufficient after a threshold coverage level, when the cost to reach the unreached soars disproportionately; whether ISS rewards reach the sub-national levels in countries; differences between country reported and UNICEF/WHO estimates of DTP coverage; the DQA/DQS processes that have improved data reporting but still needs focus; etc. However, overall, GAVI is upheld for implementing a large multi-country performance based program successfully – with some evidence of helping increase coverage levels (although attribution is difficult).

The international review of performance based financing literature suggests that:

- Performance Based Financing (PBF) or results based performance assumes that linking incentives to performance will contribute to improvement in access, quality and equity of service outputs. There are several examples of NGOs being subject to performance payments as recipients of grant funding (for example, in DRC, Rwanda, Burundi, Haiti, Afghanistan).
- Early findings of such an approach are promising and demonstrate potential to improve healthcare quality and utilisation. However, attribution of success to performance based approaches is ambiguous.
- More rigorous monitoring and reporting is called for ensuring balanced and equitable results.
- It is recognised that PBF is costly to design and implement. The ability to replicate/scale-up to other programs is a consideration, given the upfront investment in designing a PBF program.

We understand that GAVI is in the process of considering drawing on the incentive and ‘performance based’ aspects of the ISS for the NVS program to manage vaccine supply efficiently, as well as providing some direct performance based support to CSOs and local governments.

5.11.2. Electronic survey

The statement in the electronic survey was, ‘Key examples of the value add of GAVI’s ISS program are its performance based rewards and provision of ‘flexible cash’.

As shown in the figure below, the response to this statement of the electronic survey has been largely positive. Over 70% of adjusted respondents either agree or strongly agree with the statement that performance based rewards and provision of ‘flexible cash’ are key example of the

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151 Source: Performance based financing, an international review of the literature by KIT Development Policy & Practice (December 2008)
153 “Adjusted” number of respondents is calculated after excluding ‘not aware/ no view’ and the blank responses to the statement.
value add of GAVI’s ISS program. Close to 18% do not agree or disagree (neutral) and 5% disagree or strongly disagree.

Table 4 in Annex 4 presents an examination of the e-survey feedback by respondent category.

Figure 5.8: E-survey responses to question 9 – “Key examples of the value add of GAVI’s ISS program are its performance based rewards and provision of ‘flexible cash’ (282 responses received, of which 260 are non-blank)

The qualitative responses in the e-survey on performance based ISS rewards and ‘flexible’ cash is predominantly positive. Performance based ISS rewards approach is considered innovative and its positive impact has been clearly seen in the evaluation of the program. The rewards have served as an important motivational factor and incentivised greater efforts towards attainment of immunisation targets. A few issues raised include problems with data quality, incentives for manipulation of performance data, and that the approach does not account for adverse political developments/ conflicts. The limited added value of ISS for countries with high coverage rates has also been highlighted.

Flexible cash has enabled countries to work around their specific weaknesses, and use funds according to their priorities. Thus, this feature has contributed to efficient and effective use of funds and also promoted greater country ownership. However, flexibility may also imply greater chances of misuse of funds and the danger of funds lying idle, given that there are no specific guidelines for utilisation of the money.

Table 5 in Annex 4 presents the key themes of the qualitative feedback and corresponding frequency of responses.

5.11.3. EPI manager survey

The EPI manager survey posed the question, ‘What are your views on the usefulness of ‘flexible cash’ offered to countries through GAVI HSS and ISS support?’
Flexibility of use of ISS (and HSS) funding is regarded as very useful by all respondents. Some comments on the importance of flexibility include: (i) allowing the government to own the program; and (ii) allowing different sub-regions with different resources and costs to use the funds as appropriate. It is however, highlighted that flexibility may encourage misappropriation, and use of funds for low priority areas on account of politicised decision making.

Table 6 in Annex 4 summarises the responses on the usefulness of ‘flexible cash’ offered to countries through GAVI HSS and ISS support. The EPI manager survey also posed a second question, ‘Has the performance based funding aspect of GAVI ISS incentivised countries to achieve better immunisation results than if the support had not been rewards based?’

Generally speaking, performance-based funding is considered catalytic to countries in the strengthening of immunisation activities and consequent improvement in coverage rates. 9 of 21 respondent countries note the important of ISS funding in supporting their coverage rates. In the absence of other sources of funds for immunisation systems strengthening, if ISS funding is not available, their coverage rates are expected to fall.

Table 7 in Annex 4 summarises the responses on the usefulness of the performance based approach for ISS funding.

5.11.4. Structured interviews

Flexibility of ISS funds was valued by countries particularly for deployment to sub-national levels and in terms of contribution to district level planning and budgeting for immunisation. However, concerns were raised on idling and misuse of funds, ensuring accountability, and proper flow of funds to district levels (and reporting back).

Views are mixed on the appropriateness of the ISS reward criteria and its incentive effects beyond a certain DTP3 coverage level. Some consultees noted the advantages in terms of incentivising countries to improve their performance on immunisation coverage, however others suggested that the rewards might be too small compared to the cost to countries for monitoring/reporting and reaching the unreached in very remote and costly-to-serve areas. Fragile countries were also considered to be at a disadvantage for such performance based funding, which might be self-defeating to increase their low coverage levels. 154

5.11.5. Country visits

Uzbekistan has not been covered in the country summaries below as the country does not receive GAVI support under the ISS program.

Similar to the EPI manager survey and structured interview feedback reported above, mixed views were expressed in countries regarding the flexibility aspect of the ISS program.

154 Annual ISS approvals to “Fragile” countries increased gradually to a peak of $12.5m in 2007, and then declined in the following years, suggesting a reduction in their rewards funding over recent years.
Table 5.14: Country visits feedback on flexibility of ISS funding

**Bangladesh**

In Bangladesh, whilst the relative flexibility of GAVI is appreciated vis-à-vis Global Fund and World Bank approaches, some feel that flexibility risks misuse of funds by the government. However, as one of the donors pointed out, the close working and involvement of WHO and UNICEF with the Government of Bangladesh has limited the misuse of ISS funds and strengthening reporting quality for reward funding.

**Bolivia**

In Bolivia, the level of ISS funding is relatively low. The ability to use the resource flexibly is viewed positively and the EPI manager appear to understand well the ‘reward’ phase. Funds have been used to improve the communications with vaccination centres and the information management through the purchase of computers. It has also been used to strengthen the capability to monitor and conduct evaluations of the performance of vaccination through the acquisition of several vehicles – some of which have been provided as ‘rewards’ to regions with good coverage performance.

The important point to note is that the country is strongly committed at the political and technical level to vaccinations. They believe that this policy prioritisation is the driver for increased coverage as opposed to the ISS funding (which simply improves the data capture which they believe will show an increase). In other words, country stakeholders do not attribute increases in coverage rates to ISS funding per se, but rather to the government prioritisation for vaccination.

**Mali**

In Mali, country stakeholders view the flexibility of ISS funding as important in allowing the country itself to decide where the funds are allocated.

**Nigeria**

In Nigeria, national level stakeholders viewed the flexible nature of ISS support positively, although there are stricter guidelines for usage of these funds at State level, implying some loss of flexibility in the use of funds at the State level.

The general consensus on reward-based ISS funding is that the incentive works well initially, but less so at later stages as it is difficult to get additional rewards funding once high levels of coverage have been achieved (as is the case in Bangladesh). Mali has faced data reporting/ quality issues, as a result of which ISS funding had been suspended. Nigeria also reported data quality/ reliability issues. Another issue highlighted in both Mali and Nigeria was that reward based element was not transferred to the district level.

5.11.6. Conclusion

While performance-based rewards are considered to be catalytic in increasing immunisation coverage, it is pointed out that their usefulness is limited after a certain coverage level is reached. There is also concern regarding the appropriateness of the rewards indicator used and issues of data quality. Flexibility of ISS funds is valued by country governments as it enables the use of funds according to own priorities, and serves to promote country ownership of the program. However, increased chances of misuse of funds and problems with accountability are highlighted. Overall, ISS characteristics are considered to be GAVI innovations in immunisation financing, with some areas of improvement cited for enhancing the effectiveness of the program.
5.12. Overall conclusions on SG1.3

‘What have been the results and added value of GAVI’s ISS program at global and country level?’

