

A window of opportunity

Delivering prevention
in an ageing world

Health and care

Immunisation

International

Costs

Prevention

Diseases and conditions

Inequalities

Life expectancy



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Introduction

During the research for our *Delivering prevention in an ageing world*¹ programme we gathered case studies illustrating some steps being taken across the globe to prioritise prevention.

These case studies are not necessarily examples of leading practice, as there is little by way of comparative evaluation as well as demonstration of efficacy and long-term sustainability. This is especially true with regard to larger policies or changes in healthcare delivery. However, they show that across countries, people and health systems and non-health system actors are innovating. If we want a step change in prevention, mechanisms should be in place to evaluate impact properly, such as randomised control trials of policy interventions. Covid-19 was an opportunity to evaluate the success of public health preventative measures, but we failed. If we continue to implement solutions without testing them, we are at risk of not knowing what works and repeating poor policy decisions. Nevertheless, these examples are a first step in understanding how countries are delivering preventative health and offer suggestions of how G20 countries could catalyse action around prevention.

Each case study is numbered, cross-referenced, throughout *A window of opportunity: Delivering prevention in an ageing world*² report.

Investing in systems designed for prevention

Strategies and structures for integration

1. Integrated Care Systems: UK

Integrated care systems (ICSs) are partnerships that bring together providers and commissioners of NHS services across a geographical area with local authorities and other local partners such as NGOs and other organisations within the community.

The main aim of ICSs is to involve all actors including those who don't sit within the formal healthcare system to help tackle health inequalities and drive improved health outcomes. ICSs represent a fundamental shift in the way the health and care system is organised. They emphasise collaboration and a focus on places and local populations as the driving forces of improvement.

All parts of England are now covered by an ICS. Integration to meet the needs of individuals tends to work best at the local level and since ICSs tend to cover a large geographical area, its success relies upon working together with local actors and delegating significant responsibilities and budgets to them.³

Examples of ICS interventions

- The "Homefirst" scheme in Somerset has helped patients avoid 7,500 nights in hospitals and freed up at £2 million for other services. It offers patients who are healthy enough tailored support to finish therapy at home, reducing stays in hospital by up to 10 days. A specialist team of staff received additional training so that they could support patients at home and help them regain independence faster. In addition to saving costs, discharging individuals is shown to be linked to better health. For instance, a person over 80 who spends 10 days in hospital loses 10% of muscle mass equivalent to 10 years of ageing.⁴
- Staff from the primary care network in Oxfordshire, Cancer Research UK, Age UK and other stakeholders in the Buckinghamshire, Oxfordshire and Berkshire West ICS in Oxfordshire, identified a low uptake in bowel cancer screening by men in Wantage. They found that men aged 65-74 who had not had a bowel screening, the flu vaccine, and had poor

engagement with health services were most likely to need support. Social prescribers undertook training on cancer and bowel screening and as a result initially contacted 50 men. Half took up the screening and the social prescribing team plans to offer more preventative healthcare to individuals who fit the at-risk profile.⁵

- During the COVID-19 pandemic First Community Health and Care, an employee owned social enterprise, has been providing community healthcare services to Gypsy, Roma, Traveller and Showmen communities in Surrey and West Sussex. Their aim is to educate, inform and answer questions about the COVID-19 vaccine to boost vaccine confidence. In partnership with Surrey Heartlands ICS, they have produced an educational NHS video to boost vaccine confidence for individuals within these communities across the country.⁶

2. Integration through community health agents: Brazil

Brazil's Family Health Strategy (FHS) delivers community-based primary care through interdisciplinary FHS teams. Community health agents form a crucial component. Their primary role is to bridge the gap between the FHS primary care functions and public health efforts.

Community health agents are selected by local health communities and trained by Brazil's Ministry of Health; this includes training them to identify risk factors for NCDs. They're usually assigned to work in the area where they live. Their role is geared towards seeking out problems before patients approach an FHS health centre for help.

They conduct regular monthly visits and deploy a wide range of services, including ensuring all members of each household are up to date with their healthcare appointments, have their prescribed medication, and comply with medication schedules. They also identify risk factors for chronic disease, such as smoking or hypertension, and help educate individuals on health promotion, signposting them to local services. Finally, they also deliver immunisation campaigns and contact tracing.

Approximately 265,000 community health agents serve 62% of the population. The programme has been linked to reduced mortality from cardiovascular and cerebrovascular diseases, a large reduction in hospitalisations, and reduced rates of complication from diabetes. The programme has also played an important role in reducing inequities in access to, and use of, healthcare services.⁷

3. Greater integration of public health and primary care: the Netherlands

Seven neighbourhoods have introduced a “stepwise” approach to developing integrated district plans and promoting collaboration between their primary care and public health institutions. The approach uses two tools – a district health profile and policy dialogue – and involves seven steps: getting to know the neighbourhood; assembling a workgroup; analysing the neighbourhood; developing a district health profile; preparing a policy dialogue; holding local dialogues; and embedding plans and collaboration.

