The Barriers to Immunization in Pakistan
A Desk Review of Existing Researches

Compiled by
Civil Society Human and Institutional Development Programme (CHIP)
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Executive Summary

In the efforts to understand the barriers to immunization which hinder the progress of full immunization coverage within Pakistan, CHIP undertook upon a brief review of existing researches carried out within this field. To this extent numerous documents were studied and a general picture was prepared for the convenience of the reader which brings to light the various difficulties experienced at the policy, service and demand side which curtail optimum coverage of this life saving program.

Over the years there have been many researches carried out to discern the reasons behind the lagging performance of Pakistan in regard to the eradication of childhood preventable diseases as compared to other countries. Being one of the three countries where the polio remains endemic does not bode well for the system in place which targets preventable diseases and their control. Another concerning factor is that of Pakistan being able to meet the MDGs goal number 4 by the year 2015. According to the researches that have been studied – this achievement does not seem to be attainable given the rate that Pakistan is progressing in this direction. With the help of the researches which highlight the differing elements hindering complete coverage, this paper compiles the findings into a summarized version that can be used as an at a glance tool towards attaining an overall understanding of the barriers to immunization in Pakistan. It has been realized that the politicians and government agencies hold the key responsibility of including all stakeholders in drafting and formulating an effective policy which can adequately address all issues and be implemented with full confidence. The findings show that a combination of efforts have to be undertaken in the form of increased involvement of Community Strengthening Organizations (CSOs), increased trainings for immunization staff, attractive salary packages, detailed deployment of LHWs, increased mobilization and outreach programs among others in order to realize the aim of full coverage within Pakistan.

One of the key factors which can play an effective and sustainable positive impact upon immunization coverage is the inclusion of the private sector towards this drive. A collaborated union of the government along with the private sector will ensure that the optimum use of resources is deployed and a broader spectrum of issues can be addressed and rectified given the outreach and sensitization available to NGOs and other agencies in the private sector. The recommendations presented in this paper have been formulated after careful scrutiny of the weaknesses within the program itself. They stem from the policy level and extend to the service and demand levels so as to create a balanced growth of sustainability at all levels of intervention. It is hoped that this report assists those individuals and organizations seeking to study and improve the current situation of immunization within the country so as to achieve the dream of a vaccine preventable disease free Pakistan.
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<tr>
<th>Abbreviation</th>
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<tr>
<td>ADHO</td>
<td>Assistant District Health Officer</td>
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<td>ASV</td>
<td>Assistant Superintendent Vaccination</td>
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<td>BHU</td>
<td>Basic Health Unit</td>
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<td>CSO</td>
<td>Civil Society Organisation</td>
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<td>CSV</td>
<td>City Superintendent Vaccination</td>
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<td>DDHO</td>
<td>Deputy District Health Officer</td>
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<td>DOH</td>
<td>Department of Health</td>
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<td>EDO</td>
<td>Executive District Officer</td>
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<td>EPI</td>
<td>Expanded Programme on Immunization</td>
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<td>GAVI</td>
<td>Global Alliance for Vaccines and Immunization</td>
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<td>HMC</td>
<td>Health Monitoring Committees</td>
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<td>ILR</td>
<td>Ice Lining Refrigerator</td>
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<td>IV</td>
<td>Inspector Vaccination</td>
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<td>JPMA</td>
<td>Journal of Pakistan Medical Association</td>
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<td>LHW</td>
<td>Lady Health Worker</td>
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<td>MDG</td>
<td>Millennium Development Goals</td>
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<td>NID</td>
<td>National Immunization Day</td>
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<td>KPK</td>
<td>Khyber Pakhtunkhwa</td>
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<td>PILDAT</td>
<td>Pakistan Institute of Legislative Development</td>
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<td>RI</td>
<td>Routine Immunization</td>
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<td>TSV</td>
<td>Tehsil Superintendent Vaccination</td>
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<td>UC</td>
<td>Union Council</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNICEF</td>
<td>United Nations Fund for Children</td>
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<td>WHO</td>
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1. INTRODUCTION

While analyzing the state of infant and mother Routine Immunization (RI) across Pakistan the findings highlight that there exist a great number of barriers hindering optimum coverage throughout the nation. The onset of these barriers occur at the policy, service and community levels and compound to create an uphill task in ensuring programme effectiveness. Although much research has been conducted in order to identify, analyze and present solutions to this overwhelming issue, to date there has been no workable and sustainable action taken to implement positive change across the provinces of Pakistan.

For the convenience of the reader, this report aims to collate the key findings from a wide array of existing research reports so that an overall picture of the situation of RI in Pakistan may come to light. This brief amalgamation of the significant discoveries of the research reports which have been conducted over recent years, presents an at a glance idea of the barriers faced at the policy, service and community levels along with recommendations to remove these barriers in a sustainable manner. It is hoped that this report may be utilized as an easy means of discovering the issues that are faced by the current immunization programmes in Pakistan and result in the betterment and improvement of the current situation of RI coverage across the nation.

Pakistan has some of the highest child mortality rates in the world. One child in every 11 (87 per 1000 live births) born in Pakistan dies before turning five years old compared with 8% to 10% of all deaths in developed countries (Pakistan Institute of Legislative Development and Transparency [PILDAT], 2010). According to a report by World Health Organisation (WHO), United Nations Children's Fund (UNICEF) and World Bank (2009), around one third of these deaths are due to pneumonia and diarrhea which are vaccine preventable diseases. It is an established fact that prevention programs such as regular immunizations are a critical element of ensuring that children are able to fend off disease and survive the crucial period when they are most vulnerable. Pakistan is one of the 3 countries where poliomyelitis transmission remains endemic (WHO, 2012) and immunization coverage surveys suggest that 1 in every 5 children is not immunized while in many rural areas 2 of every 3 children are not immunized (Research and Development Solutions, 2012).

