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A novel health systems service design checklist to improve healthcare access for marginalized, underserved communities in Europe

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Abstract

Background

Marginalized communities such as the homeless, people who use drugs, lesbian, gay, bisexual, transgender and intersex people (LGBTI), prisoners, sex workers, and undocumented migrants are at high risk of poor health and yet face substantial barriers in accessing health and support services. The Nobody Left Outside Service Design Checklist aims to promote a collaborative, evidence-based approach to service design and monitoring based on equity, non-discrimination and community engagement.

Methods

The NLO Checklist was devised through a three-step process: two NLO platform meetings informed by a literature review; a policy workshop and an associated published concept paper; and stakeholder consultation via a European Commission-led Thematic Network webinar and scientific conference presentation.

Results

The NLO Checklist is structured into six sections according to the World Health Organization (WHO) Health Systems Framework. These are: 1) service delivery, comprising design state (six items), services provided (two items), accessibility and adaptation (16 items), peer support (two items); 2) health workforce (12 items); 3) health information systems (seven items); 4) medical products and technologies (one item); 5) financing (three items); and 6) leadership and governance (seven items). It promotes the implementation of integrated (co-located or linked) healthcare services that are community-based and people-centred. These should provide a continuum of needs-based health promotion, disease prevention, diagnosis, treatment, and management, together with housing, legal and social support services, in alignment with the goals of universal health coverage and the WHO frameworks on integrated, people-centred healthcare.

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Conclusions

The Checklist is offered as a practical tool to help overcome inequalities in access to health and support services. Policymakers, public health bodies, healthcare authorities, practitioner bodies, peer support workers and non-governmental organisations can use it when developing, updating or monitoring services for target groups. It may also assist civil society in wider advocacy efforts to improve access for underserved communities.

Strengths and Limitations

Strengths:

- The NLO Service Design Checklist is a versatile, easy-to-use, practical tool to help overcome inequalities in access to health and support services in alignment with principles of person-centricity and universal health coverage.
- The Checklist is broad in scope and hence applicable to services targeting multiple marginalized groups that often intersect and face common access barriers.
- The Checklist has been co-developed by organizations representing target communities and may help other advocacy organizations to collaboratively engage in service design and action plan formulation with key health agencies and health service providers.

Limitations:

- The Checklist is not universally applicable nor exhaustive.
- The Checklist has yet to be refined based on case studies of implementation.

Background

According to the principle of universal health coverage (UHC), all people should have access, without discrimination and exposure to financial hardship, to nationally determined, basic health services.[1-2] UHC encompasses health service delivery, human resources, health facilities, health technologies, information systems and communications networks, quality assurance mechanisms, governance and legislation, and financing.

Even in the high-income countries of the European Union and the Organisation for Economic Co-operation and Development (OECD) a large number of people are underserved by health systems. This is particularly true for socially excluded people such as the homeless, people who use drugs (PWUD), lesbian, gay, bisexual, transgender and intersex (LGBTI) people, prisoners, sex workers and undocumented migrants. These communities are at a significantly higher risk of poor health than the general population, owing to high levels of stress and precarious living conditions that can increase their vulnerability to certain infectious diseases, such as HIV and viral hepatitis, mental health conditions, maternal health problems, poor dental health and violence-related trauma. [3–8] Some chronic non-communicable diseases (e.g. cardiovascular disease or cancer) are more common or have worse outcomes in some marginalized groups (e.g. the homeless and prisoners), as compared with the general population. [3–5]

Despite their risks of poor health, these marginalized communities face substantial challenges in accessing health and support services owing to a complex interplay of educational, cultural, organizational, administrative, economic and legal barriers, together with widespread stigma and institutional discrimination. [6–11] Their general exclusion from healthcare planning and monitoring processes results in a misalignment between service design and the needs of target groups and contributes to poor health outcomes.

The Nobody Left Outside (NLO) initiative is a European coalition of organisations representing the aforementioned communities. Despite the complexity of the challenges they face in accessing services, NLO partners have worked to create a framework for the delivery of care in a way that addresses many of the overlapping needs of these communities. A 2019 Thematic Network under the Health Policy Platform of the European Commission (https://webgate.ec.europa.eu/hpf/), the NLO coalition published a Joint Statement on priority measures to improve access to health and support services in October 2019. [12] Here, we describe the NLO Service Design Checklist, a novel tool to help key stakeholders tailor health services to marginalized communities.

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Methods

Representatives of communities to whom a service is targeted should be involved in service design, or redesign, to help ensure that it addresses relevant barriers to access. Accordingly, the NLO Service Design Checklist aims to promote a collaborative and evidence-based approach to service design and monitoring. It is intended to help service providers, monitoring and evaluation experts, policymakers and representatives of target communities (e.g. civil society organizations and patient groups) to design and deliver health and support services that are accessible to underserved, marginalized people.

The Checklist was devised through a three-step process: two NLO platform meetings informed by a literature review; a policy laboratory workshop at the European Health Forum Gastein 2017; and an associated concept paper.[13] Feedback was obtained from stakeholder organisations via a European Commission-led Thematic Network webinar [14] and an oral presentation at the International Conference on Integrated Care. [15]

It is structured into six sections according to the World Health Organization (WHO) Health Systems Framework: service delivery, health workforce, health information systems, medical products and technologies, financing, and leadership and governance (Figure 1). [16] It also aligns broadly with the principles of the European Framework for Action on Integrated Health Services Delivery [17] and other recommendations. [9, 18–22]

The Checklist serves as a guide and is not necessarily exhaustive. It will be freely available online (at www.nobodyleftoutside.eu) as an open-access resource, supported by a guidance document. Users will be invited to report their experience and to provide feedback to help inform future editions.

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Results

Service delivery

Design stage

Marginalized groups are often described as 'hard to reach', whereas from their perspective, it is frequently the services that are hard to reach. Section A (Table 1) aims to aid the design and delivery of easily accessible services that meet the needs of target communities. Specifically, it promotes the implementation of integrated, co-located or linked healthcare services that are people-centred and which provide a continuum of relevant services, according to users' needs, as called for by the WHO [2] and the OECD [23]. It aligns with the principles of disease- and population-specific, yet broadly applicable, WHO guidance on service design and delivery. [9, 18, 24]

Among key considerations, service design should be based on an up-to-date assessment of:

- The specific needs and size of target communities (Checklist item A2)
- Existing access barriers, identified in consultation with the target community (A3) and healthcare staff (A4)
- Latest evidence-based clinical practice guidelines or best practices (A5) and existing resources and skills within target communities (A6).

Services provided

Services targeting marginalized groups should provide convenient and efficient access to the range of health and social services needed by users (Table 2). Integrated (e.g. co-located or linked services) offer opportunities for multifaceted screening, care and support for health and social issues beyond the initial reason for contact, subject to individualized assessment (A8).

