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Changing the faces of medicine: It starts at the top

Diversity of physicians is an essential aspect of a high-quality, safe, and inclusive healthcare system. The well-described lack of racial diversity of physicians not only contributes to worse patient outcomes for racial minority patients, including greater mortality and lower patient satisfaction, but also contributes to a less safe workplace culture for all healthcare workers.

“We propose that **provincial medical organizations and medical schools in Alberta** adopt hiring policies with the aim of diversifying medical leadership using **a threshold target of 30 per cent of applicants from underrepresented groups**.”

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The Issue

Diversity of physicians is an essential aspect of a high-quality, safe, and inclusive healthcare system.[1, 2] The well-described lack of racial diversity of physicians not only contributes to worse patient outcomes for racial minority patients, including greater mortality and lower patient satisfaction, but also contributes to a less safe workplace culture for healthcare workers.[3]

A long-standing, pervasive lack of diversity in medicine

Despite the documented importance of diversity in medicine, women and people from racial minority groups are underrepresented in many medical specialties, and among medical leadership.[4,5,6] Physicians from other underrepresented groups, including Indigenous people, people with disabilities and LGBTQ+ community members, are also present in low numbers relative to their proportion in the general population.[7,8] Even worse, the numbers of physicians and medical leaders from these groups are often unmeasured.

Medical leadership is particularly important to ignite change and refers to the guiding roles physicians play in institutions to steer organization direction, and/or health system improvements and decisions.[9]

There have been decades of initiatives and "calls to action" to improve the diversity of medicine and medical leadership with little improvement.[10,11] Effective, evidence-based initiatives must be urgently

[1] Greenwood BN, Hardeman RR, Huang L, Sojourner A. Physician-patient racial concordance and disparities in birthing mortality for newborns. Proc Natl Acad Sci U S A. 2020;117(35):21194-200.
[2] McLane P, Bill L, Barnabe C. First Nations members' emergency department experiences in Alberta: a qualitative study. Canadian Journal of Emergency Medicine. 2021;23:63-74.
[3] Lucey CR, Navarro R, King TE, Jr. Lessons From an Educational Never Event. JAMA Intern Med. 2017;177(10):1415-6.
[4] Colleges AAoM. U.S. Medical School Deans by Dean Type and Race/Ethnicity (URM vs. non-URM). American Association of Medical Colleges; 2021 January 12, 2021.
[5] Canada TAoFoMo. Governance 2018
[6] Association CM. CMA Board of Directors 2019
[7] Colleges AoAM. Matriculating student questionnaire. Association of American Medical Colleges; 2018
[8] Nouri Z, Dill MJ, Conrad SS, Moreland CJ, Meeks LM. Estimated Prevalence of US Physicians With Disabilities. JAMA Netw Open. 2021;4(3):e211254.
[9] Chen, TY. Medical leadership: An important and required competency for medical students. Tzu Chi Med J. 2018;30(2): 66-70.
[10] Ruzycki SM, Brown A, Bharwani A, Freeman GF. Gender-based disparities in medicine: a theoretical framework for understanding opposition to equity and equality. BMJ Leader. 2021.
[11] Roach P, Barnabe C, Ahmed S, Holroyd-Leduc J, Ruzycki SM. Diversity of the Albertan physician workforce: a cross-sectional survey. Submitted to the Canadian Medical Association Journal. 2021.

implemented and evaluated to address the exclusion of women and other underrepresented groups in medicine.

Background

Statistics Canada 2016 census data indicated 22.3% of Canadians identified as people of color, while the Jasmin Roy Foundation survey data noted 13% of Canadians identified as belonging to the LGBTG+ community.[13,14] In contrast, recent data from Alberta suggests that more than 50% of physicians are white and less than 3% of physicians belong to the LGBTQ+ community.[15] Current College of Physicians and Surgeons of Alberta data notes that 4,572 physicians in the province are female and 6,580 are male.[16]

Did you know...

3.5% of medical students Canada are Indigenous compared to 7.4% of the population

>60% of medical students are from the top tertile of socioeconomic status

Khan et al, 2020

This disparity is wider in leadership and academic positions; 65% of all physician leaders and two-thirds of those with academic positions were white. Similarly, cisgender men are overrepresented in leadership and senior academic roles relative to their proportion in the physician workforce.[17]

Did you know...

