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Tetanus toxoid immunization of prospective brides in Central Java, Indonesia

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A self-sustaining and highly successful routine programme to deliver tetanus toxoid (TT) immunization to prospective brides in Central Java, Indonesia, is documented. This initiative involved intersectoral collaboration between the Ministries of Health, Religious Affairs and Interior, relied on communication by local Islamic leaders, and was supported by a small administrative fee levied on the prospective brides prior to marriage registration. Collaboration with local religious institutions and leaders may accelerate both immunization and safe motherhood initiatives. This programme could be extended to all areas of Indonesia and prospective brides could be designated a priority group for TT immunization.

Introduction

Neonatal tetanus is the leading cause of infant mortality in Indonesia, according to data from the 1985 National Household Health Survey.[1] At least 70 000 infants are expected to die in 1989 from neonatal tetanus in Indonesia unless specific interventions are undertaken in addition to those currently employed.[2] Coverage of pregnant women with two doses of tetanus toxoid (TT1 and TT2) to prevent neonatal tetanus lags behind remarkable achievements in infant immunization under the Indonesian expanded programme on immunization (EPI). In 1987 only 38% of pregnant women nationally received TT1 while 30% received TT2. Approximately 26% of all births in Indonesia are first births (Indonesian Contraceptive Prevalence Survey 1987, BKKBN, unpublished) and many of these will occur soon after marriage. Providing TT immunization to prospective brides (called TT-*calon pengantin* or TT-*CP*) potentially could have a great impact on reducing neonatal tetanus mortality.

Indonesia has the largest Muslim population world-wide and over 90% of the population identify themselves as such. While the Ministry of Religious Affairs works with all officially recognized religions, local Ministry of Religious Affairs offices in predominantly Muslim areas, called Kantor Urusan Agama (KUA), register marriages between Muslims and coordinate local Islamic activities. According to government records, 1 381 000 marriages were registered during 1987. Of these, 1 200 000 (87%) were between Muslims, with the remainder classified as Protestant, Catholic, Hindu, or Buddhist marriages. Non-Muslims register their marriages with civil authorities via the Ministry of Interior.

In 1986, 59 000 local religious educators (*da'i*) and Ministry of Religious Affairs staff in five provinces were given a one-day training as immunization motivators. Booklets were distributed which included Koranic teachings on good health, a statement showing support by the Indonesian Council of Ulamas for immunization, and the vaccination schedules. In three participating provinces, a community survey of mothers (n = 3072), new brides (n = 3072) and *da'i* (n = 768) was undertaken in 1986 to evaluate this large-scale effort (Ministry of Health, 1986, unpublished). Contrary to expectations, evaluation results showed no apparent increase in either the knowledge of recently married women regarding TT immunization or in TT1 coverage in participating provinces when compared with control areas. The *da'is* surveyed had retained little knowledge about childhood immunization details. However, the religious channel was found to be a potentially important and viable vehicle for dissemination of information as over 95% of all marriages had been registered by local religious or government staff.

It was known that Central Java province had achieved a high coverage of TT1 (72%) based on

another scheme using local religious leaders. The national Committee for Advancement of Immunization determined that a case study was the most appropriate method to understand the process by which this had been achieved in Central Java. Guidelines for other provinces might then be developed, based upon the case study results.

Methods

A case study of tetanus toxoid immunization of prospective brides was conducted in Central Java province in October 1988. The study team included senior staff from the Ministry of Religious Affairs, the Ministry of Health and resident technical advisers. Two districts (Wonogiri and Pekalongan) were selected for study based upon:

- a reported high coverage of TT in prospective brides
- a reasonable distance from the province capital
- a strong Islamic religious base
- a difference in economic status between the districts to give variation within the study

Meetings with officials from the Ministries of Religious Affairs and Health were held at the province, district, sub-district and village levels. Meetings with informal religious leaders (*da'i*) and local representatives of non-governmental Islamic organizations were held at the sub-district and village levels. Based upon listings at the local Religious Affairs office, interviews were held with couples who were about to be or had just been married and who were living in close proximity to the villages being visited.

Results

Establishment of the programme

In 1982, a joint directive (*Surat Keputusan*) from the provincial chief health officer (*Kakanwil Depkes*) and the provincial head of the Ministry of Religious Affairs (*Kakanwil Depag*) had been sent to all district administrative chiefs (*bupati*), district health chiefs (*dokabu*) and heads of Religious Affairs (*kakandep*). The letter urged coordinated local activities to promote TT among prospective brides. A letter from the bupati in both districts instructed local officials, including health and religious affairs officials, sub-district administrative heads (*camat*) and village chiefs (*kepala desa*) to cooperate in ensuring high immunization coverage. The letters also authorized collection of a small administrative fee (*leges*) by the health centre (*puskesmas*) from the brides-to-be, to cover programme administrative costs. A portion of this fee is apportioned to the health centre and a portion is remitted to the local office of the Ministry of Interior (*Pemda*). The cost of the vaccine was covered by the EPI programme. Of 35 districts in Central Java, 20 (57%) report continuing efforts to immunize prospective brides six years following issuance of the original directives.

TT1 immunization coverage of prospective brides was high. From April 1987 to March 1988, TT1 coverage for them was 69% in Wonogiri district and 77% in Pekalongan. Coverage with the second dose, TT2, was much lower at 30% and 18%, respectively. Over 95% of the population from both districts are Muslim and local officials considered registration of marriage by the Religious Affairs office (KUA) as virtually complete.