An effectiveness study found that this approach helps to strengthen collaboration between local public health and primary care sectors, with greater consensus about focus. It also led to integrated health plans and activities to improve local health, such as promoting healthy lifestyles, social cohesion, and addressing the loneliness of older people. This approach was also seen as highly transferrable to other communities, given its focus on designing health programmes based on local needs.⁸

4. NGO involvement in health promotion and prevention: Finland

In Finland, health promotion and prevention is carried out largely as a partnership exercise between the public health system and NGOs, who deliver a range of health promotion and prevention services. Although a number of actors provide funding for NGOs to carry out these services, the state, regional and local government (including municipal health systems), are key financial contributors. The Finnish Centre for Health Promotion, an umbrella NGO for over 121 health NGOs, has carried out all budget planning, project implementation, monitoring and evaluation for health promotion since 1997. The role of NGOs is mainly to provide services related to alcohol and drug misuse, and mental and physical health, through educative campaigns in schools, homes, work or other public spaces.

NGOs also contribute to the design, reviews, monitoring and implementation of public health programmes. The national Ministry of Social Affairs and Health includes approximately 50 advisory boards and 90 working groups, among which 30% and 40% respectively have NGO representation. This includes the Finnish Advisory Board for Public Health, a legislative body responsible for shaping and implementing the government's long-term, inter-sectoral, public health policy. Moreover, since the early 2000s, all government health and social care programmes have been developed in consultation with NGOs; they're recognised as constituent members.

Improving incentives across systems: Incentivising prevention

5. The Jönköping healthcare system: Sweden

The healthcare system for the Jönköping region in Sweden serves around 340,000 people. It's predominantly financed using a capitation payment model (where payment is given to a provider for a target population rather than individual healthcare professionals).⁹ This allows for interdependent incentives which together drive the success of the system.

The system uses population-level data to understand the needs of different population groups, and a dashboard of indicators to monitor health outcomes across and within local populations. It offers a range of preventative services and healthcare.¹⁰

The system's Esther programme, implemented in 1998, provides person-centred care to older people. Its success has been based on understanding what they need and want, what's important to them when they're unwell, and which providers must cooperate to meet their needs.¹¹ It maps the health services they receive across different settings and explores how they can be improved across systems. There's a target for 25% of each project team to be users of the programme or patient representatives.¹² The Esther programme has helped improve patient flow and coordination for older people in six municipalities.

Everyone working within the Esther programme focuses on improvement. They all have two responsibilities: to do what they do (whether primary care physician, physiotherapist, nurse or administrator), and to improve what they do, following the Plan, Do, Study, Act (PDSA) cycle. To support continual improvement in quality, they have multiple routes to training and upskilling.

In its first three-to-five-year period, the programme saw hospital admissions reduced by 20%, a redeployment of resources to the community, a 30% reduction in hospital stay days for heart failure, and a reduction of over 30 days in the waiting period for referral appointments with specialists. Esther has been adopted across the world: in 2017 the European Commission recognised it as the best programme to support active and healthy ageing.¹³

Improving incentives across systems: Driving efficiency in healthcare delivery

6. Reducing unnecessary hospital admissions: Norway

Following Norway's Care Coordination Reform in 2012, the country built larger primary care centres that provided non-urgent care and a mix of post-acute, rehabilitation, and nursing care on a 24-hr/7-day basis. These new centres are intended to strengthen primary care and reduce unnecessary hospital admissions by acting as gatekeepers and treating less severe emergency cases. A recent study found that these larger primary care facilities significantly reduce emergency hospital admissions.¹⁴

7. Reducing low-value care: international

Choosing Wisely is a global clinician-led initiative aimed at reducing low-value care by encouraging conversations about whether specific services truly add value between patients and their healthcare providers. The campaign began in the US in 2012, but has since been implemented in a third of OECD countries.

In most countries, the campaign begins with evidence-based research by medical societies on various commonly-used medicines, tests and procedures, whose necessity should be questioned and discussed with patients.¹⁵ Through national campaigns, including discussions at medical conferences and medical journal articles, healthcare professionals are educated on the importance of initiating dialogue about care options with their patients.¹⁶



Actions to inspire and engage people

Policy makers: Prevention advocates lack a united voice

8. Tackling mental health and substance disorders by building a coalition of the willing: US

300 public and private community stakeholders formed a coalition to address mental health and substance use disorders in Orange County, California. Their shared goal was to clarify the existing pathways for accessing mental health services.

The coalition established a neutral non-profit organisation, Mind OC. This served as a platform to bring even more stakeholders together to help achieve their objective, increase awareness, and secure funding.