Our main findings from the ISS evaluation are summarised below, along with our overall conclusions.

5.12.1. Summary

Based on the analyses presented above, Table 5.15 summarises our main conclusions on GAVI’s ISS program.

Table 5.15: SG1.3 – findings

| Evaluation question SG1.3: What have been the results and value add of GAVI’s ISS program? |
|----------------------------------|---------------------------------|-----------------|
| **Issue/ Theme** | **Findings** | **Robustness** |
| ISS funding by country typology | Almost half of the ISS approval countries are the ‘poorest’. ‘Least poor’ countries receive the smallest approval. Approvals to ‘Fragile’ countries have declined since 2007. INS approvals are split roughly equally between LICUS and non-LICUS countries, although LICUS approvals have fallen faster since 2007. | A Based on ISS data from GAVI |
| Utilisation of ISS funding | On average, about 50% of ISS funds available to a country in a year (previous year’s balance + new disbursements) remain unutilised, possibly suggesting limited absorption capacity, and / or governments’ allocating the funding over a few years in the future. Most of the ISS funding is used at the district level. | B APR analysis and GAVI disbursements data analysis present similar outcomes APR data for analysis on use of ISS funding by level is based on a few countries only |
| Contribution of ISS funding to country immunisation expenditure/ financing | As per its design, GAVI ISS funding is not a major source of finance for immunisation services expenditure of countries (less than 5%), however it has contributed to country immunisation expenditure/ financing through long term commitments and by bringing immunisation to the fore of the national policy agenda. | C Data issues and gaps in cMYP data Feedback from structured interviews and country visits. |
| Sustainability of ISS funding | Being the only donor funds targeted at expanding coverage, sustainability of ISS funded areas is a concern either if the program is suspended (e.g. in 2009; Mali and Uganda) or after GAVI support ends | C Data issues and gaps in cMYP data |
| Impact of ISS funding on DTP3 coverage | Some evidence of a positive impact of ISS disbursements on DTP3 coverage – however, only statistically significant for countries with initial coverage of 65%-80% (although the evidence on this statistical | B This effect is difficult to estimate with precision, and is partly dependent on model specification, indicating |
## Evaluation question SG1.3: What have been the results and value add of GAVI’s ISS program?

<table>
<thead>
<tr>
<th>Issue/ Theme</th>
<th>Findings</th>
<th>Robustness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical equity (between districts)</td>
<td>Evidence of improvement in geographical equity since introduction of GAVI; attributable in part to GAVI, although not specifically to ISS funding.</td>
<td>C JRF indicators the only source of information, and sample size of countries varies by year</td>
</tr>
<tr>
<td>Effectiveness of DQA/DQS</td>
<td>Generally agreed that DQA/DQS have improved data quality; GAVI’s pioneering approach now being followed by other organisations. More needs to be done regarding data quality in some countries.</td>
<td>A Evidence triangulated from country visits, review of documentation, e-survey, EPI manager survey, interviews.</td>
</tr>
<tr>
<td>Additionality of ISS funding compared to other donor funding</td>
<td>Tentative conclusion that introduction of GAVI ISS funding does not diminish non-GAVI sources of finance.</td>
<td>D Case study on only four countries’ based on cMYP</td>
</tr>
<tr>
<td>Added value of innovations such as ‘performance based rewards’ and ‘flexible cash’</td>
<td>Mixed views on both features. Flexibility welcomed by country governments, but caution raised on misuse and accountability of funds. Rewards incentive effects seen as innovative but seen to wear out after a certain coverage level.</td>
<td>B Evidence triangulated from country visits, review of documentation, e-survey, EPI manager survey, interviews.</td>
</tr>
</tbody>
</table>

### 5.12.2. Conclusions

The analysis of the ISS program performance presents mixed evidence – some positive aspects of innovation and value add, and some other aspects of results that are less conclusive to establish.

Overall, the ‘rewards based’ and ‘flexible’ aspects of the ISS program are hailed as important innovations in immunisation and healthcare. Over 70% of the e-survey respondents either agree or strongly agree with the statement that ‘performance based rewards and provision of ‘flexible cash’ are key examples of the value add of GAVI’s ISS program’. However, interviews and EPI manager and e-survey feedback also reveal some issues regarding data quality and reliability, chances of misuse of funds, and the risk of funds lying idle. In this regard, the utilisation analysis of ISS funds disbursed indicates that on average, about 50% of ISS funds available to a country in a year remain unutilised. This low level of utilisation could however also reflect country governments holding on to some funds for use over the short/medium term, given the variable nature of ISS rewards (but we have not found any evidence to prove or disprove this).

Our regression analysis shows some tentative evidence of a positive impact of ISS disbursements on Diphtheria, Tetanus and Pertussis (DTP3) coverage (although not statistically significant at 10% level). Following Lu at al’s approach, evidence of positive impact of ISS disbursements on DTP3 coverage is only significant (at the 10% level) for countries with initial coverage of 65%-80%. (contrary to the finding by Lu et al and the previous ISS evaluation work by Abt.)
Interview and country feedback suggest that the incentive effects of ISS rewards are effective up to a certain level of coverage. Beyond that, the rewards are not adequate to reach out to the last 10-20% of the unimmunised population.

A strong area of value add in the ISS program is the introduction of DQA/DQS – all evidence sources explored are unanimous that these have facilitated the improvement of data reporting and quality, although it is recognised that more remains to be done (in some countries more than others). GAVI’s DQA/DQS is also seen to have influenced the development of similar tools by organisations such as Global Fund and JSI. GAVI is a key contributor to the WHO-led process of building upon the basic tools of data quality and audit, together with partners such as CDC – an example of the Alliance partners working together.

Overall, since GAVI is the only donor funding the expansion of routine immunisation coverage to the unreached, countries regard the ISS program to be of high added value. (there are, however, suggestions to modify the program design to be effective in sustaining/increasing coverage levels in countries, and to continue to build capacities and systems for monitoring and data reporting).

However, this effect is difficult to estimate with precision and is partly dependent on model specification, indicating a lack of robustness.
6. **SG 1.4 - RESULTS AND VALUE ADD OF CSO PROGRAM**

6.1. **Introduction**

The fourth evaluation question under SG1 is ‘What have been the results and value add of GAVI’s CSO program?’

6.1.1. **Scope of evaluation question**

This question seeks to examine the performance of the CSO program from its introduction in 2007 to date, in terms of results and value add. Table 6.1 summarises our lines of enquiry under the results and value add questions respectively.

*Table 6.1: Evaluation of CSO results and value add*

<table>
<thead>
<tr>
<th>Results</th>
<th>Value add</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Design Type A and B CSO support and uptake of Type A in particular.</td>
<td>• CSO engagement by other GHPs such as Global Fund, Stop TB, etc. to understand if GAVI has added value in this area.</td>
</tr>
<tr>
<td>• CSO processes from country application to disbursement, and timings thereof.</td>
<td>• GAVI role in expanding CSO involvement in achieving immunisation – including GAVI’s influence, if any, on the CSO role in the common HSS platform, and global health aid architecture.</td>
</tr>
<tr>
<td>• Implementation status and case studies on results achieved – to draw lessons on what works well and less well.</td>
<td></td>
</tr>
</tbody>
</table>

6.1.2. **Sources of evidence**

The review of the CSO program has predominantly been desk based, supplemented by targeted interviews with Secretariat staff (including Country Responsible Officers) and CSO Board members/stakeholders. The electronic and EPI manager surveys both had a question each on the CSO program performance.

The value added analysis has been undertaken by primarily comparing GAVI’s CSO approach with other comparator CSO windows.

