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### RESEARCH ARTICLE

#### POTENTIAL RISK FACORS FOR LOW IMMUNIZATION COVERAGE IN AGHANISTN.

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#### Abstract

More than 500,000 under one year aged children are in risk of vaccine preventable diseases due to no vaccination or incomplete status of their immunization. According to the Afghanistan DHS survey 13 percent of children have never received any immunization and full immunization coverage among children under one year is 46%. Understanding the potential risk factor for low immunization coverage is necessary to find the gaps. This reasrch aiming to know the key and fundamental challenges affecting EPI system of leadership, management and governance. **Method:** A qualitative study is conducted in five provinces of Afghanistan and focused group discussion(FGD) method used to determine leadership, management and governance gaps among the EPI management teams. key officers attended each FDG and five FDG session was conducted. This group of 30 officers are representing 20% of the total current EPI managers. Time Frame: This study took 10 weeks from the start to preparation of this first report. Results: EPI Managers compliance with leading, Managing and Governing of EPI program is ranging from 50-60%. Hot problematic issues remain as chronic problem. Government salary scale is very low and does not attract qualified people, Higher dependency on consultants in all provinces, low motivated staff. Poor EPI planning and monitoring at sub-national levels. Security affected monitoring of services in remote areas. Politically negative communication on use of vaccine reduced the level of acceptance of services by the families. National financial analysis indicates about 30% gaps in resources for EPI program and indicates higher dependency on donors funding. Recommendations: Improve HR management, improve monitoring and supervision at all level. Improve standardization in planning. EPI communication to match the knowledge gaps at the families. More training opportunities to EPI managers, Government to explore the possibilities of better resource allocation for EPI and to plan for EPI sustainability.

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Finally, I am grateful to the survey respondents who generously gave their time to provide the information that forms the basis of this report.

#### **Rational and Background:-**

More than 900,000( 500000 <1 +400000 <2 ) children are in risk of Vaccine preventable diseases due to no vaccination or incomplete status of their immunization in Afghanistan. This country is a mountainous country in Central Asia, administratively Afghanistan is divided into 34 provinces. The country remained under unrest for over three decades and is reviving itself again after the fall of the Taliban Regime in 2001. Afghanistan has 31.6 million populations that 74% of them are living in rural areas. GDP per capita is US\$ 634 and per capita health expenditure is US\$ 55.( world bank 2015). EPI Management structure continued to function with clear roles and responsibilities at the national, provincial and district levels. The National EPI Management Team provides technical and material support to provincial EPI Management Teams and is responsible for policy, planning, vaccine procurement, supply, tertiary level monitoring and technical oversight , while provincial teams are responsible for the implementation, supervision and monitoring of all immunization activities. The MOPH Afghanistan established and maintaining Vaccine Storage Facilities at national, regional, provincial and Health facilities levels and has a sensitive well recognized ISO certified cold chain system. The EPI program management follows a vertical program management style at national and provincial headquarters and is fully integrated into the Basic Package of Health Services(BPHS) and Essential Package of Hospital Services (EPHS) system at health facility and community levels. A human resource management structure is in place and logical logistics processes allow supplies of potential vaccine with adequate quantity from the manufacturers to national and provincial vaccine storage facilities. Supplies of vaccine to security restricted districts and villages is a challenge which cases delay in provision of immunization services in selected locations in Afghanistan. Level of community awareness is good and due to high level social mobilization for polio eradication initiatives the social mobilization for polio eradication contributed into increase level of awareness on importance of immunization in the community. The Government of Afghanistan recognizes the importance of immunization and has included it as one of the four health targets in the Government's "Afghanistan Compact 2006" document providing the basis for the Afghan National Development Strategy (ANDS). In its National Health Policy and Strategy, 2011-2015, the Ministry of Public Health (MoPH) has called for accelerated implementation of strategies to achieve the Sustainable Development Goal Number 03 on Good Health and Well-being. MoPH specified immunization as part of the Basic Package of Health Services (BPHS), with access to BPHS envisioned as the right of all Afghans. Through the implementation of BPHS in health facilities in Afghanistan, immunization service delivery has expanded from 870 EPI fixed centers in 2004 to more than 2000 fixed centers by 2015. Around 4500 staffs are engaged in providing immunization services across the country. Vaccine preventable diseases like Measles, Neonatal Tetanus, Diphtheria, Pertussis, Hepatitis B, Polio, Tuberculosis and Haemophilus influenza type b (Hib) are communicable diseases and are leading contributors to infant, and under five years child morbidity and mortality in Afghanistan.