Those stakeholders agreed to build community wellness hubs: physical buildings where people could easily access care. Mind OC received investments from a number of public and private organisations. It built its first community hub in 2019.¹⁷

9. The Scottish Food Coalition: UK

This coalition is a diverse alliance of 43 NGOs and 14 supporters working for food justice in Scotland. Even with different priorities, these organisations have been able to campaign with a shared vision, for a new "Good Food Nation Bill", as part of the country's 2014 vision and policy: *Becoming a Good Food Nation*.

The government did commit to a Good Food Nation Bill in 2019/20, but the coalition believes it isn't ambitious enough. They have therefore proposed a framework that takes a whole system approach, which would: incorporate the right to food into Scottish law; establish a food commission; include sectoral measures and targets to stimulate immediate action.

Their bill reflects their vision: universal access to high quality nutritious, sustainable food; food production that's fair to people, animals and the planet; and giving the public a greater say in food policy.¹⁸

Healthcare professionals: HCP shortages

10. Supporting recruitment and retention in underserved areas: France

The Pacte Territoire Santé is a formal agreement between the French Ministry of Health and medical associations, local health providers, and local and regional territory representatives.

The aim is to address unequal distribution of healthcare professionals across the country. It does this by attempting to attract and retain primary care physicians for rural and underserved areas by offering a comprehensive package of incentives if they commit to working a set amount of time in rural and underserved areas.

Incentives are particularly aimed at new workers, and include better pay, travel allowances, a guaranteed minimum payment amount, training opportunities, and guaranteed social protection such as sickness leave and maternity leave.

The programme's impact is constantly monitored by the Ministry of Health. In 2013 it was responsible for opening 200 contracts for primary care physicians, all of which were taken within four months. In 2014, the programme offered an additional 200 contracts. The programme also offers a number of non-financial incentives intended to help workers function and work in rural areas in the same way they would in urban areas, by supporting greater teamwork and using telemedicine.¹⁹

Healthcare professionals: Poor working conditions

11. A life-course approach to welfare: Denmark

The Danish region of Nordjyllands introduced its Livsfasepolitik ('life stage policy') in 2008 to address its ageing workforce, and help ensure that healthcare providers address the different needs and requirements of different life phases.

The policy combines elements of regulation, personal and professional support, and education. It provides a broad outline for supporting healthcare professionals' welfare, allowing flexibility for regional sectors and local committees to draft local agreements and guidelines specific to the needs of their healthcare professionals.

The policy touches on a number of issues, including work/leisure balance; encouraging inclusive workplaces that focus on how to support different employees in all stages of life; and ensuring that requirements for challenge, development and wellbeing fit each employee's life situation as well as possible; and supporting continuous skill development. In one example, Aalborg university hospital allows workers aged 58 or over the flexibility to reduce their working hours, undertake less demanding tasks, and change their occupations and job descriptions.²⁰

12. Supporting diversity in senior leadership positions: UK

In 2009, Nottinghamshire Healthcare NHS Trust launched a mentoring scheme for employees from ethnic minorities at salary bands 6 and above with high potential. This scheme was to address the small ratio of people from ethnic minorities in its senior leadership team and on its board. Mentors were given special training, and mentees were offered one-to-one support, group development sessions, and projects to build their skills and experience. By 2013, nearly 50 staff had been involved in the scheme; it was widened to include all groups underrepresented at senior levels. Mentoring was complemented with a range of other initiatives, including a development programme for staff from ethnic minorities in salary bands 1- 4. The Trust has also established a wide network of local partners through which it can advertise future senior role posts.²¹

Healthcare professionals: Using the extended healthcare workforce

13. Engaging community pharmacists with prevention: Germany, Portugal

In 2014, the Bavarian State Ministry of Public Health and Care Services in Germany launched the *Diabetes moves us!* programme. This trained community pharmacists to talk about diabetes, and launched a diabetes prevention network to promote pharmacy-led events that included diabetes screenings and educational talks. 215 pharmacies signed up to the network, registering 103 events. 2,502 people had their blood sugar checked and 1,765 completed the Finnish Diabetes Risk Score (FINDRISC) questionnaire. 195 were advised to immediately visit their physician because of very high glucose levels and 80.2% were advised to change their lifestyle to prevent type 2 diabetes.

In 2016, 120 Portuguese community pharmacists led a campaign to prevent cardiovascular disease by identifying those with undiagnosed conditions and those at risk, and educating them on risk factors for the disease. Pharmacists checked patients' lifestyle and family history, and administered a Systematic Coronary Risk Evaluation (SCORE). They assessed 1,268 individuals and referred 129 individuals to either the Nutritional Service or the Pharmaceutical Consultation Service, depending on their level of risk.²²

14. Mobile health clinics: Brazil, India, Indonesia and US

Mobile health clinics (MHCs) are most widely used in the US and India, operating at the heart of communities. These vehicles are deployed in familiar community areas such as shopping malls, churches, parks, and community and recreational centres. They offer screening and vaccinations, and help manage chronic diseases such as hypertension, asthma, cancer and heart problems. They are particularly successful at reaching populations traditionally at higher risk of ill health, who have little or no contact with the wider healthcare system. This includes older people, those in deprived and rural areas, and minority groups. The US has 2,000 MHCs serving 7 million people per year.