Medical students in Canada are over-representative of higher-income groups and under-representative of populations of Indigenous, Black, and Filipino ethnicities in Canada.

Young et al, 2012

So-called underrepresented groups clearly have a large presence in Canadian society and have important contributions to make to medicine, and yet they are historically underrepresented as physicians

[12] Khan R, Pramian T, Kang J, Gustafson J, Sibbald S. Demographic and socioeconomic characteristics of Canadian medical students: A cross-sectional survey. BMC Medical Education, 2020;20:1-8.
[13] Canada S. Data tables, 2016 Census. Visible Minority (15), Highest Certificate, Diploma or Degree (15), Generation Status (4), Age (9) and Sex (3) for the Population Aged 15 Years and Over in Private Households of Canada, Provinces and Territories and Census Metropolitan Areas, 2016 Census - 25% Sample Data. Statistics Canada; 2019.
[14] Jasmin Roy Foundation. (2017). The values, needs and realities of LGBT people in Canada in 2017.
[15] Roach P, Barnabe C, Ahmed S, Holroyd-Leduc J, Ruzycki SM. Diversity of the Albertan physician workforce: a cross-sectional survey. Submitted to the Canadian Medical Association Journal. 2021.
[16] College of Physicians and Surgeons of Alberta: Quarterly Update on Physician Resources for the three months, and year, ended Sept 30, 2020.
[17] Roach P, Barnabe C, Ahmed S, Holroyd-Leduc J, Ruzycki SM. Diversity of the Albertan physician workforce: a cross-sectional survey. Submitted to the Canadian Medical Association Journal. 2021.

and as physician leaders. It is a matter of public policy that representation and diversity in healthcare is reflective of the population.

A lack of diversity perpetuates a lack of diversity

Increasing diversity is associated with reduced sexism and harassment in government, law firms, and business.[19] Diversity in classrooms can also benefit students by improving their intellectual engagement, structural competency and racial understanding.

A lack of race or gender concordant career mentorship for trainees is associated with lower specialty selection, suggesting that a lack of diversity in a medical specialty perpetuates ongoing lack of diversity.[20]

Workforce diversity can also reduce documented health disparities for Indigenous and Black patients. Multiple studies have demonstrated race concordance led to higher patient ratings of satisfaction and more positive judgements of physicians' participatory decision-making style.[21]

Neonatal mortality is **lower** when Black newborn babies are cared for by Black doctors.

Greenwood et al, 2020

While diversity is increasing in medical schools, most medical leaders in Alberta are white cisgender men.[22] Programs and selection methods that encourage racial diversity in medical education need to be a priority. Diverse representation in leadership cannot exist without a diverse applicant pool.

[18] Young ME, Razack S, Hanson MD, Slade S, Varpio L, Dore KL, McKnight D. Calling for a broader conceptualization of diversity: surface and deep diversity in four Canadian medical schools. Academic Medicine. 2010; 87(11).
[19] Beaman L CR, Duflo E, Pande R, Topalova P. Powerful women: does exposure reduce bias? Quarterly Journal of Economics. 2009;124(4):1497-540.
[20] Ruzycki SM, Franceschet S, Brown A. Making medical leadership more diverse. British Medical Journal. 2021;373:n945.
[21] Greenwood BN, Hardeman RR, Huang L, Sojourner A. Physician-patient racial concordance and disparities in birthing mortality for newborns. Proc Natl Acad Sci U S A. 2020;117(35):21194-200.
[22] Roach P, Barnabe C, Ahmed S, Holroyd-Leduc J, Ruzycki SM. Diversity of the Albertan physician workforce: a cross-sectional survey. Submitted to the Canadian Medical Association Journal. 2021.

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Faculties of Medicine Deans are **women**

2 of 17

Faculties of Medicine Deans are **people of colour**

Source: The Association of Faculties of Medicine of Canada

Medical leaders can't solve problems that they don't see

Ample evidence gathered by our research team and others demonstrates that the barriers faced by patients, physicians, and trainees from marginalized backgrounds are invisible to current medical leadership.[24]

For example, data collected by our team demonstrated that local physician moms had no dedicated, private spaces to pump breast milk in Alberta hospitals - despite the fact that appropriate space for lactation is a requirement of all workplaces and 70% of healthcare workers in Alberta are women.[25] This gap was quickly fixed once pointed out to AHS leadership – a group of men who had not noticed that there were no lactation spaces because they had never needed to use them. This example illustrates why it is important for decision makers to share relevant characteristics with those affected by their decisions.