*Table 6.2: Evaluation Question 1.4 - CSO program*

<table>
<thead>
<tr>
<th>Evidence source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of documentation</td>
<td>Review of all GAVI documentation on CSO program (including APRs etc.)</td>
</tr>
<tr>
<td>Structured interviews</td>
<td>Interviews with, among other GAVI stakeholders, the CSO Board member, CSO task team, selected GAVI country representative officers, and consultants who reviewed Type A support and undertook the CSO M&amp;E study.</td>
</tr>
<tr>
<td>Surveys</td>
<td>One question on the CSO program in the e-survey and EPI manager survey</td>
</tr>
</tbody>
</table>
### Evidence source

<table>
<thead>
<tr>
<th>Evidence source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country studies</td>
<td>The five field visit countries do not have a CSO program. However, we have examined why Bolivia, a Type B pilot country, has not applied for support.</td>
</tr>
<tr>
<td>Comparator analysis</td>
<td>Analysis of CSO approaches of other GHPs - Global Fund, Stop TB, etc.</td>
</tr>
</tbody>
</table>

#### 6.1.3. Structure

The rest of the CSO section is structured as follows:

- Section 6.2 provides the background on the CSO program to date.
- Sections 6.3 – 6.7 in turn discuss each area of CSO results and value add.
- Section 6.8 concludes.

#### 6.2. Background

In November 2006, the GAVI Alliance Board approved an investment of about $30m for the CSO program over a two year phase of 2007-09, comprising of two types of support:

- **Type A**: $8m available to all 72 GAVI eligible countries, to strengthen the coordination and representation of CSOs involved in immunisation, child health, and HSS at country and regional levels. Provides lump-sum grants of $10,000 to $100,000 to conduct CSO mapping and other coalition building exercises.
- **Type B**: $22m for CSOs in ten selected pilot countries, to help countries implement GAVI HSS proposals or the cMYPs.

However, given the delays in its implementation, the GAVI Board in November 2009, decided to extend the program until December 2010.

As per the GAVI CSO guidelines, the rationale to support CSOs is to strengthen a country’s capacity and sustainability in the delivery of immunisation and HSS activities, reflecting the role of CSOs in:

- increasing immunisation coverage/ access to marginalised and unreached populations;
- providing technical assistance, M&E, implementation, and operational research; and
- community mobilisation to increase demand.

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156 The ten pilot countries are Afghanistan, Bolivia, Burundi, DR Congo, Ethiopia, Georgia, Ghana, Indonesia, Mozambique, and Pakistan. These were selected based on a range of criteria such as high numbers of un-immunised children; varying degrees of functioning CSO network; harmonisation with other GHPs’ HSS support countries; and geographic diversity but focus on Sub-Saharan Africa (5 on the list), fragile states (3 on the list), and Francophone countries (2 on the list) (as per Guidelines of GAVI Alliance CSO support).
The program is intended to provide catalytic support to improve CSO involvement/coordination with the public sector, rather than to create new standalone projects.

Annex 5 provides a discussion of the findings of previous evaluations.

6.3. Selection of countries and program uptake

As part of the CSO results analysis, we examine GAVI’s rationale for selection of countries and the uptake of the Type A and Type B support so far.

5.3.1 Review of documentation

Although the CSO pilot was planned for 2007–09, its uptake (particularly Type A) has been rather slow. Figure 6.1 below shows the levels of disbursements vis-à-vis commitments\(^{157}\) for both Type A and B support.

- As of February 2010, 93% of committed Type B support had been approved, of which about 51% had been disbursed.
- In contrast, only 9% of Type A committed support has been approved/disbursed (as of February 2010).

*Figure 6.1: Uptake of CSO Type A and B support (2008–10)\(^ {158}\)*

\(^{157}\)Commitment figures are those approved by the Board for Type A and B CSO funding.

\(^{158}\)The cut-off point for this evaluation has been agreed with GAVI as November/December 2009. However, following discussions with the GAVI Secretariat, an exception has been made for the CSO analysis – the approval figures presented in here include until February 2010 approvals.
Figures 6.2 and 6.3 below break down the total CSO uptake for Type A and B support by country. Some interesting points to note are:

- In general, only the Type B pilot countries have applied for Type A support.\textsuperscript{159} Togo and Cameroon are the only exceptions.\textsuperscript{160} The uptake of Type A support overall is very low.

- Of the 10 Type B pilot countries, Georgia and Bolivia did not apply. Ghana and Mozambique submitted proposals – Ghana is pending approval, and Mozambique CSO funds are expected to be integrated with the IHP package (and hence not included in the total approvals).

- Of the CSO approved countries, Burundi has not been disbursed both Type A and B funding. DRC, which has been approved for the largest Type B grant ($5.3m out of total Type B approvals of $14.2m until December 2009) has been disbursed only part of the approved amount ($2.3m has not been disbursed). Afghanistan has also been disbursed only part of the approved funds (of the total approved amount of $2.4m of Type B funding, $1.4m has not been disbursed yet).\textsuperscript{161}

\textit{Figure 6.2: Type A approvals ($)} by country (2008-10)

\begin{figure}
\centering
\includegraphics[width=\textwidth]{TypeAApprovalsByCountry.png}
\caption{Type A approvals ($)}
\end{figure}

\textit{Source: CSO Approvals and Disbursements data, February 2010 (GAVI Secretariat)}

\textsuperscript{159} This might be because countries see the benefit of the CSO mapping exercise if that were followed by a larger Type B program funding. Also, GAVI’s CSO awareness building efforts through field visits, workshops, etc. were concentrated on the Type B pilot countries.

\textsuperscript{160} Togo’s political will and good leadership in MoH motivated them to map CSOs to improve their joint working with Government, as also the expectation to apply for Type B support, when it opens up to other GAVI countries. Cameroon undertook the Type A mapping, in readiness to apply for Type B CSO support in the future.

\textsuperscript{161} Full disbursements to DRC and Burundi are pending on account of the Financial Management Assessment (FMA) procedures that are to be completed.
Note: All approved amounts have been disbursed, with the exception of Burundi.

Figure 6.3: Type B approvals ($m) by country (2008-10)

Source: CSO Approvals and Disbursements data, February 2010 (GAVI Secretariat)

Note: All approved amounts for 2008 and 2009 have been disbursed, with the exception of Burundi ($0.45m approved but not disbursed yet), DRC ($2.3m out of approved $5.3m not disbursed yet), and Afghanistan ($1.4m approved not disbursed yet). In addition, about $6.1m of Type B funds approved in 2010 have not yet been disbursed.

6.3.1. Structured interviews

The low popularity and uptake of CSO funding (Type A in particular) by countries has been attributed to various issues, including in the design of the CSO window (issues related to the processes are set out in Section 6.4. below). Several of these issues were also highlighted in the Type A Support Review.

- **Lack of clarity in program objectives:** The general rationale of the CSO support is to strengthen the delivery of the country’s immunisation and health systems programs by involving CSOs. However, the specific objectives are not well defined, for example, is the CSO funding aimed at increasing immunisation coverage to unreached, or advocacy, or improving training and technical assistance at grassroots level.

- **Small grant sizes:** Annex 5 sets out the CSO funds allocation to countries for Type A support, based on birth cohorts. The small size of grants ($10,000 to $1000,000) dis-incentivised countries from applying, unless they were also Type B pilot countries.

- **Selection of Type B pilot countries:** The criteria for nomination of some of the pilot countries were not best suited to achieve the CSO objectives within the pilot
– for example, is the aim of the mapping exercise to increase immunisation coverage, or strengthen CSOs for HSS delivery, or both. Further, the challenging political context in country (e.g. Georgia), the limited extent of CSO presence in immunisation (e.g. Indonesia), the fiduciary risks in fragile/low resource countries, etc. were not considered sufficiently. In addition, interview feedback suggests that the CSO community were not consulted in advance of the design of the program nor were country needs/gaps in this area mapped *a priori*, to ensure that it best meets the gaps in their work on ground.

- **Limited publicity on CSO programs:** Another reason cited by consultees for the low uptake, particularly of Type A support, is the lack of awareness of the program outside of the pilot countries. We understand that the GAVI Secretariat visited only some of the pilot countries to introduce the CSO program and its benefits, and to hold workshops with some relevant stakeholders. There have been limited focussed publicity efforts in other GAVI eligible countries. Our consultations in this area, albeit limited, did not reveal any role of GAVI’s country partners in promoting awareness on the CSO program (although admittedly, we have not visited any CSO program country).

### 6.3.2. Country visits

Country visits were conducted in Bangladesh, Bolivia, Mali, Nigeria and Uzbekistan between April and June 2010. Feedback on the CSO program uptake from these countries is summarised below.