Harm reduction services (Table 2) are a priority among many marginalized communities and are essential to achieve the United Nations Sustainable Development Goals (SDGs) and WHO targets

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relevant to HIV and viral hepatitis [20-21] and yet are limited in most countries and settings, e.g. prisons [8]. Other health services of particular relevance include vaccination, sexual and reproductive health, mental health, dental care and maternal health. Many of these services correspond to indicators proposed by WHO to measure UHC [2] and among vulnerable communities are often subject to variations in access within Europe.

Access should also be provided to housing, which has an extremely important yet widely neglected impact on healthcare access and outcomes. [25].Access to legal services can often be critical also, for example to undocumented migrants to help them understand their entitlement to care, to link them to the healthcare system where possible, and to facilitate regularization of their status. [26]

Accessibility and adaptation

Services should be designed to be easy to access and use by target communities. Services targeting marginalized groups should be delivered primarily from community-based centres located conveniently for users, supported by mobile outreach units where appropriate, rather than hospital-based clinics (item A9). [9, 18, 24] Co-location of multiple services can further facilitate wider engagement and uptake. Target communities can play a key role in these services.

For example, PWUD – a population that is challenging to engage and retain in health services – often use and trust harm reduction services, particularly when staffed by peers; such services offer opportunities to provide wider healthcare, support and health education. [18, 24] Engagement in care for hepatitis C virus or HIV infection may in turn contribute to reducing risk behaviours and supporting harm reduction. The Checkpoint centres across Europe [27] and the 56 Dean Street clinic in London [28] offer examples of good practice in community-based HIV services targeting key populations. Service models specifically targeting the homeless include integrated multi-professional services within shelters or community-based outpatient clinics and mobile primary care outreach teams. [29]

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Prisoners, unlike other underserved groups discussed here, are not 'hard to reach'. Prisons therefore represent an important opportunity for multifaceted public health interventions, for example voluntary testing and care for sexually transmitted infections and blood-borne viruses [18, 20 -21] and inter alia care for dental and mental health issues.

Checklist items A10–23 (Table 1) offer various additional practical considerations to improve accessibility to target groups, including free-of-charge access, confidentiality or anonymity, convenient opening hours and measures to support informed decision-making by users. Methods to further promote and monitor service engagement and adherence include sign-posting within target communities (item A22) and peer support work by community members (A25–26). Digital health tools, especially mobile phone apps, also show promise for this purpose. For example, the Refaid app (https://refaid.com) shows migrants and refugees the location of nearby services.

Health workforce

Health and social care providers often lack up-to-date, evidence-based education and training to deal with the complex challenges faced by marginalized communities and may lack evidence-based guidance and support structures. Negative attitudes among health professionals towards marginalized groups can also be an important barrier to access and can compromise care. All staff members who serve such communities therefore require specific training on the health, social, economic and other relevant aspects necessary to enable them to effectively engage with and support service users (Table 3; items B1–B9). Better training of staff in non-health provider settings (such as homeless shelters) in such matters could also lead to earlier and better referrals to the healthcare system.

Health information systems

Accurate, relevant health information is required to support evidence-based policy and service design, and to ensure that services reach and benefit target communities. Numerous evidence gaps exist with respect to the effectiveness or cost-effectiveness of services for marginalized groups.

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Collecting data regarding the health of marginalized people can be difficult and national data collection systems are limited and heterogeneous between countries [6-7], hampering international comparisons and benchmarking as well as national policymaking.

The Checklist items in this section (Table 3) aim to ensure that suitable systems are in place to capture service users' feedback and measure service quality, and that community representatives are involved in this process.

Medical products & technologies

In 2017, 12 agencies of the United Nations called on member states to put in place guarantees against discrimination, as manifest when some individuals or groups are denied access to services that are otherwise available to others – a key barrier to the achievement of the SDGs. [3] For example, among PWUD and migrants in Europe, antiretroviral therapy for HIV is more likely to be delayed and to show worse outcomes as compared to the general population. [30–31] Other examples include the limited, uneven implementation of testing and evidence-based standard-of-care treatment for hepatitis C virus infection among prisoners and PWUD [32] and to address the high levels of non-communicable diseases among the homeless. [3]

Service design should be based on the fundamental principle of equity, whereby all protocols, guidelines and policies should provide all service users with the same access to medical products and technologies as everyone else, according to the best standard of care that is locally available (C1; Table 3).

Financing

Generally, healthcare interventions targeting underserved populations have been chronically underfunded and treated as short-term and isolated projects. Items in this section (Table 4) underscore that services should be adequately and sustainably financed based on an accurate, up-

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to-date local needs assessment (E1) over a suitable timeframe, together with suitable impact assessment.

Many states depend on donor funding to deliver some services targeting underserved groups – such as national HIV, viral hepatitis and tuberculosis programmes. Where donors have withdrawn support, it is vital that governments maintain equitable service delivery through sustainable health financing systems to avoid detrimental effects on public health. [21-22]

Health services for marginalized populations can be funded in a variety of ways, including by municipal, regional, national, European Union and international funding sources. In some instances, health can be funded through structural funds, which in the past have traditionally been associated with infrastructure. This would allow for fundamental change rather than short-term projects.

The value of investment in community-based services for underserved, marginalized people should be considered from an intersectoral perspective, i.e. taking into account the broader benefits of such services on public health objectives and social/welfare services (E3). Multifaceted community-based services can facilitate early diagnosis and interventions that can reduce healthcare costs associated with some key public health threats, while improving outcomes. For example, harm reduction services to prevent bloodborne viruses are cost-effective. [33] In England, it is estimated that preventing only 1% of cases annually would save £15–19 million, while the annual costs of late HIV diagnosis are twice those of early diagnosis. [34] Policies and investment into harm reduction can also deliver broader social benefits, such as lower levels of drug-related crime and reduced pressure on healthcare and criminal justice systems.

Evidence also clearly indicates benefits health service utilization from housing assistance for homeless people [25, 35] although housing stability can cause an initial spike in healthcare use by allowing homeless people to properly connect with the health system. For example, housing interventions not only improve HIV care access and outcomes, but can also prevent new infections,

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supporting a role in primary prevention. [25] Economic arguments also support the full provision of healthcare services for undocumented migrants, i.e. not only in order to fulfil equity principles and health objectives but also because timely provision of primary healthcare services is cost-saving over hospital care. [6, 36–38]

Leadership and governance

Governance to accelerate UHC involves transparent, inclusive and equitable decision-making processes that allow for the input of all stakeholders and which develop policies that perform effectively, reaching clear and measurable outcomes for all, building accountability and being fair.[1]The NLO Checklist (Table 4) is intended to promote the involvement of community representatives in the planning, delivery, leadership and governance of services (F1), in general alignment with recommendations.[6- 7, 9, 24] Various strategies and tools can help empower community and patient populations toward this purpose. [9, 24, 39]

High-level political attention is needed to ensure that the appropriate legal frameworks are in place to support healthcare access for all. The rights of all individuals to access to preventive healthcare and to benefit from medical treatment under national laws and practices are enshrined in the Charter of Fundamental Rights of the European Union [40] and other international instruments. [41- 42] Services should reflect international standards regarding human rights, equity, non-discrimination and confidentiality (F2). Inequities in healthcare access should be addressed as part of antidiscrimination and protective policies that foster a supportive legal framework and non-discriminatory policy environment (F3). A Joint United Nations statement has called for member states to review and repeal punitive laws proven to have negative health outcomes and that counter established public health evidence.[43] Notably, in May 2019, the WHO adopted a 5-year global action plan aiming to achieve UHC and the highest attainable standard of health for refugees and migrants together with host populations [44], and G7 Health Ministers committed to improve healthcare access for all, including by strengthening primary healthcare. [45]

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National disease-specific action plans are important to the achievement of SDGs, and yet are still not present in many European Union countries, have important gaps, or frequently lack community involvement. [33] Such national action plans are also important to tackle the broader deficits in access in step with issues such as housing and other health determinants (F4).