Immunization in Pakistan is predominantly overseen by the Expanded Programme on Immunization (EPI) with support from the Gavi Alliance, the WHO and UNICEF with the Government's share consisting of roughly 20% of total funding. The EPI was initiated in 1978 and commenced nationwide implementation in 1981. Currently the EPI aims to vaccinate all children between 0 to 11 months against seven vaccine preventable diseases, namely Childhood Tuberculosis, Poliomyelitis, Hepatitis B, Diphtheria, Pertussis, Neonatal Tetanus, Hemophilus Influenza and Measles according to the following schedule (figure 1).

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1 Child Mortality, also known as under-5 mortality, is defined as the death of children under the age of five.
The awareness towards immunization for vaccine preventable diseases is quite low in the rural areas of Pakistan and as such many children go without these necessary life saving vaccinations. It has emerged that Lady Health Workers (LHWs) are the main source of information about RIs for mothers while fathers learnt about it mainly from their wives. Given this backdrop, the efforts towards spreading awareness and enlightenment specifically in the rural areas needs to be addressed and workable strategies need to be implemented in order to ensure outreach and social mobilization.

The Journal of Pakistan Medical Association [JPMA] (2004) notes that “despite the government's efforts and the EPI functioning for nearly 25 years in Pakistan, the vaccination status of children under 5 is still unsatisfactory” (Introduction section, para. 3). Tandon and Gandhi (as cited in JPMA, 2004) pointed out that utilization is higher when accessibility to vaccination centers is improved, minimal administrative barriers exist and good quality care is being provided. Furthermore, according to a study conducted by Henderson (as cited in JPMA, 2004) fixed immunization clinics often fail to reach those children who are at highest risk, i.e. those who fail to attend the health centers.

Although efforts are in place to try and eradicate vaccine preventable diseases in Pakistan, this uphill task faces many challenges and barriers along its path. This paper aims to review the existing research reports and collate their findings pertaining to barriers to immunization in order to suggest some solutions to the problems in a sustainable manner.

2.BARRIERS TO IMMUNIZATIONS

According to United Nations Development Programme [UNDP] (2011), although the rate of child deaths has been steadily falling across Pakistan, it may not be able to comply with meeting its Millennium Development Goals (MDGs) 2015 target goals of reducing under-5 mortality to 52 deaths per 1000 live births. To date, there are in place many efforts and endeavors being carried out to try and reach every child across Pakistan to vaccinate them according to the age appropriate schedule but many hurdles have been reported during this process. For the ease of understanding, these barriers are divided into three segments – the policy level, the services side and the community or demand side. A combination of service delivery, communication, management and community resistance contribute to a high number of children missed during routine and supplementary vaccination activities.
2.1 Policy Level

The national health policy is formulated in order to ensure the effective smooth running of the EPI programme across Pakistan. This policy is supposed to highlight the key responsibilities of all those responsible for implementation, monitoring, and conducting the immunization programmes in an effective and workable manner. Prior to the 18th amendment which was passed in 2010 the Federal Ministry of Health was responsible for policy making.

At the federal level, Ministry of Health is responsible for policy development, coordination, monitoring, evaluation and research, collaboration with International agencies and provision of services through federal health institutions. Since health is the provincial subject, the provincial health departments are responsible for provision of the health services within the policy frame work of federal ministry of health. Besides providing policy guidelines Ministry of Health (MoH) designs national Programs/ projects in collaboration with provincial departments of health, arranges necessary funds, provides technical assistance, monitors and evaluates. (Federal EPI/CDD Cell, National Institute of Health, 2003, p. 10)

Over the process of time specifically after the 18th amendment Provinces are now independently responsible for the immunization programmes after the devolution.

'The dissolution of the Ministry of Health at the federal level on 30th June 2011 has uncertain but potentially far-reaching implications for health and immunisation programmes. Currently, the National Expanded Programme on Immunisation (EPI) has been housed within the Ministry of Inter-Provincial Coordination at the federal level' (Anita Zaidi, 2012, p. 5).

While conducting immunization coverage in the various localities of Pakistan, a number of obstacles have been recorded from the policy and service supply side. These barriers pose a great impediment in the steady flow of full child coverage within Pakistan and it is important to understand the nature of these barriers in order to develop strategies to overcome them.

2.1.1 There are not enough fixed centres providing EPI services to cater to the entire community

Although the national policy stipulates a certain number of fixed centres to be established and maintained in order to fulfill the demands of the people, reality does not conform to this and as such there exists a shortage of R.I. providing services available to the population. It is due to this factor that many people desirous of vaccinating their children complain about the lack of an accessible EPI centre within their vicinity. It is up to the policy makers to ensure that an adequate number of EPI centres are set up and established within reach of communities. There are 6,000 fixed EPI centres, approximately one for about 27,000 population, though there is wide variation in coverage from district to district, and even at sub-district levels. (Anita Zaidi, Evaluation of GAVI support to Civil Society Organisations, 2012)

2.1.2 The policy does not match with the target population and resources

There is no effective strategy in place which provides an accurate estimate of yearly population growth which can update the existing data. As such, there exists a shortage of equipment, vaccines, syringes, etc. in the UCs, and some of the population has to go without receiving vaccinations even though they are able to reach the EPI centres.

