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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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4 1 **A novel health systems service design checklist to improve healthcare access**
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7 2 **for marginalized, underserved communities in Europe**
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59
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1 **Abstract**

2 **Background**

3 Marginalized communities such as the homeless, people who use drugs, lesbian, gay, bisexual,
4 transgender and intersex people (LGBTI), prisoners, sex workers, and undocumented migrants are at
5 high risk of poor health and yet face substantial barriers in accessing health and support services.

6 The Nobody Left Outside Service Design Checklist aims to promote a collaborative, evidence-based
7 approach to service design and monitoring based on equity, non-discrimination and community
8 engagement.

9 **Methods**

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

14 **Results**

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

1 **Conclusions**

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

7 **Strengths and Limitations**

8 **Strengths:**

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

17 **Limitations:**

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

20 **Background**

21 According to the principle of universal health coverage (UHC), all people should have access, without
22 discrimination and exposure to financial hardship, to nationally determined, basic health services.¹⁻²
23 UHC encompasses health service delivery, human resources, health facilities, health technologies,
24 information systems and communications networks, quality assurance mechanisms, governance and
25 legislation, and financing.
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3 1 Even in the high-income countries of the European Union and the Organisation for Economic Co-
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5 2 operation and Development (OECD) a large number of people are underserved by health systems.
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7 3 This is particularly true for socially excluded people such as the homeless, people who use drugs
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9 4 (PWUD), lesbian, gay, bisexual, transgender and intersex (LGBTI) people, prisoners, sex workers and
10
11 5 undocumented migrants. These communities are at a significantly higher risk of poor health than the
12
13 6 general population, owing to high levels of stress and precarious living conditions that can increase
14
15 7 their vulnerability to certain infectious diseases, such as HIV and viral hepatitis, mental health
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17 8 conditions, maternal health problems, poor dental health and violence-related trauma.³⁻⁸ Some
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19 9 chronic non-communicable diseases (e.g. cardiovascular disease or cancer) are more common or
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21 10 have worse outcomes in some marginalized groups (e.g. the homeless and prisoners), as compared
22
23 11 with the general population.³⁻⁵

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29 12 Despite their risks of poor health, these marginalized communities face substantial challenges in
30
31 13 accessing health and support services owing to a complex interplay of educational, cultural,
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33 14 organizational, administrative, economic and legal barriers, together with widespread stigma and
34
35 15 institutional discrimination.⁶⁻¹¹ Their general exclusion from healthcare planning and monitoring
36
37 16 processes results in a misalignment between service design and the needs of target groups and
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39 17 contributes to poor health outcomes.

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43 18 The Nobody Left Outside (NLO) initiative is a European coalition of organisations representing the
44
45 19 aforementioned communities. Despite the complexity of the challenges they face in accessing
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47 20 services, NLO partners have worked to create a framework for the delivery of care in a way that
48
49 21 addresses many of the overlapping needs of these communities. A 2019 Thematic Network under
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51 22 the Health Policy Platform of the European Commission (<https://webgate.ec.europa.eu/hpf/>), the
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53 23 NLO coalition published a Joint Statement on priority measures to improve access to health and
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55 24 support services in October 2019.¹² Here, we describe the NLO Service Design Checklist, a novel tool
56
57 25 to help key stakeholders tailor health services to marginalized communities.
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1 **Methods**

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

9 The Checklist was devised through a three-step process: two NLO platform meetings informed by a
10 literature review; a policy laboratory workshop at the European Health Forum Gastein 2017; and an
11 associated concept paper.¹³ Feedback was obtained from stakeholder organisations via a European
12 Commission-led Thematic Network webinar¹⁴ and an oral presentation at the International
13 Conference on Integrated Care.¹⁵

14 It is structured into six sections according to the World Health Organization (WHO) Health Systems
15 Framework: service delivery, health workforce, health information systems, medical products and
16 technologies, financing, and leadership and governance (Figure 1).¹⁶ It also aligns broadly with the
17 principles of the European Framework for Action on Integrated Health Services Delivery¹⁷ and other
18 recommendations.^{9, 18-22}

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

1 Results

2 Service delivery

3 *Design stage*

4 Marginalized groups are often described as ‘hard to reach’, whereas from their perspective, it is
5 frequently the services that are hard to reach. Section A (Table 1) aims to aid the design and delivery
6 of easily accessible services that meet the needs of target communities. Specifically, it promotes the
7 implementation of integrated, co-located or linked healthcare services that are people-centred and
8 which provide a continuum of relevant services, according to users’ needs, as called for by the WHO
9² and the OECD²³. It aligns with the principles of disease- and population-specific, yet broadly
10 applicable, WHO guidance on service design and delivery.^{9, 18, 24}

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

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

17 *Services provided*

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

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

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

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

10 *Accessibility and adaptation*

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

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

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

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

12 **Health workforce**

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

22 **Health information systems**

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

1 Collecting data regarding the health of marginalized people can be difficult and national data
2 collection systems are limited and heterogeneous between countries⁶⁻⁷, hampering international
3 comparisons and benchmarking as well as national policymaking.