MOPH in Afghanistan established Diseases Early Warning System (DEWS) and DEWS covered 15 diseases that EPI target disease are included in DEWS. MOPH DEWS report for the year 2015 indicates that about 20 millions of patients were supported through public system out of which 7, 433,522 cases were due to communicable diseases( 36.17%). A total of 2875 death due to DEWS target diseases were reported in 2015 that represents 25.81% of the total death. MOPH diseases surveillance system reported that from mid March 2017 to mid April 2017 a total of 307 patients died due to communicable diseases in one month in Afghanistan. In most of the developing countries seven of 10 top diseases are communicable diseases. The finding from the recent Demographic Health Survey (DHS) published in Afghanistan in 2015 are as follows: The Infant mortality rate is 45 per 1000 life birth, child mortality rate is 11 per 1000 life birth and under five mortality rate is 55 per 1000 life birth in Afghanistan. After ARI and Diarrheal the EPI target diseases are most common among children under five. Fifty-six percent of these children aged 12-23 months have a vaccination card. Overall, 46 percent of children have received all basic vaccinations. Seventy-four percent of children have received BCG, 73 percent have received the first dose of

pentavalent, and 85 percent have received polio 1. Coverage of vaccination against measles is 60 percent for the first dose. Thirteen percent of children in Afghanistan have not received any vaccinations.

Despite above indicators, tremendous achievements has been made in the health status of population in Afghanistan. For example under five mortality has dropped from 256/1000 live births to 45 ( DHS 2015). In spite of this progress, the health state of the country depicts that the progress towards the achievement of MDGs and SDGs is very slow. One of the key reason for this mortality is infectious diseases especially vaccine preventable diseases because of no vaccination or in-optimal vaccination coverage across the country. Therefore such situation acquires attention to conduct the study on Potential Risk Factors for low immunization Coverage in Afghanistan.

#### **Literature Review:-**

Leadership and governance comprise one of the core components of the health system, as defined by the World Health Organization. The Abuja Declaration issued by WHO in 2000 reported on investments in health and noted that funding targets are being missed both domestically and in terms of international assistance. Ministries of Health (MOHs) in many developing countries recognize that delivering quality health care requires money and depends on efficient and effective use of all resources, as well as effective management and leadership of facilities and teams.

Management and leadership are important for the delivery of efficient and effective health services. Good managers should strive to be good leaders; good leaders need management skills to be effective. Managers ensure that the available resources are well organized and applied to produce the best results. In the resource-constrained and difficult environments of many low- to middle-income countries, a manager must also be a leader to achieve optimum results<sup>2</sup>.

To ensure that resources are directed towards achieving desired results, there is emerging need for good governance practices. As demonstrated in the WHO Health Systems Building Blocks, good governance ensures accountability and transparency through engaging stakeholders, setting a shared strategic direction, and stewarding resources. Thus governance skills and practices are complementary for those who lead and manage. Unless managing, leading, and good governance are all operative, efficient health care cannot be delivered to the people( Source: MOPH Strategy for Institutionalization of Leadership, Management and governance in the health sector 2015).

The MOPH policy and MOPH Strategic Plan for 2011 – 2015 emphasizes strengthening the MOPH stewardship role and governance in the health sector. From the six WHO building blocks for health system strengthening, one important building block is strengthening leadership and governance. The Government of the Islamic Republic of Afghanistan (GIROA) and its partners are emphasizing improvement and enhancement mechanisms to allow transparency/ accountability and more systematic management of health services at all levels.

MOPH conducted Leadership Management and Governance competency assessment in 2014 and interviewed 252 mid-level health managers who are working for MOPH in 27 provinces, both at the national and provincial levels. The key finding from that assessment is as follows:

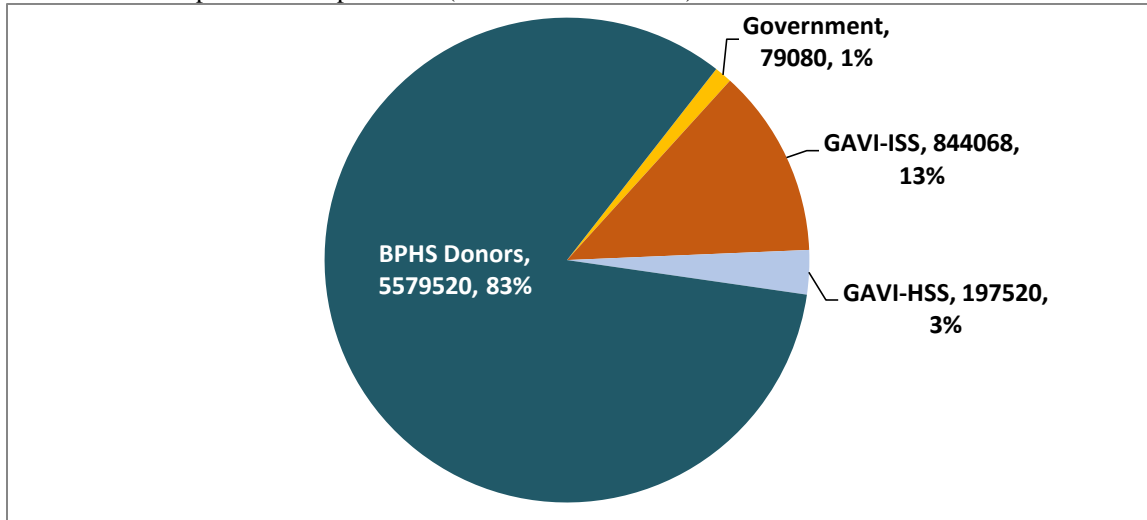
- 19% respondents do not feel prepared in leadership competencies
- 17% respondents do not feel prepared in management competencies
- 37% respondents do not feel prepared in governance competencies
- 21% respondents do not feel prepared in public health competencies
- 26% respondents do not feel prepared in knowledge of Afghanistan's Health System
- 91% respondents think they need education / training in leadership,
- 80% respondents think they need education / training in management,
- 92% respondents think they need education / training in governance,
- 90% respondents think they need education / training in public health,
- 85% respondents think they need education on Afghanistan's Health System

Poor competency among the national and provincial level EPI Management team was defined as an obstacle for improving the quality and coverage of EPI. World Health Organization boosted the HR system of immunization program and recruited one technical consultant to team up with provincial EPI Management team in all provinces of Afghanistan. While WHO support for addressing the leadership and management needs at the national and

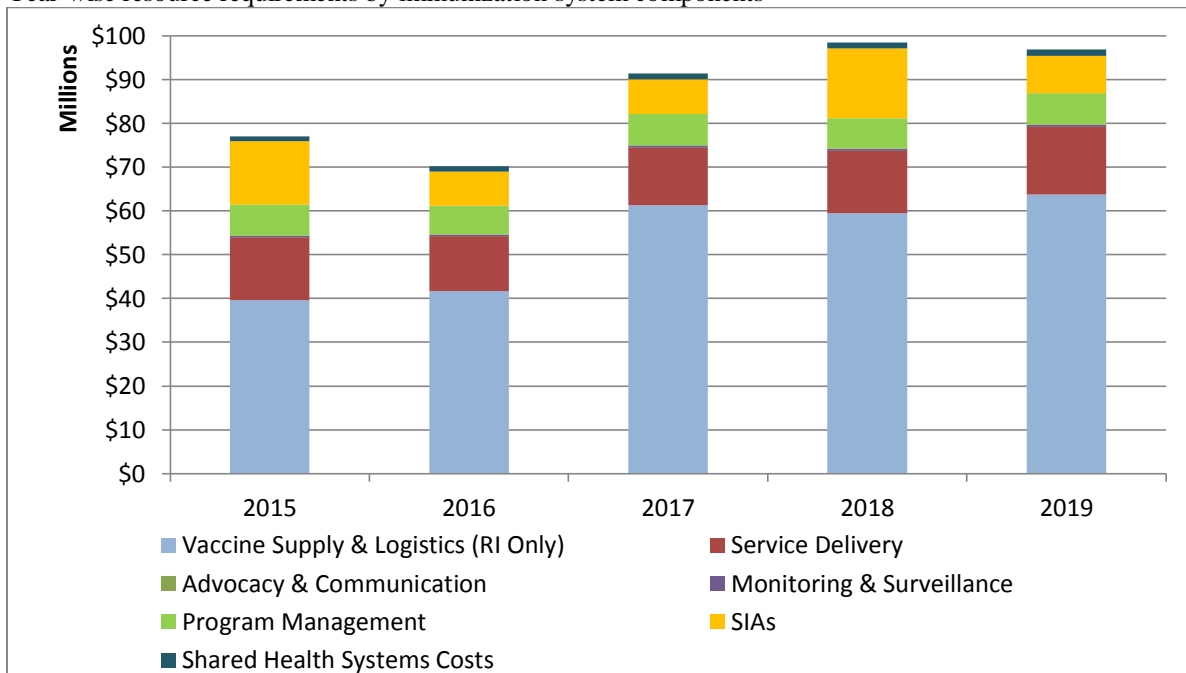
provincial EPI system is very much appreciated, but this by itself indicates dependency on WHO sources and affect the EPI sustainability in the country.

Despite high level commitment and interest of government and donors to support immunization program, a total amount of 77.1 million dollars allocated both by government and donors for the EPI program implementation for the year 2015. While there is shortage of 8.7 million dollars which is not secured. This unsecured amount is making 11.3% of the total required budget for one year in Afghanistan. (Sources: MOPH strategic plan for EPI 2016-2020).