Mechanisms such as rapid local population estimates may be undertaken periodically to provide more realistic understanding of the population that must be covered with health services such as vaccination. This may be possible during the course of the several surveys that are now conducted by or with the government. (Research and Development Solutions, 2012, p. 1)

There is also a need to periodically assess if the targets assigned to vaccinators are accurate. Currently, these targets are set based on estimates of population growth over the 1998 census and as such can be quite misleading. This deficiency in the policy leads to many vaccinators experiencing a higher than expected turnout of people seeking vaccinations but remaining unable to administer any doses due to the lack of equipment assigned to them.
2.1.3 Policies are politically influenced
Research surveys report that there is an extensive amount of political interference when designing the policies. This factor creates a massive hurdle in adequate and efficient implementation since the direct issues faced at the grassroots level are never addressed or rectified. Formulation of such policies can not lead to optimum coverage since the issues of the masses are ignored in favor of political gain.

Frequent turnover of district management due to political and other reasons resulted in inexperienced managers with little immunization background. (Hasan, Bosan & Bile, 2010, s36).

2.1.4 National Health Policy 2009 is still in its early stages
Although there does exist a National Health policy which oversees the EPI programme, it is currently not as effective in implementing, monitoring and executing a fully working EPI programme within the country.

The Policy builds upon the National Health Policy 2001 – The Way Forward - under which modest progress was made. There was a felt need to reset the strategic direction due to: a) slow progress in improving health outcomes; b) inadequate sector performance in improving coverage and access to essential health care services especially for the poor; and; c) lack of synchronization of various policy documents and their linkages with Millennium Development Goals (MDGs). The Ministry of Health initiated the process to develop a new health policy in 2006 but the process remained slow (Ministry of Health, 2009)

Despite improvements, Pakistan's health sector continues to face many challenges. The key issue remains slow progress in making progress in improving health outcomes and the performance remains inadequate (Ministry of Health, 2009)

2.1.5 Health Monitoring Committees (HMC) are not effective
Health Monitoring Committees (HMCs) in newly devolved system, meant to keep a check on good and bad performance and thus recommend for rewards and punishments, are also not working according to what was originally envisaged. (AC Nielsen, 2004, p. 116)

Many of the researches show that the HMCs are found to be quite redundant in the case of overseeing supervising and monitoring their ordained jurisdictions. As such it is not possible to ensure that correct protocol is followed during implementation of routine immunizations at the services level. Since there is no adequate follow up of the entire system in its routine workings, the immunization programme can not ensure optimum coverage.

The district officials are not fully aware of the existence and functioning of Health Monitoring Committees, neither they appreciate their role/importance. Apparently it seems that HMCs comprising elected representatives are not embracing their duties/responsibilities. (AC Nielsen, 2004, p. 72)

2.1.6 Technology is not up to date
Inadequate supervision and monitoring vaccinators' activities and validation of record has been observed in many areas and is a key factor to poor performance and low coverage... The vaccinator keeps a record of each vaccination; he uses a temporary register where all vaccinations are recorded... He also has a permanent register where vaccinations of children from his catchment population are recorded. This adds a double burden to his tasks whereby he has to reenter information from the temporary register. It has been observed that many a times this information is not transferred completely resulting in incomplete and unreliable records. (Research and Development Solutions, 2012, p. 1)

Policy makers should ensure that the technological segment for the programme is up to date and in keeping with new findings. This will create ease in data collection and help in keeping a tab on vaccinated children. New technology will greatly assist at the services level and encourage ease for the parents since data collection and personal information can be computerized and easy to access. The statistics of immunized children and mothers can be fed into a centralized data base which is accessible across Pakistan by all those involved in the programme. As such, even when parents relocate to another place, the child's updated current vaccination status will be available for the vaccinator in an extremely easy and convenient manner.
2.1.7 Politicians do not play a proactive role in the development of a health policy at all levels from federal to provincial and no special focus is paid to disadvantaged groups

The lack of interest and commitment towards the cause has resulted in a weak structure governing the overall betterment of the programme. There exists little or no specially designed workable set up for disadvantaged groups where they may access the immunization programme at their convenience.

In all provinces, it was stated that funding has substantially reduced since the inception of district governments. However, the probing revealed that this is due to non submission of a proper health budget to the Nazim/DCO by the EDOH. As a result, they receive funds for medicines only and all preventive programmes are suffering. (Faisal, Qureshi & Shoaib, 2009, p. 6)

2.1.8 National policies are irrelevant after the 18th amendment

Provinces are now independently responsible for the immunization programmes after the devolution. The ensuing scenario means that there is no general overseeing body to which they are all answerable and no strict guidelines are mapped out to be followed and adhered to during the implementation phases.

In pursuance of the 18th amendment to the constitution of Pakistan, the health sector has been devolved to the provinces and the federal Ministry of Health has been abolished. (Federal EPI/CDD Cell, National Institute of Health, 2003)

Although this step was taken in order to encourage self autonomy and cultivate ownership, it has not culminated into a positive scenario for the EPI.

2.1.9 Policy documents are not available in local languages

This great hindrance poses a great barrier towards proper implementation of policy. The lack of policy being written in local languages impedes the process of adhering to the rules and regulations by the districts. This barrier greatly hinders implementation since strategies, rules and regulations are not known to the locals. The language barrier needs to be addressed in order to create ease in understanding for all the provinces and districts.

2.1.10 The community and its representatives are not involved in Government policy

One of the key findings that is highlighted with respect to the viewpoint of community members and Community Strengthening Organizations (CSOs) is that of a lack of inclusion of community members and representatives in the policy making process. Even HMC's do not play their role effectively thus making their presence redundant to a certain extent. This factor plays a big role in some of the misconceptions and unrealistic targets set by the policy makers. They are unaware of the need at the grassroots level and as such are not able to address certain important issues that are a must for an effective policy. The government makes all the policies without the involvement of the community which leads to frustration among the community members and CSOs since their involvement is an integral part of designing a workable strategy which will be implemented with the optimum level of coverage. A combination of stakeholders will ensure an effective and durable policy.