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

7 **Medical products & technologies**

8 In 2017, 12 agencies of the United Nations called on member states to put in place guarantees
9 against discrimination, as manifest when some individuals or groups are denied access to services
10 that are otherwise available to others – a key barrier to the achievement of the SDGs.³ For example,
11 among PWUD and migrants in Europe, antiretroviral therapy for HIV is more likely to be delayed and
12 to show worse outcomes as compared to the general population.³⁰⁻³¹ Other examples include the
13 limited, uneven implementation of testing and evidence-based standard-of-care treatment for
14 hepatitis C virus infection among prisoners and PWUD³² and to address the high levels of non-
15 communicable diseases among the homeless.³

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

20 **Financing**

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

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3 1 to-date local needs assessment (E1) over a suitable timeframe, together with suitable impact
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5 2 assessment.

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8 3 Many states depend on donor funding to deliver some services targeting underserved groups – such
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10 4 as national HIV, viral hepatitis and tuberculosis programmes. Where donors have withdrawn
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12 5 support, it is vital that governments maintain equitable service delivery through sustainable health
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14 6 financing systems to avoid detrimental effects on public health. ²¹⁻²²

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18 7 Health services for marginalized populations can be funded in a variety of ways, including by
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20 8 municipal, regional, national, European Union and international funding sources. In some instances,
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22 9 health can be funded through structural funds, which in the past have traditionally been associated
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24 10 with infrastructure. This would allow for fundamental change rather than short-term projects.

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28 11 The value of investment in community-based services for underserved, marginalized people should
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30 12 be considered from an intersectoral perspective, i.e. taking into account the broader benefits of such
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32 13 services on public health objectives and social/welfare services (E3). Multifaceted community-based
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34 14 services can facilitate early diagnosis and interventions that can reduce healthcare costs associated
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36 15 with some key public health threats, while improving outcomes. For example, harm reduction
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38 16 services to prevent bloodborne viruses are cost-effective. ³³ In England, it is estimated that
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40 17 preventing only 1% of cases annually would save £15–19 million, while the annual costs of late HIV
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42 18 diagnosis are twice those of early diagnosis. ³⁴ Policies and investment into harm reduction can also
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44 19 deliver broader social benefits, such as lower levels of drug-related crime and reduced pressure on
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46 20 healthcare and criminal justice systems.

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51 21 Evidence also clearly indicates benefits health service utilization from housing assistance
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53 22 for homeless people ^{25, 35} although housing stability can cause an initial spike in healthcare use by
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55 23 allowing homeless people to properly connect with the health system. For example, housing
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57 24 interventions not only improve HIV care access and outcomes, but can also prevent new infections,
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1 supporting a role in primary prevention.²⁵ Economic arguments also support the full provision of
2 healthcare services for undocumented migrants, i.e. not only in order to fulfil equity principles and
3 health objectives but also because timely provision of primary healthcare services is cost-saving over
4 hospital care.^{6, 36–38}

5 **Leadership and governance**

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

13 High-level political attention is needed to ensure that the appropriate legal frameworks are in place
14 to support healthcare access for all. The rights of all individuals to access to preventive healthcare
15 and to benefit from medical treatment under national laws and practices are enshrined in the
16 Charter of Fundamental Rights of the European Union⁴⁰ and other international instruments.⁴¹⁻⁴²
17 Services should reflect international standards regarding human rights, equity, non-discrimination
18 and confidentiality (F2). Inequities in healthcare access should be addressed as part of
19 antidiscrimination and protective policies that foster a supportive legal framework and non-
20 discriminatory policy environment (F3). A Joint United Nations statement has called for member
21 states to review and repeal punitive laws proven to have negative health outcomes and that counter
22 established public health evidence.⁴³ Notably, in May 2019, the WHO adopted a 5-year global action
23 plan aiming to achieve UHC and the highest attainable standard of health for refugees and migrants
24 together with host populations⁴⁴, and G7 Health Ministers committed to improve healthcare access
25 for all, including by strengthening primary healthcare.⁴⁵