Distribution of expenditure on personnel (routine immunization) in 2013



Year-wise resource requirements by immunization system components



Source: National EPI

Financial sustainability of immunization program is the primary responsibility of the MoPH. This aspect is critical for the attainment of immunization outcomes. However, the financial projections show that the cost per Penta-3 child (all costs included) is estimated USD 64.1. (Source: MOPH Strategic Plan for EPI 2016-2020).

The MoPH is well aware of the complexities and difficulties associated with this situation. MOPH is willing to reform and strengthen the existing EPI management structures and business processes by employing the following strategies:

- Enhance efficient utilization of human resources by developing synergies with other health initiatives.
- Minimize wastage of resources under immunization program.
- Advocacy for ensuring financial sustainability of immunization program.
- Synchronization of EPI with PEI and non-polio efforts and more efficient sharing of the resources on the ground (including joint micro-planning at district and health facility level) can serve as an effective sustainability strategy in terms saving financial resources and achieving programmatic synergies.
- Establishing accountability mechanism through third party monitoring, E-monitoring, regular immunization coverage surveys and objective performance reviews.

According to the National Strategy for enhancement of EPI in Afghanistan 2016-2020 the goal and objective of National Immunization program (EPI) reported as follows:

**EPI Goal:** The goal of EPI is to reduce morbidity and mortality due to vaccine preventable diseases among the target population.

**EPI Objectives:-**

- To achieve and sustain 90% coverage nationally and at least 80% coverage of childhood immunization of all antigens (fully immunized) among under one year old children by the end of 2015.
- To achieve and maintain 80% coverage of TT2+ among pregnant and 70% among women of child bearing age (15-45 years) and eliminate tetanus with global goal by the end of 2015.
- To interrupt poliovirus transmission by end 2014 and sustain it until global certification.
- To achieve above 93% coverage and confirmed cases <1 per 100,000 by 2015 and eliminate measles by the end of 2015.
- To achieve maternal & neonatal tetanus elimination by the end of 2015.
- To improve injection safety and provide 100% safe immunization injections.

The key gaps for reaching to the mentioned goal and objectives is donor dependency political barriers, poor governance and low commitment by NGOs providing Primary Health Care Services and poor public private partnership.

**Research Objectives:-**

The major objective of this study was to:

- To know what are the key and fundamental challenges and barriers for effective leadership, management and governance of EPI program at national and provincial levels.
- To know the EPI challenges faced by the service providers at the provincial and health facility levels.

**Study Design:-**

The national EPI Management team and provincial EPI Management team from Kabul, Kapesa, Wardak, Nanagerhar, Laghman and Herat provinces are included in this study. We followed the purposeful method of sample selection and the number of officers participated in this survey are 30 officers. The FGD selected in each of the mentioned provinces and in each FGD we have senior EPI Manager/leader, provincial EPI Managers, EPI monitors, EPI Trainer and cold chain technicians. This sample size (5 FGDs) representing 20% of the total EPI managers who are currently leading and managing the EPI program in the country.

**Selection of provinces:-**

The above mentioned five provinces represent national EPI leaders, provinces with strong EPI management network and provinces with moderate level EPI management structure and poor EPI management structure. Due to security concern the authors could not travel to far remote provinces as the mentioned provincial headquarters were accessible and feasible to visit.

**Research Methodology:-**

The focus of this research is on the system for the EPI Leading, management and Governance at national and provincial level. The mechanism of implementation of this research is based on a face to face meeting with a focused groups which are selected from the EPI Management teams at provincial levels and EPI team at national level. As reported before five focused groups were selected from Kabul, Kapesa, Wardak, Nanagerhar, Laghman and Herat provinces. A good questionnaire used for leading the FDG. The questionnaire supports the key objectives for obtaining the needed information. The survey questionnaires, were adapted to reflect the Leadership Management and Governance functions on each key areas of EPI operation in Afghanistan. The following issues were considered during the design of questionnaire:

- What exactly do I want to know?
- Who are the people that I am going to ask questions?
- What is their level of understanding of the topics?
- How am I going to process the data/information?