While there is some awareness with respect to the CSO window of GAVI funding, there was found to be limited interest in applying for this support. Reasons for the lack of interest include the large effort required by the application process on part of the government for a small size of funding for NGOs, a lack of clarity with respect to the term CSO, and limited role played by CSOs in the health and immunisation sectors. Overall, there seems to be a need for improved communication regarding this window.

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162 The criteria were high numbers of un-immunised children; varying degrees of functioning CSO network; harmonisation with other GHPs’ HSS support countries; and geographic diversity but focus on Sub-Saharan Africa (5 on the list), fragile states (3 on the list), and Francophone countries (2 on the list) (as per Guidelines of GAVI Alliance CSO support).
Table 6.3: Country visits feedback on program uptake

<table>
<thead>
<tr>
<th>Country</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>There was limited awareness of the objectives and modalities of GAVI’s CSO window in Bangladesh, both among the civil society and government officials. This is despite the large presence of NGOs and their involvement in child health and immunisation in the country. Moreover, the Government has little incentive to go through the application process in order to procure funds that are small in size, and are channelled to the NGOs.</td>
</tr>
<tr>
<td>Bolivia</td>
<td>Bolivia is eligible for both Type A and Type B support. We understand that the focus of this funding fits well with the priorities of the Morales government – in terms of support of grassroots organisations – and that an application has been prepared with the support of PAHO. However, given continuing political uncertainty / changes in the Ministry of Health the application process has stalled. Also it was noted that there had been some confusion in the country with the term CSO – given underlying political suspicion of some NGOs working in the country.</td>
</tr>
<tr>
<td>Mali</td>
<td>Consultations with government representatives in Mali suggested that they have provided information about GAVI’s CSO window to the key CSOs in the country, however they have not professed any interest and hence Mali has not applied for Type A support. However there was a mixed picture presented by the two key CSO bodies that we consulted with during the visit. While one of them confirmed that the government had shared information with them, the other indicated that they happened to hear of the support during a visit by the GAVI CRO in Mali. There appears to be scope for better communication on the CSO support in the country.</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Nigeria has not applied for GAVI Type A CSO support, and is not one of the pilot countries eligible for Type B support. Government feedback suggested limited interest in this support, although CEPA did not get a chance to confirm this with CSOs directly during the field visit. It is possible that the limited number of high level forums for discussion of health sector issues contributes to a lack of awareness.</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>The Uzbek health system is dominated by the public sector, and CSOs do not play a role in health and immunisation, as is the case with most other countries in the region. Hence there is no demand for funding from the GAVI CSO program.</td>
</tr>
</tbody>
</table>

6.3.3. Conclusion

Take up of GAVI CSO support, particularly Type A is found to be slow. This is attributed to factors such as lack of clarity in program design, small grant size, criteria for selection of pilot countries, and limited publicity on CSO programs. The country visits confirm that a lack of awareness/understanding with respect to this window of support hinders applications for funding.

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163 Bolivia had submitted a CSO application in Spanish. GAVI do not accept applications normally in Spanish; and moreover, the application was not correct, the budget was wrong, and the application was not signed by relevant authorities. Bolivia never reverted to GAVI on correcting these. PAHO later informed GAVI that due to the political instability and changing priorities, there has been no interest to apply for CSO funds.
6.4. **CSO processes and timing**

This sub-section reviews the CSO processes and timelines from application to approval in assessing its results achieved.

6.4.1. **Review of documentation and structured interviews**

Figure 6.4 presents the GAVI processes for the review and approval of Type A and B CSO applications. While Type A proposals are approved by the Secretariat on recommendation of the CSO Task Team (given their low cost), Type B support goes through the same review and approval processes as HSS applications. The general feedback on the efficiency of the CSO processes from country application to disbursement is as follows (based on consultation feedback, and conclusions from the Type A CSO Support Analysis report)\(^{164}\):

- **Application:** The application forms and processes are considered by countries to be cumbersome and disproportionate to the funds being requested. This deters governments to invest their limited human resources to CSO applications. Some consultees provided feedback that the CSO may be best combined with the HSS program, rather than increasing transaction costs for GAVI and countries as a small stand-alone program.

- **Approval:** The lengthy review and approval process, especially for Type B support, is not conducive for a two-year pilot program. In the case of several countries, delays in funds approval and disbursement has meant that the program could not be started until recently (Please see below for analysis of process timings).

- **Disbursement:** Feedback from the Secretariat suggests that GAVI’s systems and processes do not yet permit disbursing funds to CSOs directly, but rather through the government or GAVI partners (Refer Table 6.4 below). Given that CSOs are meant to be the beneficiaries of the program, this has been sub-optimal. However, GAVI’s strategy from its inception has been to work through the national EPI program, which has been effective in increasing country ownership and the prioritisation of immunisation. Whilst we are not analysing here on whether disbursement through CSOs is necessarily the right way forward (and implications thereof)\(^{165}\), our observations suggest that it might be helpful to retain that flexibility where the case exists.

Further, where funds are disbursed through implementing partners, an MoU needs to be signed between the partner institution and the MoH in country, and countries

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\(^{165}\) There are obviously trade-offs with respect to fiduciary checks, costs of disbursement/ financial management, resource requirement, dilution of government ownership, etc. if GAVI were to have multiple disbursement channels. However, in countries and specific contexts where CSOs play a substantial role in immunisation (and may have even displaced the State functions, e.g. fragile states), GAVI might consider some flexibility in its approach.
incur a charge of 7% of the value of funds transferred (which is a downside, given the small size of CSO grants).

Figure 6.4:

Type A CSO process

1. Application form submitted by HSCC to GAVI Secretariat
2. Application reviewed by Secretariat along with GAVI CSO Task Team. Task Team recommends proposals to Secretariat
3. Following approval by the GAVI Secretariat, funds disbursed to the country
4. Funds channelled to country via Government/ HSCC/ Alliance partners/ financial management agency

Type B CSO process

1. In country HSCC decides whether to set up a technical working group/utilise an existing group to invite applications from CSOs.
2. CSOs submit applications to HSCC/TWG
3. HSCC/TWG review applications* and submit a single integrated application to GAVI Secretariat
4. GAVI Secretariat reviews HCN and CSO applications and recommends for Board approval
5. Funds channelled through Government/ GAVI/ third party funding agents (e.g. in-country International NGOs/ Alliance partners).

* Review ensures which of the CSO applications best contribute to the goals of the GAVI or SAVI HCNs proposal

Table 6.4: Channel of disbursement of CSO funds

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Type A countries</th>
<th>Type B countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government (MoH/ HSS focal point)</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>GAVI partners (WHO/UNICEF)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>CSOs</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

In terms of timing of approval and disbursement of CSO funds, there have been significant delays in several cases. Tables 6.5 and 6.6 below present the actual timings of the CSO processes for both Type A and B support. As agreed with the CSO responsible person in the Secretariat, a time lag of above four months is considered a ‘delay’.

- Out of the ten countries approved for Type A support, five received approvals and funding on time, and the remaining 50% of the countries (shaded in grey) faced delays.
- All six countries approved for Type B support faced delays in approval or disbursement or both. Pakistan, Ethiopia, and Afghanistan have noted this issue in the 2008 APRs, stating that delays led to wasted efforts by CSOs in planning and preparing for implementation.
- Typical reasons for the delays are:
- **Application to approval**: IRC/Secretariat requests for proposal clarification or re-submission, earlier delays as a result of the dual Board structure of GAVI (Alliance and Fund Boards), other GAVI internal delays, etc.

- **Approval to disbursement**: Identifying the right country recipient of funds (including signing an MoU with partner/ MoH to transfer funds to them), completion of FMA procedures for selected countries, GAVI internal processes, etc.