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3 1 National disease-specific action plans are important to the achievement of SDGs, and yet are still not
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5 2 present in many European Union countries, have important gaps, or frequently lack community
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7 3 involvement.³³ Such national action plans are also important to tackle the broader deficits in access
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9 4 in step with issues such as housing and other health determinants (F4).
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13 5 Accountable, transparent leadership and governance is essential (F7). The call by the WHO Regional
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15 6 Office for Europe call for enhanced national and local stewardship for implementation of the
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17 7 strategies and action plans on migrant health⁶, and the recommendations by a Lancet Commission
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19 8 for robust accountability and monitoring in the field of migrant health⁷ also apply to those for other
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21 9 marginalized communities. Notably, the 2018 Global Harm Reduction International study highlighted
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23 10 poor transparency on harm reduction funding across Europe.⁴⁶
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28 11 **Discussion**

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30 12 Some of the people in Europe most in need of healthcare are amongst the least likely to receive it.
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32 13 To fulfil their commitment to contribute to the health and wellbeing of all, and to reach the SDGs,
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34 14 governments at all levels – national, regional and local – working together with civil society partners
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36 15 – should ensure that nobody is left outside of their health system. Inequalities in access are not
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38 16 inevitable and can be addressed by tailored, integrated service models. The NLO Service Design
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40 17 Checklist is offered as a practical tool to support this process based on the principles of equity, non-
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42 18 discrimination and community engagement.
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47 19 Checklists have been successfully applied for clinical purposes in various settings. Notably, the WHO
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49 20 Surgical Safety Checklist has been associated with reductions in surgical mortality.⁴⁷ The scope of
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51 21 our Checklist includes direct considerations for service designers and frontline providers, together
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53 22 with wider aspects of policy, funding and governance. It shares many common aspects with the
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55 23 WHO Checklist for the framework for action on integrated health services¹⁷, including needs
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57 24 assessment, provision of a broad, multidisciplinary service, empowerment of target communities,
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1 workforce support, evidence generation on performance, and clear accountability. Our Checklist
2 focuses on certain marginalized communities, as for example do the UNAIDs Checklist for
3 community engagement in the implementation of guidelines on the sexual and reproductive rights
4 of women living with HIV ⁴⁸ and a Public Health England Checklist of questions for healthcare
5 practitioners to consider when speaking to new migrant patients. ⁴⁹

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

18 **Conclusion**

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

1 **Abbreviations**

- 2 HIV: human immunodeficiency virus.
- 3 LGBTI: lesbian, gay, bisexual, transgender and intersex
- 4 NLO: Nobody Left Outside.
- 5 OECD: Organisation for Economic Co-operation and Development.
- 6 PWUD: people who use drugs.
- 7 SDG: Sustainable Development Goal.
- 8 UHC: universal health coverage.
- 9 WHO: World Health Organization.

10 **Declarations**

11 **Ethics approval and consent to participate**

12 Not applicable.

13 **Consent for publication**

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16 Not applicable.

17 **Competing interests**

18 JVL reports research grants from AbbVie, Gilead and MSD, outside of the submitted work. LB is an
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5 **Authors' contributions**

6 JVL, LB, MC ,DO, ES, ACS and FS, participated in the idea development, planning and creation of the
7 NLO Service Design Checklist at NLO meetings and review cycles, including at the European Health
8 Forum in Gastein. JVL and LB led the drafting of this paper. JVL and FS led a European Commission
9 Thematic Network webinar to discuss the Checklist. All authors reviewed and contributed to each
10 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	Yes	No	Not relevant / Comments
Aim: Design and deliver an easily accessible service that meets the needs of the communities for whom it is intended.			
Relevance: Providers ✓✓ Policymakers ✓			
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?			

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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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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3 1 Table 3. Nobody Left Outside Service Design Checklist – section B (health workforce), C (health
4 2 information systems) and D (medical products and technologies).
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B. Health workforce	Yes	No	Not relevant / Comments
Aim: Prevent and address discrimination and ensure workforce is enabled to deliver the service. Relevance: Providers ✓✓ Policymakers ~			
Do <i>all</i> 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	Yes	No	Not relevant / Comments
Aim: Check that the service is used by the community and meets users' needs. Relevance: Providers ✓✓ Policymakers ✓			
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?			