2.1.11 MDGs unlikely to be met due to an unfocused policy

The researches show that the MDGs are not focused upon during policy making. These goals are an integral part of Pakistan living up to a certain promised standard in the eyes of the international world, but the prevailing situation in the health sector deem it improbable that the MDGs will be met.

‘Pakistan's health and immunisation indicators are lagging significantly behind regional countries. Although Pakistan has made progress towards meeting MDG4 and MDG5 targets, progress has been insufficient and uneven and targets are unlikely to be met.’ (Anita Zaidi, Evaluation of GAVI support to Civil Society Organisations, 2012) Currently immunization coverage in Pakistan is 80%. This is most likely the only MDG target that Pakistan can achieve. Although the indicator for Pakistan is moving in a positive direction it is imperative for the country to make increased efforts to reach the MDGs. (PILDAT, 2010, p. 15)
Politicians should play a key role in monitoring progress towards achieving MDGs within their designated areas of jurisdiction. A collaborated all out effort needs to be made in ensuring that they can be met. It is only through an all out effort united towards achieving the goals with the help of politicians that this slow progress towards the targets can be achieved.

2.2 SERVICE LEVEL

2.2.1 Poor Management and Supervision
One of the foremost problems faced by teams implementing immunization is that of poor management and supervision. The lack of good guidance and leadership results in a weak structure of the overall setup where vaccinators are unable to perform their duties to the optimum level.

The quality of supervision and monitoring is variable in the provinces. Reasons mentioned for weak supervision include lack of transport and recurrent resources for per diem and maintenance costs for supervisory visits. Furthermore, supervisory visits are unstructured due to poor supervision by the higher level of managers and poor capacity of district managers to assess coverage reports through desk reviews. (Masood & Navaratne, 2012, p. 17)

2.2.2 Inadequate infrastructure and transport such as non existence of government dispensaries in some areas
Although in some areas there may exist the demand for vaccines, the lack of transport and dispensaries in some areas curtail the supply offered to them.

2.2.3 Focus only upon EPI (Polio) and no coverage given to Routine Immunization (RI)
Due to the great emphasis upon Polio in the form of awareness raising campaigns and coverage for its eradication, many households are not aware of the importance of other Routine Immunizations and the detrimental outcome that can follow if their children are not given these vaccines. A lack of funding for Routine Immunizations also causes an unavailability of funds for awareness raising campaigns and effective routine immunization programmes for these vaccine preventable diseases.

“You see everybody is speaking about polio, nobody is asking about RI. It seems like polio is everything and routine immunization is nothing.” – a district supervisor in Balochistan. (Faisel et al., 2009, p. 76)

2.2.4 Lack of career structure for vaccinators and supervisors
A poor overall structure exists for career minded individuals who are seeking advancement and improvement in their job situations in this field. Due to this factor many individuals shy away from seeking employment as a vaccinator since they foresee no scope of a developing career.

Generally, in-service training for routine immunization staff is not planned and implemented for the different levels of staff. Training is erratic as it is often based on donor funding availability. The regular EPI budgets from the government usually do not allocate funds for continuing education or for in service training. (Masood & Navaratne, 2012, p. 16)

2.2.5 Lack of female team members or LHWs in KPK and Balochistan
There exists a dire shortage of female vaccinators in these areas which poses a great hindrance due to the strict practice of purdah practiced within these regions. As such visiting all-male teams are unable to access households in order to administer vaccines. It has also been observed that many LHWs are also not allowed by their families to become part of the Polio teams as it requires movement away from home and with men, which is culturally not accepted.

“Males should be convinced about the RI and to allow their females to go for it…BHU staff should conduct meetings with the males. There should be some incentive like oil or tea party for these meetings” another LHW in Punjab. (Faisal et al, 2009, p. 98)
2.2.6  In Balochistan shortages of vaccines occur frequently at the district level even though the provincial store may have sufficient stock
The main reasons given behind this barrier are that of lack of transport and the long commuting distances to the provincial store as well as an underestimation of population which are far less than actual population figures in the area. Furthermore, the BHUs in charge are unwilling to take responsibility for these shortages and instead choose to blame it on the vaccinators. (Faisal et al, 2009)

2.2.7  No proper plan for social mobilization for RI in any of the provinces at any level
To date, there exists no adequate plan for social mobilization for RI in any province across Pakistan at any level. As such, there is no awareness regarding the importance and urgency of these vaccinations for children in an age appropriate manner. Faisal et al (2009) noted that, “Community leaders and religious leaders are least bothered. They are not playing an active role in mobilization. Only LHWs are playing a small role – but that is not enough” – Vaccinator, Sindh' (p. 94).

2.2.8  Issue of recording is a management problem
The issue of recording requires improved oversight on vaccinators to improve their activities more carefully. These recordings can be improved with the usage of electronic records and analyzing data.

2.2.9  Issues with maintaining the Cold Chain/Teams sub optimally equipped in relation to chalk for door markings and ice packs for maintaining the cold chain
Cold chain for vaccines is a system for storing and transporting vaccines at very low temperatures to maintain their effectiveness before use. Because vaccines are sensitive biological substances their exposure to high temperatures directly affects the quality of vaccines and safety of immunizations. (PILDAT, 2010, pp. 14-15)

Some areas surveyed found that the teams were not fully equipped as regards their tools for cold storage, chalk, etc. which are critical in ensuring that children are not missed or overlapped as well as ensuring working and effective vaccines. Ahmad, Akhtar, Roghani, Ilyas, & Ahmad (as cited in Mangrio, Alam & Shaikh, 2008) pointed out that ‘among various core reasons, most commonly observed are the lack of motivation of EPI staff, absence of vaccinators and inconvenient place of immunization and problems with cold chain’

2.2.10  Inaccessible health facilities
Many of the researches depict that one of the main reasons for parents – specifically those in the rural areas as not being able to vaccinate their children is the distance of the health facility from their area of residence.

