

## Horizontal transmission of live vaccines

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Dear Editor,

Horizontal transmission has been rarely reported with of many live attenuated vaccines. Different mumps vaccines have shown rarely such transmission.<sup>1-5</sup> A study in US reported evidence of the transmission of rubella vaccine virus from vaccinees to two susceptible contacts.<sup>6</sup>

With live varicella vaccines, there are at least three reports. The brother of a 3-y-old vaccinated girl developed fever and a rash; horizontal transmission of vaccine virus was later confirmed.<sup>7</sup> A pregnant mother contracted the vaccine virus after her 12-mo-old boy received varicella vaccine.<sup>8</sup> Horizontal transmission was reported in 15 (17%) susceptible healthy siblings after varicella vaccination of 156 children with leukemia.<sup>9</sup> The package insert of live varicella vaccine (Varivax, Merck) states that “Post-marketing experience suggests that transmission of vaccine virus may occur rarely between healthy vaccinees who develop a varicella-like rash and healthy susceptible contacts. Transmission of vaccine virus from vaccinees who do not develop a varicella-like rash has also been reported.”<sup>10</sup>

There are two reports with rotavirus vaccines. A randomized, double-blind study on human rotavirus vaccine (Rotarix™, Glaxo) in 100 pairs of healthy twins found that the transmission rate among placebo recipients was 18.8%.<sup>11</sup> In another case, rotavirus vaccine (RotaTeq, Merck) transmission was reported from a vaccinated infant to an older, unvaccinated sibling, resulting in symptomatic rotavirus gastroenteritis.<sup>12</sup>

A study on live attenuated influenza vaccine (FluMist, MedImmune) in a Finnish day care showed that one child in the placebo group had transiently detectable vaccine virus, indicating transmission from a vaccinated child; the child remained asymptomatic.<sup>13</sup>

Despite these reports, these live vaccines are used in millions of doses across the world. Clearly, the benefit of vaccination outweighs the very low risk of vaccine virus transmission.

### Conflict of Interest

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All three authors are employed by Serum Institute of India Ltd.

### Footnotes

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