1

For peer review only

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3 1 Table 4. Nobody Left Outside Service Design Checklist – section E (financing) and F (leadership and
4 2 governance).
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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?			

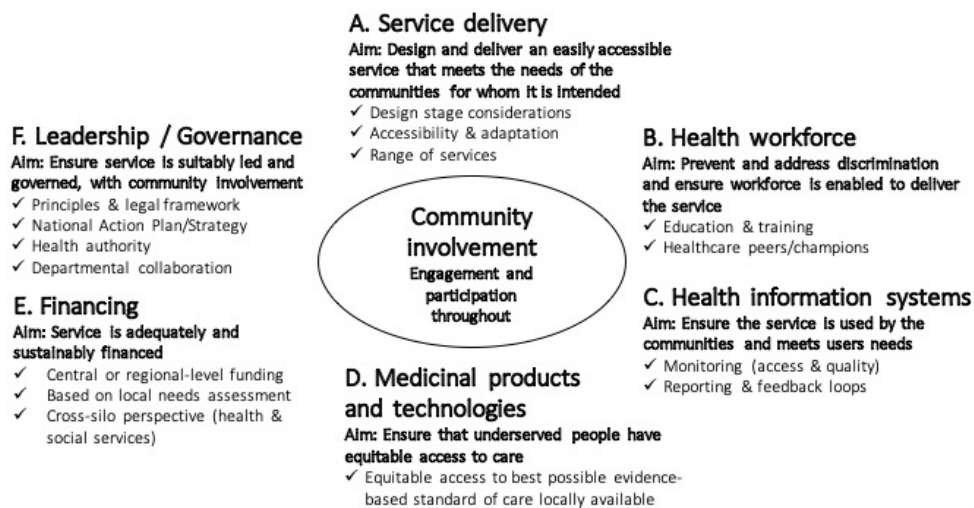
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1 **Figure legend**

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

For peer review only



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

240x125mm (72 x 72 DPI)

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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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4 1 **A novel health systems service design checklist to improve healthcare access**
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7 2 **for marginalized, underserved communities in Europe**
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60 28 health systems, Europe

1 **Abstract**

2 **Background**

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

9 **Methods**

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

15 **Results**

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

1 **Conclusions**

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

7 **Strengths and Limitations**

8 **Strengths:**

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

17 **Limitations:**

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

20 **Background**

21 According to the principle of universal health coverage (UHC), all people should have access, without
22 discrimination and exposure to financial hardship, to nationally determined, basic health services.¹⁻²
23 UHC encompasses health service delivery, human resources, health facilities, health technologies,
24 information systems and communications networks, quality assurance mechanisms, governance and
25 legislation, and financing.
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3 1 Even in the high-income countries of the European Union and the Organisation for Economic Co-
4
5 2 operation and Development (OECD) a large number of people are underserved by health systems.
6
7 3 This is particularly true for socially excluded people such as homeless people, people who use drugs
8
9 4 (PWUD), lesbian, gay, bisexual, transgender and intersex (LGBTI) people, prisoners, sex workers and
10
11 5 undocumented migrants. These communities are at a significantly higher risk of poor health than the
12
13 6 general population, owing to high levels of stress and precarious living conditions that can increase
14
15 7 their vulnerability to certain infectious diseases, such as HIV and viral hepatitis, mental health
16
17 8 conditions, maternal health problems, poor dental health and violence-related trauma.^{3 4 5 6 7 8} In
18
19 9 high-income countries, most chronic non-communicable diseases are substantially more common
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21 10 and have worse outcomes in marginalized groups, as compared with the general population.^{3 4 5}
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26 11 Despite their risks of poor health, these marginalized communities face substantial challenges in
27
28 12 accessing health and support services owing to a complex interplay of educational, cultural,
29
30 13 organizational, administrative, economic and legal barriers, together with widespread stigma and
31
32 14 institutional discrimination.^{6 7 8 9 10 11} Their general exclusion from healthcare planning and
33
34 15 monitoring processes results in a misalignment between service design and the needs of target
35
36 16 groups and contributes to poor health outcomes. An emergent approach termed “inclusion health”
37
38 17 aims to address such extreme health and social inequities.¹²
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43 18 The Nobody Left Outside (NLO) platform is a European coalition of organisations representing
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45 19 marginalised underserved communities. Despite the complexity of the challenges they face in
46
47 20 accessing services, NLO partners have worked to create a framework for the delivery of care in a way
48
49 21 that addresses many of the overlapping needs of these communities. Designated as a 2019 Thematic
50
51 22 Network under the Health Policy Platform of the European Commission
52
53 23 (<https://webgate.ec.europa.eu/hpf/>), the NLO coalition published a Joint Statement on priority
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55 24 measures to improve access to health and support services in October 2019.¹³ Here, we describe the
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1 NLO Service Design Checklist, a novel tool to help key stakeholders tailor health services to
2 marginalized communities.