**Table 6.5: Type A support**

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of submission</th>
<th>Date of Secretariat approval</th>
<th>Date of disbursement</th>
<th>Time taken from submission to Secretariat approval (in months)</th>
<th>Time taken from approval to disbursement (in months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>10/01/2008</td>
<td>18/02/2008</td>
<td>03/11/2008</td>
<td>1.3</td>
<td>8.5</td>
</tr>
<tr>
<td>Burundi</td>
<td>01/09/2008</td>
<td>23/03/2009</td>
<td>Pending</td>
<td>6.8</td>
<td>11 (pending)</td>
</tr>
<tr>
<td>Cameroon</td>
<td>03/09/2008</td>
<td>23/03/2009</td>
<td>01/05/2009</td>
<td>6.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Congo DR</td>
<td>05/10/2007</td>
<td>01/02/2008</td>
<td>30/07/2008</td>
<td>3.9</td>
<td>6</td>
</tr>
<tr>
<td>Pakistan</td>
<td>01/12/2007</td>
<td>14/02/2008</td>
<td>03/11/2008</td>
<td>2.5</td>
<td>8.6</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>05/03/2008</td>
<td>21/05/2008</td>
<td>30/07/2008</td>
<td>2.5</td>
<td>2.3</td>
</tr>
<tr>
<td>Georgia</td>
<td>01/06/2008</td>
<td>03/08/2009</td>
<td>07/12/2009</td>
<td>2.1</td>
<td>2.3</td>
</tr>
<tr>
<td>Ghana</td>
<td>04/07/2008</td>
<td>21/08/2008</td>
<td>29/09/2008</td>
<td>1.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Indonesia</td>
<td>06/03/2008</td>
<td>21/05/2008</td>
<td>30/07/2008</td>
<td>2.5</td>
<td>2.3</td>
</tr>
<tr>
<td>Togo</td>
<td>29/10/2008</td>
<td>03/02/2009</td>
<td>20/02/2009</td>
<td>3.2</td>
<td>0.6</td>
</tr>
<tr>
<td>Bolivia</td>
<td>01/03/2008</td>
<td>-</td>
<td>-</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Kyrgyz Rep</td>
<td>01/09/2008</td>
<td>Resubmission</td>
<td>-</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

*Source: GAVI Secretariat*

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166 Please refer Figure 6.4 for details on the process.
Table 6.6: Type B support

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of submission</th>
<th>Date of Board approval</th>
<th>Date of disbursement</th>
<th>Submission to Board approval (in months)</th>
<th>Board approval to disbursement (in months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>10/01/2008</td>
<td>01/06/2008</td>
<td>05/05/2009</td>
<td>5.7</td>
<td>11.1</td>
</tr>
<tr>
<td>Burundi</td>
<td>01/09/2008</td>
<td>30/07/2009</td>
<td>-</td>
<td>11</td>
<td>n/a</td>
</tr>
<tr>
<td>Congo DR</td>
<td>05/10/2007</td>
<td>01/11/2007</td>
<td>15/04/2008</td>
<td>0.9</td>
<td>5.5</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>05/03/2008</td>
<td>25/11/2008</td>
<td>29/01/2009</td>
<td>8.7</td>
<td>2.1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>06/03/2008</td>
<td>01/06/2008</td>
<td>10/11/2008</td>
<td>2.8</td>
<td>5.2</td>
</tr>
<tr>
<td>Pakistan</td>
<td>07/03/2008</td>
<td>25/11/2008</td>
<td>20/02/2009</td>
<td>8.6</td>
<td>3</td>
</tr>
<tr>
<td>Ghana</td>
<td>01/09/2008</td>
<td>-</td>
<td>-</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Mozambique</td>
<td>07/03/2008</td>
<td>-</td>
<td>-</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

6.5. Implementation status and results achieved

Given the nascent stage of the CSO program and that it has been extended beyond the pilot period of 2007-09, it is early days to measure the program results in terms of immunisation and HSS outcomes and impact. The GAVI Secretariat also indicated that countries have not yet reported on CSO results as the program is still ongoing.

This section therefore summarises for:

- **Type A support**: Expected results of the program in Afghanistan and Pakistan, based on the 2008 APR\(^{167}\); and feedback on the CSO program from the GAVI Secretariat officers responsible for Togo and Cameroon - the only two non-pilot countries to apply for Type A funding.\(^ {168}\)

- **Type B support**: Planned distribution of approved funds, expected results, and monitoring indicators/ targets for Afghanistan, Pakistan, DRC, and Ethiopia; based on the CSO Type B case studies in these countries and the 2008 APRs for Afghanistan, Pakistan, and Ethiopia.

\(^{167}\) Pakistan and Ethiopia are the only other countries that report on CSO program in the 2008 APR. However, the report only states the planned/ ongoing activities, rather than results.

\(^{168}\) This is by no means exhaustive and needs to be verified with the countries after the program is complete. We have not attempted to report results in other CSO countries given the ongoing implementation of the program.
6.5.1. Review of documentation

Type A support

Table 6.7 below presents the illustrative results of Type A support. In general, the mapping seems to have yielded (or proposed to result in) the participation of CSO representatives in the HSCCs/ bodies in the country and a better understanding to government of CSO activities in the immunisation and broader health sector. Therefore, the results of Type A support may be interpreted as a stepping stone to increased and coordinated involvement of CSOs in public immunisation/ health programs.

Table 6.7: Example of Type A results in Togo, Cameroon and Pakistan, and expected results in Afghanistan

<table>
<thead>
<tr>
<th>Country</th>
<th>Examples of results achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>Expected results as per 2008 APR:</td>
</tr>
<tr>
<td></td>
<td>• a database of CSO available for Ministry of Public Health (MoPH) and its partners</td>
</tr>
<tr>
<td></td>
<td>• Elected CSO representatives on key coordination bodies for the health sector</td>
</tr>
<tr>
<td></td>
<td>• Recommendations from the study available to MoPH and its partners for further decision making</td>
</tr>
<tr>
<td>Cameroon</td>
<td>• One CSO member on HSCC.</td>
</tr>
<tr>
<td></td>
<td>• Greater integration of CSOs in health areas outside of HIV/ AIDS, and particularly for health system strengthening.</td>
</tr>
<tr>
<td></td>
<td>• CSO mapping helped government to the extent that they are keen to submit a Type B proposal, once it is opened to other GAVI eligible countries.</td>
</tr>
<tr>
<td>Togo</td>
<td>• Two CSO members on HSCC.</td>
</tr>
<tr>
<td></td>
<td>• CSO mapping has led to better linkages between CSOs and government to coordinate for future health planning/ implementation activities.</td>
</tr>
<tr>
<td>Pakistan</td>
<td>• Program still ongoing; however the 15 CSOs comprising the GAVI CSO Consortium have been grouped into three clusters with a Cluster Coordinator each. The three Cluster Coordinators are nominated to sit on the National HSCC, as approved by the Health Secretary, MoH that chairs the HSCC.</td>
</tr>
</tbody>
</table>

Source: Country APRs and consultations

Type B support

There is no documentation related to Type B results as yet from any of the supported countries. However, the GAVI Secretariat has prepared CSO case studies on four countries (Afghanistan, DRC, Ethiopia, and Pakistan), three of which also have reported some details on proposed use of funds and expected results from the support. These are summarised below.
Based on information reported in APRs by Type B pilot countries, the total approved amount of funding is expected to be distributed across the following:

- Management costs of CSOs and HSCC/ Technical Working Group (TWG): The allocation of total funding to management costs may vary between 7 to 10%.
- Finance/ auditing costs: A small proportion (1-4%) is set aside for finance/ auditing costs.
- WHO/ UNICEF management fee: When funds are routed to the CSOs through GAVI partners such as WHO/ UNICEF, a management fee of 7% of the total funds is charged.
- CSO project activities: The remainder amount of funds is distributed to the target CSOs. The number of CSOs funded by the program differ by country (e.g.: 6 in Afghanistan, 5 in Ethiopia, and 15 in Pakistan)

Given the small size of CSO grants, the overhead expenditure on non-program activities seems rather high. For example, if funds were routed to the CSO directly or through the government, the management fee of 7% charged by partners such as WHO and UNICEF would not be incurred (e.g. $0.17m in Afghanistan).

Table 5 in Annex 5 sets out the objectives/ proposed activities, expected output, M&E indicators/ targets and issues faced by four CSO Type B countries – Afghanistan, Pakistan, DRC and Ethiopia. This is based on a review of CSO Type B proposals, country case studies, and 2008 APRs.