Did you know?

The **Alberta Human Rights Act** legislates that "appropriate accommodations must be made to support lactation at work" - despite this, the Foothills Medical Centre did not have a lactation room for employees **until 2019.**

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[23] Association of Faculties of Medicine of Canada. Board of Directors. 2021.

[24] Ruzycki SM, Freeman, G.F., Bharwani A., Brown, A. Association of physician characteristics with perceptions and experiences of gender equity in an academic internal medicine department. JAMA Netw Open. 2019;2(11):e1915165.

[25] Mills G, Ruzycki SM, Sabourin J, Dance E. Experiences of breastfeeding among women residents in Alberta: a cross-sectional survey. Postgrad Med. 2021;133(1):42-7.

The lack of diversity in medical leadership may also explain why there has been a lack of safe, effective harassment reporting mechanisms available for physicians and trainees despite documentation of high rates of sexual harassment of women physicians since the 1960s, including a 2018 report by the National Academies of Science, Engineering and Medicine that found medicine had the greatest rates of sexual harassment of all STEM fields.[26,27]

Similarly, the lack of women and racial minority physicians in medical leadership may explain why there are no onsite childcare facilities for employees in Alberta hospitals, and why racism is under recognized among medical leadership as a contributor to poor patient outcomes and unsafe work culture – these issues are less visible to those who do not experience the worse outcomes, and therefore become less urgent to solve.

Over time, these barriers – lack of lactation spaces, lack of childcare facilities, lack of safe and effective ways to address harassment at work – add up for women and underrepresented groups, contributing to less interest and availability to pursue leadership and decision-making roles. And this does not even account for implicit and explicit bias, documented by our study team among Alberta physicians, which restricts entering these positions for marginalized physicians.[28]

Policy Options

While multiple solutions to increase diversity in medical leadership have been proposed, most are hindered by lack of evidence of effectiveness or require long time horizons to see effect. Examples of initiatives include mentorship programs, minority faculty development programs, outreach programs to identify and train promising candidates, research incentives, and empathy and bias training for leaders to better understand issues unique to under-represented groups.

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[26] Martel K, Smyth P, Dhillon M, Rabi DM, Wirtzfeld D, Ruzycki SM. Harassment reporting mechanisms for physicians and medical trainees in Alberta: an environmental scan. Canadian Health Policy Journal. 2021(July 2021).

[27] National Academies of Sciences E, and Medicine. Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine. Washington, D.C.: The National Academies; 2018.

[28] Roach P, Ruzycki SM, Holroyd-Leduc J, Ahmed S, Barnabe C. Explicit and implicit anti-Indigenous bias among Albertan physicians. Submitted. 2021.

For example, an American study of 36 medical schools with faculty development programs found that on average such programs were not associated with changes in underrepresented minority representation, recruitment or promotion. Medical schools with programs of longer duration and greater intensity were, however, associated with greater increases in underrepresented minority faculty representation.[29]

The more pressing issue with such programs apart from modest (if any) effect is, however, the margin of time also required to see possible results. It is for that reason that policy options that are more direct, definite and, that have immediate results, are encouraged. One such group of policies is **diversity targets** or quotas as they are commonly referred to in the literature. Diversity targets provide a range of options and processes for organizations to choose from.

Diversity targets are:

- ✓ Immediate
- ✓ Effective
- ✓ Direct

Unlike other measures to improve representation, diversity target policies work directly and quickly to increase representation by requiring inclusion of people from marginalized groups in leadership and decision-making processes.

Diversity targets are used in governments and businesses around the world, including American businesses, and governments in Europe, South America, and the United Kingdom. [30] [31] [32] The National Football League, for example, adopted the Rooney Rule, which is a diversity target policy that requires businesses to interview a minimum number of women and minority applicants.[33]

[29] Guevara J, Adanga E, Avakame E, Brooks B.C. Minority Faculty Development Programs and Underrepresented Minority Faculty Representation at US Medical Schools. JAMA. 2013;310(21):2297-304.
[30] Maille C. Feminist interventions in political representation in the United States and Canada: Training programs and legal quotas. European Journal of American Studies. 2015;10(1).
[31] Rund J, Ramonas A. California Board Diversity Bill Enters Unchartered Legal Waters. Bloomberg Law. 2020.
[32] Assistance IfDaE. Gender Quotas Database IDEA2013
[33] Patra K. NFL instituting changes to Rooney Rule. 2020

Targeted hiring strategies have been proven to:

- directly and quickly increase representation
- reduce barriers for marginalized groups
- improve public perception by majority and minority demographic groups

Diversity target policies have been associated with reduced sexism, increased legislation that benefits women and families, and improved quality of political candidates. [34] [35] [36] [37] [38] [39] Studies show that, where adopted, targeted hiring policies are viewed favourably by the citizens and workers.