Accountable, transparent leadership and governance is essential (F7). The call by the WHO Regional Office for Europe call for enhanced national and local stewardship for implementation of the strategies and action plans on migrant health [6], and the recommendations by a Lancet Commission for robust accountability and monitoring in the field of migrant health [7] also apply to those for other marginalized communities. Notably, the 2018 Global Harm Reduction International study highlighted poor transparency on harm reduction funding across Europe. [46]

Discussion

Some of the people in Europe most in need of healthcare are amongst the least likely to receive it. To fulfil their commitment to contribute to the health and wellbeing of all, and to reach the SDGs, governments at all levels – national, regional and local – working together with civil society partners – should ensure that nobody is left outside of their health system. Inequalities in access are not inevitable and can be addressed by tailored, integrated service models. The NLO Service Design Checklist is offered as a practical tool to support this process based on the principles of equity, non-discrimination and community engagement.

Checklists have been successfully applied for clinical purposes in various settings. Notably, the WHO Surgical Safety Checklist has been associated with reductions in surgical mortality. [47] The scope of our Checklist includes direct considerations for service designers and frontline providers, together with wider aspects of policy, funding and governance. It shares many common aspects with the WHO Checklist for the framework for action on integrated health services [17], including needs assessment, provision of a broad, multidisciplinary service, empowerment of target communities,

workforce support, evidence generation on performance, and clear accountability. Our Checklist focuses on certain marginalized communities, as for example do the UNAIDs Checklist for community engagement in the implementation of guidelines on the sexual and reproductive rights of women living with HIV [48] and a Public Health England Checklist of questions for healthcare practitioners to consider when speaking to new migrant patients. [49]

While the NLO Checklist is broad in scope, it is designed to allow representatives of multiple marginalized groups that often intersect and face common access barriers to collaboratively inform service design. As such, the Checklist is not intended to be universally applicable, wholesale; rather, its different elements may be used for diverse purposes and adapted (with translation when needed) to particular settings. We encourage health service policymakers, public health bodies, healthcare practitioner bodies and NGOs at all levels to use the Checklist when developing, updating or monitoring national or regional action plans for target groups. It may also assist regional or local healthcare authorities, service managers, and frontline professionals and peer-support workers in the design, refinement or assessment of local services. The Checklist may also help organizations representing target communities to engage in service design and action plan formulation with the aforementioned bodies (proactively or via consultation processes), and in wider advocacy efforts to improve equitable access to health and support services.

Conclusion

The NLO Service Design Checklist is offered as a practical tool to help overcome Inequalities in access to health and support services. We encourage health service policymakers, public health bodies, healthcare authorities, healthcare practitioner bodies, peer support workers and non-governmental organisations to use it when developing, updating or monitoring action plans and local services for target groups. It may also assist civil society in wider advocacy efforts to improve access among underserved communities.

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Abbreviations

HIV: human immunodeficiency virus.

LGBTI: lesbian, gay, bisexual, transgender and intersex

NLO: Nobody Left Outside.

OECD: Organisation for Economic Co-operation and Development.

PWUD: people who use drugs.

SDG: Sustainable Development Goal.

UHC: universal health coverage.

WHO: World Health Organization.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Availability of data and materials

Not applicable.

Competing interests

JVL reports research grants from AbbVie, Gilead and MSD, outside of the submitted work. LB is an employee of Interel (Brussels, Belgium), which received fees from MSD as part of the grant supporting the NLO initiative. MC, DO, ACS, ES and FS declare that they have no competing interests.

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Authors' contributions

JVL, LB, MC ,DO, ES, ACS and FS, participated in the idea development, planning and creation of the NLO Service Design Checklist at NLO meetings and review cycles, including at the European Health Forum in Gastein. JVL and LB led the drafting of this paper. JVL and FS led a European Commission Thematic Network webinar to discuss the Checklist. All authors reviewed and contributed to each draft and approved the final draft.

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Table 1. Nobody Left Outside Service Design Checklist – section A: service delivery

A. Service delivery **Aim: Design and deliver an easily accessible service that meets the needs of the communities for whom it is intended.** Relevance: Providers ✓✓ Policymakers ✓	Yes	No	Not relevant / Comments
DESIGN STAGE			
A1. Were community representatives involved in the design of the service?			
Has the design of the service taken into account the:			
A2. Health and social care needs of the community?			
A3. Existing barriers to service access for the community, identified by the community and/or service users?			
A4. Existing barriers identified by healthcare staff in delivering services to the community?			
A5. Existing resources and skills within the community?			
A6. Relevant clinical practice guidelines and/or best practices?			

SERVICES PROVIDED			
A7. Does the service provide integrated access (co-located or linked) to the range of health services (including testing, treatment, prevention and supportive care), social services and legal services needed by the community?			
A8. Are the physical and psychological needs of each service user systematically assessed on an individualized basis and in an appropriate manner?			

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ACCESSIBILITY AND ADAPTATION			
Is the service made easy to access and use by the community by:			
A9. Providing community-based and/or mobile clinics?			
A10. Having convenient opening hours?			
A11. Providing child-friendly waiting areas?			
A12. Providing physical accessibility for people with reduced mobility?			
A13. Providing accessible sex- or gender-segregated spaces and services that are safe and accessible for trans, non-binary and intersex persons?			
A14. Being provided on an anonymous or confidential basis?			
A15. Not requiring users to provide formal identification to access the service?			
A16. Being free-of-charge to users?			
A17. Providing user-friendly information in plain language on the available health, social and legal services and users' rights to access these, translated into relevant languages and sufficient for them to make informed choices?			
A18. Being suitably tailored to be sensitive to users' culture, faith, gender, housing status and lifestyle?			
A19. Allowing users the option to choose which gender of staff member they see?			
A20. Providing trained interpreters for relevant languages during consultations?			
A21. Offering users assistance with completing forms or other documents?			
A22. Being promoted and signposted effectively within the community?			
A23. Providing incentives for users to use the service?			
A24. Using digital tools to help link people to care?			
PEER SUPPORT			
A25. Does the service use peer care and support by community members?			
A26. Are peer support workers adequately compensated for their services?			