Based on the nature of this study and the mechanism of FDG follow up for meeting the objectives the study author himself travel to the listed provinces and conduct the FDGs. Based on the good English communication ability of EPI Managers, the author did not translate the questionnaire into local language. As the author himself conducted all the FDG meetings so we do not see the need for training of surveyors. To allow better coverage of topics and issues in the study, five hours were allocated for the FDG in each provinces. Data and information obtained during the FDG were compiled and the FDG reports were developed in the following day of the FDG session in each province. The questionnaire covers issues of

1. Leadership, Management and Governance in EPI Program:
2. Coordination and partnership in EPI program:
3. Personnel of immunization services:
4. Delivery of EPI Services:
5. Monitoring, evaluation and evidence based decision making
6. 6 - Vaccine supplies and Quality
7. EPI Target Diseases surveillance:
8. Adverse event following immunization:

Appropriate coordination and communication was made with the National EPI team and his concurrence was obtained for survey implementation. Advance and early coordination and communication was made with the EPI managers of the selected provinces and after their approval the surveyor traveled to the headquarter of the provinces included in this survey. The questionnaire was shared with all the concerned officers prior to the travel of surveyors to avoid the last mutes surprise or confusion.

Fieldwork Data collection was carried out by the Author himself and the filed work started on 10 October and completed by 30 Dec 2016.

**Data Analysis:-**

As this study is a qualitative study we do not have separated data for tabulation and analysis. Quantitative information linked with the scope of communication in the FDG are included in each areas of technical elaboration where we have to report about data.

**Ethical Consideration:-**

This research is not causing any physical or emotional harm and is not designed to reflect issues on the individual. The focus is on the system for the EPI management and leading at national and provincial level. This research is not design in a way to explore confidentiality and disrespect privacy of the group involved with EPI. The author is also the only one interviewer and the interview with beneficiaries was not planned to seek mothers and children view. It does not require MOPH Institutional Review Board(IRB) review or approval. The Author have the concurrence and approval of national EPI director for conducting the FDGs with EPI management team in the selected provinces. However all data and information is stored in a safe place and only the author and Maulana Azad University authorized officers have access to the information. Informed consent note in written were taken from each of the respondent before the interview and data collection. The respondents are informed about their right during the study.

**Limitation of the study:-**

The limitation of the study are the following:

1. Budget limitation did not permit this study to be conducted in a wider range, so it was the representative of all Afghanistan.
2. Security limitation was an issue for selection of ample size and the author could not select more provinces due to security and travel limitations.
3. We were not able to interview the private sector managers who are involved with the EPI management and Service providers at health facility level.

**Results with Table and Graphs:-**

The results and finding form this study is presented into eight sub-titles and heading:

**1. Leadership, management and Governance practice among the EPI managers:-**

Leaders are always defining their vision for changes. When the EPI manager were asked about the EPI vision all the groups visited in this study were not able to explain the national EPI program vision. The EPI team at national and provincial level were asked about their level of competency on the following leadership skills: A - Scanning, focusing, aligning/mobilizing, and inspiring; B - developing and delivering the strategy; C - Managing change; D - Teamwork and managing relationships; E - Communication; F - Facilitation; G - Negotiation and conflict resolution skills

The level of competency of EPI manager on the above leadership skills is ranging from 50% to 65%

The EPI managers competency skills on EPI management (Planning, organizing, implementing, monitoring, Managing Finance, Managing Information, Managing performance, Managing Risk and Improving Quality) is ranging from 50-80%

The performance level of EPI managers on the Governance skills is also fall under the category of above average and is ranging from 50-60%. The following governance skills were included in the list: A - Cultivating accountability, engaging stakeholders setting shared direction, mobilizing resources; B - Gender equity in decision making; C - Collaboration across sectors and levels; D - Acting with ethical and moral integrity and influencing other to act with integrity; E - Efficiency in use of resources; F - Use of information, evidences and technology for decision making; G - Strategic planning processes and strategic approaches for implementing log-term EPI goals.

**2. Coordination of EPI program:-**

The top level decision making forum at the country level is Interagency Coordination committee(ICC). ICC is led by the Deputy Minister on Technical Affaires. WHO, UNICEF, UNFPA, Ministry of Education, USAID, WB, EC, GAVI and BPHS/EPHS implementing NGOs, selected government line ministries and representative from the private sector are the members of ICC in Afghanistan. At provincial level the high level forum for coordination of EPI routine program is Provincial Immunization Coordination Committee which also called the EPI Task Force. The provincial EPI Task force effectiveness is varied from province to province as the coordination efforts in Nanagerhar is best and coordination in Kapesa EPI Task Force is poor.

- Level of understanding of EPI managers at Provincial level on the external landscape of EPI program is limited.
- EPI Coordination at MOPH level created better environment for financial support from donors, but sustainability of the program is a question.
- EPI Management team at national level does not know much about the coordination results with global partners.
- At provincial level the EPI team is coordinating very common and routine type of issues.
- New ideas, new initiatives, new approaches for program leading/management are not discussed in these meeting.
- Hot problematic issues remain as chronic problem ( Security, population figures, HR Management, Corruption and Cold chain)

The Public Private Partnership (PPP) is not very much strong, the vaccine wastage rate in private clinics is high. The level of compliance of the private health facility on the EPI requirements is below average. The NGO responsible officer are not familiar with the NGOs proposal for BPHS implementation and could not make commitment for changes in EPI. This poor level of understanding is affecting their decision making power at the provincial and health facility level to adjust for best interest of children on immunization

### 3. Personnel Of Immunization Services:-

All together 3900 EPI managers/service providers are assigned to support EPI routine immunization in the country.