[34] Phillips A. The Politics of Presence. Oxford, editor: University Press Scholarship; 1998.
[35] Mansbridge J. Should Blacks represent Blacks and Women represent Women? A contingent yes. The Journal of Politics. 1999;61(3):628-57.
[36] Krook ML. Contesting gender quotas: dynamics of resistance. Politics, Groups and Identities. 2016;4(2):286-3.
[37] Besley T, Folke O, Persson T, Rickne J. Gender Quotas and the Crisis of the Mediocre Man: Theory and Evidence from Sweden. American Economic Association. 2017;107(8):2204-42.
[38] Dobbin F, Schrage D, Kalev A. Rage against the iron cage: the varied effects of bureaucratic personnel reforms on diversity. American Sociological Association. 2015;80(5):1014-44.
[39] Kalev A, Dobbin F, Kelly E. Best Practices or Best Guesses? Assessing the Efficacy of Corporate Affirmative Action and Diversity Policies. American Sociological Review. 2006;71:589-617.

Diversity targets can be designed to match the needs and goals of an organization

WHAT DOES TARGETED HIRING LOOK LIKE?

Mandatory quotas require a minimum threshold of the target group & penalties occur if these thresholds are not met.

Voluntary quotas provide incentives to organizations that meet thresholds.

Candidate selection quotas require a minimum threshold of applicants for a position to come from underrepresented groups without mandating those who are ultimately selected.

Thresholds differ based on the goals of the diversity target policy:

- 30% of team members belonging to underrepresented groups is thought to be the 'critical mass' needed to remove barriers for these groups[40]
- Matching the diversity target threshold of leadership to the proportion of underrepresented groups in the general population might be considered the most 'fair' policy 41,42
- Matching the diversity target threshold of leadership to the proportion of underrepresented groups in the organization may be the most feasible policy

[40] Helitzer DL, Newbill SL, Cardinali G, Morahan PS, Chang S, Magrane D. Changing the Culture of Academic Medicine: Critical Mass or Critical Actors? J Womens Health (Larchmt). 2017;26(5):540-8.
[41] Lett LA, Murdock HM, Orji WU, Aysola J, Sebro R. Trends in racial/ethnic representation among US medical students. JAMA Netw Open. 2019;2(9):e1910490.
[42] AAMC. Underrepresented in Medicine: Definition 2004

Recommendations

We propose that **provincial medical organizations and medical schools in Alberta** adopt hiring policies with the aim of diversifying medical leadership using a **threshold target of 30% of applicants coming from underrepresented groups**.

RECOMMENDATION #1

Alberta medical organizations should establish **diversity targets** for the applicant pool for medical leadership.

RECOMMENDATION #2

The diversity of medical leadership should be **monitored** and publicly **reported**. The policy should be routinely reviewed to ensure leadership reflects the diversity of the general population.

RECOMMENDATION #3

Organizations should **monitor for unintended consequences** of targeted hiring policies, including tokenism and increased discrimination, and **respond accordingly**.

Targeted hiring to diversify leadership

Groups or organizations in Alberta that are involved in physician decision making, advocacy, planning, negotiating, licensing and/or workforce management should implement the use of targeted hiring to diversify their leadership. This could include, but is not limited to, organizations such as: University of Alberta Faculty of Medicine and Dentistry, University of Calgary Cumming School of Medicine, Alberta Health Services, College of Physicians and Surgeons of Alberta, provincial and regional medical groups and Provincial Association of Resident Physicians of Alberta.

Organizations should determine how best to approach diversity targets at their institution, carefully considering the numerous factors involved. Increasing diversity at top levels of leadership will however yield the greatest results. For some groups it may be more practical or feasible to start diversification with middle tier leadership positions. Organizations should consider hiring recruitment specialists to support the process to ensure thoughtful design and dedicated recruitment strategies.

