

summonses to their abusers, and in Pakistan police often refuse to register a complaint. Forensic examination in some countries focuses solely on whether or not the victim was a virgin. In Jordan officials place women victims in prison, apparently for protective custody, and in most countries the moral standing of the victim is taken into account in the judicial system. One judge in Pakistan allegedly dismissed a case because he felt that the victim had not struggled enough.⁴

Human Right Watch has identified the high level issues that need to be addressed to counter these problems. They include repealing laws that discriminate against women; eliminating police bias against female victims of sexual assault; ensuring medicolegal systems provide women with appropriate treatment and diagnosis, providing protection from further violence; ensuring that perpetrators are brought to justice; and eliminating judicial bias against women. But some of these measures are hard to implement, because they involve changing attitudes and power relationships, and governments need encouragement to implement them: women need advocates.

The international medical advisory panel of the Planned Parenthood Foundation recommends that healthcare professionals should provide that advocacy, alongside increasing their awareness of sexual violence and their skills in managing victims, providing support and care for the victims, and implementing preventive actions.¹ Providing physical care and attention and doing so with sensitivity and understanding obviously fall within the remit of clinicians, but even these are often done badly. Even if the physical consequences of rape—injury, sexually transmitted diseases, and unwanted pregnancy—are dealt with adequately, the psychological consequences are often neglected, with victims rarely being followed up or routinely referred for counselling.⁷ There are often no standard procedures for dealing with rape victims, and doctors

are often ignorant of the sampling techniques and legislative procedures required or where to refer for counselling services even if they do know about the need to investigate and treat sexually transmitted diseases.^{8,9}

Doctors also need to advocate for action as influential members of society. There needs to be a strong, coordinated, bottom up approach to the problem of sexual violence as well as a top down one. Sexual assault is still talked about only in hushed whispers, making it even harder for victims to come to terms with their ordeal and seek the help they need. We need to brush aside the taboos and talk more openly about this huge problem and the practical ways of tackling it. As well as being an individual, every rape victim is also someone's daughter, sister, or mother. It is our responsibility to become involved and take action before these cold statistics become personal.

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Bicycle helmets: it's time to use them

The evidence that they reduce head injuries is too strong to ignore

Papers p 1055

Bicycling is a worldwide activity. In both developed and developing countries it serves as an important means of transportation as well as an enjoyable recreational activity for adults and children. Thus, injuries related to bicycling are comparatively common, and head injuries account for one third of visits to emergency departments, up to two thirds of hospitalisations, and three quarters of deaths.¹ Head injuries also carry a substantial risk of long term disability. Thus, preventing head injuries associated with this common, worldwide activity is important.

Safety helmets for bicycling have been available for at least 20 years. Although randomised controlled trials have become the gold standard for providing evidence of the effectiveness of clinical interventions, these trials are not feasible for examining whether helmets prevent head injuries. Given that the rate of head injury is about 20 injuries per 100 000 people, a randomised controlled trial would need to involve tens

of thousands of people.² Evidence for the effectiveness of helmets has come from two other types of studies: case-control studies, in which the proportion of people wearing helmets among cyclists with head injuries is compared with that of cyclists without head injuries, and ecological studies examining changes in the rate of head injury over time among populations wearing helmets and those not wearing helmets.

The strongest evidence for the effectiveness of helmets comes from case-control studies; this design is one of the cornerstones of modern epidemiology. A systematic review of five case-control studies, published in the *Cochrane Library*, found that helmets reduced the risk by 63-88% for head, brain, and severe brain injury among cyclists of all ages.¹ Four of the studies controlled for a series of important covariates.³⁻⁶ Helmets seemed equally effective in reducing injuries in crashes involving motor vehicles and in accidents associated with falls and other causes.

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In this week's journal Cook and Shiekh (p 1055) describe a study that used an ecological time series analysis.⁷ Examining all admissions to NHS hospitals in England over a four year period, the authors found that head injuries as a proportion of monthly admissions for trauma related to bicycles fell from 40% in 1991-2 to 28% in 1994-5 while total emergency admissions for trauma related to bicycles did not change. These changes showed a consistent year to year trend in which the proportion of head injuries related to trauma from bicycles became lower in each successive year. Changes occurred in all age groups and are ascribed by the authors to an increase in the use of helmets. Similar findings from ecological studies have also been reported in the United States, New Zealand, and Australia⁸⁻¹⁰; these findings were associated with an increased use of helmets occurring as a result of educational and legislative initiatives.

Despite this large body of evidence on the effectiveness of helmets in preventing head injuries in cyclists and their beneficial effects for populations of cyclists, critics, especially in the United Kingdom, continue to question the usefulness of helmets. Their criticisms fall into two main categories: "risk homeostasis" and lack of adjustment for other confounders. Hillman has argued that while helmets may offer some inherent protection to cyclists there is no overall benefit because cyclists who wear helmets ride in a less cautious manner so that their overall risk of injury is unchanged.¹¹ This theory of risk homeostasis has been discussed for decades, but the evidence that it applies to helmet use and bicycling is non-existent.¹² The other criticism is that case-control studies on helmets have not adequately controlled for all potential confounders, especially unmeasured factors such as differential risk taking behaviour in cases and controls. Adequate adjustment for differences between cases and controls is important for the validity of any case-control study. Four of the five studies in the Cochrane review controlled for potential differences between cases and controls, such as age and severity of the crash.³⁻⁵⁻⁶ Crash severity can be used as a proxy for the hypothesised effects of risk taking behaviour. The magnitude of the protective effect of helmets found by these studies (threefold to eightfold) makes it clear that unmeasured confounders cannot explain the differences in the risk of injury between cyclists who wear helmets and those who do not.

Healthcare providers and public policy makers have a duty to promote the health of the public and to base their recommendations on evidence of effectiveness. The evidence that bicycle helmets prevent head injuries is as strong as that for any injury prevention programme. While many programmes have their critics, the weight of the evidence for the effectiveness of helmets is strong; the evidence for a lack of protection is weak, circumstantial, and largely based on rhetoric. Further delays in promoting the use of helmets will be measured in the number of lives ruined by the devastating consequences of preventable brain injury.

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