The marriage arrangements

The local process of marriage registration and TT promotion was also documented for the purposes of this case study. After the prospective bride's family and prospective groom notify her village chief of their desire to marry, a local liaison to the Religious Affairs office, *kaur kesra* or *modin*, is responsible for ensuring that the wedding conforms to Islamic law and is properly registered. The *modin* may accompany the bride to the health centre where she receives TT1 and pays a small *leges* fee (Rp. 1.000; $US 0.60) for which a government stamp is issued. In Wonogiri district 5% of this fee is allocated to the health centre and 95% remitted to the local Ministry of Interior office. In Pekalongan the proportion is 30% and 70%, respectively. The prospective bride receives a blue immunization card for listing the dates of her tetanus toxoid and the immunizations her child will receive. The *modin* then accompanies the couple to the sub-district KUA where their documents are authenticated and, with proof of TT1, they are listed in the book of couples to be married (*buku pendaftaran*) by the *penghulu*. After a ten-day waiting period, the couple may be married in one of their parents' homes or at the sub-district KUA office,

with the *modin* officiating. For his various services, the *modin* receives a fee from the couple based upon the distance to the couple's home and the couple's ability to pay. There is a small KUA fee (Rp. 5.000; $US 3) for marriage registration. The *penghulu* then lists the date of marriage in the KUA marriage book (*akta nikah*). A marriage certificate (*buku nikah*) may be picked up by the couple after the new bride shows proof to KUA officials of receiving TT2 from the health centre. Although *modin, penghulu* and other local Islamic authorities are not civil employees, they often receive payments from the government for many of their administrative duties.

Recording immunizations

Combined TT/child immunization cards are printed using local government funds. They are blue in colour to differentiate them from other health forms and may have Koranic verse regarding good health on the cover. All TT1 and TT2 given to prospective brides/new brides are noted in health centre records and the total TT-*CP* doses given are reported monthly on a form developed by the province. Immunization coverage of brides is not routinely calculated at the health centre level as sub-district KUA data on marriages performed is sent directly to the district KUA office and not to the Ministry of Health.

Community awareness and participation

Tetanus toxoid immunization has been actively promoted since 1985 by local branches of national religious organizations, such as Muhammadiyah, Aisyah, and Alhidayah. At the village level, weekly religious meetings are held jointly by members of all organizations. In-depth interviews with prospective or recently married couples revealed that knowledge about TT immunization came from various sources, including health centre staff, parents, village chiefs and *modin*. Many young couples did not attend weekly religious meetings, although their parents often attended. Several of the couples mistakenly thought that TT immunization was actually provision of the injectable contraceptive depo-provera, widely promoted by the national family planning programme, although this fact did not stop compliance with the compulsory pre-marriage immunization. Many couples planned to leave their village for urban areas after their weddings. Most respondents felt education on the importance of the TT immunization would be more effectively disseminated through youth organizations rather than via organized religious channels. Most couples said they had decided upon and announced their marriage plans several months before their wedding. Official interaction with the *modin* and village leaders most often occurred at the time of initial registration, approximately two weeks before the wedding date.

Discussion

The Indonesian EPI gives priority for TT immunization to pregnant women and to female primary school students (although prospective brides may be included in selected administrative areas), for reasons related to programme management and projected operating costs. Nationwide extension of the target group eligible for tetanus toxoid immunization, to include women of childbearing age, is recommended for developing countries by the World Health Organization[3] and by disease control experts.[4-7] The Central Java experience may serve to illustrate a practical method to integrate accelerated TT coverage of high-risk women into ongoing national EPI activities.

A key element to programme success was political commitment from the district administrative officers to issue formal instruction regarding TT-*CP* and administrative fee schedules. Cooperation between three ministries – Health, Religious Affairs and the Interior – at the provincial level was a prerequisite for smooth operations at more local levels. However, when left solely up to district leaders it was found that 15 of 35 districts did not implement the programme. Therefore, higher level political commitment is needed.

This case study documents the vital role which can be played by religious institutions, both governmental and non-governmental, in raising immunization coverage of high-risk women. Mobilization of religious officials and members of religious organizations tap a new source of human resources for health promotion at a time when national health funds are scarce and existing management staff are already overburdened.

Several important operational problems remain to be solved. In contrast to high TT1 coverage, TT2 coverage remains low due to several factors:

- brides often move out of the area after marriage
- couples do not need to pick up their marriage certificates if they intend to remain in the sub-district
- TT1 administration is linked to a marriage registration process which occurs customarily ten days before the wedding and does not allow for two doses one month apart
- misinformation regarding TT immunization continues

Health messages to address potential fears of vaccine recipients and providers are urgently needed to reduce drop-out between TT1 and TT2. These messages should clearly state that TT is not a family planning method and that TT does not cause birth defects if given early or late in pregnancy.[3]

This programme was found to be self-sustaining for all operational costs and effectively utilized the routine health infrastructure for administering TT vaccine. The small administrative fee helped ensure availability of basic supplies (for example, TT cards) and the continued interest by local officials. Apportionment of some of this fee for the local Ministry of Religious Affairs office could provide a self-sustaining fund to expand the role of *modin* and other local Islamic leaders in both the EPI and 'safe motherhood initiatives'. Such financial matters are decided by each district administrative chief.

All tetanus toxoid vaccine in Indonesia is manufactured domestically with funds supplied by a Presidential Development Budget (INPRES). Providing sufficient vaccine to cover fully all prospective brides would require an additional annual budget allocation of approximately $US 100 000, based on the 1988 cost of $US 0.40 for a 10-dose vial of TT vaccine and estimates of vaccine currently provided to this target group. Annual costs will decrease over time as more prospective brides receive their initial tetanus toxoid immunization as infants and/or as school children, and subsequently require only one TT booster dose prior to delivering their first child. The Ministry of Health needs to ensure that sufficient vaccine is available for acceleration of national TT immunization coverage.

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