In India, Asia's largest mobile healthcare network for older people is run by HelpAge. It operates 174 MHCs serving over 2,586 community locations and providing 2.5 million treatments each year. They offer free health checks and medication and keep records to monitor individual progress.

MHCs in the US and India have helped patients to reduce high blood pressure, and encouraged healthier behaviour and better disease management through education. Indonesia and Brazil have adapted this intervention by deploying floating health clinics to reach remote coastal indigenous communities.²³

Individuals: Public distrust of the public health and health-care system

15. Working with religious leaders to deliver prevention messaging during the Ebola epidemic: West Africa

During the 2014-2015 Ebola epidemic, there were significant barriers to take-up of preventative health measures for many communities; these included religion, culture, tradition, fear, and the legacy of civil wars in Liberia and Sierra Leone.

Religious leaders were seen as trusted and respected members of communities. They played an important role as agents of social change to help prevent the spread of the disease.

They did this by delivering key health messages via multiple channels, such as religious services, text messaging and radio. Example messages helped communities overcome doubts about whether the Ebola outbreak was real (rather than a political or financial ploy by governments), and addressed the fear of attending healthcare facilities for treatment (many believed these facilities were infecting healthy people). Most crucially, religious leaders helped change burial practices, which had significantly contributed to the spread of the disease. Because religious leaders supported new burial practices, communities felt they could safely and properly bury their families and loved ones.²⁴

Individuals: Opportunities to engage with individual health decisions

16. The COM-B model of behaviour change: China

Evidence is emerging about how to apply behavioural science to adherence and health in general, including new models of behaviour such as the COM-B model. This model says that people must have opportunity, capability and motivation in order to change their behaviour. To do so, people must be both psychologically and physically able to do so (Capability), have the social and physical opportunity for the behaviour (Opportunity), and want or need to carry out the behaviour more than other competing behaviours (Motivation). These components interact so interventions must target one or more of the opportunity, capability and motivation to change behaviour.²⁵

Antibiotic resistance is a serious global health threat, estimated to cause 10 million deaths per year by 2050, but understanding consumer behaviour regarding antibiotic usage is limited. A novel 2021 study using the COM-B model examined consumer behaviour patterns in the use of antibiotics for upper respiratory tract infections and grouping them into categories of behaviour patterns. They then developed, tested and validated a measurement to understand antibiotic consumer behaviour.

Their tool will enable researchers to categorise and identify underlying and hidden behaviour patterns of consumers, avoiding over-simplification, to make developing and applying targeted interventions easier. For instance, a home medicine review programme may be effective for consumers who stockpile medicines and self-medicate, but less so for those who prefer to obtain a prescription before taking any antibiotics.^{26,27}



Actions to democratise access

Addressing barriers: Addressing needs across the life-course

17. National life-course vaccination programme: Australia

Australia has the most comprehensive and advanced life-course vaccination programme in the world. It has a range of programmes to increase vaccine uptake across the board and improve population health, including school-based vaccination, and policies to promote flu vaccination in residential care for older people. All vaccines included in the national programme are reimbursed. All staff and volunteers working for government-subsidised providers of residential care for older people are eligible under the free flu vaccination programme. The programme also makes refugees and other humanitarian entrants eligible for free vaccination.

The programme reviews and revises vaccination schedules regularly, ensures that a reliable vaccine supply chain is in place, and that it is adequately resourced. It includes well developed public awareness campaigns that focus on life-course vaccination and involve relevant NGOs. Vaccination is integrated into healthy living and healthy ageing policies and there is collaboration with other sectors to support vaccine delivery in non-clinical settings.

In Victoria, for instance, pharmacists are allowed to administer government-funded vaccines for at-risk groups such as older people. More broadly, a handbook on clinical advice for healthcare professionals on the safest and most effective use of vaccines across the life-course is available, and education programmes that address adult vaccination are a prerequisite for healthcare professionals to be authorised vaccination providers. Electronic databases also collect and share immunisation and infectious disease data, and immunisation data can be accessed by patients and healthcare professionals.²⁸

Addressing barriers: Barriers for people from social minorities

18. Improving COVID-19 vaccination take-up in marginalised or underserved populations: international

Countries around the world have used a number of approaches to improve take up of the COVID-19 vaccine among marginalised or underserved groups.