One of the main causes of non-immunization was distance of health centre from the users. Generally, low immunization was seen when distance of centre for immunization increased beyond 7 Km. In rural areas, a significant number of families had immunization centres beyond 7 Km. Therefore, this was quoted as the main cause of non-immunization by the parents in rural areas. This is consistent with other reports and studies. (Mohammad Naeem, 2011)

2.2.11  Absence of evening vaccination services
Most communities in the rural areas restrict their women folk from venturing out unescorted by a male family member. As such mothers are unable to take their children to immunization centers since the men folk are usually at work during the day. Another reason, as pointed out by Faisal et al (2009) given by mothers is that they are 'busy in household chores and can hardly take out time for visiting the health facility for vaccination of the child'. Since there is an absence of evening services, these parents are unable to vaccinate their children.

2.2.12  Non provision of transport to polio teams
Polio teams are not provided with transport to the target areas and have to make their own way to the site. In certain cases it becomes financially difficult for vaccinators to reach the locality since they have no means to ensure their attendance – a factor which becomes more pronounced during the hot summer months.

2  Purdah is the practice in certain societies of screening women from men or strangers by means of a curtain or all-enveloping clothes
"I am satisfied that I am getting salary and earning for my family. I cannot provide RI facilities to all the community children because; one, I am alone and two, there is lack of facilities e.g. transport…” a vaccinator in Balochistan. (Faisal et al, 2009, p. 111)

2.2.13 Insufficient human resources including shortage of vaccinators especially during NIDs due to low remuneration

Unfortunately, due to the low wage scale offered for the job of a vaccinator, there exists insufficient human resource in this field. As such, NIDs are usually understaffed and optimum coverage cannot be ensured.

2.2.14 Effects of NIDs on routine immunization

A collective feeling was that the NIDs have a detrimental effect on routine immunization because it keeps the vaccinators busy at least one week before and one week after the NIDs in which they only concentrate on polio vaccination and the campaign related arrangements. Particularly, in rural areas, routine immunization comes to naught during NIDs. "The vaccinators are unable to carry routine immunization because of the additional responsibility entrusted during NIDs for covering 150-200 children in one day, door-marking, record keeping in tally-sheets, locating and marking the missing children etc". According to them the work of routine immunization suffers because their vaccinators remain engaged in pre campaign (team selection/training, social mobilization, banners/posters pasting, polio walk, vaccine collection and distribution), campaign (Polio vaccination, monitoring and facilitating of teams) and post campaign activities (catch up and submission of reports). (Mangrio et al, 2008, p. 66)

2.2.15 No reward for well performing vaccinators and no reprimand for poorly performing vaccinators

Another hurdle faced in the efficient running of immunization programmes is that of a lack of reward for the deserving vaccinators and reprimand for the poorly performing vaccinators. There were only some reported instances of vaccinators receiving cash awards and certificates but most of the other vaccinators were simply 'verbally appreciated' for their hard work (Faisal et al, 2009, p. 88). Similarly, there were some cases of 'punitive action' being taken for poor performance such as 'not maintaining the daily register properly' and 'absence from duty' (Faisal et al, 2009, p. 88). But these cases are very rare and which is why there is a prevalent lack of motivation and a weak performing team.

Career development plans for EPI workers do not exist within the health system. This was identified as one of the major reasons for poor motivation to work in the program. Exploring the possibility of salary increments based on performance or seniority under each category of staff may be an option for consideration. (Masood & Navaratne, 2012, p. 16)

2.2.16 Findings suggest that vaccinators do not fill vaccination cards at the time of vaccination nor do they keep records of vaccinations at facilities or there is a shortage of vaccination cards available

Various surveys depict that this negative practice results in poor maintenance and follow up of missed children and as such adequate coverage is not ensured. A survey conducted also shows a shortage of vaccination cards available at the health facilities in all provinces.

2.2.17 Mothers recall most relied upon means of recording children's immunizations – moderately accurate

The predominant form of recording children's immunizations is that of mother's recall. This practice leads to children being missed for their routine boosters and follow up vaccines. However, an important issue pointed out by Sheikh et al (as cited in Research and Development Solutions, 2012) that has been highlighted recently is that even mother's recall may not be as accurate as previously thought, particularly for less publicized vaccines.

2.2.18 Team members not having adequate knowledge of their area of work

Another barrier to effective and efficient immunization is lack of adequate training given to staff along with a lack of reliable planning. This includes temperature not being displayed and performance and drop out charts and EPI session plans not available as well as inadequate knowledge and training of vaccinators regarding vaccination and
cold chain maintenance.

2.2.19 Teams negligent with regard to important queries concerning acute flaccid paralysis and routine immunizations
Due to the lack of training and knowledge, vaccinators were found to be unaware of the answers to important questions posed by parents. This drawback is also enhanced by the fact that there is no motivation by the teams to conduct their own researches with the help of the internet or medical journals to enhance their knowledge about their field of work. As a result of this, some vaccinators do not contribute to the social mobilization to the 'full extent' and vaccinators in both Punjab and Sindh bluntly stated that their 'knowledge is very limited' (Faisal et al, 2009).

2.2.20 Inexperienced vaccinators
The lack of experience confounded with a lack of adequate training makes some vaccinators poor performers in their profession. This is a dangerous factor since vaccinators need to have sound knowledge of how to administer safe and effective vaccines for the general health and well being of children. This shortcoming, however, was not an issue in all cases and a majority of the parents surveyed as part of the study by Faisal et al (2009) expressed satisfaction with vaccinators due to their 'experience in injecting vaccines' and ability to provide good 'information and guidance' about possible temporary side effects such as fever and swelling.