How can diversity targets be implemented?

Medical schools and medical organizations in Alberta should implement incentivized targeted hiring for all leadership and decision-making roles and committees. The threshold for applicants from underrepresented groups should be at least 30%. Increasing the proportion of applicants who are from underrepresented groups to at least 30% of the candidate pool increases the likelihood that someone from one of these groups will be selected.[43]

At least 30%

of applicants interviewed should be from underrepresented groups

All protected characteristics from the Canadian Charter of Rights and Freedoms should be considered in defining ‘underrepresented’. Applicants may voluntarily report their demographics to an external recruitment committee that is not involved in the selection process.

Medical organizations adhering to this policy should transparently and regularly report the diversity of their leaders, decision-makers, and committees to their membership so that the effectiveness of this policy can be monitored.

> “Any economist will tell you that diversification is the key to a secure portfolio. Any geneticist will tell you that diversification is key to maintaining hardy species of plants and animals. But somehow, when it comes to racial politics, the virtues of diversity are lost. **Diversity in health care is not about fair representation - it is about saving lives.**”
>
> – Commissioner George Strait, Associate Vice Chancellor for Public Affairs, University of California, Berkeley

Diverse applicants can be intentionally recruited using national and provincial alumni networks, including special interest groups (e.g., the Black Physicians of Canada). Organizations should follow best practices for developing selection criteria, job postings, nomination processes, and application processes for promoting diversity – for example, certain phrasing in a job posting may deter candidates from

[43] Isaac C, Lee B, Carnes M. Interventions that affect gender bias in hiring: a systematic review. Acad Med. 2009;84(10):1440-6.18

underrepresented groups, and tokenistic application packages may signal an unfriendly or inequitable organizational culture.

Clarity and transparency are essential in recruitment and nomination processes, job descriptions and requirements, terms of reference, and interview processes. Selection committees should also be evaluated to ensure best practices for diverse and bias-free hiring are also present.

When a suitably diverse applicant pool cannot be identified, organizations should re-evaluate their job posting or position to attract talented candidates. For example, an organization may split a leadership position into a dyad so that two people may combine experience and skill. Organizations could consider consultation with underrepresented groups to understand how they may be unintentionally deterring candidates – for example, inflexible working hours may exclude physician mothers or a rural headquarters may not be considered safe for a gender minority applicant.

Organizations should monitor for unintended consequences, such as tokenistic applications, by re-evaluating the impact of the targeted hiring policy after three years or interviewing applicants about their experiences. Tokenism can be addressed by cluster hiring, where multiple members of an underrepresented group are hired together such as an entire research team or clinical team.

Incentives may vary, according to the organization that adopts the diversity targets. For example, tax rebates, grants or stipends, merit increases, or institutional recognition could be used for leaders or organizations that increase their candidate diversity.

Merit is a myth

Many opponents of diversity and quotas invoke arguments about 'merit' – the idea that those who are selected are inherently 'better' or 'more deserving' than those who are not selected.[44] [45] [46]

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[44] Maille C. Feminist interventions in political representation in the United States and Canada: Training programs and legal quotas. European Journal of American Studies. 2015;10(1).
[45] Mansbridge J. Should Blacks represent Blacks and Women represent Women? A contingent yes. The Journal of Politics. 1999;61(3):628-57.
[46] Krook ML. Contesting gender quotas: dynamics of resistance. Politics, Groups and Identities. 2016;4(2):286-3.

Studies have shown that, despite using **identical** resumes and credentials:

John is more likely to be hired than Jane & Steven is more likely to be hired than Jamal

Showing how women and racial minority groups face **unearned disadvantages** in hiring.

These arguments ignore **decades** of peer-reviewed and anecdotal evidence of bias and discrimination in hiring of physicians and selection of medical students.[47]

