

# Commentary: Health inequity could increase in poor countries if universal HPV vaccination is not adopted

Resource rich countries such as the United Kingdom, which provide universal access to health care, already commit substantial resources to screening programmes for cervical cancer.<sup>1</sup> It is hard to propose changes to the status quo when cervical cancer control has been so successful.<sup>2</sup> Yet, no policymaker can ignore the pressure from the public, health providers, and drug companies calling for widescale adoption of vaccination for human papillomavirus (HPV). The danger is that women may “trade 80% protection from screening for 17% protection from vaccination.”<sup>1 3</sup> Will the UK allow this to happen? I think not. As Raffle points out, the UK should ensure that primary prevention by HPV vaccination is integrated with secondary prevention via screening.<sup>1</sup>

It is likely that testing for DNA of oncogenic HPV types, which can be performed on the same sample as that used for cytology, will provide a way around the low sensitivity of Papanicolaou cytology in detecting cervical precancer.<sup>4</sup> The downside of HPV DNA testing, however, is that it has a slightly higher rate of false positivity than cytology, because it detects virus in cervical cells before they show morphological abnormalities.

A more logical choice, therefore, is cytological triage of women positive for HPV DNA, which will detect those who should undergo colposcopy and biopsy and will largely obviate concerns about false

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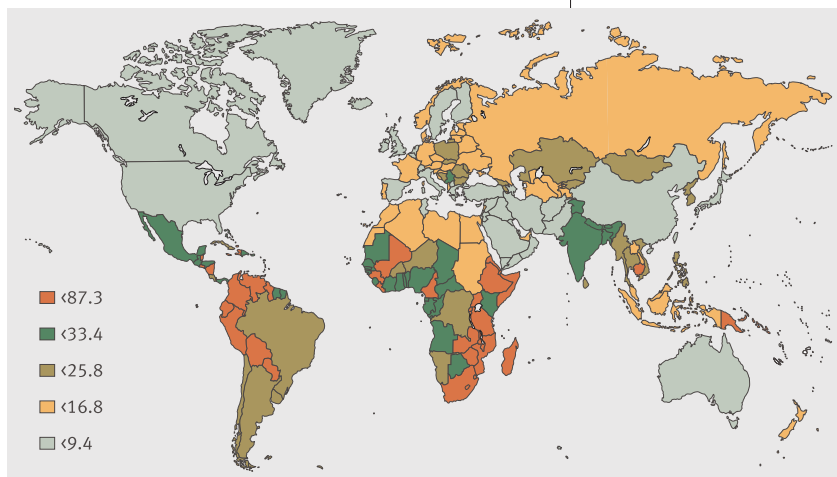
positivity. The “HPV testing followed by cytological screening” approach is gaining favour, and it may become cost effective once used as a general screening strategy, especially as longer screening intervals are possible.<sup>5 6</sup> In countries that screen every one to three years, this combined approach can achieve the same margin of safety at three to five year intervals. Countries that already adopt three to five year intervals with cytology could increase to five to seven years with the combined approach. The strategy may be most valuable when women vaccinated as teenagers reach the age for cytological screening. It would provide a surveillance system that serves two roles—monitoring duration of vaccine protection (with HPV typing for positive women) and screening for cervical cancer.<sup>6</sup>

## HPV vaccination in developing countries needs to be implemented equitably

The challenges faced by UK policymakers dwindle by comparison with those of bringing the benefits of HPV vaccination to low and medium income countries.<sup>7</sup> Cervical cancer in these countries is mainly a disease of poor women with high fertility rates, where lifetime risks can exceed 10%, although official incidence statistics may not show the true burden and geographical variation in disease (figure).<sup>8</sup>

In the most impoverished nations in Africa and Latin America, where most of the disease burden lies, cervical screening is largely available only for the small proportion of women who can afford private or managed health care in urban centres. These countries may see great benefit from HPV vaccination because they qualify for financial help in implementing immunisation programmes from the Global Alliance for Vaccines and Immunisation, which unites several governmental and supragovernmental organisations, as well as private agencies, donors, and vaccine manufacturers.<sup>9</sup> The alliance has tried innovative ways to ensure that vaccines for important diseases are widely deployed in target countries, while guaranteeing financial returns to manufacturers. The HPV vaccine is shortlisted by the alliance for pilot implementation by one such strategy—advanced market commitment.<sup>9 10</sup> None the less, because of other healthcare priorities in eligible countries, HPV vaccination may be left for a later phase of pilot implementation, after logistical and cost issues are resolved.