2.2.21 Assignment of high targets per vaccinator
It has been found that at times too many children have been allotted to one vaccinator probably due to the lack of sufficient workers in the field. In such a scenario, the vaccinator is unable to conduct full coverage of his target and some children are missed in the process.

2.2.22 Long waiting period at the health facility
Due to the long waiting period at health centers, some parents leave the premises without waiting their child's turn. It was also found that due to the long waits, some parents do not even bother taking their children to the center and as such they miss their immunizations.

2.2.23 Undesirable attitude of the EPI/health facility staff
Another barrier to adequate and proper coverage of children is the undesirable attitude of the EPI or health facility staff. However, as noted by Faisal et al, (2009) only some of them are rude and curt and do not have the people skills to deal with parents who are concerned and worried about their children. As pointed out in the study (2009), a mother from Kalat in Balochistan shared that 'their [health staff’s] behavior is very good, when we go there to vaccinate the children they advice us to vaccinate the children regularly so that they may remain protected from diseases' (p. 79). They do not offer guidance and support to parents and see their job as only injecting their target number with a vaccination.

2.2.24 Lack of private sector involvement
This factor is another barrier to immunization simply due to the enormity of the task at hand. It is not possible for the government to achieve the target of vaccinating all the children across Pakistan on its own. Additional human resource, finances and workable strategies need to be put in place in order to reach the target. As such, surveys depict that private sector intervention is needed in order to assist the already in place factors so that an overall coverage of all children can be insured.

It is a gigantic task for public sector alone to reach all the children in a huge populous country like Pakistan. Therefore, it is very important to involve private sector in providing routine immunization services. One of the senior district officer, said "The private hospitals and clinics must be first brought under the government regulations by registration and formal memorandum of understanding, in order to keep check and monitoring system on their performance". (Mangrio et al, 2008, p. 66)

2.3 COMMUNITY LEVEL

An overall picture of the barriers faced during immunization can only be ascertained once the barriers that arise
from the demand side are also discussed. Various surveys have been conducted by implementing agencies in order to bring these hurdles to light for the interest of organizations and individuals seeking to rectify them.

### 2.3.1 Lack of awareness

The most widespread barrier which heralds a block in child immunization is that of a lack of awareness of the life saving properties of child immunization among parents. This lack can be due to illiteracy specifically in the rural areas or lack of social mobilization programmes in remote areas. The research report by Ahmed (2009) was based on a survey which was conducted in order to gauge the rate of awareness of mothers in respect to the number of times a child needs to be vaccinated as stipulated by the RI schedule. The following figure 2 highlights their responses:

<table>
<thead>
<tr>
<th>Number</th>
<th>Punjab</th>
<th>Sindh</th>
<th>KPK</th>
<th>Balochistan</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Vaccination</td>
<td>2.3%</td>
<td>4.2%</td>
<td>0.8%</td>
<td>2.0%</td>
<td>2.4%</td>
</tr>
<tr>
<td>More than one</td>
<td>82.2%</td>
<td>84.3%</td>
<td>88.9%</td>
<td>59.6%</td>
<td>77.9%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>15.5%</td>
<td>11.6%</td>
<td>10.3%</td>
<td>38.4%</td>
<td>19.7%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

800 1,200 996 1,200 4,196

(AHMED, UNDERSTANDING BARRIERS TO IMMUNIZATION IN PAKISTAN VOL 2: QUANTITATIVE COMPONENT, 2009)

FIGURE 2
2.3.2 Misconceptions
Many misconceptions prevail about fever after vaccination and swelling at the injection site where parents are not aware that these are the normal after effects of certain vaccines which do not pose any danger to the child. These resulting after effects diminish over a certain short time period but are viewed as ‘dangerous’ due to misconceptions.

‘Whenever I have vaccinated my child he has suffered from fever and then spent his whole day in bed. I think it is not beneficial then but harmful’ Mother – Muzaffargarh, rural Punjab (Faisal et al, 2009, p. 63).

Similar findings were observed in the study by Ahmed (2009) which have been presented graphically in figure 3 as follows:

![Proportion of Mothers Stating Side Effects Stop Them From Future Vaccination](image)

(AHMED, UNDERSTANDING BARRIERS TO IMMUNIZATION IN PAKISTAN VOL 2: QUANTITATIVE COMPONENT, 2009) FIGURE 3
2.3.3 Lady Health Workers (LHWs) do not visit door to door in some localities
This factor presents hindrances for most families specifically those who observe strict purdah rules and females are not permitted to interact with males. Mothers tend to feel more comfortable interacting with LHWs since they are local women and they can present their concerns and questions to them openly.

<table>
<thead>
<tr>
<th>Health Education about Immunization by LHWs</th>
<th>Overall</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who claim that LHWs have encouraged about vaccination of their children</td>
<td>% 67</td>
<td>% 68</td>
<td>% 67</td>
</tr>
<tr>
<td>Who claim that LHWs have encouraged about vaccination of their children at the right age of child</td>
<td>% 60</td>
<td>% 60</td>
<td>% 61</td>
</tr>
</tbody>
</table>


2.3.4 Floods, war, internal conflict and political uncertainty
Due to the floods, internal conflict and political uncertainty, many parents are too engrossed in their problems of poverty, destruction and despair to think about vaccinating their children. For them it is more important to find shelter and food for their families and as such the issue of immunization takes the back burner. As observed by Zaidi & Khan (2012) unprecedented floods, war, internal conflict, political uncertainty and local governance issues have created significant barriers to maintaining high immunization coverage (p. 6).

2.3.5 Females not vaccinated as much as males
Another barrier to optimum child immunization is that the percentage of females vaccinated is usually less than that of the percentage of vaccinated males. This factor is usually predominant in the rural areas where the prevalent mindset tends to give importance to male children within the home. As such many females go without receiving the necessary vaccines that can prevent them from contacting vaccine preventable diseases.