- While there is significant variation across countries with regard to proposed CSO activities and expected results, a few common themes include training of health personnel, increased coverage and quality of health services, capacity building of CSOs, and effective collaboration between CSOs and governments.
- M&E indicators/ targets laid down to measure/ quantify expected results may range from the number of trained health service providers, immunisation coverage rates in targeted areas, to social mobilisation and outreach related targets.
- The key issues faced by CSO Type B countries include delays in disbursement of funds, low level of inclusiveness of the process as participation was mainly by large/ experienced NGOs, and the time and effort required by the application process was found to be disproportionate to the amount of funding.

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169 The actual amounts allocated to each of these components (Afghanistan, Ethiopia and Pakistan APRs 2008) have not been presented here because the total amount of approved CSO Type B funding figures reported by countries in the APRs do not match the GAVI Secretariat data on CSO approvals and disbursements, and hence, seem inaccurate.
CSO results indicators

The CSO indicators\textsuperscript{170} in the GAVI Alliance Strategy 2007-10 are mostly input and process indicators and do not therefore support measure of program activities and outputs. One of the indicators is an M&E framework for CSO impact assessment – but our understanding is that this is still to be developed. Therefore, our assessment is that the CSO program design needs a clear definition of outputs, and performance indicators and targets to be able to assess progress on its objective of increased CSO engagement in countries.

6.5.2. Electronic survey

The statement posed in the e-survey was ‘GAVI’s CSO program has not contributed much to facilitating/ expanding the role of CSOs in delivering immunisation and health services’. As shown in the figure below, the feedback on CSO performance is quite mixed. Over 40\% of adjusted\textsuperscript{171} respondents agree or strongly agree with the statement that the CSO program has not been very successful. That said, over 30\% do not agree or disagree (neutral); and 25\% strongly disagree or disagree to the statement. In other words, the feedback is quite mixed and not strongly in favour or disfavor of the program. This might reflect the view that several stakeholders are not very aware of the CSO program and its modus operandi and hence are neutral about its performance.

Table 1 in Annex 5 presents an examination of the e-survey feedback by stakeholder category.

\textsuperscript{170} These include (a) Mechanisms for proposed Civil Society window operational by 2007, (b) \% of total ‘Type A’ Civil Society funds disbursed, (c) \% of total ‘Type B’ Civil Society funds disbursed to ten pilot countries, and (d) M&E research framework for impact assessment of CSO support developed and lessons learned disseminated and used to inform practice.

\textsuperscript{171} Adjusted \% is calculated after taking out the ‘not aware/ no view’ and the blank responses to the statement.
There is general consensus that it is difficult to determine the impact of the CSO program as there are a limited number of countries awarded funding, the program is quite short and it is too early to assess the impact. A number of stakeholders are of the view that the program is a good way of engaging CSOs and providing them with the opportunity to be actively involved in delivering services. While this window of support provides an opportunity to work with the civil society and defines modalities, there are a number of issues that constrain the success of the program such as the disproportionately large effort required to obtain a small amount of funding, limited awareness regarding the program and lack of direct channels of funding to the CSOs.

Table 2 in Annex 5 presents the key themes of qualitative feedback to the statement, and corresponding frequencies of responses.

### 6.5.3. EPI manager survey

The EPI manager survey posed the question ‘Are you aware of GAVI’s CSO program and is it relevant for/ effective in your country, given the role of CSOs in the immunisation sector?’

All respondents are aware of the GAVI CSO program. Most agreed that CSOs are important in advocacy/ sensitising the population to immunisation, and in health service delivery, particularly with respect to hard to reach populations in remote areas.
Table 3 in Annex 5 summarises responses on whether countries are keen to apply for this support.

### 6.5.4. Structured interviews

Some stakeholders acknowledge the importance of engaging with CSOs, particularly with respect to advocacy. However, a number of issues regarding the program have been highlighted:

- There is little agreement regarding which organisations to support and mechanisms of support.
- Channelling money through the government may not be the most ideal way of reaching the CSOs.
- It is not clear if CSOs add any particular value to GAVI’s work. Whether it is useful to create a CSO program specifically for immunisation is questionable.
- May be useful to integrate the CSO and HSS windows and ensure that CSOs have a strong voice in preparation of the HSS proposal.
- Results and program visibility would take some time.

### 6.5.5. Conclusion

It is still early days to draw conclusions regarding the results and value add of GAVI CSO program. The mapping exercise undertaken under Type A support seems to have resulted in the participation of CSO representatives in health coordination bodies and generated awareness among the government with respect to CSO activities in immunisation and the broader health sector. Type B support is expected to enhance the engagement of CSOs in immunisation activities in countries.

However, in our view, the fundamental design issues in the CSO program (and issues with uptake of Type A support) might deter impact from being achieved, unless these are addressed. Further, without a proper definition of outputs, and performance indicators and targets for the program, it is difficult to assess its performance. The e-survey results are also quite divided in terms of responses on whether the CSO program has contributed to facilitating/ expanding the role of CSOs in delivering immunisation and health services.

### 6.6. Comparator organisations with CSO programs

Given the low uptake and ongoing implementation of the CSO support, the GAVI value add per se cannot focus on the results that might have been achieved in the absence of the Alliance. Instead, we compare the GAVI CSO approach with other donors/ global health initiatives that have engaged with CSOs, with a view to draw lessons on potential or scope for value add by GAVI as it seeks to re-design its CSO program.
We reviewed the CSO involvement by the Global Fund (GF), Stop TB, UNAIDS, UNITAID, USAID and the World Bank, as part of the comparator analysis.

Overall, Global Fund, USAID, and Stop TB (through its Challenge Facility for Civil Society - CFCS) fund CSOs directly for programmatic interventions. The other comparator organisations involve CSOs as key partners in implementation or oversight of programs, and/ or consult with them to better understand their perspectives. A key difference between immunisation and particularly HIV/ AIDS is that CSOs are much more activist by nature in the latter and play a stronger role in advocacy. Immunisation, by contrast, is primarily delivered through government programs, with a lesser role for CSOs.

The summary findings emerging from the comparison of GAVI CSO program to the Global Fund approach are outlined in Table 6.8 below (Annex section 5 presents a more detailed analysis of all comparator CSO approaches, based primarily on a review of documentation and a few consultations). The limited comparison with Global Fund suggests that GAVI has a low level of value add in this program so far – reasons include the minimalistic nature of CSO engagement by GAVI (rather than substantive program implementation), small grant sizes, inability to disburse to CSOs directly, low program uptake so far, amongst others. However, the potential to involve CSOs more meaningfully to reach GAVI’s immunisation objectives is recognised.

Table 6.8: Comparison of GAVI and Global Fund CSO approaches

<table>
<thead>
<tr>
<th>Criteria</th>
<th>GAVI</th>
<th>Global Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure of CSO engagement</td>
<td>• Type A support for mapping/ strengthening CSO role and Type B for CSO support in ten pilot countries to implement HSS or cMYP proposals.</td>
<td>• Global Fund’s dual track financing approach provides for a government and non-government/ CSO Principal Recipient (PR) for all its grants. CSOs are therefore an integral part of the GF program. In addition, there is a Community System Strengthening funding that can be requested as part of the disease or HSS proposal. CSOs are also members of the GF CCMs.</td>
</tr>
<tr>
<td>Size of CSO funding</td>
<td>• Type A commitment: $ 7.2m, and Type B: $21.7m. Limited uptake so far, especially Type A.</td>
<td>• 32% of GF’s resources ($2.4bn grants in 2008) go to CSOs.</td>
</tr>
<tr>
<td>Approval criteria and risk</td>
<td>• Currently, CSOs cannot be direct recipients of GAVI support. HSCC submits CSO proposals that are reviewed/ approved by GAVI.</td>
<td>• GF has minimum requirements in financial management and systems, institutional and programmatic arrangement, procurement and supply management systems, and monitoring and evaluation to be satisfied by all PRs.</td>
</tr>
<tr>
<td>Performance management</td>
<td>• GAVI does not have an explicit CSO program performance</td>
<td>• CSOs have the same reporting and audit requirements as government</td>
</tr>
<tr>
<td>Criteria</td>
<td>GAVI</td>
<td>Global Fund</td>
</tr>
<tr>
<td>----------</td>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>system, although the country APRs provide some self-reported M&amp;E indicators.</td>
<td>PRs, verified by the Local Fund Agents. GF has introduced an M&amp;E toolkit and ten performance indicators that PRs report on.</td>
<td></td>
</tr>
</tbody>
</table>

6.7. GAVI role in expanding CSO involvement in immunisation

As part of the value add question, we also briefly examine the ongoing discussions on the role of CSOs in the proposed common funding platform, and whether GAVI has influenced global immunisation and health aid stakeholders through its CSO approach.