Human resources management and recruitment of new staff members ( managers, monitors, cold chain and trainers) are mainly led and implement by the national EPI team. The EPI service providers (vaccinators, supervisors and junior cold chain managers) are recruited by the implementing NGOs. Due to low level of salaries in the government system mid-level qualified officer are not applying to work for EPI. Newly recruited EPI mangers, monitors, cold chain and trainers are technically not in good position at the time of their recruitment and they have to learn EPI management as part of their on the job training. Government salary scale is very low and does not attract qualified people to apply for job with EPI. As usual the HR processes in the Government set up is influence by the external factors and EPI team keep flexibility and are trying to bring good and qualified people on board, but corruption is in place.

People accept EPI job with the government for three reasons:

1. EPI is a good technical areas for them and they love EPI
2. Working for EPI is the highest level of employment that they could have and this is attractive for them
3. EPI is a good sources of resources and they want to be associated with a rich program.

High level of dependency to WHO consultants who are recruited to support the Polio Eradication Initiative. Not very much sustainable as the consultant will not be able to stay in the province after eradication of polio.

The plan for talent management and HR development is varied from province to province and is not standard.

The senior EPI management team at provincial level are not satisfy with the level of staff development. The quality of pre-services training is under question and over all the quality of Pre-service training is at the average level.

All EPI training packages is copied and adopted from the WHO training manuals for training of various categories of EPI managers and service providers.

### 4. Delivery of EPI Services:-

According to WHO report of year 2014 following are the vaccine-preventable diseases:

Tuberculosis, 2. Mumps, 3. Rubella, 4. Pneumococcal disease, 5. Haemophilus influenza type b, 6. Diphtheria, 7. Pertussis, 8. Rotavirus, 9. Yellow fever, 10. Tetanus, 11. Japanese encephalitis, 12. Avian influenza, 13. Meningococcal disease (polysaccharide vaccine), 14. Hepatitis A, 15. Typhoid fever, 16. Hepatitis B, 17. Meningococcal disease (conjugate vaccine), 18. Cholera, 19. Hepatitis D(HPV), 20. Varicella, 21. Poliomyelitis, 22. Measles, 23. Hepatitis E and 24. Rabies

From among the above list Tuberculosis, Pneumococcal disease, Haemophilus influenza type b, Diphtheria, Pertussis, Tetanus, Hepatitis B, Poliomyelitis and Measles are disease which are included in the routine immunization program in Afghanistan.

The EPI services are provided through EPI fixed Centers, mobile team and outreach immunization services. As of Dec 2016 a Total of 1857 EPI fixed centers are functioning and two vaccinators are assigned in each EPI fixed center. EPI fixed centers are established either in clinics or hospitals and the outreach immunization services are organized and manage through these EPI fixed centers. Pocket of population which cannot be covered through the fixed and outreach immunization services are receiving their vaccines when the mobile team are visiting their villages.

Despite good focus on EPI in MOPH policy and Strategy for the year 2015 -2020 there are certain gaps in planning for EPI services. The main causes of confusion and gaps is differences in the population figures introduce by MOPH, WHO and UNICEF. MOPH is using the Central Statistic Department figures, WHO and UNICEF are using the data obtained through implementation of National Immunization Days(NIDs) for polio Eradication. The vaccine calculation and projection is based on CSO data and while the actual data are much different that CSO. National population figures based on CSO is 28 million, UN data is 32 million and NIDs data are different in each year. Vaccine supplied to provinces and district is based on the CSO data that resulted into shortage of vaccine in some