Inclusion Europe, an international NGO, has produced easy-to-read public and personal COVID-19 health advice in multiple languages.²⁹ In the Maldives, NGO The Red Crescent is registering undocumented workers, with an agreement with the government that their data will be used only for vaccination purposes. In Hungary, an important factor in the second phase of the vaccine rollout was the inclusion of homeless people, treating them alongside those who work in, or use, health and social care services.³⁰

Providing prevention where people are

19. Tailored health services for fishermen: UK

Strenuous working conditions, coupled with occupational barriers that prevent fishermen from visiting healthcare services, puts them at increased risk of developing a number of conditions. The SeaFit programme, set up in 2018, established permanent health clinics and organises ad hoc health check events at a number of ports and quaysides throughout the UK. A wide range of services is available, including health checks, dental treatment, counselling, health screening and self-management for chronic diseases, alcohol and smoking cessation services, physiotherapy, cancer prevention information, and eye tests.

Its main successes have been offering health services that respond to the specific needs of fishermen, and its ability to build trust quickly within the fishing community. This has been achieved through the support of the service by charities dedicated to improving the lives of fishermen. The programme has shown promising results. In its first year, health advisors engaged in some way with just under 700 individuals. Patients reported having seen their doctor more often as a result of a health check. Three-quarters made changes to their diet, and over a quarter of those who received a dental check had done so for the first time in at least five years.³¹

20. Delivering HIV prevention to construction workers: UK

Test@Work used text messages to improve awareness of HIV and HIV testing in the UK during the COVID-19 pandemic. It targeted the construction industry, where workers are at greater risk of HIV because they're more likely to engage in behaviour linked to greater HIV exposure.

291 employees across 21 worksites received a series of messages over a 10-week period. Messages contained web links to evidence-based resources, to promote HIV awareness and reduce barriers to testing and HIV prevention, and discourage high-risk behaviours. Almost 70% of those invited to take part agreed to receive texts and only 12% decided to opt-out during the study. A quarter of recipients clicked on links for sexual health services and a fifth clicked on links to seek more information. The highest number of clicks per message were for messages offering HIV home testing and free condom services.

21. Government guidance for workplace health programmes: Spain, New Zealand, UK

Some countries have implemented employer guidance for the implementation of health promotion and prevention interventions.

In Spain, the Department for Labour has issued guidance on best practice corporate social responsibility which includes a focus on workplace health.³²

Since 2010, local public health service units in New Zealand have overseen a WorkWell programme as part of a national approach to workplace wellbeing. The programme offers a range of support, tools, and step-by-step guidance, as well as the support of an advisor, to help businesses develop and implement effective and sustainable workplace wellbeing programmes. This free initiative also offers an accreditation to ensure quality assurance.³³

Similarly, in 2014, the UK's Public Health England launched the Workplace Wellbeing charter, a national initiative to offer a more systematic methodology for improving workplace health. Similar to the New Zealand programme, it also offers businesses accreditation, as well as a range of workshops on physical activity to healthy eating, mental health, and alcohol awareness.

22. Breast cancer screening programme: China

China has low uptake for breast cancer screening, due to lack of knowledge and misperceptions about breast cancer risks and screenings, poor understanding of how to access screening services, and direct and indirect cost barriers.

Four worksites in Nanjing offered a support programme for 232 women aged 40 or over. The programme consisted of motivational interactive educational discussions on the causes of, and risk factors for, breast cancer, and on the benefits of early prevention interventions. Participants also received support navigating services and financial assistance. This included support with booking appointments, arranging transportation to screenings, covering payment for mammograms, and allowing employees to attend screening appointments during work without affecting their pay.

73% of those who had never previously had a screening reported having had a mammogram. The study also found that knowledge about breast cancer risk factors and screening guidelines increased significantly between the start and end of the study.³⁴

23. Supporting small businesses: South Africa, US

In 2005 a group of multinational South African companies launched a programme with the World Economic Forum to help their supplier companies (often small businesses) combat the threat of HIV/AIDS. At the time, small businesses provided more than half the total jobs in the country and accounted for 22% of GDP. But HIV/AIDS was having a crippling effect on the country's workforce, many of whom worked for small businesses. The multinationals provided practical assistance and established an HIV/AIDS workplace programme. Their support included using their purchasing power to negotiate lower prices for programme materials, buying in bulk, and providing free access to existing education resources or training initiatives. Barclays Bank Africa bought medication in bulk from Europe to create a "Barclays Pharmacy" and reduce the cost of treatment. Eskom (a state owned electricity supply company) partnered with a local business coalition to provide free training on a range of topics, from policy action to setting up an HIV action steering committee.³⁵

Since 2014, the Vermont Department of Health has offered grants to small businesses (with between 5 and 50 employees) to create health-promoting environments in their workplaces. Priority was given to those with low-income employees who had been identified as more likely to engage in behaviours associated with an increased risk of chronic disease. The grant helped to start initiatives focused on physical activity and healthy eating opportunities. This initiative has led to a diverse range of interventions, from the revision of workplace dress codes to allow for physical activity, to the adoption of a local healthy food policy, to the creation of a walking track on work premises.³⁶

24. Delivering HIV prevention to ethnic minorities: US

PrEP@Home delivers pre-exposure prophylaxis (PrEP) test kits to people's homes in the US. It addresses transportation barriers and the stigma associated with attending PrEP locations, which often prevent people from ethnic minorities at greater risk of HIV from accessing and adhering to PrEP.