Other global health partnerships such as the Global Fund and Stop TB Alliance are more advanced than GAVI in their involvement of CSOs for program delivery. However, GAVI’s value add is in bringing together CSOs with other partners in immunisation related discussions/decisions at global and country level. At the global level, GAVI has a CSO constituency represented by a member on its Board/Committees. At the country level, GAVI encourages the participation of CSOs in the HSCC or equivalent national health coordinating unit, and promotes better coordination between the government and CSOs for immunisation and public health programs. For example, this has been achieved in Togo, Cameroon, and Pakistan that received Type A CSO funding. Also, as a result of CSO workshops/meetings in Pakistan, the government is now aware of all the CSOs that work in immunisation, and has begun to involve them in planning and implementing programs.

Recognition and formal engagement of CSOs by the government was largely by exception in most countries that GAVI started the CSO program in. Nevertheless, the small number of CSO funded countries limits GAVI’s value add in this area.

Another line of enquiry is the extent to which GAVI might influence the role of CSOs in the Common Health Systems Funding Platform. Work on the Platform has been initiated by GAVI, the Global Fund, and the World Bank, and is facilitated by the WHO and other health partners. In its current pilot design and work plan, there is no explicit role accorded for CSOs. Nonetheless, it is clear that many other development partners including civil society and the private sector play crucial roles in funding health systems and providing technical assistance at the country level. These other partners are proposed to be consulted and are likely to be an integral part of the Platform at global and country (grassroots) levels in the future. It might be expected that both the Global Fund and GAVI would support the inclusion of CSO in the Platform, although Global Fund has a longer history of beneficial engagement with and direct funding of CSOs as program beneficiaries.

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172 The Pakistan Federal Secretary of Health has nominated the National Program Manager, EPI/MoH to be the focal person to facilitate the execution of GAVI CSO Support. As far as CSO interaction is concerned, the process is going on at cluster level (15 CSOs divided into three geographic clusters). The objective of these meetings and exchange visits is to strengthen and build the capacity of small CSOs and share experiences in maternal and child health (Source: Pakistan APR 2008).
6.8. **Overall conclusions for SG1.4**

‘What have been the results and added value of GAVI’s CSO program at global and country level?’

Our main findings from the CSO evaluation are summarised below, along with our overall conclusions.

6.8.1. **Summary**

Based on the analyses presented above, Table 6.9 summarises our main conclusions on GAVI’s HSS program.

*Table 6.9: CSO findings*

<table>
<thead>
<tr>
<th>Evaluation question SG1.4: Results and value add of GAVI’s CSO program</th>
<th>Findings</th>
<th>Robustness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design and uptake of Type A and B CSO support</td>
<td>Low uptake of Type A support due to limited awareness of the program and a range of design issues with the CSO program.</td>
<td>A Validated by program data, interview feedback, and country visits</td>
</tr>
<tr>
<td>CSO processes from country application to disbursement</td>
<td>Cumbersome application, delays in approval, and disbursement only through government/partners have posed issues</td>
<td>A Based on process data from GAVI</td>
</tr>
<tr>
<td>Implementation status and case studies on results achieved</td>
<td>Too early to measure but some fundamental design issues might deter impact, and there is an absence of clear results indicators in the current GAVI Strategy. So far, evidence suggests that Type A has generally helped in CSO participation in health sector committees/increased awareness in some countries.</td>
<td>B Case study based. Field visit countries do not have CSO program. Mixed e-survey feedback.</td>
</tr>
<tr>
<td>Comparator CSO approaches</td>
<td>Comparisons with Global Fund, Stop TB, USAID etc. suggest that others are more advanced than GAVI on CSO engagement, although potential to involve CSOs for immunisation is recognised</td>
<td>B Mostly based on a review of documentation of comparator CSO approaches, and some interviews</td>
</tr>
<tr>
<td>GAVI's role in expanding CSO role in immunisation</td>
<td>GAVI added value in bringing CSOs to the table with other immunisation partners. No defined role yet for CSO in the proposed common financing platform</td>
<td>C Analysis limited to the few CSO support countries.</td>
</tr>
</tbody>
</table>

6.8.2. **Conclusions**

Some fundamental design and process issues have resulted in the low uptake and popularity of the CSO program (especially Type A support). The issues include lack of clarity on
program objectives, small grant sizes, limited country publicity, delays in approval and disbursement processes, reliance on governments to submit CSO proposals, etc.\footnote{GAVI is aware of these issues and is working to address them.}

The responses from the e-survey were generally equally divided between agree/ strongly agree, disagree/ strongly disagree, and neutral on the statement ‘GAVI’s CSO program has not contributed much to facilitating/ expanding the role of CSOs in delivering immunisation and health services’.

Our assessment is that the CSO program design needs a clearer definition of outputs, and performance indicators and targets to be able to assess progress on its objective of increased CSO engagement in countries. Whilst it is too early to measure program outcomes, one result of the Type A support in some countries has been the inclusion of CSO representatives in the Health Sector Coordination Committees (HSCC) or equivalent – leading to increased recognition and coordinated involvement of CSOs in immunisation/ health programs.

In developing a framework to assess value add, we compared the GAVI CSO program with other organisations. The limited comparison, particularly with Global Fund, offers lessons and suggests that GAVI has a low level of value add in its program so far.\footnote{Reasons include the minimalistic nature of CSO engagement by GAVI (rather than substantive program implementation such as the Global Fund including CSOs as Principal Recipients of funds), small grant sizes, inability to disburse to CSOs directly, low program uptake of Type A support, amongst others.} However, the potential to involve CSOs more meaningfully to reach GAVI’s immunisation objectives is recognised. In that regard, GAVI’s CSO program has helped in including CSOs as a key stakeholder at the immunisation discussion table at global and country levels.
7. **Summary and Conclusions on SG1**

The previous sections presented our findings on each of the SG1 programs. In this section, we bring together the evidence across the SG1 evaluation questions to assess the extent to which the goal has been met. (This section is also presented in the Evaluation Report summary on SG1)

Strategic Goal 1 is to ‘Contribute to strengthening the capacity of the health system to deliver immunisation and other health services in a sustainable manner.’

Strengthening of health systems is a very large and complex goal that requires understanding of country contexts and customisation of the interventions to address issues specific to each country. Further, unlike GAVI’s vaccination goal, the outputs in relation to this goal are less tangible, more lagged in time, and more challenging to measure.

7.1. **Evaluation summary**

The SG1 programs have grown considerably since GAVI inception. The total SG1 approvals over 2001-10 are nearly $1bn (a little less than half of the NVS approvals in the period).

We do not propose to compare the relative effectiveness of GAVI spends on vaccination and health system related activities. However, there is inevitably a question as to whether GAVI’s health system strengthening activities have diluted GAVI’s core immunisation focus or have advanced it.

Stakeholder views vary on this question but there is general agreement that health system bottlenecks impede higher immunisation coverage and that GAVI can help develop more sustainable systems. Nonetheless, based on some interview feedback and CEPA’s judgement, we have concluded that the emphasis on health system programs in Phase II (and increasing their funding window over time) has not been without costs in terms of GAVI’s performance. In particular, investment of scarce human and financial resources away from delivery of its core vaccine programs has constrained what has been achieved in other vital areas such as in advocacy/ fund-raising, financial and risk management, and monitoring and evaluation.

This is not necessarily a bad result, since GAVI’s HSS program has added value by raising the profile and importance of immunisation at global and country levels. However, it is too early to comment on whether the program might achieve its specified health outcomes and impact and be sustainable, or whether the results are sufficient to justify any costs associated with dilution of focus.