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Table 2. Range of services that may be required by people from marginalized, underserved communities targeted by the Nobody Left Outside Service Design Checklist

Harm reduction:	
• Opioid substitution therapy	
• Needle and syringe exchange	
• Alcohol and substance abuse interventions	
• Infectious diseases testing (with appropriate counselling), linked to treatment services – including for HIV, hepatitis B and C virus, tuberculosis	
• Vaccination and other prevention approaches	
• Condom distribution	
• Wound care	
Other health services:	
• Sexual and reproductive health services (including screening, diagnosis and treatment of sexually transmitted diseases, cervical cancer screening)	
• Dental care	
• Maternity care services (including conception and pregnancy care)	
• Mental health services	
• Health promotion education	
Social and support services:	
• Housing or shelter support	
• Social and welfare services	
• Legal support services	

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Table 3. Nobody Left Outside Service Design Checklist – section B (health workforce), C (health information systems) and D (medical products and technologies).

B. Health workforce **Aim: Prevent and address discrimination and ensure workforce is enabled to deliver the service.** Relevance: Providers ✓✓ Policymakers ~	Yes	No	Not relevant / Comments
Do *all* staff members receive education and training on:			
B1. Health and social care needs and challenges among underserved communities?			
B2. Users' rights to health and social services, and principles of non-discriminatory equal access?			
B3. Sensitivity regarding relevant cultural, faith, gender and lifestyle matters among user communities?			
B4. Communication skills (including appropriate terminology)?			
B5. Stress management?			
B6. Conflict management?			
B7. Do healthcare staff receive suitable training to deliver the necessary services according to current evidence-based guidelines and best practices?			
B8. Is the training provided to healthcare staff accredited for continuing medical education (CME)?			
B9. Are peer support workers given suitable training to fulfil their roles?			
B10: Are healthcare staff and peer support workers given peer-to-peer support, supervision or psychological aid, if necessary?			
Do workforce training programmes include contributions from:			
B11. Community representatives?			
B12. Professional peers ('champions')?			
C. Health information systems **Aim: Check that the service is used by the community and meets users' needs.** Relevance: Providers ✓✓ Policymakers ✓	Yes	No	Not relevant / Comments
C1. Are community representatives involved in how the service is assessed?			
Are suitable systems in place to monitor the:			
C2. Usage of the service by the communities?			
C3. Quality and impact of the service provided?			
C4. Is there a formal process to capture users' feedback on the service, including complaints?			
C5. Are feedback loops in place to ensure that monitoring and user feedback help to improve the service?			
C6. Are data gathered (with consent and in a data protection-compliant manner) for research and advocacy purposes?			
C7. Does the service apply quality standards?			

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D. Medical products & technologies **Aim: Ensure that all service users have equitable access to care.** Relevance: Providers ✓✓ Policymakers ✓✓	**Yes**	**No**	**Not relevant / Comments**
D1. Do care protocols, guidelines and policies provide all service users with equitable and barrier-free access to medical products and technologies according to the best possible, evidence-based standard of care that is locally available?			

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Table 4. Nobody Left Outside Service Design Checklist – section E (financing) and F (leadership and governance).

E. Financing **Aim: Ensure the service is adequately and sustainably resourced.** **Relevance: Providers ✓ Policymakers ✓✓**	Yes	No	Not relevant / Comments
E1. Are services adequately financed based on an accurate, up-to-date local needs assessment?			
E2. Is the service sustainably financed for a suitable timeframe?			
E3. Does service financing take an intersectoral perspective based on the needs of the community?			
F. Leadership & governance **Aim: Ensure service is suitably led and governed, with community involvement** Relevance: Providers ~ Policymakers ✓✓			
F1. Are community representatives involved in the leadership and governance of the service?			
F2. Does the service reflect international standards regarding human rights, equity, non-discrimination and confidentiality?			
F3. Is there a supportive legal framework and policy environment?			
F4. Is there a National Action Plan regarding health and social care for the community, developed with involvement of the community?			
F5. Is the service operated under the Health authorities (rather than the Interior or Justice authorities)?			
F6. Do Health and Social Services authorities, and relevant government agencies, collaborate in the delivery of the service?			
F7. Does the service have accountable, transparent leadership and governance?			

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1 **Figure legend**

2 Figure 1. Schematic overview of Nobody Left Outside (NLO) Service Design Checklist, based on the
3 World Health Organization Health Systems Framework. [16]

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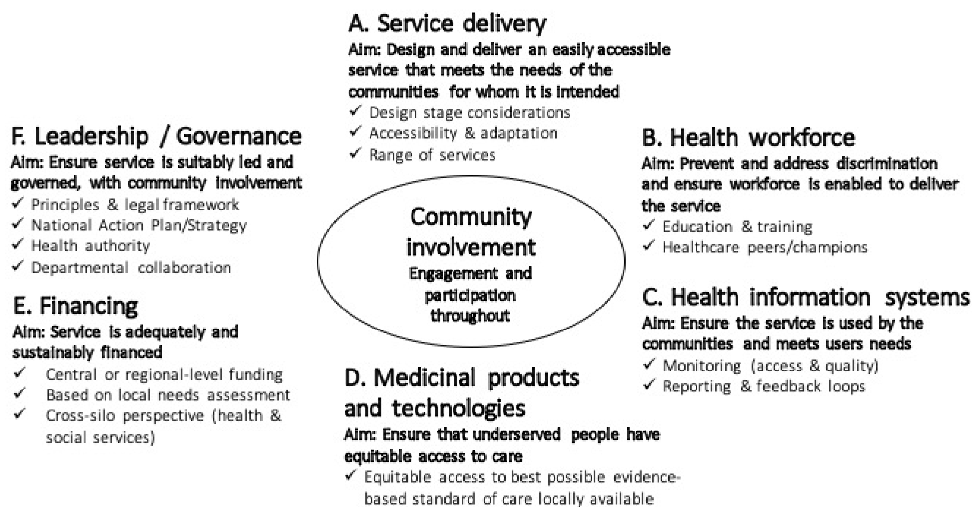

Caption : Figure 1. Schematic overview of Nobody Left Outside (NLO) Service Design Checklist, based on the World Health Organization Health Systems Framework [16]

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A novel health systems service design checklist to improve healthcare access for marginalized, underserved communities in Europe

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Abstract

Background

Marginalized communities such as homeless people, people who use drugs (PWUD), lesbian, gay, bisexual, transgender and intersex people (LGBTI), prisoners, sex workers, and undocumented migrants are at high risk of poor health and yet face substantial barriers in accessing health and support services. The Nobody Left Outside (NLO) Service Design Checklist aims to promote a collaborative, evidence-based approach to service design and monitoring based on equity, non-discrimination and community engagement.

Methods

The Checklist was a collaborative project involving nine community advocacy organizations, with a focus on homeless people, PWUD, LGBTI people, prisoners, sex workers, and undocumented migrants. The Checklist was devised via a literature review; two NLO platform meetings; a multistakeholder policy workshop and an associated published concept paper; two conference presentations; and stakeholder consultation via a European Commission-led Thematic Network (including webinar).