The intervention was intended to reduce the number of mandatory annual in-person PrEP prescription renewal visits required by delivering test kits to people's homes. Of the 58 participants, 93% renewed their prescriptions, with 75% reporting no missed PrEP doses within the last week. 77% found the kits easy to use and more than 85% indicated they preferred it to the standard in-clinic visit.³⁷

25. Smartphone urine test for women: UK

Urine analysis is the second most common diagnostic test in the UK, with 42 million tests undertaken annually. It's used for key clinical pathways that include chronic kidney disease, diabetes screening, antenatal care, and urinary tract infections (UTI).

Healthcare start-up Healthy.io has developed technology that combines an app with smartphone cameras, and a home-based urinalysis test kit, to enable patients to self-test at home and share the results with their care provider. This technology can, for instance, shift uncomplicated UTI management from primary care to pharmacies, reducing unplanned hospital admissions among people with chronic conditions. Healthy.io launched its first test-and-treat service in January 2019, available at 16,000 retail pharmacies across the UK.³⁸

Person-centred healthcare

26. Collaborative planning and person-centred care: South Africa

Rand Aid is an NGO in Johannesburg offering multidisciplinary personalised long-term care to older people in retirement villages who need help to maintain their functional ability.

The NGO deploys integrated care teams of nurses, nursing assistants, social workers, occupational therapists, doctors, recreation officers and volunteers to provide a range of services including vaccination. Older people and their families are involved in planning person-centred care, and they're encouraged and enabled to exercise autonomy in their day-to-day lives. Unfortunately, one of its main challenges is lack of public funding.³⁹ Nevertheless, the organisation has played an important role in delivering the COVID-19 vaccine.⁴⁰

27. Person-centred care improving the health of older people: Tanzania, Ethiopia, Mozambique and Zimbabwe

Between 2014 and 2017, four African countries worked in partnership with HelpAge International, funded by the UK's Department for International Development, to implement an innovative approach to delivering person-centred care. The programme was designed to give 291,595 older people living in poverty better access to home-based services.⁴¹

Care was provided by trained volunteers, supervised by healthcare coordinators, to address their clients' physical, emotional, social and spiritual needs. An integrated team of nurses, social workers, occupational therapists, and medical doctors were available to assist. Volunteers from the community were selected in consultation with programme participants. They developed individualised care plans in full consultation with patients and their families, offering assistance with daily living activities while encouraging them to exercise as much autonomy as possible. Screening, health services, and medications were free of charge to participants. They were also enrolled in psychosocial support networks and engaged in programmes that enabled them to socialise, prepare and eat meals together, discuss their health needs and learn about topics like nutrition, exercise, and entitlements to health services.⁴²

75% of participants reported better health and reduced poverty at the end of the programme. It improved health literacy, particularly for older women, as well as quality of care and access to age-appropriate health services that met older peoples' needs, especially for HIV-positive individuals. The programme also influenced national policy and encouraged greater integration and partnership between national and provincial ministries.⁴³

Targeted approaches

28. Using coproduction to increase pneumococcal vaccine uptake among older black Americans: US

In the US, pneumococcal vaccination uptake rates are particularly low for black Americans. Lack of knowledge about pneumococcal disease and the vaccination contributes to poor uptake.

In 2014, pharmacists delivered an innovative educational intervention to 190 individuals in a care home where 80% of residents were black Americans. The intervention had three components: a 30-minute educational presentation delivered by a pharmacist, a 10-minute live skit by a health education theatre group, and action planning via small group breakout sessions.

The design and delivery were co-produced with the participants: the skit was performed by members of the care home community, who incorporated examples of how they might overcome vaccination barriers related to real-life social influences. Participants' knowledge about the pneumococcal disease and vaccination increased by 54%; all unvaccinated individuals reported receiving the vaccine after the intervention.

29. A targeted app to help people manage immunisations: Canada

Launched in 2014, CANImmunize is a free app that lets individuals record when they receive a vaccination, and creates a schedule suggesting nearby locations and available vaccination dates, along with appointment reminders.

By using population-level data, the app offers targeted and easy-to-read articles on communicable disease prevention, along with videos, games, and a comic book to help people learn about immunisation, pain reduction strategies, and recommendations.

It has been translated into different languages, and offers information and recommendations for at-risk populations and refugees (who typically have low uptake for vaccination in the country). It has already been downloaded over 175,000 times.



Actions to support effective use of technology

Data analysis to support targeted services

30. Using mobile phones to tackle tuberculosis: India

The Indian Ministry of Health is working with multinational telecoms company Bharti Airtel to better understand the spread of tuberculosis (TB), using mobile phones to track people's movement and comparing the data with incidence rates.

