Simultaneous injections by two immunisation providers – A SAEFVIC Case Study

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A four-year-old girl presented to her healthcare facility for routine diphtheria, tetanus, pertussis, polio (DTPa-IPV) and measles, mumps, rubella (MMR) vaccines. Her sibling also presented for routine 18-month-old measles, mumps, rubella, varicella (MMRV) vaccine. The required vaccines were prepared for both children. The four-year-old child was vaccinated first with two nurses administering the vaccines simultaneously. The MMR and MMRV vaccines were administered instead of the MMR and DTPa–IPV vaccines.

The error was immediately detected and acknowledged to the family. The mother was upset but agreed to have the DTPa–IPV administered to her four-year-old at the time of the appointment. The error was reported to SAEFVIC, the Victorian vaccine safety service. SAEFVIC initially contacted the family and again on day seven after vaccination. SAEFVIC discussed with the family the increased risk of fever and febrile seizure when MMRV vaccine is administered as the first dose of MMR containing vaccine. No adverse event following her vaccinations was reported.

Discussion

When two injections are required, some immunisation providers choose to give both injections simultaneously into each limb by two people rather than sequential administration. This case study highlights the need for a systematic approach and clear communication between immunisation providers to avoid a vaccine error. Strategies that may assist in preventing these types of errors could be to prepare the vaccines for one child at a time. Another approach could be that both vaccinators ensure they have verbalised which vaccine they have prior to administration.

Vaccine errors involving the wrong patient commonly involve family members presenting for vaccination at the same visit. This highlights the need for additional precautions when providing vaccines to more than one family member at the same visit. A strategy to consider for this scenario includes preparing a workflow system for clinical staff to routinely follow procedure when preparing and administering the vaccines. The procedure should include failsafe measures for checking the correct vaccine and dose is given to the correct person, via the correct route, at the correct time.

Currently there is insufficient evidence for or against having two immunisation providers administer vaccines at the same time rather than one vaccine after the other. Two studies were unable to demonstrate a difference in pain response in the child between simultaneous administration and sequential administration.

As a passive surveillance system, SAEFVIC relies on adverse event reporting by healthcare practitioners and consumers. While SAEFVIC may only capture a proportion of vaccine administration errors in Victoria, they are provided with an overview of the types of errors that do occur. SAEFVIC offers expert advice for individual management. Through education SAEFVIC aims to help reduce the incidence of preventable vaccine errors.

If you experience a vaccine error or adverse event following vaccination, please call SAEFVIC on 1300 882 924 (option 1) between 9.00 am – 4.00 pm or report online at SAEFVIC or fax on (03) 9345 4163.
Further reading