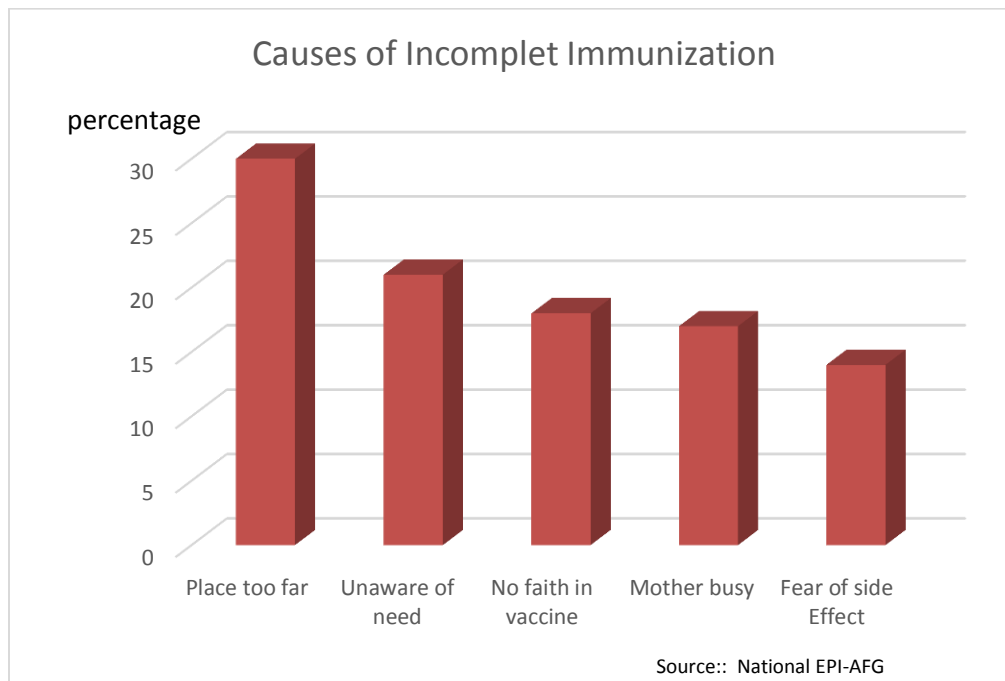


health facilities at the district level. IDPs and new returnees are adding to the level of complexities of population calculation for service projection. Based on updated information obtained from the national EPI office following are the vaccine wastage rate for each antigen included in the EPI routine program: BCG 50 % ; Penta 20% ; OPV 25 % ; Measles 50 % ; TT 25 % ; PCV 13 10 %.

The skills and knowledge of EPI service providers on reducing the miss opportunity needs improvement as there are miss opportunity reported due to poor referral and poor understanding among the health team players at the health facility level. In certain places the outreach immunization schedule is not followed and changes are due to security limitation to travel to the location identified for outreach. Staff turnover mainly the vaccinators and vaccinators absence from duty is creating gaps of services and is resulting into miss opportunity in EPI. Poor referral of eligible children and women for immunization , miss opportunity of TT vaccine due to shortage, load of work on vaccinators, miss opportunity of not giving BCG on birth day, and far distance of families from the fixed center are services gaps reported.

EPI budget is not developed at the provincial level while the plan is developed at the provincial level poor linkage of planned activities with the resource allocation. As the money allocated for EPI is processed by the financial management department of Government ( Mostofyat) at provincial level there is significant delay in releasing money to the service providers and for EPI operation at the sub-national level resulted into demotivation of EPI managers and service providers.

Political differences between political parties, geographical difficulties ( snow fall in winter), hard to reach areas where the logistics and transportation are difficult, rumors on unethical practices and vaccine values among people are main constrains and barriers for good services delivery. The most important obstacle for immunization services is the security restriction.



## 5. Monitoring, evaluation and evidence based decision making

Do we have a clear articulation of how our actions (inputs) translate into specific outputs and further into the desired outcomes?

Heavy emphasis have been made on this aspect of the EPI program management. In the EPI structure at national and provincial level monitors has good recognition and have very well defined duties. National to provincial level monitoring are happening on Quarterly basis while the provincial to health facility and district level monitoring is

happening on monthly basis. EPI monitors has good checklist ( 43 Indicators) for monitoring and are providing report on regular basis.

Because of EPI metric system, it allows better target setting and better indicators definition. Majority of EPI program aspects and program nature allows good level of measurement. Therefore, selecting the measurable results are more feasible in EPI comparing to other public health interventions. Following are key monitoring area covered by supervisors during the filed monitoring in Afghanistan. 1 – Planning and Management - 8 indicators ; 2 – Service delivery – 14 indicators ; 3 – Data Management – 11 indicators ; 4- Waste disposal - 3 indicators ; 5 – Supportive supervision – 3 indicators ; 6 – Community awareness and relations 3 indicators.

Following are the key finding on EPI monitoring:-

- Security problems (un favorable condition for supervision and monitoring)
- Lack of budget for Supportive Supervision (transportation , incentive)
- Outreach immunization by one vaccinator
- Poor district level micro planning
- Poor knowledge of vaccinators
- Periodic change of routine vaccine supplier
- Unavailability of tool kits and spare parts of refrigerators at health facility level
- Low technical knowledge of vaccinators for repairing of refrigerators
- Negative propaganda about vaccines and political dimensions of EPI
- NGOs poor compliance with cold chain equipment's maintenance and repair.
- Security limitation contributed in poor monitoring of all training sessions conducted by the provincial team.
- Poor Government support/guidance for managing persistent refusals on vaccination

Information and data obtained through supervision are analyzed and feedback provide to the users (vaccinators and supervisors). All data and files are safely secured and managed and the file are accessible for timely retrieving. EPI has good IT system for data management and reporting. Monthly and Quarterly feedback is provided to EPI Managers and service providers.