Results

The NLO Checklist has six sections in line with the World Health Organization (WHO) Health Systems Framework. These are: 1) service delivery, comprising design state (six items), services provided (two items), accessibility and adaptation (16 items), peer support (two items); 2) health workforce (12 items); 3) health information systems (seven items); 4) medical products and technologies (one item); 5) financing (three items); and 6) leadership and governance (seven items). It promotes the implementation of integrated (co-located or linked) healthcare services that are community-based and people-centred. These should provide a continuum of needs-based health promotion, disease prevention, diagnosis, treatment, and management, together with housing, legal and social support services, in alignment with the goals of universal health coverage and the WHO frameworks on integrated, people-centred healthcare.

Conclusions

The Checklist is offered as a practical tool to help overcome inequalities in access to health and support services. Policymakers, public health bodies, healthcare authorities, practitioner bodies, peer support workers and non-governmental organizations can use it when developing, updating or monitoring services for target groups. It may also assist civil society in wider advocacy efforts to improve access for underserved communities.

Strengths and Limitations

Strengths:

- The NLO Service Design Checklist is a versatile, easy-to-use, practical tool to help overcome inequalities in access to health and support services in alignment with principles of person-centricity and universal health coverage.
- The Checklist is broad in scope and hence applicable to services targeting multiple marginalized groups that often intersect and face common access barriers.
- The Checklist has been co-developed by community advocacy organizations and may help other advocacy organizations to collaboratively engage in service design and action plan formulation with key health agencies and health service providers.

Limitations:

- The Checklist is not universally applicable nor exhaustive.
- The Checklist has yet to be refined based on case studies of implementation.

Background

According to the principle of universal health coverage (UHC), all people should have access, without discrimination and exposure to financial hardship, to nationally determined, basic health services.[1-2] UHC encompasses health service delivery, human resources, health facilities, health technologies, information systems and communications networks, quality assurance mechanisms, governance and legislation, and financing.

Even in the high-income countries of the European Union and the Organisation for Economic Co-operation and Development (OECD) a large number of people are underserved by health systems. This is particularly true for socially excluded people such as homeless people, people who use drugs (PWUD), lesbian, gay, bisexual, transgender and intersex (LGBTI) people, prisoners, sex workers and undocumented migrants. These communities are at a significantly higher risk of poor health than the general population, owing to high levels of stress and precarious living conditions that can increase their vulnerability to certain infectious diseases, such as HIV and viral hepatitis, mental health conditions, maternal health problems, poor dental health and violence-related trauma.[3 4 5 6 7 8] In high-income countries, most chronic non-communicable diseases are substantially more common and have worse outcomes in marginalized groups, as compared with the general population.[3 4 5]

Despite their risks of poor health, these marginalized communities face substantial challenges in accessing health and support services owing to a complex interplay of educational, cultural, organizational, administrative, economic and legal barriers, together with widespread stigma and institutional discrimination.[6 7 8 9 10 11] Their general exclusion from healthcare planning and monitoring processes results in a misalignment between service design and the needs of target groups and contributes to poor health outcomes. An emergent approach termed “inclusion health” aims to address such extreme health and social inequities.[12]

The Nobody Left Outside (NLO) platform is a European coalition of organisations representing marginalised underserved communities. Despite the complexity of the challenges they face in accessing services, NLO partners have worked to create a framework for the delivery of care in a way that addresses many of the overlapping needs of these communities. Designated as a 2019 Thematic Network under the Health Policy Platform of the European Commission (https://webgate.ec.europa.eu/hpf/), the NLO coalition published a Joint Statement on priority measures to improve access to health and support services in October 2019.[13] Here, we describe the

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NLO Service Design Checklist, a novel tool to help key stakeholders tailor health services to marginalized communities.

Methods

Representatives of communities to whom a service is targeted should be involved in service design, or redesign, to help ensure that it addresses relevant barriers to access. Accordingly, the NLO Service Design Checklist aims to promote a collaborative and evidence-based approach to service design and monitoring. It is intended to help service providers, monitoring and evaluation experts, policymakers and target communities (e.g. civil society organizations and patient groups) to design and deliver health and support services that are accessible to underserved, marginalized people.

The Checklist was a collaborative project involving representatives of the following advocacy organizations working together as the NLO initiative: Africa Advocacy Foundation (AAF), Correlation European Harm Reduction Network, European AIDS Treatment Group (EATG), European Federation of National Organisations Working with the Homeless (FEANTSA), European Association for the Study of the Liver (EASL), Hepatitis C Trust, International Committee on the Rights of Sex Workers in Europe (ICRSE), International Lesbian, Gay, Bisexual, Trans and Intersex Association Europe (ILGA Europe), and the Platform for International Cooperation on Undocumented Migrants (PICUM), together with the Barcelona Institute for Global Health (ISGlobal). Representatives of each organization were involved during the conception, development, revision and final approval of the Checklist.

The Checklist was developed with particular reference to the following communities: homeless people, PWUD, LGBTI people, prisoners, sex workers and undocumented migrants – although its utility is not intended to be limited to these groups.

The Checklist was devised via the following steps: a literature search (via Pubmed and other online sources) regarding disease burden, barriers to accessing care, guidelines for interventions and system design and delivery); a published concept paper;[14] two NLO platform meetings (to define the

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Checklist concept, structure and items) followed by multiple revision cycles and an open multi-stakeholder policy workshop at the European Health Forum Gastein 2017. The draft Checklist was then subject to further open stakeholder consultation via the 2019 NLO European Commission-led Thematic Network (including a webinar[15] and call for written feedback) and presentations at two conferences – an oral presentation at the International Conference on Integrated Care 2019[16] and an e-poster at Lisbon Addictions 2019.[17]

It is structured into six sections according to the World Health Organization (WHO) Health Systems Framework: service delivery, health workforce, health information systems, medical products and technologies, financing, and leadership and governance (Figure 1).[18] It also aligns broadly with the principles of the European Framework for Action on Integrated Health Services Delivery[19] and other recommendations.[9 12 20 21 22 23 24]

The Checklist serves as a guide and is not necessarily exhaustive. It will be freely available online (at www.nobodyleftoutside.eu) as an open-access resource, together with a document designed to assist its implementation by providing further explanation, guidance, evidence and links to further resources. Users will be invited to report their experience and to provide feedback to help inform future editions.

Results

Service delivery

Design stage

Marginalized groups are often described as 'hard to reach', whereas from their perspective, it is frequently the services that are hard to reach. Section A (Table 1) aims to aid the design and delivery of easily accessible services that meet the needs of target communities. Specifically, it promotes the implementation of integrated, co-located or linked healthcare services that are people-centred and which provide a continuum of relevant services, according to users' needs, as called for by the WHO[2]

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and the OECD.[25] It aligns with the principles of disease- and population-specific, yet broadly applicable, guidance on service design and delivery by the WHO and United Nations (UN). [9 19 26]

Among key considerations, service design should be based on an up-to-date assessment of:

- The specific needs and size of target communities (Checklist item A2)
- Existing access barriers, identified in consultation with the target community (A3) and healthcare staff (A4)
- Latest evidence-based clinical practice guidelines or best practices (A5) and existing resources and skills within target communities (A6).

