Two people are diagnosed with the same chronic condition. One attends every follow-up appointment. The other misses several visits. It's easy to label that as non-compliance. But what if every appointment requires two buses, childcare arrangements, and time away from work? Health outcomes are shaped by more than biology. They are shaped by the systems people must navigate every day.

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SafePolyMed.eu

Improving Safety in Polymedication by Managing Drug-Drug-Gene Interactions

Safety in Polypharmacy training 2026

Session 4 - Video 2/2

Patient Vulnerability Factors

Health Equity and the Hidden Drivers of Vulnerability

Rachel Giles, Nadia Malliou, Bojana Mirosavljevich, Olga Millán

LeukaNET Leukemia Advocates Network

Patvocates PATIENT ENGAGEMENT IS IN OUR DNA

Funded by the European Union

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Vulnerable vs. Underserved

VULNERABLE

Internal or individual factors

- Older adults
- Children
- Pregnant women
- People with disabilities.

UNDERSERVED

External and systemic barriers

- Ethnic minorities
- Rural residents
- LGBTQIA+ groups



The way you see the problem, shapes the solution

Clark, B., & Preto, N. (2018). Exploring the concept of vulnerability in health care. CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne, 190(11), E308–E309. https://doi.org/10.1503/cmaj.180242

The scale of the problem

1 in 10

patients harmed during healthcare, globally

3M+

deaths annually due to unsafe care

4 in 100

die from unsafe care in low- to middle-income countries

1 in 20

patients exposed to preventable harm

~50%

preventable harm is linked to medications

Panagioti M, Khan K, Keers R N, Abuzour A, Phipps D, Kontopantelis E et al. Prevalence, severity, and nature of preventable patient harm across medical care settings: systematic review and meta-analysis BMJ 2019; 366 :l4185 doi:10.1136/bmj.l4185

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Why does health inequity happen?

Social gradient

Lower socioeconomic status tends to correlate with greater unmet health needs and worse outcomes

Data & measurement gaps

There are groups (e.g. homeless indigenous) underrepresented in routine health data. It is harder to identify and address their needs.

Structural & institutional bias

Patients not being taken seriously, facing stereotypes, or encountering racism, sexism, ageism, or ableism

Access barriers

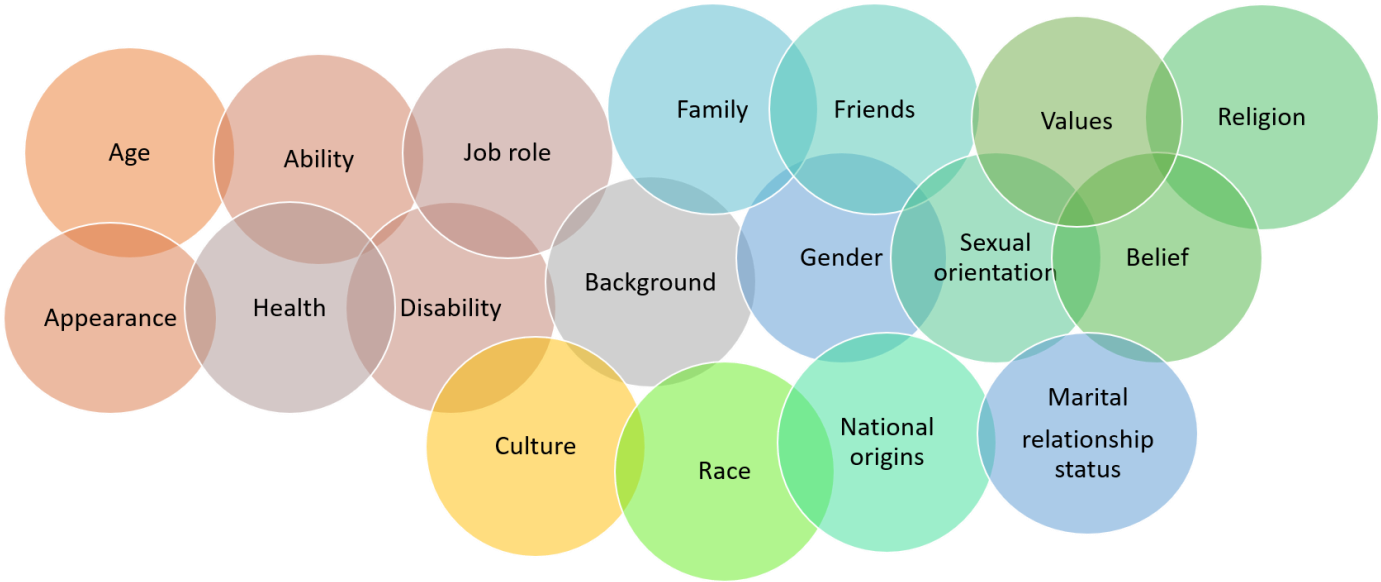
Geography, affordability, availability. Insurance gaps, stigma, geography, and simple healthcare-seeking behaviour