#### **6. Vaccine supplies and Quality:**

Afghanistan EPI Cold Chain System is certified by WHO and used to meet the international standards in year 2010. The national level cold chain and logistic team are responsible for planning, importing, custom clearance, warehousing, quality assurance and supplying vaccines and cold chain equipment to regional EPI vaccine storage facilities. All the vaccines required for national level coverage of EPI arrived to Kabul by air. Vaccine storage capacity in Afghanistan is 226.5 million doses and this quantity represents 40.5 million doses at Capital (Kabul), 151 million doses at 7 regional vaccine storage centers and 35 million doses at 27 provincial vaccine storage facilities. Vaccines are imported from the globally recognized companies. Regional and provincial vaccine storage facilities are receiving their vaccine based on the target population based on CSO population figure and vaccine utilization records. The national cold room/cold chain system is supplying approved refrigerators, establishing cold rooms, providing the spare parts and tool kit for cold chain system maintenance and improvement at sub-national levels.

Vaccine safety, problem in cold chain management at the sub provincial levels and villages are issues that need to be reviewed by the EPI team as we have reports of miss conduct of cold chain in rural areas. The EPI managers provide vaccine and supplies to the teams based on actual use and the rate of wastage the supply is mostly good but in the remote areas we do have problem in sending supplies due to geographical, weather and security and unavailability of technical team.

#### **7. EPI Target Diseases Surveillance:-**

The EPI Target diseases surveillance are included in the Ministry of Public Health Disease Early warning system (DEWS). The DEWS reports are released on weekly basis and could be accessible in the website of Ministry of Public Health of Afghanistan. [www.moph.af.gov](http://www.moph.af.gov)

Unfortunately, Afghanistan still have positive cases of Polio. The surveillance for polio eradication initiative managed vertically due to the high priority need for polio eradication.

### **8. Adverse event following immunization:-**

During the interview with the EPI managers in the provinces and at central level the author could not get the essential information about the adverse event following immunization.

UNICEF KAP survey conducted in Afghanistan in year 2014 indicates that among the reasons for not vaccinating the child, fever following immunization was the number one cause reported by 72.3% of respondents.

### **Discussion:-**

Comparing the level of knowledge of EPI national managers and provincial managers with the level, degree, scope of technical elaboration, planning and management component of EPI Routine program covered by MOPH/WHO leaders at the national level, there is an obvious gaps of leadership and management and governance competencies among the EPI managers in the National EPI team and the EPI team at provincial level. The EPI management team's understanding is limited to service provision, cold chain, logistic and training. The EPI managers were not able to present their program comprehensively. The EPI management team skills and knowledge is poor in the areas of systematic thinking, comprehensive planning, monitoring, quality assurance and program sustainability.

Gaps of communication between MOPH leaders, National EPI management team and the provincial EPI management team exist. The provincial EPI management team have limited knowledge on MOPH coordination efforts and results with donors and global partners. There is need for improvement and enhancement of coordination efforts at all levels.

The macroeconomic and sustainability indicators indicate that the immunization system is highly dependent upon external funding in Afghanistan. It includes both direct financing of EPI and also indirect financing of immunization services as part of BPHS implementation in the field. Moreover, it is likely that the changing geopolitical situation can potentially result in decline in fund flow through foreign assistance towards Afghanistan.

Human Resources management and the plan for talent development must be addressed. The MOPH and NGOs implementing BPHS should organize and conduct good quality and periodic in-services training for EPI management and service provision. WHO to strengthen the technical relation of WHO consultants with EPI Management team and to emphasize for conducting organized/systematic on the job training to EPI management team in all provinces. This is a transition period that EPI consultants should remain a good system behind, before termination of their contract with WHO.

Good information obtained through regular monitoring and supervision in EPI. Evidence based decisions has to be made to make the best use of monitoring and supervision efforts.

The Ministry of Public Health in coordination with Central Statistics Office (CSO) need to address the issue of differences in the population figures used by the EPI management and services providers.

Cold chain management and sub-district level is an important aspect of EPI program. Because the cold chain means that provision of potent and quality vaccine to children and women. Doubt in cold chain management in the security restricted areas and remote village must be address to establish better rational for sending vaccine and immunization among the children and women in the concerned villages.

Communication and social mobilization in support of EPI should be strengthened and the issue of political dimension of immunization should be logically addressed to support communication of right messages to families.

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