3 **Methods**

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

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

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

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

1 Checklist concept, structure and items) followed by multiple revision cycles and an open multi-
2 stakeholder policy workshop at the European Health Forum Gastein 2017. The draft Checklist was
3 then subject to further open stakeholder consultation via the 2019 NLO European Commission-led
4 Thematic Network (including a webinar¹⁵ and call for written feedback) and presentations at two
5 conferences – an oral presentation at the International Conference on Integrated Care 2019¹⁶ and an
6 e-poster at Lisbon Addictions 2019.¹⁷

7 It is structured into six sections according to the World Health Organization (WHO) Health Systems
8 Framework: service delivery, health workforce, health information systems, medical products and
9 technologies, financing, and leadership and governance (Figure 1).¹⁸ It also aligns broadly with the
10 principles of the European Framework for Action on Integrated Health Services Delivery¹⁹ and other
11 recommendations.^{9 12 20 21 22 23 24}

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

17 Results

18 Service delivery

19 Design stage

20 Marginalized groups are often described as ‘hard to reach’, whereas from their perspective, it is
21 frequently the services that are hard to reach. Section A (Table 1) aims to aid the design and delivery
22 of easily accessible services that meet the needs of target communities. Specifically, it promotes the
23 implementation of integrated, co-located or linked healthcare services that are people-centred and
24 which provide a continuum of relevant services, according to users’ needs, as called for by the WHO²

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

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

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

9 *Services provided*

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

14 Harm reduction services (Table 2) are a priority among many marginalized communities and are
15 essential to achieve the UN Sustainable Development Goals (SDGs) and WHO targets relevant to HIV
16 and viral hepatitis^{22 23} and yet are limited in most countries and settings, e.g. prisons.⁸ Other health
17 services of particular relevance include vaccination, sexual and reproductive health, mental health,
18 dental care and maternal health. Many of these services correspond to indicators proposed by WHO
19 to measure UHC² and among vulnerable communities are often subject to variations in access within
20 Europe.

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

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2
3 1 for example to undocumented migrants to help them understand their entitlement to care, to link
4
5 2 them to the healthcare system where possible, and to facilitate regularization of their status.²⁸
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7

8 3 *Accessibility and adaptation*

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10 4 Services should be designed to be easy to access and use by target communities. Services targeting
11
12 5 marginalized groups should be delivered primarily from community-based centres located
13
14 6 conveniently for users, supported by mobile outreach units where appropriate, rather than hospital-
15
16 7 based clinics (item A9).^{9 12 20 26} Co-location of multiple services can further facilitate wider
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18 8 engagement and uptake. Target communities can play a key role in designing, delivering and
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20 9 assessing these services.
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25 10 For example, PWUD – a population that is challenging to engage and retain in health services – often
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27 11 use and trust harm reduction services, particularly when staffed by peers (people with lived
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29 12 experience of challenges similar to those faced by the service user).²⁹ Moreover, such services offer
30
31 13 opportunities to provide wider healthcare, support and health education.^{20 26} Engagement in care for
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33 14 hepatitis C virus or HIV infection may in turn contribute to reducing risk behaviours and supporting
34
35 15 harm reduction. The Checkpoint centres across Europe³⁰ and the 56 Dean Street clinic in London³¹
36
37 16 offer examples of good practice in community-based HIV services targeting key populations. Service
38
39 17 models specifically targeting homeless people include integrated multi-professional services within
40
41 18 shelters or community-based outpatient clinics and mobile primary care outreach teams.³²
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46 19 Prisoners are another example of a group facing specific challenges in accessing healthcare. In
47
48 20 particular, access to secondary care may be limited by the prioritization of security measures over
49
50 21 healthcare services, while primary care services in prisons are often not provided to the same quality
51
52 22 as in the community. Prisons therefore represent an important opportunity for multifaceted public
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54 23 health interventions, for example voluntary testing and care for sexually transmitted infections and
55
56 24 blood-borne viruses^{20 22 23} and inter alia care for dental and mental health issues.
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1 Checklist items A10–23 (Table 1) offer various additional practical considerations to improve
2 accessibility to target groups, including free-of-charge access, confidentiality or anonymity,
3 convenient opening hours and measures to support informed decision-making by users. Methods to
4 further promote and monitor service engagement and adherence include sign-posting within target
5 communities (item A22) and peer support work by community members (A25–26). Digital health
6 tools, especially mobile phone apps, also show promise for this purpose.^{33 34 35} For example, the
7 Refaid app (<https://refaid.com>) shows migrants and refugees the location of nearby services.
8 However, the evidence base supporting these interventions is limited at present, and care must be
9 taken to ensure that their use does not contribute to widening health inequalities.

