ules than in white patients, which suggests possible molecular heterogeneity and potential differential responses to treatment. Although larger studies are needed, nemolizumab had few adverse effects, with gastrointestinal symptoms being more frequent in the nemolizumab group than in the placebo group.

The rapid action and sustained effectiveness of nemolizumab in this phase 2 trial are probably due to its neuroimmune modulatory properties. Interleukin-31 has been regarded as an itch cytokine; in multiple chronic pruritic skin diseases, it is up-regulated in the blood and can induce additional proinflammatory cytokines. Interleukin-31 signal transduction occurs through a heterodimeric receptor complex composed of interleukin-31 receptor A and the oncostatin M receptor beta subunit (OSMRβ). Looking beyond the skin, expression of interleukin-31 receptor A appears to be highest in sensory neurons in the dorsal-root ganglion. Interleukin-31–responsive neurons in the dorsal-root ganglion co-express sensors of itch and mediators of neurogenic inflammation, including transient receptor potential vanilloid 1 (TRPV1) and neuropeptide natriuretic polypeptide b (NPPB). Interleukin-31 also induces phosphorylation of JAK1 and JAK2, which are known mediators of the itch signaling cascade.

With this potential new era in prurigo nodularis, efforts are needed to increase disease awareness as new therapeutic agents become available. The results of this trial provide hope for this population of patients with intractable itch.

Disclosure forms provided by the author are available with the full text of this editorial at NEJM.org.

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Lower Blood Pressure in South Asia? Trial Evidence


The report by Jafar et al.1 in this issue of the Journal suggests that a low-cost intervention, if scaled up, “might translate into substantial reductions in premature deaths and disability.” This potential benefit arises from the reduction in systolic blood pressure shown in a cluster-randomized trial involving 2645 adults with hypertension from rural districts in Bangladesh, Pakistan, and Sri Lanka, who received an inexpensive multicomponent intervention or usual care. The multicomponent intervention included regular home visits from trained community health workers who monitored blood pressure and provided health education and counseling. In addition, local physicians were trained to follow a simple treatment algorithm to provide...
medications, and care coordination was incorporated into existing public-sector programs.

After 2 years of follow-up, the mean reduction in systolic blood pressure was 5.2 mm Hg greater in the intervention group than in the control group (95% confidence interval, 3.2 to 7.1; P<0.001). Benefits were also observed with respect to diastolic blood-pressure control and cardiovascular mortality.

Notably, the intervention was estimated to be less than $11 (U.S. dollars) per patient per year. These results need to be considered in the context of the 10.4 million annual deaths attributable to raised blood pressure. Most of the adverse events that are associated with raised blood pressure occur in low- and middle-income countries, where awareness of hypertension and treatment and control rates are very low. The blood-pressure reduction that was observed in the COBRA-BPS (Control of Blood Pressure and Risk Attenuation—Bangladesh, Pakistan, and Sri Lanka) trial might be expected to translate into 15 to 25% fewer cardiovascular events.

The blood-pressure reduction was achieved in 30 clusters of 250 to 300 households in rural communities across three countries, which supports the generalizability of the findings (at least to South Asia), and the 90% retention rate among recruits was exemplary. Training of the community health workers who were responsible for much of the intervention was short and simple, but the unique, inexpensive attribute of the trial was the pragmatic incorporation of hypertension management into the existing public-sector framework.

The relative reduction of 5.2 mm Hg in systolic blood pressure that was observed probably underestimates real potential benefits, because the usual care received in the trial was superior to that provided in many parts of low- and middle-income countries. Furthermore, if currently recommended blood-pressure targets (<130/80 mm Hg) had been in force, lower blood pressures and hence greater cardiovascular benefits could reasonably be expected.

Some aspects of the intervention require clarification if it is to be implemented successfully elsewhere. The percentage of persons who agreed to participate among those eligible for the trial is not reported, which could hide a biased sample. Furthermore, almost two thirds of the participants were female, which might reflect the demographic characteristics of the regions studied or a biased sample. The high prevalence of diabetes (26%) is not so unusual in South Asia, but 42% of the participants had chronic kidney disease, which seems remarkably high and may affect generalizability.

The “appropriate use of medications” is suggested to have played a substantive role in the lowering of blood pressure, but the reported number of antihypertensive drugs per participant being 0.11 higher in the intervention group than in the control group would be expected to generate very little blood-pressure lowering. The reported increase in the daily dose by 6.3 mg is unhelpful, since standard doses of commonly used agents vary from 1.5 to 300 mg; it would have been more helpful to report the changes in the proportions of mean standard doses used. Although adherence reportedly improved, no mention is made of the possible benefits associated with nonpharmacologic measures, nor of the relative benefits of the specific drugs (the names of which are also not reported) that were used in the two groups, which may have been critical.

What constituted “compensation for additional health services and targeted subsidiaries” as one of the intervention components is opaque, if potentially critical to the success of the intervention. Presumably, details will follow in the cost-effectiveness analysis currently in preparation. Potentially linked to this compensation is how randomization status was concealed from the trial staff. Although possible for the initial screening, concealing randomization status from the community health workers during follow-up must have been extremely difficult, particularly if they measured blood pressures and provided health education.

There was a difference of 2 mm Hg in systolic blood pressure between the two randomized groups at baseline — presumably by chance. The fact that the analysis was designed to adjust for such a difference provides some reassurance.

These potential issues notwithstanding, it is hoped that the authors are successful with their
ongoing discussions with relevant health departments and national committees to facilitate the scale-up of the interventions evaluated. Meanwhile, along with improved availability, distribution, and initiation of validated drug classes, other key efforts are also required to reduce the dreadful health burden caused by raised blood pressure — namely, population-based prevention through improved diets and lifestyle and enhanced routine screening of blood pressure, as promoted by May Measurement Month.4

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Another Decade, Another Coronavirus

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For the third time in as many decades, a zoonotic coronavirus has crossed species to infect human populations. This virus, provisionally called 2019-nCoV, was first identified in Wuhan, China, in persons exposed to a seafood or wet market. The rapid response of the Chinese public health, clinical, and scientific communities facilitated recognition of the clinical disease and initial understanding of the epidemiology of the infection. First reports indicated that human-to-human transmission was limited or nonexistent, but we now know that such transmission occurs, although to what extent remains unknown. Like outbreaks caused by two other pathogenic human respiratory coronaviruses (severe acute respiratory syndrome coronavirus [SARS-CoV] and Middle East respiratory syndrome coronavirus [MERS-CoV]), 2019-nCoV causes respiratory disease that is often severe.1 As of January 24, 2020, there were more than 800 reported cases, with a mortality rate of 3% (https://promedmail.org/).

As now reported in the Journal, Zhu et al.2 have identified and characterized 2019-nCoV. The viral genome has been sequenced, and these results in conjunction with other reports show that it is 75 to 80% identical to the SARS-CoV and even more closely related to several bat coronaviruses.3 It can be propagated in the same cells that are useful for growing SARS-CoV and MERS-CoV, but notably, 2019-nCoV grows better in primary human airway epithelial cells than in standard tissue-culture cells, unlike SARS-CoV or MERS-CoV. Identification of the virus will allow the development of reagents to address key unknowns about this new coronavirus infection and guide the development of antiviral therapies. First, knowing the sequence of the