Services provided

Services targeting marginalized groups should provide convenient and efficient access to the range of health and social services needed by users (Table 2). Integrated (e.g. co-located or linked services) offer opportunities for multifaceted screening, care and support for health and social issues beyond the initial reason for contact, subject to individualized assessment (A8).

Harm reduction services (Table 2) are a priority among many marginalized communities and are essential to achieve the UN Sustainable Development Goals (SDGs) and WHO targets relevant to HIV and viral hepatitis[22 23] and yet are limited in most countries and settings, e.g. prisons.[8] Other health services of particular relevance include vaccination, sexual and reproductive health, mental health, dental care and maternal health. Many of these services correspond to indicators proposed by WHO to measure UHC[2] and among vulnerable communities are often subject to variations in access within Europe.

Access should also be provided to housing, which has an extremely important yet widely neglected impact on healthcare access and outcomes.[5 12 27] Access to legal services can often be critical also,

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for example to undocumented migrants to help them understand their entitlement to care, to link them to the healthcare system where possible, and to facilitate regularization of their status.[28]

Accessibility and adaptation

Services should be designed to be easy to access and use by target communities. Services targeting marginalized groups should be delivered primarily from community-based centres located conveniently for users, supported by mobile outreach units where appropriate, rather than hospital-based clinics (item A9).[9 12 20 26] Co-location of multiple services can further facilitate wider engagement and uptake. Target communities can play a key role in designing, delivering and assessing these services.

For example, PWUD – a population that is challenging to engage and retain in health services – often use and trust harm reduction services, particularly when staffed by peers (people with lived experience of challenges similar to those faced by the service user).[29] Moreover, such services offer opportunities to provide wider healthcare, support and health education.[20 26] Engagement in care for hepatitis C virus or HIV infection may in turn contribute to reducing risk behaviours and supporting harm reduction. The Checkpoint centres across Europe[30] and the 56 Dean Street clinic in London[31] offer examples of good practice in community-based HIV services targeting key populations. Service models specifically targeting homeless people include integrated multi-professional services within shelters or community-based outpatient clinics and mobile primary care outreach teams.[32]

Prisoners are another example of a group facing specific challenges in accessing healthcare. In particular, access to secondary care may be limited by the prioritization of security measures over healthcare services, while primary care services in prisons are often not provided to the same quality as in the community. Prisons therefore represent an important opportunity for multifaceted public health interventions, for example voluntary testing and care for sexually transmitted infections and blood-borne viruses [20 22 23] and inter alia care for dental and mental health issues.

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Checklist items A10–23 (Table 1) offer various additional practical considerations to improve accessibility to target groups, including free-of-charge access, confidentiality or anonymity, convenient opening hours and measures to support informed decision-making by users. Methods to further promote and monitor service engagement and adherence include sign-posting within target communities (item A22) and peer support work by community members (A25–26). Digital health tools, especially mobile phone apps, also show promise for this purpose.[33 34 35] For example, the Refaid app (https://refaid.com) shows migrants and refugees the location of nearby services. However, the evidence base supporting these interventions is limited at present, and care must be taken to ensure that their use does not contribute to widening health inequalities.

Health workforce

Health and social care providers often lack up-to-date, evidence-based education and training to deal with the complex challenges faced by marginalized communities and may lack evidence-based guidance and support structures. Discrimination within healthcare settings towards marginalized groups can also be an important barrier to access and can compromise care.[36] All staff members who serve such communities therefore require specific training on the health, social, economic and other relevant aspects necessary to enable them to effectively engage with and support service users (Table 3; items B1–B9). Better training of staff in non-health provider settings (such as homeless shelters) in such matters could also lead to earlier and better referrals to the healthcare system.

Health information systems

Accurate, relevant health information is required to support evidence-based policy and service design, and to ensure that services reach and benefit target communities. Numerous evidence gaps exist with respect to the effectiveness or cost-effectiveness of services for marginalized groups. Collecting data regarding the health of marginalized people can be difficult and national data collection systems are limited and heterogeneous between countries,[6 7] hampering international comparisons and benchmarking as well as national policymaking.

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The Checklist items in this section (Table 3) aim to ensure that suitable systems are in place to capture service users' feedback and measure service quality, and that people from target communities (including but not limited to community advocacy organizations) are involved in this process.

Medical products & technologies

In 2017, 12 agencies of the United Nations called on member states to put in place guarantees against discrimination, as manifest when some individuals or groups are denied access to services that are otherwise available to others – a key barrier to the achievement of the SDGs.[36] For example, among PWUD and migrants in Europe, antiretroviral therapy for HIV is more likely to be delayed and to show worse outcomes as compared to the general population.[37,38] Other examples include the limited, uneven implementation of testing and evidence-based standard-of-care treatment for hepatitis C virus infection among prisoners and PWUD[39] and to address the high levels of non-communicable diseases among homeless people.[3]

Service design should be based on the fundamental principle of equity, whereby all protocols, guidelines and policies should provide all service users with the same access to medical products and technologies as everyone else, subject to need and according to the best standard of care that is locally available (C1; Table 3).

Financing

Generally, healthcare interventions targeting underserved populations have been chronically underfunded and treated as short-term and isolated projects. Items in this section (Table 4) underscore that services should be adequately and sustainably financed based on an accurate, up-to-date local needs assessment (E1) over a suitable timeframe, together with suitable impact assessment.

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Many states depend on donor funding to deliver some services targeting underserved groups – such as national HIV, viral hepatitis and tuberculosis programmes. Where donors have withdrawn support, it is vital that governments maintain equitable service delivery through sustainable health financing systems to avoid detrimental effects on public health.[23 24]

Health services for marginalized populations can be funded in a variety of ways, including by municipal, regional, national, European Union and international funding sources. In some instances, health can be funded through structural funds, which in the past have traditionally been associated with infrastructure. This would allow for fundamental change rather than short-term projects.

The value of investment in community-based services for underserved, marginalized people should be considered from an intersectoral perspective, i.e. taking into account the broader benefits of such services on public health objectives and social/welfare services (E3). Multifaceted community-based services can facilitate early diagnosis and interventions that can reduce healthcare costs associated with some key public health threats, while improving outcomes. In particular, providing access to routine primary care services has the potential to reduce the need for more expensive, unplanned emergency hospital care.

For example, harm reduction services to prevent bloodborne viruses are cost-effective.[40] In England, it is estimated that preventing only 1% of cases annually would save £15–19 million, while the annual costs of late HIV diagnosis are twice those of early diagnosis.[41] Policies and investment into harm reduction can also deliver broader social benefits, such as lower levels of drug-related crime and reduced pressure on criminal justice systems.