10 **Health workforce**

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

19 **Health information systems**

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

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3 1 The Checklist items in this section (Table 3) aim to ensure that suitable systems are in place to
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5 2 capture service users' feedback and measure service quality, and that people from target
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7 3 communities (including but not limited to community advocacy organizations) are involved in this
8
9 4 process.

5 **Medical products & technologies**

6 In 2017, 12 agencies of the United Nations called on member states to put in place guarantees
7
8 against discrimination, as manifest when some individuals or groups are denied access to services
9
10 that are otherwise available to others – a key barrier to the achievement of the SDGs.³⁶ For example,
11
12 among PWUD and migrants in Europe, antiretroviral therapy for HIV is more likely to be delayed and
13
14 to show worse outcomes as compared to the general population.^{37 38} Other examples include the
15
16 limited, uneven implementation of testing and evidence-based standard-of-care treatment for
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18 hepatitis C virus infection among prisoners and PWUD³⁹ and to address the high levels of non-
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20 communicable diseases among homeless people.³
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14 Service design should be based on the fundamental principle of equity, whereby all protocols,
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16 guidelines and policies should provide all service users with the same access to medical products and
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18 technologies as everyone else, subject to need and according to the best standard of care that is
19
20 locally available (C1; Table 3).

18 **Financing**

19 Generally, healthcare interventions targeting underserved populations have been chronically
20
21 underfunded and treated as short-term and isolated projects. Items in this section (Table 4)
22
23 underscore that services should be adequately and sustainably financed based on an accurate, up-
24
25 to-date local needs assessment (E1) over a suitable timeframe, together with suitable impact
26
27 assessment.

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

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

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

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

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

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3 1 role in primary prevention.²⁷ Economic arguments also support the full provision of healthcare
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5 2 services for undocumented migrants, i.e. not only in order to fulfil equity principles and health
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7 3 objectives but also because timely provision of primary healthcare services is cost-saving over
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9 4 hospital care.^{6 43–45}

5 **Leadership and governance**

6 Governance to accelerate UHC involves transparent, inclusive and equitable decision-making
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8 7 processes that allow for the input of all stakeholders and which develop policies that perform
9
10 8 effectively, reaching clear and measurable outcomes for all, building accountability and being fair.¹
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12 9 The NLO Checklist (Table 4) is intended to promote the involvement of people from target
13
14 10 communities and/or community advocacy organizations in the planning, delivery, leadership and
15
16 11 governance of services (F1), in general alignment with recommendations.^{6 7 9 26} Various strategies
17
18 12 and tools can help empower community and patient populations toward this purpose.^{9 26 29 46}
19
20 13 High-level political attention is needed to ensure that the appropriate legal frameworks are in place
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22 14 to support healthcare access for all. The rights of all individuals to access to preventive healthcare
23
24 15 and to benefit from medical treatment under national laws and practices are enshrined in the
25
26 16 Charter of Fundamental Rights of the European Union⁴⁷ and other international instruments.^{48 49}
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28 17 Services should reflect international standards regarding human rights, equity, non-discrimination
29
30 18 and confidentiality (F2). Inequities in healthcare access should be addressed as part of
31
32 19 antidiscrimination and protective policies that foster a supportive legal framework and non-
33
34 20 discriminatory policy environment (F3). A Joint UN statement has called for member states to review
35
36 21 and repeal punitive laws proven to have negative health outcomes and that counter established
37
38 22 public health evidence.³⁶ Notably, in May 2019, the WHO adopted a 5-year global action plan aiming
39
40 23 to achieve UHC and the highest attainable standard of health for refugees and migrants together
41
42 24 with host populations⁵⁰, and G7 Health Ministers committed to improve healthcare access for all,
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44 25 including by strengthening primary healthcare.⁵¹