2.3.6 Societal restrictions on women
Some rural localities do not encourage women to venture out of their homes due to the rules of purdah and as such mothers are not able to take their children to health/vaccine centers. As such, the only means of immunizing such children is by means of visiting the homes. If the immunization programme running in the locality does not offer door to door visits, or if the vaccinator misses homes due to various reasons, then those children remain unvaccinated.

2.3.7 Difference between urban and rural vaccinations
Various surveys have found that rural populations are less prone to vaccinate their children as opposed to the urban areas (Research and Development Solutions, 2012). This could be attributed to the overall lack in awareness coupled with the negative thinking surrounding equality between male and female children.

2.3.8 Low education level especially among mothers
One of the key factors contributing to adequate child immunization is the attitude of the primary care giver of children – namely, the mother. Most mothers in the rural areas are uneducated or have a very poor level of education and as such remain unaware of the importance and necessity of immunizing their children. An education secures that mothers have the relevant knowledge relating to immunizations and their importance. The Coverage Evaluation Survey-Punjab 2003 highlighted that parental lack of awareness about the need for immunization was one of the most important reasons for low coverage in Punjab Province (Masood & Navaratne, 2012, p. 27). This causal link between the education level of parents and immunization coverage is visible in figure 4 below:
Parents who were questioned about the barriers they face in immunizing their children stated that the long distance to travel to the health facility posed a big problem for them. Due to poverty and lack of financial means they claim that they are unable to afford the travelling cost to cover the distance. Restrictions on females to travel to far off distances without a male escort also compound to this hurdle since mothers are unable to take their children to the health facility by themselves. Distribution of Mothers reporting ease or difficulty in reaching vaccination points can be observed in figure 5 below:

Superstitions surrounding vaccination are predominant in the rural areas and can also be found in some of the urban localities. Beliefs state that immunizations will cause some form of diseases and ill omens upon the child and it is also against the doctrines of Islam.

Due to frequent population movement, some children are missed under the assumption that they were accounted for if an immunization programme has already been carried out within the vicinity. As such many children go unaccounted for due to this movement of people and it becomes difficult to identify them.

At times it has been found that some educated parents such as doctors, lawyers and teachers do not permit their children to receive vaccinations. Visiting teams to private schools have reported such an attitude which results in the lack of adequate coverage of children in the country. Some educated parents simply refuse to allow their children to receive vaccinations or Polio drops.
2.3.13 Some elders disallow their grandchildren to receive the Polio drops since they believe that it is a part of a conspiracy theory where the government is trying to control the population. Another finding that has come to light during the surveys that have been conducted to analyze barriers to immunization is that of some parents and elders thinking that the Polio drops are in fact a birth control drug that has been implemented by the government at a large scale in order to curtail population growth within the country. Other such beliefs follow the thinking that the Polio drops are in fact a specially designed infertility project designed by the Jews in order to eradicate Muslims. This negative thinking causes great damage to the children who go without the drops and can affect their entire future.

2.3.14 Some areas report a lack of parental awareness due to the lack of exposure to media. Although the media conducts aggressive and quality campaigning regarding the Polio, certain mothers in particular remain unexposed to it due to the lack of televisions, radios and newspapers in their homes. Some households are deprived of these technological information tools due to the strict views imposed by their men folk, where women are not allowed to listen to or watch television or the radio. As such surveys suggest that mothers in particular remain unaware of the importance of immunizations for their children. Differences in media consumption by respondents in rural and urban settings, Punjab, KPK, Sindh and Balochistan and between mothers and fathers have been noted in figure 6 below:

As can be seen, there is a much greater level of media consumption in the urban areas rather than rural areas and amongst fathers as compared to mothers. Alongside this, media consumption rates in Punjab, KPK and Sindh are almost the same but are significantly low in comparison in Balochistan. These findings tie in with findings in the previous sections regarding low rates of immunization coverage in rural areas and Balochistan.
2.3.15 No incentive for parents to bring their children for immunization
Another barrier faced in optimum coverage of children is that of a lack of incentive for parents who do not have the awareness of the importance of routine immunizations. Since they need to be coaxed into bringing their children to the health centers, there needs to be some form of incentive in place which will encourage them to participate in vaccinating their children. It has been proposed by Chandir et al (as cited in Masood & Navaratne, 2012) that 'the distribution of food or medicine coupons has been described as improving routine immunization coverage in developing countries' (p. 8).

3. RECOMMENDATIONS
In light of the barriers faced in the above mentioned three sectors, the following recommendations have been made in order to overcome them.

Studies have shown that EPI administration can be improved through mass campaigns but it necessitates strengthening of health systems, enhanced political commitment and raising awareness among the masses (Rafi, Shah, Rao & Billo, 1995).

3.1 POLICY
1. A uniform National EPI Policy should be devised and communicated to all the provinces and districts.
2. Workshops should be conducted with EPI personnel at various levels. Managers from different provinces should share their respective experiences and problems. This would help refine the policies regarding various EPI activities.
3. Provinces and districts should be periodically monitored to ensure that all the policies are being uniformly implemented.
4. Political emphasis on efficient immunization services and accountable campaigns is needed.
5. Devolution of health to provinces presents a real opportunity to improve immunization by allowing local autonomy to districts to find local solutions for improving and demonstrating their performance
6. EDOs and DOHs should visit the outreach activity once a week whereas tehsil level managerial staff (DDHO & ADHO) should visit at least twice a week to supervise the outreach activity. The EDO/DOH should carefully review the vaccinators' outreach plan to ensure adequate planning and improved coverage
7. Since low voltage and electricity is a common problem across the target districts, following should immediately be done to address this problem:
   a. Ensure that stabilizers are provided to avoid damage due to electricity fluctuations.
   b. Ensure the provision of maximum number of ILRs, (instead of front door refrigerators) so that the vaccines may be protected for a longer period of time.
   c. Ensure availability of reliable cold boxes at each static center so that vaccines are kept viable in case of electricity shut down.
8. Workshops should be conducted with EPI personnel at various levels. Managers from different provinces should share their respective experiences and problems. This would help refine the policies regarding various EPI activities. Provinces and districts should be periodically monitored to ensure that all the policies are being uniformly implemented
9. Cold chain technicians should be trained for all districts. Special training workshops should be arranged by the Federal and provincial offices for these trainings, followed by refresher courses once every three years
10. Replace old and dilapidated cold chain infrastructure with new
3.2 SERVICES