Evidence also clearly indicates that housing assistance for homeless people benefits health service utilization[27 42] although housing stability can cause an initial spike in healthcare use by allowing homeless people to properly connect with the health system. For example, housing interventions not only improve HIV care access and outcomes, but can also prevent new infections, supporting a

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role in primary prevention.[27] Economic arguments also support the full provision of healthcare services for undocumented migrants, i.e. not only in order to fulfil equity principles and health objectives but also because timely provision of primary healthcare services is cost-saving over hospital care.[6,43–45]

Leadership and governance

Governance to accelerate UHC involves transparent, inclusive and equitable decision-making processes that allow for the input of all stakeholders and which develop policies that perform effectively, reaching clear and measurable outcomes for all, building accountability and being fair.[1] The NLO Checklist (Table 4) is intended to promote the involvement of people from target communities and/or community advocacy organizations in the planning, delivery, leadership and governance of services (F1), in general alignment with recommendations.[6,7,9,26] Various strategies and tools can help empower community and patient populations toward this purpose. [9,26,29,46]

High-level political attention is needed to ensure that the appropriate legal frameworks are in place to support healthcare access for all. The rights of all individuals to access to preventive healthcare and to benefit from medical treatment under national laws and practices are enshrined in the Charter of Fundamental Rights of the European Union[47] and other international instruments.[48,49] Services should reflect international standards regarding human rights, equity, non-discrimination and confidentiality (F2). Inequities in healthcare access should be addressed as part of antidiscrimination and protective policies that foster a supportive legal framework and non-discriminatory policy environment (F3). A Joint UN statement has called for member states to review and repeal punitive laws proven to have negative health outcomes and that counter established public health evidence.[36] Notably, in May 2019, the WHO adopted a 5-year global action plan aiming to achieve UHC and the highest attainable standard of health for refugees and migrants together with host populations[50], and G7 Health Ministers committed to improve healthcare access for all, including by strengthening primary healthcare.[51]

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National disease-specific action plans are important to the achievement of SDGs, and yet are still not present in many European Union countries, have important gaps, or frequently lack community involvement.[39] Such national action plans are also important to tackle the broader deficits in access in step with issues such as housing and other health determinants (F4).

Accountable, transparent leadership and governance is essential (F7). The call by the WHO Regional Office for Europe call for enhanced national and local stewardship for implementation of the strategies and action plans on migrant health[6], and the recommendations by a Lancet Commission for robust accountability and monitoring in the field of migrant health[7] also apply to those for other marginalized communities. Notably, the 2018 Global Harm Reduction International study highlighted poor transparency on harm reduction funding across Europe.[52]

Discussion

Some of the people in Europe most in need of healthcare are amongst the least likely to receive it – this may be considered an extreme example of Tudor Hart's Inverse Care Law.[53] To fulfil their commitment to contribute to the health and wellbeing of all, and to reach the SDGs, governments at all levels – national, regional and local – working together with civil society partners – should ensure that nobody is left outside of their health system. Inequalities in access are not inevitable and can be addressed by tailored, integrated service models. The NLO Service Design Checklist is offered as a practical tool to support this process based on the principles of equity, non-discrimination and community engagement.

Checklists have been successfully applied for clinical purposes in various settings. Notably, the WHO Surgical Safety Checklist has been associated with reductions in surgical mortality.[54] The scope of our Checklist includes direct considerations for service designers and frontline providers, together with wider aspects of policy, funding and governance. It shares many common aspects with the WHO Checklist for the framework for action on integrated health services[19], including needs assessment,

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provision of a broad, multidisciplinary service, empowerment of target communities (i.e. providing people with the necessary education, skills and resources they need to take control of their own health and to play an active role in defining problems, decision-making and actions to manage their health), workforce support, evidence generation on performance, and clear accountability. Our Checklist focuses on certain marginalized communities, as for example do the UNAIDs Checklist for community engagement in the implementation of guidelines on the sexual and reproductive rights of women living with HIV[55] and a Public Health England Checklist of questions for healthcare practitioners to consider when speaking to new migrant patients.[56]

The NLO Checklist was developed with particular attention to homeless people, PWUD, LGBTI people, prisoners, sex workers and undocumented migrants, based on the expertise of participating community organizations. While the Checklist is broad in scope, it is designed to allow representatives of multiple marginalized groups that often intersect and face common access barriers to collaboratively inform service design. As such, the Checklist is not intended to be universally applicable, wholesale. Rather, it provides a range of considerations that may be used flexibly for diverse purposes and adapted (with translation when needed) to particular settings. By the same token, given its breadth and the commonality of many access barriers, we expect the Checklist to have applications beyond the specific aforementioned communities.

We encourage researchers and other stakeholders to triangulate the Checklist versus existing available documentation and best practices relevant to service design for target communities. Pilot studies are also necessary to evaluate the functionality of the Checklist in practice. NLO participant organizations have recently called on the European Commission to support a Pilot Programme to co-ordinate and evaluate implementations of the Checklist in the context of delivering UHC in Europe.[12 57] NLO members are considering applications with their own communities while raising awareness of the Checklist to promote its use more broadly,[57] now with the support of the NLO Goodwill Ambassador, former European Union

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Commissioner for Health and Food Safety, Vytenis Andriukatis. Users are invited to report their experience and to provide feedback via the NLO website (www.nobodyleftoutside.eu).

We believe the Checklist will be of use to health service policymakers, public health bodies, healthcare practitioner bodies and NGOs at all levels to use the Checklist when developing, updating, monitoring or auditing national or regional service provision and action plans for target groups. It may also assist regional or local healthcare authorities, service managers, and frontline professionals and peer-support workers in the design, refinement or assessment of local services. The Checklist may also help community advocacy organizations to engage in service design and action plan formulation with the aforementioned bodies (proactively or via consultation processes), and in wider advocacy efforts to improve equitable access to health and support services.

Conclusion

The NLO Service Design Checklist is offered as a practical tool to help overcome Inequalities in access to health and support services. We encourage health service policymakers, public health bodies, healthcare authorities, healthcare practitioner bodies, peer support workers and non-governmental organizations to use it when developing, updating or monitoring action plans and local services for target groups. It may also assist civil society in wider advocacy efforts to improve access among underserved communities.

Abbreviations

HIV: human immunodeficiency virus.

LGBTI: lesbian, gay, bisexual, transgender and intersex

NLO: Nobody Left Outside.

OECD: Organisation for Economic Co-operation and Development.

PWUD: people who use drugs.

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SDG: Sustainable Development Goal.

UHC: universal health coverage.

UN: United Nations.

WHO: World Health Organization.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Availability of data and materials

Not applicable.

Competing interests

JVL reports research grants from AbbVie, Gilead and MSD, outside of the submitted work. LB is an employee of Interel (Brussels, Belgium), which received fees from MSD as part of the grant supporting the NLO initiative. MC, DO, ACS, ES and FS declare that they have no competing interests.