Treatment heterogeneity

Drug-dose gender gap, ethnic variation, environmental health system factors

Lee A, Padilla C. Causes of health inequities. Curr Opin Anaesthesiol. 2022 Jun 1;35(3):278-284. doi: 10.1097/ACO.0000000000001142. PMID: 35671013.

Diversity, equity and what it means to be inclusive?



National Health System. NHS (2025). The Care Certificate Program. Standard 4. Available at: https://www.hee.nhs.uk/sites/default/files/documents/Standard-4%20Equality%20and%20diversity.pdf

Diversity, equity and what it means to be inclusive?



Equity is the absence of avoidable, unfair, or remediable differences among groups of people.

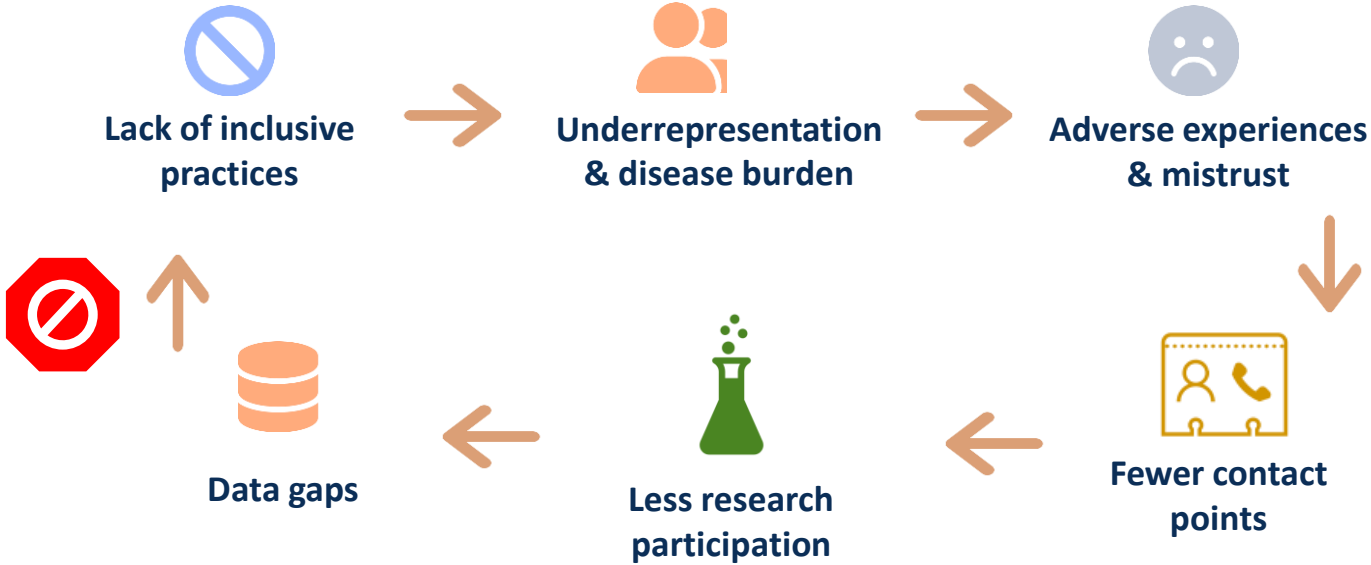
Being inclusive in healthcare means actively removing barriers and strengthening the factors that help people participate fully.