1. A fair and transparent atmosphere of competition amongst vaccinators should be maintained as expressed by the vaccinators.
2. If resources allow, quantity of prizes may be enhanced and more appropriate is to distribute one prize in each of the tehsils of the district i.e. more rather than one prize in the district.
3. Appreciation of better performance of supervisors through incentives is also recommended.
4. ALL vacant posts of ASV/CSV/TSV and IVs should be immediately filled.
5. In order to cater to lack of outreach because of any reason, the LHWs should be trained to deliver ALL vaccines within 1 year and be made responsible for vaccination in their area.
6. Vaccinators should also be responsible for providing vaccines to LHWs; for vaccination in their areas.
7. Monitoring and checking of cold chain and storage of vaccines is already a part of supervisory checklist. Stringent controls should be applied to ensure that these are being practiced in the field by supervisors.
8. More importance should be given to those segments, where awareness of vaccination is at its low. These segments cannot be accessed through traditional media. The following actions can be taken to reach them:
9. During outreach, at least one hour should be dedicated for community knowledge enhancement. During this time, vaccinators should be encouraged to visit the fathers of up to one-year-old children and educate them about vaccination.
10. Special emphasis should be given to the LHW program and their presence should be capitalized upon, in order to increase immunization coverage. These LHWs are supposed to educate mothers about family health matters, immunization being one of them, in all households in their catchments areas. They should be advised to make sure that all households are visited every month and child/mother immunization is discussed in each visit.
11. Once an outreach team is in a village/area announcements through mosques should continuously be made about their presence (for as long as the team is there).
12. Duration and consistency of strategy for basic training given should be ensured across all provinces.
13. Looking at the socio-cultural dynamics of the country only a female health provider is accepted for the mothers and children. This issue is pertinent especially for NWFP and Baluchistan.
14. Attractive career paths should be defined at vaccinators and supervisory level to increase motivation and improve performance subsequently.
15. Success stories should be widely spread across all districts to increase motivational level among the staff. Similarly staff penalized, should serve, as an example; that not following the rules will actually translate into punishment/penalization.
16. All newly recruited vaccinators should undergo intensive three months training at the district level (DHDCs/paramedic schools/government facilities), with refresher trainings to be conducted once, every three years for all workers.
17. Advocacy, mass media, communications and distribution of leaflets should be specifically designed and distributed to hospitals, schools and clinics for parents.
18. Annual feedback should be collected from the localities where coverage is low. This will present a clear picture of the reasons behind the low coverage thus creating ease in designing future strategies to improve coverage.
19. Refresher trainings for vaccinators should be conducted on a regular basis.
20. New transport to ensure adequate and effective mobility of vaccinators in the form of bicycles and motor bikes.

3.3 COMMUNITY

1. The community should be sensitized through meetings and talks given by CSO representatives and other health professionals who visit the area.
2. Female mobilizers should highly be encouraged to give talks within female gatherings in the target areas.
3. Special focus should be given to the families with a greater number of children since it is imperative to ensure that all the children are receiving/have received vaccinations.
4. Since most of the women in the rural areas rely on dais as their main source of physician specifically during pregnancies and child birth, it is highly beneficial for dais to be sensitized, educated and trained regarding immunization. At times they are the only link that women in the village have to the outside world.
5. A centralized tracking system would prove to be ideal for the convenience of parents. This would ensure that data is available for the health workers and vaccinators even if parents do not remember certain things.
6. Media and religious leaders should be taken on board in order to spread awareness amongst the masses. Since these two mediums are very influential upon society, this action will mobilize many individuals into making sensible and safe decisions regarding their children.
7. The vaccinators should be assigned to cover specified areas – even fields where some of the women work during the daytime. It is also beneficial to visit fathers in their pace of work in order to speak with them to encourage vaccinating their children.
8. Myths and misconceptions must be addressed in a satisfactory manner.
9. Schools and madrassas should be targeted in order to spread awareness among children and their parents.
10. The perceptions of families need to be changed through sensitization and encouragement. Families need to support each other in this decision and not try to dissuade each other.
11. Religious myths should be addressed and it should be promoted that Islam does not negate vaccinations – in fact it promotes all means that strive towards maintaining for one's health and taking care of one's body.

4 CONCLUSION

In order to attain greater coverage and outreach, the government needs to explore sustainable solutions which can supplement the already existing setup of Routine Immunizations in the country. Greater focus needs to be paid to regular and intensive trainings as well as maintenance of infrastructure in order to protect and ensure the cold chain for effective delivery and optimum results. Mass awareness through campaigns and mobilizations strategies need to be formulated which will target those populations living in rural and remote areas. Although much work needs to be done in the field for full coverage of the children of Pakistan, there remains a promising ray of light in the form of a united effort where the private sector joins hands with the public sector in this lifesaving drive. If the two sectors can join hands and implement workable strategies towards Routine Immunization in light of the above mentioned recommendations, it is certain that the dream of a vaccine preventable disease free Pakistan will indeed emerge.
BIBLIOGRAPHY


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