In middle resource countries, such as Brazil, Mexico, and India, the situation is different. Many have the training and screening infrastructures and have dedicated substantial resources to quality control and attaining wide coverage. Yet these countries still



Age standardised annual incidence rates (per 100 000 women) of invasive cervical cancer in 2002 (world population of 1960 as age distribution standard).<sup>8</sup> Average incidence is estimated mainly from data reported to the International Agency for Research on Cancer by population based tumour registries. Registry coverage is incomplete or non-existent in developing countries, and when available, it provides an over-representation of cancer occurrence in urban areas. Because cervical cancer is more common in multiparous women in resource poor regions and rural areas with no screening or tumour registries, average incidence in many Latin American, sub-Saharan, and Southeast Asian countries may underestimate the true burden of cervical cancer

have high mortality from cervical cancer because the chain of resources needed for effective cancer control has broken. These countries may not adopt universal HPV vaccination as public policy because, although they may receive some subsidies from the vaccine manufacturers, they are not eligible for financial help from the alliance, and other public health priorities will take precedence. The intense awareness campaigns by HPV vaccine manufacturers will probably result in more affluent segments of the population taking up opportunistic vaccination. This situation will probably last for as long as the cost of HPV vaccination remains at at least 10 times higher than the level that these countries' healthcare budgets can afford.

Inaction will have consequences, however; deferring policy decisions because of the high costs of vaccination may further increase socioeconomic inequity with regard to cervical cancer in medium income countries. Women targeted by vaccine promotion already have health care and benefit from annual cervical smears, so they are not at high risk of cervical cancer. These women are not candidates for vaccination because of their age, but they will learn of its benefits and may have their daughters vaccinated. Like their mothers, however, these girls from affluent families would not be at high risk for cervical cancer later in life even without vaccination.

In contrast, women without access to health promotion who cannot afford private health care and depend on the public system (where screening is low quality, sporadic, or non-existent) are being screened inadequately or not at all. They will not learn about HPV

vaccines so their daughters will not be offered vaccination. These girls—unvaccinated and unprotected by screening—look set to contribute to the statistics of cervical cancer 10-20 years later, as their mothers do today.

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## Buying cake is our job

I cried at work yesterday, for the first time in ages. Don't know why—it was probably a culmination of a number of small things, but I'd been spending the whole day running around trying to clerk patients, place cannulas, replace blocked suprapubic catheters, chase blood results, liaise with oncologists, break bad news, and talk to relatives. I should know by now that medicine is stressful and you need to multitask.

On the ward round that morning we'd seen a man with cancer who had come to us for symptom control, but it now looked as though this could become a terminal admission. We'd told him we were concerned that he was becoming weaker. He told us he still believed that God had a miracle for him. As we left his bedside he called out after us, "My daughter is coming to visit me later. It's her birthday today." He was beaming with delight.

I asked for help to sort out a surprise birthday cake. The ward clerk tried her best and made telephone calls to the domestic and volunteer department, without any luck. Everyone was busy. I went off to see another patient; the ward was particularly hectic that afternoon, and staff were flying around trying to complete various jobs. I was about to try to get a cake myself, but then another patient needed to be seen. I asked again to find someone who could go. "This man is dying," I said, "This is the last of his child's birthdays he will see. Let's not let this opportunity for something special pass by. Can one of the ward staff go, maybe?"

The reply, not meant to sound unthinking, was, "It's not our job to buy cake."

No, it's no one's "job" to buy cake. "But you're wrong," I thought,

"It is our job . . . it's our job to try and make people happy, surely." And now for the happier part—and this is why I love palliative care, because it really can bring out the best in people. I called my consultant, meaning to say that I was bogged down with work and wouldn't make it to the afternoon journal club. I ended up crying instead. "Hang on," she said, "I'm coming over." Ten minutes later she appeared on the ward, chaplain and director of mission by her side, smiling broadly. A pretty paper bag, cuddly soft toy, sweets . . . birthday cake and candles that later appeared out of nowhere (bought by one of the nurses as she went off duty) . . . a special birthday song by the father's bedside . . . smiles, laughter, a glimpse of hope, of what it's like to be normal again.

"Yes," I thought, "Buying cake is our job." Perish the day we forget that, for we lose a part of what it is that makes us human.

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