This intervention was implemented in the states of Uttar Pradesh and Gujarat. It tracks the movement of 280 million mobile users and compares that data to TB incidence rates.

The Ministry of Health's partnership with Bharti Airtel brought together the technical expertise needed to manipulate the data with a deep understanding of the disease and its impact on local populations. Analysis found that high levels of movement between different areas was a better predictor of the spread of TB than geographical proximity to areas with high rates of TB. This enabled public health actors to predict the locations likely to become infection hotspots and develop more effective and targeted preventative interventions (including diagnosis), along with strategies for treatment adherence and the mitigation of risks associated with drug-resistant TB. For example, targeted prevention messaging and mobile health clinics have been deployed to improve early detection.⁴⁴

31. Integrating digital platforms: UK

Personal health record platform Patients Know Best (PKB) worked in partnership with Nottinghamshire Integrated Care System and NHS Digital to co-design an integration for the NHS app called "All-in-One", making PKB one of the first products to integrate with the NHS app.

Launched in March 2020, All-in-One lets users access their personal health record and coordinate their care through PKB. They can access everything in one place, including appointments, test results, care planning, symptom tracking, journals, consultations, prescriptions, and links to forums.

Over 55,000 patients across Nottinghamshire are now registered with the NHS app, partly in response to the pandemic. Nottinghamshire Integrated Care System has calculated that this integration has achieved £6.40 in savings for every £1 invested, for a return of 6:1 on their initial investment. All-in-One has saved each organisation £100,000 each year as well as making it more convenient for patients to access healthcare.⁴⁵

32. A national health information system: Estonia

Estonia has one of the most comprehensive e-health systems in the world, with 99% of its health system now digitised, covering 98% of the population. The Estonian EHR service allows all medical documents to be uploaded to the system, enabling any healthcare worker to access a patient's medical history from birth to death. Patients can also access their data through a portal, using an electronic ID card or mobile phone. They can also use the portal to book appointments and screenings, and receive appointment reminders, as well as access services such as ePrescriptions (99% of all prescriptions are now electronic), teleconsultations, their immunisation passport, virtual health checks, and eAmbulance.

The EHR service is underpinned by legislation that allows all healthcare service providers, regardless of public or private ownership, to upload patients' data into the national system; companies that don't comply are met with financial penalties. Healthcare providers receive regular training, including virtual tutorials on how to use the EHR platform and other software systems.

Patients can see who is accessing their data, and have the legal right to ask why. An opt-out mechanism enables them to restrict who can access their EHRs. Blockchain technology is used to ensure the integrity and security of all patient data. Interoperability is key; individual software systems connect to a government data exchange platform, which integrates and digitally records all interactions in a secure central database. This allows new services to be added as and when appropriate. The e-health system is just one part of a wider eEstonia platform that enables individuals to access a range of other services digitally, such as eTaxes and eSchools.⁴⁶

Connecting individuals to preventative healthcare

33. Drone delivery of vaccines and other life-saving interventions: international

Drone healthcare delivery services are in place around the world. Compared to land-based transport, drones are a faster, more cost-effective way of widening access to health in geographically isolated regions, effectively delivering prevention to millions of individuals around the world. Across many lower income countries, drone services have the potential to improve vaccine uptake by at least 36%, and reduce by a fifth the cost of every dose administered.

In 2019, the Ghanaian government partnered with private organisations and NGOs to launch the world's largest drone delivery service. This delivers routine vaccines to 2,000 health facilities, serving 12 million people across the country. In Rwanda, drones make 2,000 deliveries of medical supplies per day and during the COVID-19 pandemic, drones have been used in China to deliver medical testing supplies from hospitals to the Chinese Centre of Disease Control and Prevention, reducing unnecessary human contact to make delivery safer.⁴⁷

34. Tackling the digital divide: Nicaragua, Colombia, Mexico

A number of initiatives in the Latin America region aim to improve technology infrastructure and digital skills.

In 2014, telecommunications company América Móvil worked in partnership with the Nicaraguan government to deploy landline telephones in 300 rural communities, benefitting 6,000 individuals. They also introduced telemedicine systems to tackle the transmission of HIV/AIDS in pregnant women in the municipality of Waslala.⁴⁸ They have also organised over 4,000 training and digital inclusion workshops in Mexico, in partnership with The Massachusetts Institute of Technology, various NGOs, and online course provider Coursera.⁴⁹ More than 250,000 participants registered for one workshop in Mexico City.