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3 1 National disease-specific action plans are important to the achievement of SDGs, and yet are still not
4
5 2 present in many European Union countries, have important gaps, or frequently lack community
6
7 3 involvement.³⁹ Such national action plans are also important to tackle the broader deficits in access
8
9 4 in step with issues such as housing and other health determinants (F4).
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12
13 5 Accountable, transparent leadership and governance is essential (F7). The call by the WHO Regional
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15 6 Office for Europe call for enhanced national and local stewardship for implementation of the
16
17 7 strategies and action plans on migrant health⁶, and the recommendations by a Lancet Commission
18
19 8 for robust accountability and monitoring in the field of migrant health⁷ also apply to those for other
20
21 9 marginalized communities. Notably, the 2018 Global Harm Reduction International study highlighted
22
23 10 poor transparency on harm reduction funding across Europe.⁵²
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28 11 **Discussion**

29
30 12 Some of the people in Europe most in need of healthcare are amongst the least likely to receive it –
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32 13 this may be considered an extreme example of Tudor Hart's Inverse Care Law.⁵³ To fulfil their
33
34 14 commitment to contribute to the health and wellbeing of all, and to reach the SDGs, governments at
35
36 15 all levels – national, regional and local – working together with civil society partners – should ensure
37
38 16 that nobody is left outside of their health system. Inequalities in access are not inevitable and can be
39
40 17 addressed by tailored, integrated service models. The NLO Service Design Checklist is offered as a
41
42 18 practical tool to support this process based on the principles of equity, non-discrimination and
43
44 19 community engagement.
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49 20 Checklists have been successfully applied for clinical purposes in various settings. Notably, the WHO
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51 21 Surgical Safety Checklist has been associated with reductions in surgical mortality.⁵⁴ The scope of our
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53 22 Checklist includes direct considerations for service designers and frontline providers, together with
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55 23 wider aspects of policy, funding and governance. It shares many common aspects with the WHO
56
57 24 Checklist for the framework for action on integrated health services¹⁹, including needs assessment,
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3 1 provision of a broad, multidisciplinary service, empowerment of target communities (i.e. providing
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5 2 people with the necessary education, skills and resources they need to take control of their own
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7 3 health and to play an active role in defining problems, decision-making and actions to manage their
8
9 4 health), workforce support, evidence generation on performance, and clear accountability. Our
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11 5 Checklist focuses on certain marginalized communities, as for example do the UNAIDs Checklist for
12
13 6 community engagement in the implementation of guidelines on the sexual and reproductive rights
14
15 7 of women living with HIV⁵⁵ and a Public Health England Checklist of questions for healthcare
16
17 8 practitioners to consider when speaking to new migrant patients.⁵⁶
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22 9 The NLO Checklist was developed with particular attention to homeless people, PWUD, LGBTI
23
24 10 people, prisoners, sex workers and undocumented migrants, based on the expertise of participating
25
26 11 community organizations. While the Checklist is broad in scope, it is designed to allow
27
28 12 representatives of multiple marginalized groups that often intersect and face common access
29
30 13 barriers to collaboratively inform service design. As such, the Checklist is not intended to be
31
32 14 universally applicable, wholesale. Rather, it provides a range of considerations that may be used
33
34 15 flexibly for diverse purposes and adapted (with translation when needed) to particular settings. By
35
36 16 the same token, given its breadth and the commonality of many access barriers, we expect the
37
38 17 Checklist to have applications beyond the specific aforementioned communities.
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43 18 We encourage researchers and other stakeholders to triangulate the Checklist versus existing available
44
45 19 documentation and best practices relevant to service design for target communities. Pilot studies are also
46
47 20 necessary to evaluate the functionality of the Checklist in practice. NLO participant organizations have
48
49 21 recently called on the European Commission to support a Pilot Programme to co-ordinate and evaluate
50
51 22 implementations of the Checklist in the context of delivering UHC in Europe.^{12 57} NLO members are
52
53 23 considering applications with their own communities while raising awareness of the Checklist to promote
54
55 24 its use more broadly,⁵⁷ now with the support of the NLO Goodwill Ambassador, former European Union
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3 1 Commissioner for Health and Food Safety, Vytenis Andriukatis. Users are invited to report their
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5 2 experience and to provide feedback via the NLO website (www.nobodyleftoutside.eu).