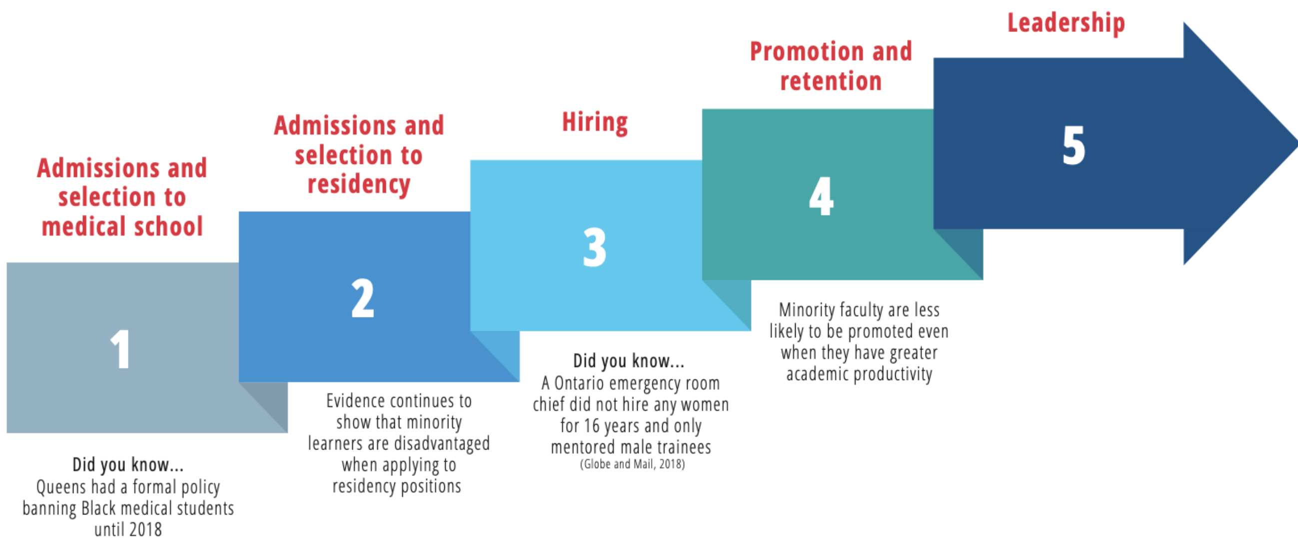
These arguments further ignore the value of diverse teams – that hiring only the 'best' individuals may not lead to assembling the best team. Evidence from multiple settings – including business, politics, and medicine – reinforces the values of diverse teams.

Diversity targets implemented for political parties in Europe demonstrated that the quality of all candidates increased after diversity targets were implemented, suggesting that diversity targets **increase** rather than decrease the so-called merit of applicants.[48]

Despite legal challenges, diversity targets have been found constitutional in Canada, the U.S., Europe, and the U.K.[49] Voluntary candidate-selection diversity targets or quotas are the most legally defensible design, but mandatory reserved position diversity targets or quotas have been successfully defended in many settings.[50,51]

[47] Klein R, Julian KA, Snyder ED, Koch J, Ufere NN, Volerman A, et al. Gender Bias in Resident Assessment in Graduate Medical Education: Review of the Literature. J Gen Intern Med. 2019.
[48] Besley T, Folke O, Persson T, Rickne J. Gender Quotas and the Crisis of the Mediocre Man: Theory and Evidence from Sweden. American Economic Association. 2017;107(8):2204-42.
[49] Blake V. Affirmative action and medical school admissions. AMA Journal of Ethics. 2012;14(12):1003-7.
[50] Somani AA. The use of gender quotas in America: are voluntary party quotas the way to go? ; 2013.
[51] Ovseiko PV, Taylor M, Gilligan RE, Birks J, Elhussein L, Rogers M, et al. Effect of Athena SWAN funding incentives on women's research leadership. BMJ. 2020;371:m3975.

Unearned disadvantages in hiring and selection faced by women and racial minority groups are unfair, and diversity targets can counteract the effect of these biases.



Conclusion

The lack of diversity in medicine is a long-standing and prevalent issue that has significant health implications for patients and physicians. Previous interventions applied to increase diversity have been unsuccessful. Direct action is needed to urgently and definitively increase the diversity of physicians and medical leadership.

Diversity targets (or quotas, as they are commonly referred to in literature) have been used in corporations and governments around the world to increase the diversity in leadership. Implementation of targeted hiring has improved policies, the quality of candidates, and overall decision-making.

THE BOTTOM LINE

Targeted hiring policies are common in business and politics

Targeted hiring policies are used in Europe, Asia, and the United States

Targeted hiring policies successfully increase diversity of leadership

An incentivized candidate-selection diversity target process will increase representation of physicians from marginalized groups in medicine from the bottom to the top. The diversity of physicians, and their leadership, should be monitored and iteratively improved to meet the needs of Albertans.

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