- Active participation
- Diversity in clinical trials
- Equity in access
- Empowered contribution
- Removing barriers
- Training and educating HCPs

The Journal of Infectious Diseases, 220, Sup. 2, 30–32, https://doi.org/10.1093/infdis/jiz198
https://ascpt.onlinelibrary.wiley.com/doi/10.1002/cpt.2804

The cycle that drives health inequity

When inclusive practices are not built in, the cycle below reinforces itself.



"Breaking the loop requires action at multiple points."

Determinants of health: Why context matters

"The **context** of people's lives determines their health, so **blaming individuals for having poor health or crediting them for good health is inappropriate**.

Individuals are unlikely to be able to directly control many of the determinants of health."

(WHO, 2024)

The context of people's lives determines their health

Specific determinants include:

- Migration
- Age
- Climate change
- Commercial determinants
- Conflict, among others.

DEI is really about people living in a permanent state of vulnerability

World Health Organization. WHO (2024). Determinants of Health. Available at: https://www.who.int/news-room/questions-and-answers/item/determinants-of-health

Social, cultural and institutional risk factors

Traditional medicine

Herb-drug interactions can go unnoticed

Health literacy

People do not fully understand the name of their medication, what it is for

Rural residence

Limited access & reduced monitoring

Low income

Restricts food, housing, healthcare access

Gender & caregiving

Less pension access. Caregiving reduces self-oversight

OTC medications

Painkillers, antihistamines interact with prescribed medicines

Venditti, V., Bleve, E., Morano, S., & Filardi, T. (2023). Gender-Related Factors in Medication Adherence for Metabolic and Cardiovascular Health. Metabolites, 13(10), 1087. https://doi.org/10.3390/metabo13101087

Key Takeaways

Vulnerable vs. underserved
The first step toward mitigating the risks they create

Notice your own biases
The moment you become aware of them is the moment you can start to change how you act

Let’s see some real examples!

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Real Drug Examples

Bucindolol

A beta blocker first studied for treating hypertension, used for arrhythmias and essential tremor

Different forms of one gene change whether a person responds to the drug, and one form of that gene is more common in Black patients. **Efficacy of beta-blockers appears to differ between white and Black patients**

Language mismatch

Vancomycin

Antibiotic used to treat serious infections caused by bacteria.

Higher body weight requires higher doses of Vancomycin.

It is critical to adjust dosage based on patient's weight and monitor!

Many patients genuinely do not know their current weight

Warfarin

Common blood thinner for blood clot prevention.

Older adults are more sensitive and are typically prescribed lower doses while being closely monitored for ADRs.

Vulnerable group, needs family support

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3140276/ | https://pubmed.ncbi.nlm.nih.gov/19106348/
https://www.bhf.org.uk/informationsupport/heart-matters-magazine/medical/drug-cabinet/warfarin

Ethical and Cultural Considerations in Practice

Enabling tools can protect the vulnerable instead of simply excluding them

Informed consent in multicultural settings

End-of-life care and religious beliefs

Respect for autonomy and dignity is essential

Pregnancy & lactation



Rev. invest. clín. vol.71 no.4 Ciudad de México jul./ago. 2019 Epub 12-Abr-2021, https://doi.org/10.24875/ric.19002812

Key Takeaways



Understanding what makes a patient vulnerable and why, is what allows us to mitigate risks and improve outcomes.

Awareness is the first step. Notice the risk factors, the biases, and the barriers.

Session 4 complete ✓

▶ **Next: Session 5 — Side Effects, Adverse Drug Reactions & Patient-Reported Outcomes.**

Credits & Attributions

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AI disclosure

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Figures

- Equality–equity illustration generated using Microsoft Copilot. Reviewed and edited by humans

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