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8 3 We believe the Checklist will be of use to health service policymakers, public health bodies,
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10 4 healthcare practitioner bodies and NGOs at all levels to use the Checklist when developing,
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12 5 updating, monitoring or auditing national or regional service provision and action plans for target
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14 6 groups. It may also assist regional or local healthcare authorities, service managers, and frontline
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16 7 professionals and peer-support workers in the design, refinement or assessment of local services.

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18 8 The Checklist may also help community advocacy organizations to engage in service design and
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20 9 action plan formulation with the aforementioned bodies (proactively or via consultation processes),
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22 10 and in wider advocacy efforts to improve equitable access to health and support services.
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28 11 **Conclusion**

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30 12 The NLO Service Design Checklist is offered as a practical tool to help overcome Inequalities in access
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32 13 to health and support services. We encourage health service policymakers, public health bodies,
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34 14 healthcare authorities, healthcare practitioner bodies, peer support workers and non-governmental
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36 15 organizations to use it when developing, updating or monitoring action plans and local services for
37
38 16 target groups. It may also assist civil society in wider advocacy efforts to improve access among
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40 17 underserved communities.
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45 18 **Abbreviations**

46
47 19 HIV: human immunodeficiency virus.

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50 20 LGBTI: lesbian, gay, bisexual, transgender and intersex

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53 21 NLO: Nobody Left Outside.

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56 22 OECD: Organisation for Economic Co-operation and Development.

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59 23 PWUD: people who use drugs.
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3 1 SDG: Sustainable Development Goal.
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6 2 UHC: universal health coverage.
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9 3 UN: United Nations.
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12 4 WHO: World Health Organization.
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15 16 5 **Declarations**

17 18 6 **Ethics approval and consent to participate**

19
20 7 Not applicable.
21
22

23 24 8 **Consent for publication**

25
26 9 Not applicable.
27
28

29 30 10 **Availability of data and materials**

31
32 11 Not applicable.
33
34

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42
43

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51 19 non-remunerated) basis.
52
53

54 55 20 **Authors' contributions**

56
57 21 JVL, LB, MC, DO, ES, ACS and FS, participated in the idea development, planning and creation of the
58
59 22 NLO Service Design Checklist at NLO meetings and review cycles, including at the European Health
60

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3 draft and approved the final draft.

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5 Table 1. Nobody Left Outside Service Design Checklist – section A: service delivery
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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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4	A12. Providing physical accessibility for people with reduced mobility?		
5	A13. Providing accessible sex- or gender-segregated spaces and services that are safe		
6	and accessible for trans, non-binary and intersex persons?		
7			
8	A14. Being provided on an anonymous or confidential basis?		
9			
10	A15. Not requiring users to provide formal identification to access the service?		
11			
12	A16. Being free-of-charge to users?		
13			
14	A17. Providing user-friendly information in plain language on the available health,		
15	social and legal services and users' rights to access these, translated into relevant		
16	languages and sufficient for them to make informed choices?		
17			
18	A18. Being suitably tailored to be sensitive to users' sexuality, ethnicity, migration		
19	status , culture, faith, gender, housing status and lifestyle?		
20			
21	A19. Allowing users the option to choose which gender of staff member they see?		
22			
23	A20. Providing trained interpreters for relevant languages during consultations?		
24			
25	A21. Offering users assistance with completing forms or other documents?		
26			
27	A22. Being promoted and signposted effectively within the community?		
28			
29	A23. Providing incentives (e.g. financial) for users to use the service?		
30			
31	A24. Using digital tools with evidence of benefit to help link people to care?		
32			
33			
34	PEER SUPPORT		
35			
36	A25. Does the service use peer care and support by community members?		
37			
38	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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3 Table 3. Nobody Left Outside Service Design Checklist – section B (health workforce), C (health
4 information systems) and D (medical products and technologies).
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B. Health workforce	Yes	No	Not relevant / Comments
Aim: Prevent and address discrimination and ensure workforce is enabled to deliver the service. Relevance: Providers ✓✓ Policymakers ~			
Do <i>all</i> 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	Yes	No	Not relevant / Comments
Aim: Check that the service is used by the community and meets users' needs. Relevance: Providers ✓✓ Policymakers ✓			
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?			

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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3 1 Table 4. Nobody Left Outside Service Design Checklist – section E (financing) and F (leadership and
4 2 governance).
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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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3 1 **Figure legend**
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- 5 2 Figure 1. Schematic overview of Nobody Left Outside (NLO) Service Design Checklist, based on the
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7 3 World Health Organization Health Systems Framework.¹⁸
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Figure 1



Figure 1- JPEG

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