Editorial

Public Health Problem Solving Paradigm

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The problem solving paradigm is well known to public health practitioners and public health agencies. This approach is different from the clinical approach in the sense that instead of thinking in terms of patients, a public health practitioner thinks in terms of populations and instead of making clinical diagnosis, public health practitioner makes community diagnosis. Public health practitioners have had great impact on populations through effective public health interventions. Public health practitioners might not be visibly in touch with the patients but their fingers are always on the pulse of the population, through organized community based efforts, epidemiological data, health surveys and longitudinal studies. They use the evidence so generated for proper health care planning and instituting preventive, curative and rehabilitative services in the community.
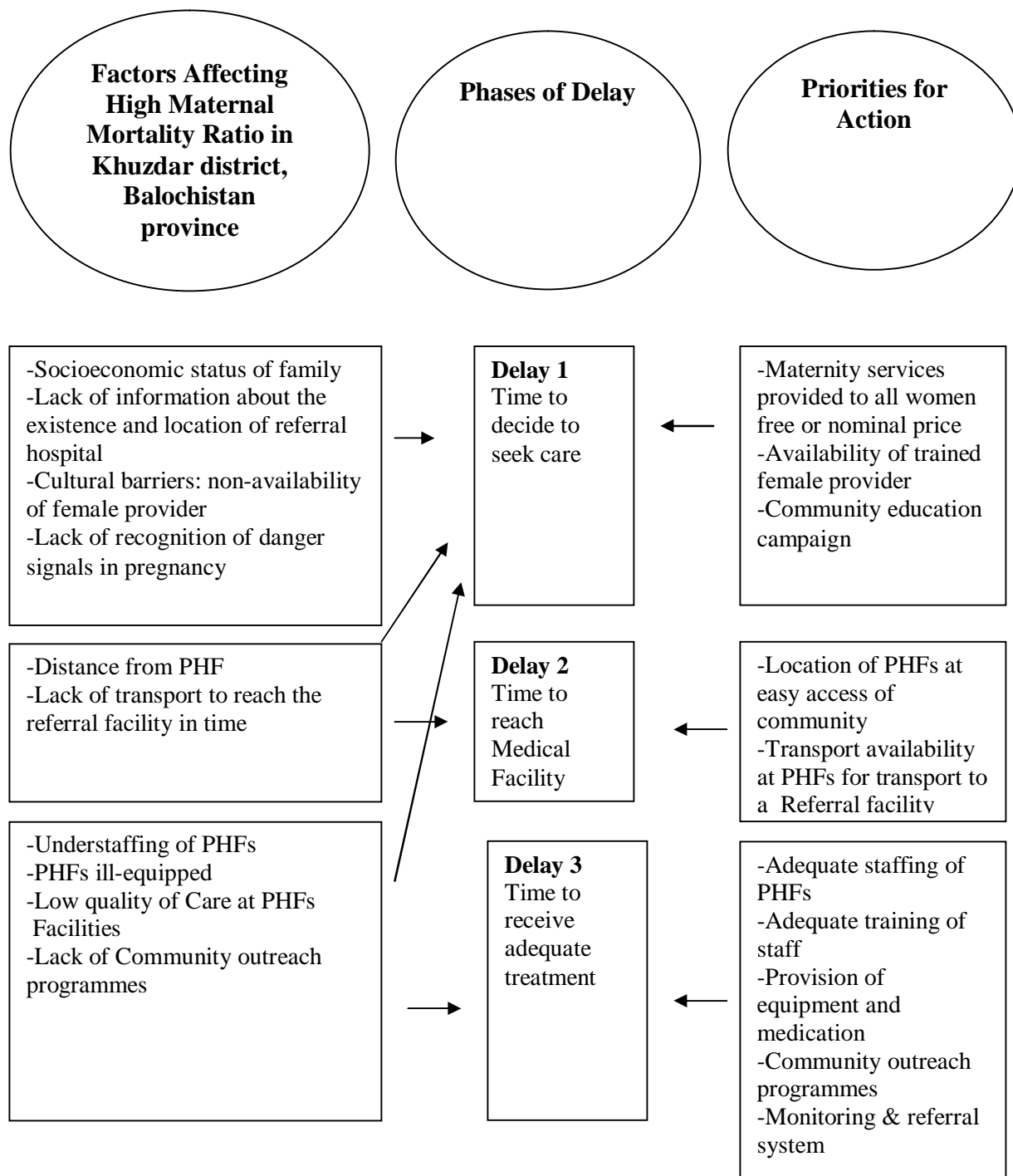
Public Health problem solving paradigm essentially includes the following steps:[1] 1. defining the problem, 2. measuring the magnitude of the problem, 3. developing a conceptual framework for the key determinants of the problem including the biologic, epidemiological, demographic, socio-cultural, economic, environmental, health system (access to and organization of the health care services) and political determinants, 4. identifying and developing intervention and prevention strategies, 5.setting priorities among strategies and recommending policies and 6. implementing programs and evaluating them.

Problem definition is of far most importance in the public health problem solving paradigm. Solution to public health problem depends on how the problem has been defined. According to the philosopher John Dewey, "A problem well stated is a problem half solved." Problem definition involves stating the problem, population affected, context (geographical, economic, historical, ethnic) and the time frame. After brain storming, talking to experts and carrying out literature review, various tools such as affinity diagram, cause and effect/fish bone diagram and interrelationship diagram are very handy at entangling the issues surrounding cause and effect.

Let's apply the problem solving paradigm to maternal mortality ratio (MMR) in Pakistan, which is 4th on the list of healthy life years lost in Pakistan, after Diarrhea, Lower respiratory infections among children and Tuberculosis.[2] Let's explore the problem of high maternal mortality in Khuzdar district, Balochistan. Women living in rural areas particularly in the remote areas of Balochistan Province of Pakistan are most vulnerable. Maternal Mortality ratio and 95% confidence limits, in Khuzdar district of Balochistan has been reported as one of the highest[3] in the country (700; 95% CI 500-900). Applying the three delays model of maternal mortality to Khuzdar district, Balochistan, we can see that the underlying determinants of Delay 1, Delay 2 and Delay 3 are different and the interventions to take care of them also differ (fig. 1). So, in order to take of MMR in Khuzdar district, one would have to have knowledge of ground realities as to which delay is most significantly associated with MMR, there and then institute

interventions accordingly. If we fail to do that, our effort to reduce MMR by three quarters between 1990 to 2015 (Millennium Development Goals, Goal 5, Target 6),[4] is not going to be achieved**.**

Fig 1 Factors affecting high maternal mortality ratio in Khuzdar district, Balochistan province of Pakistan

Factors Affecting High Maternal Mortality Ratio in Khuzdar district, Balochistan province

Phases of Delay

Priorities for Action

Factors	Phases of Delay	Priorities for Action
-Socioeconomic status of family -Lack of information about the existence and location of referral hospital -Cultural barriers: non-availability of female provider -Lack of recognition of danger signals in pregnancy	**Delay 1** Time to decide to seek care	-Maternity services provided to all women free or nominal price -Availability of trained female provider -Community education campaign
-Distance from PHF -Lack of transport to reach the referral facility in time	**Delay 2** Time to reach Medical Facility	-Location of PHFs at easy access of community -Transport availability at PHFs for transport to a Referral facility
-Understaffing of PHFs -PHFs ill-equipped -Low quality of Care at PHFs Facilities -Lack of Community outreach programmes	**Delay 3** Time to receive adequate treatment	-Adequate staffing of PHFs -Adequate training of staff -Provision of equipment and medication -Community outreach programmes -Monitoring & referral system

PHF= Peripheral Health Facility

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