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175 Total SG1 approvals and disbursements across all countries in 2001 was $14.7m, rising to over $150m by 2007 (with approvals over $200m), but then falling slightly in terms of annual approvals since then.
Although HSS comprises the largest SG1 program, the impact of the INS and ISS programs on country health systems has been for a longer period and covered a greater number of countries. These two programs have contributed significantly and added value to enhancing the capacity of health systems:

- INS by promoting the introduction and accelerated uptake of safety equipment in routine immunisation in countries and their sustained use and financing post GAVI support; and
- ISS by helping to finance immunisation system gaps to expand coverage to the unReached, and by rewarding increased coverage levels.

On the other hand, it should be noted that INS has (as an unintended consequence) increased issues related to sharps safe disposal/ waste management that most GAVI countries are resource-constrained to tackle.

On ISS, country feedback suggests that the incentive effects of the ‘rewards’ funding diminish after a certain coverage level, and that post GAVI support, these immunisation gaps often remain unfunded. Based on the EPI manager survey feedback, we have observed considerable variation in the extent to which EPI managers fully understand the nature of the ISS incentives and the importance of pushing these down to the district level.

The CSO program (given its small size and low uptake) has not yet impacted upon the capacity of health systems in the country – except to include CSOs as a key stakeholder at the immunisation table in some countries. Our evaluation brought up some fundamental design and implementation issues in the program that are being addressed. The program requires greater clarity in the definition of outputs, outcomes and impacts, as well as output based performance indicators and targets to be able to measure/ monitor performance.

Taking GAVI’s efforts in the round, we would rate the achievement of its first goal to be partial, although some results might be forthcoming in Phase III of GAVI’s support.

7.2. Conclusions on SG1 results and added value

We now provide a more detailed assessment of the two RFP questions for SG1. In answering the first question of whether the goal has been met, we examine the contributions of the four SG1 programs in terms of the two components of the goal:

a. strengthening the capacity of the health system to deliver immunisation and other health services; and

b. sustainability.

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176 HSS accounts for the largest portion of total SG1 approvals (48%), followed by ISS (38%), INS (12%), and CSO (2%).

177 By 2010, 71 countries had been approved for INS, 62 for ISS, 44 for HSS, and 5 for CSO.
We then present the evidence on the second RFP question on what might have been accomplished in the absence of the Alliance (i.e. the counterfactual).

7.2.1. RFP Question 1: Results achieved on SG1

Table 7.1 below summarises the extent to which GAVI’s first goal has been met. Other than the INS program and to some extent the ISS program, it is difficult to say whether the goal has been met as yet.

Table 7.1: Contribution by the SG1 programs to the goal

<table>
<thead>
<tr>
<th>SG1 definition: ‘Contribute to strengthening the capacity of the health system…’</th>
</tr>
</thead>
<tbody>
<tr>
<td>✅ INS has contributed to adoption/ increased uptake of injection safety equipment for immunisation, and improved safety standards/ practices in GAVI countries. However, on the downside, it has increased the burden for sharps waste management and disposal in countries.</td>
</tr>
<tr>
<td>? By definition, HSS aims to plug gaps in the wider health systems (and not just immunisation), but contributions are too early to measure and the value of HSS grants are very small (vis-a-vis total health expenditure) to make a wide-ranging impact.</td>
</tr>
<tr>
<td>? There is mixed feedback on whether ISS rewards have strengthened immunisation systems – on one hand, it is a small proportion of total immunisation expenditure and over 50% of funds disbursed to a country remained unutilised in a given year. On the other hand, there is some weak evidence of a positive impact of ISS disbursements on DTP3 coverage. By financing unfunded parts of the immunisation system (that no other donor funds), it has enhanced immunisation capacities in countries, especially to reach remote areas.</td>
</tr>
<tr>
<td>? The CSO program is yet to contribute substantively to enhancing CSO role/ engagement in immunisation and health systems, although its potential is recognised.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SG1 definition: ‘...to deliver immunisation and other health services in a sustainable manner.’</th>
</tr>
</thead>
<tbody>
<tr>
<td>✅ INS has probably done best in terms of sustainability, as both the use and funding for safety equipment have been sustained after GAVI support across a majority of GAVI countries.</td>
</tr>
<tr>
<td>? Too soon to comment on sustainability of HSS and CSO, given the nascent stage of their implementation.</td>
</tr>
<tr>
<td>❎ ISS funding being ‘rewards’ in nature might be difficult to sustain once the program support ends and these areas remain unfunded by the governments (more so, since no other donor funds immunisation coverage to the unreached). Also, views have been expressed that the ISS reward criteria do not incentivise ‘sustaining’ high coverage levels after a certain threshold, when increases in coverage are expensive and difficult.</td>
</tr>
</tbody>
</table>

7.2.2. RFP Question 2: GAVI added value

By definition, the value add of GAVI is assessed by the hypothetical situation of the GAVI Alliance not existing. Our judgements in this area are primarily based on feedback from stakeholder consultations both at global and country levels. Where possible, we have tried to analyse available data that supports our ability to attribute a particular result to GAVI. Also, by drawing comparisons with other organisations supporting health system strengthening initiatives, we have tried to establish GAVI’s relative strengths or ‘additionality’ in this area.
The following have emerged as areas of strong value add under SG1:

- Increased levels of global awareness on injection safety practices as well as adoption/higher uptake of safety equipment across GAVI countries are regarded as strong contributions of GAVI. Stakeholder interviews and country visits highlighted that in the absence of GAVI INS, the widespread and sustained use of AD syringes and safety boxes for routine immunisation (and wider healthcare programs in some countries) might not have occurred. No other donor has financed a similar safety program in routine immunisation at such scale (although UNICEF procures/supplies AD syringes and safety boxes).

- Value add of the ISS program in terms of GAVI being the only donor to explicitly finance activities focused on increasing routine immunisation coverage to unreached areas. Country feedback suggests that this has helped finance immunisation system bottlenecks (such as lack of human capacities at district level, cold chain facilities, etc.), which in the absence of GAVI, might have remained unfunded. The value add is however tempered by concerns about sustainability – since several countries may be unable to finance these areas after GAVI support.

- The DQA/DQS processes are regarded as valuable innovations of GAVI in improving the quality of immunisation data measurement and reporting by countries. Although more remains to be done, the increase in the coverage Verification Factor in countries where a second DQA was conducted presents some evidence of its value add. The DQA/DQS have also been pathfinders in influencing the development of similar tools by the Global Fund, JSI, WHO, etc. and have demonstrated successful working together of the Alliance partners.

- GAVI’s approach to program implementation has promoted country ownership and inclusiveness of country stakeholders in the design and development of the program proposal and areas of spend. Country feedback suggests that this is an area of GAVI value add, as countries would not have felt the same sense of program ownership if the funds were channelled through the traditional aid sources (viewed in these cases as ‘donor programs’). The flexibility offered by GAVI to countries to define the areas of greatest need in terms of funding gaps and bottlenecks (for example, in the case of HSS and ISS programs) is also valued.

Based on our comparison of GAVI’s approach with alternate donors in this area, we infer some degree of value add in the following SG1 areas:

- GAVI has been critical in placing immunisation on the global map of HSS strategy and funding. Although GAVI’s value of HSS funding is relatively small and recent compared to other donors, its approach in terms of flexibility and country driven processes have influenced the global health aid architecture. The testimony to
GAVI’s sphere of influence in this area is its lead role in the common platform along with Global Fund, World Bank, WHO, and other donors.

- The innovation of performance based rewards for ISS funding, although not introduced by or unique to GAVI, has reported some added value in terms of providing incentives to immunisation officers in countries (particularly at district level, in countries where rewards have percolated downwards) to increase coverage levels to areas previously un-serviced. For example, in Bangladesh, the government and GAVI partners agreed that in the absence of the rewards based ISS, the coverage of the national EPI program would not have risen to the 2008 levels of c. 94% from around 80% in 2003. A majority of the e-survey respondents also agreed with the statement that performance based rewards and provision of ‘flexible cash’ are key examples of the value add of GAVI’s ISS program.

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178 That said, several suggestions have been proposed on re-designing the ISS rewards criteria and funding levels to continue to act as an incentive to sustain/increase coverage levels.