Over the last decade the Colombian government created initiatives to bring internet access to underserved populations. One of these created the Vive Digital Points: centres where local communities can connect to the internet, access the state's online portal, and receive technology training. Some of these centres are in remote locations. The government also offers subsidies and financial assistance to families unable to afford smartphones and mobile data plans. It grants free access to services offered by certain government websites, and during off-peak late night hours. In 2020, the government announced subsidised fixed connections for users in isolated and rural areas. The aim is to supply access for 500,000 low income households – nearly 270,000 connections have already been installed.⁵⁰ In 2016 and 2017, the coalition Alliance for Affordable Internet ranked Colombia as the leader among developing countries in providing affordable internet access to its citizens.⁵¹

35. A low-tech intervention to deliver preventative health messaging: international

The Be He@lthy Be Mobile programme was launched by the WHO to address the growing global burden of NCD; it's particularly aimed at underserved communities that have the greatest risk of ill health. With 96% of the world having access to mobile phone networks, the intervention aims to improve health literacy and empower individuals and communities with simple text messages with health messaging.

The WHO has partnered with several countries around the world; their initiatives are wide-ranging: from improving awareness about NCDs, including the risk factors for type 2 diabetes and cardiovascular disease, to messaging on how to quit smoking, and from information on cancer screening to helping individuals better manage chronic illness through long-term behavioural change techniques.⁵²

36. Using inclusive design to improve adherence: Australia and Finland

These interventions use accessible technologies which limit the need to interact with technology to help older people improve adherence to medicines and preventative treatment.

Peninsula Health in Victoria, Australia has implemented ITEC-CHF, an innovative telemonitoring programme that helps those with chronic heart failure to improve compliance with their daily weight management, to help prevent their illness from progressing. ITEC-CHF uses a 'zero touch' design to make monitoring weight much easier. Participants don't need to interact with the technology other than stepping onto a weight scale. If there's abnormal weight fluctuation, they're contacted by a nurse to identify the appropriate preventative action. Initial findings suggest the approach has effectively improved patient outcomes and experience.

A Finnish pilot study has implemented an advanced in-home robotic system to help older people with medication adherence, by administering medication at scheduled intervals. The system notification combines sound, an on-screen message, and light. Patients simply press a dispenser button to access their medications.⁵³

37. Integrating health informatics education into the nursing curriculum: Denmark

Denmark has one of the most advanced digital health systems in the world. The government has gone to great efforts to ensure its healthcare workforce are properly trained in using the applications.

In 2017, nursing training adopted a new curriculum that includes an integrated nursing informatics education module. 50% of informatics topics are integrated into the curriculum; communications lessons include telemedicine, and modules on caring for older people include a newly implemented assessment of welfare technology. One teacher/professor at every campus holds a Masters in health informatics. The new curriculum integrates nursing informatics into competency areas, including nursing research, quality assurance and healthcare management, and into students' daily work as nurses. For instance, nursing informatics lecturers are required to teach about how to apply informatics in nursing work rather than simply teach about the technology.⁵⁴

Empowering individuals with user-centred technology

38. Delivering telemedicine via TV to overcome poor digital literacy and poor access to health tech: US

In 2020, telemedicine provider American Well teamed up with networking hardware company Cisco Systems, to develop a service to connect older people and those with serious medical conditions to healthcare services via their TVs.

Older people can connect to one of American Well's doctors, and its broader network of hospitals, via a live video feed accessed through their TV.

The aim is to overcome barriers, including poor digital literacy skills, by engaging patients through a platform they know and regularly use, rather than through apps or other more sophisticated telehealth services. The intervention's goal is to reduce emergency visits to hospitals and enable older people to live independently for longer as a result.⁵⁵

39. Using bindis to improve iodine intake among women: India

In rural India, iodine deficiency is widespread, with an estimated 350 million people affected due to living in areas where crops are grown in iodine-deprived soil – and about a third of those families don't have access to iodised salt.

Iodine deficiency can lead to a number of problems including weight gain, cognitive impairment, breast cancer, and hypothyroidism (which can cause heart failure, depression, and impaired ovulation). During pregnancy, iodine is critical for foetal brain development; suboptimal levels can even lead to death. In 2015, an NGO called Neelvasant Medical Foundation and Research Centre found a cheap and culturally appropriate way to improve iodine deficiency by coating bindis – a small dot worn between the eyebrows of women for religious, cultural and cosmetic reasons. The bindis act like transdermal patches, slowly releasing the 150 to 220 micrograms of iodine they require each day over a four-hour period.⁵⁶

The NGO has been selling these to women in rural areas of the Maharashtra state, and women have reported fewer headaches as a result. One pack costs only 2 INR, making them particularly affordable: women in the state living in remote and rural areas make on average 20–30 INR a day.⁵⁷

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About the ILC

The International Longevity Centre UK (ILC) is the UK's specialist think tank on the impact of longevity on society. The ILC was established in 1997, as one of the founder members of the International Longevity Centre Global Alliance, an international network on longevity.

We have unrivalled expertise in demographic change, ageing and longevity. We use this expertise to highlight the impact of ageing on society, working with experts, policy makers and practitioners to provoke conversations and pioneer solutions for a society where everyone can thrive, regardless of age.



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