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Authors' contributions

JVL, LB, MC ,DO, ES, ACS and FS, participated in the idea development, planning and creation of the NLO Service Design Checklist at NLO meetings and review cycles, including at the European Health

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Forum in Gastein. JVL and LB led the drafting of this paper. JVL and FS led a European Commission Thematic Network webinar to discuss the Checklist. All authors reviewed and contributed to each draft and approved the final draft.

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Table 1. Nobody Left Outside Service Design Checklist – section A: service delivery

A. Service delivery **Aim: Design and deliver an easily accessible service that meets the needs of the communities for whom it is intended.** Relevance: Providers ✓✓ Policymakers ✓	Yes	No	Not relevant / Comments
DESIGN STAGE			
A1. Were people from the target community involved in the design of the service?			
Has the design of the service taken into account the:			
A2. Health and social care needs of the community?			
A3. Existing barriers to service access for the community, identified by the community and/or service users?			
A4. Existing barriers identified by healthcare staff in delivering services to the community?			
A5. Existing resources and skills within the community?			
A6. Relevant clinical practice guidelines and/or best practices?			
SERVICES PROVIDED			
A7. Does the service provide integrated access (co-located or linked) to the range of health services (including testing, treatment, prevention and supportive care), social services and legal services needed by the community?			
A8. Are the physical and psychological needs of each service user systematically assessed on an individualized basis and in an appropriate manner?			
ACCESSIBILITY AND ADAPTATION			
Is the service made easy to access and use by the community by:			
A9. Providing community-based and/or mobile clinics?			
A10. Having convenient opening hours?			
A11. Providing child-friendly waiting areas?			

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A12. Providing physical accessibility for people with reduced mobility?			
A13. Providing accessible sex- or gender-segregated spaces and services that are safe and accessible for trans, non-binary and intersex persons?			
A14. Being provided on an anonymous or confidential basis?			
A15. Not requiring users to provide formal identification to access the service?			
A16. Being free-of-charge to users?			
A17. Providing user-friendly information in plain language on the available health, social and legal services and users' rights to access these, translated into relevant languages and sufficient for them to make informed choices?			
A18. Being suitably tailored to be sensitive to users' sexuality, ethnicity, migration status, culture, faith, gender, housing status and lifestyle?			
A19. Allowing users the option to choose which gender of staff member they see?			
A20. Providing trained interpreters for relevant languages during consultations?			
A21. Offering users assistance with completing forms or other documents?			
A22. Being promoted and signposted effectively within the community?			
A23. Providing incentives (e.g. financial) for users to use the service?			
A24. Using digital tools with evidence of benefit to help link people to care?			
PEER SUPPORT			
A25. Does the service use peer care and support by community members?			
A26. Are peer support workers adequately compensated for their services?			

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1 Table 2. Range of services that may be required by people from marginalized, underserved

2 communities targeted by the Nobody Left Outside Service Design Checklist

Harm reduction:	
• Opioid substitution therapy	
• Needle and syringe exchange	
• Alcohol and substance abuse interventions	
• Infectious diseases testing (with appropriate counselling), linked to treatment services – including for HIV, hepatitis B and C virus, tuberculosis	
• Vaccination and other prevention approaches	
• Condom distribution	
• Wound care	
Other health services:	
• Sexual and reproductive health services (including screening, diagnosis and treatment of sexually transmitted diseases, cervical cancer screening)	
• Dental care	
• Maternity care services (including conception and pregnancy care)	
• Mental health services	
• Health promotion education	
Social and support services:	
• Housing or shelter support	
• Social and welfare services	
• Legal support services	

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1 Table 3. Nobody Left Outside Service Design Checklist – section B (health workforce), C (health
2 information systems) and D (medical products and technologies).
3

B. Health workforce **Aim: Prevent and address discrimination and ensure workforce is enabled to deliver the service.** Relevance: Providers ✓✓ Policymakers ~	Yes	No	Not relevant / Comments
Do *all* staff members receive education and training on:			
B1. Health and social care needs and challenges among underserved communities?			
B2. Users' rights to health and social services, and principles of non-discriminatory equal access?			
B3. Sensitivity regarding relevant cultural, faith, gender and lifestyle matters among user communities?			
B4. Communication skills (including appropriate terminology)?			
B5. Stress management?			
B6. Conflict management?			
B7. Do healthcare staff receive suitable training to deliver the necessary services according to current evidence-based guidelines and best practices?			
B8. Is the training provided to healthcare staff accredited for continuing medical education (CME)?			
B9. Are peer support workers given suitable training to fulfil their roles?			
B10: Are healthcare staff and peer support workers given peer-to-peer support, supervision or psychological aid, if necessary?			
Do workforce training programmes include contributions from:			
B11. Community representatives?			
B12. Professional peers ('champions')?			
C. Health information systems **Aim: Check that the service is used by the community and meets users' needs.** Relevance: Providers ✓✓ Policymakers ✓	Yes	No	Not relevant / Comments
C1. Are community representatives involved in how the service is assessed?			
Are suitable systems in place to monitor the:			
C2. Usage of the service by the communities?			
C3. Quality and impact of the service provided?			
C4. Is there a formal process to capture users' feedback on the service, including complaints?			
C5. Are feedback loops in place to ensure that monitoring and user feedback help to improve the service?			
C6. Are data gathered (with informed consent where appropriate and in a data protection-compliant manner) for research and advocacy purposes?			
C7. Does the service apply quality standards?			

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D. Medical products & technologies **Aim: Ensure that all service users have equitable access to care.** Relevance: Providers ✓✓ Policymakers ✓✓	**Yes**	**No**	**Not relevant / Comments**
D1. Do care protocols, guidelines and policies provide all service users with equitable and barrier-free access to medical products and technologies according to the best possible, evidence-based standard of care that is locally available?			

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Table 4. Nobody Left Outside Service Design Checklist – section E (financing) and F (leadership and governance).

E. Financing **Aim: Ensure the service is adequately and sustainably resourced.** **Relevance: Providers ✓ Policymakers ✓✓**	Yes	No	Not relevant / Comments
E1. Are services adequately financed based on an accurate, up-to-date local needs assessment?			
E2. Is the service sustainably financed for a suitable timeframe?			
E3. Does service financing take an intersectoral perspective based on the needs of the community?			
F. Leadership & governance **Aim: Ensure service is suitably led and governed, with community involvement** Relevance: Providers ~ Policymakers ✓✓			
F1. Are community representatives involved in the leadership and governance of the service?			
F2. Does the service reflect international standards regarding human rights, equity, non-discrimination and confidentiality?			
F3. Is there a supportive legal framework and policy environment?			
F4. Is there a National Action Plan regarding health and social care for the community, developed with involvement of the community?			
F5. Is the service operated under the Health authorities (rather than the Interior or Justice authorities)?			
F6. Do Health and Social Services authorities, and relevant government agencies, collaborate in the delivery of the service?			
F7. Does the service have accountable, transparent leadership and governance?			

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Figure legend

Figure 1. Schematic overview of Nobody Left Outside (NLO) Service Design Checklist, based on the World Health Organization Health Systems Framework.[18]

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Figure 1- JPEG

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